Smart Growth Committee Meeting
June 11, 2025 @ 6:30 PM
This meeting is recorded for public record.

Committee Members:
Nicole Scimone, Chair
Lisa Dorsey
Bernie Flynn

Smart Growth Committee of Borough Council:
Borough Manager: Sean Metrick

Smart Growth Committee Meeting:

1. Call to Order

2. Announcements

   A. A public hearing June 18, 2025 at 6:30 pm: Amending the Code of the Borough of West Chester, Chapter 54, titled Electrical Standards, Chapter 72, titled Mechanical Standards, and Chapter 82, titled Plumbing, by amending the licensing requirements for contractors performing work in the Borough of West Chester.

3. Comments

   Comments, suggestions, petitions by residents in attendance regarding items that are not on the agenda. Please be advised that all public comment has a 5-minute time limit.

4. Reports

   A. Director's Report

   B. Presentation by Safe Harbor of Chester County, 20 N Matlack St
   Issue: Discussion of current facilities and services and future plans

5. Old Business

   A. Motion to approve Smart Growth Committee minutes – May, 2025

6. New Business

   A. Motion to approve HARB applications
   Issue: Consider a Motion to approve the May HARB Certificate of Appropriateness

      1. 2025-10-17 N. High St-Sign
      2. 2025-16 202 W. Gay St-Convert door to retail window
      3. 2025-17-235 E. Market St-Sign

   B. Discuss future revisions to café permits, dining platforms in parking areas, and use of

the street during Gay St closure *Issue: Improvements to regulations for outdoor seating standards and possible ordinance updates.*

C. Subdivision and Land Developments, Conditional Use

1. Motion to approve resolution final subdivision plans for minor lot line change 410 W Washington St., Elks Club
2. West Chester University – Campus Master Plan – conditional use hearing pending. Timeline for review process.
3. Motion to approve resolution final subdivision plan for land development 210-214 W. Washington St

7. Other Business

8. Adjournment

Visit www.west-chester.com for access to all attachments.
Agendas are posted to www.west-chester.com by noon 3 business days prior to the meeting.

NOTICE IS GIVEN that on **June 18, 2025 at 6:30 p.m**., prevailing time, Council for the Borough of West Chester, Chester County, Pennsylvania, will hold a public hearing as part of the regularly scheduled public meeting at the Borough of West Chester's municipal building located at 401 East Gay Street, West Chester, Pennsylvania, to consider the adoption of, and if approved, Borough Council will adopt the following ordinance with the following title and summary:

AN ORDINANCE OF THE BOROUGH OF WEST CHESTER, CHESTER COUNTY, PENNSYLVANIA, AMENDING THE CODE OF THE BOROUGH OF WEST CHESTER, CHAPTER 54, TITLED ELECTRICAL STANDARDS, CHAPTER 72, TITLED MECHANICAL STANDARDS, AND CHAPTER 82, TITLED PLUMBING, BY AMENDING THE LICENSING REQUIREMENTS FOR ELECTRICAL CONTRACTORS, MECHANICAL CONTRACTORS, AND PLUMBING CONTRACTORS PERFORMING WORK IN THE BOROUGH OF WEST CHESTER.

The full text of the Ordinance is available on the Borough's website www.west-chester.com. In addition, a certified copy of the proposed Ordinance is on file at the offices of the *Daily Local News* by calling (215) 648-1066 and the Chester County Law Library, Chester County Justice Center, Suite 2400, 201 West Market Street, West Chester, Pennsylvania 19380.

Those individuals with disabilities and ADA accommodations for effective participation in the meeting should call 610-692-7574 at least two days prior to the meeting. All attempts will be made for reasonable accommodations.

Kristin S. Camp, Esquire
Borough Solicitor

PLEASE ADVERTISE ON JUNE 10, 2025

Borough of West Chester

401 East Gay St West Chester PA 19382

Borough Council
Patrick McCoy, President
Nicole Scimone, Vice President
Bryan Travis
Brian McGinnis
Sheila Vaccaro
Bernie Flynn
Lisa Dorsey

Mayor
Lillian L. DeBaptiste

Borough Manager
Sean Metrick

Department of Building and Housing Monthly Report – May 2025
To: Smart Growth Committee of Borough Council
From: Ramsey Reiner, Interim Director of Building and Housing
June 6th, 2025

Summary Highlights

- The search continues for a new director. We had several applicants and have begun interviewing some wonderful candidates.
- Rental license renewal period has begun for 2025-2026. We highly recommend that all landlords and property managers create an account in the portal. Once complete, please email housing@west-chester.com to connect the account to your rental licenses. Payment and Tenant Landlord Forms may be done online. Payment will not be accepted until all items are complete and an inspection has been scheduled.
- Holds have been placed on all properties that have outstanding balances for the Borough, including taxes and sewer. No permits or licenses will be issued until these are paid. Property owners must contact Portnoff directly. Portnoff Law Associates, Ltd. 866-211-9466 https://www.portnoffonline.com/contact/

Planning & Zoning

- Ramsey and Wendy met with Zoning Hearing Board to discuss best practices. They have requested a fee schedule review and update for all zoning hearing fees. They will also be working with the office to update the application and process internally.

Codes Enforcement

- Code officers have been inspecting several outstanding rental properties and doing follow-up reinspections. We will be requesting an update to both the Rental License Fee as well as an additional fee for reinspections (per unit) in the near future.
- CEOs have been clearing out the outstanding SmartGov case requests.

Code Enforcement Tickets Issued: Grass, Snow & Trash

Status	24-Sep	24-Oct	24-Nov	24-Dec	25-Jan	25-Feb	25-Mar	Apr-25	May-25
Paid	6			2	61	43	44	74	68
Issued				1	2		27	0	9
Warning	4	2	2		2	3	8	18	38
Void						3	6	5	2
Dismissed	1				4	12	2	10	10
Abandoned	2				1		2	0	1
In Dispute							1	1	0
Court	0	0	0	0	20	11	1	16	12
	13	2	2	3	90	72	91	124	140

Rental Licensing

Rentals	25-Feb	25-Mar	25-Apr	25-May
Annual Rental Inspection	111	127	129	128
Initial Rental Inspection (New Rental)	3	5	5	3

Points

- No points accumulated in May because no active citation was found guilty in that month. There were no PD citations received this month. The points will all reset on July 1st.

Month	Sum of Points
Jan	11
Sep	12
Oct	15
Nov	6
Dec	9
Grand Total	**53**

Row Labels	Sum of Points
211 S Walnut	3
315 S High Street	6
419 S Walnut	3
501 S Walnut	3
628 S Walnut St2	3
507 S Walnut St2	3
437 S High St2	3
429 S. Walnut St	3
432 S Walnut	3
500 S. Walnut	3
248 E Gay St	6
511 S High St	3
439 S High St	3
21 W Barnard St	5
633 S Walnut St	3
Grand Total	**53**

Building Permits

		Feb-25	Mar-25	Apr-25	May 25
Code Enforcement					
Enforcement Requests		40	71	34	84
Cases Opened		21	49	15	54
Cases Closed		23	28	55	71
Permits Issued					
CERTIFICATE OF OCCUPANCY		2		1	
COMMERCIAL ADDITION-ALTERATION-REPAIR		4		10	6
RESIDENTIAL ADDITION-ALTERATION-REPAIR		18		25	51
RESIDENTIAL DEMOLITION		1			
COMMERCIAL DEMOLITION					1
CAFE PERMIT CONTRACT				15	7
HOME OCCUPATION				1	
SIGN PERMIT				2	
RESIDENTIAL NEW BUILDING				2	
CERTIFICATE OF APPROPRIATENESS-SIGNS					1
ZONING SITE PLAN REVIEW					4
Permit Applications Received					
CAFE PERMIT CONTRACT		6	14	28	7
CERTIFICATE OF APPROPRIATENESS- SIGNS		1	1	4	2
CERTIFICATE OF APPROPRIATENESS- REPAIR					5
CERTIFICATE OF OCCUPANCY		3	2	2	2
COMMERCIAL ADDITION-ALTERATION-REPAIR		8	4	18	14
COMMERCIAL DEMOLITION					1
LAND DEVELOPMENT APPLICATION			1	1	
HEN PERMIT		1			1
RESIDENTIAL ADDITION-ALTERATION-REPAIR		41	42	53	60
RESIDENTIAL NEW BUILDING		4	2	2	1
SIGN PERMIT		3	4	3	5
VARIANCE/SPECIAL EXCEPTION, ZONING APPEAL		1	2	1	

ZONING SITE PLAN REVIEW		7	13	8	4
ZONING VERIFICATION LETTER			1	1	1
Building Permit Inspections		30	85	164	100
Code Enforcement					
NUISANCE			1		4
PROPERTY MAINTENANCE		23	33	2	49
RIGHT OF WAY		1			
ZONING VIOLATION		1	4	1	1
BUILDING CODE VIOLATION					2

Safe Harbor of Chester County

Smart Growth Committee Presentation

Safe Harbor
OF CHESTER COUNTY, INC.

Thank you

Grateful for the opportunity to present our vision

Committed to serving West Chester and growing responsibly

Safe Harbor

At a Glance

- Serving West Chester since 1994
- Largest shelter for single adults in Chester County
- 40-bed facility: 20 men & 20 women (only shelter for single women)
- Average stay: 3–6 months; 150+ residents annually
- 43,000+ meals served annually, including daily community lunch
- 233 volunteers in 2024

From Shelter to Whole-Person Care

Expanded Services for a Changing Need

- Trauma-informed, resident-centered care
- Daily therapeutic day programming
  - Mental and physical health and wellness
  - Recovery and support groups
  - Job readiness and digital literacy
  - Financial literacy and tenant preparation
  - Life skills training
- Wrap-Around Program: 6-month post-exit support

Safe Harbor
OF CHESTER COUNTY, INC.

Powered by Collaboration

Strong and Growing Community Partnerships and Support

Nonprofit Partners

Chester County Food Bank,WCU, The Melton Center, Act in Faith, Open Hearth, WC Food Cupboard, WC Senior Center, Home of the Sparrow, Human Services, Inc. MVP, Community Warehouse, The Wardrobe, CYWA, Friends Assocation, Haven Behavioral Health, The United Way, OIC, CVIM, Chester County Bar Association, KACS, Coatesville VA

Business Partners

CTDI, Lasko, PA CareerLink, Scott Honda, Limoncello Restaurant, Dougherty Automotive, Takeda, St.Gobain, ABC Home Inspection, Bichen Productions, Element, Renee Ryan Real Estate, CamCo, Whitegap Mortgage, First Trust Bank, Whole Foods, Wegmans, Meridian Bank, Omni Cable

Stakeholder Support

Senator Carolyn Comitta, Representative Chris Pielli, Commissioner Maxwell, Commissioner Roe, Commissioner Moskowitz, CC District Attourney Chris de-Barenna Sarobe, Dr. Julie Deitrich, CC Partnership to End Homelessness, Department of Community Development Governance Committee

Powered by Collaboration

Strong and Growing Community Partnerships and Support

Growing Need

Limited Space

- 120+ individuals on our waitlist
- Only 20 shelter beds in the county for single women, family wait list
- Increasing need for long-term support services, demand for affordable housing, and rising costs
- Our current facility is maxed out with little space for programming

Our Vision for Expansion

- Scaling support with purpose and partnership
- Sustainable growth through innovative practices
- Meeting the rising needs

- Build a new 3-story facility above our existing parking lot
- Expand housing capacity by 50%+
- Create multi-use space for services, community connection, and nonprofit partnerships

Safe Harbor
OF CHESTER COUNTY, INC.

Expansion Concept Overview

Proposed Building Layout

- Ground Floor: Retains essential parking
- First Floor: 7 flexible housing units (~24 people)
- Second Floor: 64 beds in 4 wings of 16 (modular layout)
- Rooftop: Garden + solar panels for wellness & sustainability

Linking Past and Future

- Add second-floor walkway to current building
- Repurpose current facility into a Community Resource Center
- Program & meeting space
- Administrative offices
- One-stop shop for services
- Expanded kitchen facilities

Supporting Borough Goals

Alignment with Smart Growth

- Reuse of owned property & vertical development
- Preserves parking and green space
- Increases housing without overburdening infrastructure
- Supports equity in housing, workforce, and health

Next Steps

- Requesting tentative approval and borough support to move forward with schematic design
- Seeking collaboration during planning/zoning phases
- Committed to transparency and community alignment throughout the process

When we come together, our whole community thrives.

Thank You!

Together, we can build a more connected and compassionate West Chester

Jessica Chappell, MA
Executive Director
jessica@safeharborofcc.org
484.402.4258

Ruby Abouraya, BA
Sr. Director of Finance & Growth
ruby@safeharborofcc.org
(484) 753-2677

Platinum Transparency 2025
Candid.

Safe Harbor OF CHESTER COUNTY, INC.

DRAFT MEETING MINUTES

SMART GROWTH COMMITTEE OF BOROUGH COUNCIL

Date:	Wednesday, May 14, 2025 @ 630 PM
Committee Members:	Nicole Scimone, Chair Lisa Dorsey Bernie Flynn
Staff:	Ramsey Reiner, Interim Director of Building, Housing & Code Enforcement Sean Metrick, Borough Manager

I. Call to order-6:50PM

II. Announcements

A. A public hearing May 22, 2025 at 6:30pm to add a definition to Chapter 97 "Borough Historic Architect" and to require review by the same for preliminary subdivision and land development plans in the HO 60 and HO 75 Overlay Zoning Districts.-Announced by Chair Scimone

III. Comments, suggestions, petitions by residents in attendance regarding items not on the agenda. *(Please be advised that all public comments have a 5-minute time limit.)*

IV. Reports

A. Director's report- Presented by Interim Director, Ramsey Reiner. Ms. Reiner starting by announcing the Director Position is open. The job has been posted on multiple job-seeking websites and the Borough's LinkedIn page, please share. Ms. Reiner continues to update the Committee with rental license program status, license renewals for the upcoming new cycle, new instruction cover letter for invoices, giving instructions for portal use, and inspections. There will be an Open House for landlords to come and get instructions and answers to any questions. Zoning Hearing had three hearings. One property was for an appeal for a student home, that was withdrawn for a settlement. 236 W. Gay St. was granted a Special Exception for a Short-Term Rental, with a maximum occupancy of four people. With the new application, there is a total of eleven short-term rentals. 143 E. Marshal St. was granted relief for an addition of a powder room. Subdivision and Land Development has the master plan for West Chester University at 700 S. High St. 210-214 W. Washington St (Axel Properties) has Final Land Development plan being reviewed. Both properties will be going to the Planning Commission later this month. Bill (Director of IT), has set up recording of the Planning Commission meetings moving forward. Historical Architectural Review Board had one recommendation for curb-side protected seating at 39 E. Gay St. At the Planning Commission Voting Session member Thomas Dougherty will be presenting a report on "Traditional Patterns of Building Homes in West Chester." Jim Cherry, PC Chair, will be giving the annual report. Code Enforcement Officers have been coming in at weekends to ensure Café Permit holders are in compliance. Officers have split the Borough geographically for code enforcement when performing rental inspections. Ms. Reiner continues to present a table showing the increase in tickets and code enforcement from September 2024-April 2025. There were 129 rental inspections performed in April. Sum of points for properties have not changed. 164 building inspections were performed and many permit applications were received and issued in April. Mr. Flynn asked about the straw and plastic bag requirements, and if they are being followed. Ms. Reiner explained she and Will Williams (Sustainability Director) are planning public education, perhaps with Downtown West Chester. Mr. Flynn asks about the 44 West Land Development public art that should have been installed in 2022, now the art piece has been seen, perhaps there could be another safer option. Ms. Scimone noted at the Planning Commission meeting, the building codes are

moving from the 2018 edition to the 2021 edition. Ms. Reiner confirmed this will be adopted in July. Building & Housing Department has already acquired new code books.

B. Presentation by Safe Harbor of Chester County, 20 N Matlack St -Tabled
Issue: Discussion of current facilities and services and future plans

C. Presentation of responsible outdoor lighting- dark sky standards- Dr Timothy Lawlor
Issue: Review of current standards and best practices-Dr. Lawlor, Co-Chair of West Chester Green Team gives presentation called "Responsible Lighting, You Won't be Able to Unsee it" about impacts of bad lighting with existing and new construction and the impacts it makes universally. Ms. Scimone asks what the difference is being presented compared to the lighting ordinance already in place. Dr. Lawlor explains that LED lighting was not as prevalent when the ordinance was created. The bright, white light with the blue band is the most damaging light for insects and wildlife and suppresses Melatonin in humans. Mr. Flynn adds Chester County properties are the most illuminated in West Chester, mostly the parking garages. Unfortunately, the County won't act on this, but the rest of the Borough can. He looks forward to adopting the Dark Sky initiative. Mr. Metrick asks if lighting should be reviewed during the permitting process. Dr. Lawlor answers that any lighting should be fully shielded. Lighting should not encroach on neighboring property and lighting should always be pointed down. Using warm lighting instead of cool lighting would cut down greatly on combined illumination. Ms. Scimone added that when time comes to replacing lighting with Borough properties over time, we should look into only replacing with warm lights. Mr. Flynn offers that when the "cobra heads" were replaced throughout the Borough three years ago, the technology exists that the intensity of lighting can be adjusted individually. Lisa Kerns, West Biddle St, commented there was a great presentation about lighting at the Sustainability Committee where they learned about the controllability of the install lighting throughout the Borough.

V. Old Business

A. Motion to approve Smart Growth Committee minutes – April, 2025 (attachment)-3:0 Recommend motion to approve

VI. New Business

A. HARB applications (attachment)
2025-15-39 E. Gay St-Protective barrier for curbside café seating
Issue: Consider a Motion to approve the April HARB Certificate of Appropriateness-Paul Padien, Attorney representing the applicant, and Brianna Hampton, Designer, stand to give presentation of plan of the protective barrier. Mr. Flynn added the Walnut Street sign will have a dedication to Mr. Stan Zukin as a commemorative walkway, being so instrumental working with the Borough over the years. 3:0 Recommend motion to approve.

B. Discuss future revisions to café permits, dining platforms in parking areas, and use of the street during Gay St closure (attachment)
Issue: Improvements to regulations for outdoor seating standards and possible ordinance updates. Interim Director Reiner reviewed possible ordinance additions to clarify Gay Street closure use and occupancy for next season. She continues the only enforcement now is with issued Café permits. There has been confusion with businesses that do not require Café Permits such as retail establishments and solicitation inquiries using the closure for advertising. She suggests separating the sidewalk Café Permit from the Dining Platform. Also, addressing properties that have historically encroached on other businesses. Improving permitting, what the application timeline looks like, PennDot Streetery permits, doing away with Café 1 District and Café 2 District designation, etc., so there are better practices in place for next year. Ms. Reiner explained the current Dining Policy is very confusing with reference to some of the Café Ordinance included. She would like to see clarification with the Café Ordinance, and Dining Policy. Mr. Flynn offered there a number of restaurants that encroach over the middle line of Gay Street and use very aggressive tenting, not the ordinary shelter tenting for inclement weather. The issue is there is no policing of this on nights and

weekends. Overcrowding and blocking pathways could lead to emergency management issues. Ms. Scimone added she would like regulations on how items like this are monitored, because there could be an added benefit to the community allowing big tents. Ms. Dorsey agreed there should be some requirements. Ms. Reiner added that tent requirements and regulations could be added to the Dining Policy. Mayor Debaptiste commented that the tent in question does not look like a circus tent, then added the addition of potted plants to create their own beautiful outdoor area. Regulations with tents being more uniform, and areas beautified would enhance the Gay Street closure experience. Ms. Reiner thanked the Committee for their feedback and will continue refining the ordinance and policy.

C. Discuss West Chester University Campus plan review, issues, and timing (attachment). Mr. Metrick reviews the process of the Master Plan review. First, starting with the Planning Commission next month, then moving onto Smart Growth, then Borough Council Work Session then Voting Session to provide preliminary feedback to the University by June as pledged. There is an extension for the Conditional Use Hearing until August 2025.

VII. Other business-None

VIII. Adjournment-7:43pm

visit www.west-chester.com for access to all attachments. Agendas are posted to www.west- chester.com by noon 3 business days prior to the meeting.

DATE APPLICATION RECEIVED: 02/28/2025

APPLICATION NUMBER: 2025-10

Replace existing wall sign and freestanding sign with newly rebranded signage for Wells Fargo bank

Application not yet complete

Project Name: Wells Fargo-HARB — Add Note

Project Description: Replace existing wall sign and freestanding sign with newly rebranded signage for

Permit Number: COA-25-0001
Initial Application Number: REFERENCE-25-0139
Permit Type: CERTIFICATE OF APPROPRIATENESS- SIGNS
Status:* HARB REVIEW
Process State: Pending
Parent Permit:
Assigned To: User — WENDY MECKE
Fast Track:
Applied for Online:

Applicant: Wenck, Kevin
Primary Contact: Wenck, Kevin
Primary Contractor:
Last Activity: 02/28/2025 11:02
Last Inspection Date:
Initiated: 02/27/2025
Submitted:* 02/27/2025 — Application is 2 days old
Completed: — 4 of 4 submittals received, 0 of 4 submittals accepted.
Approved: — 1 of 3 (33%) steps approved.
Ready: — $0.00 paid (100%), $0.00 due.
Issued:
Finaled: — No inspections.
Closed: — $0.00 deferred fees due.
Expires: Exp Override:

Site Address

Site Address: 17 N HIGH ST — Verify Address and Coordinates
Site City: WEST CHESTER — Latitude:
State: PA Site Zip: 19380 — Longitude:
Inspection Area:
Zone: TC TC
Primary Parcel: 1-9-123

Contractors Submittals Details Workflow Fees Conditions Inspections Other Requirements Notes

Contact

Contact | Phone Numbers | Email Addresses | Details | Secure Details | Points of Contact | Portal Accounts

Replace Photo

Contractor: No — Active:
First Name: Kevin — Middle Name: — Last Name: Wenck
Display Name:* Wenck, Kevin
Primary Phone: 4846952120 — Primary Email: kevin.wenck@fastsigns.com
Portal Access Code:* TSR54-RHSVN

Mailing Address

396 Schantz Rd
Allentown, PA 18104
Edit Address

Physical Address

Edit Address | Copy Mailing Address

Save | Reset | Close | Delete | Audit | Convert to Contractor | Associations

DATE APPLICATION RECEIVED: 02/28/2025

APPLICATION NUMBER: 2025-10

Permit #: COA-25-0001		**Status:**	HARB REVIEW	**Contact:**	Wenck, Kevin
Type:	CERTIFICATE OF APPROPRIATENESS- SIGNS	**Project Name:**	Wells Fargo-HARB	**Contractor:**	

Site Address: 17 N HIGH ST
WEST CHESTER, PA 19380

Name	Value
REASON FOR APPROPRIATENESS APPLICATION:*	Sign
LOCATION OF PROJECT:*	Wall sign and along High St
NAME OF BUSINESS:*	Wells Fargo
ARE YOU REPLACING AN EXSISTING SIGN:*	Yes
HOW MANY SIGNS DO YOU WISH TO INSTALL:*	2
HOW MANY FACADES WILL SIGN DISPLAY ON:*	Front
HANGING SIGN:	No
BUILDING MOUNTED:	Yes
OTHER:	Yes
IF OTHER PLEASE SPECIFY:	Freestanding sign as well, to replace existing
GIVE A THOROUGH DESCRIPTION OF SIGN:	Wall Sign=internally illuminated front lit char
IS THERE NEW ILLUMINATION:	No
FIXTURE TEXT:	Wells Fargo
SIGN DIMENSION HEIGHT:	
SIGN DIMENSION WIDTH:	
SIGN DIMENSION DEPTH:	

Freestanding sign as well, to replace existing free standing sign

Wall Sign=internally illuminated front lit channel letters to replace existing front lit internally illuminated channel letters on backer.
Free standing sign is now an internally illuminated monument sign to replace an existing internally illuminated pylon sign

Application Numbers: 2025-10

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS
Borough of West Chester
Historical and Architectural Review Board

PROJECT ADDRESS: 17 N. High Street

1) ***Date of HARB Review:*** *May 29, 2025*

2) ***Applicant's Proposal:*** *Signs-Revised*

3) **Findings:**

The applicant, Kevin Wenke of Fastsigns, was present to present the project. The overall project is to update the existing Wells Fargo Bank signage to comply with their current visual branding. Mr. Wenke had made a previous submission for review by the HARB at the March 27, 2025 meeting.

Based on the HARB's March 27 comments, Mr. Wenke revised the signage package and returned to the May 29, 2025 meeting to present the applicant's final sign proposal, including additional design documents submitted at the meeting. The proposed signage was described as follows:

- *The existing elevated pilon sign on Gay Street is proposed for removal; it is to be replaced with a lower, but larger 57" W x 44" H. opaque box sign, ground- mounted on a 16" high metal base. Total sign height to be approx. 60". The new sign will be illuminated with LED ground mounted floodlights.*
- *The existing horizontal building-mounted sign facing the rear parking lot is to be replaced with a larger 27"H. x 231"W. non-illuminated, red sign panel with individual boxed-type white letters. The sign-panel size and location are in accordance with previous HARB comments.*
- *Not subject to HARB review: A narrow vertical-red-stripe door applique sign applied to the interior glass of the existing front entrance door facing High Street.*
- *Not included in this submission: The ATM machine signage panel is a future submission.*

The HARB reviewed the application in detail. The HARB complimented the applicant for responding to their previous comments. The design of the monument and wall mounted signs were deemed appropriate. The size of the monument sign was an issue. HARB had asked for it to be 20% smaller, but meant the height and width dimensions, not only the sign area. The HARB objected to the proposed sign height. The final agreement on height with applicant is documented in the final motion.

4) ***Recommendations from HARB:***

The Board recommends Approval of a Certificate of Appropriateness for Application 2025-10 as submitted, including the revised design documents provided at the May 29 HARB meeting, with the following clarifications:

1. *The wall-mounted sign is approved as submitted on Page 5 of the revised May 29, documents.*
2. *The Monument sign's overall height shall be 54"; sign panel 41"H. and metal base 13"H. The Monument sign's width shall be reduced proportionately based on the latest squarish design on Page 4 of the revised May 29, documents.*
3. *The ground mounted up lights for the monument sign will be 24-watt, warm LED floodlights, model SKU-LS-FFL-24-T5HO-30K, as described in the revised May 29, documents.*
4. *The light fixture lumen level is required to comply with the Borough's ordinance.*

Application Numbers: 2025-10

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS
Borough of West Chester
Historical and Architectural Review Board

PROJECT ADDRESS: 17 N. High Street

5) Borough Council's Action and Date

- ❑ Approved per HARB recommendation:
- ❑ Denied for the following reasons:
- ❑ Approved with the following differences from HARB recommendation:

Date of Action Taken: _____ , 2025

Borough Manager's Signature:

REVISED PLANS PER HARB RECOMMENATION

E01 SIGNTYPE WFR2-M-NI-WR CUSTOM MONUMENT SIGN NON-ILLUMINATED

WELLS FARGO TO PROVIDE EXTERNAL ILLUMINATION TO SIGN COORDINATED BY SIGN VENDOR
- NO INTERNAL ILLUMINATION

SIDE A

SIDE B

EXISTING

CUSTOM COMMENTS:

WELLS FARGO TO PROVIDE EXTERNAL ILLUMINATION TO SIGN COORDINATED BY SIGN VENDOR - NO INTERNAL ILLUMINATION

EXISTING SQUARE FOOT = 13.2
PROPOSED SQUARE FOOT = 17.6

Previously proposed 22 SF x .20 (20%) = 4.4
22 SF - 4.4 = 17.6 SF PROPSED

SIDE A

SIDE B

AMERICAN / INTERSTATE SIGNCRAFTERS
130 Commerce Road - Boynton Beach, FL 33426
TEL: (561) 547-3760 / FAX: (561) 547-3842

Revisions:

01.03.25 CB - Revised per redlines	X
04.03.24 CB - Revised for permitting	X
04.11.25 CB - Revised for permitting	X
04.14.25 CB - Revised per mark ups	X

- ALL ELECTRICAL COMPONENTS ARE TO BE U.L. LISTED & APPROVED AS PER THE NEC 2017
- ALL BALLAST, TRANSFORMERS, ELECTRONIC POWER SUPPLIES AND CLASS 2 POWER SOURCES TO COMPLY WITH NEC 600.21
- BRANCH CIRCUIT DISCONNECTING SHALL BE LOCATED IN FRONT OF SIGN IN APPROVED LISTED BOX & BEFORE ENTERING THE STRUCTURE OF THE SIGN AS PER NEC 600.6 & NEC90.4
- ALL PRIMARY WIRING TO BE #12 THWN AS PER NEC-60-5
- GROUNDING & BONDING AS PER NEC 250
- INSTALLATION WILL COMPLY WITH ALL OF THE REQUIREMENTS OF THE NEC 600 & FBC EC 405.2.4
- SIGNS WILL BE CONTROLLED BY A PHOTOCELL OR ASTRONOMICAL TIME CLOCK

File Location: 82663_141560_West Chester West Chester, PA

Date: 12.09.24

Designer: CB PM: MJ

Address: 17 N High Street

City/State: West Chester, PA

Job Number: 82663

Page Number: 4

E02 SIGNTYPE WFR2-WCH-FP-H-14 WHITE REVERSE CHANNEL LETTERS NON-ILLUMINATED ON FASCIA CHANNEL LETTERS

EXISTING

CUSTOM COMMENTS:

EXISTING SQUARE FOOT = 33.06 V.I.F.
PROPOSED SQUARE FOOT = 24.40
RESTORATION AREA 48 SQUARE FEET

Wells Fargo Letters
14" H x 12'-7 7/8"W
= 14.8 SF

PROPOSED

WELLS FARGO

SW 7673 PEWTER CAST

AMERICAN / INTERSTATE SIGNCRAFTERS
130 Commerce Road - Boynton Beach, FL 33426
TEL: (561) 547-3760 / FAX: (561) 547-3842

Revisions:

01.03.25 CB - Revised per redlines	X
04.03.24 CB - Revised for permitting	X
04.11.25 CB - Revised for permitting	X
04.14.25 CB - Revised per mark ups	X

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- GROUNDING & BONDING AS PER NEC 250
- INSTALLATION WILL COMPLY WITH ALL OF THE REQUIREMENTS OF THE NEC 600 & FBC EC 405.2.4
- SIGNS WILL BE CONTROLLED BY A PHOTOCELL OR ASTRONOMICAL TIME CLOCK

File Location: 82663_141560_West Chester West Chester, PA

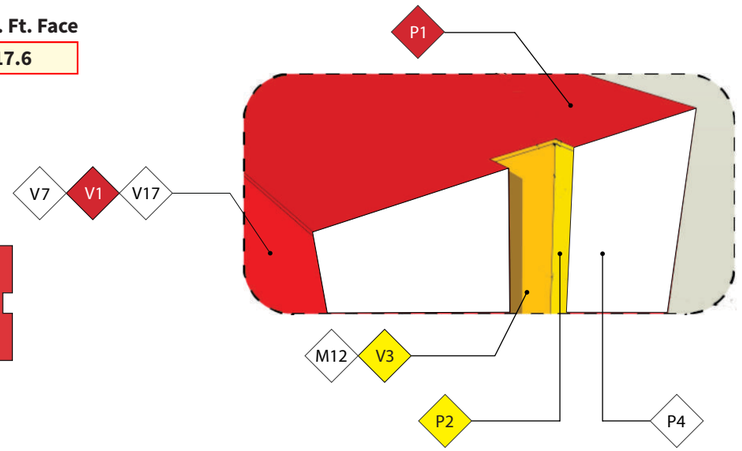
Date: 12.09.24
Designer: CB PM: MJ
Address: 17 N High Street
City/State: West Chester, PA
Job Number: 82663
Page Number: 5

E01 SIGNTYPE WFR2-M-NI-WR CUSTOM MONUMENT SIGN NON-ILLUMINATED

WELLS FARGO TO PROVIDE EXTERNAL ILLUMINATION TO SIGN COORDINATED BY SIGN VENDOR - NO INTERNAL ILLUMINATIO

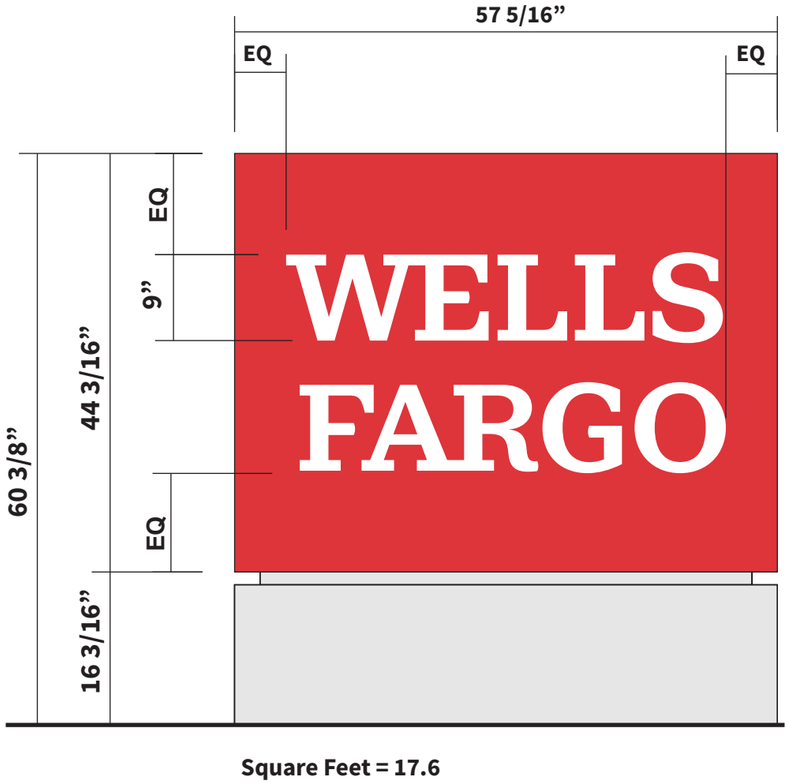
	A	B	C	D	E	Sq. Ft. Face
WFR2-M-NI-WR CUSTOM	57 5/16”	44 3/16”	60 3/8”	9”	16 3/16”	17.6

2 **Plan View**
Scale: Not To Scale



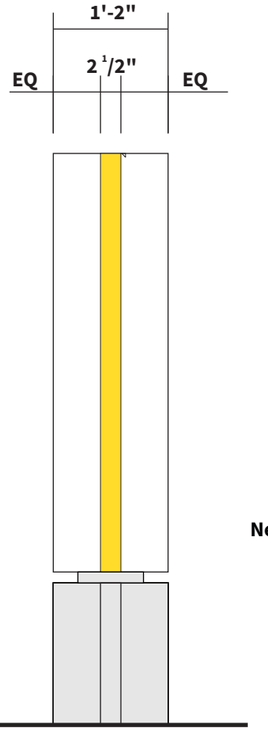
Color Reference Chart

- P1 — Painted Matthews MP99020, R189332 SV Satin V1.0 (Translucent) (Back & Edges Only)
- P2 — Painted Matthews MP99038, R208821 SV Satin V1.0
- P3 — Painted Matthews MP99705, R189555 SV Satin V1.0
- P4 — Painted Matthews MP11477, R206822 SV Satin V1.0
- M12 — .177” White Polycarbonate
- V1 — 3M 3630-2538 Wells Fargo Environments Red Translucent Vinyl
- V3 — 3M 3730-4337 Wells Fargo Environments Yellow Translucent Vinyl
- V7 — Clear Vinyl, 3M 3660M, Matte Overlaminate
- V17 — 3M Panagraphics III White Flex Face

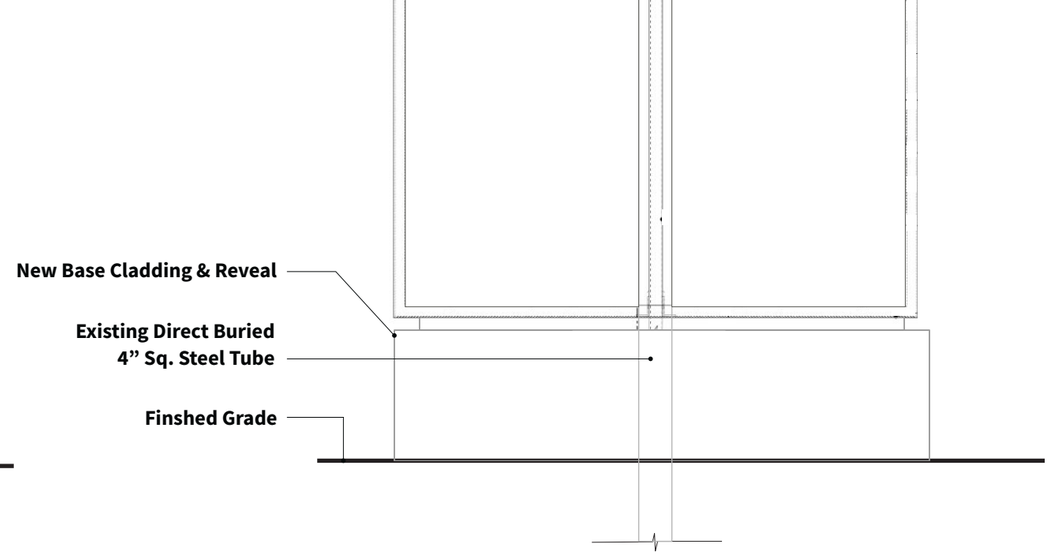


Square Feet = 17.6

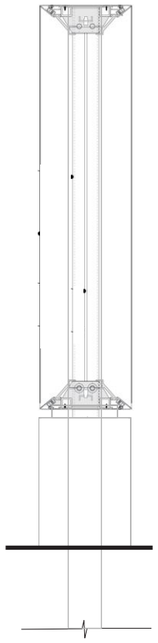
1 **Front View**
Scale: 3/4”=1’-0”



3 **Side View**
Scale: Not To Scale



4 **Front Section View**
Scale: Not To Scale



5 **Side Section View**
Scale: Not To Scale

AMERICAN / INTERSTATE SIGNCRAFTERS
130 Commerce Road - Boynton Beach, FL 33426
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Revisions:

01.03.25 CB - Revised per redlines	X
04.03.24 CB - Revised for permitting	X
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File Location: 82663_141560_West Chester West Chester, PA

Date: 12.09.24
Designer: CB PM: MJ
Address: 17 N High Street
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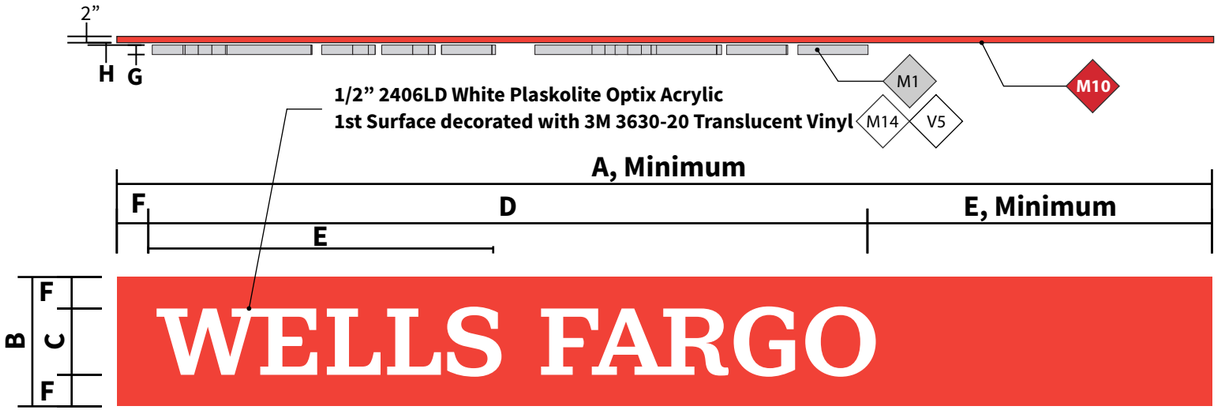
E02 SIGNTYPE WFR2-WRCH-FP-H-14 WHITE REVERSE CHANNEL LETTERS NON-ILLUMINATED ON FASCIA CHANNEL LETTERS



A = Width of Panel
B = Height of Panel
C = Height of "W"
D = Width of Letters
E = Width of "Wells"
F = 47-1/2% of Height of "W"
G = Letter Depth
H = Standoff Depth

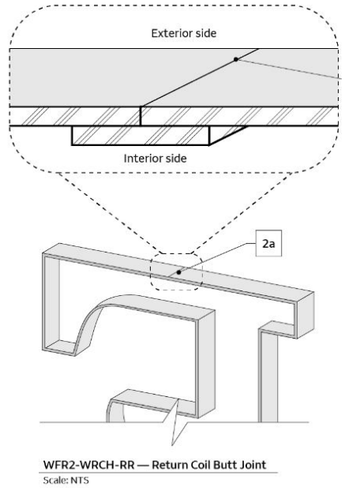
1 **Front Elevation**
Scale: NTS

	A	B	C	D	E	F	G	H
-10	165-1/2"	19-1/2"	10"	108-1/2"	52"	4-7/8"	2-1/2"	1/2"
-12	198-1/4"	23-3/8"	12"	130-1/8"	62-1/2"	5-3/4"	2-1/2"	1/2"
-14	231-3/8"	27-1/4"	14"	151-7/8"	72-3/4"	6-3/4"	2-1/2"	1/2"
-16	264-3/8"	31-1/4"	16"	173-1/2"	83-1/4"	7-5/8"	2-1/2"	1/2"
-18	297-5/8"	35-1/8"	18"	195-1/4"	93-5/8"	8-5/8"	2-1/2"	3/4"
-21	347"	40-15/16"	21"	227-3/4"	109-1/4"	10"	3"	3/4"
-24	396-5/8"	46-7/8"	24"	260-3/8"	124-3/4"	11-1/2"	3"	3/4"
-27	446-1/8"	52-5/8"	27"	292-7/8"	140-1/2"	12-15/16"	3"	3/4"
-30	495-3/4"	58-1/2"	30"	325-3/8"	156"	14-3/8"	3"	3/4"

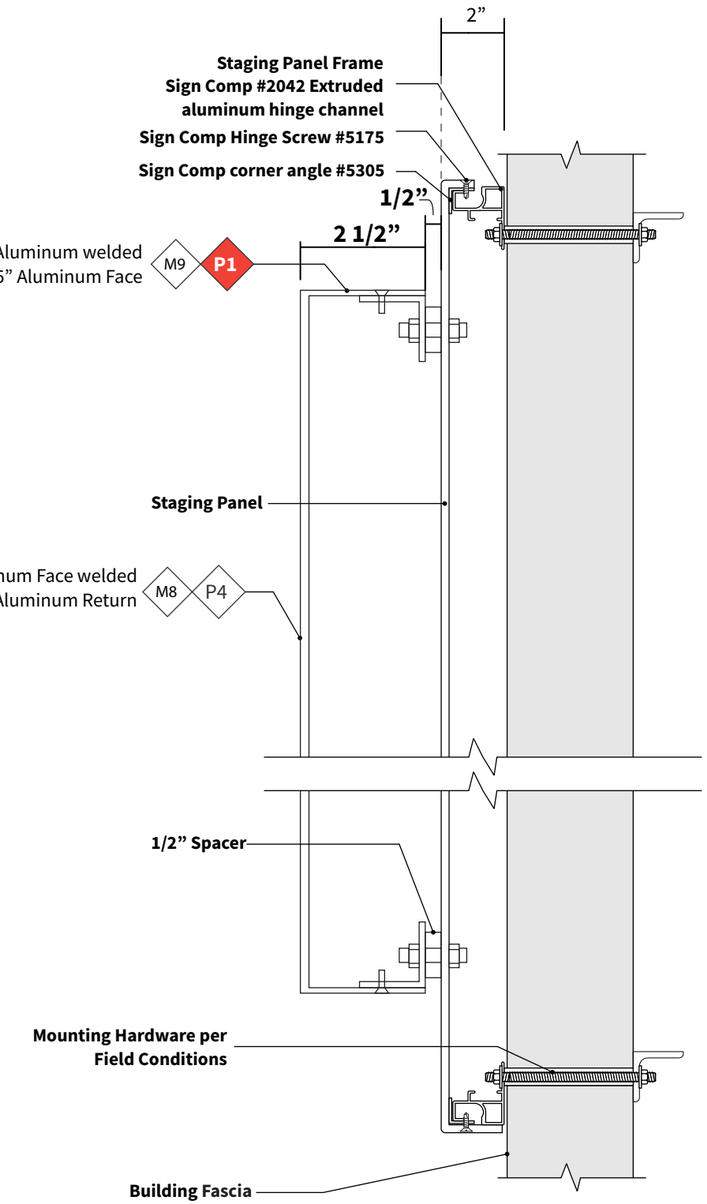
Wells Fargo Letters
14" H x 12'-7 7/8"W
= 14.8 SF

Material & Color Reference Chart

- M10 — ACM Alpolic WNX WF Env. Red
- L3 — LED Modules, GE/Current, Power Max HO, 6500k White 24v
- L17 — LED Modules, SloanLED Prism24 HO, 6500k White 24v
- V2 — 3M 3630-53 Cardinal Red
- V5 — 3M 3630-20 White Translucent Vinyl
- V8 — 3M 3735-60 Diffuser Vinyl
- M5 — Acrylic, Plaskolite Optix, Clear
- M1 — Aluminum Coil, Pre-Finished Wieland ATT Silver, or RSA WF Platinum #654
- M14 — Acrylic, Plaskolite Optix, 2406LD, White



WFR2-WRCH-RR — Return Coil Butt Joint
Scale: NTS



1 **Section A - A**

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E02 **SIGNTYPE** **WFR2-WRCH-FP-H-14 WHITE REVERSE CHANNEL LETTERS NON-ILLUMINATED ON FASCIA CHANNEL LETTERS**

REVISED PLANS PER HARB RECOMMENDATION

EXISTING

CUSTOM COMMENTS:

EXISTING SQUARE FOOT = 33.06 V.I.F.
PROPOSED SQUARE FOOT = 24.40
RESTORATION AREA 48 SQUARE FEET

PROPOSED

WELLS FARGO

SW 7673 PEWTER CAST

APPROVED
By Adam Loew at 1:28 pm, Apr 18, 2025

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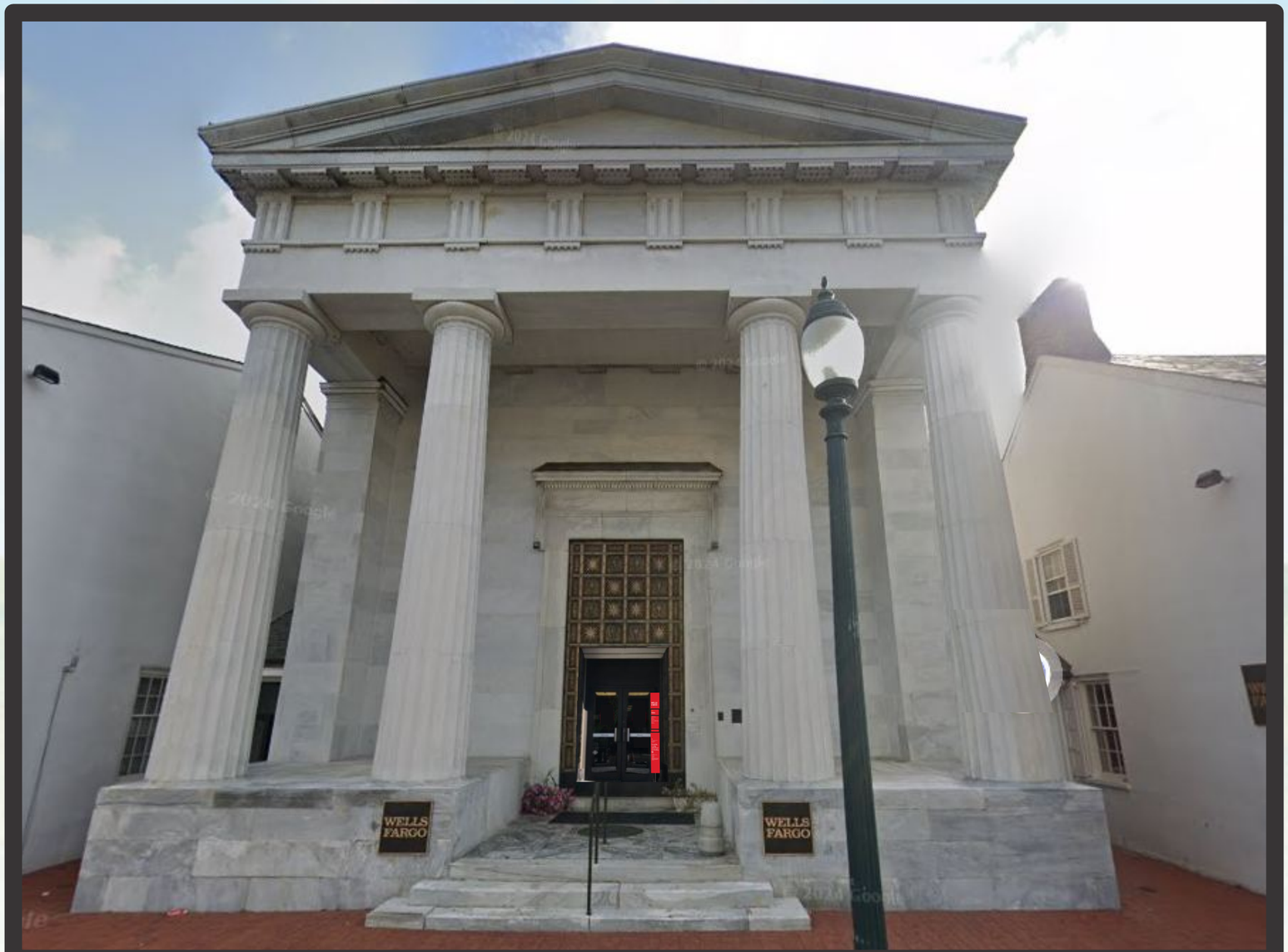
laying edge of sign
to curb-26'
face to driveway 34"
WELLS FARGO
WC seafood kitchen
38 E. GAY ST.

WELLS FARGO
Parking for Wells Fargo Customers
While transacting Bank business.
Parking for Wells Fargo Customers
While transacting Bank business.
Parking for Wells Fargo Customers
While transacting Bank business.
FASTSIGNS
USDOT 2829654
WELLS FARGO
TIGUAN
SE
MJC-3604

WELLS FARGO

BE 141560
WEST CHESTER

17 N HIGH ST
WEST CHESTER, PA 19380
JANUARY 3, 2025



DESIGN SPECIFICATIONS				
IBC	2018	with	PA	amendments
ASCE	7-16	Minimum Design Loads for Buildings & Other Structures		
ACI	318-14	Building Code Requirements for Structural Concrete		
ANSI/AISC	360-16	Specification for Stuctural Steel Buildings		

DESIGN LOADS		
Wind	V =	115 mph
Exposure	C	
Risk Cat.	II	
Grnd. Snow	Pg =	25 psf

BRAND BOOK APPROVAL

Approved Erica Rhodus 1.13.2025

LL REQUIRED CHANGE(S)

PERMIT CHANGE(S)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JERE MURDOCH
ENGINEER
PE082030

2399 NJ-34, A-2
MANASQUAN, NJ 08736
(973) 570-8215 x0

MURDOCH ENGINEERING

1/30/2025

Jere Murdoch, PE
Professional Engineer
PA PE Lic. #PE082030

AMERICAN / INTERSTATE SIGNCRAFTERS
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TEL: (561) 547-3760 / FAX: (561) 547-3842

Revisions: **PROPOSED**

01.03.25 CB - Revised per redlines	X
X	X
X	X
X	X

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Page Number: 1

E01 SIGNTYPE WFR2-M-22-WR MONUMENT SIGN ILLUMINAT

DESIGN SPECIFICATIONS			
IBC	2018	with PA	amendments
ASCE	7-16	Minimum Design Loads for Buildings & Other Structures	
ACI	318-14	Building Code Requirements for Structural Concrete	
ANSI/AISC	360-16	Specification for Stuctural Steel Buildings	

DESIGN LOADS		
Wind	V =	115 mph
Exposure	C	
Risk Cat.	II	
Grnd. Snow	Pg =	25 psf

SIDE A

SIDE B

EXISTING

CUSTOM COMMENTS:

NOTE: PROPOSED THE SMALLEST STANDARD SIGN AT 22SF WHICH IS OVER THE ALLOWED 20 SF AND WE MAY NEED TO MODIFY THE SIGN TO REDUCE SF FOR PERMIT APPROVAL

EXISTING SQUARE FOOT = 13.2 V.I.F.
PROPOSED SQUARE FOOT = 22

SIDE A

SIDE B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JERE MURDOCH
ENGINEER
PE082030

2259 NJ-34, A-2
MANASQUAN, NJ 08736
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X X
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Page Number: 2

E02 SIGNTYPE WFR2-WRCH-RR-H-18 NON-ILLUMINATED CHANNEL LETTERS

DESIGN SPECIFICATIONS				
IBC	2018	with	PA	amendments
ASCE	7-16	Minimum Design Loads for Buildings & Other Structures		
ACI	318-14	Building Code Requirements for Structural Concrete		
ANSI/AISC	360-16	Specification for Stuctural Steel Buildings		

DESIGN LOADS		
Wind	V =	115 mph
Exposure	C	
Risk Cat.	II	
Grnd. Snow	Pg =	25 psf

EXISTING

PROPOSED

CUSTOM COMMENTS:

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PROPOSED SQUARE FOOT = 24.40
RESTORATION AREA 48 SQUARE FEET

WELLS FARGO

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X	X

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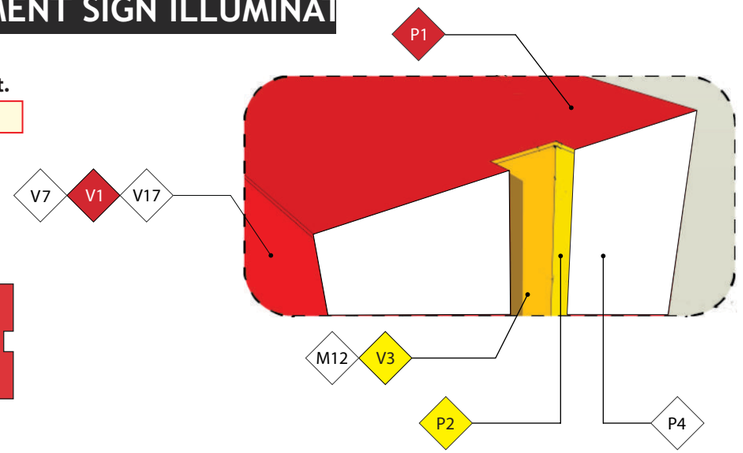
E01 SIGNTYPE WFR2-M-22-WR MONUMENT SIGN ILLUMINAT

	A	B	C	D	E	Sq. Ft.
WFR2-M-22-WR	63-7/8”	49-1/4”	67-1/4”	10-1/8”	18”	22
WFR2-M-34-WR	79-1/2”	61-1/4”	79-1/4”	12-5/8”	18”	
WFR2-M-48-WR	95”	73-1/4”	96-1/8”	15”	22-7/8”	



Color Reference Chart

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- **P2** Painted Matthews MP99038, R208821 SV Satin V1.0
- **P3** Painted Matthews MP99705, R189555 SV Satin V1.0
- **P4** Painted Matthews MP11477, R206822 SV Satin V1.0
- **M12** .177” White Polycarbonate
- **V1** 3M 3630-2538 Wells Fargo Environments Red Translucent Vinyl
- **V3** 3M 3730-4337 Wells Fargo Environments Yellow Translucent Vinyl
- **V7** Clear Vinyl, 3M 3660M, Matte Overlaminate
- **V17** 3M Panagraphics III White Flex Face

1 **Plan View**
Scale: Not To Scale

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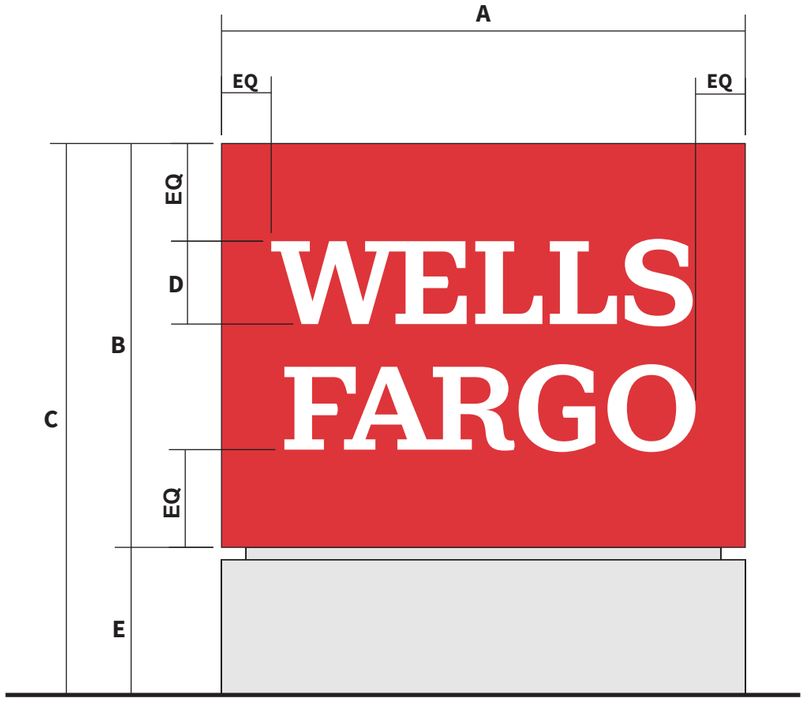
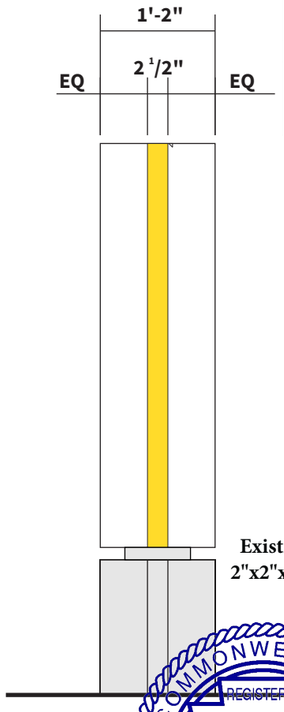
ASCE	7-16	Minimum Design Loads for Buildings & Other Structures		
ACI	318-14	Building Code Requirements for Structural Concrete		
ANSI/AISC	360-16	Specification for Stuctural Steel Buildings		

DESIGN LOADS		
Wind	V =	115 mph
Exposure	C	
Risk Cat.	II	
Grnd. Snow	Pg =	25 psf

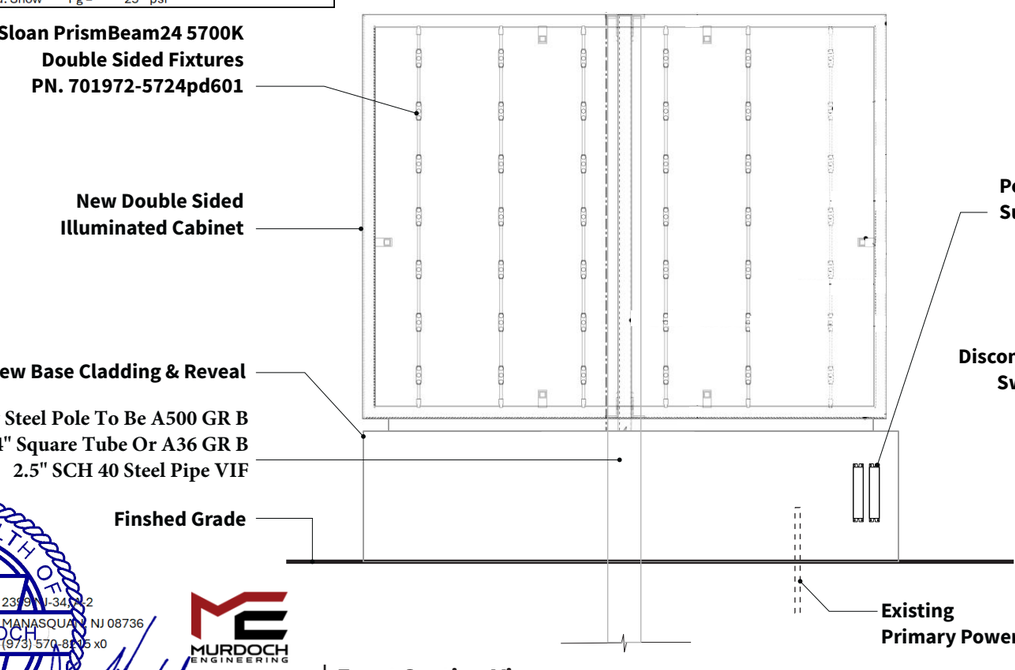
Use For All Locations
Except Florida Locations



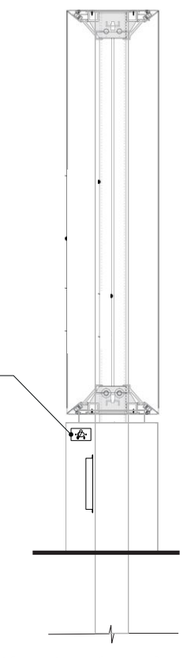
2 **Front View**
Scale: Not To Scale



3 **Side View**
Scale: Not To Scale



4 **Front Section View**
Scale: Not To Scale



5 **Side Section View**
Scale: Not To Scale

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JERE MURDOCH
ENGINEER
PE082030

2399 NJ-34 Ste 2
MANASQUAN, NJ 08736
(973) 570-8215 x0

MURDOCH ENGINEERING

1/30/2025

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TEL: (561) 547-3760 / FAX: (561) 547-3842

Revisions:
01.03.25 CB - Revised per redlines X
X X
X X
X X

- ALL ELECTRICAL COMPONENTS ARE TO BE U.L. LISTED & APPROVED AS PER THE NEC 2017
- ALL BALLAST, TRANSFORMERS, ELECTRONIC POWER SUPPLIES AND CLASS 2 POWER SOURCES TO COMPLY WITH NEC 600.21
- BRANCH CIRCUIT DISCONNECTING SHALL BE LOCATED IN FRONT OF SIGN IN APPROVED LISTED BOX & BEFORE ENTERING THE STRUCTURE OF THE SIGN AS PER NEC 600.6 & NEC90.4
- ALL PRIMARY WIRING TO BE #12 THWN AS PER NEC-60-5
- GROUNDING & BONDING AS PER NEC 250
- INSTALLATION WILL COMPLY WITH ALL OF THE REQUIREMENTS OF THE NEC 600 & FBC EC 405.2.4
- SIGNS WILL BE CONTROLLED BY A PHOTOCELL OR ASTRONOMICAL TIME CLOCK

UL LISTED

File Location:
82663_141560_West Chester
West Chester, PA

Date: 12.09.24
Designer: CB PM: MJ

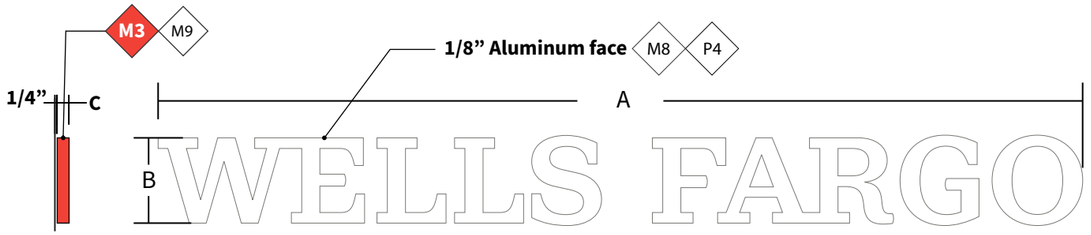
Address: 17 N High Street
City/State: West Chester, PA

Job Number: 82663
Page Number: 4

E02 SIGNTYPE WFR2-WRCH-RR-H-18 WHITE CHANNEL LETTERS WITH RED RETURN - NON-ILLUMINATED

DESIGN SPECIFICATIONS			
IBC	2018	with PA	amendments
ASCE	7-16	Minimum Design Loads for Buildings & Other Structures	
ACI	318-14	Building Code Requirements for Structural Concrete	
ANSI/AISC	360-16	Specification for Stuctural Steel Buildings	

DESIGN LOADS		
Wind	V =	115 mph
Exposure	C	
Risk Cat.	II	
Grnd. Snow	Pg =	25 psf



1 **Front Elevation**
Scale: NTS

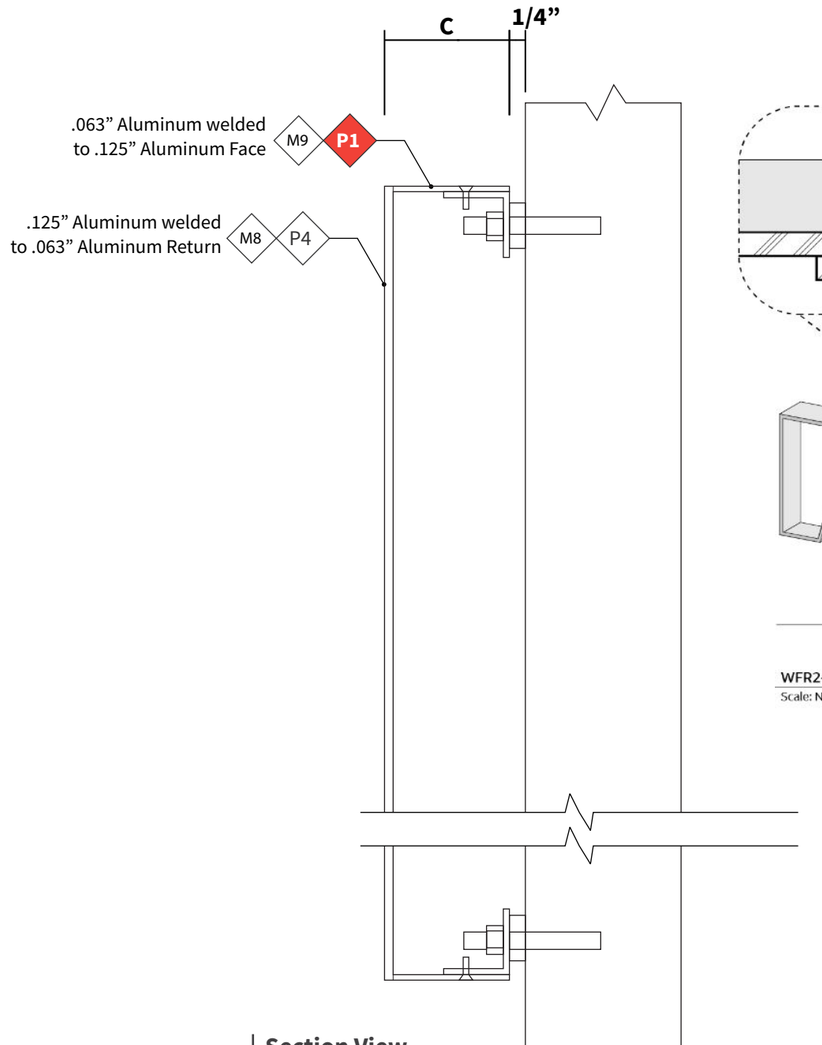
	A	B	C
-10	108-1/2"	10"	2-1/2"
-12	130-1/8"	12"	2-1/2"
-14	151-7/8"	14"	2-1/2"
-16	173-1/2"	16"	2-1/2"
-18	**195-1/4"**	**18"**	**2-1/2"**
-21	227-3/4"	21"	3"
-24	260-3/8"	24"	3"
-27	292-7/8"	27"	3"
-30	325-3/8"	30"	3"

A = Width of Letters

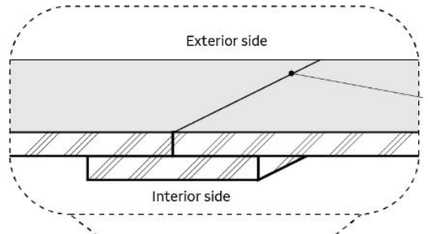
B = Height of Letters

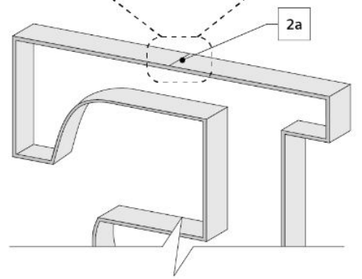
C = Depth of Letters

- P1 MP99020, R189332 SV Satin V1.0
- P4 MP 11477, R206822 SV Satin V10.0 Finish
- M8 1/8” Aluminum
- M9 .063” Aluminum



2 **Section View**
NTS





WFR2-WRCH-RR — Return Coil Butt Joint
Scale: NTS

ENGINEER'S NOTE:
Provide Min. QTY: 3 Connections
Per Letter TYP. Evenly Spaced

FASTENER SCHEDULE		
	3/8" LAG SCREW	FOR USE WITH WOOD OR EIFS WALL SYSTEMS. 1-1/2" MIN PENETRATION (EXCL. TIP)
	3/8" DIA. THREADED ROD	FOR USE WITH WOOD, CONCRETE BLOCK OR EIFS WALL SYSTEMS.
	3/8" RED HEAD L.D.T. (LARGE DIAMETER TAPCON)	FOR USE WITH CONCRETE BLOCK, BRICK OR CONCRETE. EMBED A MIN. OF 2 1/2".
	3/8" DIA. HILTI HIT ROD WITH HY150 MAX ADHESIVE	FOR USE WITH CONCRETE. EMBED A MIN. OF 2".
	3/8" DIA. HILTI HIT ROD WITH HY20 ADHESIVE	FOR USE WITH MASONRY AND BRICK. EMBED A MIN. OF 3 3/8".
	3/8" DIA. HILTI HIT ROD WITH HY20 ADHESIVE	FOR USE WITH CONCRETE BLOCK. EMBED A MIN. OF 2".
	3/8" DIA. HILTI HLC SLEEVE ANCHOR	FOR USE WITH CONCRETE, MASONRY AND BRICK. EMBED A MIN. OF 3 3/8".

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JERE MURDOCH
PE082030

MURDOCH ENGINEERING

1/30/2025

Jere Murdoch, PE
Professional Engineer
PA PE Lic. #PE082030

AMERICAN / INTERSTATE SIGNCRAFTERS
130 Commerce Road - Boynton Beach, FL 33426
TEL: (561) 547-3760 / FAX: (561) 547-3842

Revisions:
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File Location: 82663_141560_West Chester West Chester, PA

Date: 12.09.24
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Page Number: 5

GENERAL:

1. ALL MATERIALS AND WORK SHALL CONFORM TO THE REQUIREMENTS OF THE APPLICABLE INTERNATIONAL BUILDING CODE (IBC).
2. CONSTRUCTION METHODS AND PROJECT SAFETY: DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE METHODS, PROCEDURES, OR SEQUENCE OF CONSTRUCTION. TAKE NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE DURING CONSTRUCTION. THE EOR WILL NOT ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT, AND MAINTAIN ALL SAFETY DEVICES AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE, AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS, AND REGULATIONS.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS PRIOR TO THE START OF CONSTRUCTION AND NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES OR INCONSISTENCIES THAT ARE FOUND. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE DRAWINGS.
4. ALL OMISSIONS AND/OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND FIELD INSPECTOR. THE ENGINEER SHALL PROVIDE A SOLUTION PRIOR TO PROCEEDING WITH ANY WORK AFFECTED BY THE CONFLICT OR OMISSION.
5. WHERE NO CONSTRUCTION DETAILS ARE SHOWN OR NOTED FOR ANY PART OF THE WORK, CONSTRUCT IN ACCORDANCE WITH THE STEEL CONSTRUCTION MANUAL, 14TH EDITION OR 2010 ALUMINUM DESIGN MANUAL .
6. WHEN A DETAIL IS IDENTIFIED AS TYPICAL, THE CONTRACTOR IS TO APPLY THIS DETAIL IN ESTIMATING AND CONSTRUCTION TO EVERY LIKE CONDITION WHETHER OR NOT THE REFERENCE IS REPEATED IN EVERY INSTANCE.
7. ANY CHANGE TO THE DESIGN AS SHOWN ON THE DRAWINGS REQUIRES PRIOR WRITTEN APPROVAL FROM DESIGN ENGINEER OF RECORD BEFORE CONSTRUCTION.
8. WORK PERFORMED IN CONFLICT WITH THE STRUCTURAL DRAWINGS OR APPLICABLE BUILDING CODE REQUIREMENTS SHALL BE CORRECTED AT THE EXPENSE OF THE CONTRACTOR.
9. VERIFICATION: VERIFY ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS BEFORE STARTING WORK. NOTIFY THE EOR IMMEDIATELY OF ANY DISCREPANCIES.

EXISTING CONDITIONS:

1. IF EXISTING CONDITIONS ARE NOT AS DETAILED IN THIS DESIGN, THE INSTALLER SHALL CEASE WORK AND NOTIFY MURDOCH ENGINEERING IMMEDIATELY.
2. MURDOCH ENGINEERING WILL NOT BE PERFORMING ON-SITE INSPECTIONS OR VERIFICATIONS. IT IS THE RESPONSIBILITY OF THE INSTALLER, STRUCTURE OWNER, AND PROPERTY OWNER TO IDENTIFY EXISTING CONDITIONS AND CONTACT MURDOCH ENGINEERING WITH ANY DISCREPANCIES OR CONCERNS.
3. INSTALLER SHALL CONFIRM THE DIAMETER AND THICKNESS OF EXISTING MEMBERS AND NOTIFY MURDOCH ENGINEERING OF ANY DISCREPANCIES.
4. INSTALLER SHALL INSPECT AND CONFIRM THE QUALITY OF EXISTING STRUCTURE AS "IN GOOD REPAIR". IF THERE ARE ANY INDICATIONS THAT THIS IS NOT THE CASE, INSTALLER SHALL CEASE WORK IMMEDIATELY AND NOTIFY MURDOCH ENGINEERING.
5. ANY EXISTING INFORMATION SHOWN HAS BEEN FURNISHED BY THE PERSON(S) OR COMPANY THIS DOCUMENT WAS PREPARED FOR (SEE TITLE BLOCK). MURDOCH ENGINEERING IN NO WAY CERTIFIES THIS INFORMATION AS "AS-BUILT". IF THERE IS ANY REASON TO BELIEVE THE EXISTING CONDITIONS DETAILED HEREIN ARE NOT ACCURATE, MURDOCH ENGINEERING SHALL BE NOTIFIED IMMEDIATELY.

STEEL

1. STEEL SHAPES SHALL CONFORM TO THE FOLLOWING:

ROUND HSS	ASTM A500, GR B	Fy=42 KSI MIN.
SQUARE/RECT HSS	ASTM A500, GR B	Fy=46 KSI MIN.
THREADED ROD	F1554 GR 55	Fy=55 KSI MIN.
STEEL PLATE STD.	ASTM A36 ASTM	Fy=36 KSI MIN.
PIPE	A53, GR B	Fy=35 KSI MIN.

2. BOLTS SHALL CONFORM TO ASTM A325 UNO.
3. BOLTS AND THREADED ROD SHALL BE HOT-DIP GALVANIZED PER ASTM F2329 UNO.
4. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554 UNO.
5. NUTS SHALL CONFORM TO ASTM A563.
6. WASHERS SHALL CONFORM TO ASTM F844.
7. STEEL HARDWARE SHALL BE HOT-DIP GALVANIZED PER ASTM A153 UNO
8. WELDING:
   a. WELD STRUCTURAL STEEL IN COMPLIANCE WITH ANSI/AWS D1.1 AND AISC SPECIFICATION, CHAPTER J. WELDERS SHALL BE CERTIFIED AS REQUIRED BY GOVERNING CODE AUTHORITY. WELDING SHALL BE DONE BY ELECTRIC ARC PROCESS USING LOW-HYDROGEN ELECTRODES WITH SPECIFIED TENSILE STRENGTH NOT LESS THAN 70 KSI UNLESS NOTED OTHERWISE.
   b. ALL SHOP AND FIELD WELDS SHALL BE PERFORMED BY AN AWS OR ICC CERTIFIED WELDER WITH ACTIVE STATUS AT TIME OF WELDING
   c. UNLESS A LARGER WELD SIZE IS INDICATED, PROVIDE MINIMUM SIZE WELDS PER AISC SPECIFICATION, SECTION J2, TABLE J2.4
   d. BASE PLATES SHALL BE WELDED ON TOP AND BOTTOM WITH CONTINUOUS WELDS OF AT LEAST 1/4" (IF PLATE IS CUT TO FIT TUBE INTO PLATE)

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ALUMINUM:

1. FABRICATE AND ERECT ALUMINUM IN COMPLIANCE WITH THE ALUMINUM ASSOCIATION (AA) 2010 ALUMINUM DESIGN MANUAL (ADM) 1, THE SPECIFICATIONS FOR ALUMINUM SHEET METAL WORK (ASM35), AND IBC CHAPTER 20.
2. PIPE AND TUBE SHALL BE 6061-T6 PER ASTM B241 OR B429 WITH Ftu=38 KSI MIN, Fty=35 KSI MIN, Ftuw=24 KSI MIN, Ftyw=15 KSI MIN.
3. STD STRUCTURAL PROFILES SHALL BE 6061-T6 PER B308 WITH Ftu=38 KSI MIN, Fty=35 KSI MIN, Ftuw=24 KSI MIN, Ftyw=15 KSI MIN.
4. SHEET AND PLATE SHALL BE 6061-T6 PER ASTM B209 WITH Ftu=42 KSI MIN, Fty=35 KSI MIN, Ftuw=24 KSI MIN, Ftyw=15 KSI MIN.
5. EXTRUSIONS SHALL BE 6061-T6 PER ASTM B241 OR B429 WITH Ftu=38 KSI MIN, Fty=35 KSI MIN, Ftuw=24 KSI MIN, Ftyw=15 KSI MIN.
6. ALL SHOP AND FIELD WELDS SHALL BE PERFORMED BY AN AWS OR ICC CERTIFIED WELDER WITH CURRENT STATUS AT TIME OF WELDING
7. UNLESS A LARGER WELD SIZE IS INDICATED, PROVIDE MINIMUM SIZE WELD PER ADM. ALL ALUMINUM WELDED JOINTS SHALL HAVE WELD SIZES OF AT LEAST $\frac{1}{4}$ INCH
8. FILLET WELDS SHALL NOT EXCEED THINNEST MEMBER WALL THICKNESS JOINED.
9. ALUMINUM WELD FILLER SHALL BE 5356 ALLOY
10. WELDING PROCESS GMAW OR GTAW SHALL BE IN ACCORDANCE WITH AWS D1.2 ⁻
11. ALUMINUM CHANNEL LETTERS SHALL BE CONSTRUCTED OF 0.090" RETURNS AND 0.125" BACKS MINIMUM, UNLESS A LARGER SIZE IS INDICATED ON DRAWINGS. THIS NOTE SHALL SUPERCEDE DRAWING DETAILS.
12. PROVIDE NEOPRENE GASKET BETWEEN DISSIMILAR METALS TO PREVENT GALVANIC CORROSION
13. ALUMINUM DIRECTLY EMBEDDED INTO CONCRETE SHALL BE CAPPED AT BOTTOM AND COATED WITH BITUMINOUS COATING OR POLYURETHANE WHERE IN CONTACT WITH CONCRETE.
14. FASTENERS BETWEEN DISSIMILAR METALS SHALL BE STAINLESS STEEL 316.

CONCRETE & REINFORCEMENT

1. MINIMUM 28-DAY COMPRESSIVE STRENGTH (fc') SHALL BE 3,000 PSI. THE MAXIMUM WATER TO CEMENT RATIO SHALL BE 0.45 BY WEIGHT. A MINIMUM OF 5-3/4 BAGS OF CEMENT SHALL BE USED PER CUBIC YARD WITH A SLUMP OF 4" +/- 1.
2. REINFORCEMENT TO BE ASTM A615 GR 60, Fy=60 KSI UNO
3. CALCIUM CHLORIDE OR ADDED CHLORIDE IS NOT PERMITTED
4. VIBRATION: ALL REINFORCED CONCRETE SHALL BE CONSOLIDATED WITH MECHANICAL VIBRATORS
5. CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318-14
6. PROVIDE A MINIMUM OF 2-1/2" COVER OF ALL EMBEDDED STEEL REBAR AND A MINIMUM OF 6 INCHES OF COVER FOR DIRECT BURIED PIPE OR TUBE MEMBERS.

FOUNDATIONS

1. CONCRETE POURED INTO CONSTRAINED EARTH EXCAVATIONS MUST CURE UNDER PROPER CONDITIONS FOR A MINIMUM OF 7 DAYS PRIOR TO SIGN BOX INSTALLATION. (EXCEPTION: IF THE OVERALL HEIGHT OF THE SIGN IS LESS THAN 20 FEET AND THE SIGN IS ADEQUATELY BRACED AGAINST WIND LOADS FOR A MINIMUM OF 4 DAYS, THE BOX MAY BE INSTALLED THE SAME DAY AS THE FOOTING IS POURED)
2. FOOTINGS MUST BE POURED AGAINST UNDISTURBED EARTH. SOIL BACKFILL IS UNACCEPTABLE. WHEN A SONOTUBE IS USED AS THE FORM, 3/4" BLUESTONE OR CONCRETE SHALL BE USED TO BACKFILL THE SPACE BETWEEN THE SONOTUBE AND UNDISTURBED EARTH.
3. COLD WEATHER PLACEMENT: PROTECT CONCRETE WORK FROM PHYSICAL DAMAGE OR REDUCED STRENGTH THAT COULD BE CAUSED BY FROST, FREEZING ACTIONS OR LOW TEMPERATURES. DO NOT POUR CONCRETE DURING OR WHEN FREEZING TEMPERATURES ARE ANTICIPATED WITHIN 3 DAYS OF POUR.
4. REINFORCEMENT IS NOT REQUIRED FOR DIRECT BURIAL TYPE SIGN FOOTINGS FOR SIGNS OF 25 FEET OVERALL HEIGHT OR LESS, DIRECT BURIED STEEL SHALL EXTEND TO 6 INCHES FROM BOTTOM OF FOOTING.
5. FOR ANCHOR BOLT/ BASE PLATE - SQUARE FOOTINGS, PROVIDE A MINIMUM OF #5 VERTICAL REBAR @ 12" O.C., 4" OFFSET FROM PERIMETER, TOP AND BOTTOM OF FOOTING. PROVIDE #3 HORIZONTAL TIES @ 12" O.C. UNLESS OTHERWISE NOTED.
6. FOR ANCHOR BOLT/ BASE PLATE - ROUND FOOTINGS, PROVIDE A MINIMUM OF SIX (6) VERTICAL #5 REBARS, EVENLY SPACED, 4" OFFSET FROM FOOTING PERIMETER & #3 HORIZONTAL TIES, 12" O.C. Unless otherwise noted.
7. ANCHOR BOLTS SHALL BE TIED TO REBAR CAGE AT A MINIMUM OF TWO LOCATIONS PER ANCHOR BOLT
8. FOOTING DESIGN ASSUMES FOOTING SHALL BE EXCAVATED AND POURED IN UNDISTURBED NATURAL EARTH, CAPABLE OF WITHSTANDING A MINIMUM 1,500 PSF VERTICAL DESIGN BEARING PRESSURE AND 150 PSF/FT OF DEPTH OF LATERAL BEARING PRESSURE BASED ON SOIL DATA OBTAINED FROM THE USGS SOIL SURVEY.
9. IF CLAY, SILTY - CLAY, ORGANIC OR FILL SOIL IS ENCOUNTERED UPON EXCAVATION, CONTACT MURDOCH ENGINEERING FOR FOOTING DESIGN MODIFICATION PRIOR TO CONSTRUCTION.
10. PORTION OF STEEL SUPPORT EMBEDDED INTO CONCRETE SHALL NOT BE PAINTED. IT SHALL BE CLEAN BARE METAL FOR PROPER ADHESION TO CONCRETE

SCOPE OF WORK:

1. LIMITS OF LIABILITY TO EXTEND ONLY TO THE QUANTITY INDICATED. ATTEMPTS IN PART OR IN WHOLE TO INSTALL GREATER QUANTITIES THAN THOSE SPECIFIED WITHOUT CONSULTING MURDOCH ENGINEERING SHALL VOID ALL PROFESSIONAL LIABILITY AND COVERAGE.

DESIGN SPECIFICATIONS

IBC	2018	with PA	amendments
ASCE	7-16	Minimum Design Loads for Buildings & Other Structures	
ACI	318-14	Building Code Requirements for Structural Concrete	
ANSI/AISC	360-16	Specification for Stuctural Steel Buildings	

DESIGN LOADS

Wind	V =	115 mph
Exposure	C	
Risk Cat.	II	
Grnd. Snow	Pg =	25 psf

MURDOCH ENGINEERING
murdochengineering.com
(973) 570-8215
2399 NJ-34 A-2
Manasquan, NJ 08736

PREPARED FOR:

AMERICAN / INTERSTATE SIGNCRAFTERS

PROJECT TITLE:
WELLS FARGO

PROJECT ADDRESS:
17 N High St, West Chester, PA 19380, USA

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JERE MURDOCH
ENGINEER
PE082030

2399 NJ-34, A-2
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(973) 570-8215 x0

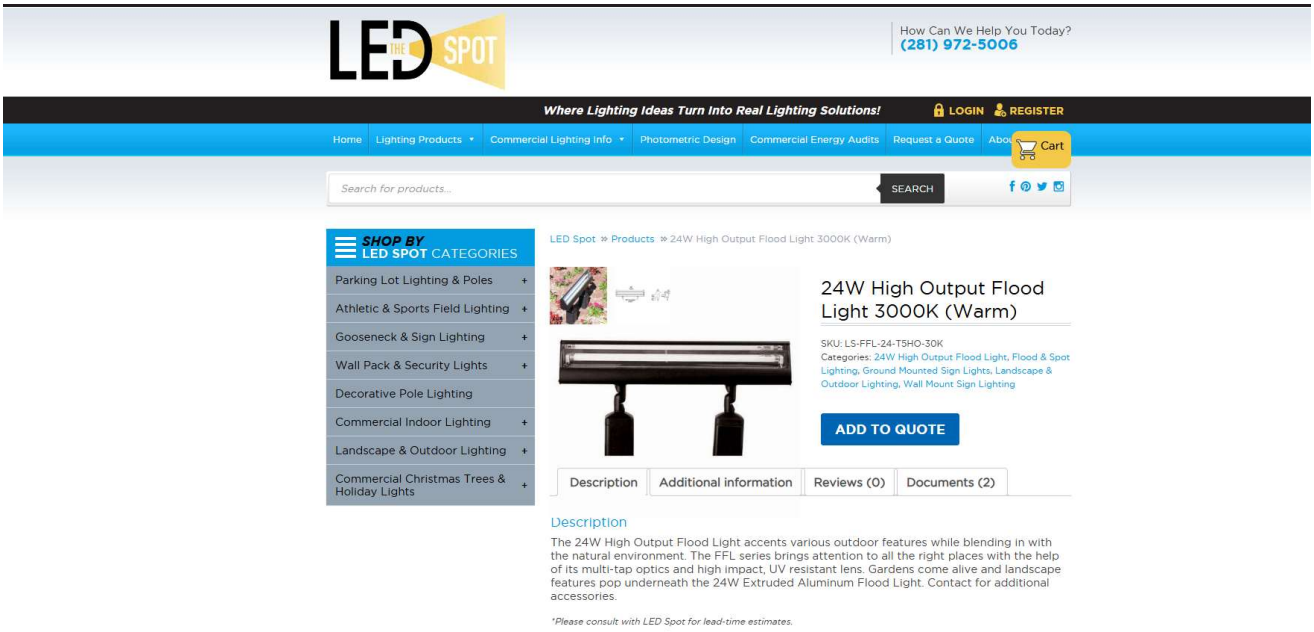
MURDOCH ENGINEERING

1/30/2025

Jere Murdoch, PE
Professional Engineer
PA PE Lic. #PE082030

DWG TITLE:
GENERAL NOTES

SHEET:	SIZE:
S.1	**B**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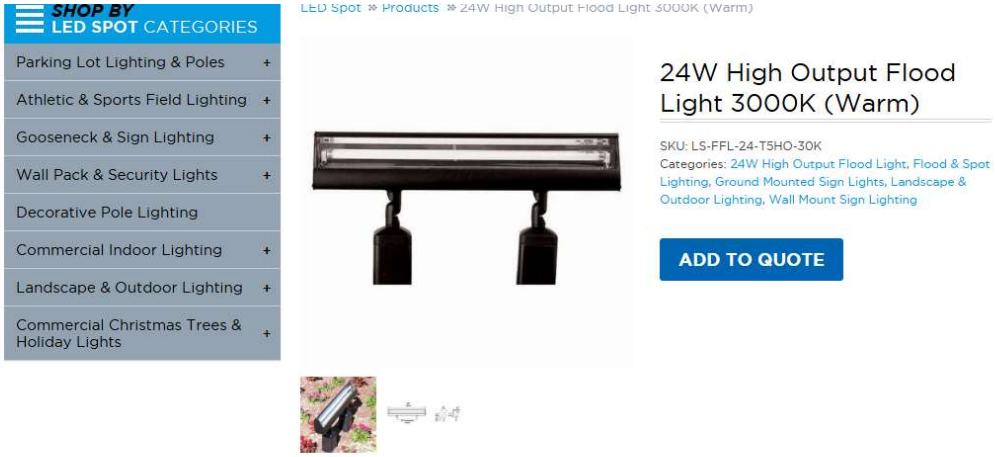
Athletic & Sports Field Lighting
Gooseneck & Sign Lighting
Wall Pack & Security Lights
Decorative Pole Lighting
Commercial Indoor Lighting
Landscape & Outdoor Lighting
Commercial Christmas Trees & Holiday Lights
LED Spot » Products » 24W High Output Flood Light 3000K (Warm)
24W High Output Flood Light 3000K (Warm)
SKU: LS-FFL-24-T5HO-30K
Categories: 24W High Output Flood Light, Flood & Spot Lighting, Ground Mounted Sign Lights, Landscape & Outdoor Lighting, Wall Mount Sign Lighting
ADD TO QUOTE
Description
Additional information
Reviews (0)
Documents (2)
Description
The 24W High Output Flood Light accents various outdoor features while blending in with the natural environment. The FFL series brings attention to all the right places with the help of its multi-tap optics and high impact, UV resistant lens. Gardens come alive and landscape features pop underneath the 24W Extruded Aluminum Flood Light. Contact for additional accessories.
*Please consult with LED Spot for lead-time estimates.


SHOP BY LED SPOT CATEGORIES
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Athletic & Sports Field Lighting
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Commercial Indoor Lighting
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24W High Output Flood Light 3000K (Warm)
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ADD TO QUOTE
Description
Additional information
Reviews (0)
Documents (2)
Additional information
Weight 4 lbs
Dimensions 25 × 25 × 25 in
Paint Color Antique Verde, Black Texture, Bronze Texture, Camel Tone, Chrome Powder, Hunter Texture, Rubbed Verde, Rust, Stucco, Weathered Brown +$30.00, Weathered Iron, White Texture
Wattage 24
Color Temperature 3000

T5HO FLUORESCENT LIGHTS
FFL-24, FFL-39, FFL-54 SERIES

TYPE

SPECIFICATIONS

CONSTRUCTION: Extruded aluminum floodlight with 2 heavy duty cast aluminum adjustable swivels. Stamped aluminum Hood Extension available (add -HE to part number)

LENS: High impact clear acrylic

REFLECTOR: Highly polished specular aluminum

BALLAST: 120v type 1 outdoor high frequency electronic (FFL-24 & FFL-39 only)
120v - 277v Universal Multi Voltage input available, add -MV to catalog number
NOTE: FFL-54 only available in -MV

LAMP SUPPLIED:
FFL-24: 24 watt T5HO tube, 3000K
FFL-39: 39 watt T5HO tube, 3000K
FFL-54: 54 watt T5HO tube, 3000K

LAMP OPTIONS: 3500K, 4100K

SOCKET: G5 2-pin

WIRING: Standard 120 volt Black, White and Ground

MOUNTING: None supplied. See Mounting Accessories below for options

FINISH: Black Texture polyester powder coat. Optional finishes available

NOTE: 2 lamp models available. Consult factory for details

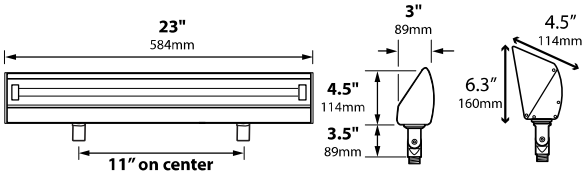
FFL-24-T5HO
mounted on
FA-26-BLT

FFL-39-T5HO
mounted on
FA-26-BLT

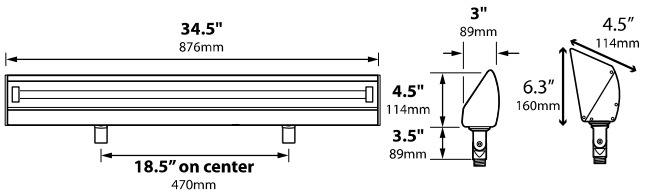
FFL-54-T5HO
mounted on
FA-26-BLT

ORDERING INFORMATION

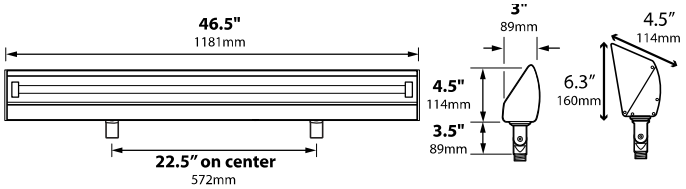
CATALOG NO.	DESCRIPTION	LAMP	SHIP WEIGHT
FFL-24-T5HO30K-BLT	Aluminum T5HO Floodlight	24w, T5HO 3000K	4.0 lbs.
FFL-24-T5HO35K-BLT	Aluminum T5HO Floodlight	24w, T5HO 3500K	4.0 lbs.
FFL-24-T5HO41K-BLT	Aluminum T5HO Floodlight	24w, T5HO 4100K	4.0 lbs.
FFL-39-T5HO30K-BLT	Aluminum T5HO Floodlight	39w, T5HO 3000K	8.0 lbs.
FFL-39-T5HO35K-BLT	Aluminum T5HO Floodlight	39w, T5HO 3500K	8.0 lbs.
FFL-39-T5HO41K-BLT	Aluminum T5HO Floodlight	39w, T5HO 4100K	8.0 lbs.
FFL-54-T5HO30K-MV-BLT	Aluminum T5HO Floodlight	54w, T5HO 3000K	13.0 lbs.
FFL-54-T5HO35K-MV-BLT	Aluminum T5HO Floodlight	54w, T5HO 3500K	13.0 lbs.
FFL-54-T5HO41K-MV-BLT	Aluminum T5HO Floodlight	54w, T5HO 4100K	13.0 lbs.



24w T5HO



39w T5HO



54w T5HO

IP44 CE ETL Intertek

BEAM/GLARE CONTROL ACCESSORIES

FA-06-24	24" long, 1/4" Mini Hex Cell Louver for FFL-24
FA-06-35	35" long, 1/4" Mini Hex Cell Louver for FFL-39
FA-06-47	47" long, 1/4" Mini Hex Cell Louver for FFL-54
FA-69-24	Aluminum Hood Extension for FFL-24
FA-69-39	Aluminum Hood Extension for FFL-39
FA-69-54	Aluminum Hood Extension for FFL-54
-HE	Add to catalog number for factory installed Hood Extension

JOB INFORMATION

Type: Date:

Job Name:

Cat. No.:

Lamp(s):

Specifier:

Contractor:

Notes:

FOCUS INDUSTRIES INC.
25301 COMMERCENTRE DRIVE
LAKE FOREST, CA 92630
www.focusindustries.com
sales@focusindustries.com
(949) 830-1350 • FAX (949) 830-3390

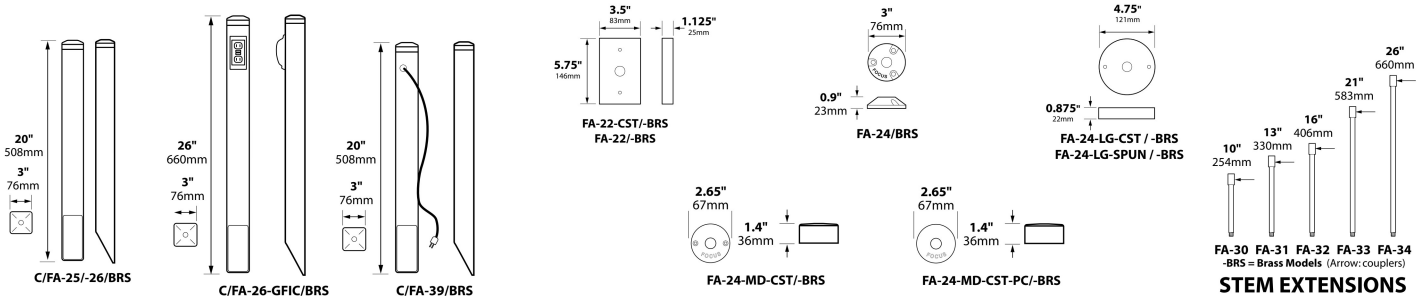
Black Texture (Standard)	Antique Verde	Bronze Texture	Camel	White Texture	Hunter Texture	Rust	Weathered Iron	Weathered Brown	Stucco	Rubbed Verde	Chrome Powder		Acid Rust	Acid Verde	Black Acid Treatment
-BLT	*-ATV*	*-BRT*	*-CAM*	*-WTX*	*-HTX*	*-RST*	*-WIR*	*-WBR*	*-STU*	*-RBV*	*-CPR*		*-BAR/CAR*	*-BAV/CAV*	*-BAT*

BRASS & COPPER ONLY

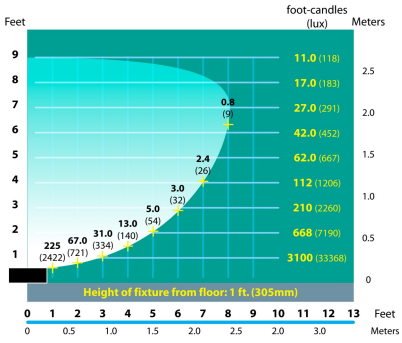
T5HO FLUORESCENT LIGHTS
FFL-24, FFL-39, FFL-54 SERIES

TYPE

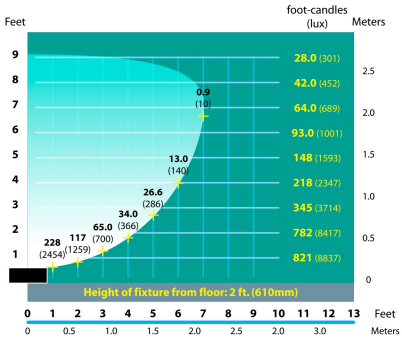
MOUNTING ACCESSORIES



LIGHT DISTRIBUTIONS AND PHOTOMETRICS



FFL-24T5HO Half Spread Photometrics



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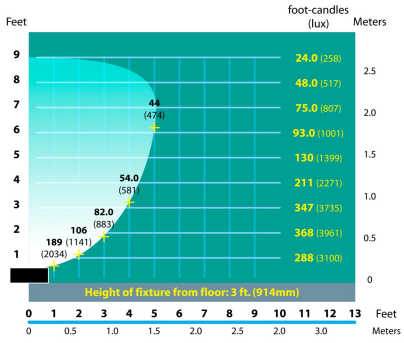

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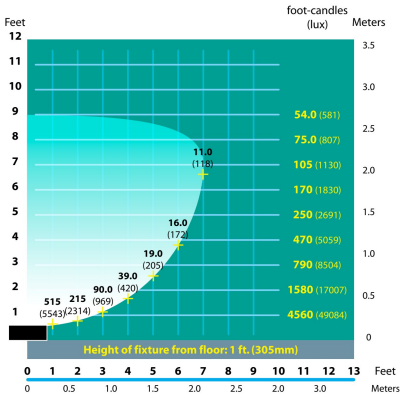

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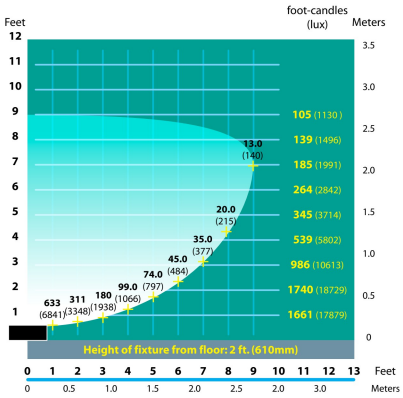

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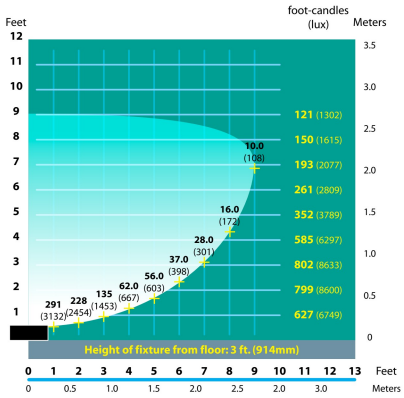

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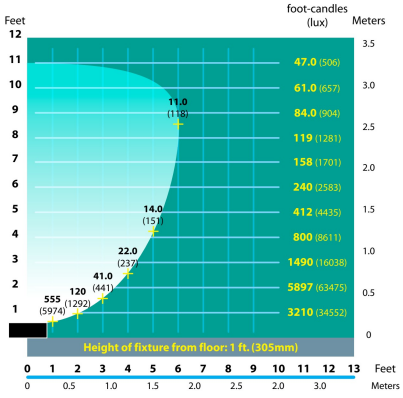

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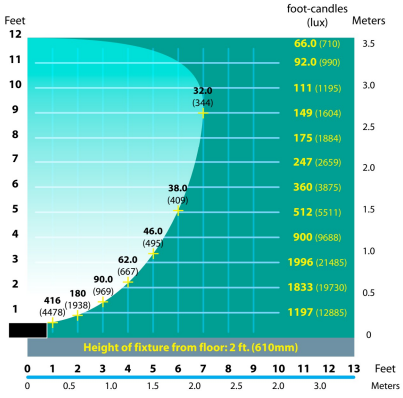
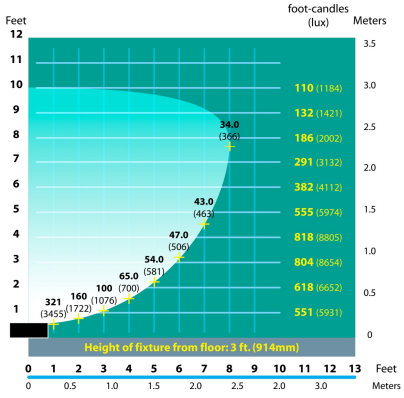


FFL-54T5HO Half Spread Photometrics



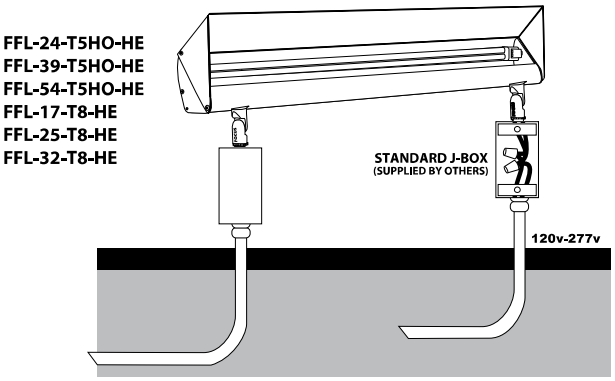
FFL-54T5HO Half Spread Photometrics

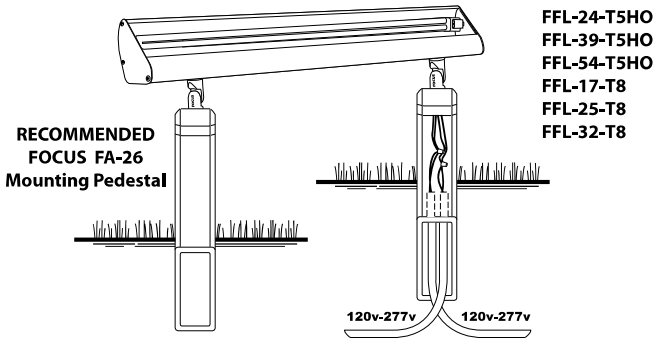
Black Texture (Standard)	Antique Verde	Bronze Texture	Camel	White Texture	Hunter Texture	Rust	Weathered Iron	Weathered Brown	Stucco	Rubbed Verde	Chrome Powder		Acid Rust	Acid Verde	Black Acid Treatment
-BLT	*-ATV*	*-BRT*	*-CAM*	*-WTX*	*-HTX*	*-RST*	*-WIR*	*-WBR*	*-STU*	*-RBV*	*-CPR*		*-BAR/CAR*	*-BAV/CAV*	*-BAT*

INSTALLATION INSTRUCTIONS FOR
120 - 277 VOLT T5HO & T8 FLUORESCENT FLOOD LIGHTS

INSPECTED BY:

1. Make sure electrical supply power is shut off at circuit breaker before starting fixture installation or servicing of fixture.
2. Using thread sealant, thread fixture onto junction box or other mounting device (not supplied) until it is at desired direction. Tighten provided lock nut to ensure that the fixture is firmly locked into adjusted position.
3. Attach fixture leads to line in leads observing polarity (black to black, white to white and green to ground) using approved silicone-filled safety wire connectors.
4. Attach junction box cover plate to junction box (not supplied). Make sure that wires are not pinched between junction box cover and junction box.
5. Coat exposed fixture threads with thread sealant to prevent moisture from entering junction box or other mounting device.
6. Install lamp; refer to section below.
7. To adjust fixture aiming angle, loosen swivel screw. **Do not remove completely.** Hold fixture at selected angle and tighten swivel screw firmly with #2 Phillips screw driver.
8. Turn power on to the fixture and check for proper operation.





LAMP INSTALLATION/REPLACEMENT:

CAUTION: Do not exceed maximum wattage marked on fixture label.

1. To prevent electrical shock, turn off electrical power supply before servicing.
2. Remove 2 side plate screws, loosen third screw and pivot side plate.
3. Slide lens outward to expose lamp.
4. Replace with correct wattage type of lamp, marked on fixture label.
5. Re-install front lens & side plate screws.

NOTE: Must be installed by a licensed electrician per local codes.
For Questions Call 1-888-882-1350

INSTALLATION INSTRUCTIONS FOR
120 - 277 VOLT T5HO & T8 FLUORESCENT FLOOD LIGHTS

INSPECTED BY:

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2. Using thread sealant, thread fixture onto junction box or other mounting device (not supplied) until it is at desired direction. Tighten provided lock nut to ensure that the fixture is firmly locked into adjusted position.
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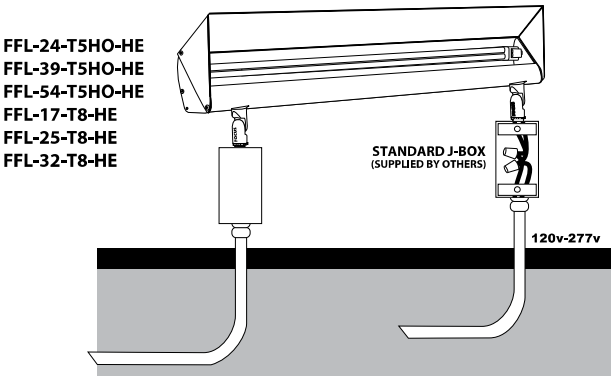

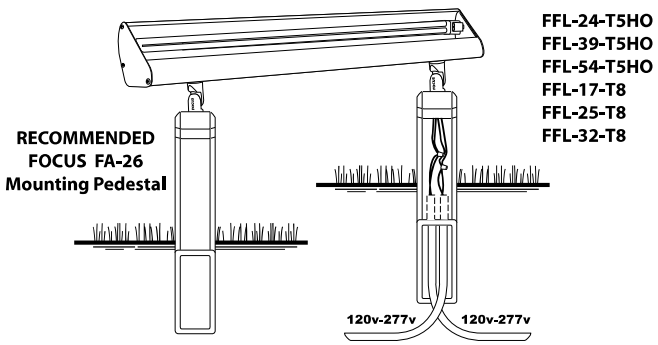

LAMP INSTALLATION/REPLACEMENT:

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1. To prevent electrical shock, turn off electrical power supply before servicing.
2. Remove 2 side plate screws, loosen third screw and pivot side plate.
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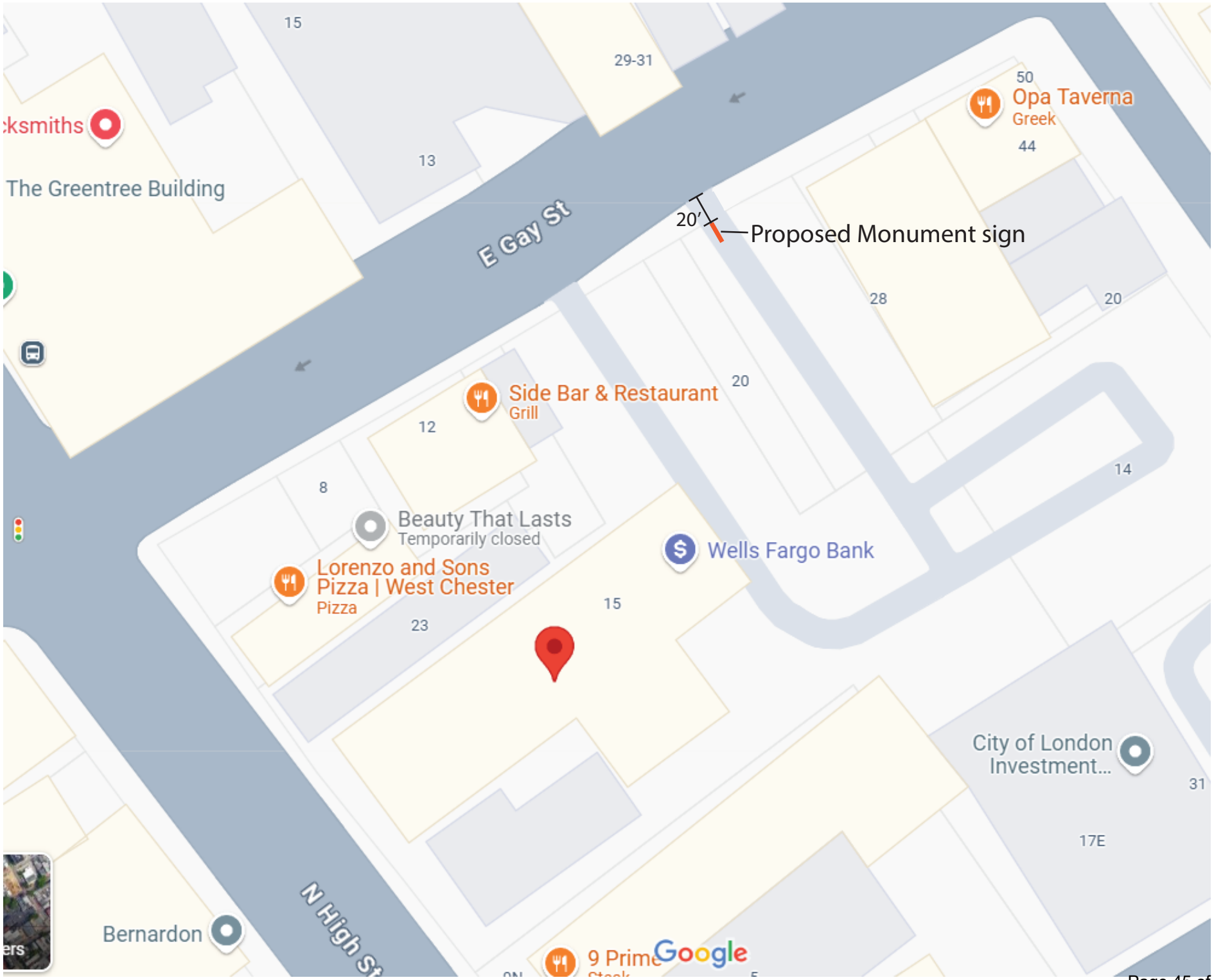
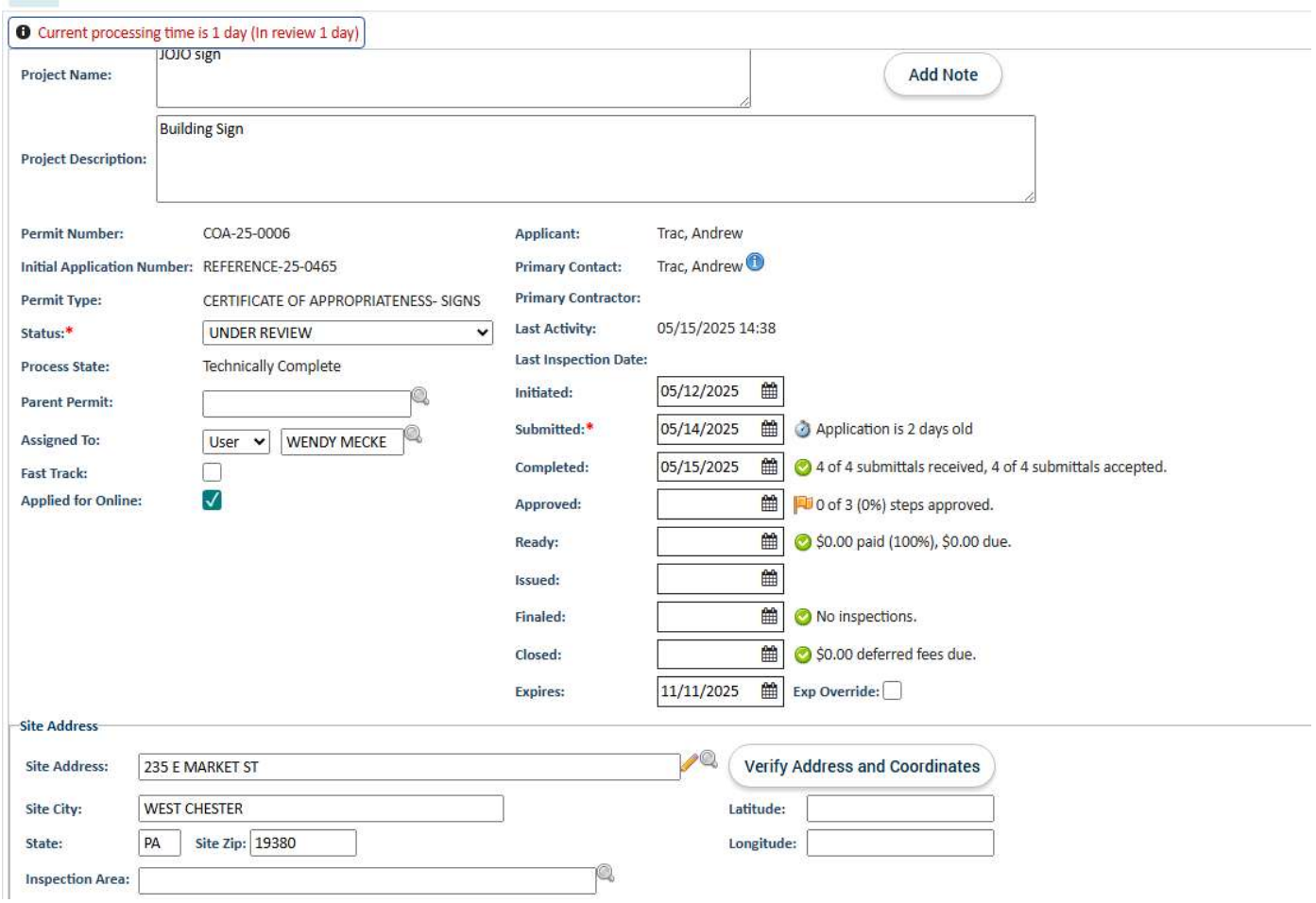
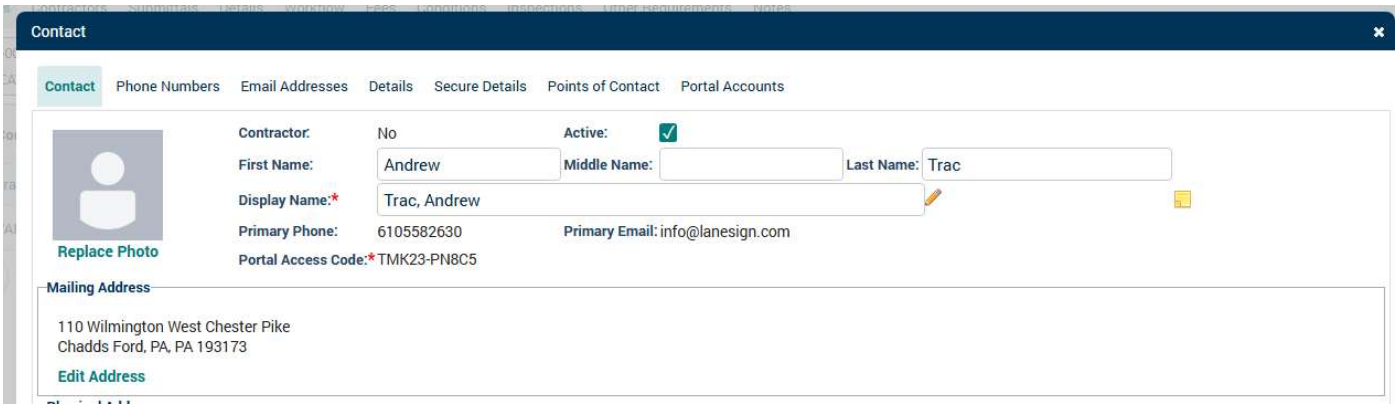

15
29-31
50
Opa Taverna
Greek
44
cksmiths
13
The Greentree Building
E Gay St
20'
Proposed Monument sign
28
20
20
Side Bar & Restaurant
Grill
12
14
8
Beauty That Lasts
Temporarily closed
Wells Fargo Bank
Lorenzo and Sons
Pizza | West Chester
Pizza
15
23
City of London
Investment...
31
17E
N High St
Bernardon
9 Prime
Google


Current processing time is 1 day (In review 1 day)
Project Name:
JOJO sign
Add Note
Project Description:
Building Sign
Permit Number: COA-25-0006
Initial Application Number: REFERENCE-25-0465
Permit Type: CERTIFICATE OF APPROPRIATENESS- SIGNS
Status:* UNDER REVIEW
Process State: Technically Complete
Parent Permit:
Assigned To: User WENDY MECKE
Fast Track:
Applied for Online:
Applicant: Trac, Andrew
Primary Contact: Trac, Andrew
Primary Contractor:
Last Activity: 05/15/2025 14:38
Last Inspection Date:
Initiated: 05/12/2025
Submitted:* 05/14/2025 Application is 2 days old
Completed: 05/15/2025 4 of 4 submittals received, 4 of 4 submittals accepted.
Approved: 0 of 3 (0%) steps approved.
Ready: $0.00 paid (100%), $0.00 due.
Issued:
Finaled: No inspections.
Closed: $0.00 deferred fees due.
Expires: 11/11/2025 Exp Override:
Site Address
Site Address: 235 E MARKET ST
Verify Address and Coordinates
Site City: WEST CHESTER
Latitude:
State: PA Site Zip: 19380
Longitude:
Inspection Area:


Contact
Contact Phone Numbers Email Addresses Details Secure Details Points of Contact Portal Accounts
Contractor: No
Active:
First Name: Andrew
Middle Name:
Last Name: Trac
Display Name:* Trac, Andrew
Primary Phone: 6105582630
Primary Email: info@lanesign.com
Portal Access Code:* TMK23-PN8C5
Replace Photo
Mailing Address
110 Wilmington West Chester Pike
Chadds Ford, PA, PA 193173
Edit Address

Application Numbers: 2025-17

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS
Borough of West Chester
Historical and Architectural Review Board

PROJECT ADDRESS: 235 E. Market Street

1) ***Date of HARB Review:*** *May 29, 2025*

2) ***Applicant's Proposal:*** *Sign*

3) **Findings:**

The applicant, Andrew Trac, was present to describe the proposed building mounted sign. Mr. Trac described the project as follows:

- *A building mounted sign made from ½-inch thick individual acrylic letters; pin mounted on the building's existing painted wood signage panel.*
- *The letters will be painted gold as illustrated in the submission.*
- *The message on the sign is "***JOJO & CO. – Vintage & Boutique***."*

The HARB reviewed the application in detail. The HARB was supportive of the proposed building mounted sign.

4) ***Recommendations from HARB:***

The Board recommends Approval of a Certificate of Appropriateness for Application 2025-17 as submitted.

Application Numbers: 2025-17

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS
Borough of West Chester
Historical and Architectural Review Board

PROJECT ADDRESS: 235 E. Market Street

5) Borough Council's Action and Date

- ❑ Approved per HARB recommendation:
- ❑ Denied for the following reasons:
- ❑ Approved with the following differences from HARB recommendation:

Date of Action Taken: _____ , 2025

Borough Manager's Signature:

214
212
Middle Alley
239
Realty One Group
Restore - West Chester
Comfort Keepers
Home Care
249
247
E Market St
252
Middle Alley
231
235
235
233
225
227
229
Be Well Collective
211
221
Momo & Sushi Cafe
Nepalese
219
215
3
E Market St
Kieron's Auto Repair
Temporarily closed
230
3
Sign

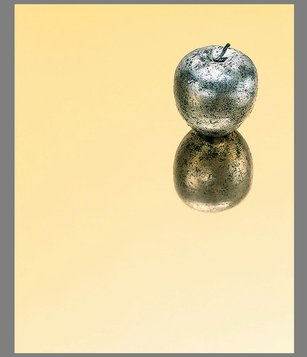
71"
JOJO & CO.
VINTAGE & BOUTIQUE
17"

71"
10"
JOJO&CO.
17"
3"
VINTAGE & BOUTIQUE
62"
Letters 0.5" thick
pins mount

JOJO&CO.

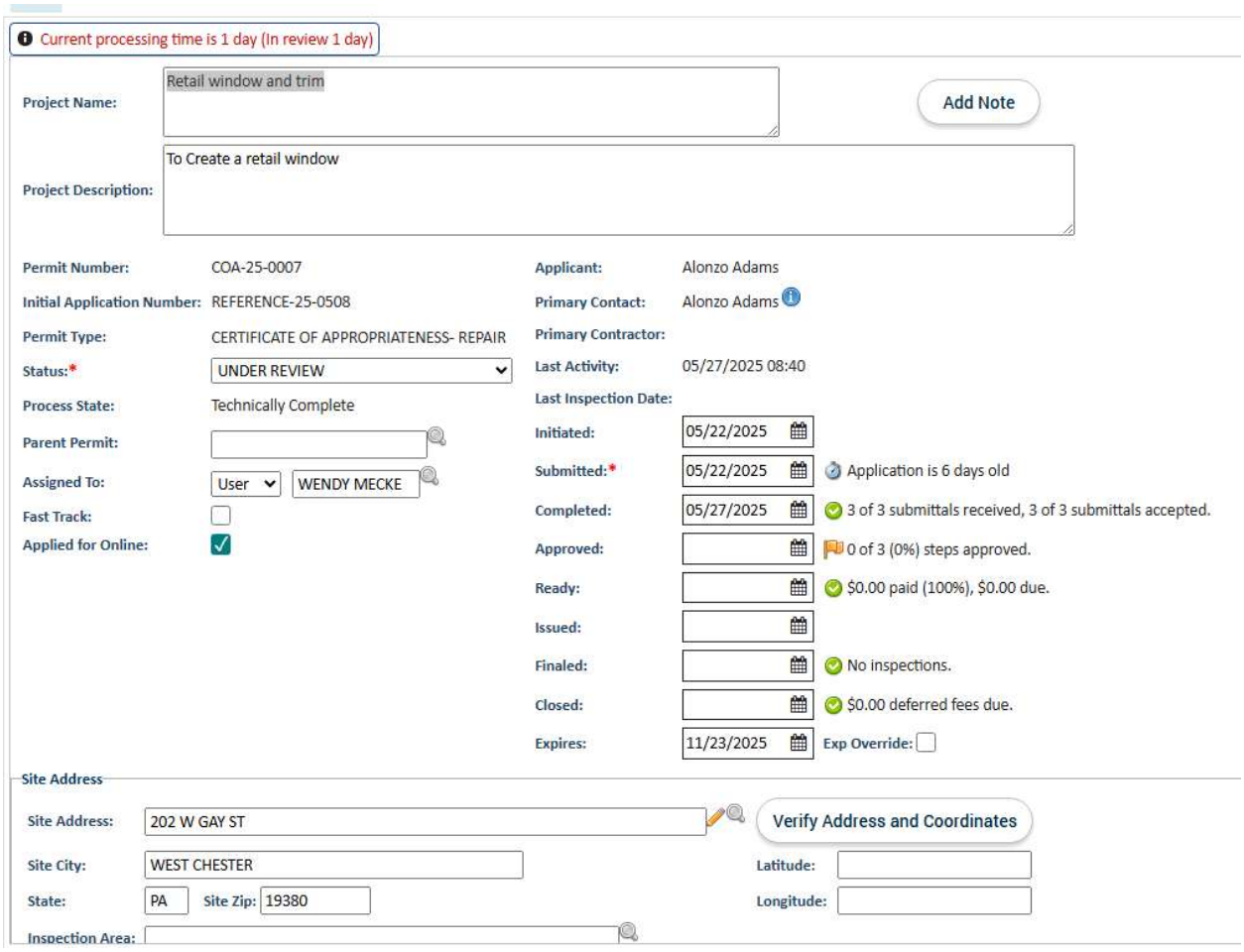
VINTAGE & BOUTIQUE

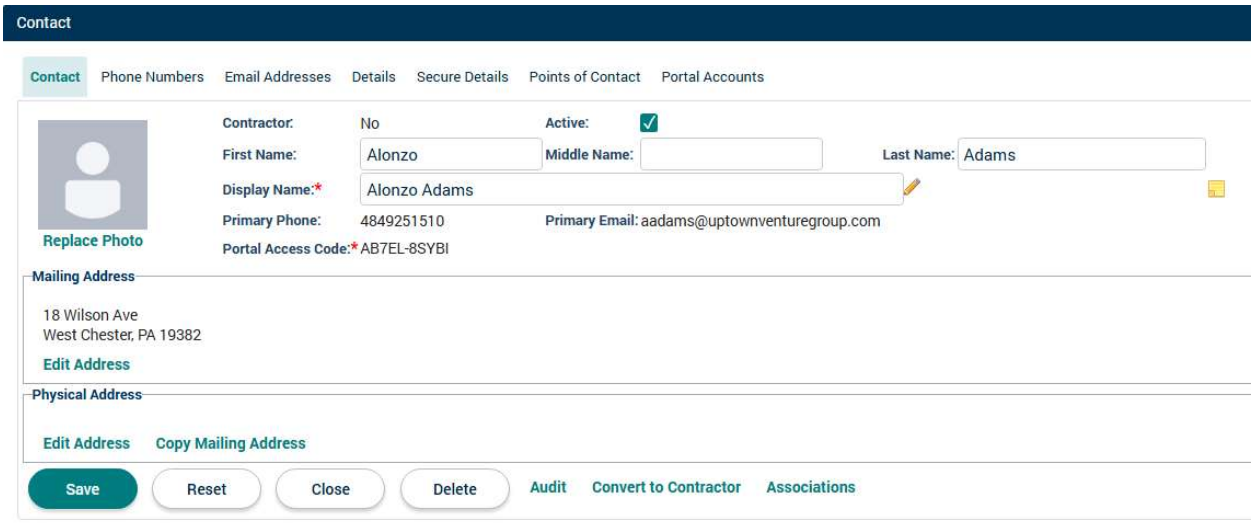
Satin brass,



DATE APPLICATION RECEIVED: 05/27/2025

APPLICATION NUMBER: 2025-16





DATE APPLICATION RECEIVED: 05/27/2025

APPLICATION NUMBER: 2025-16

Permit #: COA-25-0007	**Status:** UNDER REVIEW	**Contact:** Alonzo Adams	**Site Address:** 202 W GAY ST
Type: CERTIFICATE OF APPROPRIATENESS- REPAIR	**Project Name:** Retail window and trim	**Contractor:**	WEST CHESTER, PA 19380

Name	Value
REASON FOR APPROPRIATENESS APPLICATION:*	Replacement or alteration from original
LOCATION OF PROJECT:*	202 W. Gay Street
NAME OF BUSINESS:*	Uptown Venture Group LLC
WHICH ELEMENTS DID YOU CHANGE:	Window and Trim
ON HOW MANY FACADES:	1
WHAT WAS THE OLD IS THE MATERIAL:	Brick and aluminum
WHAT IS THE PROPOSED NEW MATERIAL:	Aluminum and Azek
HOW WILL IT BE INSTALLED:	By a Contarctor
ARE YOU USING ANY HISTORICAL MATERIALS:	No
IF SO, WHAT AND HOW:	
WHAT WERE THE OLD DIMENSIONS:	
WHAT ARE THE NEW DIMENSIONS:	9x8 x1
WHAT ARE THE OLD COLORS:	Off white
WHAT ARE THE NEW COLORS:	Black
WHY DO YOU WISH TO MAKE THESE CHANGES:	A retail window for the new business

Application Numbers: 2025-16

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS

Borough of West Chester

Historical and Architectural Review Board

PROJECT ADDRESS: 202 W. Gay Street

1) ***Date of HARB Review:*** *May 29, 2025*

2) ***Applicant's Proposal:*** *Create Retail Window and Trim*

3) **Findings:**

The applicant, Alonzo Adams of the Uptown Venture Group, attended to present the project. Mr. Adams had made a previous submission for review by the HARB at the April 24, 2025 meeting.

Based on the HARB's April 24 comments, Mr. Adams revised the storefront design and returned to the May 29, 2025 meeting to present the final design proposal. Greg Radford, the project architect, also attended the May 29 meeting and submitted additional design drawings SK-1 and SK-2 at the meeting. The proposed was described as follows:

- *The property is zoned commercial and will continue as first floor office or retail space.*
- *Project proposes to remove the two existing first-floor double-hung windows and install a large single-pane storefront window, similar to the neighboring building.*
- *The new window will be surrounded by a traditional-style decorative storefront with solid panels, decorative trim, and cornice moldings, constructed of Azek.*
- *The existing residential front door and transom window above will be retained.*
- *The wood frame hood above the entrance door will be removed.*
- *The existing wood bulkhead covering the basement window will be removed. The window will be covered with the new storefront facing panels and trim.*
- *The sign illustrated in the documents is not part of the submission for approval.*

The HARB reviewed the application in detail. The HARB commented the revised drawings were more comprehensive but still did not clearly illustrate the proposed construction in detail. Much time was spent verifying the design intent, materials, and spatial dimensions with Mr. Radford. The HARB's primary concern was that the design was "flat" and lacked the three-dimensional richness typical of West Chester's traditional storefronts. The proposed flat modern detailing was not deemed appropriate. After extensive discussion, and to expedite the project at the applicant's request, the HARB and the applicant agreed to appropriate design revisions required for final approval. The agreed path forward is reflected in the final motion.

4) ***Recommendations from HARB:***

The Board recommends Approval of a Certificate of Appropriateness for Application 2025-16 as submitted, including the revised design documents SK-1 and SK-2 provided at the May 29 HARB meeting, with the following clarifications:

1. *The proposed aluminum storefront window frame shall be clad in Azek trim so that no aluminum is exposed.*
2. *The storefront base panel details as shown shall be packed out to create a framed panel of three receding planes offset at least ¾-inch each.*
3. *The frieze panel and trim above the storefront window shall be treated in a similar manner with three receding planes to create additional visual depth in the storefront detailing.*
4. *The aluminum flashing at the top of the new storefront assembly shall be painted to match the adjacent Azek trim.*

5. ***Note:*** *This approval is contingent on the submission of updated design drawings documenting the revisions required herein that have been incorporated into the project design. The revised documents shall be submitted to the HARB no later than Wednesday, June 4, 2025 for review and final approval by a HARB subcommittee.*
6. ***MOTION UPDATE:*** *Subsequent to the meeting, the applicant did submit the requested revised design drawings on Wednesday June 4, 2025 for review by the HARB subcommittee. The Subcommittee provided the following comments:*
   6.1 The resubmitted drawings, "SK-3" dated 6-3-2025, appropriately reflect the conditions included within the HARB's motion for approval with one small exception that should be corrected within drawings submitted for building permit, explained as follows: Azek sill/jamb trim shall be added to complete the concealment of the aluminum window frame. The updated drawings show a facing trim piece only in lieu of the two-piece assembly that is necessary to cover all exposed aluminum as noted in Condition #1 of the motion.

Application Numbers: 2025-16

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS
Borough of West Chester
Historical and Architectural Review Board

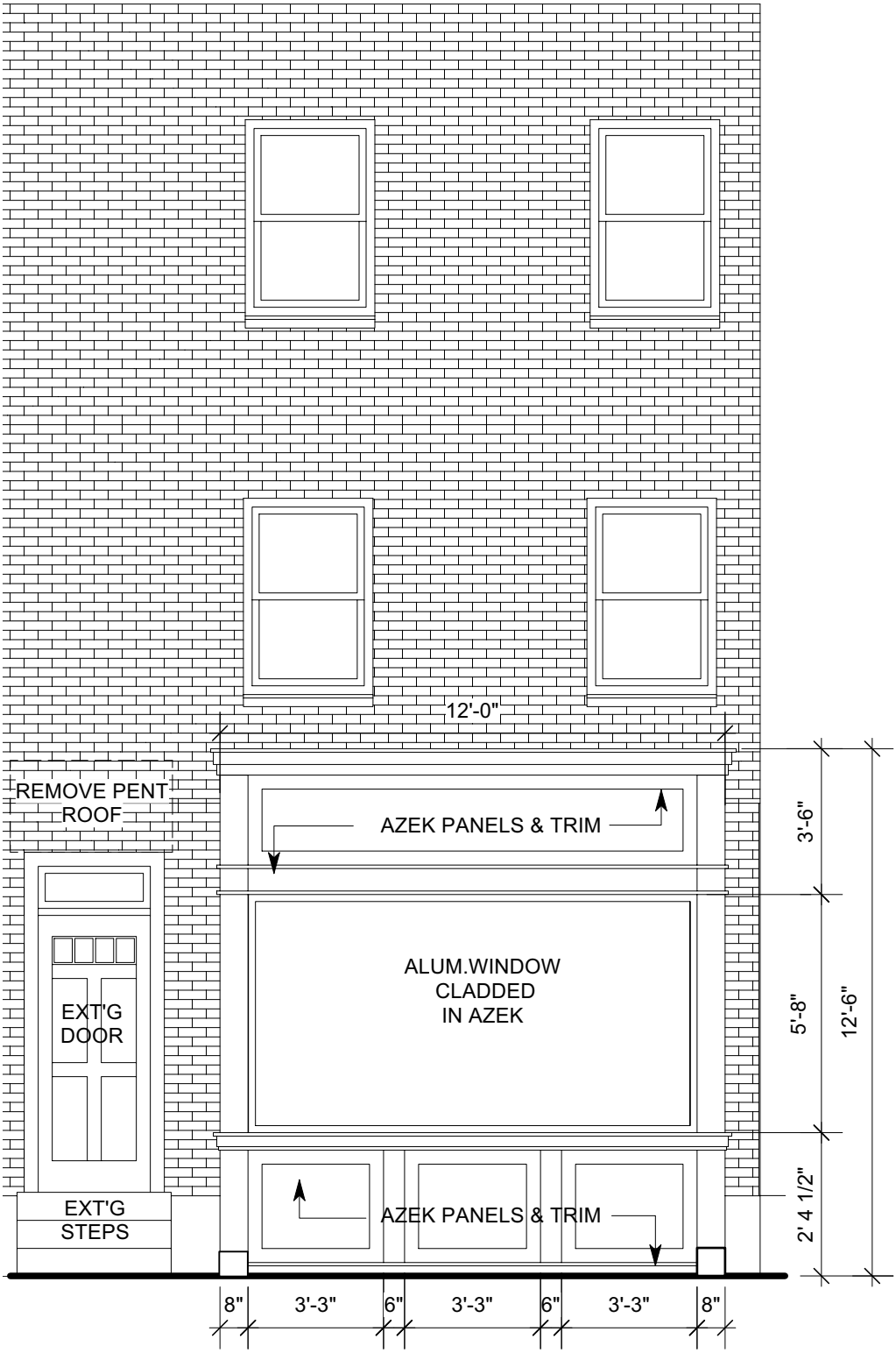
PROJECT ADDRESS: 202 W. Gay Street

5) Borough Council's Action and Date

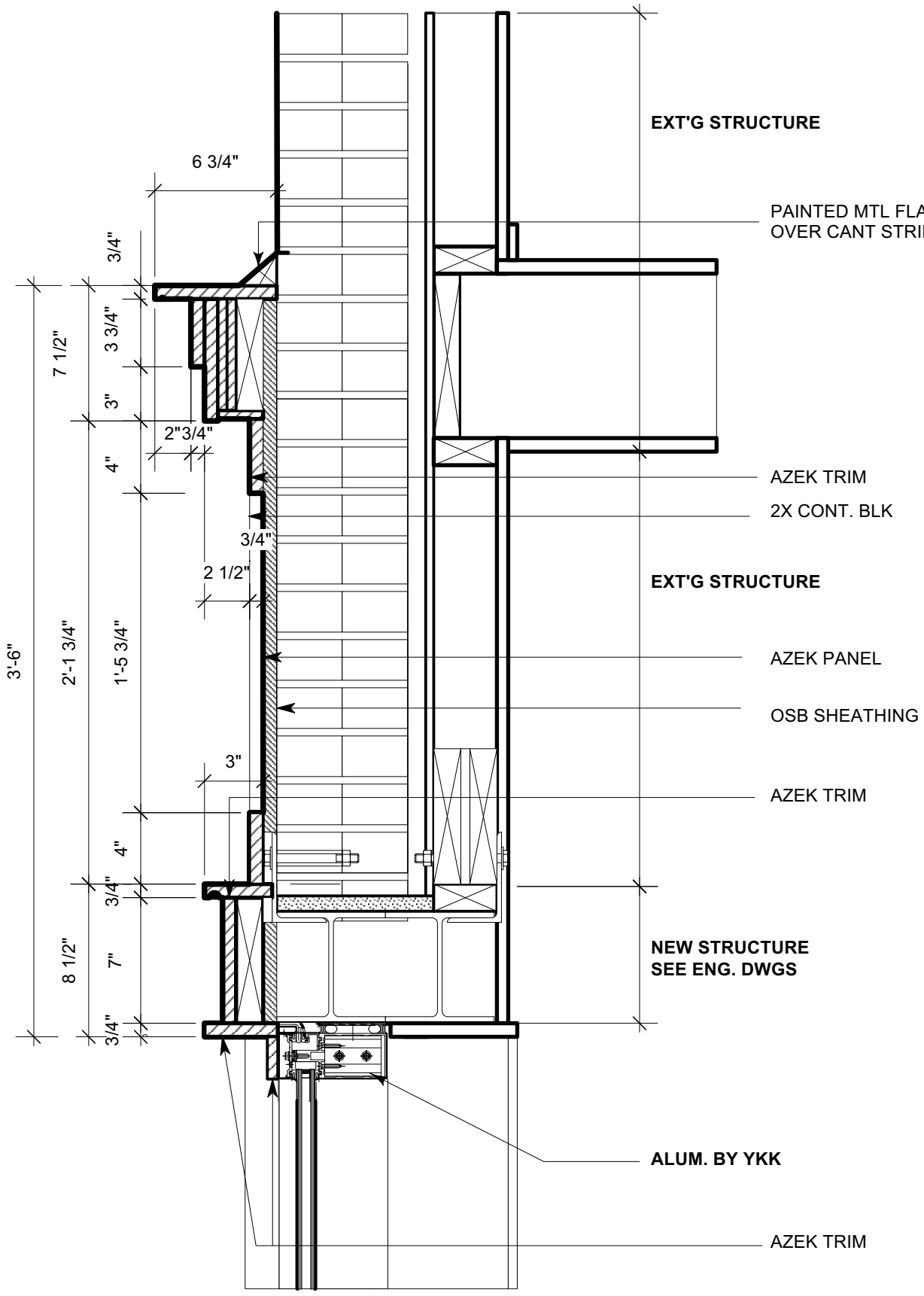
- ❑ Approved per HARB recommendation:
- ❑ Denied for the following reasons:
- ❑ Approved with the following differences from HARB recommendation:

Date of Action Taken: _____ , 2025

Borough Manager's Signature:

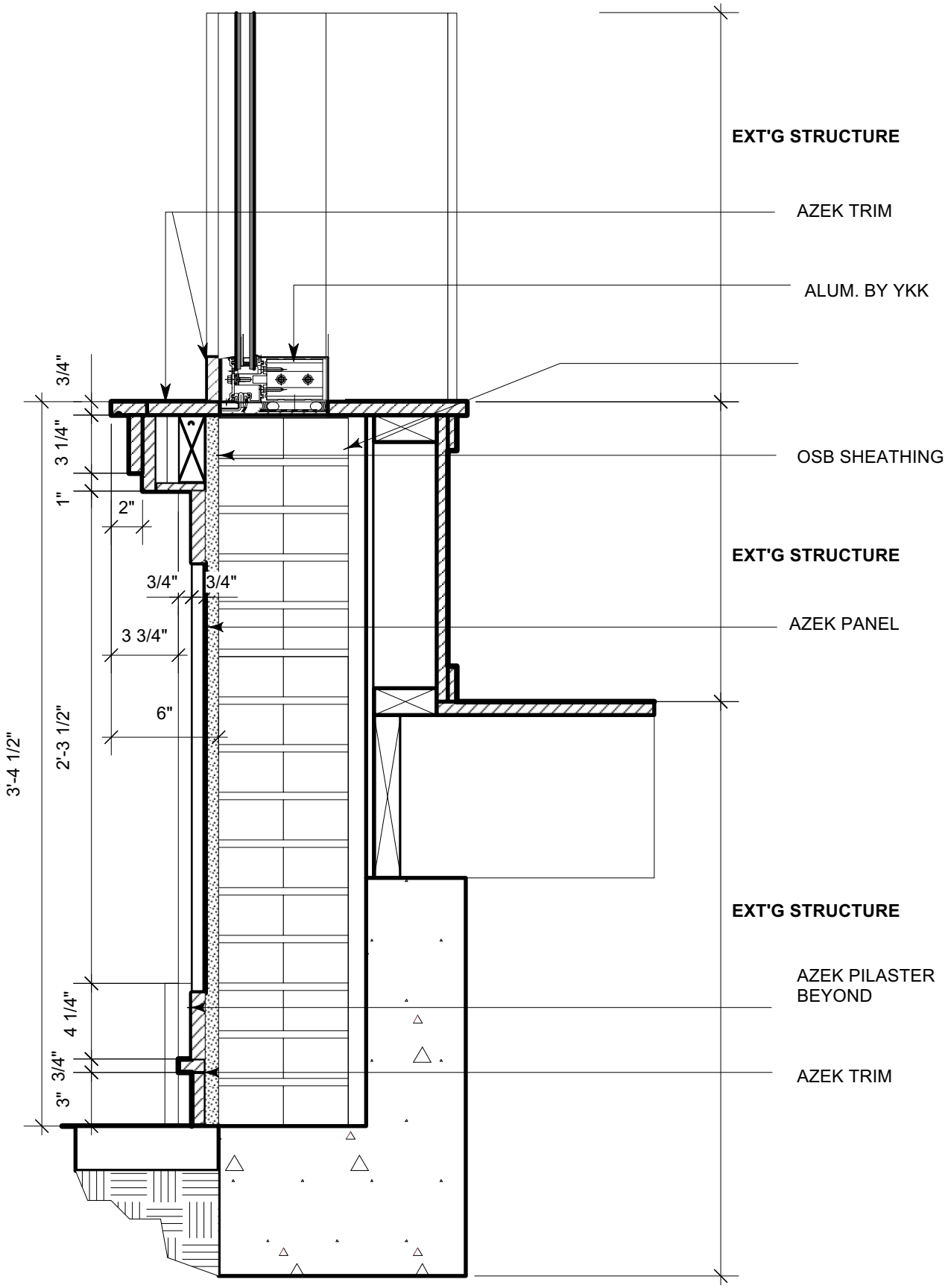


1 STREET ELEVATION
Scale: 1/4" = 1'-0"

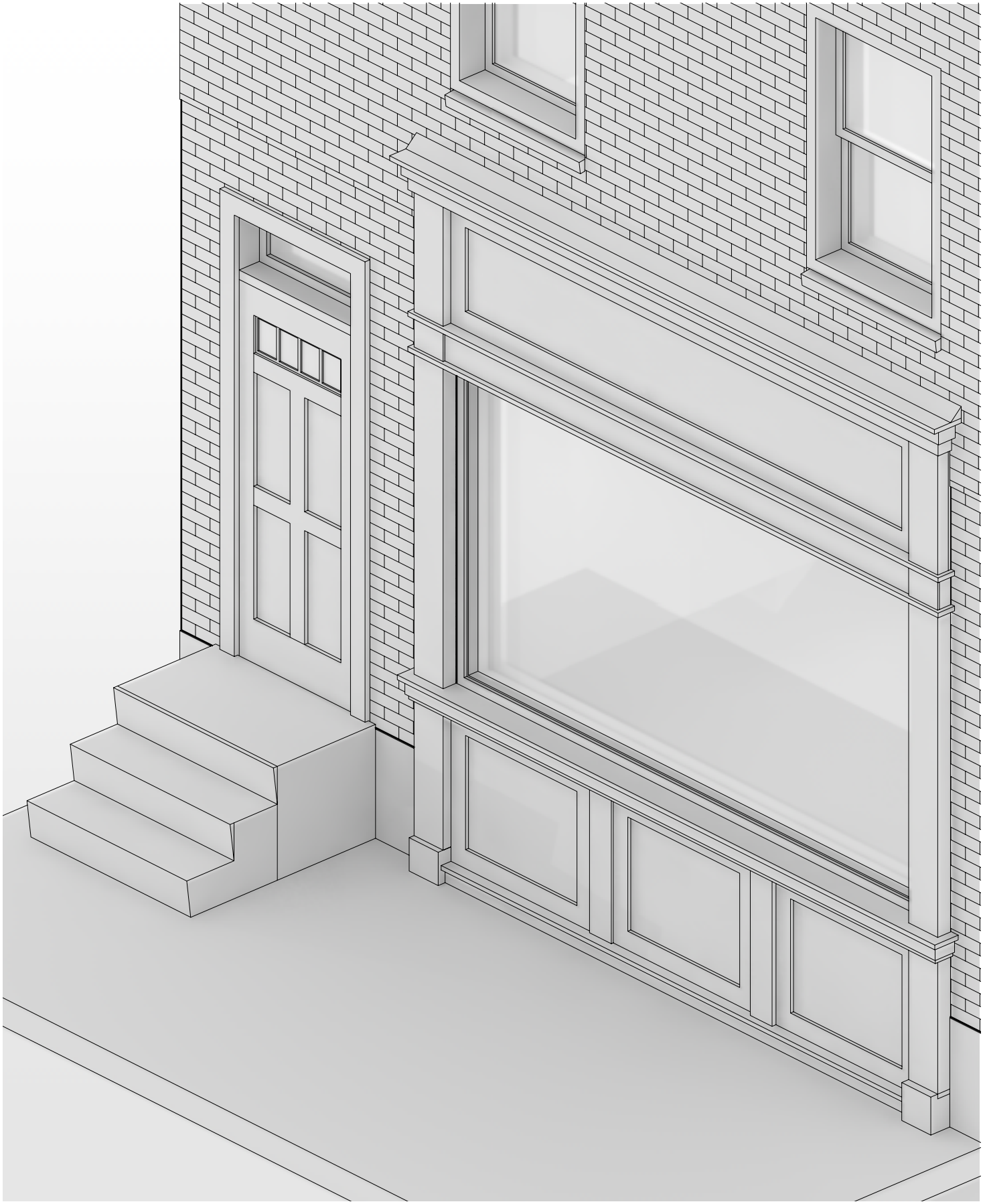


10 WINDOW HDR

Scale: 1 1/2" = 1'-0"



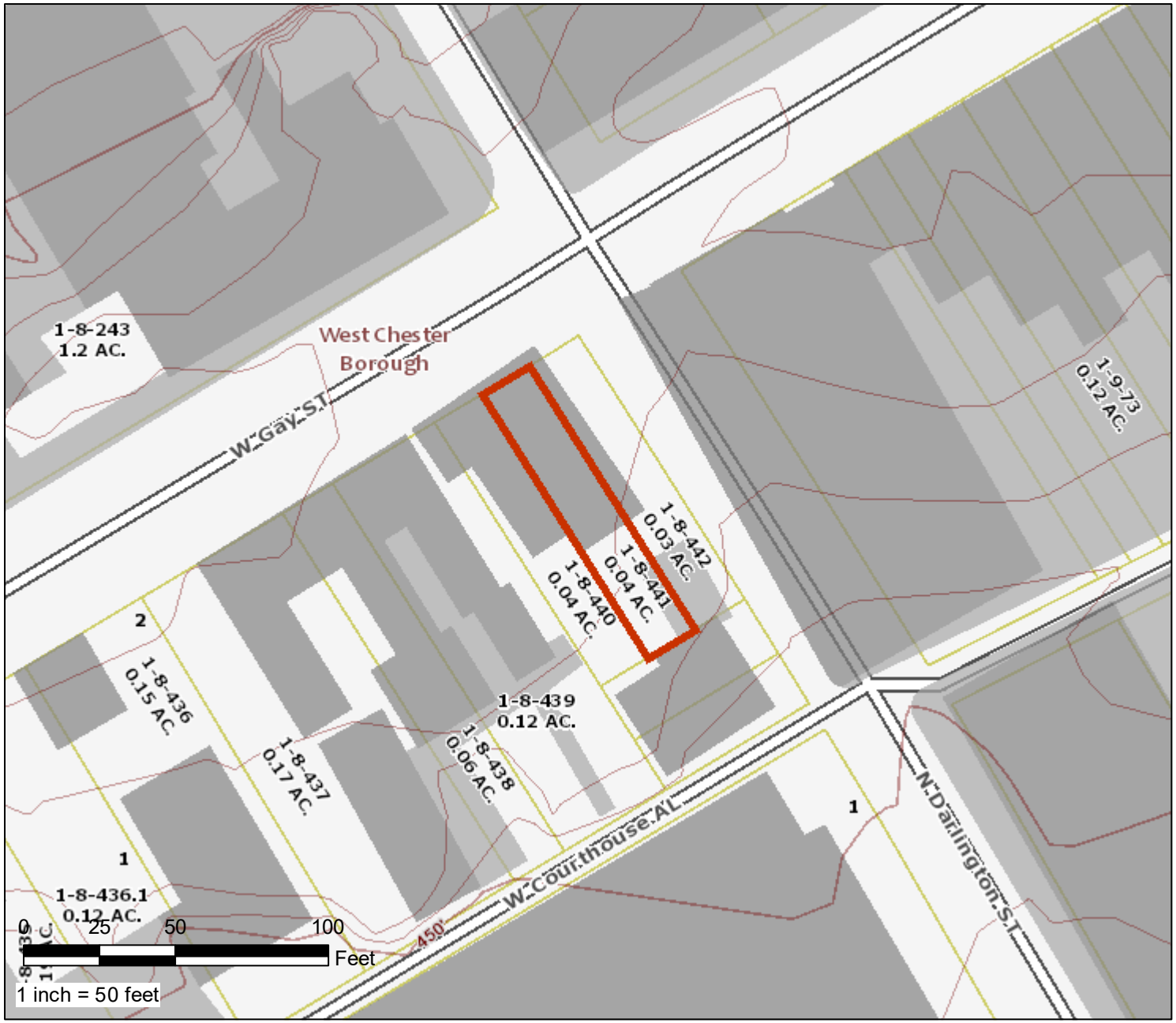
2 WINDOW SILL
Scale: 1 1/2" = 1'-0"



4 PERSPECTIVE
Scale: 1/2" = 1'-0"

202

202 Site/Grade



COUNTY OF CHESTER

PENNSYLVANIA

Find Address Information

PARID: 0108 04410000
UPI: 1-8-441
Owner1: UPTOWN VENTURE GROUP LLC
Owner2:
Mail Address 1: 18 WILSON AVE
Mail Address 2: WEST CHESTER PA
Mail Address 3:
ZIP Code: 19382
Deed Book: 11087
Deed Page: 890
Deed Recorded Date: 07/28/2023
Legal Desc 1: SS OF W GAY ST
Legal Desc 2: LOT & APTS
Acres: 0.0375
LUC: R-20
Lot Assessment: 30710
Property Assessment: 47820
Total Assessment: 78530
Assessment Date: 12/15/2023 7:39:35 AM
Property Address: 202 W GAY ST
Municipality: WEST CHESTER
School District: West Chester Area

Map Created:
Tuesday, March 19, 2024

County of Chester

Limitations of Liability and Use:
County of Chester, Pennsylvania makes no claims to the completeness, accuracy, or content of any data contained herein, and makes no representation of any kind, including, but not limited to, the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied or inferred with respect to the information or data furnished herein. For information on data sources visit the GIS Services page listed at www.chesco.org/gis.

Chapter 90A

RESTAURANT-CAFES

§ 90A-1.	Purpose.	§ 90A-5.	Indemnification of the Borough; insurance.
§ 90A-2.	Definitions.	§ 90A-6.	Specific standards.
§ 90A-3.	Restaurant-cafe permit required.	§ 90A-7.	Additional rules and regulations.
§ 90A-4.	Permit application.	§ 90A-8.	Violations and penalties.

[HISTORY: Adopted by the Council of the Borough of West Chester 2-17-2010 by Ord. No. 8-2010. Amendments noted where applicable.]

GENERAL REFERENCES

Alcoholic beverages — See Ch. 36. **Vendors and vending machines — See Ch. 106.**

§ 90A-1. Purpose.

"Restaurant-cafes," as defined in this chapter and in the West Chester Borough Zoning Ordinance, Chapter 112 of the Borough Code, are permitted in certain areas of the Town Center District pursuant to Article VII of the Zoning Ordinance. The purpose of the restaurant-cafe designation and the districts created thereunder is to promote the pedestrian character of the Borough. The regulations governing restaurant- cafes which receive a permit as a Cafe I District restaurant-cafe and restaurant-cafes which receive a permit as a Cafe II District restaurant-cafe differ because the Cafe II District abuts residential districts.

§ 90A-2. Definitions.

For purposes of this chapter, the following words, terms and phrases have the meanings indicated herein:

CAFE I DISTRICT — An area within the Town Center District where restaurant-cafes are a permitted use subject to the regulations in this chapter, which area is defined as the area bounded by Gay Street to the north, Matlack Street to the east, Market Street to the south and Darlington Street to the west, as well as the High Street corridor between Chestnut Street and Miner Street and the Market Street corridor between Darlington Street and New Street.**[Amended 2-19-2014 by Ord. No. 1-2014]**

CAFE II DISTRICT — An area within the Town Center District where restaurant-cafes are a permitted use subject to the regulations in this chapter, which area is defined as all areas of the Cafe I District and the High Street corridor between Miner Street and Dean Street and Church Street between Chestnut Street and Miner Street.

RESTAURANT-CAFE — A building or part of a building used for the purpose of furnishing food and beverages to the public to be consumed on the premises and in an area on the sidewalk directly abutting and adjacent to and upon the same lot as a restaurant or any premises licensed by the Pennsylvania Liquor Control Board pursuant to regulations of the Board to conduct business on the above-mentioned premises.

Commented [RR1]: This seems like it includes both areas, which negates any difference in enforcement between the 2 areas.

Commented [RR2]: Need new definition for ON-STREET DINING PLATFORM/STREETERY to show there is a difference between the 2 permits and each should have its own application. Should also include a permit for the Gay Street Closure participants. Some of these are retail- so may have to reconsider what this is named or if that is a different permit located elsewhere?

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§ 90A-3. Restaurant-~~cafe~~café/streetery permit required.

It shall be unlawful for any person to erect, construct or maintain a restaurant-cafe without first applying for and securing a permit therefor as provided in this chapter. The permit shall specify if the restaurant is permitted as a Cafe I District restaurant-cafe or a Cafe II District restaurant-cafe and shall be valid from the date of issuance until the end of the calendar year in which the permit was issued.

§ 90A-4. Permit application. [Amended 5-18-2017 by Ord. No. 5-2017]

A. Any person who shall desire to open a restaurant-cafe in the Borough shall make application therefor (the applicant) in writing to the Department of Building, Housing, and Codes Enforcement, as established by the West Chester Borough Outdoor Dining Policy, incorporated herein, as amended from time to time by Borough Council.[1] Such application shall be accompanied by such application fee as required by a schedule of fees, established by and amended from time to time by resolution of Borough Council. Such application shall be made annually in accordance with the Outdoor Dining Policy after the first of the year, upon forms provided by the Borough, and shall set forth and include the following:

(1) The name and address of the applicant.

(2) A scaled plan specifying the precise location of the outdoor portion of the restaurant-cafe with a proposed seating plan, a calculation of the proposed occupant load and, where applicable, the location of any adjacent parking spaces in the public right-of-way.

(3) The written consent of the property owner, if different than the applicant.

(4) An agreement of indemnity as outlined in § 90A-5 and a certificate of liability insurance naming the Borough as an additional insured.

(5) The indoor seating capacity of the restaurant-cafe.

(6) The type of restaurant-cafe proposed by the applicant, whether it be Cafe I District restaurant-cafe or Cafe II District restaurant-cafe.

(7) Such other information as may be required from time to time by the Borough.

B. No action shall be taken on any application for a permit under this section until the application has been completed in its entirety and the application fee, as required by a schedule of fees established and amended from time to time by resolution of the Borough Council, has been paid in full. The schedule of fees shall be kept on file at the Department of Building, Housing, and Codes Enforcement. There shall be no proration of fees under this subsection.

§ 90A-5. Indemnification of the Borough; insurance. [Amended 5-18-2017 by Ord. No. 5-2017]

The applicant/property owner shall well and truly save, indemnify, defend and keep harmless the Borough of West Chester, its officers, employees, and agents from and against any and all actions, suits, demands, payments, costs, and charges for and by reason of the existence of the restaurant-cafe and all damages to persons or property resulting from or in any manner caused by the presence, location, use, operation, installation, maintenance, replacement or removal of such restaurant-café or by the acts or omissions of the employees or agents of the applicant in connection with such restaurant-cafe. Such indemnification shall be provided through the execution of the Borough's indemnification agreement for restaurant-cafes, made

1. **Editor's Note: Said Outdoor Dining Policy is on file in the Borough offices.**

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available by the Borough, incorporated herein, as amended from time to time.[2] The applicant/property owner must obtain and maintain an insurance policy which covers general liability in the area of the restaurant-cafe, which is within the public right-of-way, which names the Borough as an additional insured.

Commented [RR3]: What should the amount be?

§ 90A-6. Specific standards.

Commented [RR4]: Can we deny any permits that are in the street?

The following regulations shall apply to restaurant-cafes.

A. A minimum pedestrian walkway of 54 inches clear is to be maintained in front of the restaurant-cafe.

B. The minimum height of umbrellas which project into the required minimum pedestrian walkway shall be 80 inches.

C. There shall be no advertising displayed on umbrellas or tables which are located on the sidewalk directly abutting or adjacent to the restaurant-cafe.

D. If on-street parking exists in front of the restaurant-cafe, tables on the curbline are prohibited. If on-street parking does not exist in front of the restaurant, tables are permitted at the curbline, provided that a barrier is erected which is approved by the Borough's Historic Architectural Review Board (HARB) and Borough Council.

E. Tables which are placed on the sidewalk directly abutting or adjacent to the restaurant-cafe shall not exceed 13 square feet in area.

F. The Cafe I District restaurant-cafe shall not utilize disposable plates or utensils.

G. There shall be no temporary signs or banners permitted outside of the restaurant-cafe.

H. The owner of the restaurant-cafe is responsible for keeping the pedestrian walkway in front of the premises clean and free of trash and debris.

I. Owners of a Cafe I District restaurant-cafe must stop serving customers on or before 11:00 p.m. prevailing time and clear all tables of food, beverages and customers on or before 12:00 midnight prevailing time.

J. Owners of a Cafe II District restaurant-cafe must stop serving customers on or before 9:00 p.m. prevailing time and clear all tables of food, beverages and customers on or before 10:00 p.m. prevailing time.

K. Owners of a Cafe I District restaurant-cafe must provide table service.

L. All owners of a restaurant-cafe must provide trash receptacles, acceptable to the Borough of West Chester, which are located at the exterior of the premises.

M. The Cafe I District restaurant-cafe shall serve all beverages in glass only. No alcoholic beverages shall be served or allowed to be consumed in a Cafe II District restaurant-cafe.

N. The owner shall maintain the restaurant-cafe in accordance with all Borough ordinances and state and federal laws, as well as rules and regulations promulgated and adopted by the Borough which pertain to the use of restaurant-cafes.

O. Notice for removal.

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2. Editor's Note: Said indemnification agreement is on file in the Borough offices.

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(1) The owner shall remove the outdoor portion of the restaurant-cafe within 30 days after written notice by the Borough if the Borough determines that the restaurant-cafe is detrimental to the health, safety and general welfare of the Borough or its citizens because one or more of the following conditions has occurred:

(a) Due to pedestrian traffic changes, the restaurant-cafe narrows the sidewalk to the extent that pedestrian traffic is impeded;

(b) The restaurant-cafe interferes with the maintenance or installation of an underground utility structure;

(c) The restaurant-cafe is no longer being used as such;

(d) The restaurant-cafe has been temporarily or permanently closed for violation of any Borough, state or federal law and/or regulation; or

(e) The restaurant-cafe is operated in violation of any ordinance, rule or regulation of the Borough of West Chester.

(2) In the event that the owner fails to remove the restaurant-cafe within 30 days after written notice, the Borough may proceed to remove and restore the area and charge the owner for the cost thereof. Should the restaurant-cafe be removed by the Borough, the owner shall be entitled to a return of the equipment, furnishings or appurtenances so removed only after the payment of all costs due to the Borough and by requesting the return in writing. The responsibility for removal under the provisions of this subsection shall be the sole responsibility of the owner without any obligation or cost assessed against the Borough.

P. Any restaurant-cafe that is located on a public street that is closed to vehicular traffic during the Borough's Restaurant Festival shall close its outdoor seating area for the duration of the Restaurant Festival. **[Added 4-21-2010 by Ord. No. 11-2010]**

Q. Borough Council may approve the erection of a railing or fence in the sidewalk right-of-way as part of the permit for the restaurant-cafe subject to the following criteria: **[Added 8-17-2011 by Ord. No. 14-2011]**

(1) All railings shall be wrought iron in dark muted colors.

(2) Railings must be installed with removable sections.

(3) The design of the railing shall not include sharp points on top of the rails.

(4) The height of the railing shall be a minimum of 30 inches and a maximum of 45 inches above the sidewalk grade.

(5) If on-street parking abuts the sidewalk where the railing is proposed to be located, the railing shall be installed a minimum of 18 inches from the curbline. If there is no on-street parking which abuts the sidewalk where the railing is proposed to be located, the railing shall be installed at the curbline.

§ 90A-7. Additional rules and regulations. [Amended 5-18-2017 by Ord. No. 5-2017]

The West Chester Borough Outdoor Dining Policy, as amended from time to time, which provides additional guidelines, standards, and regulations, is incorporated herein.[3] The Borough may, from time to time, through its Outdoor Dining Policy, promulgate whatever rules or regulations it deems necessary or

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desirable to effectuate the purposes of this chapter, and the same shall be approved by the Borough Council.

§ 90A-8. Violations and penalties.

Any person who violates or permits the violation of any provision of this chapter shall, upon conviction thereof in a summary proceeding brought before a District Justice, be guilty of a summary offense and shall be subject to the payment of a fine, not less than $50 for the first offense, not less than $100 for the second and subsequent offense and not more than $1,000 plus the costs of prosecution. Upon default of payment thereof, the defendant may be sentenced to imprisonment in the county prison for a period of not more than 30 days. Each section or provision of this chapter that is violated shall constitute a separate offense and each day or portion thereof in which a violation of this chapter is found to exist shall constitute a separate offense each of which violations shall be punishable by a separate fine imposed by the District Justice in the amounts stated hereinabove.

Commented [RR5]: How do we stop people from installing these in parking spaces that are not paid for?

3. **Editor's Note: Said Outdoor Dining Policy is on file in the Borough offices.**

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April 28, 2025

Re: 401 & 335 W. Washington Street Lot Line Change

401 W. Washington is in the NC-1 and 335 W. Washington is in the NC-2 District. Both are neighborhood conservation districts.

The following information has been submitted for review:

1. A Preliminary/Final Minor Subdivision Plan for Elk Terrace Associates, LP dated 01/22/2025 with 2 revisions project number 16202 by Howell Surveying.

Comment:

After review of the plan with the second revision the plan has zoning approval with one condition.

1. The Zoning Requirements for proposed Lot 2 are revised from 71,850 S.F. to 71,505 S.F.

Yerkes Associates, Inc
MICHAEL BARBIERI
Michael Barbieri
Borough of West Chester Zoning Officer

NARRATIVE

THE PURPOSE OF THIS PLAN IS TO CONVEY 5,089 S.F. FROM PARCEL #1-8-37.1 TO PARCEL #1-8-37.1C. NO NEW CONSTRUCTION OR DEVELOPMENT IS PROPOSED AS PART OF THIS SUBMISSION.

ZONING REQUIREMENTS*

ZONE NC-1 (NEIGHBORHOOD CONSERVATION DISTRICT)
AREA AND BULK REGULATIONS

	REQUIRED	EXISTING LOT 1	PROPOSED LOT 1
MIN. LOT AREA			
PER DWELLING UNIT	MEDIAN VALUE OF LOTS ON THE BLOCK FACE	137,920 S.F.	132,831 S.F.
MIN. LOT WIDTH			
AT BUILDING LINE	60'	387.9'	360.4'
BUILDING SETBACKS			
MIN. FRONT YARD	MATCH EXISTING ADJACENT SETBACKS	1.1'	1.1'
MIN. SIDE YARD	15'	49.3'	20.8'
MIN. REAR YARD	35'	N/A	N/A
ACCESSORY STRUCTURE SETBACKS			
MIN. SIDE YARD	5'	110.2'	110.2'
MIN. REAR YARD	5'	364.1'	364.1'
MAX. BUILDING COVERAGE (OVER 20,000 S.F.)	15%	5.1%	5.3%
MAX. IMPERVIOUS COVERAGE (OVER 20,000 S.F.)	30%	32.1%**	29.9%
MAX. BUILDING HEIGHT	35'	<35'	<35'

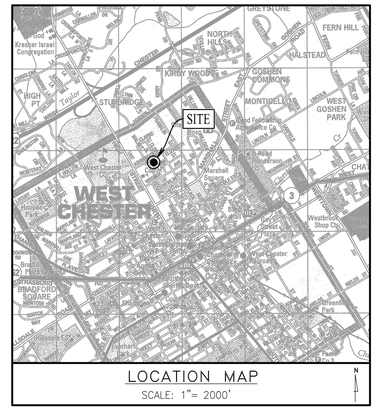
* SEE GENERAL NOTES FOR ZONING INFORMATION DISCLAIMER
** EXISTING NON-CONFORMING

ZONING REQUIREMENTS*

ZONE NC-2 (NEIGHBORHOOD CONSERVATION DISTRICT)
AREA AND BULK REGULATIONS

	REQUIRED	EXISTING LOT 2	PROPOSED LOT 2
MIN. LOT AREA			
PER DWELLING UNIT	MEDIAN VALUE OF LOTS ON THE BLOCK FACE	66,103 S.F.	71,192 S.F.
MIN. LOT WIDTH			
AT BUILDING LINE (ATTACHED)	20'	157.8'	185.3'
BUILDING SETBACKS			
MIN. FRONT YARD	MATCH EXISTING ADJACENT SETBACKS	20.9'**	20.9'**
MIN. SIDE YARD	EX. ADJACENT, 10'	7.2'**	7.2'**
MIN. REAR YARD	35'	N/A	N/A
ACCESSORY STRUCTURE SETBACKS			
MIN. SIDE YARD	5'	N/A	N/A
MIN. REAR YARD	5'	N/A	N/A
MAX. BUILDING COVERAGE (OVER 5,000 S.F.)	35%	37.5%**	34.9%
MAX. IMPERVIOUS COVERAGE (OVER 5,000 S.F.)	50%	85.1%**	85.1%**
MAX. BUILDING HEIGHT	35'	<35'	<35'

* SEE GENERAL NOTES FOR ZONING INFORMATION DISCLAIMER
** EXISTING NON-CONFORMING



LOCATION MAP
SCALE: 1"= 2000'

COMMONWEALTH OF PENNSYLVANIA COUNTY OF CHESTER

ON THIS THE _____ DAY OF _____ 20 ___ A.D. BEFORE ME, THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, RESIDING IN _____ PERSONALLY APPEARED _____ _____ WHO ACKNOWLEDGES _____SELF TO BE THE _____ OF _____ A _____, AND THAT AS SUCH TO DO SO, _____ EXECUTED THE FOREGOING PLAN BY SIGNING THE NAME OF THE SAID _____ BY _____SELF AS _____, THAT THE SAID _____ IS THE OWNER OF THE DESIGNATED LAND, THAT ALL NECESSARY APPROVAL OF THE PLAN HAS BEEN OBTAINED AND IS ENDORSED THEREON AND THAT THE SAID _____ DESIRES THAT THE FOREGOING PLAN MAY BE DULY RECORDED.

BY: _____ ELKS HOME OF WEST CHESTER DATE

BY: _____ ELK TERRACE ASSOCIATES, LP C/O HALF PENNY MANAGEMENT, CO DATE

WITNESS MY HAND AND SEAL THE DAY AND DATE ABOVE WRITTEN.

NOTARY PUBLIC: _____

MY COMMISSION EXPIRES: _____

REVIEWED BY THE PLANNING COMMISSION OF WEST CHESTER BOROUGH, CHESTER COUNTY, PENNSYLVANIA, THIS _____ DAY OF _____, 20 ____.

_____ CHAIRPERSON

_____ MEMBER

_____ MEMBER

APPROVED BY THE BOROUGH COUNCIL OF WEST CHESTER BOROUGH, CHESTER COUNTY, PENNSYLVANIA, THIS _____ DAY OF _____, 20 ____.

_____ PRESIDENT

_____ SECRETARY

REVIEWED BY THE CHESTER COUNTY PLANNING COMMISSION THIS _____ DAY OF _____, 20 ____.

_____ SECRETARY

REVIEWED APPLICANT THIS _____ DAY OF _____, 20 ____.

_____ BOROUGH ENGINEER

RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS OF CHESTER COUNTY AT WEST CHESTER, PENNSYLVANIA, IN PLAN BOOK _____ PAGE _____ ON THE _____ DAY OF _____, 20 ____.

_____ (DEPUTY) RECORDER OF DEEDS

CERTIFICATE OF DESIGNER

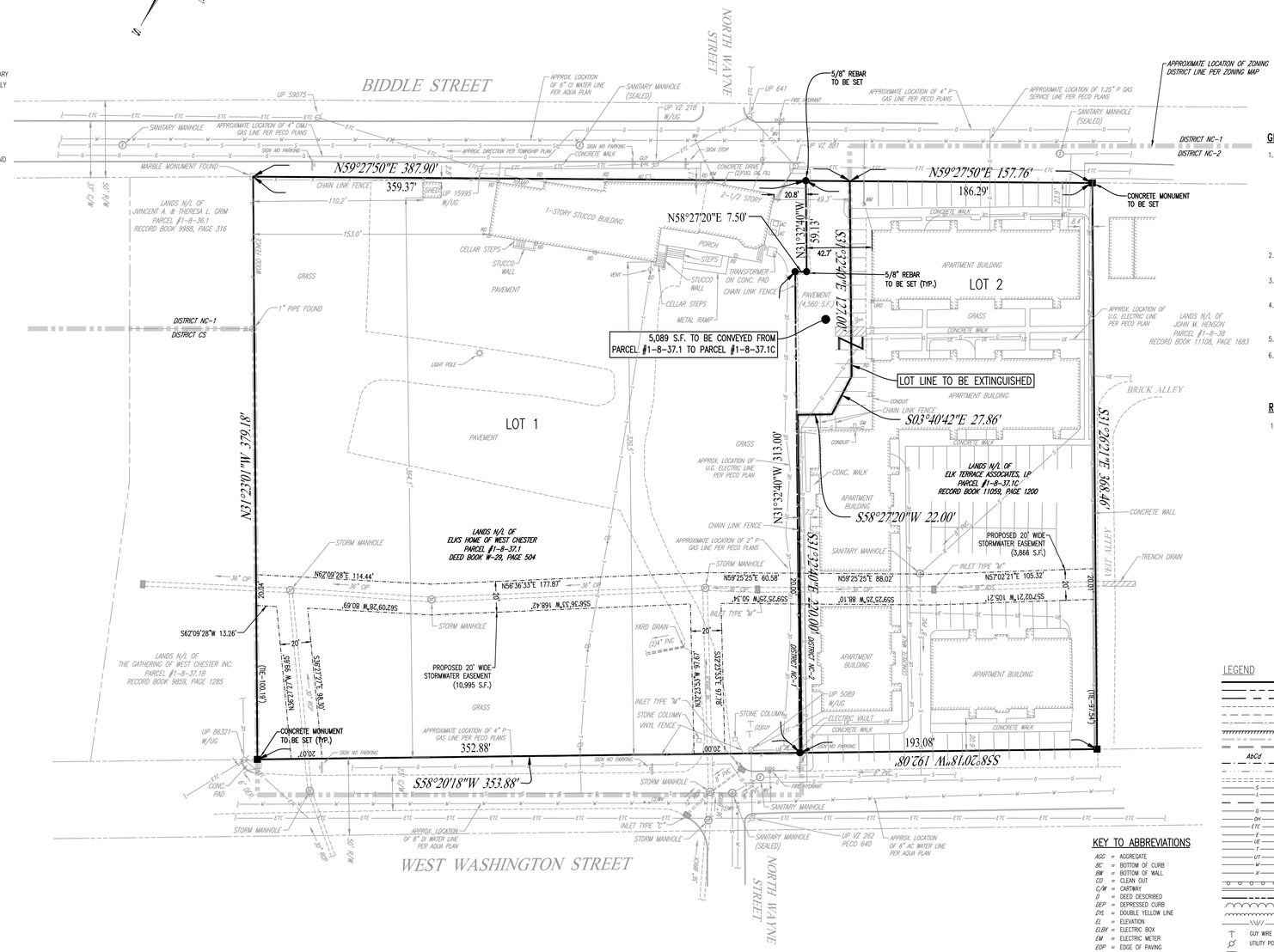
I HEREBY CERTIFY THAT THE PLANS ARE IN CONFORMITY WITH ENGINEERING, ZONING, SUBDIVISION, BUILDING, SANITATION AND OTHER APPLICABLE BOROUGH CHAPTERS AND REGULATIONS. IF THE PLANS ARE NOT SO CONFORMING, THEN THE REASONS FOR REQUESTING AN EXCEPTION ARE NOTED HERON. IF PROPOSED ZONING CHANGES ARE SHOWN, THEN THE SUGGESTED LOCATIONS OF BUILDINGS IN CONNECTION THEREWITH ARE IDENTIFIED HEREON.

_____ PHILLIP S. NEILL, PLS REGISTRATION NO: SU075419

CERTIFICATE OF ACCURACY – SURVEY

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, ALL SURVEY BOUNDARY INFORMATION AND COMPUTATIONS SHOWN AND DESCRIBED HEREON ARE TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE WEST CHESTER BOROUGH SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

_____ PHILLIP S. NEILL, PLS REGISTRATION NO: SU075419



LEGEND

- PROPERTY BOUNDARY
- ADJOINER PROPERTY LINE
- FLOOD PLAIN LINE
- EDGE OF PAVING
- EDGE OF GRAVEL
- CENTERLINE
- BUILDING LINE
- ZONING BOUNDARY LINE
- SOILS LINE
- ABCd — SOIL TYPE DESIGNATION
- EASEMENT LINE
- WATER/STREAM/POND
- STORM PIPE
- S — SANITARY SEWER
- SANITARY LATERAL
- BUILDING SETBACK LINE
- G — GAS LINE
- OH — OVERHEAD WIRES
- ETC — OVERHEAD ELECTRIC,TELECOMMUNICATION, CABLE LINES
- E — OVERHEAD ELECTRIC LINE
- UE — UNDERGROUND ELECTRIC LINE
- T — OVERHEAD TELECOMMUNICATION LINE
- UT — UNDERGROUND TELECOMMUNICATION LINE
- W — WATER SERVICE LINE
- X — FENCE LINE
- GUARD RAIL
- CONCRETE CURB LINE
- LEGAL RIGHT-OF-WAY
- TREE LINE
- BRUSH LINE
- WETLANDS
- GUY WIRE
- UTILITY POLE
- AC — AIR CONDITIONING UNIT
- WELL
- STREET SIGN
- GAS MANHOLE
- SANITARY MANHOLE
- STORM MANHOLE
- ELECTRIC MANHOLE
- COMMUNICATIONS MANHOLE
- WATER MANHOLE
- GENERAL UTILITY MANHOLE
- STORM INLET TYPE "C"
- STORM INLET TYPE "M"
- STORM INLET TYPE "S"
- CITY STORM INLET
- LIGHT POST
- FIRE HYDRANT
- SANITARY CLEAN OUT
- WV — WATER VALVE
- GAS VALVE
- WETLAND FLAG
- ROOF DRAIN
- MONUMENT FOUND
- MONUMENT SET
- PIPE/REBAR FOUND
- 5/8" REBAR SET
- STAKE FOUND
- STAKE SET
- SITE BENCHMARK
- DECIDUOUS TREE
- CONIFER TREE
- ABCdEFG — SLANTED TEXT=EXISTING INFORMATION
- ABCDEFG — UPRIGHT TEXT=PROPOSED INFORMATION
- 12 — TITLE REPORT NOTE

KEY TO ABBREVIATIONS

AGG = AGGREGATE
BC = BOTTOM OF CURB
BW = BOTTOM OF WALL
CO = CLEAN OUT
C/W = CANTWAY
D = DEED DESCRIBED
DEP = DEPRESSED CURB
DYL = DOUBLE YELLOW LINE
EL = ELEVATION
ELEK = ELECTRIC BOX
EM = ELECTRIC METER
EOP = EDGE OF PAVING
FF = FIRST FLOOR ELEVATION
GM = GAS METER
GUY = GUY WIRE
GV = GAS VALVE
HCP = HANDICAP PARKING SIGN/SPOT
INV = INVERT ELEVATION
LA = LANDSCAPED AREA
OH = OVERHEAD WIRES
RD = ROOF DRAIN
R/W = RIGHT-OF-WAY
S = SURVEY
SWL = SINGLE WHITE LINE
SYL = SINGLE YELLOW LINE
TC = TOP OF CURB
TG = TOP OF GRATE
TEBX = TELEPHONE/COMM. BOX
TW = TOP OF WALL
UP = UTILITY POLE
URD = UNDERGROUND ROOF DRAIN
WE = WETLAND
WM = WATER METER
WV = WATER VALVE

GENERAL NOTES

1. RECORD OWNER/MAILING ADDRESS:
   ELKS HOME OF WEST CHESTER
   PO BOX 29
   WEST CHESTER, PA 19380
   TAX PARCEL #: 1-8-37.1
   SITE ADDRESS: 401 W. WASHINGTON STREET
   WEST CHESTER, PA 19380
   SOURCE OF TITLE: DEED BOOK W-29, PAGE 504
   LOT AREA: 137,920 S.F./3.166 ACRES

   RECORD OWNER/MAILING ADDRESS:
   ELK TERRACE ASSOCIATES, LP
   C/O HALF PENNY MANAGEMENT, CO
   90 CRICKET AVE
   ARDMORE, PA 19003
   TAX PARCEL #: 1-8-37.1C
   SITE ADDRESS: 335 W. WASHINGTON STREET
   WEST CHESTER, PA 19380
   SOURCE OF TITLE: RECORD BOOK 11059, PAGE 1200
   ("REFERENCE PLAN #1")
   LOT AREA: 66,103 S.F./1.517 ACRES
2. BOUNDARY AND PHYSICAL IMPROVEMENTS SHOWN ARE FROM FIELD SURVEY BY HOWELL SURVEYING, LLC. PERFORMED ON 12/04/2024.
3. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT, WHICH WOULD DISCLOSE ANY RIGHTS, RESERVATIONS, EASEMENTS, ETC... OF RECORD.
4. UNDERGROUND UTILITIES SHOWN WERE PLOTTED FROM OBSERVABLE EVIDENCE AT THE TIME OF SURVEY AND INFORMATION FROM PLANS SUPPLIED BY UTILITY COMPANIES. NO GUARANTEE IS MADE THAT UNDERGROUND UTILITIES ARE ACCURATELY OR COMPLETELY SHOWN HEREON.
5. THE 50' WIDE RIGHT-OF-WAY OF BIDDLE STREET & WEST WASHINGTON STREET WERE TAKEN FROM DEEDS OF RECORD.
6. THIS PROPERTY IS LOCATED WITHIN FLOOD HAZARD ZONE X, AN AREA OF MINIMAL FLOOD HAZARD PER THE NATIONAL FLOOD INSURANCE RATE MAP FOR CHESTER COUNTY, PA. MAP NO. 42029C0210G, PANEL 210 OF 380, DATED SEPTEMBER 29, 2017.

REFERENCE PLAN(S)

1. PLAN ENTITLED, " PLANNED APARTMENTS FOR ELK HOME ASSOCIATION", PREPARED BY YERKES ENGINEERING, CO., WEST CHESTER, PA, DATED 12/01/1969, RECORD PLAN BOOK #36, PAGE 43.

PA ONE CALL

ACT 287 SERIAL NUMBER: 20243313128 & 20243313152
HOWELL SURVEYING DOES NOT GUARANTEE THE ACCURACY OF THE LOCATIONS FOR EXISTING SUBSURFACE UTILITY LINES, STRUCTURES, ETC. SHOWN ON THE PLANS, NOR DOES HOWELL SURVEYING GUARANTEE THAT ALL SUBSURFACE UTILITY LINES, STRUCTURES, ETC. ARE SHOWN. CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATIONS OF ALL SUBSURFACE UTILITY LINES, STRUCTURES, ETC. BEFORE THE START OF WORK, BY CALLING THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776.

UTILITIES NOTIFIED

COMPANY: AQUA PENNSYLVANIA
ADDRESS: 762 LANCASTER AVE
BRYN MAWR, PA. 19010
CONTACT: THOMAS WADDY
EMAIL: tbwaddy@aquaamerica.com
PHONE: 610-525-1400 EXT. 52105

COMPANY: COMCAST
ADDRESS: 1250 HADDONFIELD-BERLIN RD
CHERRY HILL, NJ. 08034
CONTACT: WYATT PARRISH
EMAIL: WYATT_PARRISH@CABLE.COMCAST.COM
PHONE: 484-368-4391

COMPANY: PECO AN EXELON COMPANY C/O USIC
ADDRESS: 450 S HENDERSON ROAD SUITE B
KING OF PRUSSIA, PA. 19406
CONTACT: NIKKIA SIMPKINS
EMAIL: nikkiasimpkins@usicllc.com
PHONE: 484-681-5720

COMPANY: WEST CHESTER BOROUGH
ADDRESS: 401 E GAY ST
WEST CHESTER, PA. 19380
CONTACT: DON EDWARDS
EMAIL: dedwards@west-chester.com
PHONE: 610-696-5282

COMPANY: VERIZON BUSINESS FORMERLY MCI
ADDRESS: 400 INTERNATIONAL PARKWAY
RICHARDSON, TX. 75081
CONTACT: DEAN BOYERS
EMAIL: investigations@verizon.com
PHONE: 469-886-4238

COMPANY: VERIZON BUSINESS FORMERLY MCI
ADDRESS: 7000 WESTON PKWY
CARY, NC. 27513
CONTACT: VICTOR WOOD
EMAIL: victor.s.wood@verizon.com
PHONE: 919-414-2782

EX. IMPERVIOUS TABULATION - PARCEL #1-8-37.1

1- PAVED/CONC. DRIVES	35,985 S.F.
2- BUILDING	6,905 S.F.
3- PORCH	822 S.F.
4- STEPS/WALKS/RAMPS	296 S.F.
5- SHED	122 S.F.
6- CONCRETE PADS	117 S.F.
7- WALLS	47 S.F.
TOTAL =	44,255 S.F.

EX. IMPERVIOUS TABULATION - PARCEL #1-8-37.1C

1- PAVEMENT	23,168 S.F.
2- BUILDINGS	24,779 S.F.
3- WALKS	8,280 S.F.
TOTAL =	56,227 S.F.

40 0 20 40 80
GRAPHIC SCALE
1 inch = 40 feet

PARCELS #1-8-37.1 & #1-8-37.1C

HOWELL SURVEYING
Local Knowhow. Engineered.
1250 Wrights Lane, West Chester, PA 19380
(610) 918-9004 | Fax: (610) 918-9005

DOES NOT APPEAR IN THIS BLOCK
BY PAM S. KAY IN JACKAL, F. PA 19003123 DA

COMMONWEALTH OF PENNSYLVANIA
PHILIP SCOTT NEILL
LAND SURVEYOR
SU075419
REGISTERED

NO.	DATE	DESCRIPTION
1	04/21/25	REVISED PER TOWNSHIP REVIEW LETTER DATED 04/21/2025.
2	-----	-----
3	-----	-----
4	-----	-----
5	-----	-----
6	-----	-----
7	-----	-----
8	-----	-----

PRELIMINARY/FINAL
MINOR SUBDIVISION

CLIENT: ELK TERRACE ASSOCIATES, LP
PROJECT: ELKS HOME OF WEST CHESTER
LOCATION: 335 & 401 W. WASHINGTON STREET
WEST CHESTER BORO., CHESTER COUNTY, PA

DATE: 01/22/2025
SCALE: 1"=40'
DRAWN BY: KPM
CHECKED BY: PSN
PROJECT NO.: 16202
CAD FILE: 6202 LOT LINE CHANGE (REV1)
DRAWING NO.: S1
SHEET 1 OF 1

BOROUGH OF WEST CHESTER
PLANNING COMMISSION

June 04, 2025

Borough Council
Borough of West Chester
401 E Gay St, West Chester, PA 19380

RE: 401 West Washington Street, Elks Home of West Chester, Lot Line Change

Members of Council,

The Planning Commission reviewed discussed and voted on the "401 West Washington Street, Elks Home of West Chester, Lot Line Change" at the PC voting session May 27, 2025.

M. Clapp moved to recommend approval of the Draft plan with one condition: resolve the final comment from the Zoning Officer regarding lot areas.
J. Cherry seconded the motion.

PC Note to BC: *The Borough of West Chester "Official Map" identifies a potential "right-of-way" through the 401 West Washington parcel. (continuation of N. Wayne Street) and based on conversations with the Borough Solicitor, the proposed change to the property line would or should not affect the Official Map and the proposed future right-of-way shown on the property for N. Wayne St..*
(The purpose of an Official Map is to identify the locations of planned public lands and facilities, providing notice to property owners and developers of a municipality's future intentions to acquire land for public purposes like streets, parks, or trails.)

Public Comments
Lisa Kearns (312 W. Biddle St.) - Neighbors are concerned this is a prelude to development. The applicant indicated this was not a prelude to development.
N. Scimone (BC) - What is the purpose of this change? The applicant reiterated that the general objective was to transfer the parking lot and the driveway to the Elks Terrace apartment property.

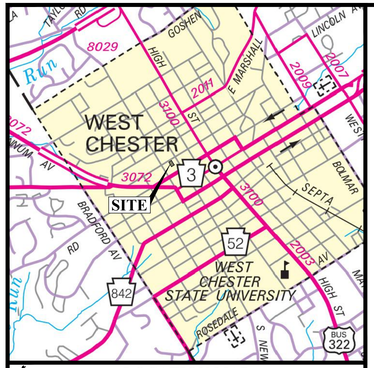
The motion passed with a vote of 5-1.
The vote was as follows:
J. Birl-Yes, A. Burke-No, J. Cherry-Yes, M. Clapp-Yes, T. Dougherty-Yes, A. Katz-Abstain, S. Mitten-Yes,

Please refer to PC meeting minutes for a more complete record of the PC's thoughts and concerns. Please feel free to contact me if you have any questions.

Respectfully Submitted,

Jim Cherry
Chair, Borough of West Chester Planning Commission

FINAL
LAND DEVELOPMENT PLAN
FOR
AXLE SQUARE, LLC
210-214 WEST WASHINGTON STREET, WEST CHESTER, PA, 19380
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA



LOCATION MAP
SCALE: 1" = 2000'

GENERAL NOTES:

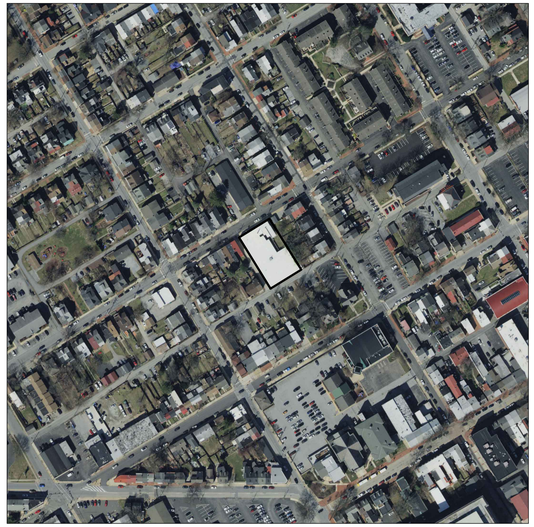
1. TOTAL TRACT AREA = 0.385 ACRES (16,883 S.F.)
2. TAX PARCEL NUMBERS: UPIs: 1-8-147, 1-8-147.1, AND 1-8-148.
3. THIS PLAN WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT.
4. BOUNDARY INFORMATION SHOWN PER FIELD SURVEY PERFORMED IN JUNE 2024 BY INLAND DESIGN, LLC, WEST CHESTER, PA.
5. TOPOGRAPHIC INFORMATION AND IMPROVEMENTS SHOWN BY PHYSICAL FIELD SURVEY PERFORMED IN JUNE, 2024 BY INLAND DESIGN, LLC, WEST CHESTER, PA. CONTOUR INTERVAL = 2 FOOT.
6. ELEVATIONS BASED ON NAVD88 DATUM. VERTICAL DATUM OBTAINED BY GPS OBSERVATIONS ON JUNE 18, 2024.
7. THE PROPERTY IS LOCATED WITHIN THE 'NC-2' - NEIGHBORHOOD CONSERVATION ZONING DISTRICT FOR SINGLE-FAMILY ATTACHED DWELLINGS.
8. THERE ARE NO WETLANDS LOCATED ON THE SUBJECT PROPERTY PER THE NATIONAL WETLANDS INVENTORY.
9. THERE IS NO 100 YEAR FLOODPLAIN LINE SHOWN ON THE PLAN, WHICH WAS DETERMINED FROM THE REFERENCE FIRM PANELS, MAP NUMBER 42029C0210G, EFFECTIVE SEPTEMBER 29, 2017.
10. SOILS INFORMATION TAKEN FROM UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE. THE ENTIRE SITE FALLS WITHIN THE SOIL CLASSIFICATION OF UrB - URBAN LAND.
11. SITE GEOLOGY IS CHARACTERIZED AS Fgp: FELSIC GNEISS.
12. THE PROPERTY IS SERVICED BY PUBLIC SEWER AND PUBLIC WATER.
13. THE SITE IS LOCATED IN THE TAYLOR RUN WATERSHED WHICH IS TRIBUTARY TO THE BRANDYWINE CREEK WATERSHED. THE CHAPTER 93 DESIGNATION FOR TAYLOR RUN: TROUT STOCKING (TSF), MIGRATORY FISHES (MF).
14. COMPLETENESS OR ACCURACY OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES AND FACILITIES CANNOT BE GUARANTEED. THE CONTRACTOR MUST VERIFY THE LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND/OR FACILITIES PRIOR TO BEGINNING ANY EARTH-MOVING ACTIVITIES.
15. A HOMEOWNER'S ASSOCIATION WILL BE CREATED FOR THE PURPOSES OF MAINTAINING ALL COMMON ELEMENTS INCLUDING, BUT NOT LIMITED TO DRIVEWAYS, STORMWATER MANAGEMENT FACILITIES, SIDEWALKS, LANDSCAPING AND ANY OTHER RELATED ELEMENTS.
16. THE SITE DEVELOPER SHALL BE RESPONSIBLE TO COORDINATE WITH A PROFESSIONAL LAND SURVEYOR TO SET ALL PROPOSED BOUNDARY MONUMENTATION AT THE COMPLETION OF CONSTRUCTION.
17. THE OWNER AND CONTRACTOR ARE RESPONSIBLE TO ENSURE THAT NO DAMAGE OCCURS TO EXISTING CURBING OR ROADWAYS. ANY DAMAGE WILL REQUIRE IMMEDIATE REPAIR TO THE BOROUGH'S SATISFACTION. ADDITIONALLY, WEST CHESTER BOROUGH DOES NOT ACCEPT MUD, DIRT OR DEBRIS TRACKED ONTO EXISTING ROADS. ANY MUD, DIRT OR DEBRIS OFFSITE / ON THE ROADS SHALL BE IMMEDIATELY CLEANED/REMOVED.
18. THERE ARE NO STREETS, RIGHTS-OF-WAY, OR ANY PUBLIC USE INTENDED FOR DEDICATION BY THIS PLAN.
19. ALL UTILITY LINES INCLUDING BUT NOT LIMITED TO ELECTRIC, GAS, STREETLIGHT SUPPLY, AND TELEPHONE SHALL BE PLACED UNDERGROUND. INSTALLATION OF ALL UTILITIES SHALL BE IN STRICT ACCORDANCE WITH THE ENGINEERING STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY, MUNICIPAL AUTHORITY OR OTHER PUBLIC UTILITY CONCERNED.
20. STORMWATER MANAGEMENT SHOWN PER PROJECT NARRATIVE AND POST CONSTRUCTION MANAGEMENT CALCULATIONS FOR MAZ CONSTRUCTION, 210-214 WEST WASHINGTON STREET, WEST CHESTER BOROUGH, CHESTER COUNTY, DATED SEPTEMBER 30, 2024, LAST REVISED APRIL 2, 2025.
21. IN ACCORDANCE WITH SECTION 97-38.1.E. THE APPLICANT IS PROPOSING TO PROVIDE A FEE IN LIEU OF ACREAGE TO BE SET ASIDE FOR RECREATION AND OPEN SPACE.
22. AFTER ALL PROPOSED CONSTRUCTION ACTIVITY HAS BEEN COMPLETED THE FULL WIDTH OF WASHINGTON STREET AND PATTON ALLEY SHALL BE MILLED AND OVERLAID FOR THE EXTENT OF THE FRONTAGE OF THE PROPERTY.
23. ACCESS TO THE ALLEYS, ADJACENT RESIDENTIAL DRIVEWAYS AND THE WASHINGTON STREET SIDEWALK SHALL BE AVAILABLE AT ALL TIMES AND NOT UTILIZED FOR CONSTRUCTION PURPOSES. IF CONSTRUCTION REQUIRES TEMPORARY CLOSURE OF AN ALLEY OR SIDEWALK, SIGNAGE AND DETOURS SHALL BE POSTED PER WEST CHESTER BOROUGH REQUIREMENTS.
24. EACH NEW DWELLING SHALL BE CONSTRUCTED TO PROVIDE A DEDICATED BRANCH CIRCUIT AND OVER CURRENT PROTECTION TO ACCOMMODATE A FUTURE LEVEL 2 EVCS INSTALLATION, WITH A WIRED RECEPTACLE AND RACEWAY TERMINATION WITHIN CLOSE PROXIMITY TO VEHICLE PARKING.
25. THE ONE-CAR GARAGE IN EACH DWELLING SHALL MAINTAIN A 9-FOOT BY 18-FOOT OPEN PARKING SPACE AREA.
26. THE CONTRACTOR SHALL REPAIR ANY DAMAGED SECTIONS OF EXISTING SEWER MAIN THAT IS ENCOUNTERED/CAUSED DURING LATERAL CONNECTIONS.
27. PRE AND POST LATERAL CONNECTION TV INSPECTION OF THE EXISTING PATTON ALLEY SEWER MAIN SHALL BE COMPLETED BY THE DEVELOPER.

WAIVER REQUESTS:

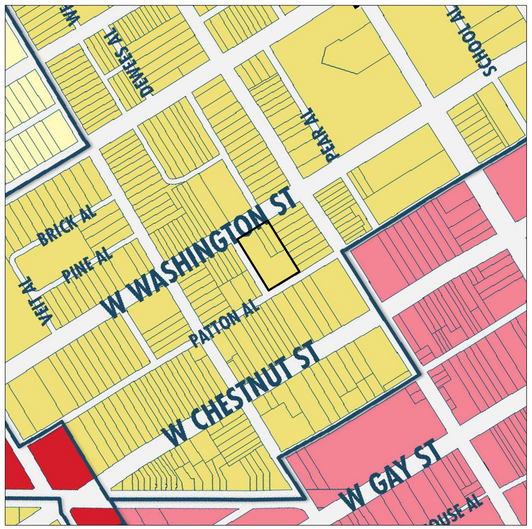
THE FOLLOWING WAIVERS ARE REQUESTED FROM THE WEST CHESTER BOROUGH SUBDIVISION AND LAND DEVELOPMENT ORDINANCE:

1. §97-27.F(7) - THE APPLICANT REQUESTS A WAIVER FROM THE REFERENCED SECTION OF THE ORDINANCE THAT REQUIRES 75-FEET CLEAR-SIGHT TRIANGLES BE PROVIDED AT THE ALL STREET INTERSECTIONS. THE 75-FOOT CLEAR-SIGHT TRIANGLE AT THE BIRDSEYE ALLEY INTERSECTION WITH WASHINGTON STREET AND PATTON ALLEY IS BLOCKED BY EXISTING BUILDINGS ON ADJOINING PROPERTIES AND THE PROPOSED NEW DWELLINGS ON OUR SITE.
2. §97-27.F(6) - THE APPLICANT REQUESTS A WAIVER FROM THE REFERENCED SECTION OF THE ORDINANCE THAT REQUIRES STREET INTERSECTIONS OF A STREET WITH A 25 MPH POSTED SPEED HAVE A MINIMUM SIGHT DISTANCE OF 175-FEET, MEASURED FROM A POINT 15-FEET FROM THE INTERSECTED PAVEMENT EDGE. THE SIGHTLINE FOR THE BIRDSEYE ALLEY INTERSECTION WITH WASHINGTON STREET, MEASURED 15-FEET BACK IS BLOCKED BY AN EXISTING BUILDING. THE SIGHTLINE FOR THE BIRDSEYE ALLEY INTERSECTION WITH PATTON ALLEY IS BLOCKED BY AN EXISTING BUILDING TO THE WEST AND THE PROPOSED BUILDINGS TO THE EAST. AN EXHIBIT SHOWN IN THE TRAFFIC STUDY SHOWS THAT THE REQUIRED SIGHT DISTANCE (175') IS ACHIEVABLE MEASURED 12.2 FEET BACK AT THE WASHINGTON INTERSECTION AND 10.5 FEET BACK AT THE PATTON INTERSECTION.

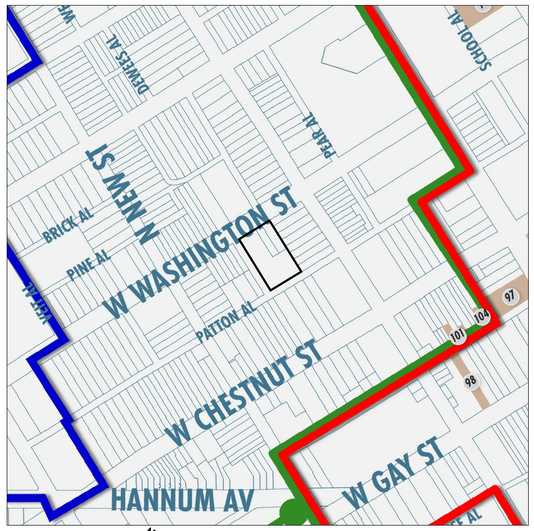
USGS MAP
SCALE 1:200



AERIAL MAP
SCALE 1:200



ZONING MAP
SCALE 1:200



HISTORIC RESOURCE PROTECTION MAP
SCALE 1:200

SHEET INDEX

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	TITLE PLAN
3	EXISTING CONDITIONS & DEMOLITION PLAN
4	LAYOUT PLAN
5	IMPROVEMENTS CONSTRUCTION PLAN
6	PCSM PLAN
7	PCSM DETAILS
8	CONSERVATION & EROSION & SEDIMENT CONTROL PLAN
9	EROSION & SEDIMENT CONTROL DETAILS
10	LANDSCAPE PLAN
11	LANDSCAPE & LIGHTING DETAILS
12	CONSTRUCTION DETAILS
13	VEHICLE TURNING PLAN
14	TRUCK TURNING PLAN

CERTIFICATION OF OWNERSHIP AND ACKNOWLEDGMENT OF SUBDIVISION AND LAND DEVELOPMENT PLANS

ON THIS, THE _____ DAY OF _____, 20 ____, BEFORE ME, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED _____, WHO BEING DULY SWORN ACCORDING TO LAW, DEPOSES AND SAYS THAT HE IS THE OWNER AND/OR EQUITABLE OWNER OF THE PROPERTY SHOWN ON THIS PLAN, AND THAT HE ACKNOWLEDGES THAT THE SAME TO BE HIS ACT AND PLAN AND DESIRES THE SAME TO BE RECORDED AS SUCH ACCORDING TO LAW.

WITNESS MY HAND AND SEAL THE DAY AND DATE ABOVE WRITTEN. MY COMMISSION EXPIRES:

_____ _____

_____
(NOTARY PUBLIC OR OTHER OFFICER)

REVIEWED BY THE PLANNING COMMISSION OF THE BOROUGH OF WEST CHESTER, CHESTER COUNTY, PENNSYLVANIA, THIS _____ DAY OF _____, 20___.

_____

_____

_____

REVIEWED BY THE CHESTER COUNTY PLANNING COMMISSION THIS _____ DAY OF _____, 20___.

CCPC FILE # _____

_____
SECRETARY

REVIEWED BY THE BOROUGH ENGINEER OF THE BOROUGH OF WEST CHESTER, CHESTER COUNTY, PENNSYLVANIA THIS _____ DAY OF _____, 20___.

_____
BOROUGH ENGINEER

APPROVED BY THE BOROUGH COUNCIL OF THE BOROUGH OF WEST CHESTER, CHESTER COUNTY, PENNSYLVANIA, THIS _____ DAY OF _____, 20___.

_____

_____

_____

RECORDER OF DEEDS

RECORDED IN THE OFFICE FOR THE RECORDING OF DEEDS IN AND FOR THE COUNTY OF CHESTER, AT WEST CHESTER, PA, IN PLAN BOOK _____, PAGE NO. _____ ON THE _____ DAY OF _____, 20___.

_____
RECORDER OF DEEDS

ENGINEER'S CERTIFICATION:

I, SCOTT J. ZWIZANSKI, ON THIS DATE _____, HEREBY CERTIFY THAT THE PLANS ARE IN CONFORMITY WITH ZONING, BUILDING, SUBDIVISION AND OTHER APPLICABLE BOROUGH CHAPTERS AND REGULATIONS. IN ANY INSTANCE WHERE SUCH PLANS DO NOT CONFORM, EVIDENCE SHALL BE PRESENTED THAT AN EXCEPTION OR MODIFICATION HAS BEEN GRANTED OR AUTHORIZED.

SCOTT J. ZWIZANSKI, P.E.

APPLICANT'S CERTIFICATION:

I, _____, ON THIS DATE _____, HEREBY CERTIFY THAT THE PLANS ARE IN CONFORMITY WITH ENGINEERING, ZONING, SUBDIVISION, BUILDING, SANITATION, AND OTHER APPLICABLE BOROUGH CHAPTERS AND REGULATIONS. IF PROPOSED ZONING CHANGES ARE SHOWN, THEN THE SUGGESTED LOCATIONS OF BUILDINGS IN CONNECTION THEREWITH ARE IDENTIFIED HEREON.

_____
APPLICANT

ZONING DATA
NC-2 NEIGHBORHOOD CONSERVATION DISTRICT
SINGLE-FAMILY ATTACHED

DESCRIPTION	REQUIRED	EXISTING			PROPOSED
		UPI: 1-8-147.1	UPI: 1-8-147	UPI: 1-8-148	
MINIMUM LOT AREA PER DWELLING UNIT	MEDIAN VALUE OF LOTS ON THE BLOCK FACE	12,359 S.F.	2,262 S.F.	2,262 S.F.	16,883 S.F. (0.39 AC.)
LOT WIDTH, MINIMUM (ATTACHED)	20 FEET	50 FEET	25 FEET	25 FEET	100 FEET
BUILD-TO LINE/FRONT YARD	MATCH EXISTING ADJACENT SETBACKS	0 FEET	0 FEET	0 FEET	0.5 FEET (WASHINGTON) 9.3 FEET (PATTON)
SIDE YARD, MINIMUM	EXISTING ADJACENT, 10 FEET MINIMUM	0 FEET	0 FEET	0 FEET	10 FEET
REAR YARD, MINIMUM	20 FEET	0 FEET	40 FEET	40 FEET	N/A
MAX. IMPERVIOUS COVERAGE	50% (LOTS OVER 5,000 S.F.) 80% (LOTS UNDER 4,000 S.F.)	98.3% (12,147 S.F.) *	84.2% (1,904 S.F.) *	40.0% (905 S.F.)	44.7% (7,548 S.F.)
MAX. BUILDING COVERAGE	35% (LOTS OVER 5,000 S.F.) 45% (LOTS UNDER 4,000 S.F.)	97.3% (12,028 S.F.) *	71.9% (1,627 S.F.) *	30.2% (684 S.F.)	34.6% (5,840 S.F.)
MAXIMUM BUILDING HEIGHT	35 FEET	< 35 FEET	< 35 FEET	< 35 FEET	34.17 FEET
* EXISTING NON-CONFORMITY.					
TOTAL EXISTING IMPERVIOUS COVERAGE OF THE THREE EXISTING PARCELS COMBINED IS 88.6% (14,956 S.F.). THE TOTAL PROPOSED IMPERVIOUS COVERAGE OF THE CONSOLIDATED LOT IS 44.7% (7,548 S.F.) THIS IS A TOTAL REDUCTION OF 43.9% (7,408 S.F.).					

OWNER / APPLICANT:

AXLE SQUARE, LLC
833 LINCOLN AVE, #1
WEST CHESTER, PA 19380
ATTN: MICHAEL ZAPPITELLI

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PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20241660254

PENNSYLVANIA ACT 187 REQUIREMENTS:
InLand Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does InLand Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

InLand Design
Engineering, Surveying & Land Planning
16 Hagerty Blvd.
West Chester, PA 19382
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA Registered Professional SCOTT J. ZWIZANSKI ENGINEER PE091752

No.	Date:	Description:
1	12/16/2024	REVISED PER MUNICIPAL REVIEW LETTERS.
2	12/18/2024	ADDED PERVIOUS PAVING
3	4/2/2025	REVISED PER MUNICIPAL REVIEW LETTERS.
4	6/2/2025	REVISED PER MUNICIPAL REVIEW LETTERS.

FINAL
LAND DEVELOPMENT PLAN

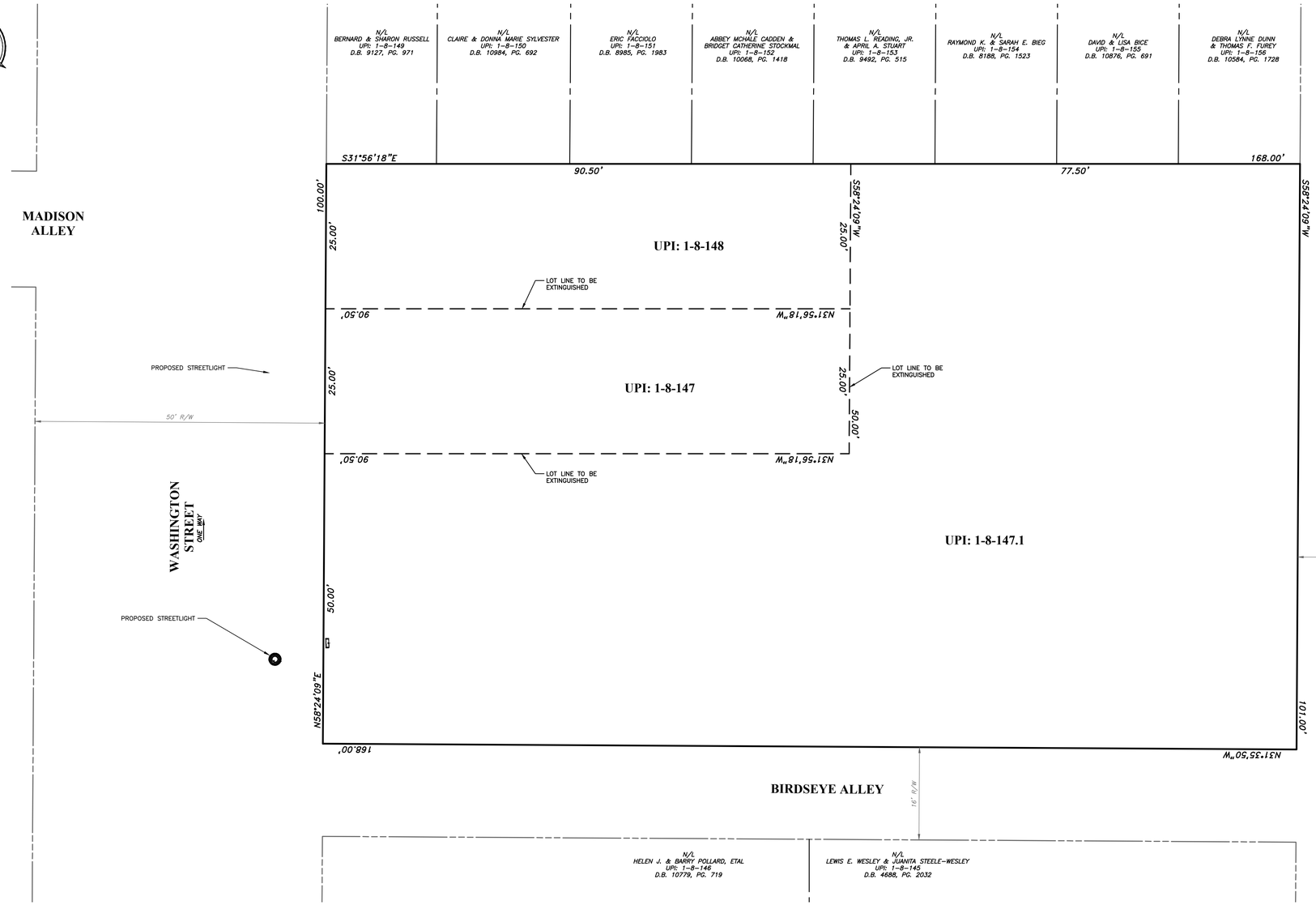
Date: 9/30/2024
Scale: AS NOTED
Drawn by: DWN
Checked by: SJZ
Project No. 12308

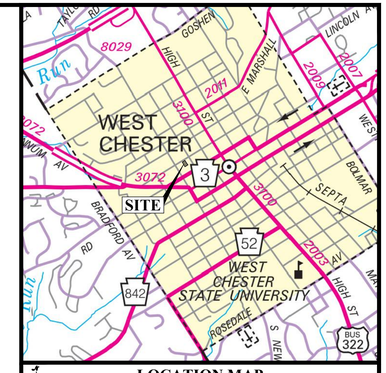
COVER SHEET FOR
AXLE SQUARE, LLC
210-214 WEST WASHINGTON STREET
WEST CHESTER, PA, 19380
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET 1 OF 14

UPI: 1-8-147 | UPI: 1-8-147.1 | UPI: 1-8-148

N:\12300\12308\dwg\Sheets\Preliminary Submission\1 COVER SHEET.dwg





LOCATION MAP
SCALE: 1" = 2000'

TITLE NOTES:

1. THE PURPOSE OF THIS PLAN IS TO CONSOLIDATE TAX PARCELS 1-8-147, 1-8-147.1 AND 1-8-148 INTO ONE LOT BY EXTINGUISHING THE SHARED LOT LINES BETWEEN THEM RESULTING IN A PROPOSED TRACT AREA OF 16,883 S.F. (0.388 ACRES).
2. THERE ARE NO STREETS, RIGHTS-OF-WAY, OR ANY PUBLIC USE INTENDED FOR DEDICATION BY THIS PLAN.
3. PERMANENT IRON PINS SHALL BE SET AT ALL CORNERS AND/OR ANGLE POINTS OF THE CONSOLIDATED PARCELS. NO OCCUPANCY PERMITS WILL BE ISSUED AND NO PUBLIC IMPROVEMENTS WILL BE ACCEPTED BY THE BOROUGH UNTIL ALL MONUMENTS ARE IN PLACE.

AREA OF TRACT:

UPI: 1-8-147		
GROSS LOT AREA	2,262 S.F.	0.052 AC.
AREA WITHIN RIGHT-OF-WAY	0 S.F.	0.000 AC.
NET LOT AREA	2,262 S.F.	0.052 AC.
UPI: 1-8-147.1		
GROSS LOT AREA	12,359 S.F.	0.284 AC.
AREA WITHIN RIGHT-OF-WAY	0 S.F.	0.000 AC.
NET LOT AREA	12,359 S.F.	0.284 AC.
UPI: 1-8-148		
GROSS LOT AREA	2,262 S.F.	0.052 AC.
AREA WITHIN RIGHT-OF-WAY	0 S.F.	0.000 AC.
NET LOT AREA	2,262 S.F.	0.052 AC.
CONSOLIDATED PARCEL		
GROSS LOT AREA	16,883 S.F.	0.388 AC.
AREA WITHIN RIGHT-OF-WAY	0 S.F.	0.000 AC.
NET LOT AREA	16,883 S.F.	0.388 AC.

LEGEND

- PROPERTY BOUNDARY
- PROPERTY BOUNDARY TO BE EXTINGUISHED
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE

OWNER / APPLICANT:

AXLE SQUARE, LLC
833 LINCOLN AVE, #1
WEST CHESTER, PA 19380
ATTN: MICHAEL ZAPPITELLI

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Serial Numbers:
20241660254

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UPI: 1-8-147 | UPI: 1-8-147.1 | UPI: 1-8-148

INLAND DESIGN
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16 Hagerty Blvd.
West Chester, PA 19382
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SCOTT G. ZWIZANSKI
ENGINEER
PE091752

No.	Date:	Description:
1	12/16/2024	REVISED PER MUNICIPAL REVIEW LETTERS.
2	12/18/2024	ADDED PERVIOUS PAVING
3	4/2/2025	REVISED PER MUNICIPAL REVIEW LETTERS.
4	6/2/2025	REVISED PER MUNICIPAL REVIEW LETTERS.

FINAL
LAND DEVELOPMENT PLAN

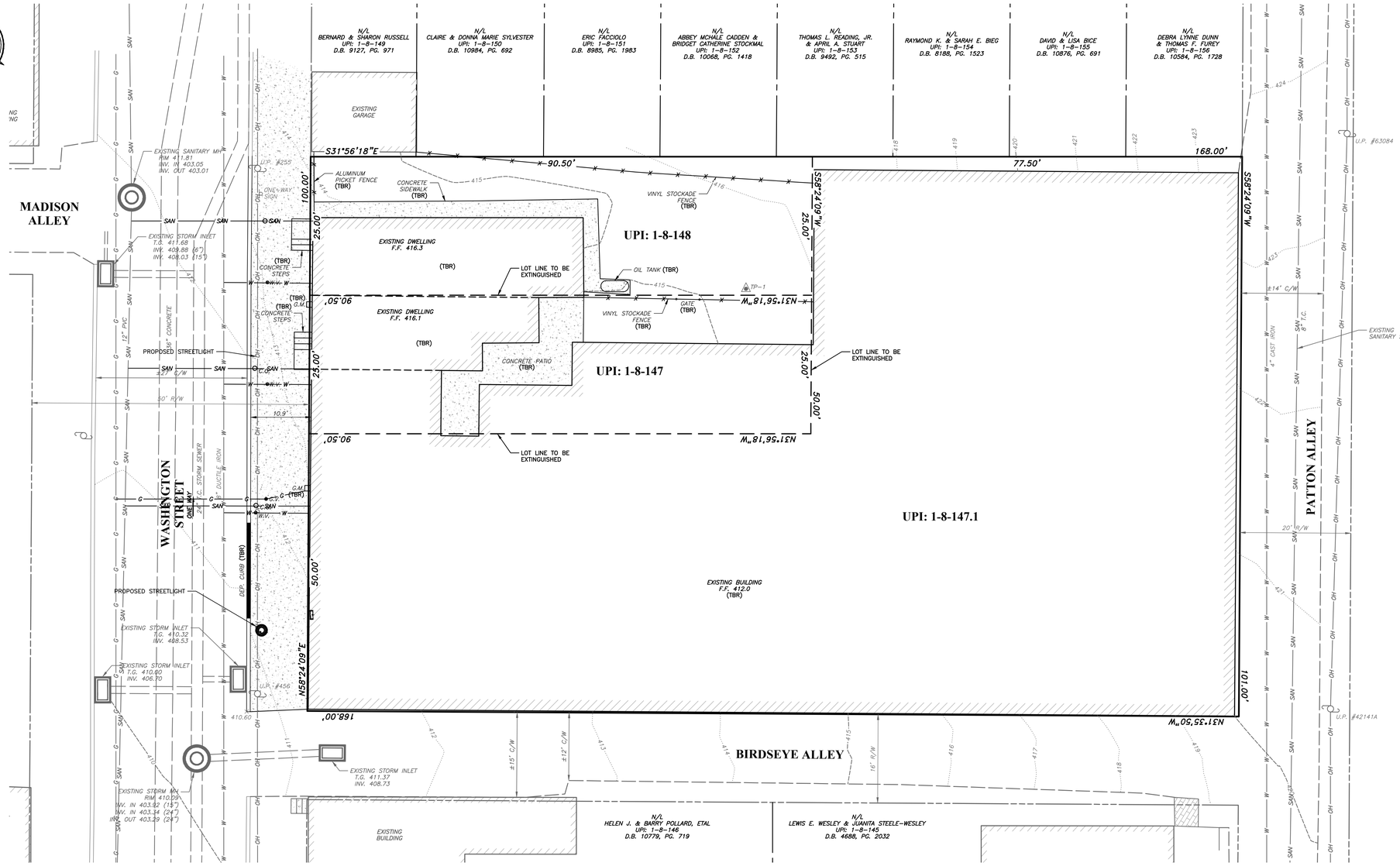
GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 Inch = 10'

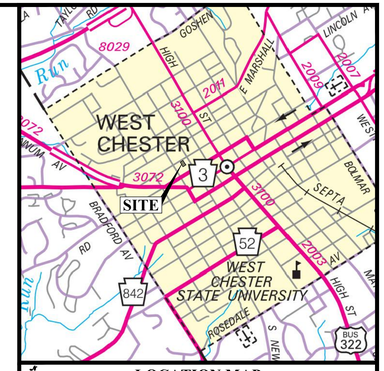
Date: 9/30/2024
Scale: 1" = 10'
Drawn by: DWN
Checked by: DWN
Project No. 12308

TITLE PLAN
FOR
AXLE SQUARE, LLC
210-214 WEST WASHINGTON STREET
WEST CHESTER, PA, 19380
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET 2 OF 14

N:\12300\12308\dwg\Sheets\Preliminary Submission\2 TITLE PLAN.dwg





LOCATION MAP
SCALE: 1" = 2000'

DEMOLITION NOTES:

1. THE EARTHWORK/SITE CONTRACTOR SHALL REMOVE AND/OR DEMOLISH ALL OF THE ANCILLARY FEATURES WHICH INTERFERE AND/OR CONFLICT WITH THE PROPOSED CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, FENCES FENCE POSTS AND FOOTINGS, POSTS, VEGETATION, PADS, STEPS, SIGNS BOLLARDS, CURBING, RAILINGS, ETC., INCLUDING EXISTING IMPROVEMENTS THAT MAY NOT BE SHOWN ON THESE PLANS. REMOVAL OF TREES MUST INCLUDE REMOVAL OF THE STUMPS.
2. THE EARTHWORK/SITE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE APPROPRIATE UTILITY PROVIDERS/OWNERS TO DISCONNECT THE EXISTING UTILITY SERVICES TO THE EXISTING BUILDING(S) AND/OR SITE PRIOR TO BEGINNING DEMOLITION. SERVICES, INCLUDING BUT NOT LIMITED TO STORM SEWER, ELECTRIC, SANITARY SEWER, GAS, TELEPHONE, AND WATER, MUST BE REMOVED AS DIRECTED BY THE APPROPRIATE UTILITY PROVIDERS/OWNERS.
3. THE EXISTING SANITARY SEWER LATERALS IN WASHINGTON ST. ARE PROPOSED TO BE FULLY REPLACED IN THEIR EXACT SAME LOCATION AND USED FOR PROPOSED WASHINGTON ST. DWELLINGS A, B AND C. IF THE EXISTING LATERAL LOCATION FOR EITHER OF THESE THREE UNITS CAN NOT BE REUSED, IT SHALL BE CUT AND CAPPED AT THE SEWER MAIN TO MINIMIZE THE FUTURE RISK OF INFILTRATION.
4. ALL DEBRIS FROM THE DEMOLISHED STRUCTURES THAT IS NOT REUSED AS FILL IS TO BE DISPOSED OF ACCORDING TO ALL APPLICABLE STANDARDS. DEMOLISHED MATERIALS REUSED AS FILL MATERIAL SHALL BE COMPLETED PER THE DIRECTION OF THE SOILS ENGINEER.
5. ALL DEMOLITION IS TO BE PERFORMED IN STRICT CONFORMANCE WITH ALL APPLICABLE TOWNSHIP, COUNTY, STATE, AND/OR OTHER GOVERNING BODIES STANDARDS.
6. CONTRACTOR SHALL IMPLEMENT MEASURES TO PREVENT DUST FROM LEAVING THE SITE DURING DEMOLITION AND CONSTRUCTION.
7. ANY EXISTING IMPROVEMENTS THAT ARE NOT TO BE DEMOLISHED , EITHER ON-SITE OR OFF-SITE (I.E. EXISTING ROAD, EXISTING CURBING, EXISTING UTILITIES, ETC.) DAMAGED BY THE EARTHWORK/SITE CONTRACTOR DURING CONSTRUCTION MUST BE REPAIRED BY THE EARTHWORK/SITE CONTRACTOR TO THEIR PRE-CONSTRUCTION CONDITION.
8. DEMOLITION OF CURBING AND/OR SIDEWALK (INCLUDING STONE BASE) SHALL EXTEND TO THE FIRST CONSTRUCTION OR EXPANSION JOINT BEYOND THE LIMIT OF DEMOLITION SHOWN ON THE PLANS. REPLACE WITH NEW CURB AND SIDEWALK (INCLUDING STONE BASE) AS REQUIRED.
9. WHEN CONNECTING TO EXISTING STORM SEWER PIPES AND/OR STRUCTURES, IF THE EARTHWORK/SITE CONTRACTOR FINDS THE EXISTING DOWNSTREAM EXISTING STORM SEWER PIPES AND/OR STRUCTURES BLOCKED AND/OR CLOGGED THE EARTHWORK/SITE CONTRACTOR MUST FLUSH AND/OR CLEAR ALL OF THE BLOCKAGES AND/OR CLOGGING FROM THE CONNECTION POINT TO THE EXISTING STORM SEWER PIPING OUTFALL POINT.
10. WHERE APPLICABLE, THE EARTHWORK/SITE CONTRACTOR SHALL PLUG EXISTING DRAINAGE STRUCTURES WITH BRICK AND NON-SHRINK GROUT.
11. DEMOLITION OF THE EXISTING BUILDINGS SHALL BE COMPLETED SO THAT THE EXISTING ROADWAYS AND ADJACENT PROPERTIES ARE NOT DISTURBED.

LEGEND

- PROPERTY BOUNDARY
- PROPERTY BOUNDARY TO BE EXTINGUISHED
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- TP-5 — TEST PIT LOCATION
- 102 — EXISTING 2' CONTOUR
- 100 — EXISTING 10' CONTOUR
- X102.35 — EXISTING SPOT ELEVATION
- EXISTING SIGN
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING CONCRETE PAD, SIDEWALK OR PATIO
- EXISTING FENCE LINE
- SAN — EXISTING STORM STRUCTURES & PIPE
- SAN — EXISTING SANITARY STRUCTURES & PIPE
- EXISTING SANITARY CLEAN-OUT
- EXISTING WATER VALVE
- W — EXISTING WATER LINE
- EXISTING GAS VALVE
- G — EXISTING GAS LINE
- EXISTING UTILITY POLE
- OH — EXISTING OVERHEAD WIRE
- (TBR) — TO BE REMOVED

EXISTING IMPERVIOUS COVERAGE:

DESCRIPTION	UPI: 1-8-147.1	UPI: 1-8-147	UPI: 1-8-148	COMBINED
BUILDING	12,028 S.F.	1,627 S.F.	684 S.F.	14,339 S.F.
PAVING/CONCRETE	119 S.F.	277 S.F.	221 S.F.	617 S.F.
TOTAL	**12,147 S.F.**	**1,904 S.F.**	**905 S.F.**	**14,956 S.F.**

AREA OF TRACT:

UPI: 1-8-147		
GROSS LOT AREA	2,262 S.F.	0.052 AC.
AREA WITHIN RIGHT-OF-WAY	0 S.F.	0.000 AC.
NET LOT AREA	2,262 S.F.	0.052 AC.
UPI: 1-8-147.1		
GROSS LOT AREA	12,359 S.F.	0.284 AC.
AREA WITHIN RIGHT-OF-WAY	0 S.F.	0.000 AC.
NET LOT AREA	12,359 S.F.	0.284 AC.
UPI: 1-8-148		
GROSS LOT AREA	2,262 S.F.	0.052 AC.
AREA WITHIN RIGHT-OF-WAY	0 S.F.	0.000 AC.
NET LOT AREA	2,262 S.F.	0.052 AC.
CONSOLIDATED PARCEL		
GROSS LOT AREA	16,883 S.F.	0.388 AC.
AREA WITHIN RIGHT-OF-WAY	0 S.F.	0.000 AC.
NET LOT AREA	16,883 S.F.	0.388 AC.

SOILS DESCRIPTION

SYMBOL	DESCRIPTION	SLOPE	AVAILABLE WATER CAPACITY	DRAINAGE CLASS	DEPTH TO S.H.W.T.	DEPTH TO BEDROCK	CAPABILITY UNIT	HYDROLIC SOIL GROUP
UrB	URBAN LAND	0% - 8%	---	---	---	---	8s	---

OWNER / APPLICANT:

AXLE SQUARE, LLC
833 LINCOLN AVE, #1
WEST CHESTER, PA 19380
ATTN: MICHAEL ZAPPITELLI

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Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20241660254

PENNSYLVANIA ACT 187 REQUIREMENTS:
InLand Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does InLand Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

UPI: 1-8-147 | UPI: 1-8-147.1 | UPI: 1-8-148

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COMMONWEALTH OF PENNSYLVANIA — Registered Professional — SCOTT V. ZWIZANSKI — ENGINEER — PE091752

No.	Date:	Description:
1	12/16/2024	REVISED PER MUNICIPAL REVIEW LETTERS.
2	12/18/2024	ADDED PERVIOUS PAVING
3	4/2/2025	REVISED PER MUNICIPAL REVIEW LETTERS.
4	6/2/2025	REVISED PER MUNICIPAL REVIEW LETTERS.

FINAL
LAND DEVELOPMENT PLAN

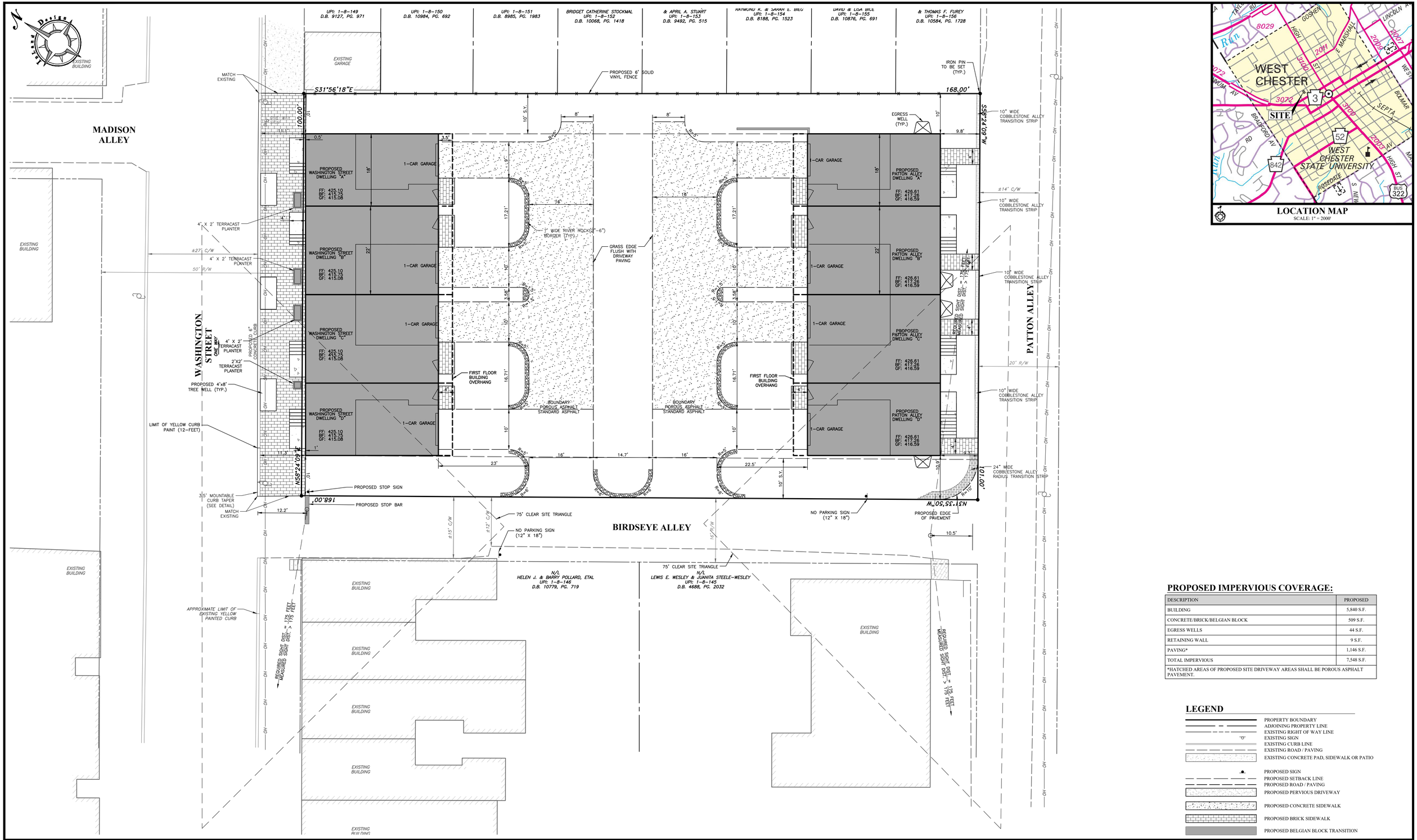
GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 Inch = 10'

Date: 9/30/2024
Scale: 1" = 10'
Drawn by: DWN
Checked by: SJZ
Project No. 12308

EXISTING CONDITIONS & DEMOLITION PLAN
FOR
AXLE SQUARE, LLC
210-214 WEST WASHINGTON STREET
WEST CHESTER, PA, 19380
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET **3** OF 14

N:\12300\12308\dwg\Sheets\Preliminary Submission\3 EXISTING CONDITIONS & DEMOLITION PLAN.dwg



PROPOSED IMPERVIOUS COVERAGE:

DESCRIPTION	PROPOSED
BUILDING	5,840 S.F.
CONCRETE/BRICK/BELGIAN BLOCK	509 S.F.
EGRESS WELLS	44 S.F.
RETAINING WALL	9 S.F.
PAVING*	1,146 S.F.
TOTAL IMPERVIOUS	7,548 S.F.
*HATCHED AREAS OF PROPOSED SITE DRIVEWAY AREAS SHALL BE POROUS ASPHALT PAVEMENT.	

LEGEND

- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING SIGN
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING CONCRETE PAD, SIDEWALK OR PATIO
- PROPOSED SIGN
- PROPOSED SETBACK LINE
- PROPOSED ROAD / PAVING
- PROPOSED PERVIOUS DRIVEWAY
- PROPOSED CONCRETE SIDEWALK
- PROPOSED BRICK SIDEWALK
- PROPOSED BELGIAN BLOCK TRANSITION

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(IN FEET)
1 Inch = 10'

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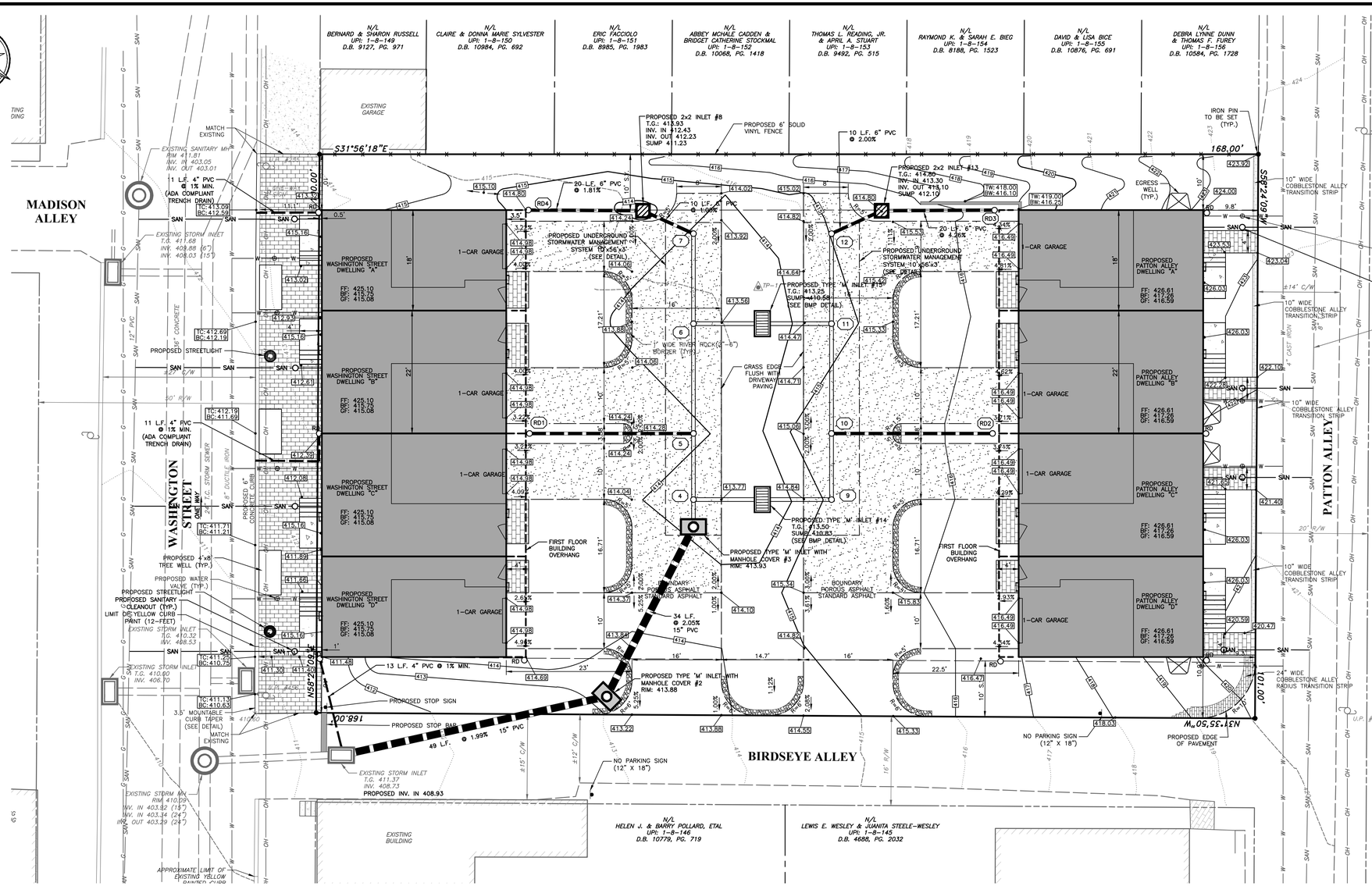
Project No. 12308

LAYOUT PLAN FOR
AXLE SQUARE, LLC
210-214 WEST WASHINGTON STREET
WEST CHESTER, PA, 19380
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET 4 OF 14

N:\12300\12308\dwg\Sheets\Preliminary Submission\4 LAYOUT PLAN.dwg



LOCATION MAP

SCALE: 1" = 2000'

CONSTRUCTION NOTES:

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE LOCAL AUTHORITY OR GOVERNING AGENCY OF THE BEGINNING DATE OF CONSTRUCTION AND TO ENSURE THAT NO WORK IS PERFORMED WITHOUT THE REQUIRED PERMITS AND INSPECTIONS BY THE LOCAL AUTHORITY OR GOVERNING AGENCY.
2. FOR THE PURPOSES OF THESE PLANS AND GENERAL NOTES. " SITE CONSTRUCTION" SHALL BE CONSTRUED TO MEAN STORMWATER MANAGEMENT FACILITIES, SITE IMPROVEMENTS AND RELATED CONSTRUCTION.
3. ALL SITE CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE PaDOT PUB. 408, 2000 Ed. AND LATEST ADDENDUM THERETO. CONTRACTOR SHALL PROVIDE CERTIFICATION THAT ALL MATERIAL INCORPORATED INTO THE PROJECT MEET PaDOT SPECIFICATIONS.
4. CONTRACTOR SHALL COMPLY WITH ALL LAWS AND ORDINANCES APPLICABLE TO THIS TYPE OF CONSTRUCTION.
5. CONTRACTOR IS RESPONSIBLE FOR CHECKING ALL DISTANCES, GRADES, QUANTITIES AND ELEVATIONS. POTENTIAL PROBLEMS WHICH MIGHT BE OBSERVED BY THE CONTRACTOR SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. WORK IN THE AREA SHALL CEASE UNTIL A RESOLUTION OF THE POTENTIAL PROBLEM HAS BEEN DETERMINED.
6. ALL MATERIALS TO BE PROPERLY DISPOSED.
   A) ALL CLEAN SOIL TO BE DEPOSITED ON SITE AS DIRECTED.
   B) ALL OTHER MATERIAL TO BE REMOVED FROM SITE BY CONTRACTOR.
7. CONTRACTOR SHALL PROVIDE ALL BORROW MATERIAL REQUIRED FOR CONSTRUCTION WHICH IS NOT AVAILABLE ON SITE.
8. FILL MATERIAL SHALL BE COMPACTED TO NO LESS THAN 97% OF THE MAXIMUM DRY WEIGHT DENSITY (STANDARD PROCTER).
9. ALL PAVEMENT JOINTS AND CURB-PAVEMENT JOINTS SHALL BE SEALED USING A "RUBBERIZED JOINT SEAL" AS PER PENNDOT PUBLICATION 408.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PAVEMENT MARKINGS, EROSION AND SEDIMENTATION CONTROL AND TRAFFIC MAINTENANCE AND PROTECTION IN ACCORDANCE WITH PENNDOT PUBLICATION 213.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND PAYING FOR THE REMOVAL AND/OR RELOCATION OF UTILITIES OR OTHER OBSTRUCTIONS IN ORDER TO COMPLETE THE SITE CONSTRUCTION.
12. NO EXCAVATION OR FILL MATERIAL SHALL BE GRADED TO A SLOPE GREATER THAN 3:1.
13. THERE SHALL BE NO BURYING OF TREES, STUMPS OR CONSTRUCTION MATERIALS. TREES AND STUMPS MAY BE CHIPPED OR GROUND AND DISPOSED OF IN OPEN SPACE AREAS.CONTRACTOR SHALL MAKE EVERY ATTEMPT TO RECYCLE CONSTRUCTION AND ORGANIC MATERIALS TO MINIMIZE WASTE.
14. GRADING SHALL BE PERFORMED TO SECURE PROPER DRAINAGE AWAY FROM ALL BUILDINGS AND TO THE STORMWATER COLLECTION AND MANAGEMENT SYSTEM.
15. ALL EXISTING POWER POLES, CURBS AND OTHER ABOVE GROUND PHYSICAL FEATURES WHICH WOULD INTERFERE WITH NORMAL USE OF PROPOSED CONSTRUCTION SHALL BE REMOVED AND RELOCATED AS REQUIRED.
16. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITY SERVICE LINES IN THE FIELD PRIOR TO CONSTRUCTION AND ENSURE THAT ALL UTILITIES ARE RELOCATED OR PROTECTED DURING CONSTRUCTION.
17. ALL WATERLINE INSTALLATION IS TO BE PERFORMED ACCORDING TO THE SPECIFICATIONS AND DIRECTIVES OF THE GOVERNING AUTHORITY.
18. ALL SANITARY SEWER INSTALLATION IS TO BE PERFORMED ACCORDING TO THE SPECIFICATIONS AND DIRECTIVES OF THE GOVERNING AUTHORITY.
19. ALL GAS LINE INSTALLATION IS TO BE PERFORMED ACCORDING TO THE SPECIFICATIONS AND DIRECTIVES OF THE GOVERNING AUTHORITY.
20. ANY SUBSTANDARD OR DAMAGED CURB, SIDEWALK, OR ASPHALT ALONG THE PROPERTY FRONTAGE SHALL BE REPLACED.
21. THE BOROUGH ENGINEER AND PUBLIC WORKS DEPARTMENT SHALL BE CONTACTED PRIOR TO THE PROPOSED INLET CONNECTION TO DETERMINE THE MEANS AND METHODS AND DETERMINE IF ANY ADDITIONAL REPAIR OR REPLACEMENT IS REQUIRED.
22. BOROUGH ROAD OPENING PERMITS WILL BE REQUIRED FOR ANY WORK WITHIN THE RIGHTS-OF-WAY OF WASHINGTON STREET, BIRDSEYE OR PATTON ALLEYS,

LEGEND

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- SAN EXISTING STORM STRUCTURES & PIPE
- SAN EXISTING SANITARY STRUCTURES & PIPE
- EXISTING SANITARY CLEAN-OUT
- EXISTING WATER VALVE
- W EXISTING WATER LINE
- EXISTING GAS VALVE
- G EXISTING GAS LINE
- EXISTING UTILITY POLE
- OH EXISTING OVERHEAD WIRE
- PROPOSED SETBACK LINE
- 102 PROPOSED 2' CONTOUR
- 100 PROPOSED 10' CONTOUR
- 425.35 PROPOSED SPOT ELEVATION
- PROPOSED ROAD / PAVING
- PROPOSED CONCRETE SIDEWALK
- 11 12 13 14 PROPOSED STORM STRUCTURES & PIPE
- SAN PROPOSED SANITARY STRUCTURES & PIPE
- PROPOSED SANITARY CLEAN-OUT
- SAN PROPOSED SANITARY LATERAL
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- W W PROPOSED WATER LINE

OWNER / APPLICANT:

AXLE SQUARE, LLC
833 LINCOLN AVE, #1
WEST CHESTER, PA 19380
ATTN: MICHAEL ZAPPITELLI

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COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SCOTT G. ZWIZANSKI ENGINEER PE091752

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4	6/2/2025	REVISED PER MUNICIPAL REVIEW LETTERS.

FINAL
LAND DEVELOPMENT PLAN

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 Inch = 10'

Date: 9/30/2024
Scale: 1" = 10'
Drawn by: DWN
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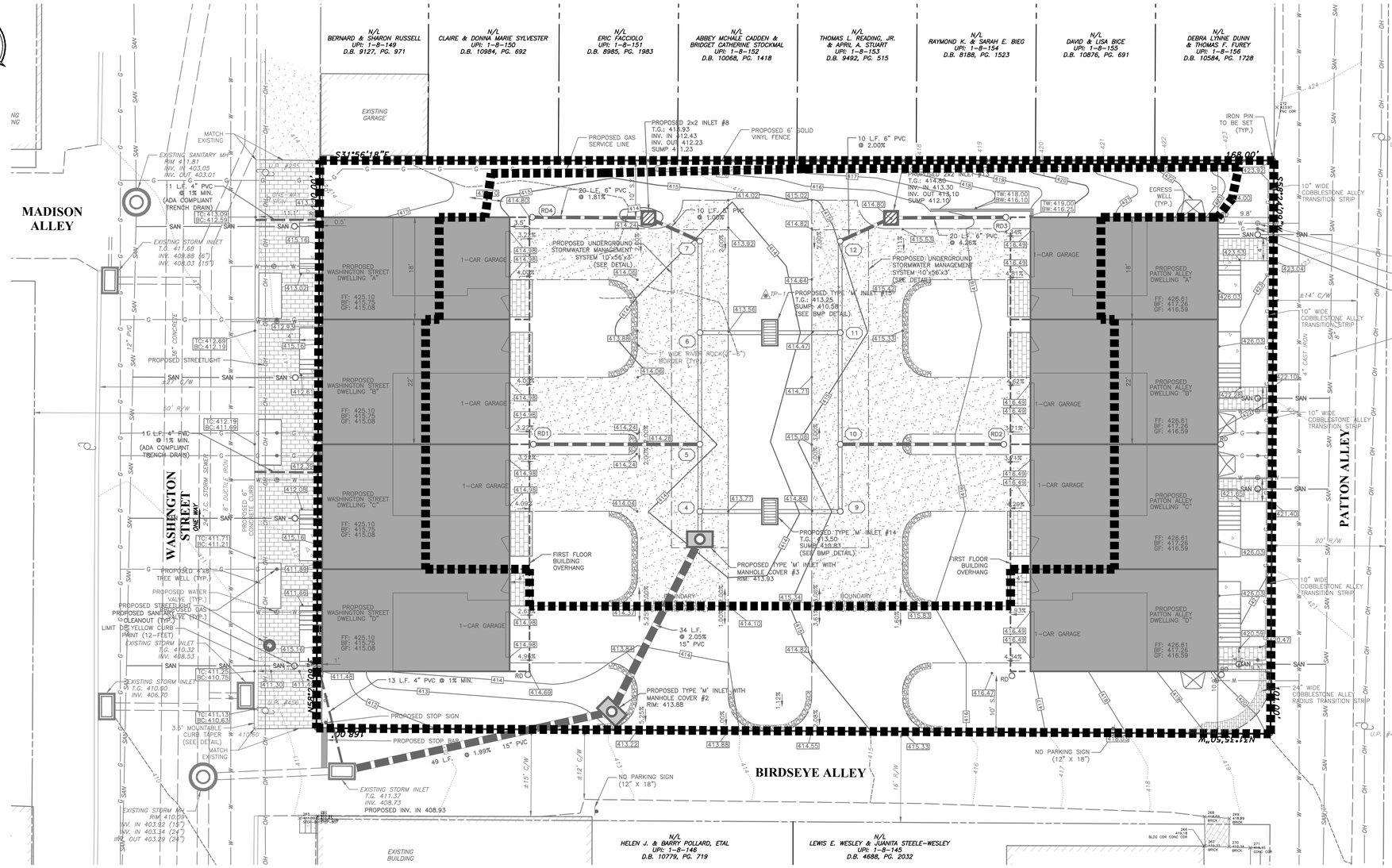
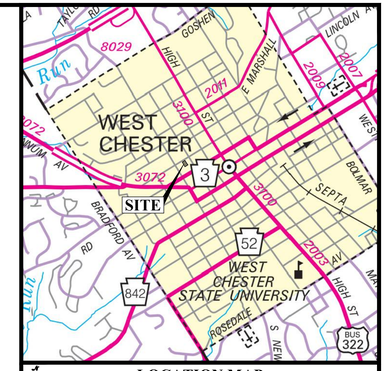
IMPROVEMENT CONSTRUCTION PLAN FOR
AXLE SQUARE, LLC
210-214 WEST WASHINGTON STREET
WEST CHESTER, PA, 19380
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET 5 OF 14

N:\12300\12308\dwg\Sheets\Preliminary Submission\5 IMPROVEMENTS CONSTRUCTION PLAN.dwg





LOCATION MAP
SCALE: 1" = 2000'

BMP SUMMARY:

STRUCTURAL BMPS

- SUBSURFACE INFILTRATION BED - THE INFILTRATION BED IS USED TO CONTROL THE RATE AND VOLUME OF RUNOFF FROM THE SITE AND ALSO ALLEVIATE THERMAL POLLUTION BY STORING STORMWATER UNDERGROUND.

SWM SITE PLAN NOTES:

1. A BLANKET EASEMENT IS HEREBY GRANTED GIVING THE BOROUGH OF WEST CHESTER THE RIGHT, BUT NOT THE OBLIGATION, TO ENTER THE PROPERTY TO PERFORM ANY REQUIRED PCSW BMP MAINTENANCE WHICH HAS NOT BEEN PROPERLY PERFORMED IN A TIMELY MANNER. THE HOMEOWNER SHALL BE RESPONSIBLE FOR THE COST OF ANY MAINTENANCE WHICH IS PERFORMED BY THE TOWNSHIP.
2. THE STORMWATER MANAGEMENT BMPS SHOWN ON THIS PLAN ARE PERMANENT FIXTURES AND CANNOT BE ALTERED OR REMOVED WITHOUT THE APPROVAL OF THE MUNICIPALITY.
3. NO BMP OR MAN-MADE CONVEYANCE MAY BE USED BY THE OWNER OR OTHERS FOR ANY PURPOSE OTHER THAN ITS INTENDED STORMWATER CONTROL FUNCTION.
4. THIS PLAN ALSO SERVES AS THE OPERATION & MAINTENANCE PLAN FOR THIS PROPERTY AND WILL BE RECORDED.
5. THE APPLICANT, HIS SUCCESSOR, OR ASSIGNS SHALL MAKE RECORDS OF THE INSTALLATION, AND OF ALL MAINTENANCE AND REPAIRS OF ALL BMP'S, AND SHALL RETAIN THE RECORDS FOR AT LEAST FIFTEEN YEARS. THESE RECORDS SHALL BE SUBMITTED TO THE MUNICIPALITY, IF REQUESTED.
6. AN AS-BUILT PLAN OF THE PROPOSED BMPS SHALL BE SUBMITTED TO THE MUNICIPALITY IN ACCORDANCE WITH THE STORMWATER ORDINANCE.
7. THE APPLICANT ACKNOWLEDGES THAT, PER MUNICIPAL ORDINANCE, IT IS UNLAWFUL TO MODIFY, REMOVE, FILL, LANDSCAPE, ALTER OR IMPAIR THE EFFECTIVENESS OF, OR PLACE ANY STRUCTURE, OTHER VEGETATION, YARD WASTE, BRUSH CUTTINGS, OR OTHER WASTE OR DEBRIS INTO ANY PERMANENT STORMWATER MANAGEMENT BMP OR CONVEYANCE DESCRIBED IN THIS O&M PLAN OR TO ALLOW THE BMP OR CONVEYANCE TO EXIST IN A CONDITION WHICH DOES NOT CONFORM TO THIS O&M PLAN, WITHOUT WRITTEN APPROVAL FROM THE MUNICIPALITY.
8. AFTER DEMOLITION OF THE EXISTING BUILDING IS COMPLETE, ADDITIONAL INFILTRATION TESTING SHALL BE COMPLETED AT THE PROPOSED BOTTOM OF BED ELEVATION USING THE DOUBLE RING INFILTROMETER METHOD TO VERIFY THE DESIGN TEST RESULTS. IF TESTED RATES DO NOT MEET THE DESIGN RATES, THE DESIGN ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
9. DURING CONSTRUCTION OF THE INFILTRATION BEDS, ADDITIONAL INFILTRATION TESTING SHALL BE COMPLETED WHEN THE BED IS EXCAVATED AND PRIOR TO INSTALLING STONE TO VERIFY THE DESIGN TEST RESULTS. IF TESTED RATES DO NOT MEET THE DESIGN RATES, THE DESIGN ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
10. INFILTRATION AREAS SHALL ALSO BE PROTECTED FROM SEDIMENTATION. AREAS THAT ARE ACCIDENTALLY COMPACTED OR GRADED SHALL BE REMEDIATED TO RESTORE SOIL COMPOSITION AND POROSITY. ADEQUATE DOCUMENTATION TO THIS EFFECT SHALL BE SUBMITTED TO THE MUNICIPAL ENGINEER FOR REVIEW. ALL AREAS DESIGNATED FOR INFILTRATION SHALL ACHIEVED FINAL STABILIZATION.
11. ALL ROOF DRAINS ARE TO BE 6" SDR35 PVC AT A MINIMUM 1% SLOPE UNLESS OTHERWISE NOTED.
12. GUTTERS ARE TO BE FITTED WITH GUTTER GUARDS TO KEEP LEAVES DEBRIS OUT OF THE INFILTRATION BED.
13. FOUNDATION PERIMETER DRAINS AND SUMP PUMP OUTLETS ARE NOT TO BE DIRECTED TO STORMWATER BMPS. OUTLET LOCATIONS ARE TO BE LOCATED IN THE FIELD DURING CONSTRUCTION.

LEGEND

- PROPERTY BOUNDARY
- PROPERTY BOUNDARY TO BE EXTINGUISHED
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- TP-5 TEST PIT LOCATION
- 102 EXISTING 2' CONTOUR
- 100 EXISTING 10' CONTOUR
- ×102.35 EXISTING SPOT ELEVATION
- EXISTING SIGN
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING CONCRETE PAD, SIDEWALK OR PATIO
- EXISTING FENCE LINE
- EXISTING STORM STRUCTURES & PIPE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING SANITARY CLEAN-OUT
- EXISTING WATER VALVE
- EXISTING WATER LINE
- EXISTING GAS VALVE
- EXISTING GAS LINE
- EXISTING UTILITY POLE
- EXISTING OVERHEAD WIRE
- PROPOSED SETBACK LINE
- 102 PROPOSED 2' CONTOUR
- 100 PROPOSED 10' CONTOUR
- 425.35 PROPOSED SPOT ELEVATION
- PROPOSED ROAD / PAVING
- PROPOSED CONCRETE SIDEWALK
- 11 12 13 14 PROPOSED STORM STRUCTURES & PIPE
- SAN PROPOSED SANITARY STRUCTURES & PIPE
- PROPOSED SANITARY CLEAN-OUT
- SAN PROPOSED SANITARY LATERAL
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- W W PROPOSED WATER LINE
- POST DRAINAGE AREA

BMP OPERATIONS AND MAINTENANCE PROCEDURES:

THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, OPERATION AND MAINTENANCE OF POST CONSTRUCTION STORMWATER MANAGEMENT BMP. THE OPERATION AND MAINTENANCE REQUIREMENTS FOR THE PCSWM BMP FOR THIS PROJECT INCLUDE THE FOLLOWING:

SUBSURFACE INFILTRATION BEDS - INFILTRATION BEDS SHALL BE INSPECTED QUARTERLY AND AFTER RAINFALL EVENTS TO ENSURE THAT THEY ARE WORKING PROPERLY AND THAT DEBRIS AND/OR SEDIMENT HAS NOT ENTERED THE SYSTEM. INFLOW AND OUTFLOW POINTS INTO THE INDIVIDUAL SUBSURFACE INFILTRATION BED SHOULD BE KEPT CLEAR OF LEAVES AND OTHER DEBRIS. ACCUMULATED SILT AND DEBRIS THAT HAS DEPOSITED IN THE SUMPED BOTTOM OF ALL INLETS TRIBUTARY TO THE SYSTEM SHALL BE CLEANED OUT TWICE PER YEAR.

FAILURE: IF A SYSTEM IS NOT DRAINING WITHIN 72 HOURS OF THE STORM EVENT, THE SYSTEM SHALL BE REPAIRED OR REPLACED AS REQUIRED.

ALL INSPECTIONS OF THE POST CONSTRUCTION STORMWATER MANAGEMENT BMPS SHALL BE PERFORMED BY THE APPOINTED REPRESENTATIVE OF THE OWNER.

IF ANY DEFICIENT CONDITIONS ARE FOUND DURING THE INSPECTION A PLAN FOR ADDRESSING THEM SHALL BE PREPARED WITHIN TWO MONTHS AND THE PLAN SHALL BE CARRIED OUT WITHIN SIX MONTHS.

THE PROPERTY OWNER, HIS SUCCESSOR, OR ASSIGNS SHALL MAKE RECORDS OF THE INSTALLATION, AND OF ALL MAINTENANCE AND REPAIRS OF ALL BMP'S, AND SHALL RETAIN THE RECORDS FOR AT LEAST FIFTEEN YEARS. THESE RECORDS SHALL BE SUBMITTED TO THE MUNICIPALITY, IF REQUESTED.

UNTIL THE SITE IS STABILIZED AND DURING CONSTRUCTION ACTIVITIES, ALL BMP'S MUST BE MAINTAINED PROPERLY BY THE CONTRACTOR. ALL PERMANENT MAINTENANCE PROCEDURES SHALL BE PERFORMED BY THE OWNER, HIS SUCCESSOR, OR ASSIGNS. THE OWNER IDENTITY & CONTACT INFORMATION CAN BE FOUND AT THE BOTTOM OF THIS SHEET.

APPLICANT'S SWM SITE PLAN ACKNOWLEDGEMENT:

I, _____, HEREBY ACKNOWLEDGE THAT ANY REVISION TO THE APPROVED SWM SITE PLAN SHALL BE SUBMITTED TO AND APPROVED BY THE BOROUGH, AND THAT A REVISED EROSION AND SEDIMENT CONTROL PLAN SHALL BE SUBMITTED TO, AND APPROVED BY, THE CONSERVATION DISTRICT OR BOROUGH (AS APPLICABLE) FOR A DETERMINATION OF ADEQUACY PRIOR TO CONSTRUCTION OF THE REVISED FEATURES.

_____
APPLICANT

ENGINEER'S SWM SITE PLAN CERTIFICATION:

I, SCOTT J. ZWIZANSKI, ON THIS DATE 4/2/2025, HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE THAT THE SWM SITE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE BOROUGH OF WEST CHESTER ORDINANCE NO. 94, BOROUGH OF WEST CHESTER'S STORMWATER MANAGEMENT ORDINANCE.

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SCOTT G. ZWIZANSKI — ENGINEER — PE091752

SCOTT J. ZWIZANSKI, P.E.

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PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20241660254

PENNSYLVANIA ACT 187 REQUIREMENTS:
InLand Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does InLand Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

UPI: 1-8-147 | UPI: 1-8-147.1 | UPI: 1-8-148

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COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SCOTT G. ZWIZANSKI — ENGINEER — PE091752

No.	Date:	Description:
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3	4/2/2025	REVISED PER MUNICIPAL REVIEW LETTERS.
4	6/2/2025	REVISED PER MUNICIPAL REVIEW LETTERS.

FINAL
LAND DEVELOPMENT PLAN

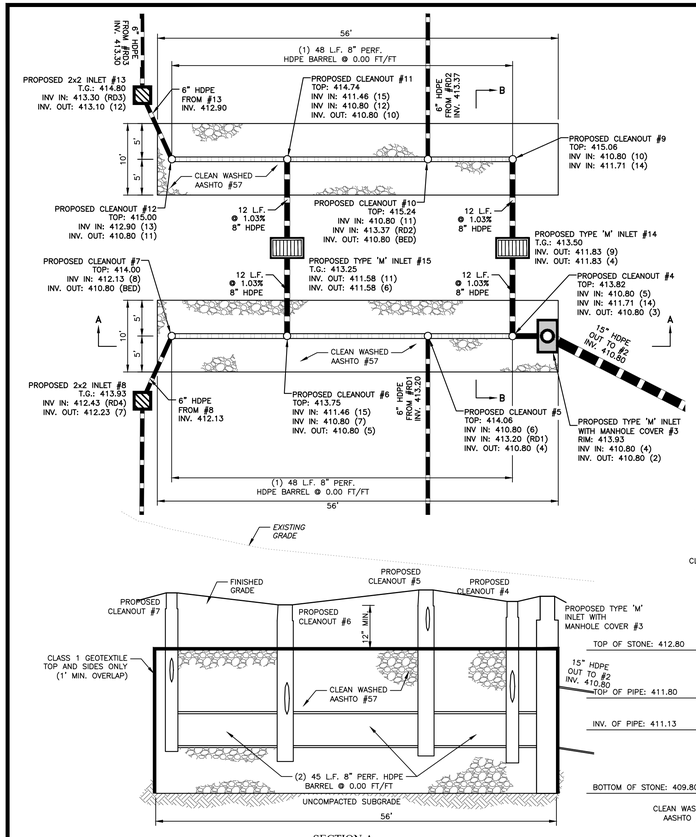
GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 Inch = 10'

Date: 9/30/2024
Scale: 1" = 10'
Drawn by: DWN
Checked by: SJZ
Project No. 12308

PCSM PLAN
FOR
AXLE SQUARE, LLC
210-214 WEST WASHINGTON STREET
WEST CHESTER, PA, 19380
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET 6 OF 14

N:\12300\12308\dwg\Sheets\Preliminary Submission\6 PCSM PLAN.dwg



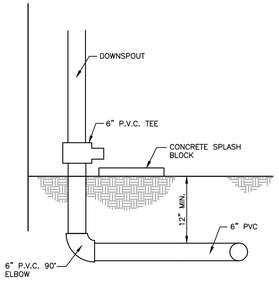
BMP SUBSURFACE INFILTRATION BED
(NOT TO SCALE)

SUBSURFACE INFILTRATION BED CONSTRUCTION SEQUENCE :

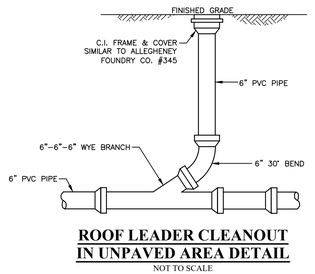
1. THE INSTALLATION OF THE SUBSURFACE INFILTRATION BEDS SHALL BE DONE DURING NON-RAINY PERIODS TO PREVENT SEDIMENT DEPOSITION AND CLOGGING OF THE SOIL STRUCTURE.
2. EXCAVATE THE SUBSURFACE INFILTRATION BED TO THE PROPOSED BOTTOM. EXCAVATION SHALL BE DONE IN A MANNER THAT DOES NOT DISTURB THE SOIL STRUCTURE OF THE INFILTRATION ZONE. INSTALL 12" FILTER SOCK ALONG THE UPSLOPE PERIMETER OF THE EXCAVATED AREA TO PREVENT RUNOFF FROM UNSTABILIZED AREAS FROM ENTERING THE INFILTRATION AREA. IF UNFAVORABLE CONDITIONS, SUCH AS GROUNDWATER AND/OR FACILITY ROCK, ARE ENCOUNTERED DURING INSTALLATION OF THE SUBSURFACE INFILTRATION BED, CONSTRUCTION SHALL CEASE AND THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED. AN ALTERNATIVE SYSTEM SUITABLE TO THE FIELD CONDITIONS SHALL BE DESIGNED AND APPROVED BY THE MUNICIPALITY AND THE CONSERVATION DISTRICT PRIOR TO FURTHER INSTALLATION BY THE CONTRACTOR.
3. ONCE EXCAVATION IS COMPLETE, PERFORM ADDITIONAL INFILTRATION TESTS IN EACH BED AREA AT THE PROPOSED BOTTOM OF BED ELEVATION USING THE DOUBLE RING INFILTROMETER METHOD TO VERIFY THE DESIGN TEST RESULTS. IF TESTED RATES DO NOT MEET THE DESIGN RATES, THE DESIGN ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
4. SCARIFY THE BOTTOM OF THE EXCAVATION. PLACE FILTER FABRIC IN THE EXCAVATION AND TACK IT UP TO THE SIDES. ALLOW SUFFICIENT FABRIC TO OVERLAP THE TOP OF THE FACILITY.
   NOTE: SUBSURFACE INFILTRATION BED FILTER FABRIC AND STONE SHALL BE KEPT CLEAN OF SOIL/SEDIMENT DURING THE INSTALLATION PROCESS. IF INSPECTION INDICATES THAT SOIL SEDIMENT HAS ENTERED THE SUBSURFACE INFILTRATION BED, APPROPRIATE MEASURES (I.E., CLEANING THE SOIL/SEDIMENT FROM THE FABRIC, STONE, EXCAVATION, ETC. AND OR REPLACEMENT OF THE FABRIC AND STONE), PIECES OF FILTER FABRIC SHALL BE INSTALLED WITH A 12" OVERLAP 12" ON ALL SEAMS.
5. PLACE AASHTO #57 STONE IN THE BOTTOM OF THE FACILITY AND EVENLY DISTRIBUTE ON THE BOTTOM. CARE SHALL BE TAKEN TO ENSURE THAT THE FILTER FABRIC IN THE FACILITY IS NOT TORN DURING INSTALLATION. ALL STONE SHALL BE UNIFORMLY GRADED, CLEAN WASHED AGGREGATE. THE STONE SHALL BE CHECKED AND APPROVED BY THE DESIGN OR SITE ENGINEER BEFORE INSTALLATION INTO THE FACILITY TO ENSURE THAT IT IS CLEAN WASHED STONE.
6. INSTALL THE INLETS AND DISTRIBUTION PIPE AS SHOWN ON THE PLAN & DETAIL. IMMEDIATELY INSTALL INLET SEDIMENT FILTERS. COMPLETE BACKFILLING OF STONE IN THE FACILITY TO THE LEVEL SHOWN AS TOP OF STONE IN THE DETAIL. PROVIDE OPENING IN THE FILTER FABRIC FOR THE INFLOW PIPES.
7. COMPLETE PLACEMENT OF THE STONE IN THE SUBSURFACE INFILTRATION BED. OVERLAP FILTER FABRIC ON TOP OF THE SUBSURFACE INFILTRATION BED. BACKFILL OVER THE SUBSURFACE INFILTRATION BED WITH SOIL TO FINISHED GRADE. STABILIZE AREA OVER UNDERGROUND FACILITY WITH PERMANENT MEASURES AS STATED ON THE EROSION AND SEDIMENT CONTROL PLAN. INSTALL WATERTIGHT COVERS ON ALL TRIBUTARY INLETS UNTIL THE SUBSURFACE INFILTRATION BED DRAINAGE AREA IS STABILIZED TO PREVENT CONTAMINATION OF STONE WITHIN THE SUBSURFACE INFILTRATION BED.
8. ALL INLETS SHALL BE GIVEN A FINAL INSPECTION AFTER THE SITE HAS BEEN STABILIZED TO ENSURE THEY ARE FREE OF SEDIMENT.

SUBSURFACE INFILTRATION BED NOTES:

1. DURING SITE CONSTRUCTION, THE INFILTRATION BED SHALL BE PROTECTED FROM COMPACTION DUE TO HEAVY EQUIPMENT OPERATION OR STORAGE OF FILL OR CONSTRUCTION MATERIAL AND SHALL ALSO BE PROTECTED FROM SEDIMENTATION. AREAS THAT ARE ACCIDENTALLY COMPACTED OR GRADED SHALL BE REMEDIATED TO RESTORE SOIL COMPOSITION AND POROSITY. ADEQUATE DOCUMENTATION TO THIS EFFECT SHALL BE SUBMITTED TO THE MUNICIPAL ENGINEER FOR REVIEW. THE INFILTRATION BED SHALL NOT RECEIVE RUNOFF UNTIL THE CONTRIBUTORY DRAINAGE AREA HAS ACHIEVED FINAL STABILIZATION.
2. IT IS RECOMMENDED THAT A SOILS ENGINEER OR REPRESENTATIVE THEREOF IS PRESENT ON-SITE DURING THE CONSTRUCTION OF THE STORMWATER MANAGEMENT SYSTEM IN ORDER TO ENSURE THE SYSTEM WAS CONSTRUCTED AS DESIGNED AND TO OVERSEE THE EXCAVATION OF THE FINE GRAIN SOILS. GIVEN THE LOCALIZED INVESTIGATIONS, IT IS PARAMOUNT THAT THE ENTIRE FACILITY BOTTOM BE VERIFIED TO BE SITUATED WITHIN THE CORRECT INFILTRATION STRATUM.
3. THE CONTRACTOR IS TO ENSURE THAT THERE IS NO PRECIPITATION IN THE FORECAST FOR THE DURATION OF THE INFILTRATION BED CONSTRUCTION.
4. APPROPRIATE, PERMANENT MEASURES, AS SHOWN ON THE PLAN, SHALL BE IMPLEMENTED TO PROTECT THE INFILTRATION BED FROM SEDIMENT LADEN RUNOFF ENTERING IT.
5. ROOF DRAINS DISCHARGING TO THE INFILTRATION BED SHALL HAVE APPROPRIATE MEASURES TO PREVENT CLOGGING BY UNWANTED DEBRIS (FOR EXAMPLE, SILT, LEAVES AND VEGETATION). THESE MEASURES MAY INCLUDE, BUT ARE NOT LIMITED TO, LEAF TRAPS, GUTTER GUARDS AND CLEANOUTS.
6. THE FOLLOWING PROCEDURES AND MATERIALS SHALL BE REQUIRED DURING THE CONSTRUCTION OF THE INFILTRATION BED:
   a. EXCAVATION FOR THE INFILTRATION BED SHALL BE PERFORMED WITH EQUIPMENT THAT WILL NOT COMPACT THE BOTTOM OF THE BED.
   b. THE BOTTOM OF THE BED SHALL BE SCARIFIED PRIOR TO THE PLACEMENT OF AGGREGATE.
   c. ONLY CLEAN AGGREGATE WITH DOCUMENTED POROSITY, FREE OF FINES, SHALL BE ALLOWED.
   d. THE TOP AND SIDES OF THE INFILTRATION BED SHALL BE COVERED WITH DRAINAGE FABRIC. FABRIC SHALL BE NON-WOVEN FABRIC ACCEPTABLE TO THE MUNICIPAL ENGINEER.
   e. STORMWATER SHALL BE DISTRIBUTED THROUGHOUT THE ENTIRE INFILTRATION BED AND PROVISIONS FOR THE COLLECTION OF DEBRIS SHALL BE PROVIDED AS SHOWN ON THE PLAN.

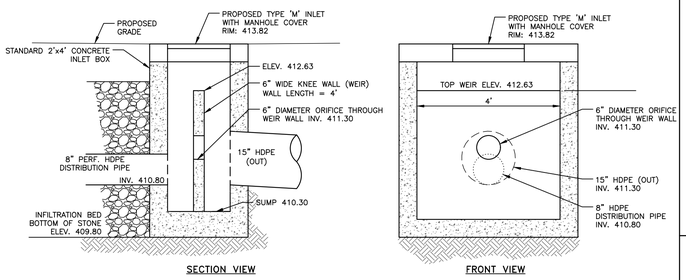


DOWNSPOUT OVERFLOW
NOT TO SCALE

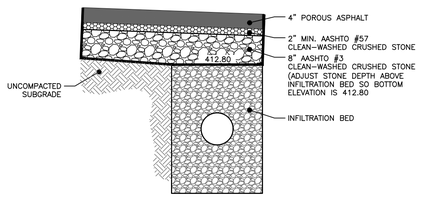


ROOF LEADER CLEANOUT IN UNPAVED AREA DETAIL
NOT TO SCALE

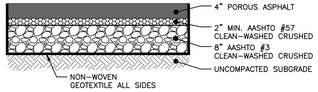
FOR CLEANOUT IN PAVED AREA SEET DETAIL ON SHEET 12.



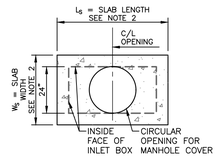
TYPE 'M' INLET BOX WITH MANHOLE COVER - OUTLET STRUCTURE DETAIL
(NOT TO SCALE)



POROUS PAVEMENT / INFILTRATION BED DETAIL
(NOT TO SCALE)



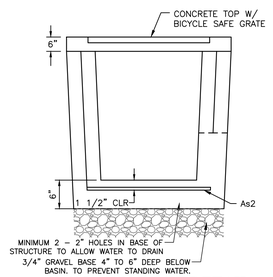
POROUS PAVEMENT DETAIL
(NOT TO SCALE)



STANDARD INLET BOX

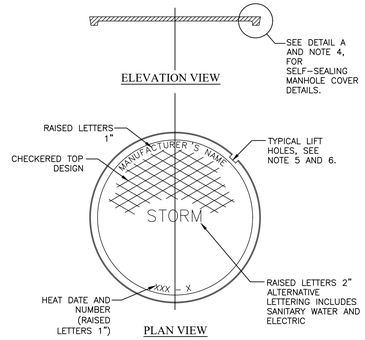
CIRCULAR OPENINGS:
1. FOR A STANDARD BOX, ONLY A 24" OPENING IS PERMITTED.

TOP SLAB WITH OPTIONAL ROUND OPENING FOR MANHOLE COVER
(NOT TO SCALE)



2'x2' LAWN INLET DETAIL
(NOT TO SCALE)

NOTE:
CONTRACTOR MAY SUBSTITUTE EQUIVALENT CATCH BASIN SUBJECT TO REVIEW AND APPROVAL BY THE MUNICIPALITY.



CAST IRON MANHOLE COVER
(PLATEN COVER)

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COMMONWEALTH OF PENNSYLVANIA — Registered — SCOTT G. ZWIZANSKI — PROFESSIONAL ENGINEER — PE091752

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3	4/2/2025	REVISED PER MUNICIPAL REVIEW LETTERS.
4	6/2/2025	REVISED PER MUNICIPAL REVIEW LETTERS.

FINAL
LAND DEVELOPMENT PLAN

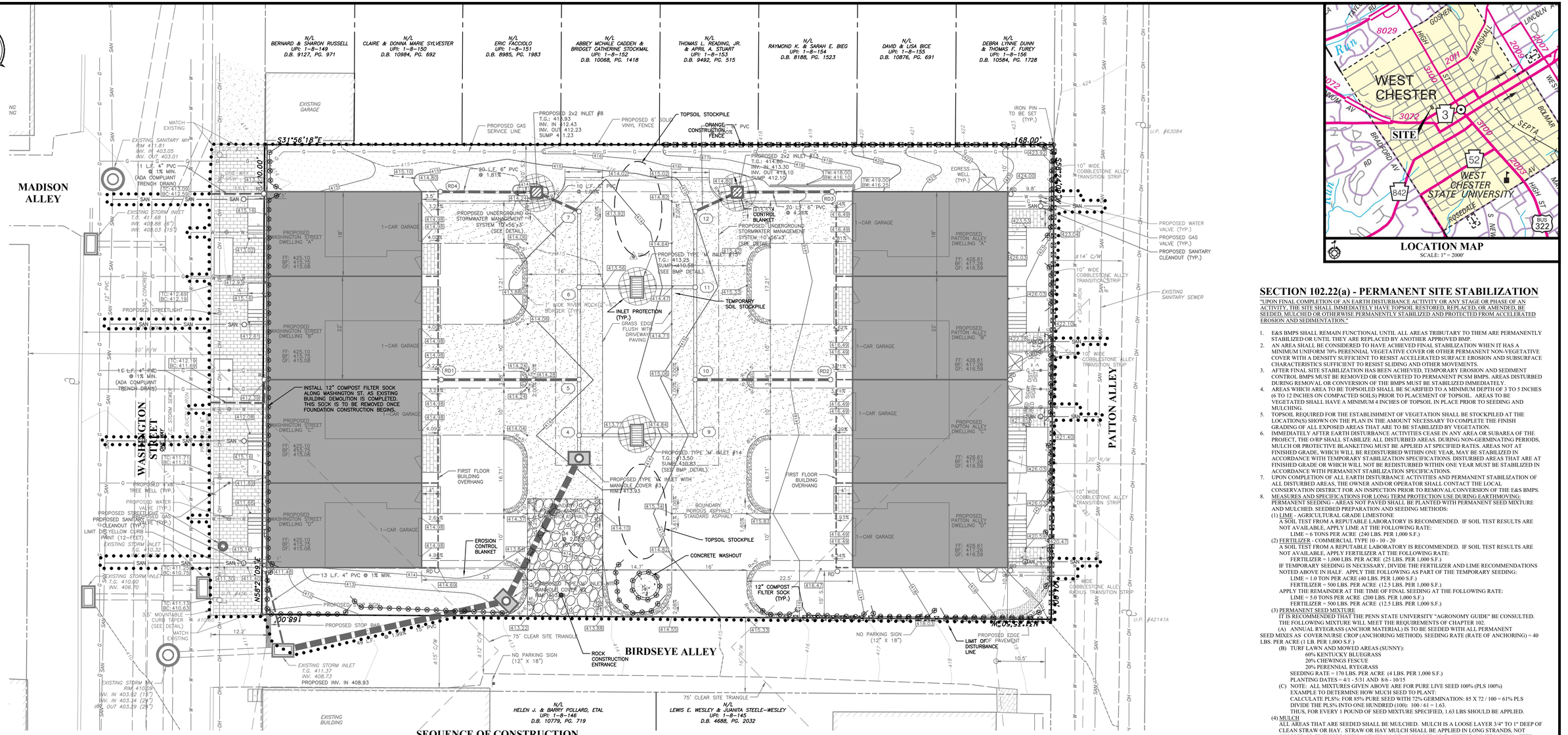
GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 Inch = 10'

Date: 9/30/2024
Scale: AS NOTED
Drawn by: DWN
Checked by: SJZ
Project No. 12308

SWM DETAILS FOR
AXLE SQUARE, LLC
210-214 WEST WASHINGTON STREET
WEST CHESTER, PA, 19380
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET 7 OF 14

N:\12300\12308\dwg\Sheets\Preliminary Submission\7 PCSM DETAILS.dwg



LOCATION MAP
SCALE: 1" = 2000'

SECTION 102.22(a) - PERMANENT SITE STABILIZATION

"UPON FINAL COMPLETION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY, THE SITE SHALL IMMEDIATELY HAVE TOPSOIL RESTORED, REPLACED, OR AMENDED, BE SEEDED, MULCHED OR OTHERWISE PERMANENTLY STABILIZED AND PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION."

1. E&S BMPS SHALL REMAIN FUNCTIONAL UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER APPROVED BMP.
2. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
3. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT CONTROL BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT PCSM BMPS. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPS MUST BE STABILIZED IMMEDIATELY.
4. AREAS WHICH AREA TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES (6 TO 12 INCHES ON COMPACTED SOILS) PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING.
5. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION.
6. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE O/RP SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING PERIODS, MULCH OR PROTECTIVE BLANKETING MUST BE APPLIED AT SPECIFIED RATES. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REDISTURBED WITHIN ONE YEAR, MAY BE STABILIZED IN ACCORDANCE WITH TEMPORARY STABILIZATION SPECIFICATIONS. DISTURBED AREAS THAT ARE AT FINISHED GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT STABILIZATION SPECIFICATIONS.
7. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPS.
8. MEASURES AND SPECIFICATIONS FOR LONG TERM PROTECTION USE DURING EARTHMOVING:
   PERMANENT SEEDING - AREAS NOT PAVED SHALL BE PLANTED WITH PERMANENT SEED MIXTURE AND MULCHED. SEEDBED PREPARATION AND SEEDING METHODS:
   (1) LIME - AGRICULTURAL GRADE LIMESTONE
   A SOIL TEST FROM A REPUTABLE LABORATORY IS RECOMMENDED. IF SOIL TEST RESULTS ARE NOT AVAILABLE, APPLY LIME AT THE FOLLOWING RATE:
   LIME = 6 TONS PER ACRE (240 LBS. PER 1,000 S.F.)
   (2) FERTILIZER - COMMERCIAL TYPE 10 - 10 - 20
   A SOIL TEST FROM A REPUTABLE LABORATORY IS RECOMMENDED. IF SOIL TEST RESULTS ARE NOT AVAILABLE, APPLY FERTILIZER AT THE FOLLOWING RATE:
   FERTILIZER = 1,000 LBS. PER ACRE (25 LBS. PER 1,000 S.F.)
   IF TEMPORARY SEEDING IS NECESSARY, DIVIDE THE FERTILIZER AND LIME RECOMMENDATIONS NOTED ABOVE IN HALF. APPLY THE FOLLOWING AS PART OF THE TEMPORARY SEEDING:
   LIME = 1.0 TON PER ACRE (40 LBS. PER 1,000 S.F.)
   FERTILIZER = 500 LBS. PER ACRE (12.5 LBS. PER 1,000 S.F.)
   APPLY THE REMAINDER AT THE TIME OF FINAL SEEDING AT THE FOLLOWING RATE:
   LIME = 5.0 TONS PER ACRE (200 LBS. PER 1,000 S.F.)
   FERTILIZER = 500 LBS. PER ACRE (12.5 LBS. PER 1,000 S.F.)
   (3) PERMANENT SEED MIXTURE
   IT IS RECOMMENDED THAT THE PENN STATE UNIVERSITY "AGRONOMY GUIDE" BE CONSULTED. THE FOLLOWING MIXTURE WILL MEET THE REQUIREMENTS OF CHAPTER 102.
   (A) ANNUAL RYEGRASS (ANCHOR MATERIAL) IS TO BE SEEDED WITH ALL PERMANENT SEED MIXES AS COVER/NURSE CROP (ANCHORING METHOD). SEEDING RATE (RATE OF ANCHORING) = 40 LBS. PER ACRE (1 LB. PER 1,000 S.F.)
   (B) TURF LAWN AND MOWED AREAS (SUNNY):
   60% KENTUCKY BLUEGRASS
   20% CHEWINGS FESCUE
   20% PERENNIAL RYEGRASS
   SEEDING RATE = 170 LBS. PER ACRE (4 LBS. PER 1,000 S.F.)
   PLANTING DATES = 4/1 - 5/31 AND 8/6 - 10/15
   (C) NOTE: ALL MIXTURES GIVEN ABOVE ARE FOR PURE LIVE SEED 100% (PLS 100%)
   EXAMPLE TO DETERMINE HOW MUCH SEED TO PLANT:
   CALCULATE PLS%: FOR 85% PURE SEED WITH 72% GERMINATION: 85 X 72 / 100 = 61% PLS
   DIVIDE THE PLS% INTO ONE HUNDRED (100): 100 / 61 = 1.63
   THUS, FOR EVERY 1 POUND OF SEED MIXTURE SPECIFIED, 1.63 LBS SHOULD BE APPLIED.
   (4) MULCH
   ALL AREAS THAT ARE SEEDED SHALL BE MULCHED. MULCH IS A LOOSE LAYER 3/4" TO 1" DEEP OF CLEAN STRAW OR HAY. STRAW OR HAY MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN, AND SHALL BE ANCHORED OR TACKIFIED IMMEDIATELY AFTER APPLICATION. NETTING OR EROSION CONTROL BLANKETS MUST BE INSTALLED ON SLOPES 3:1 AND STEEPER. MULCH SHALL BE APPLIED AT THE FOLLOWING RATE:
   STRAW/HAY = 3 TONS PER ACRE (140 LBS. PER 1,000 S.F.)
   (5) EROSION CONTROL BLANKET
   ALL SLOPES 3:1 OR STEEPER, AS WELL AS ALL DISTURBED AREAS WITHIN 50 FEET OF A SURFACE WATER (WITH 100 FEET FOR HQ OR EV WATERS) MUST BE STABILIZED WITH EROSION CONTROL BLANKET.

LEGEND

- PROPERTY BOUNDARY
- PROPERTY BOUNDARY TO BE EXTINGUISHED
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- TP–5 TEST PIT LOCATION
- 102 EXISTING 2' CONTOUR
- 100 EXISTING 10' CONTOUR
- ×102.35 EXISTING SPOT ELEVATION
- EXISTING SIGN
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING CONCRETE PAD, SIDEWALK OR PATIO
- EXISTING FENCE LINE
- EXISTING STORM STRUCTURES & PIPE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING SANITARY CLEAN-OUT
- EXISTING WATER VALVE
- EXISTING WATER LINE
- EXISTING GAS VALVE
- EXISTING GAS LINE
- EXISTING UTILITY POLE
- EXISTING OVERHEAD WIRE
- PROPOSED SETBACK LINE
- 102 PROPOSED 2' CONTOUR
- 100 PROPOSED 10' CONTOUR
- 428.35 PROPOSED SPOT ELEVATION
- PROPOSED ROAD / PAVING
- PROPOSED CONCRETE SIDEWALK
- 11 12 13 14 PROPOSED STORM STRUCTURES & PIPE
- SAN PROPOSED SANITARY STRUCTURES & PIPE
- PROPOSED SANITARY CLEAN-OUT
- PROPOSED SANITARY LATERAL
- FM PROPOSED SANITARY FORCE MAIN
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER LINE
- 12" COMPOST FILTER SOCK
- ORANGE CONSTRUCTION FENCE
- LIMIT OF DISTURBANCE / NPDES PERMIT BOUNDARY
- ROCK CONSTRUCTION ENTRANCE
- EROSION CONTROL BLANKET FOR SLOPES
- INLET SEDIMENT FILTER

SEQUENCE OF CONSTRUCTION

ALL EARTH DISTURBANCE ACTIVITY SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.

AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES INCLUDING BUT NOT LIMITED TO: THE LANDOWNER AND ALL APPROPRIATE MUNICIPAL OFFICIALS FOR AN ON SITE PRE-CONSTRUCTION MEETING.

THE PROFESSIONAL DESIGN ENGINEER, GEOTECHNICAL ENGINEER, SOILS PROFESSIONAL, AND/OR DESIGNEE MUST BE PRESENT ON-SITE FOR INSPECTIONS OF THE OVERALL FUNCTIONALITY OF THE STORMWATER BMPS

ANY DISTURBED AREA WHERE THERE WILL BE A CESSATION OF ACTIVITY FOR FOUR DAYS OR LONGER MUST BE STABILIZED WITH TEMPORARY STABILIZATION.

1. DELINEATE THE LIMITS OF DISTURBANCE ALONG EASTERN PROPERTY LINE.
2. DEMOLISH ALL EXISTING STRUCTURES AND FEATURES REMOVE DEMOLISHED MATERIAL FROM THE SITE.
3. AS DEMOLITION ALLOWS, INSTALL PERIMETER CONSTRUCTION FENCE, SILT SOCK AND PERIMETER EROSION CONTROLS AS SHOWN ON THE PLAN AND ACCORDING TO DETAILS.
4. INSTALL ROCK CONSTRUCTION ENTRANCE.
5. ONCE BUILDING DEMOLITION IS COMPLETE, SOIL SHALL BE ANALYZED TO CONFIRM NO SOIL REMEDIATION IS NEEDED.
6. PERFORM ADDITIONAL INFILTRATION TESTS IN EACH BED AREA AT THE PROPOSED BOTTOM OF BED ELEVATION USING THE DOUBLE RING INFILTROMETER METHOD TO VERIFY THE DESIGN TEST RESULTS. IF TESTED RATES DO NOT MEET THE DESIGN RATES, THE DESIGN ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
7. CLEAR, GRUB AND BEGIN ROUGH GRADING OPERATIONS. STOCKPILE TOPSOIL IN DESIGNATED AREA.
8. INSTALL BUILDING FOUNDATIONS AND BEGIN BUILDING CONSTRUCTION.
9. INSTALL NEW SIDEWALK WHEN APPROPRIATE.
10. WHEN APPROPRIATE INSTALL SUBSURFACE INFILTRATION BED FOLLOWING THE INFILTRATION BED SEQUENCE OF CONSTRUCTION. INSTALL STORM SEWER AND ROOF DRAIN CONNECTIONS TO INFILTRATION BED. INLET SEDIMENT FILTERS SHALL BE INSTALLED IMMEDIATELY.
11. PRIOR TO POROUS ASPHALT PAVEMENT INSTALLATION, ALL SITE DISTURBED AREA SHALL HAVE EROSION CONTROL BLANKET INSTALLED OR BE SODDED.
12. SEED AND MULCH ALL REMAINING DISTURBED AREAS.
13. ONCE ALL HOUSES ARE CONSTRUCTED AND PERMANENTLY STABILIZED VEGETATED AREAS MUST HAVE A UNIFORM 70% VEGETATIVE COVER), AND AFTER A SITE INSPECTION AND APPROVAL FROM THE BOROUGH, REMOVE ANY REMAINING EROSION CONTROLS.

TEMPORARY SITE STABILIZATION - SECTION 102.22(b)

"UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE ACTIVITY OF ANY STAGE OR PHASE OF AN ACTIVITY WHERE A CESSATION OF EARTH DISTURBANCE ACTIVITIES WILL EXCEED 4 DAYS, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION PENDING FUTURE EARTH DISTURBANCE ACTIVITIES."

1. E&S BMPS MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPS.
2. ANY DISTURBED AREA THAT IS NOT AT FINAL GRADE OR WHERE THERE HAS BEEN A CESSATION OF EARTHMOVING ACTIVITY SHALL BE PLANTED WITH A TEMPORARY SEED MIX AND MULCHED. AREAS THAT ARE TO BE EXPOSED FOR MORE THAN ONE YEAR SHALL BE SEEDED WITH PERMANENT SEED MIX AND MULCHED. SEEDBED PREPARATION AND SEEDING METHODS:
   (1) LIME - AGRICULTURAL GRADE LIMESTONE
   A SOIL TEST FROM A REPUTABLE LABORATORY IS RECOMMENDED. IF SOIL TEST RESULTS ARE NOT AVAILABLE, APPLY LIME AT THE FOLLOWING RATE:
   LIME = 1.0 TON PER ACRE (40 LBS. PER 1,000 S.F.)
   (2) FERTILIZER - COMMERCIAL TYPE 10 - 10 - 20
   A SOIL TEST FROM A REPUTABLE LABORATORY IS RECOMMENDED. IF SOIL TEST RESULTS ARE NOT AVAILABLE, APPLY FERTILIZER AT THE FOLLOWING RATE:
   FERTILIZER = 500 LBS. PER ACRE (12.5 LBS. PER 1,000 S.F.)
   (3) TEMPORARY SEED MIXTURE
   ANNUAL RYEGRASS IS A QUICK GERMINATING SPECIES OF GRASS, WHICH CAN BE SEEDED DURING MOST TIME PERIODS. IF YOU PLAN TO LEAVE THE PROJECT DISTURBED AND INACTIVE FOR MORE THAN TWENTY (20) DAYS, TEMPORARY SEEDING SHALL BE APPLIED IMMEDIATELY. IF THE SITE IS TO REMAIN INACTIVE FOR ONE YEAR OR MORE A PERMANENT SEED MIX IS NECESSARY.
   ANNUAL RYEGRASS = 40 LBS. PER ACRE (1 LB. PER 1,000 S.F.)
   NOTE: ALL MIXTURES GIVEN ABOVE ARE FOR PURE LIVE SEED 100% (PLS 100%)
   (4) MULCH
   ALL AREAS THAT ARE SEEDED SHALL BE MULCHED. MULCHING MAY BE USED AS A TEMPORARY STABILIZATION IN SOME DISTURBED AREAS IN NON-GERMINATING SEASONS. MULCH IS A LOOSE LAYER 3/4" TO 1" DEEP OF CLEAN STRAW OR HAY. STRAW OR HAY MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN, AND SHALL BE ANCHORED OR TACKIFIED IMMEDIATELY AFTER APPLICATION. NETTING OR EROSION CONTROL BLANKETS MUST BE INSTALLED ON SLOPES 3:1 AND STEEPER. MULCH SHALL BE APPLIED AT THE FOLLOWING RATE:
   STRAW/HAY = 3 TONS PER ACRE (140 LBS. PER 1,000 S.F.)

LIMIT OF DISTURBANCE: 18,698 S.F. (0.43 AC.)
WATERSHED: TAYLOR RUN
CHAPTER 93 CLASSIFICATION: TSF / MF

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PA. act 172 of 1986 requires three working days notice
Serial Numbers:
20241660254

PENNSYLVANIA ACT 187 REQUIREMENTS:
InLand Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does InLand Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

UPI: 1-8-147 | UPI: 1-8-147.1 | UPI: 1-8-148

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COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — SCOTT D. ZWIZANSKI — PE091752

No.	Date:	Description:
1	12/16/2024	REVISED PER MUNICIPAL REVIEW LETTERS.
2	12/18/2024	ADDED PERVIOUS PAVING
3	4/2/2025	REVISED PER MUNICIPAL REVIEW LETTERS.
4	6/2/2025	REVISED PER MUNICIPAL REVIEW LETTERS.

FINAL
LAND DEVELOPMENT PLAN

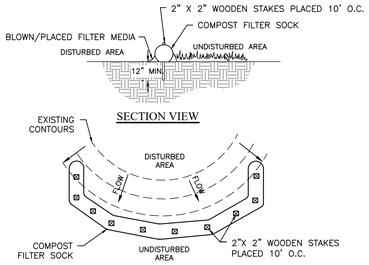
GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 Inch = 10'

Date: 9/30/2024
Scale: 1" = 10'
Drawn by: DWN
Checked by: SJZ
Project No. 12308

CONSERVATION & EROSION CONTROL PLAN FOR
AXLE SQUARE, LLC
210-214 WEST WASHINGTON STREET
WEST CHESTER, PA, 19380
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET 8 OF 14

N:\12300\12308\dwg\Sheets\Preliminary Submission\8 CONSERVATION & EROSION & SEDIMENT CONTROL PLAN.dwg



PLAN VIEW

SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2.

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT (FIGURE 4.1).

MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN ON FIGURE 4.2. STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

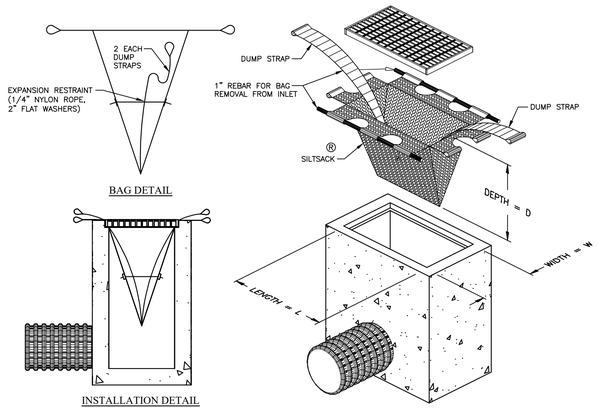
BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

STANDARD CONSTRUCTION DETAIL #4-1

COMPOST FILTER SOCK

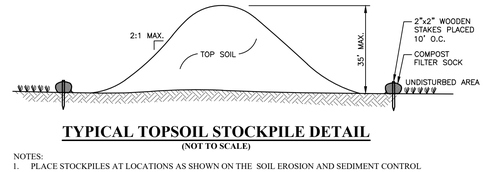
(NOT TO SCALE)



SEDIMENT FILTER BAG INLET PROTECTION DETAIL

(NOT TO SCALE)

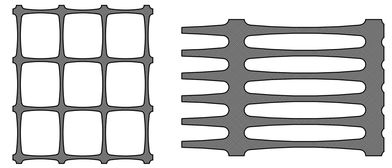
1. AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.
2. INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED.



TYPICAL TOPSOIL STOCKPILE DETAIL

(NOT TO SCALE)

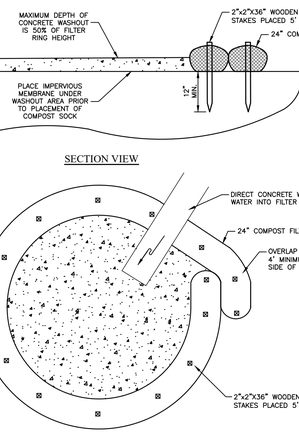
NOTES:
1. PLACE STOCKPILES AT LOCATIONS AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
2. ALL SIDE SLOPES SHALL BE 2 TO 1 OR FLATTER.
3. STOCKPILE SHALL RECEIVE A VEGETATIVE COVER IN ACCORDANCE WITH MINIMUM STABILIZATION REQUIREMENTS.
4. SILT FENCE OR HAY BALE FILTER SHALL BE INSTALLED AS DETAILED HEREON.
5. SEE STANDARD CONSTRUCTION DETAIL #4-1, COMPOST FILTER SOCK FOR INSTALLATION REQUIREMENTS.
6. LOCATION OF PROPOSED STOCKPILE WHICH AFFECT EROSION CONTROLS ARE SHOWN SCHEMATICALLY ONLY. ACTUALLY STOCKPILE LOCATION MAY CHANGE DURING CONSTRUCTION.
7. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET.



FOR GENERAL USE:
TENSAR SAFETY FENCE BX 2051, 4' HT.,
ORANGE FOR EXTRA PROTECTION:
TENSAR SAFETY FENCE UX 4250, 4' HT.,
ORANGE INSTALLATION:
ATTACH FENCE TO 2" x 2" PINE STAKES DRIVEN AT LEAST 18" INTO THE GROUND, SPACED 5' ON CENTER, WITH WIRE FASTENERS IN 3 PLACES PER STAKE.

ORANGE CONSTRUCTION FENCE DETAIL

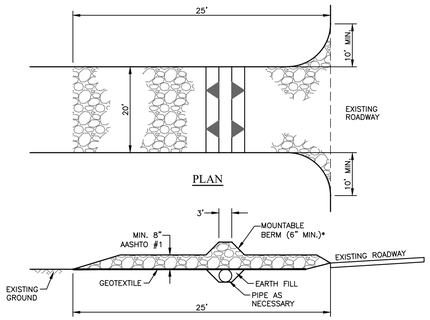
NOT TO SCALE



COMPOST SOCK WASHOUT INSTALLATION

(PADEP STANDARD FIGURE 3.18)
(NOT TO SCALE)

1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
2. 18" FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.

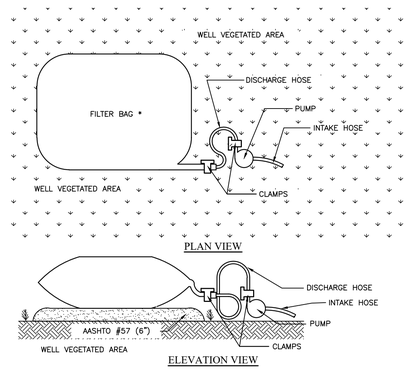


STANDARD CONSTRUCTION DETAIL #3-1

ROCK CONSTRUCTION ENTRANCE DETAIL

(NOT TO SCALE)

1. REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.
2. RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
3. MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.
4. MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

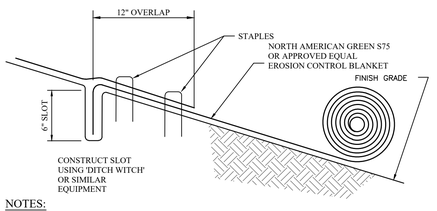


STANDARD CONSTRUCTION DETAIL #3-16

PUMPED WATER FILTER BAG

(NOT TO SCALE)

1. FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS.
2. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED.
3. BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE FLOW PATH SHALL BE PROVIDED. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%.
4. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED.
5. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHOULD BE FLOATING AND SCREENED.



NOTES:
1. COMPLETE GRADING OF SLOPE.
2. CULTIVATE THE SOIL TO A DEPTH OF 6 INCHES, INCORPORATING FERTILIZER AND LIME WHERE NECESSARY, PROVIDING AN EVEN SURFACE, FREE FROM EXCESSIVE STONES, CLODS OR TRASH.
3. SEED AND MULCH THE AREA AS OUTLINED IN SEEDING SCHEDULE.
4. UNREEL THE MATTING UP AND DOWN THE SLOPE. THIS IS BEST ACHIEVED BY PLACING A METAL PIPE THROUGH THE CENTER OF THE ROLL THROUGH WHICH IS PASSED A ROPE. BY HOLDING EACH END OF THE ROPE, THE ROLL CAN BE UNWOUND SLOWLY DOWN THE SLOPE. THE MATTING SHOULD NOT BE STRETCHED NOR ALLOWED TO LIE LOOSELY, BUT TO TAKE UP THE CONTOURS OF THE GROUND. THE MANUFACTURER'S RECOMMENDATIONS FOR OVERLAPPING ADJACENT STRIPS SHALL BE FOLLOWED.
5. UPHILL ENDS OF THE MATTING SHALL BE BURIED IN A 6-INCH DEEP SLOT AND STAPLED, AS SHOWN, AT 12-INCH CENTERS ACROSS THE WIDTH OF THE MAT. AT JOINTS, THE DOWNHILL END SHOULD BE OVERLAPPED (SHINGLE FASHION).
6. MATTING SHOULD BE STAPLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS, BUT GENERALLY STAPLES SHOULD BE INSERTED ON 12-INCH CENTERS DOWN EACH EDGE OF THE MAT AND DOWN ITS CENTERLINE.
7. FOLLOWING INSTALLATION, MESH MATTINGS SHOULD BE ROLLED WITH A SMOOTH ROLLER TO BRING INTO CLOSE CONTACT WITH THE SOIL AND TO CONSOLIDATE THE SEEDBED.

EROSION BLANKET INSTALLATION FOR SLOPES

(NOT TO SCALE)

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Serial Numbers:
20241660254

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UPI: 1-8-147 | UPI: 1-8-147.1 | UPI: 1-8-148

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Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SCOTT S. ZWIZANSKI — ENGINEER — PE091752

No.	Date:	Description:
1	12/16/2024	REVISED PER MUNICIPAL REVIEW LETTERS.
2	12/18/2024	ADDED PERVIOUS PAVING
3	4/2/2025	REVISED PER MUNICIPAL REVIEW LETTERS.
4	6/2/2025	REVISED PER MUNICIPAL REVIEW LETTERS.

FINAL
LAND DEVELOPMENT PLAN

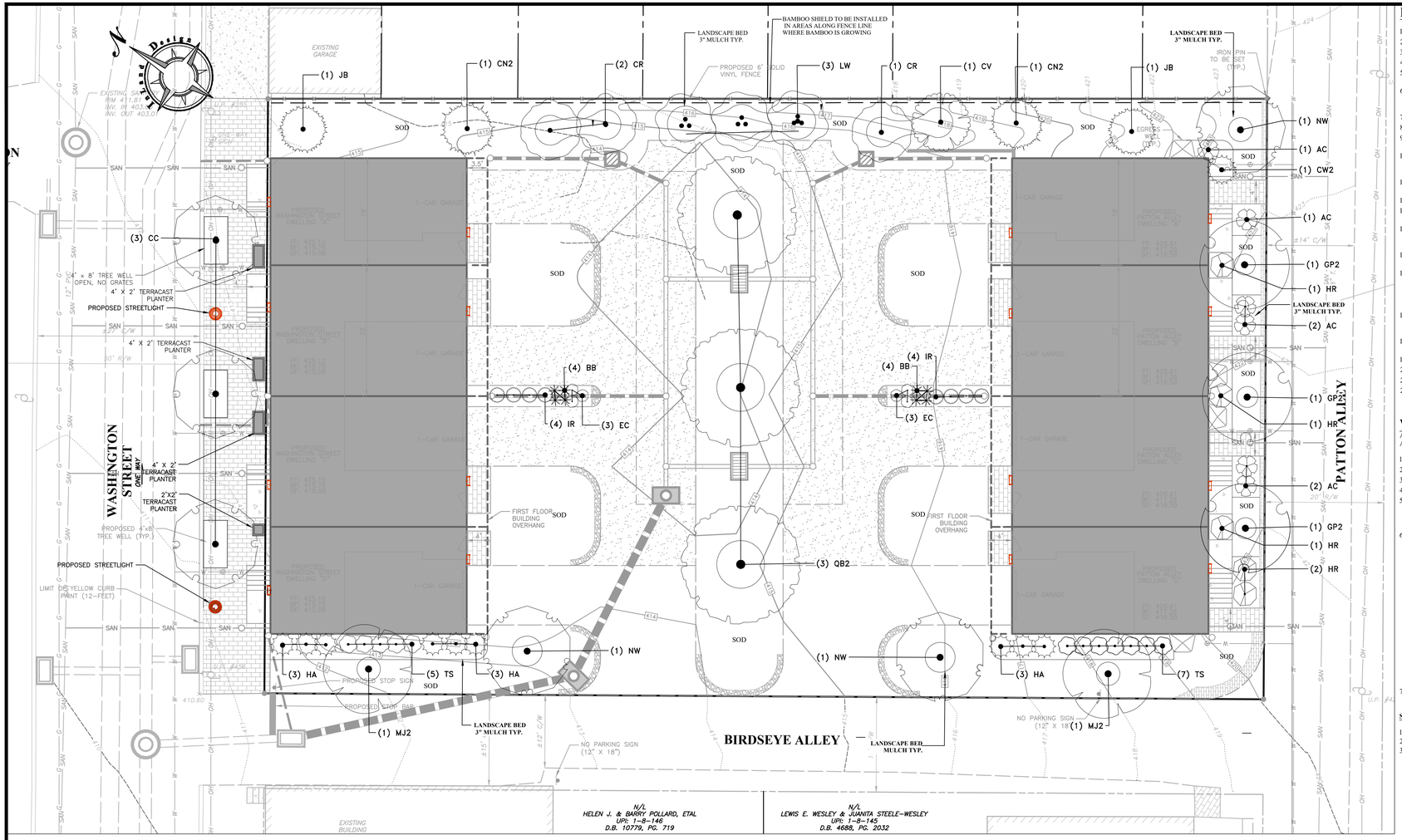
GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 Inch = 10'

Date: 9/30/2024
Scale: AS NOTED
Drawn by: DWN
Checked by: SJZ
Project No. 12308

EROSION CONTROL DETAILS FOR
AXLE SQUARE, LLC
210-214 WEST WASHINGTON STREET
WEST CHESTER, PA, 19380
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

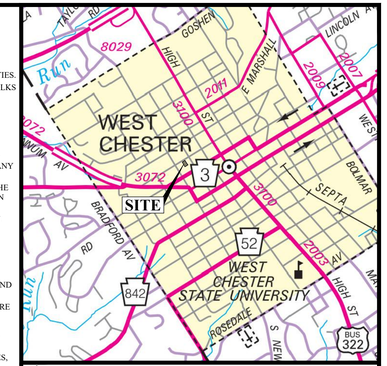
SHEET 9 OF 14

N:\12300\12308\dwg\Sheets\Preliminary Submission\9 EROSION & SEDIMENT CONTROL DETAILS.dwg



LANDSCAPING GENERAL NOTES

1. ALL BEDS SHALL HAVE THREE INCHES OF SHREDDED HARDWOOD MULCH OR EQUAL.
2. TREE WRAP SHALL BE REMOVED AT THE END OF THE GUARANTEE PERIOD.
3. DO NOT CUT THE LEADER OF DECIDUOUS TREES.
4. NO DECIDUOUS SHADE TREES WILL BE LOCATED CLOSER THAN 10 FEET TO SANITARY AND WATER UTILITIES.
5. NO PLANTS, EXCEPT GROUND COVER, SHALL BE PLANTED LESS THAN FIVE FEET FROM A STRUCTURE, WALKS OR CURBLINES.
6. ALL PLANT MATERIALS SHALL BE OF NURSERY STOCK, BALLED AND BURLAPPED. IT SHALL BE OF SYMMETRICAL GROWTH, TYPICAL OF ITS SPECIES OR VARIETY, CERTIFIED FREE OF INSECTS, PESTS AND DISEASE, HAVE A NORMAL GROWTH HABIT, AND A VIGOROUS HEALTHY ROOT SYSTEM.
7. ALL TREES SHALL BE GUARANTEED FOR A PERIOD OF 24 MONTHS BY THE LANDSCAPING CONTRACTOR.
8. ALL SHRUBS SHALL BE GUARANTEED FOR A PERIOD OF 18 MONTHS BY THE LANDSCAPING CONTRACTOR.
9. LOCATION OF ALL UNDERGROUND UTILITIES SHALL BE VERIFIED AND MARKED IN THE FIELD, PRIOR TO ANY DIGGING OPERATIONS.
10. ALL PLANTING MATERIALS SHALL MEET THE MINIMUM STANDARDS OF THE MOST RECENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION FOR HEALTH, FORM, AND ROOT CONDITION.
11. ALL TREES AND SHRUBS SHALL HAVE BEEN GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE TOWNSHIP.
12. PLANT MATERIAL SHALL NOT BE PLANTED UNTIL THE FINISHED GRADING HAS BEEN COMPLETED.
13. TREES AND SHRUBS SHALL BEAR THE SAME RELATIONSHIP TO THE FINISHED GRADE IN THE NEW DEVELOPMENT AS THEY DID IN THE NURSERY.
14. THE LANDSCAPE CONTRACTOR SHALL PROVIDE ALL PLANT MATERIALS AS SPECIFIED IN THE PLANT SCHEDULE AND SHALL INSTALL ALL MATERIAL IN ACCORDANCE WITH THE PLANTING DETAILS, NOTES AND SPECIFICATIONS IN THE APPROVED LANDSCAPE PLANS.
15. ANY SUBSTITUTIONS OF PLANT MATERIALS MUST BE REVIEWED AND APPROVED BY THE BOROUGH BEFORE INSTALLATION.
16. ALL LANDSCAPE IMPROVEMENTS TO BE PROVIDED IN ACCORDANCE WITH THE ORDINANCE SHALL BE INSTALLED AND MAINTAINED BY ACCEPTED PRACTICES AS RECOGNIZED BY THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS. PLANTING AND MAINTENANCE OF VEGETATION SHALL INCLUDE, AS APPROPRIATE, BUT NEED NOT BE LIMITED TO, PROVISIONS FOR SURFACE MULCH, GUY-WIRES AND STAKES, IRRIGATION, FERTILIZATION, INSECT AND DISEASE CONTROL, AND PRUNING
17. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO ADEQUATELY AND PROPERLY MAINTAIN THE LANDSCAPE AREAS, INCLUDING WATERING, FERTILIZING TO MAINTAIN HEALTHY GROWTH, PRUNING, WEEDING, AND CLEANING DEBRIS PRIOR TO THE END OF THE GUARANTEE PERIOD.
18. ALL PLANTINGS WHICH DO NOT SURVIVE AFTER THE EXPIRATION OF THE MAINTENANCE GUARANTEE WILL BE REPLACED BY THE LANDSCAPE CONTRACTOR.
19. CONTRACTOR SHALL REMOVE ANY DEAD, DISEASED OR DECAYING TREES FROM THE PROPERTY.
20. STREET TREE SHALL HAVE A MIN. OF 7-FEET OF HEAD CLEARANCE ABOVE SIDEWALK AT PLANTING.
21. PLANTERS ALONG WASHINGTON STREET TO BE MAINTAINED BY THE HOA.
22. ALL DISTURBED AREAS NOT MULCHED TO BE SODDED.



LOCATION MAP
SCALE: 1" = 2000'

WEST CHESTER BOROUGH LANDSCAPING SPECIFICATIONS

ALL TREE PLANTING PROCEDURES SHALL FOLLOW ANSI A300 (PART 6)- 2012 PLANTING AND TRANSPLANTING, AS WELL AS ISA'S BEST MANAGEMENT PRACTICES:TREE PLANTING, SECOND EDITION.

1. ALL TREES SHALL BE GUARANTEED FOR A PERIOD OF 24 MONTHS. ANY TREE THAT DIES WITHIN THE GUARANTEE SHALL BE REPLACED.
2. ALL TREES WITHIN THE RIGHTS-OF-WAY SHALL BE AN APPROVED SPECIES, AND SHALL CONFORM TO REQUIREMENTS OF THE BOROUGH RELATIVE TO SPACING.
3. ALL TREES SHALL BE TRUE TO NAME, NURSERY GROWN, AND FREE OF ALL PEST INFESTATION, PLANT DISEASE, OR UNHEALED TRUNK OR BASAL SCARS.
4. TREES SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, HAVE NORMAL GROWTH HABITS, WELL-DEVELOPED, DENSELY FOLIATED BRANCHES, AND VIGOROUS AND FIBROUS ROOT SYSTEMS.
5. ALL TREES, OR AT A MINIMUM REPRESENTATIVE SAMPLES OF ALL TREES, SHALL BE SUBJECT TO INSPECTION AT THE PLANTING SITE PRIOR TO PLANTING (IT IS RECOMMENDED THAT THE REPRESENTATIVE SAMPLES OF ALL TREES BE INSPECTED, RATHER THAN ALL TREES, IN THE EVENT ANY OR ALL TREES ARE REJECTED PLANTINGS WILL BE APPROVED OR REJECTED FOR CAUSE. ALL PLANTINGS SHALL CONFORM TO THE STANDARDS OF THE PUBLICATION "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1) OF THE AMERICAN ASSOCIATION OF NURSERYMEN, LATEST EDITION.
6. ALL TREES SHALL BE DUG WITH BALL AND BURLAP AND SHALL CONFORM WITH THE BALL DIAMETER TO DEPTH RATIO STANDARDS OF THE PUBLICATION "AMERICAN NURSERY STOCK"(ANSI Z60.a) OF THE AMERICAN ASSOCIATION OF NURSERYMEN, LATEST EDITION, I.E. ONE FOOT OF BALL FOR EACH TRUNK CALIPER MEASURED ONE FOOT ABOVE GROUND AND SHALL NOT BE LESS IN DEPTH THAN ⅓ OF THE BALL DIAMETER. WIRE BASKETS WHICH MAY BE USED TO TRANSPORT TREES SHALL BE REMOVED PRIOR TO PLANTING.

   TREES SHOULD BE PLANTED IN ELLIPTICAL PLANTING HOLES RATHER THAN THE STRAIGHT SIDED HOLES. HOLES SHOULD BE DUG AT LEAST TWO (2) FEET WIDER THAN THE GREATEST WIDTH OF THE TREE BALL FOR TREES OF LESS THAN FIVE INCH (5) CALIPER AND FOUR (4) FEET WIDER FOR TREES OF GREATER THAN FIVE INCH (5") CALIPER. ALL TREES SHALL BE SET ON FIRM SOIL THAT HAS NOT BEEN LOOSENED OR TO WHICH SOIL AMENDMENTS HAVE BEEN ADDED (THIS IS TO PREVENT FUTURE SETTLING OF THE TREE TO BELOW THE POINT THAT THE TREE WAS ORIGINALLY GROWN NATURALLY OR IN THE NURSERY.)

   CHECK EACH TREE FOR THE START OF THE FLAIR OR ROOT SYSTEM AND PLANT AT THAT DEPTH. UNTIE THE BURLAP ON THE BALL AND REMOVE IT FROM THE TOP ⅓ OF THE BALL. PLASTIC BURLAP, IF USED, SHALL BE REMOVED. USED GOOD QUALITY TOPSOIL FOR PLANTING. FIRM UP SOIL TO ENSURE SOIL CONTACT TO ROOT MASS. WATER THE TREE UNTIL THE ENTIRE ROOT BALL IS WET. THEREAFTER, KEEP ROOT SYSTEM MOIST BUT NOT WET.

   INJURED, DISEASED TREES AND TREES WITH BROKEN BRANCHES OR DOUBLE LEADERS SHOULD BE PRUNED. FOR TREES WITH DOUBLE LEADERS, REMOVE ONE OF THE DOUBLE LEADERS TOTALLY. DO NOT TOP THE CENTRAL LEADER.

   MULCH SAUCER OF TREE AT A MINIMUM THICKNESS OF THREE INCHES (3"), BUT DO NOT PILE MULCH ON TREE TRUNK. MAINTAINING A PERMANENTLY MULCHED AREA AROUND THE TREE PROMOTES GROWTH AND HELPS PREVENT MOWING INJURIES.

7. TAKE CUSTOMARY PRECAUTIONS ACCORDING TO THE STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN IN PREPARING PLANTS FOR DIGGING, MOVING, TRANSPLANTING, AND PLANTING.

SPECIFICATIONS FOR SHRUBS

1. ALL SHRUBS SHALL BE GUARANTEED FOR A PERIOD OF 18 MONTHS. ANY SHRUB THAT DIES WITHIN THE GUARANTEE PERIOD SHALL BE REPLACED.
2. SHRUBS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, HAVE NORMAL GROWTH HABITS, WELL-DEVELOPED, DENSELY FOLIATED BRANCHES, AND VIGOROUS AND FIBROUS ROOT SYSTEMS.
3. SHRUBS SHOULD BE BALLED AND BURLAPPED OR CONTAINER GROWN.

   A. SPACING: UNLESS A HEDGE IS PROPOSED, GIVE SHRUBS ROOM TO GROW BY PROVIDING PROPER SPACING; PLACE PLANTING HOLES ON CENTERS THAT APPROXIMATE TGHE HEIGHT OF THE SHRUB AT MATURITY. IF SET AGAINST A BUILDING, SHRUBS SHOULD NOT TOUCH WALLS OR BE PLANTED IN THE BUILDING'S DRIP LINE WHERE PLANTS CAN BE DAMAGED BY EXCESSIVE WATER RUN-OFF, AND/OR FALLING ICE AND SNOW. DO NOT PLANT IN AREAS THAT WILL HAVE LARGE PILES OF SNOW FROM PLOWING OF PARKING LOTS OR ROADWAYS.

   B. PLANTING: DIG A SEPARATE HOLE FOR EACH SHRUB. ADD ORGANIC MATERIALS SUCH AS PEAT MOSS OR COMPOST TO SOIL. HOLES SHOULD BE DUG AT LEAST EIGHT INCHES (8") WIDER THAN THE SHRUB, AND THE SAME DEPTH AS THE BALL. PLANTS SHALL BE REMOVED FROM CONTAINERS, AND ALL PLASTIC BURLAP SHALL BE REMOVED. NATURAL FIBER BURLAP MAY BE LEFT, BUT LOOSEN THE TOP AND REMOVE FROM THE STEM OF THE SHRUB. SET SHRUB AT SAME LEVEL AS GROWN AT THE NURSERY OR ONE INCH (1") HIGHER, FILL WITH MIXTURE OF SOIL AND ORGANIC MATERIAL UNTIL THE HOLEIS ⅔ FULL, THEN ADD WATER. BUILD SAUCER AROUND SHRUB AND FINISH FILLING, TAMPING TO ENSURE GOOD SOIL TO ROOT CONTACT. WATER AND COVER WITH MULCH, DO NOT PILE MULCH DEEPER THAN THREE INCHES (3"). PRUNE OUT ANY BROKEN BRANCHES. MAINTAIN A WATERING SCHEDULE WHENEVER RAINFALL IS INSUFFICIENT TO KEEP THE SOIL MOIST. A SLOW RELEASE FERTILIZER SHOULD BE ADDED EARLY IN THE SPRING OF THE SECOND YEAR.

   AZALEAS AND RHODODENDRONS AND OTHER ERICACEOUS PLANTS SHALL BE PLANTED IN SOIL WITH A pH VALUE BETWEEN 4.5 pH AND 6.5 pH. THESE PLANTS ARE FIBROUS ROOTED AND GROW WITHIN THE UPPER 12 INCHES OF SOIL. A MULCH WILL KEEP THE TOPSOIL COOL AND AID IN GROWTH.

   MULCH ON ALL SHRUBS SHOULD BE RENEWED YEARLY TO KEEP DOWN WEEDS, CONSERVE WATER, AND INCREASE SOIL HUMUS.

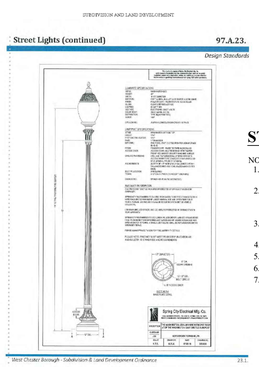
LEGEND

- PROPERTY BOUNDARY
- PROPERTY BOUNDARY TO BE EXTINGUISHED
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- TP-5 TEST PIT LOCATION
- 102 EXISTING 2' CONTOUR
- 100 EXISTING 10' CONTOUR
- ×102.35 EXISTING SPOT ELEVATION
- EXISTING SIGN
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING CONCRETE PAD, SIDEWALK OR PATIO
- EXISTING FENCE LINE
- EXISTING STORM STRUCTURES & PIPE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING SANITARY CLEAN-OUT
- EXISTING WATER VALVE
- EXISTING WATER LINE
- EXISTING GAS VALVE
- EXISTING GAS LINE
- EXISTING UTILITY POLE
- EXISTING OVERHEAD WIRE
- PROPOSED SETBACK LINE
- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- ●125.35 PROPOSED SPOT ELEVATION
- PROPOSED ROAD / PAVING
- PROPOSED CONCRETE SIDEWALK
- PROPOSED STORM STRUCTURES & PIPE
- PROPOSED SANITARY STRUCTURES & PIPE
- PROPOSED SANITARY CLEAN-OUT
- PROPOSED SANITARY LATERAL
- PROPOSED SANITARY FORCE MAIN
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER LINE
- PROPOSED BAMBOO SHIELD
- PROPOSED SCONCE LIGHT
- PROPOSED LANDSCAPE
- PROPOSED STREET LIGHT

LIGHTING NOTE:
1. CONTRACTOR SHALL COORDINATE EXACT STREETLIGHT LOCATION ON WASHINGTON STREET WITH WEST CHESTER BOROUGH AT THE TIME OF INSTALLATION.

WALL SCONCE:CYPHER

NOTES:
1. MANUFACTURER: KIM LIGHTING
2. MODEL NUMBER: CY1-15-3K7-2-SP-SP-R (3000K) (OR APPROVED EQUAL)
3. COLOR: TO MATCH FACADE
4. FASCIA FORM: E-ROUNDED EDGE
5. LUMINOUS FRONT :STANDARD-NONE
6. CONTACT INFORMATION: https://www.currentlighting.com/kimlighting 1 (864) 678-1000



STREET LIGHT:CYPHER

NOTES:
1. MANUFACTURER: SPRING CITY ELECTRICAL MFG., COOMPANY
2. CATALOGUE NUMBER: ALMWSH-LE060/EVX/X2-30-CR3-YS11-FPA-CU (OR APPROVED EQUAL)
3. COLOR: POWDER COAT - RIVER TEXTURE GLOSS BLACK
4. COLOR TYPE 3000K (WARM WHITE)
5. DISTRIBUTION TYPE III (ASYMMETRIC)
6. QUANTITY : 2 ALONG WASHINGTON STREET
7. CONTACT INFORMATION: WWW.SPRINGCITY.COM (610) 948-4000

TERRACAST SELF-WATERING RESERVOIRS

NOTES:
1. MANUFACTURER: TERRA CAST
2. MODEL NUMBER: FOR MILLENNIUM RECTANGULAR II TC-REC3794
   FOR MILLENNIUM SQUARE II TSC-WWR21
3. CONTACT INFORMATION:
   TERRACAST
   HTTPS://WWW.TERRACASTPRODUCTS.COM/
   844-285-9556

TERRACAST PLANTERS:MILLENNIUM II

NOTES:
1. MANUFACTURER: TERRA CAST
2. -MODEL NUMBER: MILLENNIUM RECTANGULAR II TSR48-24 (OR APPROVED EQUAL)
   -MILLENNIUM SQUARE II TSS24-24 (OR APPROVED EQUAL)
3. COLOR: CHARCOAL
4. LUMINOUS FRONT :STANDARD-NONE
5. CONTACT INFORMATION:
   TERRACAST
   HTTPS://WWW.TERRACASTPRODUCTS.COM/
   844-285-9556

LANDSCAPE REQUIREMENTS

	NO. PLANTS	REQUIRED	PROPOSED
§ 97-A.24 - STREET TREES: 1 SHADE TREE (3-31/2" CAL.) FOR EVERY 35 FEET OF ROAD LENGTH.			
WASHINGTON STREET LENGTH : 100' (100' / 35' = 2.86 ~ 3)	1	3	3
PATTON ALLEY LENGTH : 101' (101' / 35' = 2.88 ~ 3)	1	3	4
BIRDSIDE ALLEY LENGTH: 168' (168' / 35')= 4.8 ~ 5	1	5	4
TOTAL	11	11	
LANDSCAPING AND SCREENING			
§ 97-33.D.(5)(b) / (c)- BUILDING FACADE — BUILDING FACADE LENGTH: 160'			
1 (2 ½"-3" CAL.) SPECIMEN DECIDUOUS TREE PER 50' LENGTH OF BUILDING FACADE (160'/50' = 3.2 ~ 4)	1	4	4
1 (6'-7') SPECIMEN EVERGREEN TREE PER 50' LENGTH OF BUILDING FACADE (160'/50' = 3.2 ~ 4)	1	4	4
5 (30" HT) EVERGREEN/DECIDUOUS SHRUB PER 20' LENGTH OF BUILDING FACADE (160'/20' = 8) (8 * 5=40 SHRUBS)	5	40	41

TOTAL LANDSCAPE	REQUIRED	PROPOSED
DECIDUOUS TREES	15	15
EVERGREEN TREES	4	4
SHRUBS	40	41

PLANT SCHEDULE LANDSCAPE

CODE	QTY	BOTANICAL / COMMON NAME	SIZE	CONTAINER
BUILDING EVERGREEN TREES				
CN2	2	CHAMAECYPARIS NOOTKATENSIS / NOOTKA CYPRESS	6'-7' MIN. HT.	CONT.
JB	2	JUNIPERUS CHINENSIS 'BLUE POINT' / BLUE POINT JUNIPER	6'-7' MIN. HT.	B&B
DECIDUOUS TREES				
LW	3	LAGERSTROEMIA INDICA 'WHIT IV' / RED ROCKET® CRAPE MYRTLE	3" - 3 1/2" CAL.	B&B
QB2	3	QUERCUS BICOLOR / SWAMP WHITE OAK	3" - 3 1/2" CAL.	B&B
SPECIMAN DECIDUOUS TREES				
CV	1	CHIONANTHUS VIRGINICUS / WHITE FRINGETREE	21/2"-3" CAL.	B&B
CR	3	CORNUS X 'RUTCAN' / CONSTELLATION® FLOWERING DOGWOOD	21/2"-3" CAL.	B&B
STREET TREES				
CC	3	CERCIS CANADENSIS / EASTERN REDBUD	3" - 3 1/2" CAL.	B&B
GP2	3	GINKGO BILOBA 'PRINCETON SENTRY' / PRINCETON SENTRY MAIDENHAIR TREE	3" - 3 1/2" CAL.	B&B
MJ2	2	MAGNOLIA VIRGINIANA 'JIM WILSON' / MOONGLOW® SWEETBAY MAGNOLIA	3" - 3 1/2" CAL.	B&B
NW	3	NYSSA SYLVATICA 'WILDFIRE' / WILDFIRE TUPELO	3" - 3 1/2" CAL.	B&B
SHRUBS				
AC	6	AZALEA X 'CONLEN' / AUTUMN BRAVO® ENCORE® AZALEA	30" HT MIN.	B&B
CW2	1	CHAMAECYPARIS OBTUSA 'WELLS SPECIAL' / WELLS SPECIAL HINOKI FALSE CYPRESS	#5	CONT.
HA	9	HYDRANGEA ARBORESCENS 'ANNABELLE' / ANNABELLE HYDRANGEA	30" HT MIN.	CONT.
HR	5	HYDRANGEA QUERCIFOLIA 'RUBY SLIPPERS' / RUBY SLIPPERS OAKLEAF HYDRANGEA	30" HT MIN.	CONT.
IR	8	ITEA VIRGINICA 'SMNIVMM' / FIZZY MIZZY® SWEETSPIRE	24"-36"	CONT.
TS	12	THUJA OCCIDENTALIS 'SMARAGD' / EMERALD GREEN ARBORVITAE	5' HT.	CONT.
PERENNIALS				
BB	8	BOUTELOUA GRACILIS 'BLONDE AMBITION' / BLONDE AMBITION BLUE GRAMA	#1	CONT.
EC	6	ECHINACEA X 'CHEYENNE SPIRIT' / CHEYENNE SPIRIT CONEFLOWER	#2	CONT.

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Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20241660254

PENNSYLVANIA ACT 187 REQUIREMENTS:
InLand Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does InLand Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

UPI: 1-8-147 | UPI: 1-8-147.1 | UPI: 1-8-148

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REGISTERED LANDSCAPE ARCHITECT — PENNSYLVANIA — MEGAN ELIZABETH ANDERSON — CERTIFICATE NUMBER LA-005117 — Expires 12/31/2025

No.	Date:	Description:
1	12/16/2024	REVISED PER MUNICIPAL REVIEW LETTERS.
2	12/18/2024	ADDED PERVIOUS PAVING
3	4/2/2025	REVISED PER MUNICIPAL REVIEW LETTERS.
4	6/2/2025	REVISED PER MUNICIPAL REVIEW LETTERS.

FINAL
LAND DEVELOPMENT PLAN

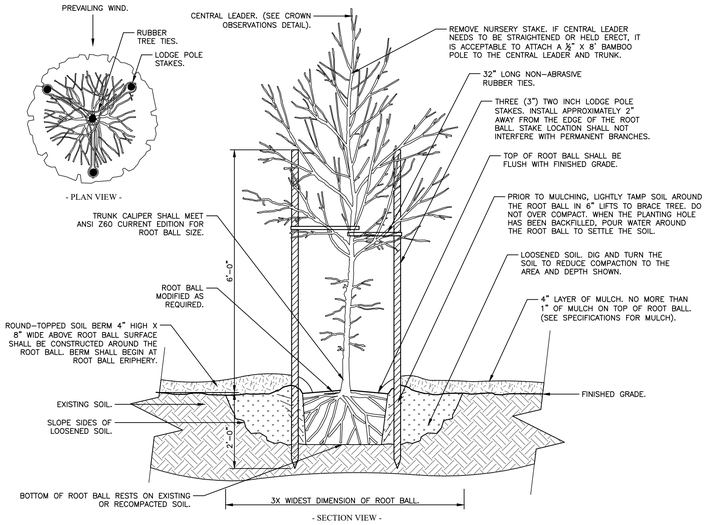
GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 Inch = 10'

Date: 9/30/2024
Scale: 1" = 10'
Drawn by: MEAS/DWN
Checked by: MEAS
Project No. 12308

LANDSCAPE PLAN FOR
AXLE SQUARE, LLC
210-214 WEST WASHINGTON STREET
WEST CHESTER, PA, 19380
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

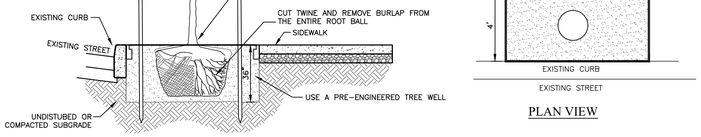
SHEET 10 OF 14

N:\12300\12308\dwg\Sheets\Preliminary Submission\10 LANDSCAPE PLAN.dwg



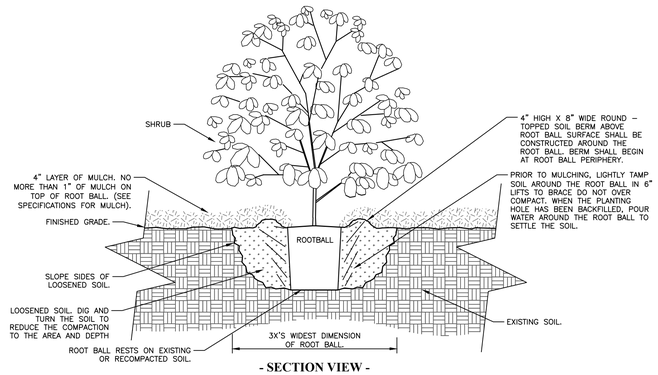
TYPICAL TREE PLANTING DETAIL

(NOT TO SCALE)



TYPICAL STREET TREE PLANTING DETAIL

(NOT TO SCALE)



- SECTION VIEW -

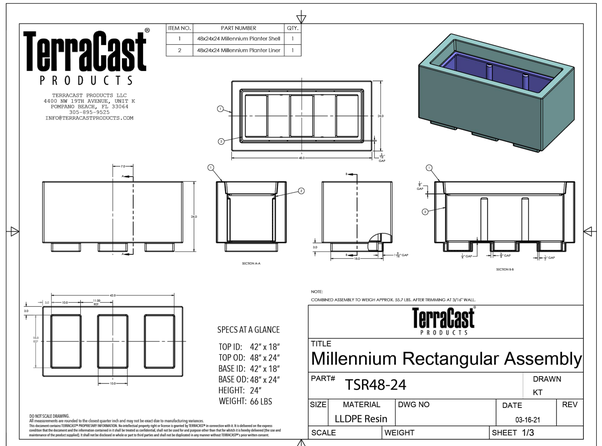
TYPICAL SHRUB PLANTING DETAIL

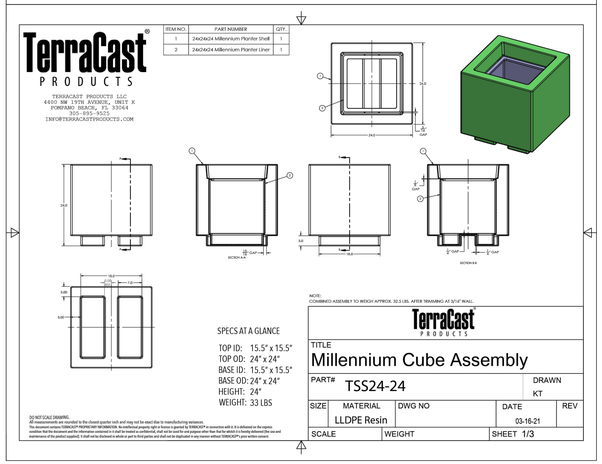
(NOT TO SCALE)

TERRACAST MILLENIUM II PLANTER

NOTES:
- PRODUCT: TERRACAST MILLENNIUM RECTANGULAR II PLANTER
- 24"X48" ITEM #
  TSR48-24: MILLENNIUM PLANTER SHELL
  TSR48-24-LINER: MILLENNIUM PLANTER LINER
- PRODUCT: TERRACAST MILLENNIUM SQUARE II PLANTER (CUBE)
- 24" X 24" ITEM #
  TSS24-24: MILLENNIUM PLANTER SHELL (CUBE)
  TSS24-24-LINER: MILLENNIUM PLANTER LINER (CUBE)
- COLOR: CHARCOAL

WWW.TERRACASTPRODUCTS.COM/PRODUCT/MILLENNIUM-RECTANGULAR-2/
- INFO@TERRACASTPRODUCTS.COM
- (844) 285-9556





STREET PLANTER PLANTING OPTIONS

NOTES:
- USE PLANTER AND WATERING INSERT AS SPECIFIED
- PLANTER TO BE FILLED WITH POTTING SOIL-NOT GARDEN SOIL OR TOPSOIL
- LARGE PLANT IN CENTER OF PLANTER AS A FOCAL POINT
- SMALL AND TRAILING PLANTS AROUND THE FOCAL POINT.
- WATER, PRUNE, DEADHEAD AND WEED AS NEEDED.
- FERTILIZE AT MINIMUM TWICE A GROWING SEASON WITH BALANCE FERTILIZER. (I.E. MIRACLE-GRO)
- CHANGE PLANTS OUT SEASONALLY FOR YEAR ROUND INTEREST
- COLDER MONTHS USE EVERGREEN BOUGHS AND DRIED HERBACEOUS MATERIAL
- LIST PROVIDED ARE OPTIONS, THERE ARE A LARGE VARIETY OF PLANTS AVAIABLE.

PHOTO — BOTANICAL / COMMON NAME

STREET PLANTERS

COLEUS SCUTELLARIOIDES / COLEUS

IPOMOEA BATATAS / ORNAMENTAL SWEET POTATO

LOBELIA X 'WNLOLASKBL' / LAGUNA SKY BLUE LOBELIA

LYSIMACHIA NUMMULARIA / CREEPING JENNY

PELARGONIUM X HORTORUM / GERANIUM

PENNISETUM SETACEUM 'FIREWORKS' / FIREWORKS FOUNTAIN GRASS

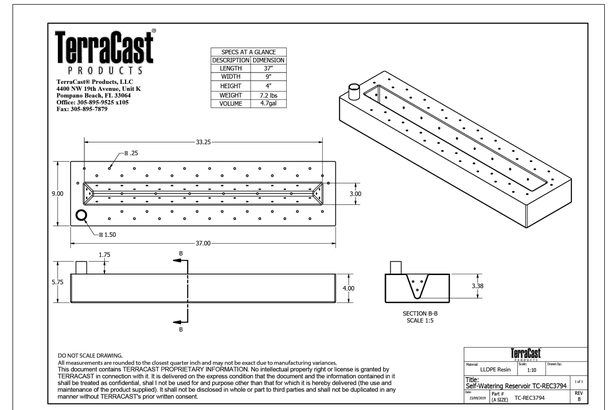
PETUNIA X HYBRIDA 'PAS481974' / EASY WAVE® MYSTIC PINK PETUNIA

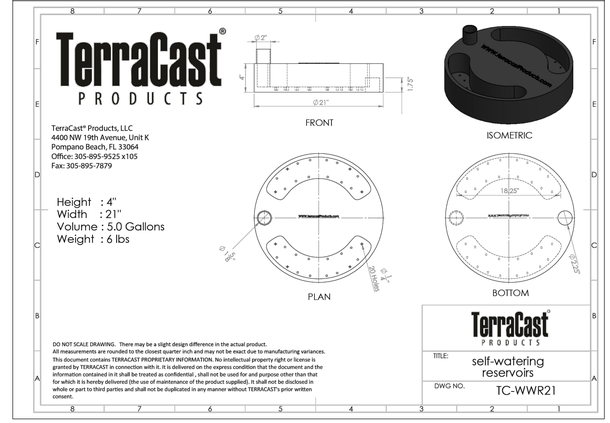
SALVIA LONGISPICATA X FARINACEA 'PAS1246577' / BIG BLUE SALVIA

TAGETES NELSONII / MARIGOLD

VERBENA OFFICINALIS / VERBENA

VIOLA TRICOLOR / PANSY





TERRACAST SELF-WATERING RESERVOIRS

NOTES:
- MANUFACTURER: TERRA CAST
- MODEL NUMBER:
  FOR MILLENNIUM RECTANGULAR II
  TC-REC3794
  FOR MILLENNIUM SQUARE II
  TC-WWR21
- CONTACT INFORMATION:
  TERRACAST
  HTTPS://WWW.TERRACASTPRODUCTS.COM/
  844-285-9556

BAMBOO SHIELD

NOTES:
- BAMBOO SHIELD TO BE INSTALLED ALONG FENCE LINE PER MANUFACTURERS SPECIFICATIONS.
- RECOMMENDED PRODUCT: 80 MIL. THICK X 30" DEPTH.
- https://bambooshield.com/
- Text 1-855-661-3822
- Call 1-855-661-3822

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Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20241660254

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UPI: 1-8-147 | UPI: 1-8-147.1 | UPI: 1-8-148

InLand Design
Engineering, Surveying & Land Planning

No.	Date:	Description:
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4	6/2/2025	REVISED PER MUNICIPAL REVIEW LETTERS.

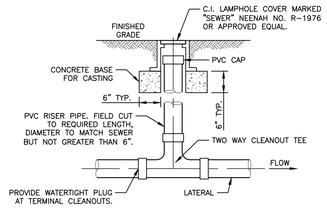
FINAL LAND DEVELOPMENT PLAN

Date: 9/30/2024
Scale: AS NOTED
Drawn by: MEAS
Checked by: MEAS
Project No. 12308

LANDSCAPE & LIGHTING DETAILS FOR
AXLE SQUARE, LLC
210-214 WEST WASHINGTON STREET
WEST CHESTER, PA, 19380
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

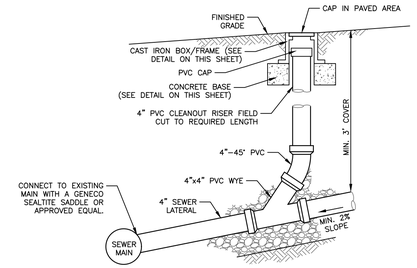
SHEET 11 OF 14

N:\12300\12308\dwg\Sheets\Preliminary Submission\11 LANDSCAPE & LIGHTING DETAILS.dwg



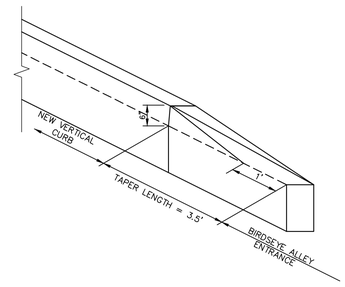
TYPICAL CLEANOUT FRAME AND COVER DETAIL PAVED SURFACES OR SIDEWALKS

(NOT TO SCALE)



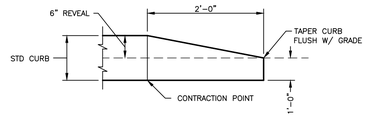
TYPICAL SANITARY SEWER LATERAL

(NOT TO SCALE)



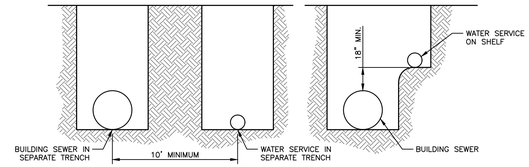
WASHINGTON ST./BIRDSEYE ALY CONCRETE CURB MOUNTABLE TAPER DETAIL

NOT TO SCALE



CURB END TREATMENT DETAIL

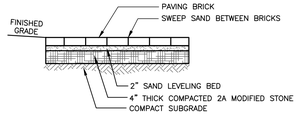
NOT TO SCALE



TYPICAL WATER & SEWER SERVICES SEPARATION DETAIL

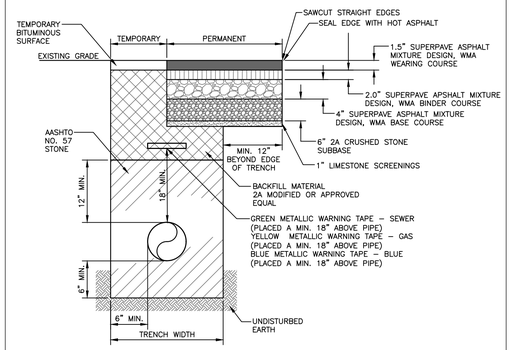
(NOT TO SCALE)

NOTE:
1. THE BUILDING WATER SERVICE AND SEWER SERVICES SHALL BE 10-FEET APART.
2. WHERE 10-FEET SEPARATION CAN NOT BE ACCOMPLISHED, THE SERVICES SHALL HAVE A VERTICAL SEPARATION OF 12-INCHES (MINIMUM).



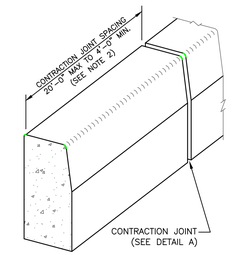
TYPICAL BRICK SIDEWALK SECTION

(NOT TO SCALE)

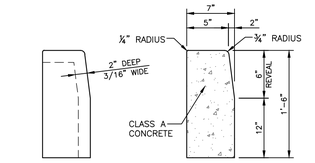


PAVEMENT RESTORATION DETAIL FOR WASHINGTON STREET, BIRDSEYE ALLEY AND PATTON ALLEY

(NOT TO SCALE)



PLAIN CEMENT CONCRETE CURB



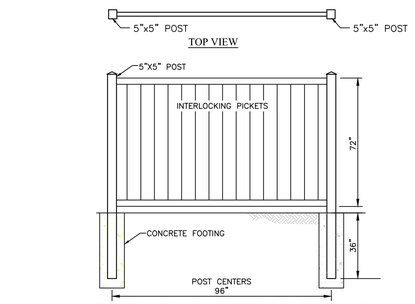
DETAIL A CONTRACTION JOINT

TYPICAL CROSS SECTION

NOTES
1. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTION 630 FOR PLAIN CEMENT CONCRETE CURB AND DEPRESSED CURB, SECTION 640 FOR PLAIN CEMENT CONCRETE GUTTER AND SECTION 641 FOR PLAIN CEMENT CONCRETE CURB GUTTER.
2. SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS.
3. PLACE 3/4" THICK PREMOLDED EXPANSION JOINT FILLER MATERIAL AT STRUCTURES AND AT THE END OF THE WORK DAY. CUT MATERIAL TO CONFORM TO AREA ADJACENT TO CURB OR TO CONFORM TO CROSS SECTIONAL AREA OF CURB.
4. WHERE CURBS ARE INSTALLED ADJACENT TO PARKING LANES A 6" HIGH CURB REVEAL CAN BE UTILIZED WITH APPROVAL FROM THE LOCAL MUNICIPALITY.
5. PROVIDE AN ASPHALTIC SEALER AT THE CURB TO PAVEMENT JOINT.

6" REVEAL - CONCRETE CURB

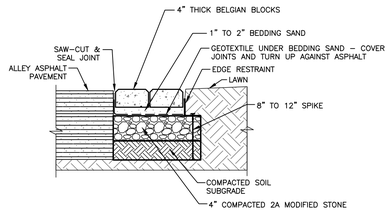
(NOT TO SCALE)



TYPICAL 6-FOOT VINYL PRIVACY FENCE DETAIL

(NOT TO SCALE)

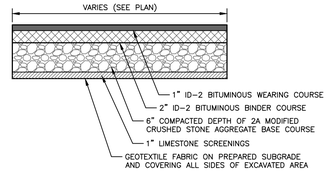
NOTE:
1. THE FENCE INSTALLED FOR THIS PROJECT SHALL BE A NON-WHITE COLOR.



PATTON ALLEY PAVEMENT BORDER

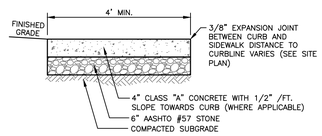
(NOT TO SCALE)

NOTE:
1. ALONG PATTON ALLEY, THE BLOCK BORDER SHALL BE 10" WIDE.
2. ALONG THE PAVEMENT RADIUS BETWEEN PATTON ALLEY AND BIRDSEYE ALLEY, THE BLOCK BORDER SHALL BE 24" WIDE, AS SHOWN ON THE PLAN.



TYPICAL DRIVEWAY / PARKING LOT SECTION

(NOT TO SCALE)



TYPICAL SIDEWALK SECTION

(NOT TO SCALE)

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Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA
Registered
PROFESSIONAL
SCOTT G. ZWIZANSKI
ENGINEER
PE091752

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FINAL
LAND DEVELOPMENT PLAN

Date: 9/30/2024
Scale: AS NOTED
Drawn by: DWN
Checked by: SJZ
Project No. 12308

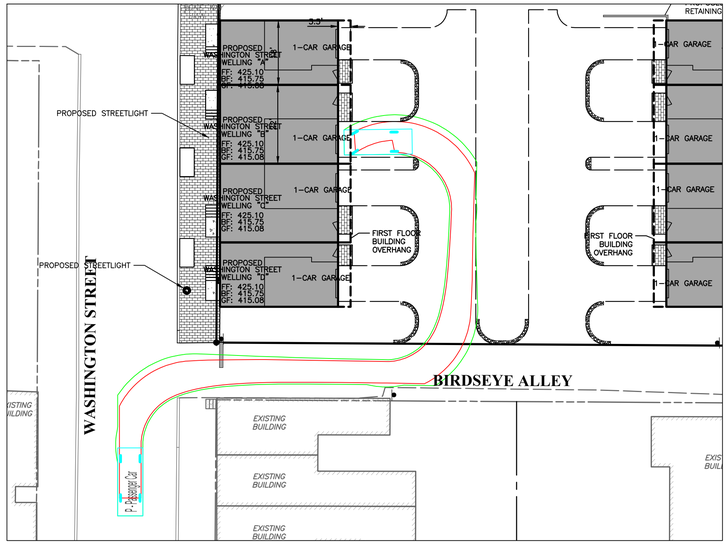
CONSTRUCTION DETAILS FOR

AXLE SQUARE, LLC
210-214 WEST WASHINGTON STREET
WEST CHESTER, PA, 19380

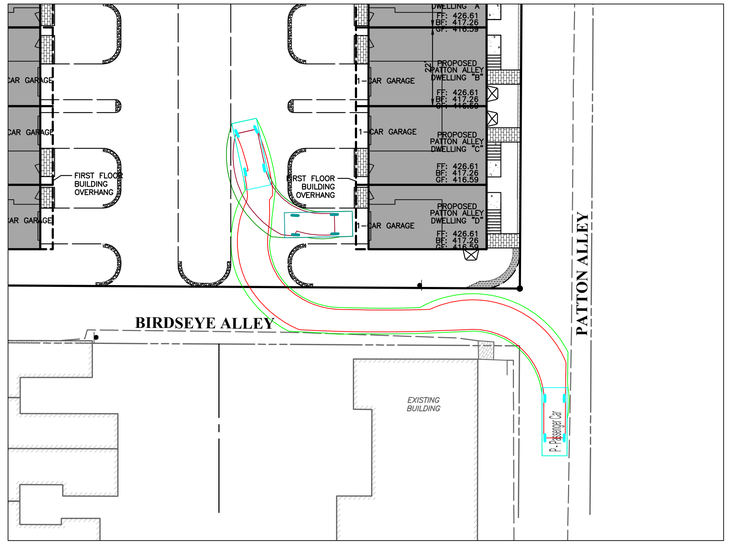
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET **12** OF 14

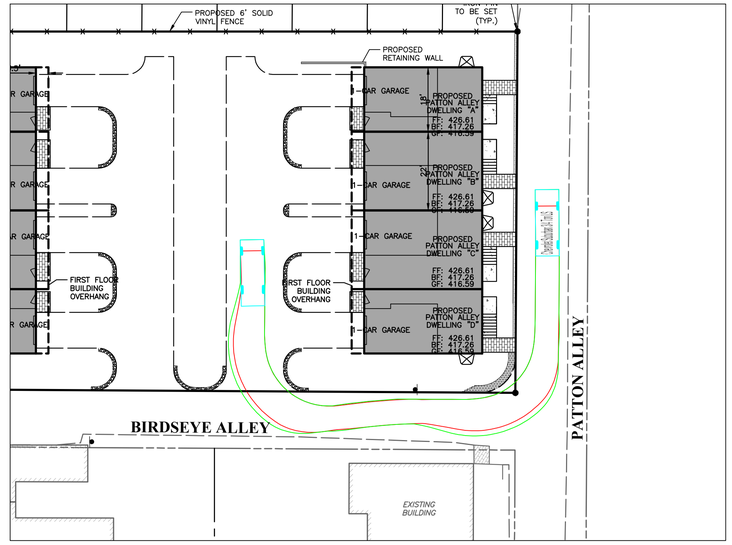
N:\12300\12308\dwg\Sheets\Preliminary Submission\12 CONSTRUCTION DETAILS.dwg



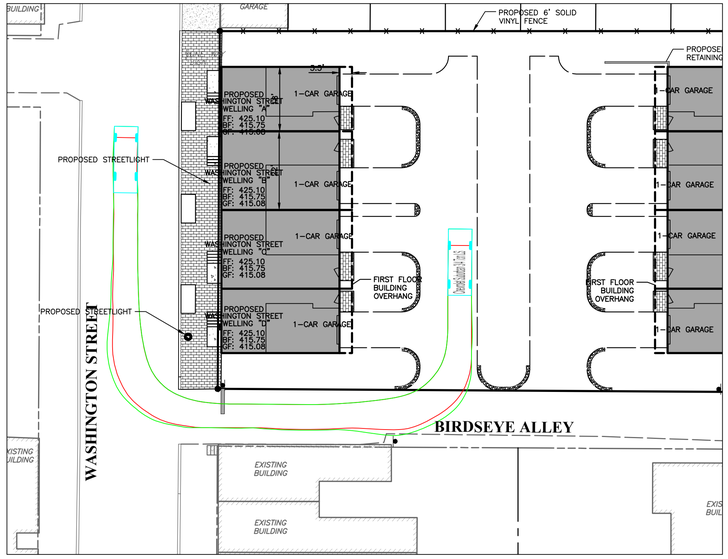
ENTERING SITE FROM WASHINGTON STREET



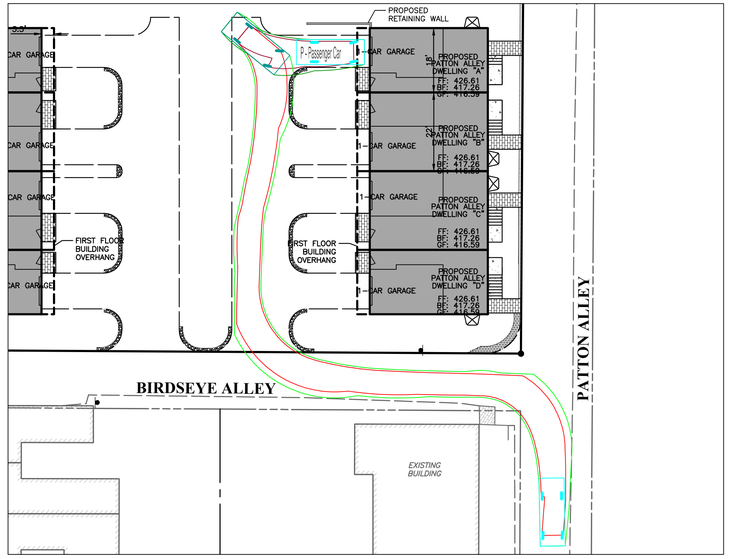
ENTERING SITE FROM NORTHBOUND PATTON ALLEY



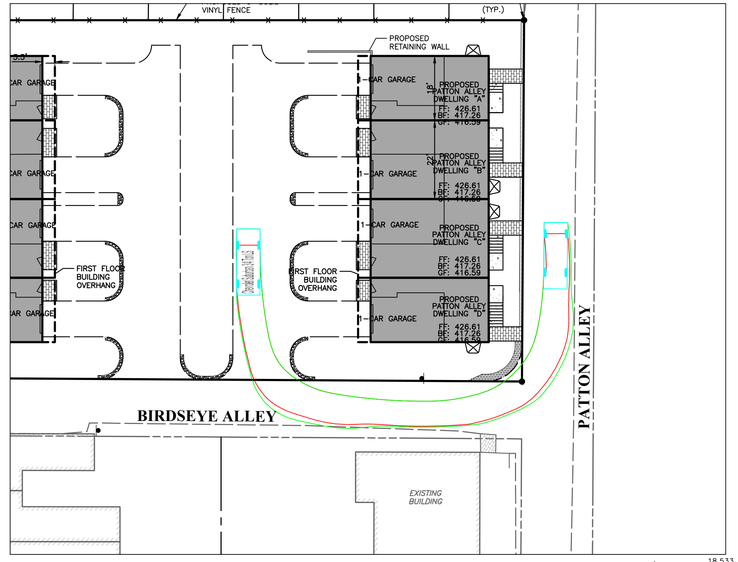
ENTERING SITE FROM SOUTHBOUND PATTON ALLEY



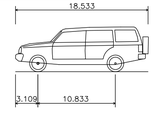
EXITING SITE TO WASHINGTON STREET



EXITING SITE TO SOUTHBOUND PATTON ALLEY



EXITING SITE TO NORTHBOUND PATTON ALLEY



Chevrolet Suburban 3/4 Ton LS	
Overall Length	18.533ft
Overall Width	6.582ft
Overall Body Height	6.232ft
Minimum Ground Clearance	0.698ft
Track Width	6.582ft
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	22.050ft

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COMMONWEALTH OF PENNSYLVANIA — Registered PROFESSIONAL — SCOTT G. ZWIZANSKI — ENGINEER — PE091752

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4	6/2/2025	REVISED PER MUNICIPAL REVIEW LETTERS.

FINAL
LAND DEVELOPMENT PLAN

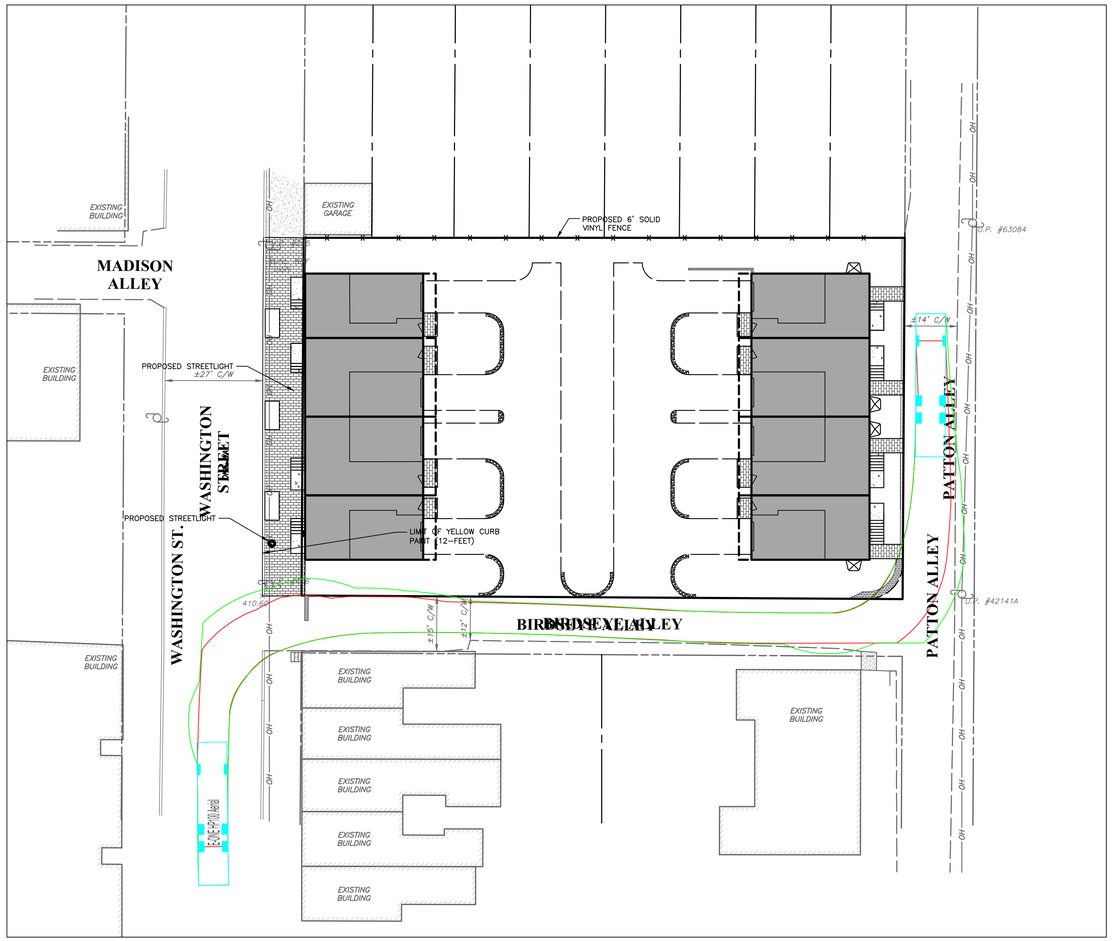
GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 Inch = 10'

Date:	9/30/2024
Scale:	1" = 10'
Drawn by:	DWN
Checked by:	SJZ
Project No.	12308

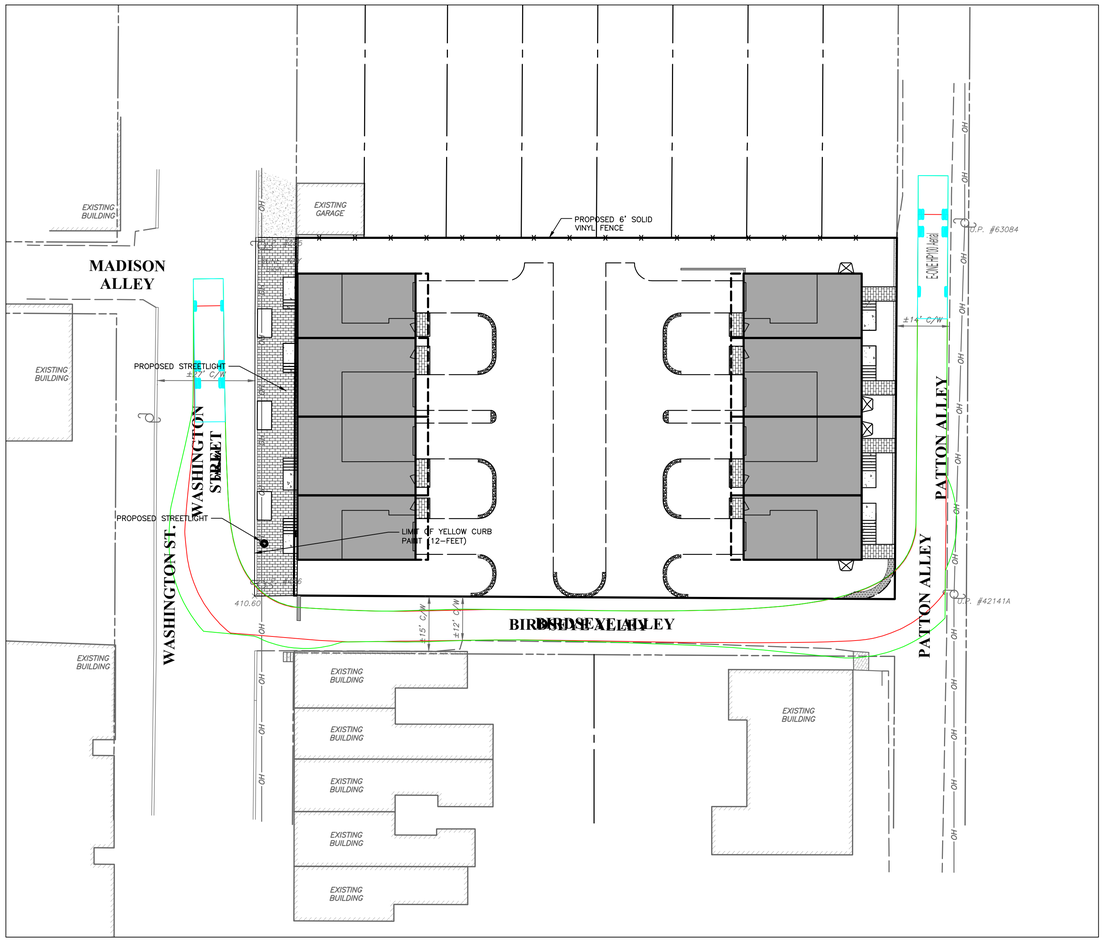
VEHICLE TURNING PLAN
FOR
AXLE SQUARE, LLC
210-214 WEST WASHINGTON STREET
WEST CHESTER, PA, 19380
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET **13** OF 14

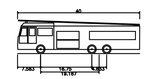
N:\12300\12308\dwg\Sheets\Preliminary Submission\13 VEHICLE TURNING PLAN.dwg



FIRE TRUCK ENTERING BIRDSEYE ALLEY FROM WASHINGTON ST.



FIRE TRUCK ENTERING BIRDSEYE ALLEY FROM PATTON ALLEY



E-ONE HP100 Aerial

Overall Length	40.000ft
Overall Width	8.333ft
Overall Body Height	11.000ft
Min Body Ground Clearance	1.383ft
Track Width	8.333ft
Lock-to-lock time	6.00s
Max Wheel Angle	45.00°

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PENNSYLVANIA ONE CALL SYSTEM, INC. SERIAL #20241660254 CALL BEFORE YOU DIG!

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FINAL
LAND DEVELOPMENT PLAN

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 Inch = 20'

Date: 9/30/2024
Scale: 1" = 20'
Drawn by: DWN
Checked by: SJZ
Project No. 12308

TRUCK TURNING PLAN
FOR
AXLE SQUARE, LLC
210-214 WEST WASHINGTON STREET
WEST CHESTER, PA, 19380
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET 14 OF 14

N:\12300\12308\dwg\Sheets\Preliminary Submission\14 TRUCK TURNING PLAN.dwg

BEFORE THE BOROUGH COUNCIL OF WEST CHESTER BOROUGH

In Re: West Chester University of Pennsylvania's Application for Conditional Use for Approval of University Campus Plan

Narrative in Support of Application

I. Introduction & Background

West Chester University of the Pennsylvania State System of Higher Education (the "Applicant") is the record owner of those subject parcels of real property located in the Planned University Campus District of West Chester Borough (together, the "Properties"). The Properties are used for educational uses with associated improvements and accessory uses and improvements incidental to the existing educational use.

The Applicant seeks conditional use approval of its University Campus Plan providing certain University projects in West Chester Borough (the "Borough") over the life of the University Campus Plan. In conformity with the stated purpose of the Planned University Campus District, the Applicant's University Main Campus Plan provides for the orderly, coordinated, and unified development of its campus and related uses through long-range planning, strengthens and preserves surrounding neighborhoods, and advances the mission of West Chester University of the Pennsylvania State System of Higher Education.

II. Request for Conditional Use Approving University Campus Plan

The Applicant requests that the Borough Council grant Conditional Use approval for its University Main Campus Plan in the Borough pursuant to Section 112-314 of the West Chester Borough Zoning Ordinance ("Ordinance"), subject to future land development approval for each specified project.

The Applicant is specifically seeking approval of the enclosed "Master Plan for West Chester University Campus Improvements", which constitutes the Master Site Plan component required per Section 112-314.C(3)(f) of the Ordinance ("Master Site Plan"). The University Campus Plan consists of the Master Site Plan as well as the other components required by Section 112-314.C(3) of the Ordinance. For all projects shown on the Master Site Plan, the ultimate land development application for each project will reflect the actual building footprint, layout, and related details.

The Applicant will demonstrate compliance with the Ordinance's criteria for University Campus Plans and their associated components, Conditional Use criteria, and all other applicable requirements at the time of the hearing on the instant application.

III. Conclusion

The Applicant will present testimony and evidence in support of its Application at the time of the hearing before the Borough Council and hereby requests approval of the Application.

Respectfully submitted,

MacELREE HARVEY, LTD.

Dated: March 31, 2025

Brian L. Nagle
MacElree Harvey, Ltd.
17 West Miner Street
P.O. Box 660
West Chester, PA 19381-0660
(610) 436-0100
Attorney for Applicant

6193163v2
160785.75985

MASTER PLAN
FOR
WEST CHESTER UNIVERSITY CAMPUS IMPROVEMENTS
WEST CHESTER BOROUGH - WEST GOSHEN & EAST BRADFORD TOWNSHIPS - CHESTER COUNTY - PENNSYLVANIA

WEST GOSHEN TOWNSHIP
PLANNED UNIVERSITY MAIN CAMPUS OVERLAY DISTRICT CLASS 1 PUC1

	REQUIRED	PROPOSED
MAXIMUM LOT COVERAGE	50%	15.3%
MINIMUM GREEN AREA	15%	50.5%
SETBACKS		
PRINCIPAL USE:		
CONTIGUOUS TO RESIDENTIAL USE	50 FT.	
ALONG W. ROSEDALE AVE.	20 FT.	
ALL OTHER BOUNDARIES	30 FT.	
SURFACE PARKING LOTS:		
CONTIGUOUS TO RESIDENTIAL USE	25 FT.	
ALL OTHER BOUNDARIES	10 FT.	
MAXIMUM BUILDING HEIGHT	60 FT.	
MINIMUM BUILDING SEPARATION[3]	20 FT.	

WEST GOSHEN TOWNSHIP
PLANNED UNIVERSITY MAIN CAMPUS OVERLAY DISTRICT CLASS 2 PUC2

	REQUIRED	PROPOSED
MAXIMUM LOT COVERAGE	50%	13.6%
MINIMUM GREEN AREA	15%	54.6%
SETBACKS		
PRINCIPAL USE:		
CONTIGUOUS TO RESIDENTIAL USE	50 FT.	
ALONG W. ROSEDALE AVE.	20 FT.	
ALL OTHER BOUNDARIES	30 FT.	
SURFACE PARKING LOTS:		
CONTIGUOUS TO RESIDENTIAL USE	25 FT.	
ALL OTHER BOUNDARIES	10 FT.	
MAXIMUM BUILDING HEIGHT	60 FT.	
MINIMUM BUILDING SEPARATION[3]	20 FT.	

WEST GOSHEN TOWNSHIP
PLANNED UNIVERSITY MAIN CAMPUS OVERLAY DISTRICT CLASS 3 PUC3

	REQUIRED	PROPOSED
MAXIMUM LOT COVERAGE	50%	1.7%
MINIMUM GREEN AREA	15%	89.2%
SETBACKS		
PRINCIPAL USE:		
CONTIGUOUS TO RESIDENTIAL USE	50 FT.	
ALONG E. ROSEDALE AVE.	20 FT.	
ALL OTHER BOUNDARIES	30 FT.	
SURFACE PARKING LOTS:		
CONTIGUOUS TO RESIDENTIAL USE	25 FT.	
ALL OTHER BOUNDARIES	10 FT.	
MAXIMUM BUILDING HEIGHT	60 FT.	
MINIMUM BUILDING SEPARATION[3]	20 FT.	

WEST GOSHEN TOWNSHIP
PLANNED UNIVERSITY MAIN CAMPUS OVERLAY DISTRICT CLASS 4 PUC4

	REQUIRED	PROPOSED	
MAXIMUM LOT COVERAGE	50%	24.0%	NO DEVELOPMENT PROPOSED IN CLASS 4
MINIMUM GREEN AREA	15%	40.1%	
SETBACKS			
PRINCIPAL USE:			
CONTIGUOUS TO RESIDENTIAL USE	50 FT.		
ALONG W. ROSEDALE AVE.	20 FT.		
ALL OTHER BOUNDARIES	30 FT.		
SURFACE PARKING LOTS:			
CONTIGUOUS TO RESIDENTIAL USE	25 FT.		
ALL OTHER BOUNDARIES	10 FT.		
MAXIMUM BUILDING HEIGHT	60 FT.		
MINIMUM BUILDING SEPARATION[3]	20 FT.		

WEST CHESTER BOROUGH
PLANNED UNIVERSITY CAMPUS DISTRICT – PUC

	REQUIRED	PROPOSED
SETBACKS		
MINIMUM PERIMETER	20 FEET	
CONTIGUOUS TO SHARPLESS ST	30 FEET	
SURFACE PARKING LOTS		
MINIMUM SETBACK	20 FEET	
CONTIGUOUS TO RESIDENTIAL USE	30 FEET	
MAXIMUM IMPERVIOUS COVERAGE	80%	52.9%
MINIMUM GREEN SPACE	20%	47.1%
MAXIMUM BUILDING HEIGHT	90 FEET	

EAST BRADFORD TOWNSHIP
PLANNED UNIVERSITY MAIN CAMPUS OVERLAY – PU

IMPROVEMENTS IN EAST BRADFORD TOWNSHIP ARE SHOWN FOR INFORMATION ONLY

SHEET INDEX

SHEET NO.	TITLE
	COVER SHEET
2A	NORTH CAMPUS 0–5 YEAR IMPROVEMENTS
2B	SOUTH CAMPUS 0–5 YEAR IMPROVEMENTS
3A	NORTH CAMPUS 6–10 YEAR IMPROVEMENTS
3B	SOUTH CAMPUS 6–10 YEAR IMPROVEMENTS
4A	NORTH CAMPUS 10+ YEAR IMPROVEMENTS
4B	SOUTH CAMPUS 10+ YEAR IMPROVEMENTS

GENERAL NOTES

1. APPLICANT:
   WEST CHESTER UNIVERSITY OF THE PENNSYLVANIA
   STATE SYSTEM OF HIGHER EDUCATION
   201 CARTER DRIVE, SUITE 200
   WEST CHESTER, PA 19383
2. RECORD OWNER:
   PROPERTIES OF THE UNIVERSITY ARE OWNED BY A COMBINATION OF ENTITIES INCLUDING, THE COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF GENERAL SERVICES, AND WEST CHESTER UNIVERSITY.
3. CONTACT INFORMATION:
   DAVID MCNAMARA
   SENIOR ASSOCIATE VICE PRESIDENT OF FACILITIES
   201 CARTER DRIVE, ROOM 327
   WEST CHESTER, PA 19382
   DMCNAMARA@WCUPA.EDU
4. SITE BEING:

   NORTH CAMPUS: BOROUGH OF WEST CHESTER AND WEST GOSHEN TOWNSHIP

   SUPERBLOCK PARCELS BOUNDED BY THE NORTHERLY SIDE OF WEST ROSEDALE AVENUE, THE WESTERLY SIDE OF HIGH STREET, THE SOUTHERLY SIDE OF SHARPLESS STREET, AND THE EASTERLY SIDE OF SOUTH NEW STREET.

   NORTH CAMPUS PARCELS INCLUDING PLANNED UNIVERSITY BUILDINGS AND STUDENT RESIDENTIAL BUILDINGS ALONG THE SOUTHERLY SIDE OF WEST ROSEDALE AVENUE, THE EASTERLY SIDE OF HIGH STREET, AND MATLACK STREET.

   SOUTH CAMPUS: EAST BRADFORD TOWNSHIP AND WEST GOSHEN TOWNSHIP

   SOUTH CAMPUS PARCELS INCLUDING PLANNED UNIVERSITY BUILDINGS AND STUDENT RESIDENTIAL BUILDINGS ALONG SOUTH CAMPUS DRIVE, CAREY DRIVE, SOUTH NEW STREET AND THE ATHLETICS STADIUM.
5. TOPOGRAPHY AND IMPROVEMENTS ARE COMPILED FROM PRIOR LAND DEVELOPMENTS PLANS PREPARED BY CHESTER VALLEY ENGINEERS AND OTHERS. INFORMATION IS FROM FIELD SURVEYING, AERIAL TOPOGRAPHY AND PUBLICLY AVAILABLE DATA.
6. THE UNIVERSITY IS SERVED BY EXISTING PUBLIC SEWER AND WATER SERVICES.

Scale in Feet
0 60 180 300 600 900 1,200
120 240
1" = 300'

UNIFORM PARCEL IDENTIFIER:

Appendix G

COVER SHEET

NO.	DATE	REVISION

MASTER PLAN
FOR
WEST CHESTER UNIVERSITY
WEST GOSHEN TOWNSHIP, EAST BRADFORD TOWNSHIP, WEST CHESTER BOROUGH - CHESTER COUNTY - PENNSYLVANIA

ChesterValley ENGINEERS, INC.
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610-644-4623
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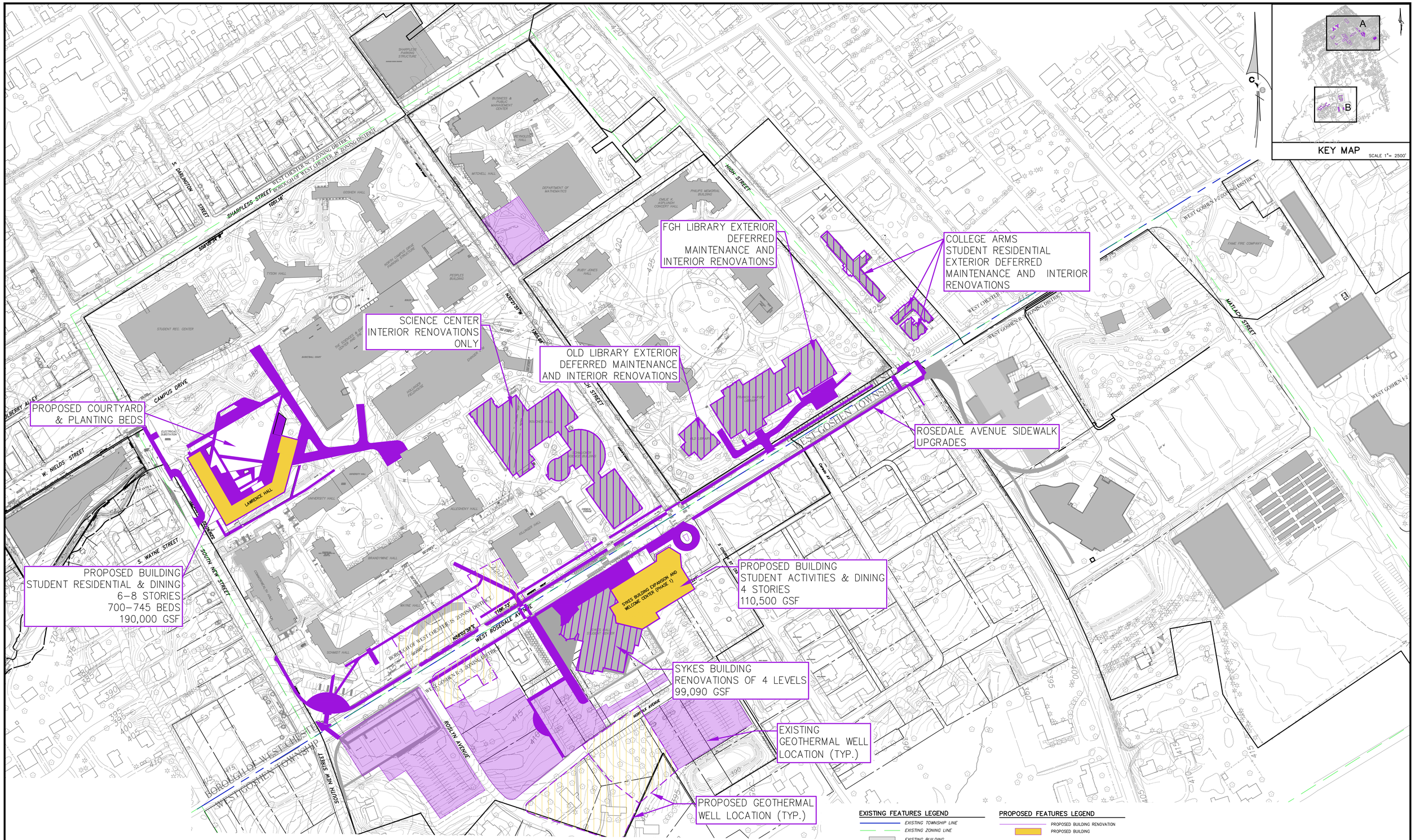
PROJECT NO.	F.B.
22002	

SCALE	DATE	DRAWN BY	CHECKED BY	DRAWING
1" = 300'	04/02/2025	ND	NC	

J:\CVE-22000\22002 West Chester University\dwg\Sheets\SAT 01 COVER.dwg, 4/7/2025 9:56:48 AM,



0–5 YEARS (NORTH CAMPUS)

- NEW LAWRENCE HALL, INCLUDING DECANTING EXISTING LAWRENCE CENTER PROGRAMS, NEW BEDS, STUDENT SUPPORT SERVICES, CAFÉ AND RECREATIONAL SPACE.
- SCIENCE CENTER COMPLEX RENOVATION
- OLD LIBRARY RENOVATION
- FHG LIBRARY RENOVATION
- COLLEGE ARMS APARTMENTS RENOVATION
- EXISTING GEOTHERMAL DEFERRED MAINTENANCE
- ROSEDALE AVENUE GATEWAY AND IMPROVEMENTS INCLUDING TRAFFIC CALMING AT PEDESTRIAN CROSSINGS, LANDSCAPE, SIGNAGE, AND A NEW SIGNAL AT INTERSECTION OF W ROSEDALE AND S NEW STREET.
- RENOVATION AND EXPANSION OF SYKES STUDENT UNION TO INCLUDE INCLUDED DINING, STUDENT SUPPORT, WELCOME CENTER AND ADMISSIONS.
- TEMPORARY HOUSING
- REMOVE TEMPORARY HOUSING & REINSTATE M1 LOT AS PARKING

NORTH CAMPUS YEARS 0–5 PROJECTS

- LAWRENCE HALL DEMOLITION & REBUILD
- SYKES BUILDING ADDITIONS & RENOVATIONS
- TEMPORARY HOUSING IN LOT M1
- SCIENCE CENTER INTERIOR RENOVATIONS
- OLD LIBRARY INTERIOR RENOVATIONS
- FHG LIBRARY INTERIOR RENOVATIONS
- COLLEGE ARMS INTERIOR RENOVATIONS
- ROSEDALE AVENUE UPGRADES

EXISTING FEATURES LEGEND

- EXISTING TOWNSHIP LINE
- EXISTING ZONING LINE
- EXISTING BUILDING
- 202 EXISTING 2' CONTOURS
- 210 EXISTING 10' CONTOURS
- × 212.20 EXISTING SPOT ELEVATION
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVING
- EXISTING CURB
- FLOOD PLAIN
- EXISTING LIGHT POLE
- STREAM LINE
- EXISTING STORM INLET
- EXISTING STORM MANHOLE
- EXISTING SIGN
- EXISTING UTILITY POLE
- EXISTING POST
- EXISTING DECIDUOUS TREE
- EXISTING CONIFEROUS TREE
- EXISTING TREE & SHRUB LINE
- EXISTING MANHOLE (SAN, STORM, GAS, WATER, WATER, ELECTRIC, TELEPHONE, ETC.)

PROPOSED FEATURES LEGEND

- PROPOSED BUILDING RENOVATION
- PROPOSED BUILDING
- PROPOSED INTERIOR RENOVATION
- PROPOSED RECREATION RENOVATION
- EXISTING GEOTHERMAL WELL LOCATION
- PROPOSED GEOTHERMAL WELL LOCATION
- PROPOSED ASSOCIATED WORK
- PROPOSED IMPROVEMENT APPROXIMATE LOCATION
- PROPOSED TRAIL CONNECTIONS

Scale in Feet
0 20 40 60 80 100 200 300 400
1" = 100'

NORTH CAMPUS 0-5 YEARS

NO.	DATE	REVISION

MASTER PLAN
FOR
WEST CHESTER UNIVERSITY
WEST GOSHEN TOWNSHIP, EAST BRADFORD TOWNSHIP, WEST CHESTER BOROUGH - CHESTER COUNTY - PENNSYLVANIA

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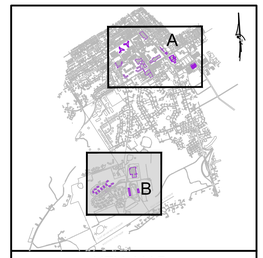

KEY MAP SCALE 1"= 2500'

Scale in Feet
0 20 40 60 80 100 200 300 400
1" = 100'

SOUTH CAMPUS YEARS 0-5 PROJECTS

- STURZEBECKER BUILDING INTERIOR RENOVATIONS
- SOUTH CAMPUS APARTMENT ADDITIONS
- SOUTH CAMPUS COMMONS ADDITION OR NEW BUILDING IN TO ALTERNATE LOCATION

SOUTH CAMPUS 0-5 YEARS

NO.	DATE	REVISION

MASTER PLAN
FOR
WEST CHESTER UNIVERSITY
WEST GOSHEN TOWNSHIP, EAST BRADFORD TOWNSHIP, WEST CHESTER BOROUGH - CHESTER COUNTY - PENNSYLVANIA

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GOSHEN HALL ADDITION
7 STORIES
420–445 BED CAPACITY
118,760 GSF

TYSON HALL ADDITION
7 STORIES
420–445 BED CAPACITY
108,040 GSF

CHURCH ST PEDESTRIANIZATION

RAM PARK RELOCATION

KEY MAP
SCALE 1"= 2500'

Scale in Feet
0 20 40 60 80 100 200 300 400
1" = 100'

NORTH CAMPUS YEARS 6–10 PROJECTS
–TYSON HALL & GOSHEN HALL EXPANSIONS AND RENOVATIONS
–CHURCH STREET RENOVATED TO BE PEDESTRIAN ONLY
–RAM PARK RELOCATION ACROSS CHURCH STREET

NORTH CAMPUS 6-10 YEARS

NO.	DATE	REVISION

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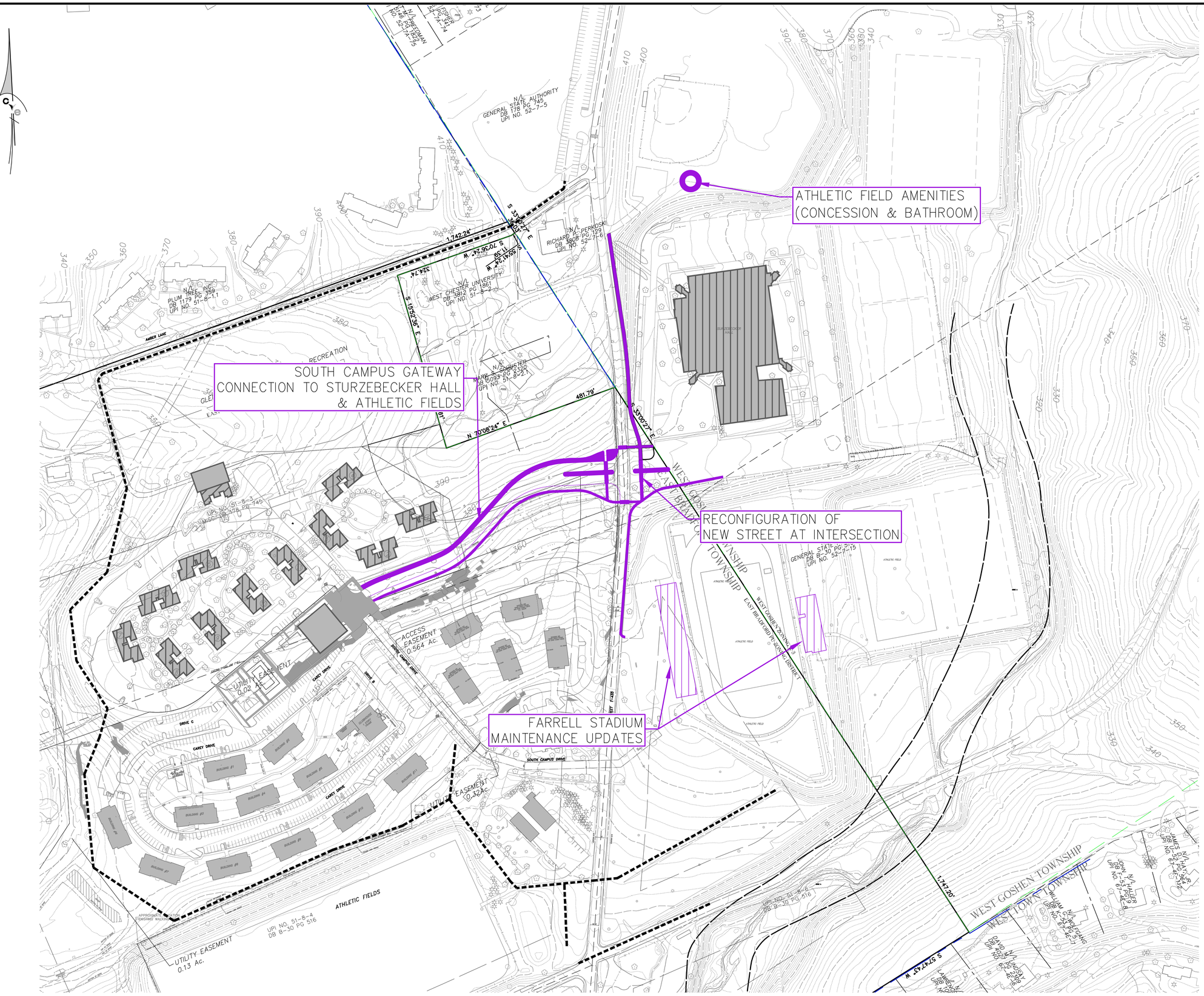

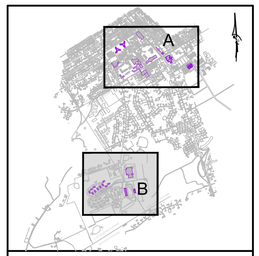

KEY MAP
SCALE 1"= 2500'

SOUTH CAMPUS YEARS 6–10 PROJECTS

- FARRELL STADIUM TECHONOLOGY AND PRESS BOX UPDATES
- ATHLETIC FIELDS BATHROOMS AND CONCESSIONS
- SOUTH CAMPUS GATEWAY CONNECTION TO STURZEBECKER HALL & ATHLETIC FIELDS
- RECONFIGURATION OF NEW STREET AT THE INTERSECTION

SOUTH CAMPUS 6-10 YEARS

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0 20 40 60 80 100 200 300 400
1" = 100'

NO.	DATE	REVISION

MASTER PLAN
FOR
WEST CHESTER UNIVERSITY
WEST GOSHEN TOWNSHIP, EAST BRADFORD TOWNSHIP, WEST CHESTER BOROUGH - CHESTER COUNTY - PENNSYLVANIA

ChesterValley ENGINEERS, INC.
112 Moores Road, Suite 200, Malvern, PA 19355
610-644-4623
www.chestervalley.com

PROJECT NO. 22002
F.B.

SCALE	DATE	DRAWN BY	CHECKED BY	DRAWING
1" = 100'	04/02/2025	ND	NC	

J:\CVE-22000\22002 West Chester University\dwg\Sheets\SHT 04 YEARS 6-10.dwg, 4/1/2025 9:58:47 AM...

LAND ACQUISITION AT CORNER OF SHARPLESS AND HIGH ST

E.O. BULL EXPANSION
& RENOVATION
80,630 GSF
(55,630 GSF RENOVATION)
(25,000 GSF ADDITION)
2 STORIES

PRESIDENT'S WALK
LANDSCAPE UPGRADES

MULTI-MODAL TRANSPORTATION STATION

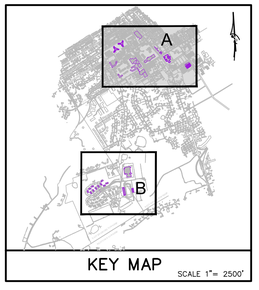
NEW KILLINGER HALL
WITH BRIDGE TO SYKES BLDG
6-8 STORIES
545-585 BED CAPACITY
184,250 GSF

NEW PARKING DECK
4 STORIES
96,000 GSF
250 PARKING SPACES
(SYKES BLDG PHASE 2)

SCHMIDT HALL ENTRYWAY
ADDITION & RENOVATION
8 STORIES
370-385 BED CAPACITY
91,980 GSF

OUTDOOR RECREATIONAL IMPROVEMENTS

UPGRADED PARKING LOT & STRIPING



Scale in Feet
0 20 40 60 80 100 200 300 400
1" = 100'

NORTH CAMPUS YEARS 10+ PROJECTS

- -SYKES STUDENT UNION PARKING DECK & PARKING LOT UPGRADE
- -KILLINGER HALL DEMOLITION & NEW BUILD WITH PEDESTRIAN BRIDGE
- -SCHMIDT HALL FULL RENOVATION & NEW ENTRY ADDITION
- -E.O. BULL CENTER FOR THE ARTS EXPANSION & RENOVATIONS
- -PRESIDENT'S WALK UPGRADES
- -OUTDOOR RECREATION AREA LANDSCAPE UPGRADES & IMPROVEMENTS
- -LAND ACQUISITION OF CORNER AT HIGH ST AND SHARPLESS ST

NORTH CAMPUS 10+ YEARS

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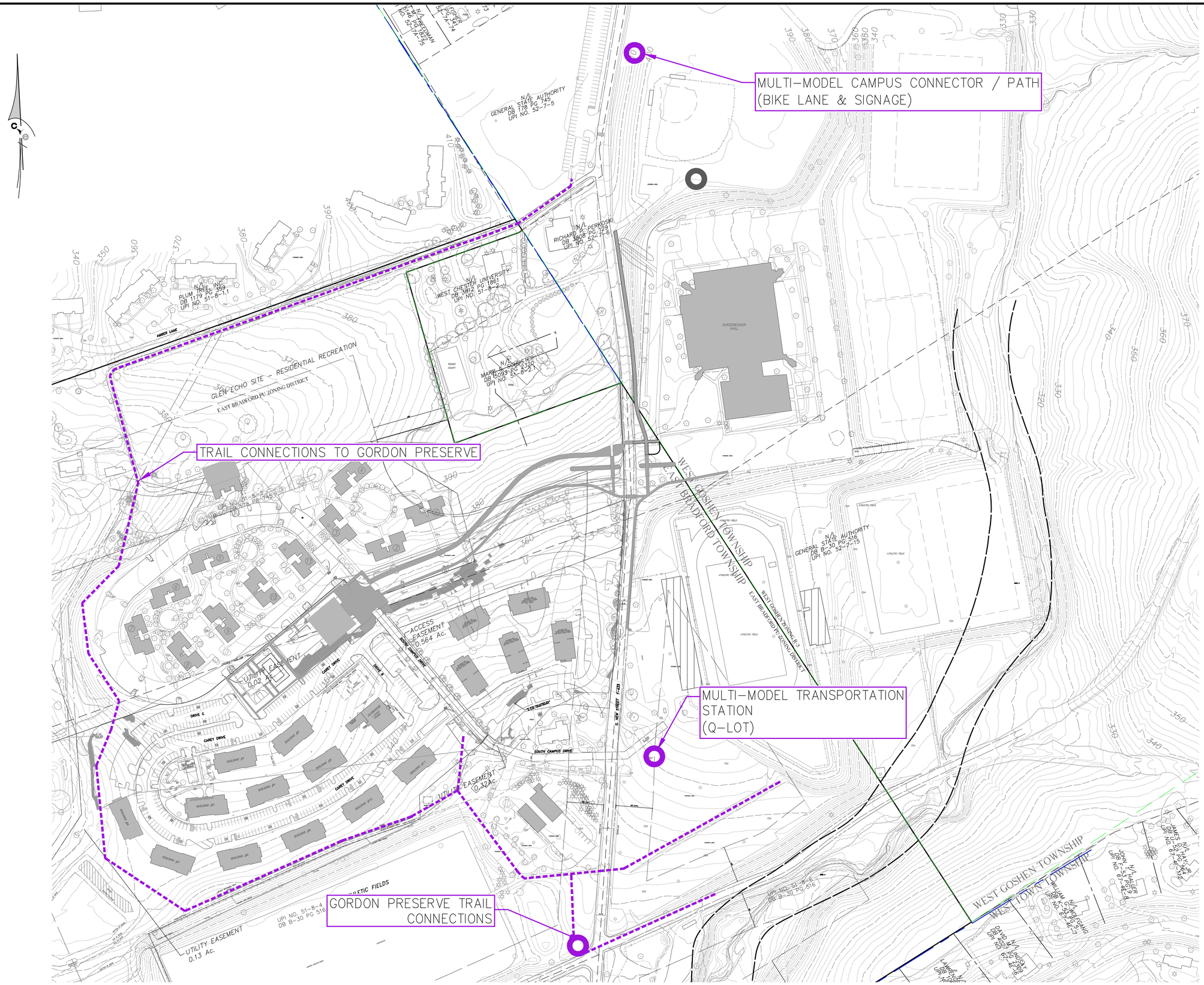

SOUTH CAMPUS YEARS 10+ PROJECTS
- GORDON PRESERVE TRAIL CONNECTIONS
- S NEW STREET MILTI-MODEL TRANSPORTATION STATION
- S NEW STREET MULTI-MODEL CAMPUS CONNECTOR / PATH (BIKE LANE & SIGNAGE)

SOUTH CAMPUS 10+ YEARS

NO.	DATE	REVISION

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J:\CVE-22000\22002 West Chester University\dwg\Sheets\SHT 06 YEARS 10+.dwg, 4/1/2025 10:01:44 AM,

BOROUGH OF WEST CHESTER
CONDITIONAL USE APPLICATION

Property Address: See enclosed plan showing subject West Chester University of Pennsylvania properties in West Chester Borough

Name of Applicant: West Chester University of Pennsylvania

Mailing Address: 700 S. High Street, West Chester, PA 19382

Telephone Number: 610-436-1000 / Fax Number: N/A

Email Address: N/A

Attorney: Brian L. Nagle, Esquire / MacElree Harvey, Ltd.

Mailing Address: 700 S. High Street, West Chester, PA 19382

Telephone Number: 610-840-0224 / Fax Number: 610-430-8245

Zoning District: Planned University Campus District / **Proposed Use:**

Approval of a "University Campus Plan" for the university-owned property in West Chester Borough.
See Narrative in Support of Application.

Zoning Code Sections Relating to Application: Section 112-314 of the West Chester Borough Zoning Ordinance

***** Attach report in accordance with Section 112-113 and any specific section governing the proposed conditional use with the appropriate fee.***

Note: All conditional use applications will be forwarded to the Borough's Planning Commission for comment. Applicant attendance is recommended. Historic carriage house applications will be forwarded to the Borough's Historical and Architectural Review Board for review and comment. Applicant attendance is recommended.

Signature of Applicant Brian L. Nagle, Esquire, Attorney-in-Fact — *Date* 3-31-25

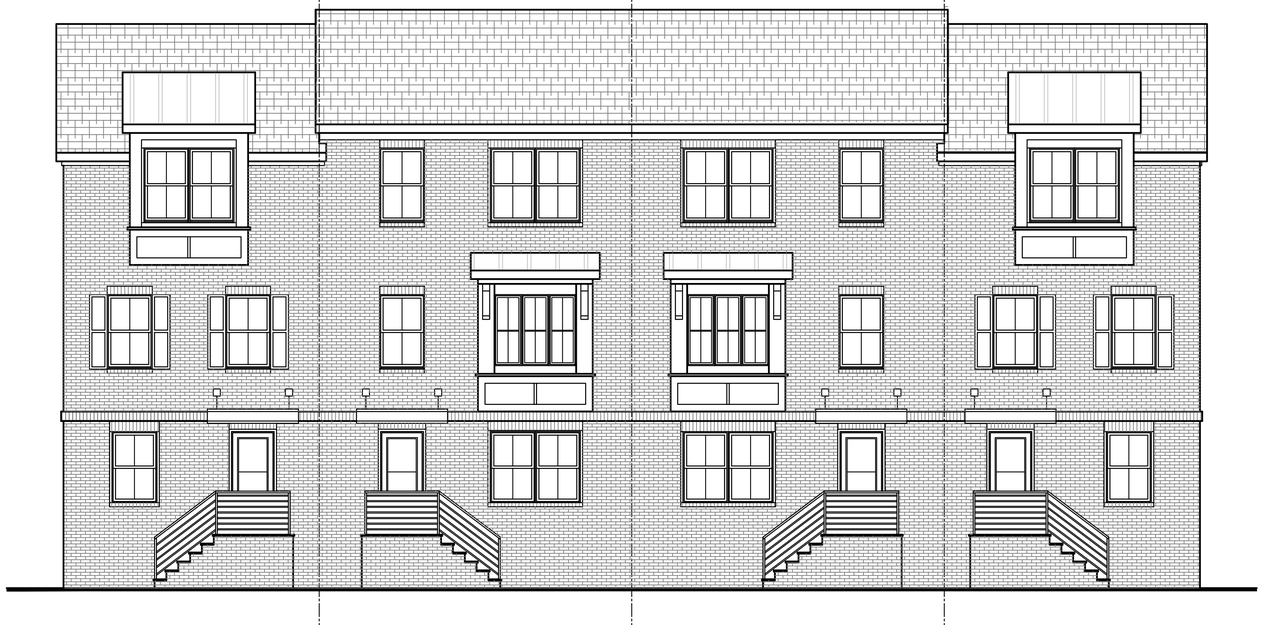
For Borough Official Use Only

Fee Paid $ _____ *Date Application Submitted* _____

Borough Official _____

Name Signature Application #

DRIVEWAY ELEVATION - WASHINGTON STREET



FRONT ELEVATION - WASHINGTON STREET

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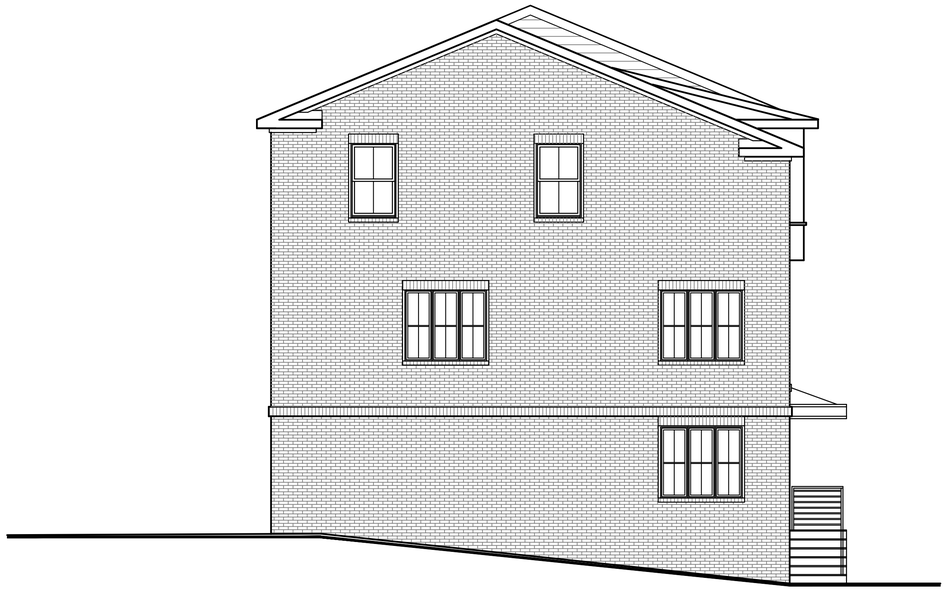
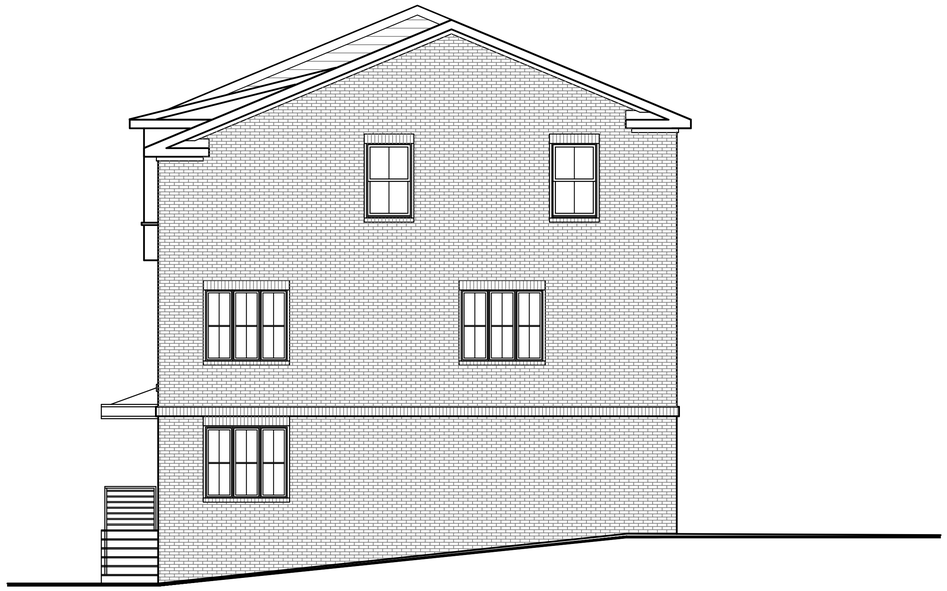


LEFT SIDE ELEVATION - WASHINGTON STREET



RIGHT SIDE ELEVATION - WASHINGTON STREET

GROUND FLOOR PLAN - WASHINGTON STREET

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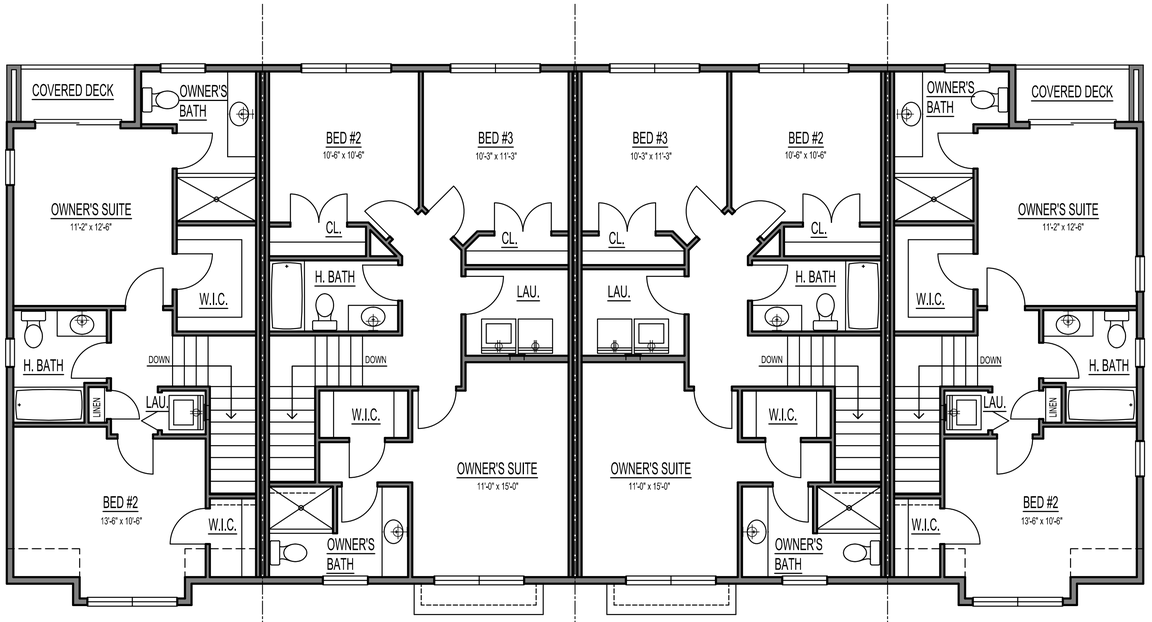
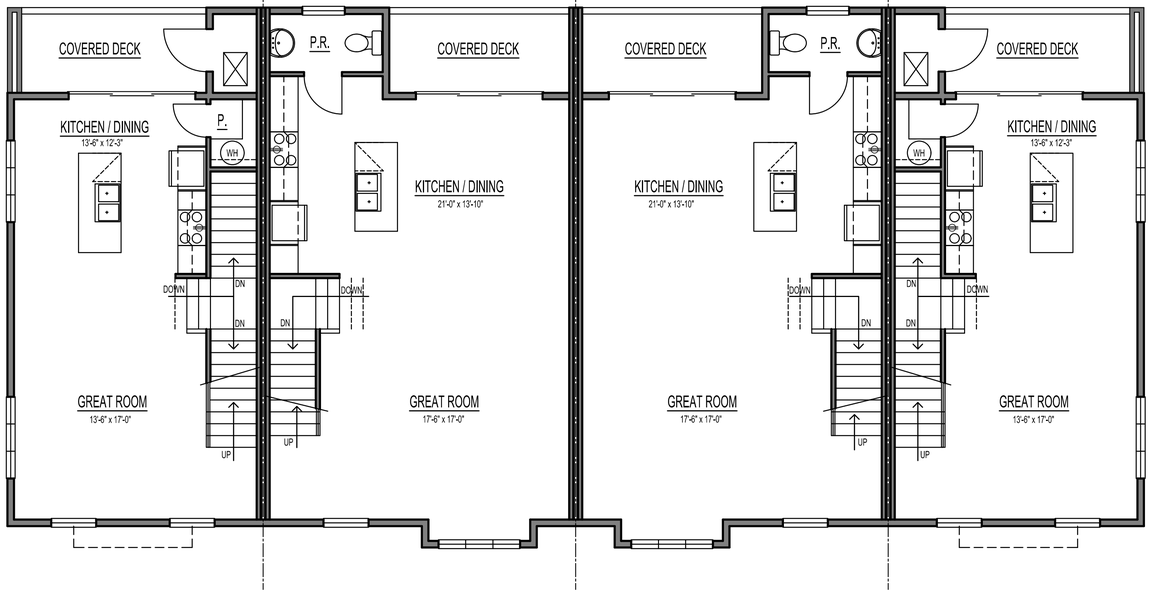


SECOND FLOOR PLAN - WASHINGTON STREET



FIRST FLOOR PLAN - WASHINGTON STREET

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DRIVEWAY ELEVATION - PATTON ALLEY

FRONT ELEVATION - PATTON ALLEY

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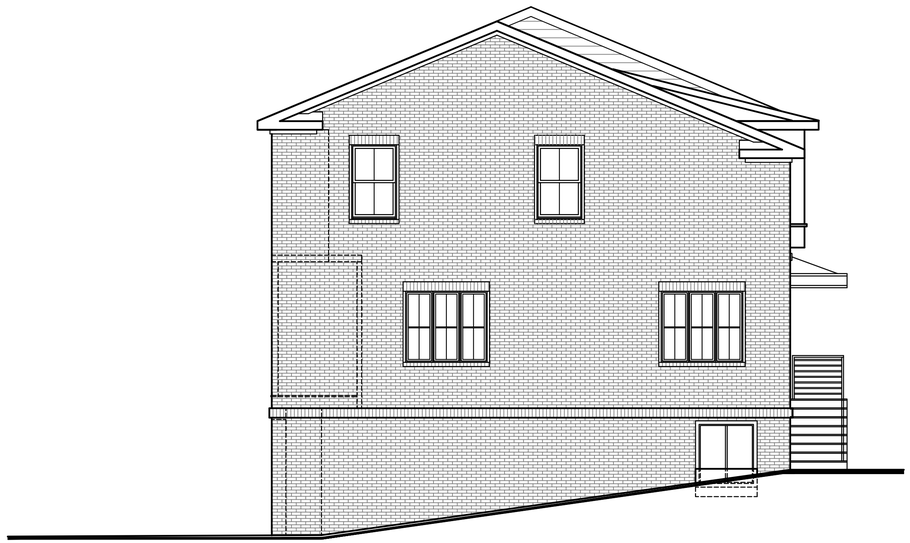
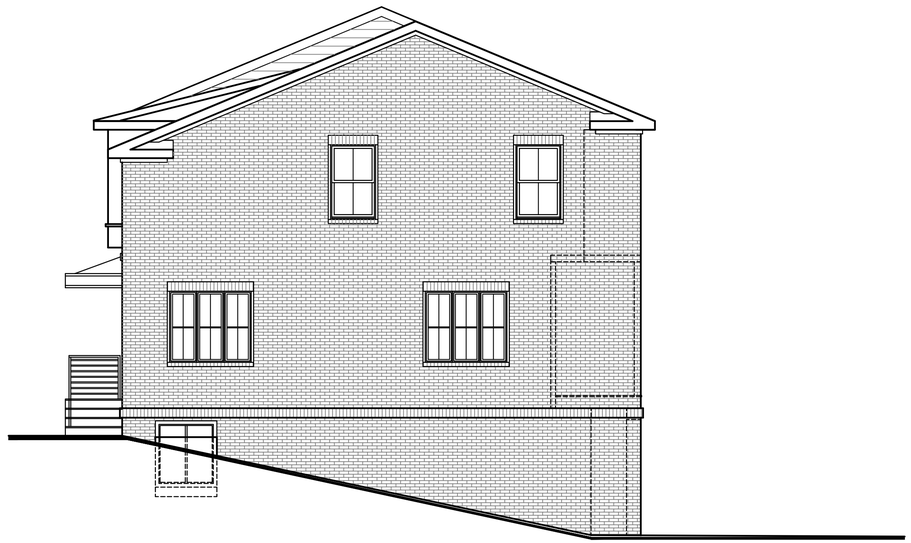
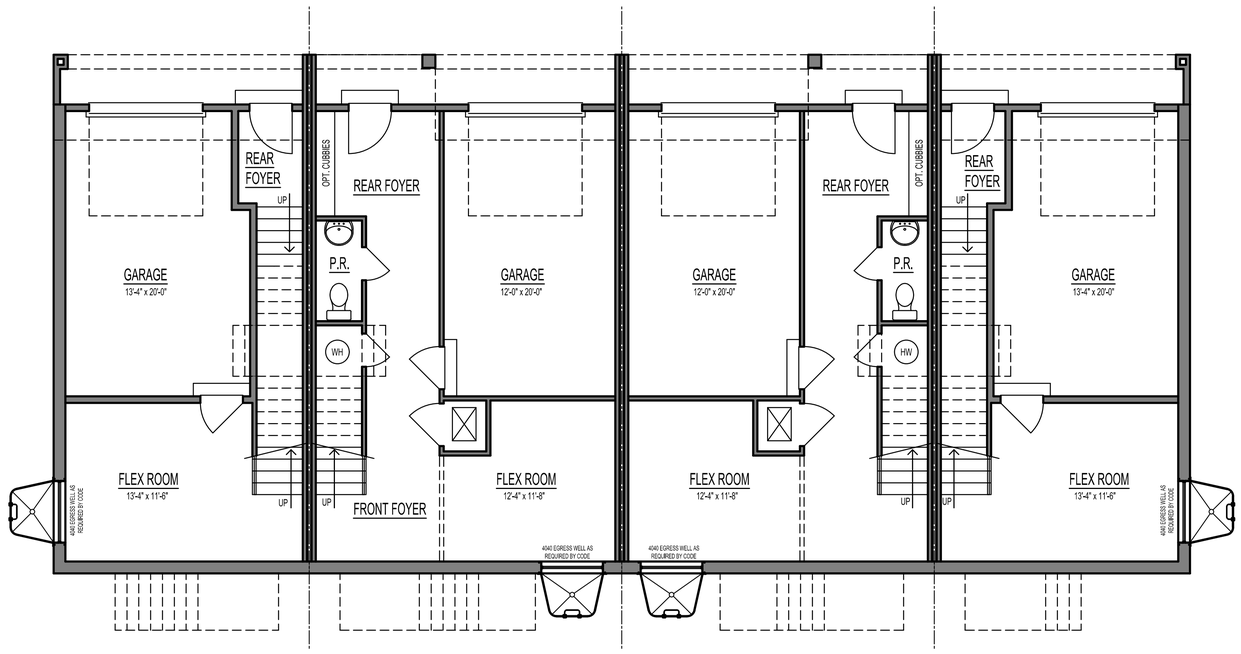


LEFT SIDE ELEVATION - PATTON ALLEY



RIGHT SIDE ELEVATION - PATTON ALLEY



GROUND FLOOR PLAN - PATTON ALLEY

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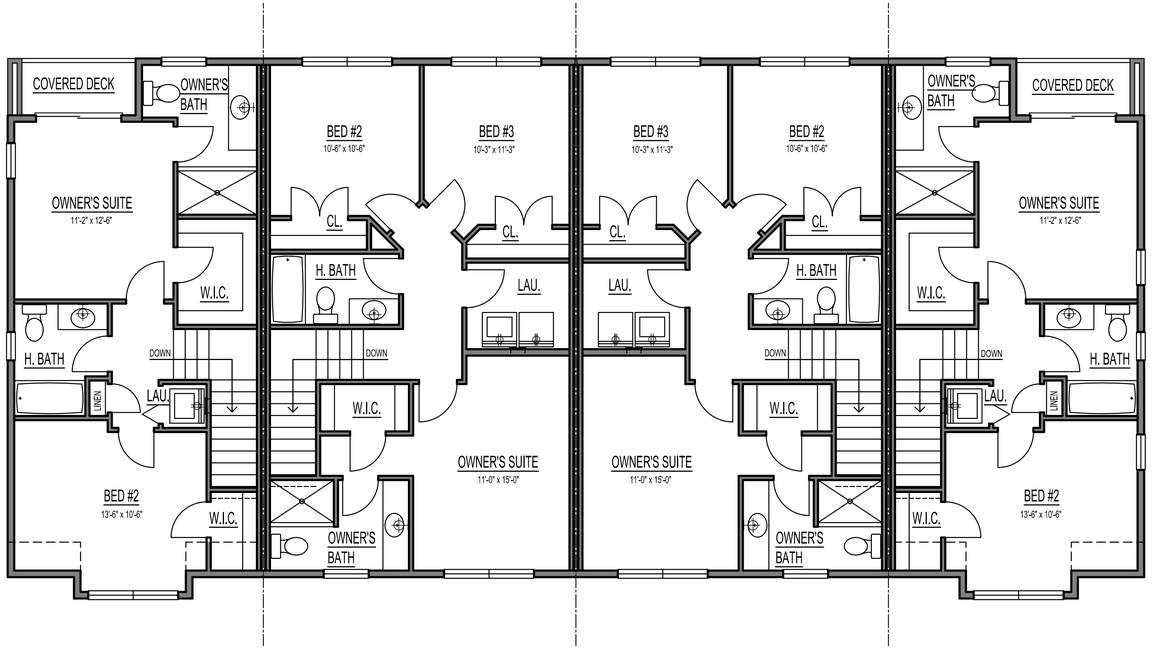

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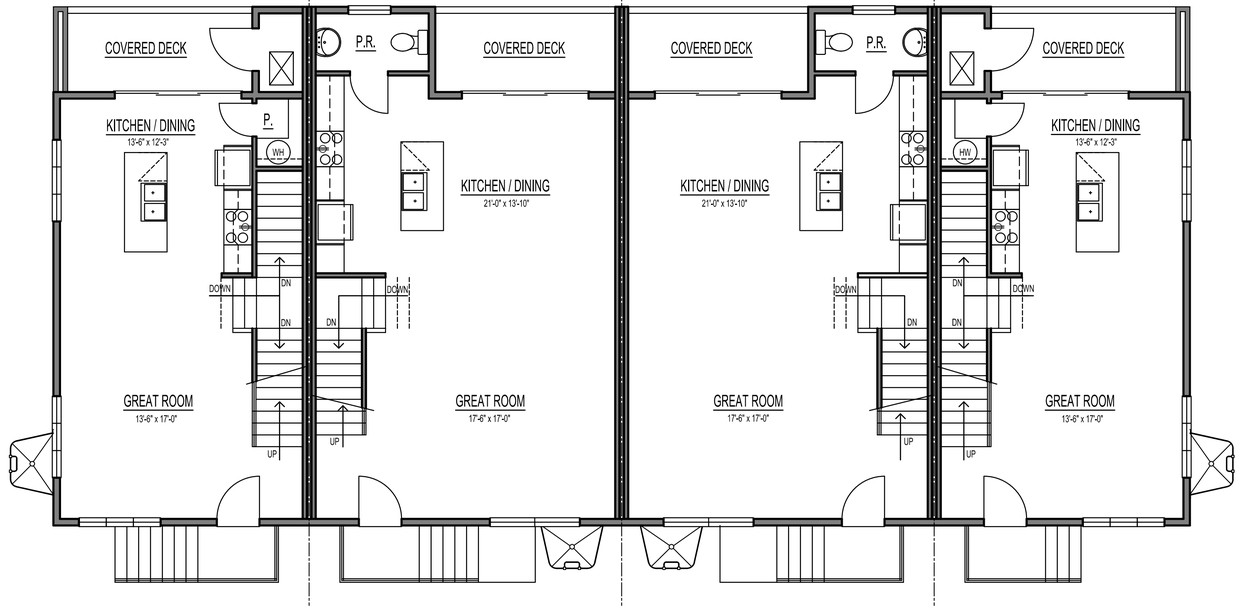

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BOROUGH OF WEST CHESTER
PLANNING COMMISSION

June 04, 2025

Borough Council
Borough of West Chester
401 E Gay St, West Chester, PA 19380

RE: Final Land Development for 210-214 West Washington Street

Members of Council,

The Planning Commission reviewed discussed and voted on the “Final Land Development for 210-214 West Washington Street” at the PC voting session May 27, 2025.

M. Clapp moved to recommend approval of the final plan with the following conditions:
1) include a waiver from the requirement for streetlights OR install streetlights on Washington and Patton per the Code;
2) reduce the curb radius at Patton and Birdseye to 10 ft with a mountable curb, which prioritizes pedestrian safety, is consistent with other alley curb radii in the Borough and still accommodates fire trucks and firefighting capabilities; and
3) resolve all remaining consultant comments.
J. Birl seconded the motion.

Public Comments
None.

The motion passed with a vote of 7-0.

Please refer to PC meeting minutes for a more complete record of the PC’s thoughts and concerns. Please feel free to contact me if you have any questions.

Respectfully Submitted,

Jim Cherry
Chair, Borough of West Chester Planning Commission

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INLAND DESIGN
Engineering, Surveying & Land Planning
16 Hagerty Blvd.
West Chester, PA 19382
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

AXLE SQUARE

210-214 WEST WASHINGTON STREET

BOROUGH OF WEST CHESTER - CHESTER COUNTY - PENNSYLVANIA

JUNE 2, 2025

EWING
COLE
WEST CHESTER
UNIVERSITY
CAMPUS MASTER PLAN
20230517
V7 JANUARY 2025

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY
- A. Context
- B. Goals & Objectives
- C. Jurisdictional Requirements
- D. Participants & Process
- E. Methodology & Timeline
- F. Key Outcomes & Recommendations

2. CAMPUS CONTEXT & DATA GATHERING
- A. Previous Studies & Reports
- B. Current Studies & Reports

3. ISSUES & NEEDS (2015-2025)
- A. Campus Objectives
- B. Residential Life
- C. Academic & Student Programs
- D. Space Utilization & Needs Analysis
- E. Highest & Best Use
- F. Deferred Maintenance Overview
- G. Campus-Wide Dining Analysis

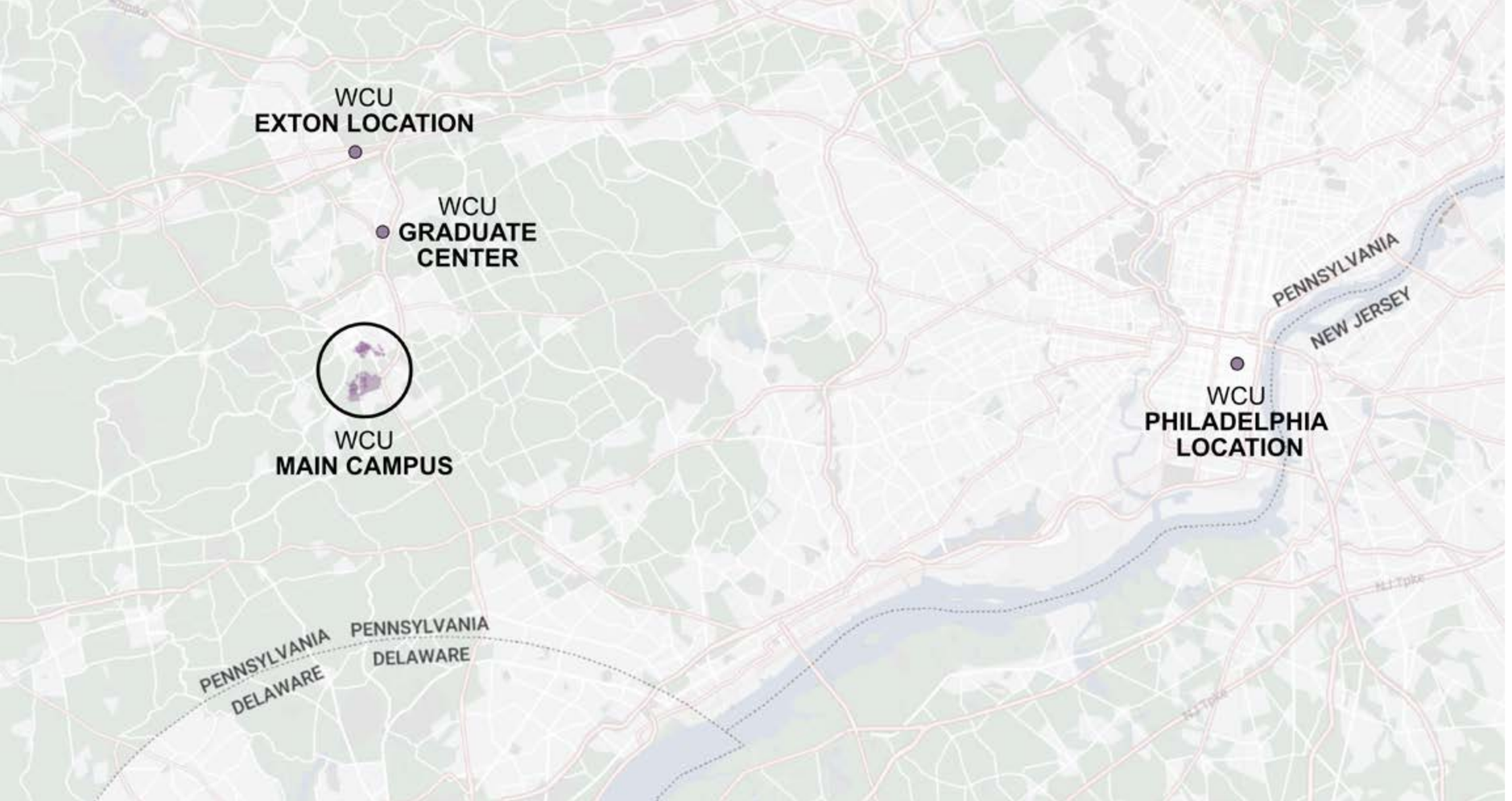
4. SITE & LANDSCAPE
- A. North Campus Observations & Opportunities
- B. South Campus Observations & Opportunities
- C. Traffic & Parking Analysis

5. COMPREHENSIVE CAMPUS MASTER PLAN
- A. Overarching Themes, Projects, & Initiatives
- B. Master Plan Recommendations (by District)
    - a. District A: North Campus Academic & Support
    - b. District B: North Campus Housing & Support
    - c. District C: North Campus Support
    - d. District D: East Campus Academic & Support
    - e. District E: South Campus Housing & Support
    - f. District F: South Campus Athletics & Support

6. IMPLEMENTATION STRATEGY
- A. Overview
- B. Project Sequencing
    - a. 1-5 years
    - b. 6-10 years
    - c. 10+ years

7. APPENDIX
- A. University Enrollment Report and Projection Analysis
- B. Student Housing Development Study, January 2025
- C. MGT Housing Study, January 2025
- D. Transportation Study, January 2025
- E. Parking Study, January 2025
- F. Conceptual Storm Water Management Strategy, March 2025
- G. Campus Master Site Plan, March 2025

SECTION 1.
EXECUTIVE SUMMARY



A. CONTEXT

CAMPUS LOCATIONS

Founded in 1871, West Chester University (WCU) is a public research university with its main campus in West Chester, PA and satellite campus locations including a Graduate Center, an Exton location, and in Center City Philadelphia. WCU is the largest of the 10 state-owned universities belonging to the Pennsylvania State System of Higher Education (PASSHE) and the sixth largest university in the state of Pennsylvania.

PROJECT SCOPE

In 2023, WCU selected EwingCole, Architects, Engineers & Planners to provide a comprehensive update to the 2015 Master Plan, with a specific focus on improving and increasing the number of total student housing beds at WCU's North Campus and South Campus. Additionally this Campus Master Plan (CMP) is intended to fulfill the University's need to maintain compliance with jurisdictional oblications as they relate to West Chester Borough and West Goshen Township Planned Univeristy Campus District (PUC) and as such includes:

- University Enrollment Report and Projection Analysis
- University Housing Report and Analysis
- University Campus Transporation Study
- University Campus Parking Study
- Conceptual Stormwater Management Study
- Master Site Plan

This work began with the planning team taking into account past studies executed by WCU comissioned and completed after the 2015 campus plan. Additionally, an assessment of existing facilities, including building engineering systems was completed. A space utilization study was performed to identify and prioritize ongoing deferred maintenance activities. Site systems, parking, circulation, landscape opportunities, and financial analysis are also part of the overall framework that informs the recommendations of this updated Master Plan.

B. GOALS & OBJECTIVES

MASTER PLAN GOALS

The 2024 Campus Master Plan (CMP) is guided by both **aspirational and functional goals.** Functionally, the goals of the master plan are to:

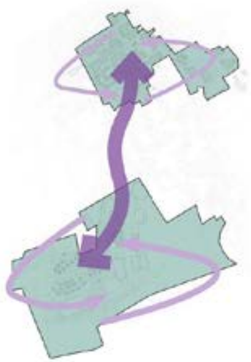
GUIDE NEAR AND LONG-TERM DEVELOPMENT, through an integrated approach to growth.

ESTABLISH CRITERIA FOR EVALUATION, by identifying key issues and potential capital costs.

PROVIDE A FRAMEWORK FOR IMPLEMENTATION, by prioritizing projects, needs and initiatives.

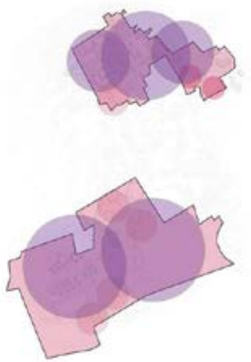
Aspirational goals of the master plan are linked to broader themes of Connectivity, Experience and Identity. These include

Reframe Campus **Connectivity**



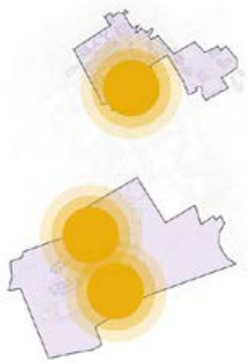
by strengthening campus circulation, open spaces, pathways and linkages that support social and physical connection. This includes identifying opportunities for passive and active recreation in relation to existing and proposed buildings and reinforcing landscape hierarchies across campus - particularly at the North Campus "Superblock" where building density is greatest.

Enhance Living & Learning **Experience**



by providing places that support health, wellness and sustainability. This includes rethinking how residential life and support services are programmed, both within student housing locations, as well as what support services are clustered together for improved synergy.

Strengthen Campus **Identity**



by reinforcing the notion of a welcoming campus that supports a sense of belonging through access to student support programs and by creating memorable experiences. This includes the integration of new buildings or additions with open space, and the role of landscape planning and streetscape design to help orchestrate user experience.

C. JURISDICTIONAL REQUIREMENTS

PASSHE, TOWNSHIPS, BOROUGH, & ZONING

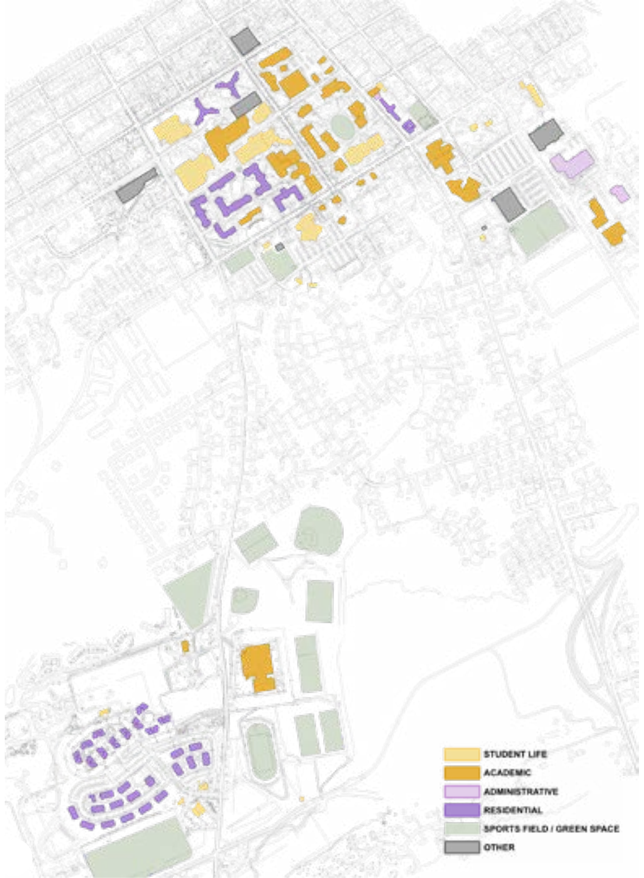
The North Campus and South Campus span three different municipalities, with specific zoning requirements that impact development including parking, building type, size and open space.

Borough of West Chester Requirements: Most buildings on the North Campus fall into the "Superblock," which is a zone bounded by S. New Street, S. High Street, W. Rosedale Avenue, and Sharpless Street. The Borough of West Chester requires a 5-year outlook for the master plan.

West Goshen Township: The remainder of the buildings on the North Campus and the Athletic Facilities on the South Campus, are in West Goshen Township, which requires a 5-year outlook for the master plan.

East Bradford Township: The remainder of the buildings on the South Campus (mostly residential apartments) are within East Bradford Township.

Westtown Township: This adjacent jurisdiction has an interest in the development of University facilities.



JURISDICTIONAL PARAMETERS

The work of the Comprehensive Master Plan document is intended to satisfy jurisdictional requirements set forth by the authorities previously noted. Each of these jurisdictions have provided a Planned University Main Campus Overlay District (PUC) for development planning purposes.

BOROUGH OF WEST CHESTER

The current zoning district known as the PUC - Planned University Campus District was established in September 2021. The PUC area of the University is bounded by South High Street, University Avenue, Reynolds Alley, Sharpless Street, South New Street, and West Rosedale Avenue and is considered a stand-alone lot for the application of the area and bulk requirements for the PUC District.

- 90ft max building height
- All campus facilities allowed

WEST GOSHEN TOWNSHIP

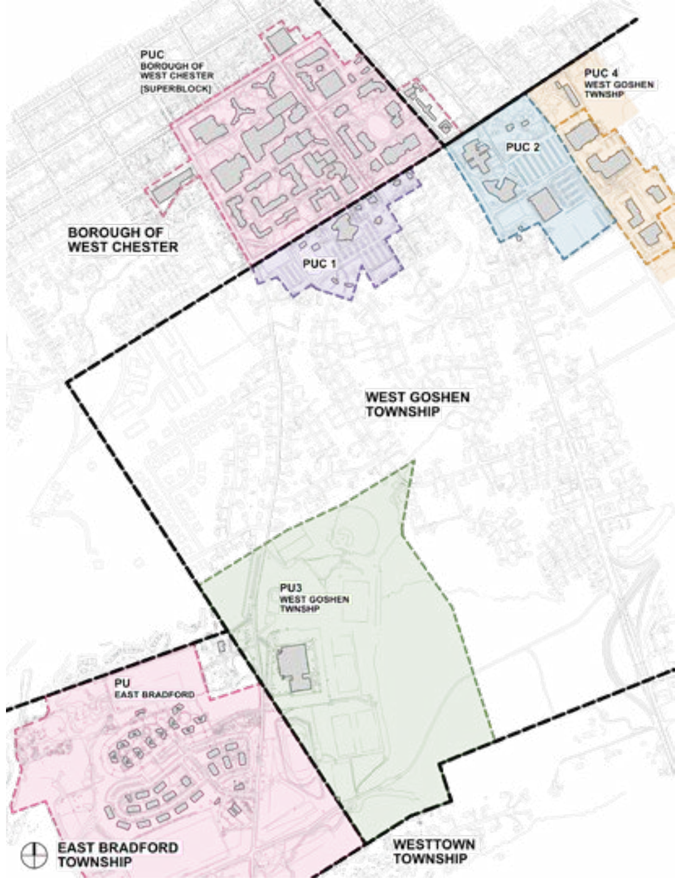
The current zoning district known as the Planned University Main Campus Overlay District (PUC) was established in May 2021. The PUC includes four (4) sub districts referred to as PUC Class 1, PUC Class 2, PUC Class 3, and PUC Class 4.

- No student housing allowed
- 50ft max or 4 stories

EAST BRADFORD TOWNSHIP

The current zoning district known as the PU Planned University District was established in April 2003.

- 40ft max or 3 stories
- 1 parking space per student bed



The Borough of West Chester and West Goshen Township as well as PASSHE, require a specific set of items to be included and considered in a master plan submission, as indicated in the chart below. PASSHE requires an implementation plan for recommendations spanning Short-Term (0-5 year); Mid-Term (5-10 year); and Long-Term (10-20 year).

Additionally, the University will submit a Campus Master Plan to East Bradford Township as part of the University's update to the Campus-wide Master Plan in accordance with Section 115-145 of the East Bradford Township Zoning Ordinance.

	BOROUGH OF WEST CHESTER / WEST GOSHEN TOWNSHIP*	PASSHE
1	A University Enrollment Report & Projection Analysis	Physical Analysis of the Campus
2	A University Housing Report & Analysis	Solution Development
3	A University Main Campus Transportation Study	Space Allocations
4	A University Main Campus Parking Study	Site
5	A Comprehensive Stormwater Management Strategy	Buildings
6	A Master Site Plan	Infrastructure
7	The University shall be responsible for all improvements required by the Township Subdivision and Land Development Ordinance and other applicable ordinances and regulations for each phase of the University Campus Plan.	

* 5 Years for Borough of West Chester & West Goshen Township

0-5 Short Term; 5-10 Mid Term; 10-20 Long Term

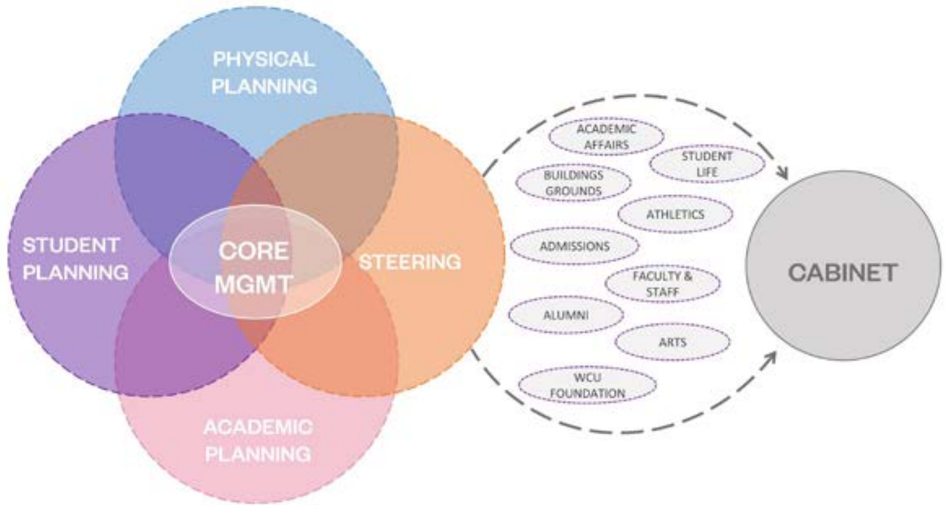
D. PARTICIPANTS & PROCESS

PROCESS

The master plan preparation process was managed by a core team led by EwingCole in collaboration with key stakeholders representing Student Support Services, Residence Life, Faculty & Staff, Academic Affairs, Athletics, Admissions, Arts, and Facilities & Grounds. Additional insight and support were offered through the Steering Committee, with input from the Executive Committee.

The Core Team met bi-weekly to manage the process and to advance activities related to each phase. Milestone meetings were open to all stakeholders, in addition to several open forums that included input from students and faculty at large.

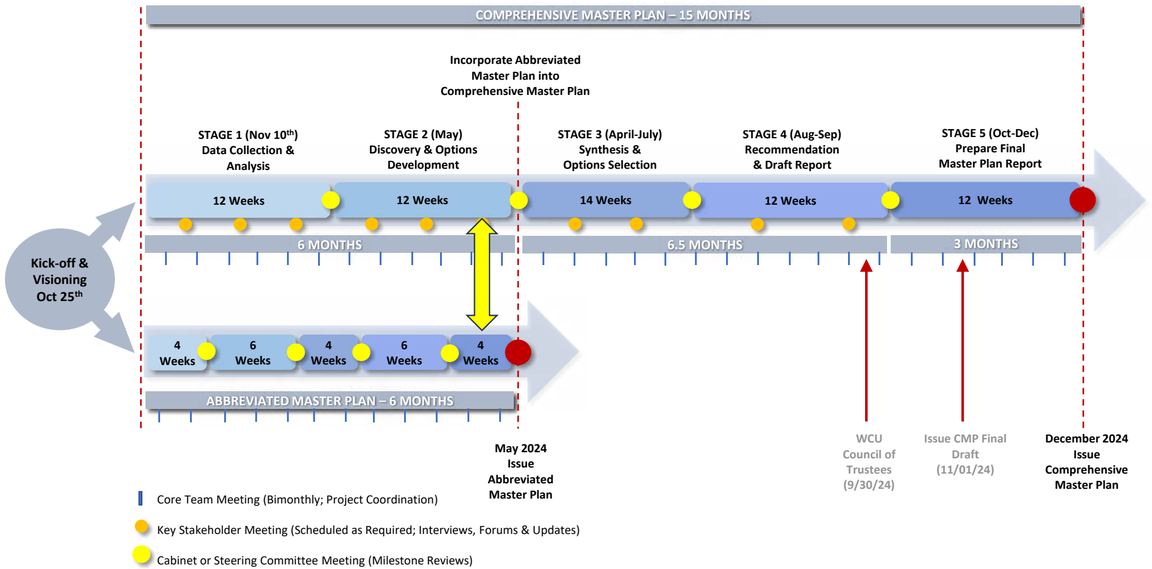
Additional members of the **EwingCole Master Planning Team** included **OJB, Landscape Architects; Chester Valley Civil Engineers; Porter-Khouw Food Service Consultants; CFP Inc., Space Utilization Analysts; Becker & Frondorf, Cost Estimating; PFM and Watchdog, Real Estate Management Services; MGT, Housing Need Analysts.**



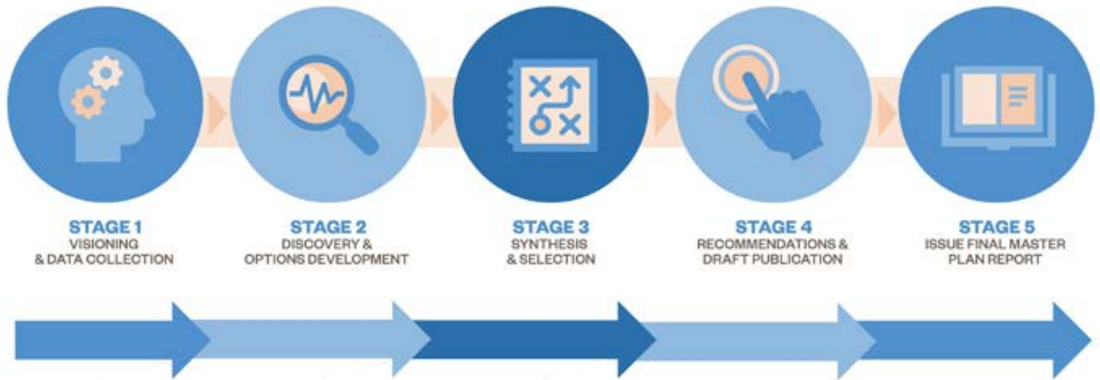
E. MASTER PLAN METHODOLOGY & TIMELINE

PROCESS

The master plan was accomplished over a 15-month period, with a significant first milestone at six-months, with the issuance of the Abbreviated Master Plan. Note that the Abbreviated Master Plan, which was focused on Student Housing Development, was accomplished prior to the more Comprehensive Campus Master Plan. It was important to WCU leadership to first understand and reach consensus on Student Housing strategies for increased bed-count, and then, how those strategies would be integrated into the final master plan recommendations



The master planning effort was accomplished with a **5 Stage Planning Process**, bracketed by a Visioning Workshop and culminating with the delivery of the Final Report. The work progressed sequentially, with evaluation and analysis, each stage building upon the next.



F. KEY OUTCOMES & RECOMMENDATIONS

RECOMMENDATIONS

By far, the most immediate recommendation is to begin the **implementation for the upgrade and expansion of student housing** and supporting residential life services.

The master plan also identifies a variety of other recommendations. Key among them are the renovation and **expansion of Sykes Student Union** to include additional dining, a **new Welcome Center** and a placeholder location for a future multi-level parking deck. Other recommendations include a **new Commons Building** at the South Campus, improvements to Campus Walk (Church Street) and upgrades along W. Rosedale Avenue.

STUDENT HOUSING DEVELOPMENT STRATEGY

A comprehensive Student Housing Development Study (a.k.a. Abbreviated Master Plan) was competed in June 2024 by the EwingCole team. Currently, WCU includes a mix of housing assets that are both self-managed and affiliated housing that is managed by University Student Housing (USH). The goal of the study was to develop strategies for increasing the number of WCU-managed beds and to bring them up to the same or similar standards as USH.

Construct New Lawrence Hall: The team analyzed the impact of new construction, partial additions and renovations, in response to how to achieve the most beds in a planning sensitive manner over a 10-year period. Through evaluation and discussion with WCU's leadership team, the best strategy for the North Campus starts with the demolition of existing Lawrence Center, an older building which currently does not maximize the site. Support services currently housed in Lawrence Center will be temporarily or permanently relocated to allow for a new Lawrence Residence Hall to be constructed. The strategy for decanting programs is addressed later in this report.

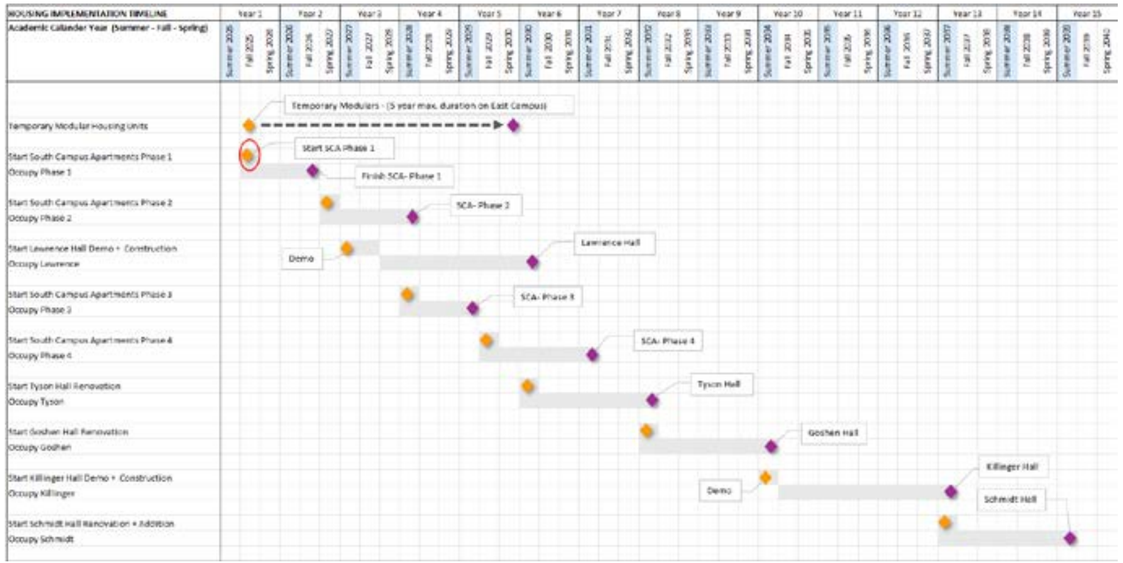
Multi-Year Housing Upgrades: Following the completion of Lawrence Hall, a multi-year strategy for upgrading existing WCU-managed student housing on the North Campus is recommended, as funding allows. This includes the renovation of Tyson, Goshen and Schmidt Halls, and the full replacement of Killinger Hall to maximize the number of beds and student support programs into a larger building.

Renovate and Expand South Campus Student Apartments: Simultaneously, a strategy for renovation and expansion to the existing Apartments on the South Campus will be initiated in a series of 4-phases. Currently, there are eleven two and three-story apartment buildings. The intent is to add an additional floor to each building, upgrade the existing apartments, and add new beds.

Temporary Modular Housing: To help achieve these goals, a zone of Temporary Modular Housing (128 beds) will be located at the M-1 parking lot on the East Campus. This will provide some flexibility by helping to balance the total number of beds while the new Lawrence Hall is constructed and South Campus Apartments are renovated. Note that these modular units are considered "additional" beds but serve as swing space as the existing beds are taken off-line for renovation and renewal. The temporary modular housing is permitted to remain in place for a period of five years from the date of initial occupancy.

Implementation Strategy: Ultimately, the master plan illustrates that it is possible to increase the total number of self-managed housing from 5,349 beds to 6,239 beds over a 10–15-year period, as financing allows.

The Student Housing Implementation Strategy illustrated on the following diagram tracks the balance of beds as projects are completed.



SECTION 2.
CAMPUS CONTEXT & DATA GATHERING

A. PREVIOUS STUDIES & REPORTS

OVERVIEW

Building and Grounds projects that were recommended in the 2015 Master Plan and that have been completed include:

- Demolition of Speakman Hall & Construction of SECC (Science Engineering Center & Commons)
- Provision of additional dining options at 701 S. High St. (Saxby's & QDOBA)
- Renovation of Ruby Jones Hall
- Renovation of Anderson Hall
- Improvements to President's Walk

The 2024 Master Plan also incorporates findings and relevant considerations from earlier studies including:

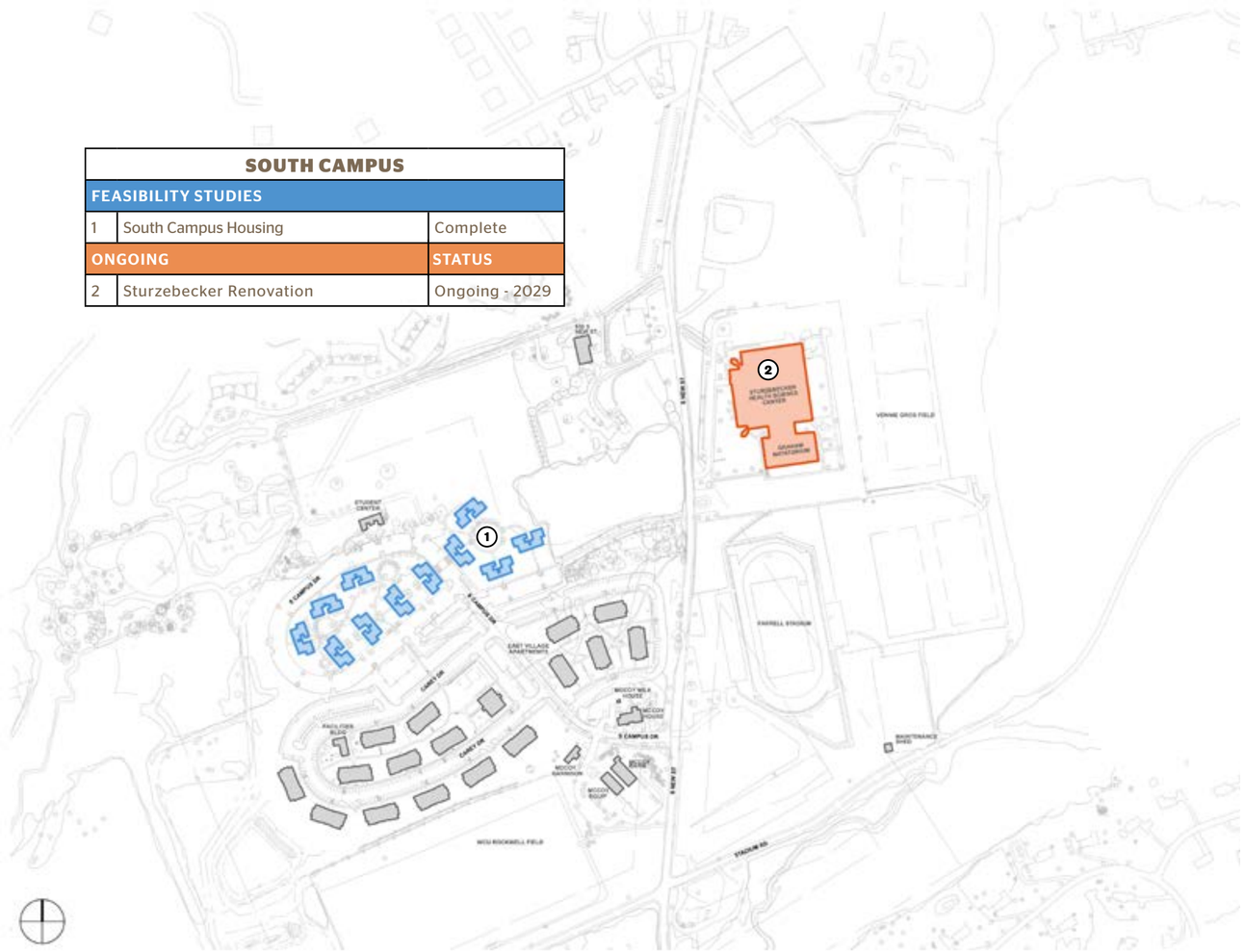
- Sykes Student Union Feasibility Study.
- FHG Library Renovation Study.
- Old Library Study for Welcome Center.
- Student Housing Improvement Study (Killinger & Schmidt) with Student Housing Market & Feasibility Study.

The results of these studies have been carried forward and integrated with the 2024 Master Plan, but with the following two clarifications:

1. The Old Library, which is a historic campus building, needs considerable repair, regardless of its intended use. Building system and accessibility upgrades are required. The 2024 Master Plan does recommend that the Old Library be upgraded to current standards, but not renovated as a Welcome Center.
2. As a result of the 2024 Student Housing Development Study, Killinger Hall is not recommended to be renovated in place, but eventually demolished and replaced with a larger residence hall that maximizes the potential of the site by increasing the number of allowable floors and thereby increasing the total number of beds.

NORTH CAMPUS		
COMPLETED PROJECTS		
1	Demolish Speakman Hall & Construct "The Commons" + Garage	
3	701 S. High St New Dining	
4	Renovate Ruby Jones Hall (Minor)	
5	Renovate Anderson Hall Spaces Vacated by Business Depts.	
6	President's Walk (Phase 1)	
FEASIBILITY STUDIES		
7	Library Plaza Renovation	
8	Sykes Student Union Expansion	
9	FHG Library Renovation	
10	Old Library Renovation	
11	Student Housing Improvements	
ONGOING		**STATUS**
12	BPMC Mechanical HVAC Upgrades	Complete
13	Geothermal Well Field Expansion	In Planning
14	FHG Library Roof Replacement	2027
15	Blue Phone Upgrades (Video & Audio)	Ongoing
16	Security/Safety Screens at Parking Garages	Ongoing
17	Replacement/Deployment Programs for IT & AV Systems	Ongoing

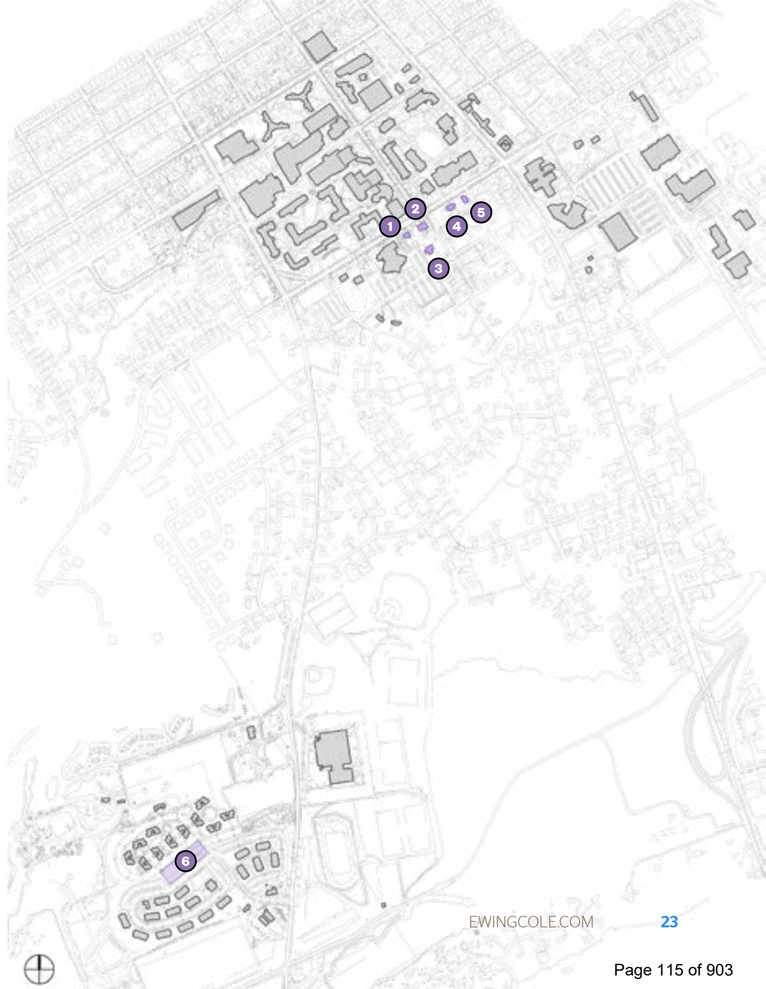
SOUTH CAMPUS		
FEASIBILITY STUDIES		
1	South Campus Housing	Complete
ONGOING		**STATUS**
2	Sturzebecker Renovation	Ongoing - 2029



BUILDING DEMOLITION RECOMMENDATION

The following buildings on North & South Campus are recommended for demolition in support of the proposed Master Plan Projects.

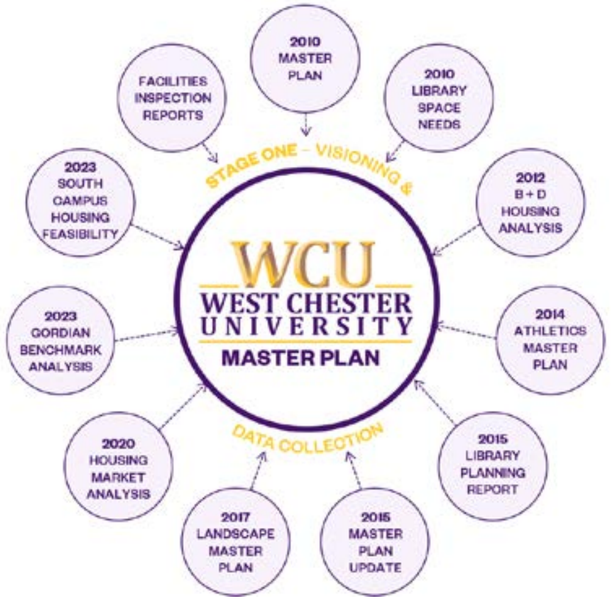
1. McKelvie Hall
2. Messikomer Hall
3. 101 Norfolk
4. 30 W Rosedale
5. 28 W Rosedale
6. Parking (Future Potential Commons Building Site)



Several of the recommendations highlighted in the 2015 Master Plan are also carried forward as recommendations in the 2025 Master Plan. These include:

- Sykes Student Union expansion for events, student support services and dining
- Multi-level parking structure behind Sykes Student Union
- FHG Library Renovations, based on the programming study developed by WCU
- Pedestrianization of S Church Street, in coorperation with West Chester Borough, while allowing emergency vehicle access
- Renovation of the Science Center Complex within the context of ongoing deferred maintenance
- Renovation of the Old Library to meet current standards for building systems and accessibility
- Renovation of Sturzebecker Health Science Center, which is scheduled for completion in 2029

The 2025 CMP Update took into account a myriad of previously completed studies and reports. Those studies and reports were evaluated in the context of the current campus culture and needs. As such, previously suggested recomendations and capital projects have been incorporated into this CMP update.



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B. CURRENT STUDIES & REPORTS

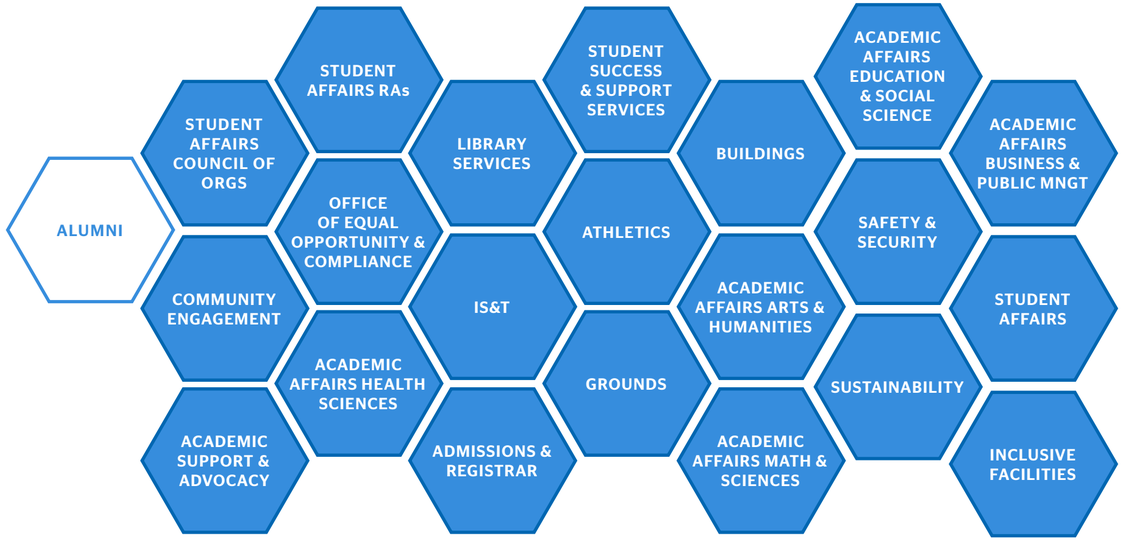
INFORMING 2024 CMP

As part of the 2024 Master Plan data gathering and information discovery process, several notable studies were completed that inform the recommendations in this report, including:

- MGT Housing Study (informed housing strategies).
- Student Housing Development Study (informed programming of room types, student support services, bed count scenarios and conceptual block-and-stack options).
- Existing Facilities Assessments (informed Deferred Maintenance planning).
- Space Utilization and Needs Analysis (informed efficiency and availability of space).
- Campus Dining Study (identified issues, needs and expansion locations).

Additionally, valuable information was generated through bi-weekly project meetings and other events including:

- Benchmark Surveys & Workshops (provided feedback related to potential projects, initiatives, and issues from the larger WCU community including faculty, staff and students).
- Interviews with Key Stakeholders (provided valuable insight into campus issues and academic program needs).
- Milestone Presentations with WCU core leadership team (provided oversight and input related to master planning strategies and evaluation of priorities).



Over the course of the CMP process the planning team met with a broad cross section of the WCU campus community. In cooperation with WCU leadership, twenty two (22) stakeholder groups were identified. Via stakeholder meetings the planning team was afforded the opportunity to gain insight direclty from hundred individuals representing the diverse make up of the WCU campus community.

SECTION 03.
ISSUES & NEEDS

A. CAMPUS OBJECTIVES

OVERVIEW

The 2024 Campus Master Plan is guided by both **aspirational and functional goals**. Functionally, a master plan needs to provide a framework for implementation of recommended projects and initiatives, based on key issues and priorities of the institution.

Aspirational goals - or themes - focus on improving connectivity, enhancing user experience and reinforcing WCU's identity and brand. These themes are touchstones that accompany the physical recommendations of the campus master plan. For example, integrating the configuration of buildings with open space, improving user experience along campus pathways with site furnishings, creating iconic identifiable spaces, such as the President's Oval, in other parts of the campus, realigning student support programs at residence halls for increased access and synergy, and enhancing the visual image of WCU at key campus gateways through landscape and streetscape design.

B. RESIDENTIAL LIFE

2024 STUDENT HOUSING DEVELOPMENT STUDY OUTCOMES

- Recommended opportunities for swing space locations
- Established program benchmark criteria
- Identified buildings for major renovation and/or addition
- Identified sites and strategies for new construction
- Determined potential implementation scenarios

EXISTING ASSETS

Currently WCU includes a mix of housing assets that are both self managed and affiliated housing that is managed by University Student Housing (USH). These twelve (12) campus facilities are home to more than 5,300 students in total between both the "north" campus and the "south" campus. The University offers community-style (traditional dorm rooms) and suites on campus while offering apartment housing at the South Campus location.

The WCU managed housing accounts for more than 2,400 student beds. The majority of these units are traditional housing with the exception of the apartment offerings within College Arms and the South Campus Apartments.

College Arms	97
Goshen	558
Killinger	308
Schmidt	438
Tyson	558
South Campus Apartments	499
	2,458 Beds

The USH managed housing is primarily suite-style units and is home to nearly 3,000 students.

Allegheny	636
Brandywine	622
Commonwealth	651
University	265
East Village Apartments	264
The Village Apartments	524
	2,962 Beds

Generally, the USH managed buildings are newer, constructed between 2004 and 2014. The WCU managed buildings are older with College Arms being circa 1920s and majority of the University owned buildings having been constructed between 1959 and 1971 with exception of the South Campus apartments constructed in 1993.

As of Fall 2024, WCU has capacity for 5,420* student beds or ~31.5% of the total enrollment of 17,171** students.

- 14,449 undergraduate students
- 2,722 graduate students

*The 5,420 Total bed capacity includes swing space.
**Enrollment numbers are per WCU Office of Institutional Research.

College Arms Apartments (WCU)

Tyson Hall (WCU)

Commonwealth Hall (USH)

Goshen Hall (WCU)

South Camous Apartments (WCU)

East Village Apartments (USH)

Killinger Hall (WCU)

Allegheny Hall (USH)

The Village Apartments (USH)

Schmidt Hall (WCU)

Brandywine Hall (USH)

University Hall (USH)

STUDENT HOUSING PLAN DRIVERS

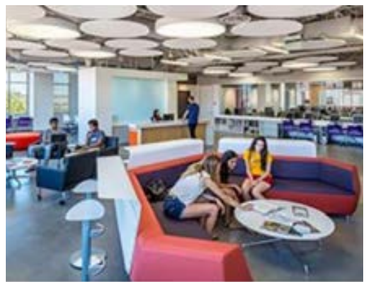
The WCU campus has strong collegiate attributes that include iconic spaces and places. Through a combination of renovations, additions and new construction, there is an opportunity for future student housing to:

- Increase the total number of student beds available on campus.
- Bring parity to the quality of housing offered by the University (both WCU and USH operated).
- Provide housing options to maintain all 1st year students on campus and ideally, the ability to house 1st and 2nd year students on campus.
- Offer a variety of options, and price points.
- Create places to empower and support the University's mission for building community on campus.
- Create opportunities for students to build community, both within residence halls and exterior spaces. Create places, both within residence halls and exterior open spaces, that empower and support the University's mission to improve and enhance student experiences.
- Accommodate physical accessibility.
- Address students' increased request for additional privacy.
- Accommodate the increasing level of student expectations.
- Build upon existing relationships between campus spaces.
- Reinforce the University image and brand.
- Address and prioritize the deferred maintenance needs of aging housing stock.
- Define an actionable implementation strategy that provides the necessary phasing consideration and/or swing space for renovation projects acknowledging an academic calendar.
- Establish a road map / framework that aligns with University's fiscal capacity over time.

PROGRAMMING & PLANNING CONSIDERATIONS FOR HOUSING

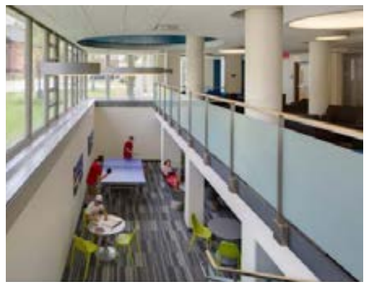
- Expected occupants.
- Increased demand for amenities.
- Technology integration.
- Co-living spaces.
- Health, wellness and sustainability focus.
- Remote and hybrid learning adaptation.
- Cultural and international accommodations.
- Proximity to student transit.
- Safety, security and accessibility.
- Diversity of occupancy types (Single, Double, Triple) and variety of room types including Traditional Style, Suite Style, Pod Style, Apartment Style.

USC Iovvine Young Academy

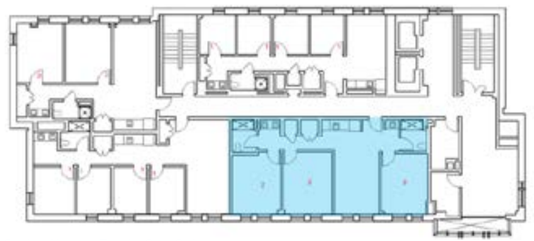


University of Delaware Ceasar Rodney Hall

The Ohio State University South High Rises



Student Housing Trends - First Year Housing



Student Housing Trends - Suite Style

FIRST YEAR HOUSING ELEMENTS

CONFIGURATION

- Traditional Double Loaded Corridor
- Traditional Racetrack
- Pod Style
- Neighborhood Sizes 30-40

UNIT TYPE MIX

- Doubles (Primary)
- Medical Singles w/ Private Restroom (2 per 30-40)

RESIDENT ASSISTANTS (RA) AND ROOM ACCOMMODATIONS

- Recommend 1 RA per 30-40 students

TOILETS, SHOWERS, AND SINKS

- Provide single user rooms
- Recommend ratio of 1 per 6 students minimum

FLOOR LEVEL AMENITIES

- Floor lounge (flexible student configuration)
- Group study
- Corridor lounge
- Laundry

SUITE STYLE HOUSING ELEMENTS

UNIT MIX

- 4-6 Bed Unit (single and doubles)

UNIT AMENITY

- Private Living Area
- Kitchenette
- In-suite Laundry

FLOOR AMENITY

- Lounge Area
- Quiet Study

NORTH CAMPUS - KEY ISSUES & OPPORTUNITIES

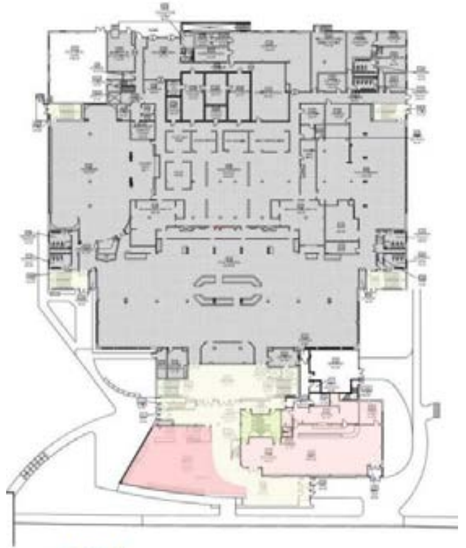
Through evaluation and discussion with WCU's leadership team, the best strategy for the North Campus starts with the demolition of the existing Lawrence Center, an older building which currently does not maximize the potential of the site. Support services currently housed in Lawrence Center will be temporarily or permanently relocated to allow for a new Lawrence Residence Hall to be constructed.

- Demolition of the existing Lawrence Center and construction of a new Lawrence Hall is the best opportunity to yield the greatest number of new beds in the short term.
- A new Lawrence Hall can improve pathway connections and open space synergies with the Student Recreation Center and SECC.
- Student Support Services can be realigned at the ground floor of Lawrence Hall, including additional café, classrooms and potentially the relocation of the Food Pantry from Commonwealth Hall, thus freeing up space for WCU Health Services in Commonwealth Hall.
- A comprehensive renovation strategy for Tyson, Goshen and Schmidt Halls will extend the life of these structures and provide a better mix of occupancy types.
- Killinger Hall is not recommended to be renovated in place, but eventually demolished and replaced with a larger residence hall that maximizes the potential of the site by increasing the number of allowable floors and thereby increasing the total number of beds and the ability to incorporate student support services.

The adjacent chart and diagram illustrates student support services in the existing Lawrence Center, as well as the older, unused cafeteria space that was replaced by the new cafeteria in the SECC.

EXISTING PROGRAM	
Level 1	
Einstein Bagel	2,425 sf
Chickie's & Pete's	3,700 sf
Unused Dining / Servery	46,000 sf
Level 2	
Academic Success Program	1,400 sf
Career Development Center	5,400 sf
Learning Asst & Resource Center	4,500 sf
Office of Educational Accessibility**	1,400 sf
Exploratory Studies Academic Advising	1,500 sf
Residence Life & Housing	3,500 sf
University College Dean's Suite	1,400 sf
Center or Women & Gender Equity	1,300 sf
Counseling Center	4,050 sf

** At the time of this report, OEA has been temporarily relocated to Wayne Hall.



Existing Lawrence Center Program

SOUTH CAMPUS - KEY ISSUES & OPPORTUNITIES

The age and condition of WCU apartments at the South Campus requires significant upgrades. As part of a multi-year renovation strategy, it is also possible to add another floor to these freestanding apartment buildings, thereby increasing the total number of beds.

- The large open tract of land, known as the Glen Echo site, is situated between the student apartments and the neighborhood. By increasing the bed-count through the multi-year apartment renovation, the Glen Echo site – which is an open recreational field – remains as a buffer to the neighborhood.
- Strengthening the connection between South Campus housing and South Campus Athletic functions can be accomplished with improved streetscape, pathway design, lighting and signage, to reinforce a sense of place.
- Any increases to parking can be mitigated by utilizing the large surface parking lots across New Street, at the athletic fields. During field day or large events, students would be required to temporarily relocate their cars.
- Expansion to the existing Southside building or a new Commons Building with food service and shared meeting space is recommended as a strategy to reinforce a sense of community at the South Campus. Food service options could also be integrated with athletics programs.

TEMPORARY HOUSING CONSIDERATIONS

In response to the need to advance a robust housing renewal campaign, the University initiated analysis of opportunities to provide temporary on-campus modular housing to allow existing housing stock to be taken offline while minimizing impact to campus wide bed count offering. The Team worked with the University to evaluate multiple site locations and configurations on North, East, and South Campus locations.

The evaluations considered a variety of modular buildings that were readily available to WCU as well as bed count, proximity to other campus amenities and functions, access to necessary utilities, and jurisdictional constraints.

The University elected to implement a plan to provide 128 beds in a temporary modular configuration at the site identified as Lot M-1 (former parking area). It should be noted that the provision of these modular housing units are not "additional" beds for the University's total bed count but rather are intended to allow for swing space to allow renovation work that cannot be achieved over the course of a summer term.

This does however maximize the University's ability to offer on-campus housing solutions in lieu of students having to seek accommodations off-campus in an artificially inflated / overpriced housing market in areas directly adjacent to the University. Note that Lot M-1 is intended to revert to surface parking when North Campus bed-count goal is achieved. The temporary modular housing is permitted to remain in place for a period of five years from the date of initial occupancy.

M-1 Lot Aerial

M-1 Lot Street View

North and East Campus Site Considerations

South Campus Site Considerations

C. ACADEMIC & STUDENT PROGRAMS

OVERVIEW

Key planning issues related to Academic & Student Programs include:

- Continue to address deferred maintenance of existing buildings, infrastructure, technology, and interior spaces, to improve the longevity of facilities and quality of campus life.
- Provide a dedicated space for a new Welcome Center, which would house multi-purpose meeting and presentation space, as well as office and support space for Admissions.
- Accommodate increased demand for dining and student support spaces, specifically for clubs, associations and study areas for commuter students at Sykes Student Union.
- Provide additional large, multi-purpose spaces that can host academic lectures, forums and community events.

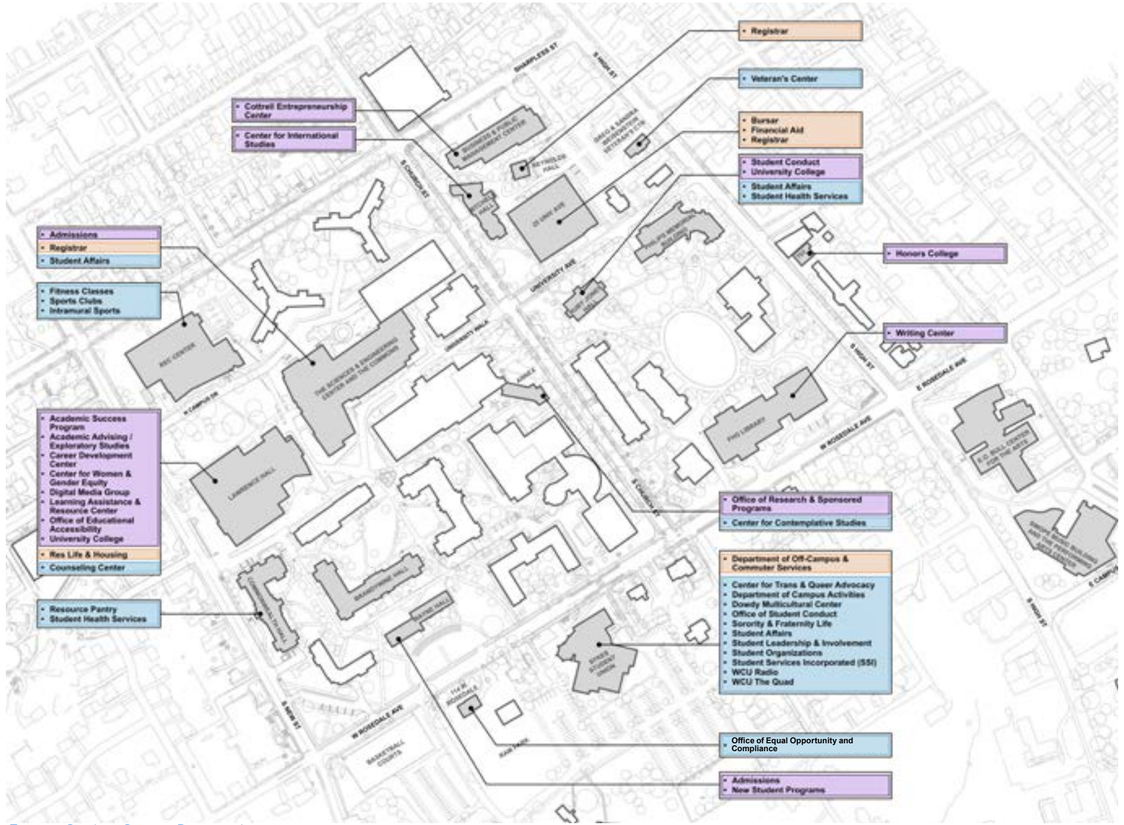
As WCU has grown, many of the program needs that support academic and student services have been impacted by the availability of adequate space. If that space exists, the physical condition of the space is often in need of renovation, system upgrades, or becomes inefficient due to evolving (expanding) program needs.

SPACE UTILIZATION

When a new academic building is constructed, it often is so well used, that it becomes overused, as in the case of the Business School, due to demand for classrooms of a particular size, specific technology, or the amount of informal student study and gathering space that was incorporated into the final construction. The SECC is another example of a successful new building that is over utilized, because there is not enough existing space in other buildings - such as the Sykes Student Union - to offset demands for increased access to food service or areas to host large events.

Over time, many of the programs that support students have been located based on where space is available, often decentralizing programs that would benefit from being grouped together. While not a reflection of the quality of programs, the daily life of students (and faculty) is impacted by a "convenience factor." Student Support Services are currently scattered across the campus and in some cases, require realignment to make it more convenient for students to access those services.

The following diagram shows the dispersion of student programs across campus, as well as a strategy for decanting programs in Lawrence Center to allow for demolition.

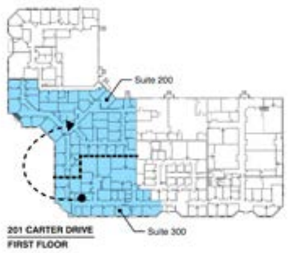


Existing Student Service Program Locations

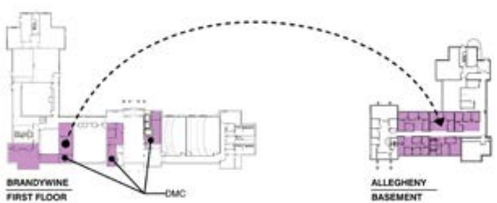
The map below indicates proposed Lawrence program relocations.
Programs in 201 Carter and Brandywine Hall must first be relocated before Lawrence program relocations can take place.

The two best options for realigning student support programs are to incorporate them into new construction as Lawrence Hall is built, and Sykes Center is expanded. Long-term, as the new Killinger Hall is constructed, there is also an opportunity to incorporate student support functions.

Relocation of Existing Student Service Program Locations



Initial Program Relocation at 201 Carter Drive



Initial Program Relocation from Brandywine Hall to Allegheny Hall

Relocation of Existing Lawrence Center Student Service Programs. The Office of Educational Accessibility has been temporarily relocated to Wayne Hall at the time of this report.

D. SPACE UTILIZATION NEEDS & ANALYSIS

OVERVIEW

As part of the discovery process, Comprehensive Facilities Planning, Inc. conducted a space utilization and needs analysis to identify WCU's space needs based on defined programs and enrollment goals. Current and projected instructional space needs are analyzed in relation to the PASSHE space model and the Alternate space model. Note that the full report is included via the Appendix.

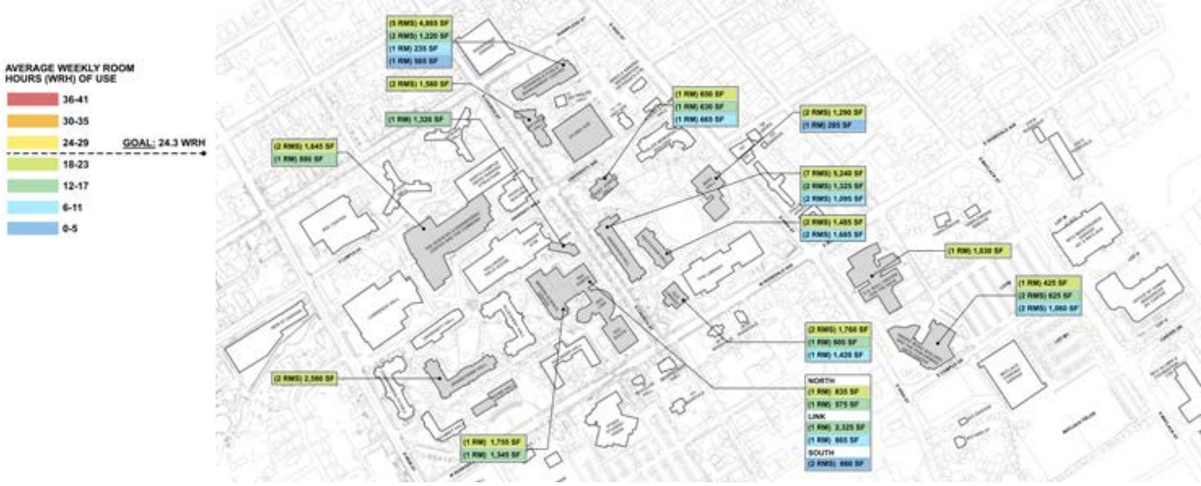
METHODOLOGY

The study was developed through a data-driven modeling process based on a "snapshot in time" of conditions found and reported for the University (Fall 2023 and Spring 2024). Basic data collected includes the on-campus full-time equivalent (FTE) student enrollment, class schedule, personnel, library collections, building floor plans, and the building space inventory. This information was used to document the current utilization and to establish the relative quantities of space needed to support the current and future demand.

PASSHE GUIDELINES & ALTERNATIVE METHOD

The Pennsylvania State System of Higher Education (PASSHE) space planning guidelines were applied for the office calculation. The remaining space types: classroom, teaching lab, research lab, library/study, general use, special use, support and health care are compared to the PASSHE guidelines using an Alternative method.

- The Alternative calculation methodology differs from the Pennsylvania State System of Higher Education (PASSHE) process in that the space need is calculated at the department level and rolls the result to the college or division level and finally to the campus level.
- The PASSHE calculations provide a campus wide "allocation" of space-by-space type (classrooms, instructional lab, research, etc.) using campus wide personnel and enrollment data multiplied by an appropriate "space factor". While this provides useful data at the campus level for capital planning, it does not provide detail as to which units have space surpluses or deficits.
- While the Alternate method uses the same "space factors" as PASSHE, the input data, personnel, enrollment etc. is at the department level and based on the current or proposed operating practices. This provides space surpluses or deficits by space type and by primary room type category.
- The space needs analysis is quantitative. All existing space is counted regardless of its quality or suitability. Conducted at a campus wide level, the analysis is intended for use within the context of long-range planning. The study is not intended to replace detailed program plan level analysis.



Underutilized Classrooms (Above) Overutilized Classrooms (Below)

SPACE NEEDS BY ROOM TYPE & ASSIGNMENT

The current and projected space needs are sorted by major room type in Figure 01 and 02 using the Alternate Calculation and PASSHE. The projected need is based on an enrollment of 12,435 full-time equivalent (FTE) students.

Room Type Description	Current ASF	Current ASF Need	Surplus (Deficit)	Projected ASF Need	Surplus (Deficit)	Comments
Classrooms	148,891	152,181	(3,290)	163,461	(14,570)	Deficit due to 20 ASF/seat applied
Teaching Laboratories	105,126	116,475	(11,349)	116,475	(11,349)	
Open Laboratories	31,794	31,810	(16)	31,810	(16)	
Research Laboratories	46,519	48,296	(1,777)	51,479	(4,960)	
Offices	332,543	294,759	37,784	303,859	28,684	Projected Need TBD
Library/Study	107,089	91,022	16,067	93,323	13,766	
Special Use Facilities	28,355	27,701	654	27,701	654	
Athletic/PE/Recreation	171,417	200,555	(29,138)	207,605	(36,188)	Need TBD
Assembly Facilities	48,543	46,676	1,867	47,459	1,084	
Exhibition Space	4,849	7,800	(2,951)	8,192	(3,343)	Art Gallery/Museum
Food Facilities	53,237	67,534	(14,297)	71,944	(18,707)	
Student Lounge	14,429	29,160	(14,730)	31,118	(16,689)	
Merchandising	14,044	14,830	(786)	15,809	(1,765)	Bookstore
Recreation	18,882	18,882	0	18,882	0	Game Rooms/Social Areas
Meeting Rooms	26,914	25,872	1,042	27,119	(205)	
Support Facilities	126,902	61,132	65,770	63,266	63,636	Includes shop/central storage
Health Care Facilities	5,091	3,999	1,092	4,234	857	
Inactive/Unknown	49,597	0	49,597	0	49,597	
Total	**1,334,222**	**1,238,684**	**95,539**	**1,283,736**	**50,486**	

Figure 01: WCU Alternate Current Space Need by Room Type

Room Type Description	Current ASF	Current ASF Need	Surplus (Deficit)	Projected ASF Need	Surplus (Deficit)	Comments
Classrooms	148,891	139,786	3,790	149,172	(281)	
Teaching Laboratories	136,920	190,270	(53,350)	203,045	(66,125)	
Research Laboratories	46,519	36,676	9,843	36,676	9,843	
Offices	332,543	303,036	29,507	303,036	29,507	Projected Need TBD
Library/Study	107,089	142,463	(35,374)	146,776	(39,687)	
Special Use Facilities	28,355	24,474	3,881	26,113	2,242	
Athletic/PE/Recreation	171,417	260,597	(89,180)	274,125	(102,708)	
Assembly Facilities	48,543	86,203	(37,660)	90,898	(42,355)	
Exhibition Space	4,849	12,617	(7,768)	13,400	(8,551)	Art Gallery/Museum
Food Facilities	53,237	118,055	(64,818)	125,096	(71,859)	
Student Lounge	14,429	13,117	1,312	13,900	529	
Merchandising	14,044	0		0	14,044	Included with Lounge
Recreation	18,882	0		0	18,882	PASSHE does not include this room type
Meeting Rooms	26,914	11,653	15,261	12,435	14,479	
Support Facilities	126,902	67,255	59,647	72,000	54,902	Includes shop/central storage
Health Care Facilities	5,091	5,496	(405)	5,731	(640)	
Inactive/Unknown	49,597	0	49,597	0	49,597	office/labs/vacant
Total	**1,334,222**	**1,411,698**	(77,476)	**1,472,403**	(138,181)	

Figure 02: WCU PASSHE Current Space Need by Room Type

OFFICE SPACE METRICS

Office space needs are calculated by multiplying the number of authorized positions by an office square foot module designated for each position. Figure 03 summarizes the WCU Main Campus office space need according to the staffing levels and PASSHE Guidelines as compared to the existing facilities space inventory. Student organization space is included in the office calculation but needs further input regarding overall space need. Personnel identified with office space located at the Graduate Center are not included in the FTE totals.

Position Type	FTE	Module	Additive	ASF Need
Faculty	791.9	150	40	150,457
Executive/Managerial	492.5	150	40	93,567
Clerical	179.9	150		26,979
Graduate Students	120.8	120		14,496
Student Workers	164.8	70		11,536
Student Organization Offices (TBD)				6,000
Total ASF Need				**303,036**
Existing ASF				**332,543**
Surplus				**29,507**

Figure 03: WCU Main Campus Office Space Summary

The office space need illustrates the following major findings:

- The surplus of office space is likely due to the office service calculation using the PASSHE model.
- Average office size in the position type category is likely due to mismatches of personnel to room types in the inventory.
- A total of 1,593 rooms are classified as office space (excludes students) in the existing inventory. This compares to a combined total of 1,629 administrative, faculty, coaches or staff positions (excludes the personnel without office). The difference may indicate shared office use by assistant coaches and clerical staff.
- The existing space identified as office service may include circulation space, and student workers. Multiple use within a single space makes it difficult to accurately distribute appropriate room use.

CLASSROOM SUMMARY & METRICS

The classrooms were analyzed to determine whether sufficient instructional space exists for the current and future profile of student population and course offerings. Specifically, the analysis documents the utilization of the classroom supply, determines the classroom capacity to meet current and future enrollments, and recommends utilization strategies for meeting these needs.

Figure 04 is a summary of the classrooms with scheduled use. The WCU Main Campus supply includes 142 General Use Classrooms, for a total of 117,088 assignable square feet (ASF). In addition, there are 9 Department classrooms 11 lecture halls, and 5 Seminar rooms for a total of 143,029 assignable square feet (ASF) and 5,862 assignable square feet (ASF) of classroom service space.

Campus	Rooms	Count	Seats	ASF	ASF/Seat	Service	Total ASF
Main	General Use Classroom	142	6,069	117,088	19.29	5,774	
	Department Classroom	9	161	3,938	24.46	88	
	Lecture Hall	11	1,447	20,714	14.32		
	Seminar Room	5	38	1,289	33.92		
	Total Inventory	**167**	**7,715**	**143,029**		**5,862**	**148,891**
Graduate Ctr.	General Use Classroom	10	266	8,199	30.8		
Exton	General Use Classroom	2	N/A	1788			
Philly	General Use Classroom	N/A	N/A	N/A			

Figure 04: Summary of classrooms with scheduled use

The PASSHE Classroom model assumes an ALL-DAY utilization goal of 37.5 Weekly Room Hours (WRH) 67% Station Occupancy (SO) and 20 ASF/Seat for the allocation. The Alternate Classroom model recommends a DAY utilization goal of 24.3 Weekly Room Hours (WRH) 64% Station Occupancy (SO) and 20 ASF/seat for modeling the classroom needs.

On the West Chester University Main Campus, classrooms are currently scheduled from 8:00 AM to 4:30 PM Monday to Friday, Friday ends by 3:00 PM. Therefore, the alternative classrooms needs are based on 40.5 hours available for scheduling classrooms during the daytime hours. Based on the available hours to schedule, classroom utilization goals of 24.3 Weekly Room Hours (WRH) and 64% Station Occupancy (SO) are recommended for modeling the classroom needs.

The Alternate classroom utilization expectation goals recommended for the WCU Main Campus for the daytime hours used in the alternate calculation are:

- 24.3 Average Weekly Room Hours of Use
- 68% Student Station Occupancy
- 20 ASF per Seat

Figure 05 identifies the classroom utilization in Fall 2023 and Spring 2024.

			Day: 8:00 AM - 4:30 PM			All Hours-PASSHE		
Campus	**Term**	**Rooms**	**WRH**	**Avg WRH**	**SO%**	**WRH**	**Avg WRH**	**SO%**
WCU Main	Fall 2023	154	3,513.0	22.8	67.6%	4,430.9	28.8	64.0%
WCU Main	Spring 2024	154	3,349.9	21.8	64.0%	4,200.3	27.3	60.3%
Grad Center	Fall 2023	10	64.6	6.5	58.4%	168.6	16.9	53.6%
Grad Center	Spring 2024	10	49.4	4.9	52.8%	144.5	14.5	52.2%
	Goal/Capacity			**24.3**	**68.0%**		**38.0**	**67.0%**

Figure 05: Classroom utilization in Fall 2023 & Spring 2024

West Chester Main Campus

- The Fall 2023 total Day Avg. WRH rate of 22.8 falls below the expected utilization rate of 24.3.
- The total SO% of 67.6% is below the expected seat fill of 68.0%.
- Average 18.4 ASF/seat for classrooms is slightly below the recommended average of 20 ASF/seat.

Graduate Center

- The Fall 2023 total Day Avg. WRH rate of 6.5 falls below the expected utilization rate of 24.3.
- The total SO% of 58.4% is below the expected seat fill of 68.0%.
- Average 30.8 ASF/seat for the classrooms exceeds the recommended average of 20 ASF/seat.

Figure 06 identifies the classroom utilization by building by Average Weekly Room Hours (WRH). on the West Chester Campus. The Hours Available column identifies the opportunity to increase the number of hours in the classrooms in each building if the utilization factors can be achieved. Negative numbers indicate the hours have exceeded the goal and there is no capacity for additional hours of use. The hours available column shows that 229 hours are still available (76 more 3-hour classes) in the classrooms if the 24.3 Avg. WRH goal could be met.

Building	Rooms	WRH	Avg. WRH	SO%	Seats	ASF	ASF / Seat	Hrs Avail 24.3	Rms Avail 24.3
25 Univ Ave	9	262.2	29.1	78.6%	377	7,665	20.3	(43.5)	(1.8)
Anderson	19	409.3	21.5	74.5%	868	13,592	15.7	52.4	2.2
Brandywine	5	126.2	25.3	61.1%	384	7,032	18.3	(4.7)	(0.2)
Bus and Pub	24	598.8	25.0	77.8%	1,163	26,074	22.4	(15.6)	(0.6)
E. O. Bull	1	21.8	21.8	85.1%	45	1,048	23.3	2.5	0.1
Ehinger Annex	1	15.1	15.1	67.5%	40	1,308	32.7	9.2	0.4
Main	22	573.8	26.1	62.4%	1,085	18,256	16.8	(39.2)	(1.6)
Merion	3	60.3	20.1	57.1%	232	4,213	18.2	12.7	0.5
Mitchell	10	269.6	27.0	49.0%	512	7,484	14.6	(26.6)	(1.1)
Old Library	4	62.3	15.6	75.3%	185	4,049	21.9	34.9	1.4
Recitation	14	319.8	22.8	64.9%	513	10,369	20.2	20.4	0.8
Ruby Jones	4	69.0	17.3	60.9%	162	2,748	17.0	28.2	1.2
Sci Comp L	2	25.4	12.7	78.2%	236	3,463	14.7	23.2	1.0
Sci Comp N	3	4.3	21.4	63.6%	160	2,765	17.3	8.7	0.4
Sci Comp S	2	56.8	28.4	79.6%	107	1,731	16.2	(8.2)	(0.3)
Sci Eng Center	8	93.6	24.2	64.4%	661	11,212	17.0	0.8	0.0
SOM/PAC	10	11.3	21.1	57.6%	278	5,222	18.8	31.7	1.3
Sturzebecker	11	123.1	11.2	72.1%	471	9,172	19.5	144.2	5.9
Wayne	2	50.3	25.1	67.2%	77	1,707	22.2	(1.7)	(0.1)
Total	**154**	**3,513.0**	**22.8**	**67.6%**	**7,556**	**139,110**	**18.4**	**229.2**	**9.4**
Goals			**24.3**	**68.0%**			**24**		

Figure 06 - Classroom utilization by Average Weekly Room Hours (WRH)

PRELIMINARY FINDINGS & RECOMMENDATIONS

1. The current supply of classrooms is sufficient to meet the current and projected demand, assuming utilization factors can be met.

2. There is an opportunity to optimize classroom capacity by creating more classrooms to accommodate 20-39 students. The best fit would suggest fewer rooms in the 1-19 and 30-39 size range, and six more rooms in the 20-29 seat size range. The amount of space required depends on the ASF/seat used.

3. Increasing the classroom ASF/seat will provide the opportunity to create active learning style rooms with furniture and technology that allow for collaborative instruction.

4. If utilization is increased for several labs with six or fewer hours within the same discipline, it may be possible to consolidate the number of labs and repurpose the rooms to accommodate the programs with a need for additional laboratory space. Further review of research space needs will be needed to verify the calculated space needs.

5. The existing office space is sufficient to accommodate any future personnel but may not be in the preferred location to meet the desired affinities. Note that there are 155 rooms in the inventory classified as an office with unknown assignments.

E. HIGHEST & BEST USE

EVALUATION

Several key buildings on campus were evaluated for "highest and best use" as part of the 2024 Master Plan. These include: Wayne Hall, Killinger Hall, College Arms, FHG Library, Old Library, and Sykes Student Union.

WAYNE HALL

Wayne Hall is a nine-story building, of approximately 92,000 gross square feet. It was converted from residential use to academic use over a decade ago, and is now home to various offices, classrooms, research labs and departmental space for:

- Admissions
- Communication & Media
- Educational Foundations & Policy Studies
- History
- New Student Programs
- Office of Clinical Experiences & Candidate Services
- Psychology
- Women's and Gender Studies

While the structure can certainly be reconverted back to a residence hall, the larger issue is that there is no available space on or near campus to house the approximately 58,684 square feet of useable academic space, not to mention the additional renovation and potential leasing costs that would be incurred under this strategy. Therefore, after evaluation, there was consensus with WCU's leadership team that **leaving Wayne Hall programs in place** makes the most sense, financially and strategically.

KILLINGER HALL

Killinger Hall was evaluated by the master planning team for both renovation, addition, and replacement considerations. The existing 3-story building was purpose-built as a traditional residence hall in 1959 and is outmoded by today's standards for campus living. The building also has extensive and ongoing maintenance issues.

A 2017 Feasibility Study explored opportunities for renovation and modest expansion, including upgrades to bathrooms, interior finishes, building systems and improvements to common spaces. However, that study did not consider the full potential of the site, which allows for meaningful expansion. If the existing Killinger Hall is demolished and **replaced with a new Killinger Hall**, then the number of beds and student support services is increased significantly. Additionally, a new Killinger Hall has the potential to provide a **pedestrian bridge connection** across W. Rosedale Avenue, that could connect to the Sykes Student Union and proposed Welcome Center Expansion.

COLLEGE ARMS

College Arms is a three-building complex with structures constructed in 1920, 1930, and 1970 respectively and is currently used as apartment-style student housing. The buildings in this complex have a variety of maintenance needs, including exterior façade rehabilitation, repairs to sloped floor requiring structural enhancements, ceiling repairs and areas with moisture infiltration. Additionally, none of the buildings are fully accessible and will require upgrades for compliance.

As a part of the evaluations for both the Student Housing Development Study and the Campus Master Plan, the **consensus is for College Arms to remain in use as student housing,** acknowledging the deferred maintenance issues noted above.

721 South High Street

731 South High Street

733 South High Street

FHG LIBRARY

Francis Harvey Green (FHG) Library is prominently situated at the intersection of High Street and Rosedale Avenue and includes a plaza that serves as a gateway to the campus. FGH Library was built in two phases. The earlier 2-story building was constructed in 1966 and encompasses over 60,000 square feet. The newer 6-story building was constructed in 1976 and encompasses over 86,000 square feet. Both buildings require upgrades to mechanical, electrical and telecom systems. Additionally, roof replacement and facade repairs are to be implemented as part of the deferred maintenance program. A strategic plan for reprogramming the interior spaces of the buildings is currently being developed by WCU Library Services.

The master plan supports **the recommendation to upgrade and modernize FGH** to ensure that it continues to serve students and faculty needs.

OLD LIBRARY

Old Library was constructed in 1902 and is prominently situated at the intersection of Church Street (Campus Walk) and W. Rosedale Avenue. As part of the Quadrangle Historic District, it is an iconic example of neoclassical academic architecture. An earlier renovation study completed in 2018 suggested that the Old Library be gutted and repurposed for a Welcome Center and Admissions functions. This study also addressed upgrading building systems, and correcting accessibility issues by resizing restrooms, and adding a new stair and elevator at the east side of the building.

The 2024 Master Plan also recommends the complete renovation and necessary code related upgrades to the Old Library, although not for use as a Welcome Center and Admissions functions.
Factors contributing to this include:

- Currently, the building houses offices, classrooms, exhibit and support space for the Anthropology Department. There is no immediate space available on campus to relocate Anthropology.
- Tour groups have used the steps of the Old Library as a gathering space, but this is not an ideal way to accommodate prospective students and their families, especially during inclement weather, and with no access to restrooms.
- Based on 2024 Master Plan discussions, greater synergies can be achieved if a new Welcome Center is considered as an addition to the Sykes Student Union. In this scenario, a number of functions could be shared, including restrooms, access to larger, multi-purpose meeting rooms and availability of dining. There is also the ability to park behind Sykes, either with additional surface parking or a future multi-level parking deck.

The recommendation, therefore, is to renovate Old Library to house Anthropology offices, classrooms, exhibits as well as offices and support for Undergraduate and Graduate Administration.

Building Section with new Service Addition and Elevator

Plan & Section Graphics from 2018 Old Library Renovation + Addition Study

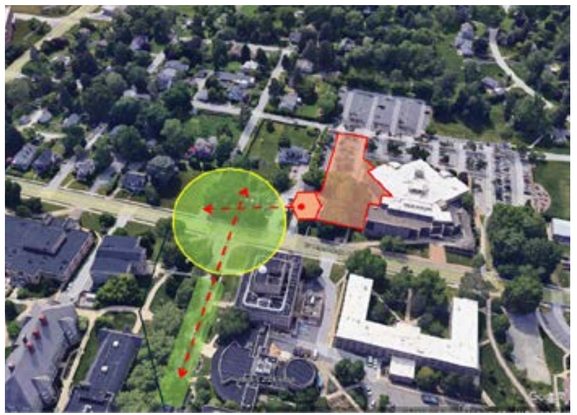
SYKES STUDENT UNION

Sykes Student Union is situated across from the North Campus along W. Rosedale Avenue. The building is well used and has undergone several renovations. One of the challenges is the flow of students back and forth across W. Rosedale Avenue, which is not ideal. Another challenge is the limitation of the existing footprint to expand dining and other student support functions.

Renovating and expanding Sykes has been discussed in previous studies, including the 2015 Master Plan. While streetscape design and traffic calming improvements can be initiated, the challenges to the existing building footprint will continue to exist. A **building expansion (to the east)** along W. Rosedale Avenue, can alleviate program pressures for dining, multi-purpose meeting space for events, lectures, additional student support space for clubs and associations, and **a new Welcome Center including the Admissions office.** The expansion could be planned to accept a future pedestrian bridge across W. Rosedale Avenue, which would emanate from the future new Killinger Hall.

A new Welcome Center would eliminate the need to use other building spaces and improve the experience for potential students and their families. Since WCU does not currently have a Welcome Center, most of supporting functions are dispersed in several buildings on campus, including SECC, Lawrence Center, Wayne Hall, and Messikomer Hall. Positioning a **new Welcome Center as part of a Sykes Student Union Expansion**, has the potential to create an iconic exterior plaza at the end of S Church Street, which, along with the planned demolition of Messikomer, 28 & 30 W Rosedale houses, would also support improvements to W. Rosedale Avenue and the creation of a new programmable open space across Church Street in a prominent location.

Proposed Welcome Center Location



F. DEFERRED MAINTENANCE

OVERVIEW

Another contributing issue to the adequacy of academic and student spaces, is the backlog of Deferred Maintenance for the campus. The care of buildings and grounds is an ongoing and complex activity, specifically due to the amount of funding that is available in any given year. This leads to a constant reprioritization of what projects are the most important to accomplish. Replacing a leaking roof takes precedence over an interior space upgrade, for example.

As part of the information gathering phase of the master plan, the Existing Buildings Assessment included a visual survey and evaluation of over 80 buildings on campus, noting the condition of building exteriors and interiors, and adequacy of building mechanical, electrical, plumbing and fire protection systems. Summary analysis focused attention on facility systems that are in poor or fair condition to help in the prioritization of deferred maintenance projects. The full report is included via the Appendix.

It is recommended that WCU i**ncrease the annual deferred maintenance budget** over the coming years to facilitate repairs and replacements that have been identified across campus facilities.

BUILDING CONDITION EVALUATION FORM

No.	Building Name	Year Constructed	Year renovated	Building area	Construction Type
115	**BOG - Merion Science Center**	1995		79,135	II-B

COMPONENT		SYSTEMS	TYPE	CONDITION RATING GOOD	FAIR	POOR	COMMENTS
1.0 Exterior Building Condition	1.1	Foundations/Structure	Concrete	X			
	1.2	Walls	Masonry	X			
	1.3	Roof	Low-slope				
	1.4	Windows	Aluminum	X			
	1.5	Door	Aluminum / HM	X			
	1.6	Other					
2.0 Interior conditions	2.1	Walls	CMU	X			
	2.2	Ceiling	ACT	X			
	2.3	Flooring	Tile, VCT, CPT	X			
3.0 Accessibility	3.1	Building suitable		X			Elevator provided
	3.2	Accessible route		X			Ramps at entrances
4.0 HVAC Systems	4.1	Cooling Source	(2) roof mounted air cooled chillers, (2) 400 ton Trane water cooled chillers located in basement, (1) Baltimore Air Coil cooling tower on roof			X	Cooling tower has significant corrosion on fill and housing.
	4.2	Heating Source	Steam plant consisting of (3) steam boilers and condensate receiver serve the Air handlers in Merion, Science Center North, South, and Link. (2) Aerco Benchmark 3000 gas fired hot water boilers serve Merion perimeter heating and VAV reheat.			X	Boiler flues exhaust to same area as mechanical room air intake.
	4.3	Air Distribution Equipment	(3) variable volume air handlers serve classroom areas, one for each floor. (2) constant volume air handlers in basement serve the laboratories. Animal lab air handler is 100% outside air and utilized filter banks with HEPA and carbon filters.			X	Basement laboratory air handlers are approaching expected end of service life.
	4.4	Hydronic Distribution - CHW	(6) base mounted end suction pumps located in basement serving secondary chilled water, primary chilled water, and condenser water systems.			X	Secondary pump casing insulation is damaged. Chemical bypass feeder is heavily corroded. No continuous vapor barrier at AHU connections leading to damaged insulation from sweating.
	4.5	Hydronic Distribution - HW	(2) 7.5 HP base mounted end suction pumps.			X	Minor corrosion on pump housing, impeller, and flanges.
	4.6	Controls	Electronic DDC controls				
	4.7	Other					
5.0 Plumbing Systems	5.1	Hot water generation			x		New Bradford-White electric water heater, and new Intelihot gas-fired water heater.
	5.2	Domestic Water Booster Pump(s)					-
	5.3	Domestic Water Recirc Pump(s)					-
	5.4	Sump Pumps(s)					-
	5.5	Sewage Ejector(s)				x	Needed for basement waste. Waste from above by gravity.
	5.6	Domestic Water Distribution					8-inch combined DW/FP service into the building. Splits to a 6-inch FP and 3-inch DW service.
	5.7	Sanitary System					
	5.8	Storm System (Primary)			x		
	5.9	Storm System (Secondary)			x		
	5.10	Gas Distribution			x		
	5.11	Medical Air			x		Beacon med air also provided for laboratories
	5.12	Drinking fountains			x		
6.0 Electrical Systems	6.01	Service Equipment	15kV Primary Switch Xfmr Section - 1500kVA 13.2kV-480/277V Siemens 2500A switchboard	X	x	x	Lack of arc flash labels on some equipment. Existing Siemens electrical distribution is near end of life. Capacitor bank on service may cause electrical issues.
	6.02	Normal Distribution System	Mix of panel manufacturers, MCC in mechanical		X	X	MCC is outdated, replace with distribution panel and VFDs
	6.03	Emergency Distribution System	350kW, 480/277V, 3phase nat gas generator			X	Gen set and ATS 1 & 2 are obsolete
	6.04	Exterior Lighting					
	6.05	Interior Lighting	Fluorescent lighting		X		Replace fixtures with LED type fixtures. Upgrade lighting controls to meet current energy code requirements.
	6.06	Emergency Lighting	Fixtures acted up by gen set				
	6.07	Lightning Protection System					
7.0 Fire Alarm Systems	7.01	Devices	Simplex	X			
	7.02	Equipment	Simplex 4100U	X			
8.0 Fire Protection Systems	8.1	Wet Pipe System					8-inch combined DW/FP service into the building. Splits to a 6-inch FP and 3-inch DW service.
	8.2	Dry Pipe System					
	8.3	Stand Pipes					
	8.4	Fire Pump					
	8.5	Other					
	8.6	Other					
9.0 Security Systems	9.1	Access control	Card readers at entrance/exit locations	X			
	9.2	Security Cameras	Interior and exterior IP Cameras	X			
	9.3	Intrusion Detection	NA				
	9.4	Mass Notification System	Within notification area of coverage			X	
	9.5	Blue light systems	Emergency Blue Light phone at building perimeter	X			
10.0 Telecom Systems	10	Incoming service	WCU Network	X			
	10	Campus backbone infrastructure	OM FOC campus backbone cable		X		
	10	Data Center	NA				
	10	MDF	Dedicated to Telecom Systems				Cat 5e, 6, 6a structured cable system.
	11	IDF's	NA				
11.0 Audio Visual (AV) Systems	11	Conference rooms	Projectors, screens, ceiling speakers, Video Switching, Video conferencing system			X	
	11	Class Rooms	Projectors, screens, ceiling speakers, and other elements appropriate for classroom environment.			X	
	11	Auditorium	NA				
	11	Media centers	NA				
	12	Outdoor forums	NA				
12.0 Other Technology	12	Other Technology	NA				
	12	Other Technology	NA				

SYSTEMS

- Exterior
- Interior
- Accessibility
- HVAC
- Plumbing
- Electrical
- Fire Alarm
- Fire Protection
- Security
- Telecom
- Audio-visual

115 – MERION SCIENCE CENTER

BUILDING CONDITION ASSESSMENT

Year Constructed: 1995
Gross Square Footage: 73,888 gsf
Construction Type: II-B
Stories above grade: 3
Fully Sprinklered: Y

1.0 Exterior Building Conditions

1.1 The Merion Science Center consists of a 3-story building with a basement and a 1-story addition, which connects to the Schmucker Science center north building. The exterior materials consist of brick veneer, metal panel and cast stone sill and coping; all observed to be in good condition. There is a greenhouse structure attached to the south façade; not assessed. There is a large mechanical well with metal grating on the west side of the building. The condition and function not assessed.

1.2 Roofing: The building has built-up low slope roofing assemblies. Condition of roofing and flashing to be reviewed.

1.3 Fenestration: Consists of aluminum framed windows and storefront systems with insulated glazing. All in good condition.

2.0 Interior conditions

2.1 Interior partitions: Primarily painted concrete masonry units; all observed to be in good condition.

2.2 Ceilings: Suspended acoustic tile throughout; observed to be in good condition.

HISTORIC RESOURCES

Part of the logic for how to prioritize Deferred Maintenance is to consider those buildings that are part of the historic legacy of WCU. These structures are significant to the character and longevity of the campus and maintaining them is important so that they keep integrity and do not fall into disuse.
For example:

- The Quadrangle Historic District has been part of the National Register of Historic Places since 1981. These buildings include Philips Memorial Hall, Ruby Jones Hall, Recitation Hall, Anderson Hall and the Old Library.
- Philips Memorial Hall appears to be well maintained.
- Ruby Jones Hall and Anderson Hall have had recent renovations.
- Recitation Hall requires system upgrades, primarily related to electrical infrastructure.
- Old Library needs significant upgrades, including accessibility and code-related issues, upgrades to technology and building systems, and exterior masonry repairs. The Old Library warrants higher priority on the list of buildings needing deferred maintenance attention.

WCU Historic Resources

1. Philips Memorial Hall

2. Ruby Jones Hall

3. Anderson Hall

4. Recitation Hall

5. Old Library

ONGOING DEFERRED MAINTENANCE PRIORITIES

Other priorities for deferred maintenance include:

- Addressing significant building deficiencies in the Science Center Complex (comprised of Merion Science Center, Science Complex North, Science Center Link, Science Center South).
- FHG Library Renovations (as outlined in the FHG Strategic Plan).
- Geothermal Well Field Upgrades and Expansion (to increase capacity of the existing wells due to current campus demand is greater than the original design capacity of the existing geothermal well system).
- Upgrading and improving the HVAC system at Swope Music & Performing Arts Center (ongoing).
- Upgrading and replacing the existing roof system at FHG Library (ongoing).

The site plan on the following page indicates deferred maintenance project priorities on the North Campus.

PRIORITIZED RECOMMENDATIONS		
PRIORITIZED RECOMMENDATIONS		
1	Old Library (Historic Resource)	
2	Geothermal Upgrades	
ONGOING		
3	HVAC at Swope Music Building	
4	FHG Re-roofing	

Prioritized Recommendations Map

G. CAMPUS WIDE DINING ANALYSIS

OVERVIEW

Overall, the campus dining analysis recommends a range of 20,000 – 30,000 additional square feet of new dining space on campus, to complement the dining facilities at the SECC and other satellite venues, and to provide a greater variety of food choice and access options. Recommendations are based on the size of the student population and in support of the goal of having more students live on campus during their first two years. The detailed Dining Analysis Report is provided via the Appendix.

METHODOLOGY

- Assessed all 13 Campus Dining Locations.
- Completed 8 focus group sessions (Student Affairs; Foundation / Alumni; Admissions; Athletics; Residence Life; Business & Finance; Dining Contracts; Off-Campus / Sykes). Completed Initial Assessment and recommendations for existing facilities.
- Incorporated Campus Wide Survey Results.

KEY FINDINGS AND RECOMENDATIONS

SHORT-TERM (0 – 3 YEARS)

- Anytime Dining concept (not all you care to eat).
- Expand Commons Dining Hours and Offerings (7am – Midnight 7 days per week).
- Update Meal Plans (4-tier unlimited plans).
- Just Walk Out (Amazon concept for both North & South campuses).
- Keep food trucks in short term.
- Consider café concept at future Lawrence (Panera example).

The Commons dining hall is currently operating at about 60% utilization. Several short-term recommendations to maximize the use of this space include:

- Optimizing hours of operation and on-board days.
- Enhancing meal variety and selection.
- Introducing non-food amenities.
- Improving meal plans.

These targeted strategies are designed to boost engagement, meet the diverse needs of the campus community, and ensure the facility is used to its full potential.

The Commons Anytime Dining Hall recomendations feature extended hours from 7:00 a.m. to Midnight, 7 days a week and an updated menu profile. All menu items will be available continuously throughout all hours of operation and students will

Meal Plan	Access	Flex Dollars	Extra Perks
Platinum Unlimited	Unlimited Access to the Commons & South Campus	$350	5 Guest Meals & Parents Eat Free
Gold Unlimited	Unlimited Access to the Commons & South Campus	$250	5 Guest Meals
Silver Unlimited	Unlimited Access to the Commons & South Campus	$150	5 Guest Meals
Bronze Unlimited	Unlimited Access to the Commons & South Campus	$0	5 Guest Meals
Commuter 75 Plan	75 Meals/Semester in the Commons & South Campus	$350	N/A
Commuter 30 Plan	30 Meals/Semester in the Commons & South Campus	$300	N/A

Meal Plans

have access to unrestricted take-out.
Meal Plans are recommended to be updated to include four tiers of unlimited plans varying in the amount of flex dollars. These plans are mandatory for North Campus Residents. It is recommended to keep food trucks, which are managed by West Chester Borough, along Church Street in the short-term due to capacity constraints at the Commons and at Sykes.

The Common's Anytime Dining Hall's updated menu is recommended to feature an array of menu categories informed by survey responses, including popular items such as chicken tenders, cheeseburgers, and subs. Additionally, there will be a comprehensive allergen-friendly and vegan station to cater to diverse dietary needs. Favorites from Einstein's Bagels and Chickie's and Pete's can be incorporated into the daily menu.

The goal of these recommendations is to shift the focus and student traffic into a community-driven location in the Commons. This aims to create an atmosphere conducive to the spontaneous formation of relationships between students and faculty. By fostering a vibrant and inclusive environment, these changes are intended to enhance the overall campus experience and strengthen the sense of community at WCU.

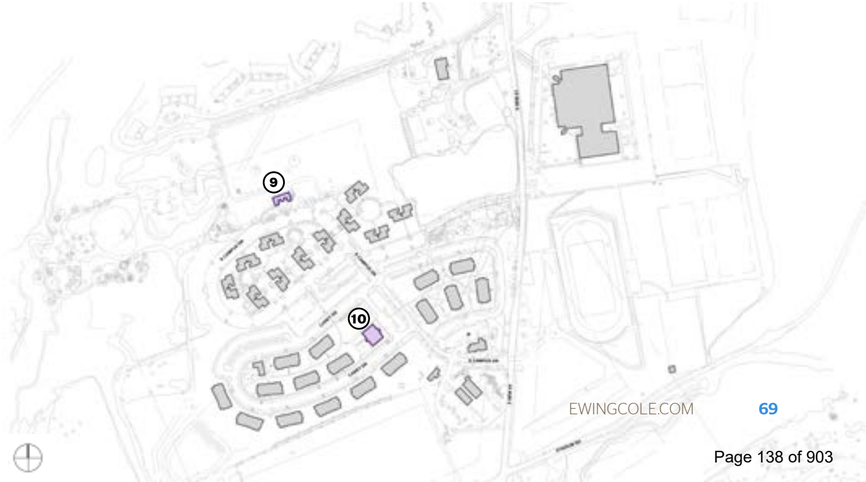
NORTH CAMPUS

1. Power Up
2. The Commons Anytime Dining Hall
   - Freshens
   - Amazon Just Walk Out at Rammy's
3. Food Trucks*
   - *Managed by Borough not WCU
4. P.O.D. at Main Hall
5. Saxby's and QDOBA
6. Starbucks
7. Sykes Ram's Head Food Court
   - B+F
   - Bento Sushi
   - Chick-fil-A
   - EcoGrounds
   - The Spread & Greens To Go
8. P.O.D. at E.O. Bull

Short Term North Campus Dining (Above) Short Term South Campus Dining (Below)

SOUTH CAMPUS

9. Southside
10. Amazon Just Walk Out at the Village



LONG-TERM (3 – 10 YEARS)

- Expand +23,000 sf at Sykes with additional beds on campus.
- Consider food truck offerings long term (in event of Church St pedestrianization)
- New 10,000 - 15,000 sf Dining concept at South Campus (7am-10pm 7 days per week).

Increasing the number of beds by ~220 on the South Campus, along with implementing mandatory meal plans, will significantly boost dining revenue. This surge in demand justifies the need for a robust dining venue on the South Campus, with the capacity to accommodate all resident students and athletes practicing there. Additionally, this venue is recommended to be open to the public after athletic events, creating an opportunity to serve the broader WCU community.

A new 10,000 - 15,000 sq. ft. South Campus Anytime Dining Hall is recommended to be built, featuring hours from 7:00 a.m. to 10:00 p.m., 7 days a week, and including a menu profile comparable to the Commons Anytime Dining Hall. All menu items will be available continuously throughout all hours of operation and students will have access to unrestricted take-out. The increase of beds on North Campus could require an additional 23,000 sq. ft. at Sykes, when the building is expanded. With these improvements to dining programs, food trucks will no longer be required, however, this is up to the discretion of WCU. Currently food trucks park along Church Street. However, in the event that Church Street is pedestrianized, some reasonable accommodation on campus to locate food trucks should be planned for daily and/or special events.

The recommendation is that Meal Plans would be mandatory for North and South Campus Residents. Longer hours and unlimited take-out options at centralized dining locations on campus will provide students with a safe and wholesome area where they can easily access nutritious meals at their convenience. This approach will play a crucial role in mitigating any food insecurity issues on campus, ensuring that all students have reliable access to healthy meals. Improvements to the Meal Plans can be effectively leveraged during the recruitment of prospective students, highlighting the WCU's commitment to student welfare and overall well-being. Additionally, it will encourage current students to remain on campus for longer periods, fostering a stronger sense of community and engagement.

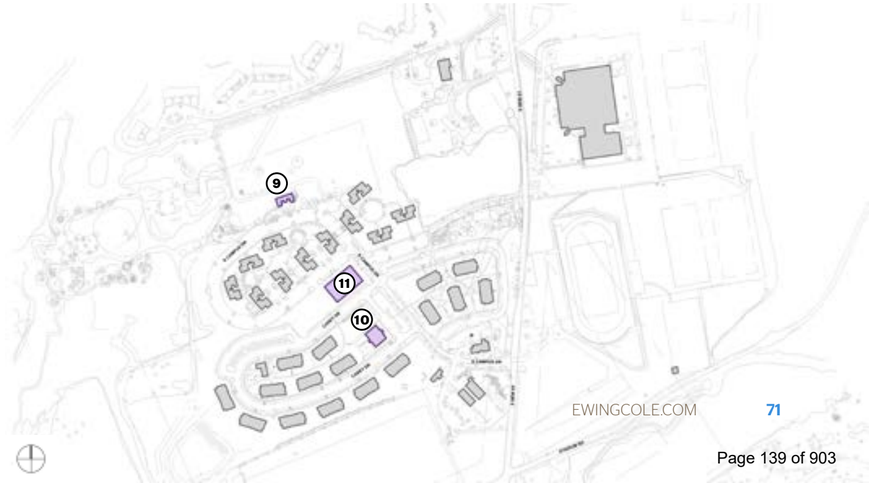
NORTH CAMPUS

1. Power Up
2. The Commons Anytime Dining Hall
   - Freshens
   - Amazon Just Walk Out at Rammy's
3. Lawrence Hall
   - Just Walk Out
   - Saxby's
4. P.O.D. at Main Hall
5. Saxby's and QDOBA
6. Starbucks
7. Syke's Student Union Expansion
   - B+F
   - Bento Sushi
   - Chick-fil-A
   - EcoGrounds
   - The Spread & Greens To Go
8. P.O.D. at E.O. Bull

Long Term North Campus Dining (Above) Long Term South Campus Dining (Below)

SOUTH CAMPUS

9. Southside
10. Amazon Just Walk Out at the Village
11. South Campus Commons Dining



SECTION 04.
SITE & LANDSCAPE

A. BUILDINGS & GROUNDS

OVERVIEW

Site conditions at the North and South Campus vary greatly. Analysis of the landscape and circulation issues gives insight into potential improvements that accompany master plan recommendations. A variety of prevalent issues emerged through meetings with WCU's Facilities Group, including:

- Prioritization of deferred maintenance projects
- Amount and availability of outdoor space – planted, open, recreation
- Acknowledgement of existing and future planned geothermal well fields and ongoing energy study
- Universal access to campus places and spaces
- Building and landscape maintenance requirements
- Parking considerations
- Improved opportunities for community gathering (indoors and outdoors).
- Encourage best practices for student / campus safety and security.
- Align with campus sustainability objectives.

The existing public roadways create clear boundaries for the North Campus as shown on the following diagram. While most of the campus favors pedestrian movement, there are also significant interruptions where vehicles and pedestrians clash.

North Campus is bounded by public streets

B. NORTH CAMPUS

OBSERVATIONS & OPPORTUNITIES

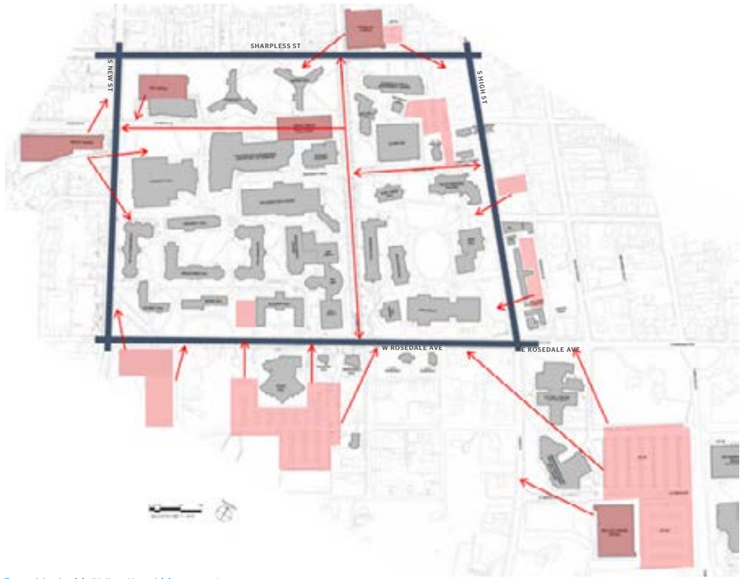
SUPERBLOCK

The highest density of buildings on the North Campus is within the zone known as the "Superblock." Major public streets define edges of the superblock which is bounded by Sharpless Street, W Rosedale Avenue, S High Street and New Street. Within the superblock, there is multi-directional movement, across internal campus streets, pathways and external streets. Most parking is located outside of the superblock, at the edges of the site, except for the Student Recreation Center Garage and the Commons Parking Garage.

CLASH POINTS

The boundaries of the superblock create circulation "clash points" due to multi-modal use along the perimeter streets as well as within campus streets. Clash points occur between pedestrians, automobile access to parking garages and truck access to loading docks. Several of the service zones on the North Campus are not segregated from pedestrian traffic, including at Tyson & Goshen Halls, Lawrence Center and Killinger Hall.

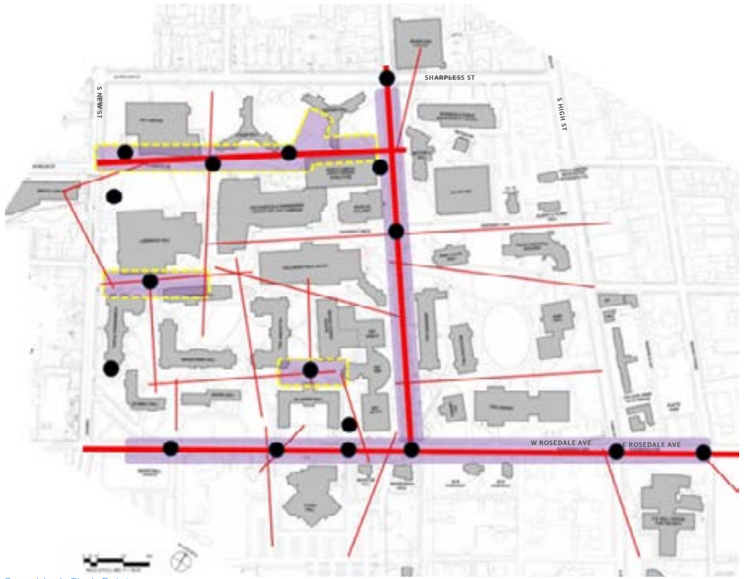
One of the most challenging clash points is along the access road to the Commons Parking Garage from S New Street. This road also connects to parking and service areas for the Student Recreation Center, SECC, Tyson Hall and Goshen Hall. This road also intersects primary pathways that students use to go to the Student Recreation Center, SECC, Dining and Residence Halls.



Superblock - Multidirectional Movement

One of the opportunities to reduce the clash points at Tyson and Goshen Halls is to reorient service access to Goshen Hall and restrict (and redirect) the current pedestrian path that runs along the north edge of the Commons Parking Garage. Examples of how this can be achieved are illustrated in the Recommendations Section of this report.

The other significant clash points occur along W Rosedale Avenue, due to the high level of pedestrian traffic to and from Sykes Student Union. Safety conditions can be improved by adding traffic calming devices at key crossings, specifically at Sykes and at the intersection of S Church Street and W Rosedale Avenue. In the future, with the development of a new Killinger Hall, a pedestrian bridge could span Rosedale and connect to Sykes Student Union, further improving traffic safety.



Superblock Clash Points

GATEWAYS

North campus "gateways" occur at key intersections along W Rosedale Avenue, at S New Street and S High Street, and at the intersection of S Church Street / University walk. These locations are key image and branding opportunities for WCU that can be enhanced through attention to landscape, planting, lighting and signage. The intersection of S Church Street and W Rosedale Ave becomes a primary opportunity that can enhance the North Campus. For example:

- Expansion of Sykes Student Union to the east along Rosedale, could include a new Welcome Center, with a new front-door and plaza at the foot of S Church Street.
- A new exterior space can be a gathering place for tours, photos, and outdoor events.
- An improved intersection would provide a better way for commuter students to cross Rosedale from parking behind Sykes and provide convenient access for prospective students and their families visiting the campus.

GATEWAYS
CORRIDORS / PATHS
LANDSCAPE OPPORTUNITY

1 Lawrence Open Space & Bus Pavilion
2 Tyson / Goshen Landscape
3 Church Street Corridor
4 University Ave Corridor
3 Church Street Corridor
4 University Ave Corridor
5 University Gateway
6 Rosedale & New St Corner
7 Ceremonial Gateway
8 Regional / Civic Gateway
9 President's Walk Extension
10 Meadows at Poetry Center

North Campus Gateways

CONNECTIONS

The superblock is spatially organized into three zones: the Academic Quad, organized around the central landscaped oval; the middle Transitional Zone, organized around S Church Street / University Walk; and the Residential Zone, in which buildings, pathways and smaller green spaces or plaza occur. The Residential Zone does not currently have an exterior space that is hierarchically equivalent to the Academic Zone or the Transitional Zone. There is an opportunity here to create a new iconic green space across from the Student Recreation Center and the SECC.

GATEWAYS
CORRIDORS / PATHS
LANDSCAPE OPPORTUNITY

1 Academic Quad
2 Church St Transition
3 Residential

North Campus has three spatial zones: Academic, Residential, and Transitional Zones

C. SOUTH CAMPUS

OBSERVATIONS & OPPORTUNITIES

The South Campus is accessed from New Street, with buildings and grounds organized on both sides of the street.

The East parcel is home to Farrell Stadium, Sturzebecker Health Sciences Center, multiple athletic fields, surface parking and open landscape areas, including the Gordon Environmental Center. Note that the renovation of Sturzebecker is scheduled for completion by year 2029.

The West parcel is home to apartment-style student housing, which is comprised of WCU-managed beds, known as South Campus Apartments and USH-managed beds, known as The Village Apartments and East Village Apartments. Units are accessed via perimeter loop roads and surface parking. Just north of the South Campus Apartments, is an open landscape zone known as the Glen Echo Site, which borders on residential neighborhoods.

The South Campus Apartments need complete renovation to achieve parity with USH-managed beds. As part of the renovation strategy, it is possible to increase the bed-count if another floor is added to each of the buildings.

CREATE A SENSE OF PLACE

In addition to improving the existing South Campus Apartments and increasing the overall bed count, there is an opportunity to bolster the sense of place by:

- Positioning a new Commons Building with dining and event space at the heart of the South Campus, or expanding the existing Southside building. This shared-use building could be programmed to offer dining options that align with athletic and training programs.

- Creating a more intentional connection between west and east parcels could be achieved by a new pedestrian pathway, with improved lighting, signage and landscape. This new pathway would emanate from the new Commons Building and connect to Sturzebecker Health Sciences Center, thus creating a new gateway along New Street.

- Keeping the Glen Echo site as green space for passive recreation. Existing pathways through the open landscape could be added to create recreational loops and connect to the Gordon Environmental Center.

- Adding a bike lane along S New Street to improve safety and connections between North and South campus. Note that this would require collaboration and input between WCU and the surrounding community.

- As more beds and a new Commons Building are added to the South Campus, a parking strategy could entail allowing students to use the surface parking (Lot Q and R) next to Farrell Stadium, with the provision that on game days, those cars would need to park in other locations. This would reduce the need to add additional surface parking and preserve open space. Note that a more detailed implementation plan would be needed to clarify this approach.

South Campus Gateways

New St bisects the South Campus into an East and West parcel

D. TRANSPORTATION & PARKING ANALYSIS

OVERVIEW

The full Transportation & Parking Analysis Report is in the Appendix.

PRELIMINARY TRANSPORTATION EVALUATION

TRAFFIC COUNTS/INTERSECTIONS

Vehicle and pedestrian counts were completed during the weekday morning (7:00-10:00 A.M.) and weekday evening (3:00-6:00 P.M.) peak time periods at the 25 intersections/locations (see aerials included in the Appendix). These counts were completed in early December 2023 or late April 2024 when classes were in session.

PEAK HOURS

Utilizing the 3-hour peak period (7:00-10:00 A.M. and 3:00-6:00 P.M.) a peak hour, which is the highest four consecutive 15-minute intervals (i.e. 7:30-8:30 A.M.), is determined for each intersection. The weekday A.M. and weekday P.M. peak hour traffic and pedestrian volumes are shown in the attached Figures.

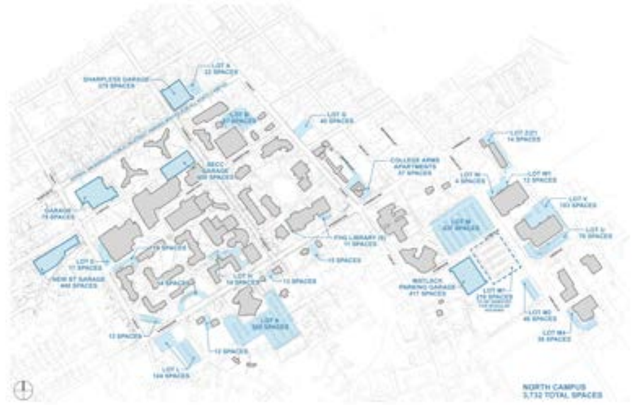
CAPACITY ANALYSIS

Capacity analyses were conducted for the weekday A.M. and weekday P.M. peak hours at the study area intersections for Existing Conditions. These analyses were conducted according to the methodologies contained in the Highway Capacity Manual, 6th Edition (HCM) using Synchro 11 software, a Trafficware product.

INTERSECTION OPERATIONS

A level of service (LOS) and queue matrix for the study area intersections are attached for the peak hours evaluated (included in the Appendix).

Preliminary evaluation of the **critical traffic items** based on results of the analysis indicate that overall, all intersections operate at a good level of service (ILOS B or better), and all movements except one operate at LOS C or better. At the S High Street / Sharpless Street intersection, the eastbound approach operates at LOS E. Future analysis will need to evaluate if roadway improvements are required at any of the intersections in accordance with relevant ordinances. The future analysis will include the planned intersection improvements at the S New Street/W Rosedale Avenue intersection.



Existing Parking at North Campus

Existing Parking at South Campus

PRELIMINARY PARKING EVALUATION

EXISTING PARKING

Approximately 6,000 parking spaces are illustrated on the adjacent site plans.

- 3,547 North Campus
- 2,187 South Campus
- 500+ Borough of West Chester Campus Adjacent

PARKING COUNTS

Spot parking occupancy counts were completed during the weekday afternoon (11:00 A.M.-1:00 P.M.) and the weekday evening (4:00-6:00 P.M.) peak time periods at the parking areas in both the University's North Campus and South Campus. The surface lot counts were performed using drone imagining, and the parking garage counts were performed manually by a technician. These counts were completed in late April 2024 when classes were in session.

PARKING OCCUPANCY DATA

The following tables summarize the parking occupancy data collected North Campus and South Campus. This chart represents a sampling of mid-day peek and late afternoon times evaluated. **Of the nearly 1500 spots observed there were more than 350 available during the peak times.**

Preliminary evaluation of the **critical parking items** based on the results of the analysis indicate that the observed midday parking occupancy was higher than the observed evening parking demand. Additionally, the midday parking occupancy was identified as 80% on the North Campus and 48% on the South Campus.

Occupancy levels of specific lots vary, with some being near, or at, the number of spaces provided, and others being less than 50% occupied. Additionally, evening parking occupancy was identified at 47% at North Campus and 40% at South Campus. Note that future analysis will need to be completed as the master plan is implemented, in accordance with the applicable ordinance requirements.

Count Date and Approximate Count Time:		12/05 @ 11:00am-1:00pm			12/05 @ 5:00-7:00pm			12/06 @ 11:00 am-1:00pm			12/06 @ 5:00 pm-7:00pm		
Parking Lot	Total Spaces Provided	# Occupied	# Unoccupied	% Occupied	# Occupied	# Unoccupied	% Occupied	# Occupied	# Unoccupied	% Occupied	# Occupied	# Unoccupied	% Occupied
New Street Garage	447	371	76	83.0%	304	143	68.0%	387	60	86.6%	305	142	68.2%
Student Recreation Center Garage	79	41	38	51.9%	38	41	48.1%	31	48	39.2%	32	47	40.5%
The Commons Garage	457	376	81	82.3%	224	233	49.0%	371	86	81.2%	205	252	44.9%
Sharpless Parking Garage	383	237	146	61.9%	141	242	36.8%	226	157	59.0%	158	225	41.3%
A Lot	22	22	0	100%	7	15	31.8%	22	0	100%	6	16	27.3%
B Lot	57	52	5	91.2%	10	47	17.5%	51	6	89.5%	24	33	42.1%
G Lot	40	31	9	77.5%	13	27	32.5%	37	3	92.5%	12	28	30.0%
Totals	1485	1130	355	76.1%	737	748	49.6%	1125	360	75.8%	742	743	50.0%

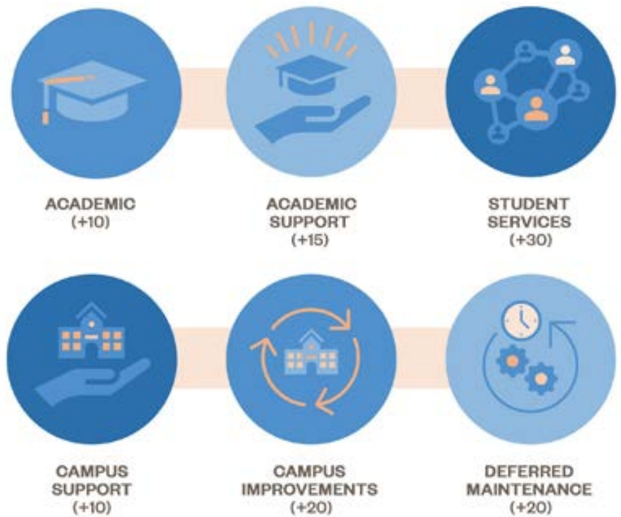
Summary of classrooms with scheduled use

SECTION 05.
COMPREHENSIVE MASTER PLAN

A. OVERARCHING THEMES, PROJECTS, & INITIATIVES

DISCOVERY PHASE

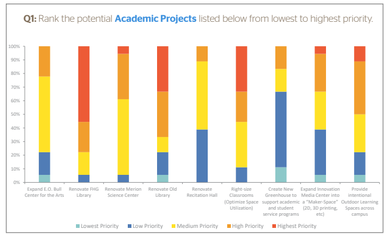
The discovery phase of the master planning process resulted in over one-hundred potential projects, initiatives and recommendations. The prioritization of those projects and initiatives, were vetted through a series of Stakeholder Meetings, with additional strategic input from the Steering Committee and WCU leadership. All of the key stakeholder groups at WCU were interviewed and included in update presentations, as master plan recommendations coalesced.

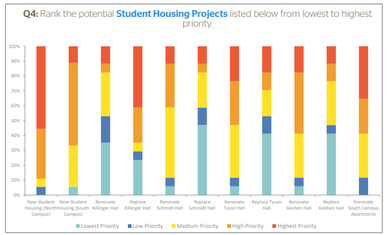


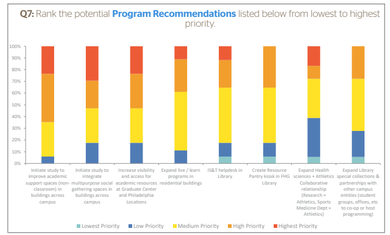
+100

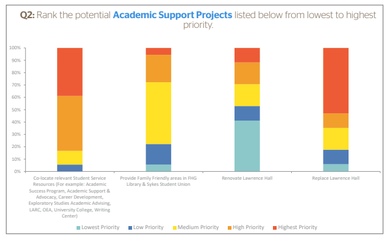
Potential Projects Initiatives or Studies

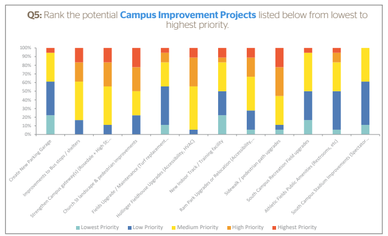
+ NEW CONSTRUCTION
+ MAJOR ADDITIONS
+ MAJOR RENOVATIONS
+ MINOR RENOVATIONS
+ DEFERRED MAINTENANCE

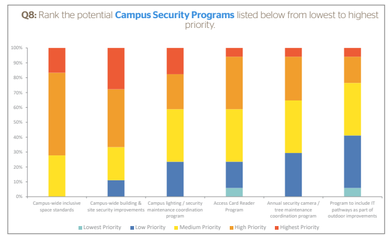


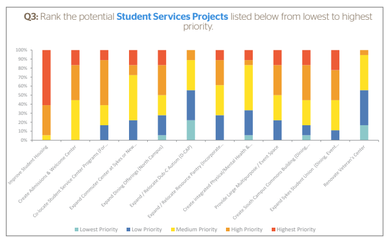


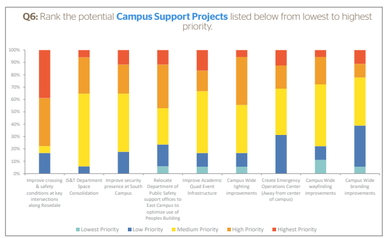


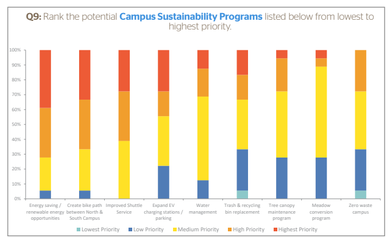












Exerpt of Results from Steering Committee Surveys

COMMON ISSUES & THEMES

A series of overarching themes resulted from the Stakeholder Meetings and reinforced via steering committee updates. The projects identified as part of the Master Plan recommendations are in support of these themes, which are summarized below.

The most immediate recommendation by far is to begin the implementation for the upgrade and expansion of student housing and supporting residential life services.

At South Campus, the first priority is the phased upgrade and expansion to South Campus Apartments. Expansion to the Southside building or a new Commons Building with food service, meeting and event space is also planned.

At North Campus, the first priority is to decant the remaining student support functions in Lawrence Center, so that the structure can be demolished and a new Lawrence Hall constructed.

Future phases for upgrading or replacing beds at North Campus are accomplished in a phased implementation plan as funding allows.

Another important recommendation is the renovation and expansion of Sykes Student Union to include additional space for dining, large events, student organizations, and provision for a Welcome Center & Admissions Offices.

Improvements to Church Street (Campus Walk) and upgrades along W. Rosedale Avenue, including a new plaza and streetscape improvements associated with the new Welcome Center, will improve pedestrian safety and provide a new iconic open space to reinforce WCU's brand.

A placeholder location for a future multi-level parking deck that is attached to the Sykes expansion is recommended.

Many of the issues identified during Individual Stakeholder Meetings had common themes that impact Master Plan recommendations.

Projects were distilled into six main categories and further prioritized and organized into campus districts.

HOUSING
- Lawrence Hall – Demo & Build New Housing
- College Arms Apartments Renovation
- South Campus Apartments – Full Reno w/ Vertical Expansion
- Tyson Hall – Full Reno w/ Addition
- Goshen Hall – Full Reno w/ Addition
- Killinger Hall – Demo & Build New Housing
- Schmidt Hall – Full Reno w/ Entry Addition

ACADEMIC
- Science Center Complex Renovation
- Old Library Renovation
- FHG Library Renovation
- Sturzebecker Renovation
- EO Bull Center for the Arts Expansion & Landscape Improvements

STUDENT SERVICES
- Improve or Build New South Campus Commons Building
- Expand Sykes for Student Services, Dining, Welcome Center, & Parking

CAMPUS IMPROVEMENTS
- S Church St & University Ave Improvements
- Rosedale Ave Improvements
- Future Open Space
- Land Acquisition to Complete "Superblock"
- S New St and W Rosedale Ave Recreation Addition
- Improved gateway at S New St Across from Sturzebecker and Athletic Fields
- Improvements at Farrell Stadium
- Athletic Field Amenities (restrooms, concessions, etc)
- President's Walk Extension
- Planning Study for Tanglewood Residence & Grounds (highest & best use of property)

CAMPUS SUPPORT
- 210 & 220 East Rosedale
- Maintenance Garage
- 201 Carter Utilization
- 204 Carter vacant
- Alumni & Foundation Center
- 887 Matlack – relocate public safety

CAMPUS IMPROVEMENT PROGRAMS - SUSTAINABILITY
- Existing Geothermal Deferred Maintenance
- New St multimodal Campus Connector
- Gordon Preserve Connections
- Bike-share Program

B. MASTER PLAN RECOMMENDATIONS (BY DISTRICT)

CAMPUS DISTRICTS & LANDSCAPE FRAMEWORKS

Master plan recommendations illustrated in this report are organized by "campus districts" which are based on the current use and configuration of the campus. For example, the North Campus superblock is comprised of a predominately Academic District and a Residential District. The parcel along Rosedale Avenue is predominately a Student Support Services District. The east part of the campus is a mix of Academic and Facility Support. The South Campus is comprised of a Residential District and an Athletic and Health Sciences District.

Recommendations and improvements are described per district, categorized below, which include multiple types of buildings, infrastructure, programs, and spaces.

Campus buildings and landscapes create synergies that result in the visual character of spaces. For a physical environment as varied as WCU, it is useful to have a framework for landscape solutions that are scaled to use or specific location. Landscape solutions for a Residential Zone may be different from an Academic Zone, or areas that border public streets. Having a landscape framework is a way to create a dynamic campus that bolsters the brand identity of WCU.

DISTRICT A PROJECTS

NORTH CAMPUS ACADEMIC & SUPPORT

- Science Center Complex Renovations
- Old Library Renovation
- FHG Library Renovation
- College Arms Apartments Renovation
- Church St Improvements
- Land acquisition to complete "superblock" (Corner of Sharpless & S High St)

DISTRICT B PROJECTS

NORTH CAMPUS HOUSING & SUPPORT

- Lawrence Hall - Demo & Build New Housing
- Existing Geothermal Deferred Maintenance
- Tyson Hall - Full Reno w/ Addition
- Goshen Hall - Full Reno w/ Addition
- Killinger Hall - Demo & Build New Housing
- Schmidt Hall - Full Reno w/ New Entry Addition

DISTRICT C PROJECTS

NORTH CAMPUS STUDENT SERVICES & SUPPORT

- Sykes Expansion - Student Services & Welcome Center
- Rosedale Ave Improvements
- Existing Geothermal Deferred Maintenance
- Future Open Space (Across S Church St)
- Sykes Student Union Parking Deck
- Recreation Improvements (Corner of W Rosedale Ave & S New St)

DISTRICT D PROJECTS

EAST CAMPUS ACADEMIC & SUPPORT

- Temporary Housing
- Removal of Temporary Housing & Reinstate M1 Lot as Parking
- E.O. Bull Center for the Arts Addition & Landscape improvements
- Planning Study for Tanglewood Residence & Grounds (Highest and Best Use of Property)
- President's Walk Extension (Landscape)
- 210 & 220 East Rosedale
- Maintenance Garage
- 201 Carter Utilization
- 204 Carter vacant
- Alumni & Foundation Center
- 887 Matlack – relocate public safety

North Campus Districts

DISTRICT E PROJECTS

SOUTH CAMPUS HOUSING & SUPPORT

- South Campus Apartments Renovation & Vertical Expansion
- Expansion to Southside or New South Campus Commons Building
- South Campus Gateway Connection to Sturzebecker and Athletic Fields

DISTRICT F PROJECTS

SOUTH CAMPUS ATHLETICS & SUPPORT

- Sturzebecker Renovation
- Farrell Stadium Improvements
- Athletic field amenities (restrooms, concessions, etc)
- Gordon Preserve Trail Connections
- S New St. Multi-modal Transportation

South Campus Districts

W ROSEDALE AVE
S HIGH ST

DISTRICT A PROJECTS
NORTH CAMPUS ACADEMIC & SUPPORT

0-5 YEARS
1. Science Center Complex Renovation
2. Old Library Renovation
3. FHG Library Renovation
4. College Arms Apartments Renovation

6-10 YEARS
5. S Church St & University Ave Improvements

10+ YEARS
6. Land acquisition to complete "superblock" (corner of Sharpless & S High St)

North Campus

SCIENCE CENTER COMPLEX RENOVATION

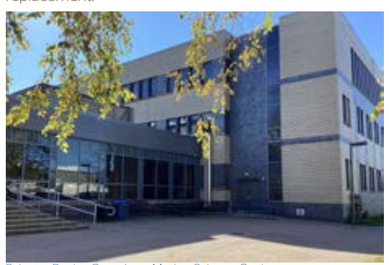
The Science Center is a complex of three interconnected buildings that house teaching labs, classrooms, student support spaces and offices.

Merion Science Center, constructed in 1995, consists of a 3-story, 73,888 SF building with a basement and a 1-story addition, which connects to the Science Center North and Merion Science Center on the first level.

Science Center North, constructed in 1965, is a 3-story 48,287 SF building with a basement level. The building has linkages to the Science Center – south and the Merion Science Center to the west on the first level.

Science Center South (SSC), constructed in 1968, is comprised of a 5-story, 75,226 SF building with a basement, and a 1-story link and planetarium, which connects to the Science Center North building.

Ongoing mechanical, plumbing, telecom, audio/visual and security system upgrades have been documented in the Existing Building Assessment Report. These include replacing the generator, changing interior lighting fixtures to LED type, and upgrading existing Category 5e cabling to Category 6 to align with current industry standards. Additionally, the 2023 Gordian Report recommends repairing spalling cast stone and masonry on the exterior facades and a full roof replacement.



Science Center Complex · Merion Science Center

FHG LIBRARY RENOVATION

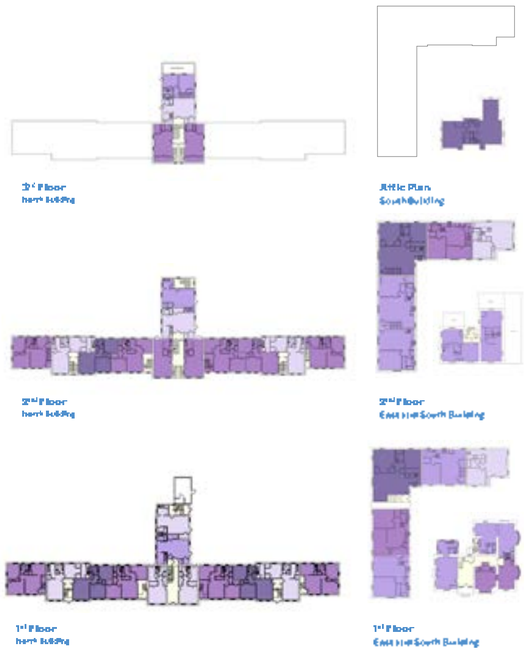
The FHG Library, constructed in 1966, consists of a 2-story, 60,042 SF building and connects to the FHG Phase II library, which is a 6-story, 86,009 SF building. Both structures have basement levels. A variety of building system upgrades were identified as part of the Existing Building Assessment Report, including recommendations for mechanical, plumbing, electrical, telecom, audio/visual and security. Additionally, roof replacement and facade repairs are to be implemented as part of the deferred maintenance program. The ongoing Library Strategic Plan is based in part on a 2015 Concept for renovation and reprogramming both buildings, with the goal of modernizing interior spaces to more effectively support staff resources and current student needs.

While there is a list of deferred maintenance projects associated with the FHG Library as noted above, these projects should be coordinated with the findings and recommendations of the Library Strategic Plan.

FHG Library

COLLEGE ARMS APARTMENTS RENOVATION

Continued use of the buildings for student housing to accommodate up to 97 beds, acknowledging the variety of deferred maintenance issues as part of on-going renovations.



721 South High Street

731 South High Street

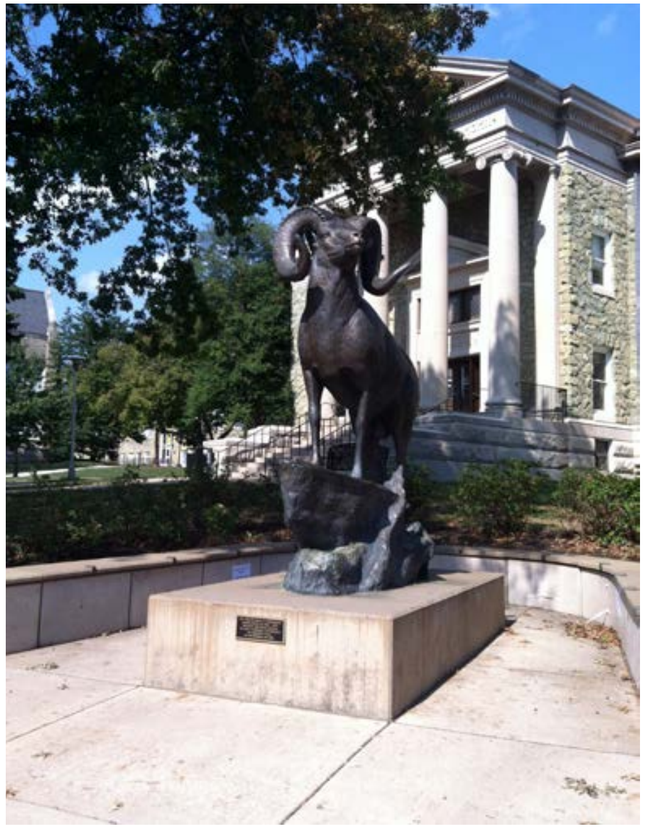
733 South High Street

OLD LIBRARY RENOVATION

Full renovation and system upgrades, to meet current building and accessibility standards is a minimum recomnedation of this study. Program use of the Old Library is suggested to contain Anthropology offices, exhibits and support, as well as offices for Undergraduate and Graduate Student Affairs.

The challenging grade change between the street and the library entrance makes it inaccessible for visitors. The library lacks a social space for students and visitors to gather. And the iconic statue of the West Chester Ram is tucked away off the main path beneath existing trees. The Campus Master Plan envisions reconnecting the Old Library to the campus by transforming S. Church Street into an accessible green corridor for pedestrians. This shift from a car-focused street to a pedestrian-friendly space will allow campus programs to extend outdoors, creating more vibrant, interconnected spaces. The landscape design proposes to relocate the ram statue to sit proudly at the end of the corridor, becoming a prominent gateway feature that draws people in and celebrates the university.

The design will introduce a new courtyard at the Old Library, which will serve as a gathering space that invites students and visitors to relax and socialize. The design team sees an opportunity to integrate art into the courtyard to enhance the sense of arrival to the library and create a unique experience.



Building Section with new Service Addition and Elevator

LEVEL 3

LEVEL 2

LEVEL 1

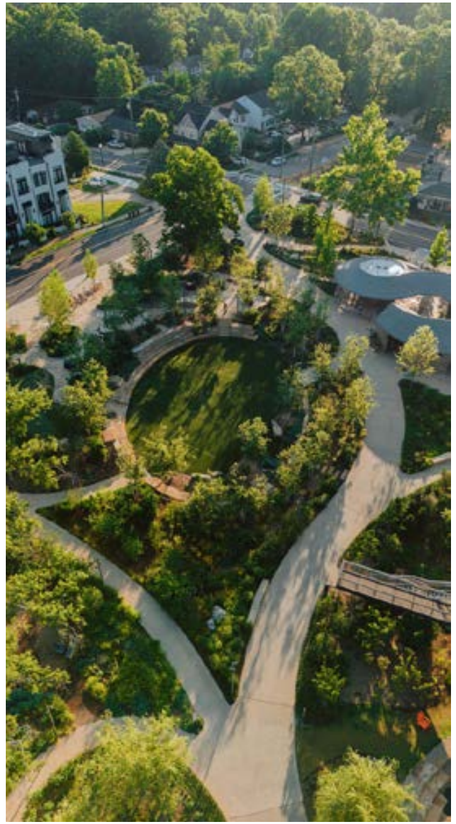
Plans, Landscape Plan, and Section from Previous Old Library Welcome Center Study

S CHURCH STREET & UNIVERSITY AVE IMPROVEMENTS

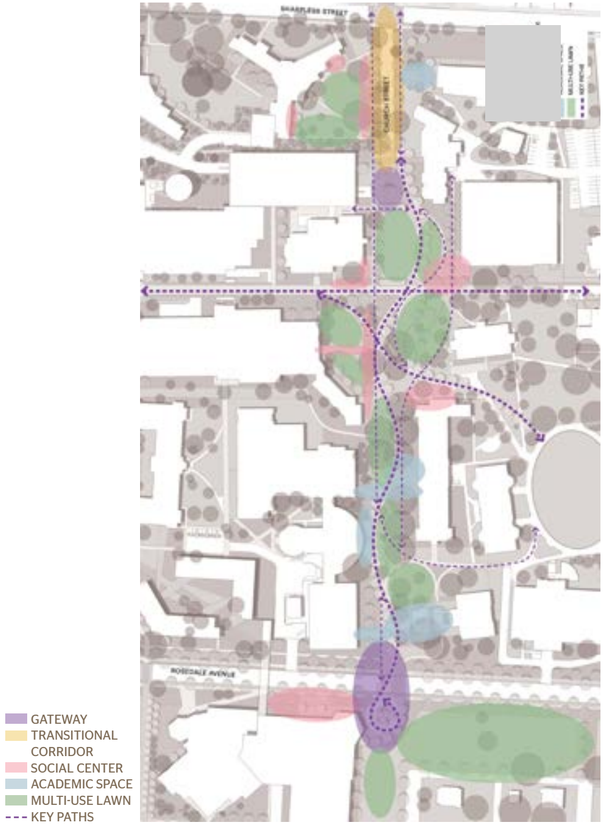
S Church Street and University Avenue offer an opportunity to tie the North campus together to support the creation of a true live and learn community. As West Chester University has built across these roadways, the character of the streets has remained fragmented with stately trees on both sides, although many continue to decline with age and stress. WCU has an opportunity to work with local governments to pedestrianize segments of these roadways within the heart of North Campus, unlocking pedestrian connectivity and safety throughout, and providing new programming to build upon the University's rich landscape character.

With the closing of S Church Street to regular, public vehicular traffic, a new green spine can be created knitting the campus together. The existing roadway can be raised and reinterpreted as a series of rooms and spaces that can be active or passive, large and small, while serving the variety of programmatic needs the University has. Service and emergency vehicle access would still be available, but concealed within the new structure of pathways and lawns.

A key linchpin to the new pedestrian mall will be the intersection of University Avenue and S Church Street. A new energy should be focused on this crossroads building upon the existing University Avenue lawn and capturing the flow of the existing President's Walk around the Academic quad. With the removal of vehicular traffic from this area, expanded lawns, plaza space and seating areas can capture and support significant campus activity and daily use of the University, students, and community.



Example Landscapes for Consideration



Church St & University Ave Landscape Plan

SHARPLESS ST
S NEW ST

DISTRICT B PROJECTS
NORTH CAMPUS HOUSING & SUPPORT

0-5 YEARS
1. Lawrence Hall - Demo & Build New Housing
2. Existing Geothermal Deferred Maintenance

6-10 YEARS
3. Tyson Hall - Full Reno w/ Addition
4. Goshen Hall - Full Reno w/ Addition

10+ YEARS
5. Killinger Hall - Demo & Build New Housing
6. Schmidt Hall - Full Reno w/ New Entry Addition

North Campus

LAWRENCE HALL

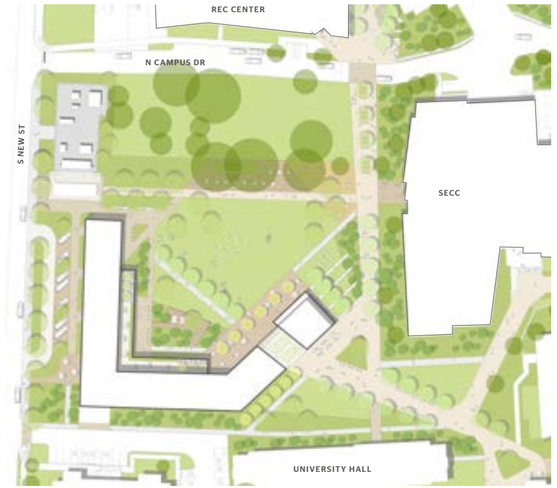
Demolition of the existing Lawrence Center and construction of new Lawrence Hall as part of a multi-year initiative to improve and increase the number of WCU-managed beds on campus. Prior to demolition, various Student Services and Support Programs will be decanted to temporary or permanent locations.

The first floor of the new Lawrence Hall will accommodate a variety of student-facing programs and services, including dining or cafe. The upper floors of the building are residential units. The new structure is positioned to take advantage of the existing open space known as Plum Run and will provide additional programmable open space for passive recreation, thus creating a new residential quad, bounded by Lawrence Hall, the SECC and the Student Recreation Center.

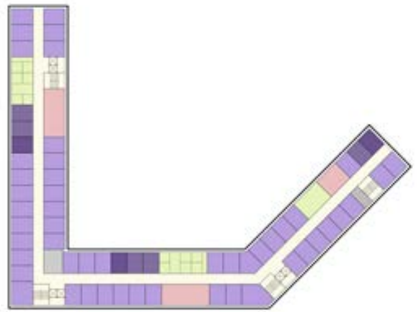
The existing landscape is characterized by significant topographic movement with the southeastern area near Hollinger Fieldhouse and University Hall sitting significantly higher than the northwestern corner of the site at the intersection of New Street and North Campus Drive at the interface of the Plum Run Creek corridor.

This new orientation supports focused transitions on grade allowing for a refocused plaza at Hollinger Fieldhouse and University Hall to support improved circulation through campus. The building's western face will also allow for a distillation of vehicular circulation and the creation of a dedicated bus stop and parking off of S New Street. Students will now be able to enter campus with clarity as to where they want to go and without concern of dodging car traffic.

The landscape takes cues from and reinforces the existing campus forest canopy and historic Plum Run creek. A mix of canopy and understory trees are intended to build upon the existing character while immersing students in a safe and ecologically friendly environment.



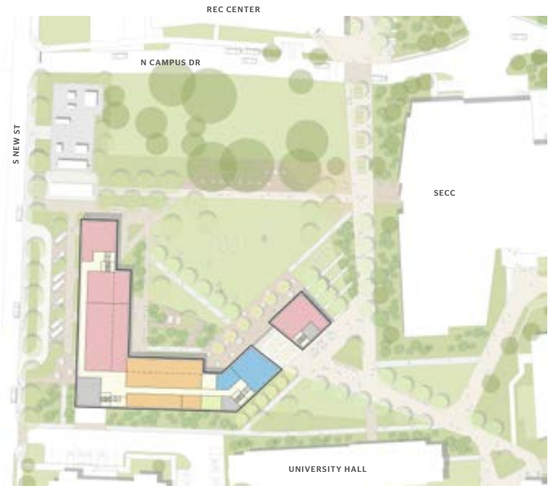
Site Plan



Typical Floor Plan

PROGRAM KEY

- ACADEMIC SUPPORT
- AMENITY
- BED - ADA SINGLE
- BED - DOUBLE
- BED - RA
- BUILDING SUPPORT
- CIRCULATION
- STUDENT AFFAIRS
- STUDENT SUPPORT
- TOILET ROOMS



Ground Floor Plan

KEY ATTRIBUTES

- Relocated bus stop
- Improved programmable outdoor space
- Direct campus connection

HOUSING METRICS

- 6-8 Stories
- 700-780 Bed Capacity
- Student Amenity (+/- 28 sf/student)
- Res Life support
- Live Learn Community Opportunity
- Building Support
- Dining Amenity

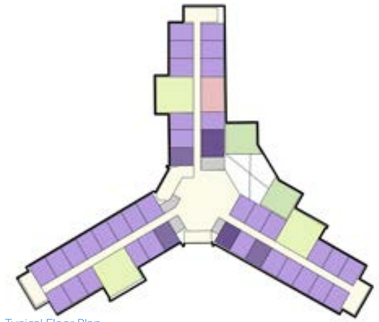
TYSON & GOSHEN HALLS

Multi-year phased renovation and upgrade of the existing buildings will improve parity with newer campus housing by rebalancing (reducing) the total number of beds per floor to provide a better quality of space for students. Building system and exterior façade upgrades are envisioned, along with strategic, modest additions to the central core of each building to improve functionality. Modifications to the loading service area at Goshen Hall are also recommended to reduce circulation clashes and improve the open space between the two Halls.

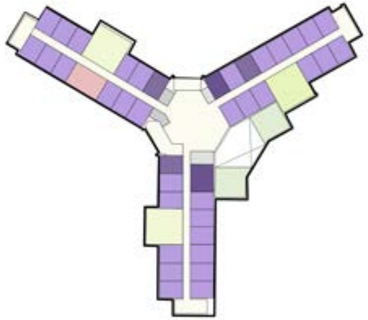
Tyson and Goshen Halls are located adjacent to residential neighborhoods to the north amongst a significant existing campus forest canopy, and have access to key amenities at the Student Recreation Center and Commons. The proposed landscape intends to build upon these key programming conditions.

To the west, active recreation is reinterpreted to enhance use and connectivity with the recreation center. Between Tyson and Goshen Halls, residential focused programming builds upon and connects to the interior design while immersing students in the ecological history of Plum Run Creek and the existing tree canopies. The circulation pulls students from the recreation run corridor at Lawrence Hall and SECC through Tyson and Goshen Halls, further separating pedestrians from vehicles and back of house use in this area.

Site Plan



Typical Floor Plan



PROGRAM KEY
- ACADEMIC SUPPORT
- AMENITY
- BED - ADA SINGLE
- BED - DOUBLE
- BED - RA
- BUILDING SUPPORT
- CIRCULATION
- STUDENT AFFAIRS
- STUDENT SUPPORT
- TOILET ROOMS

Ground Floor Plan

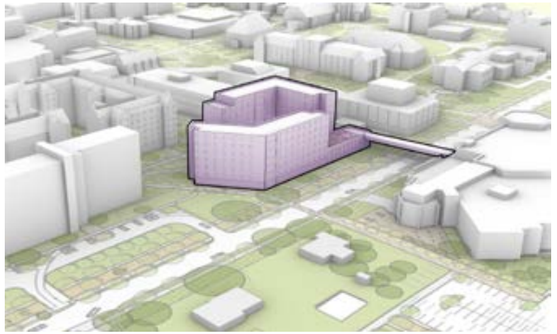
KEY ATTRIBUTES
- Improved service & pedestrian access
- Improved programmable exterior space
- Live Learn Community Opportunity with Addition

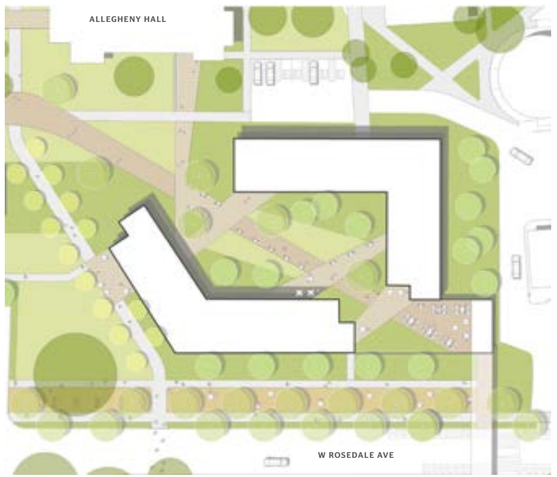
HOUSING METRICS
- 7 Stories
- 420-445 Bed Capacity
- Student Amenity (+/- 25 sf/student)
- Res Life support
- Improved Building Support

KILLINGER HALL

The existing older residence hall does not meet current expectations for residential life. Additionally, it does not take full advantage of the allowable height and density within the superblock. Similar to the objectives of a new Lawrence Hall, a re-envisioned Killinger Hall will significantly increase bed capacity and create opportunities for socialization space, program space, in addition to beds. Positioned along W Rosedale Avenue, a new Killinger Hall could potentially include a pedestrian bridge connecting to Sykes Student Union, across Rosedale, improving safety and creating greater campus synergies for full time and commuter students.

Killinger Hall's position at a nexus between the community lots, Sykes Student Union and amenities in the northern core of the campus will allow for programmatic variety of landscape spaces to support students and the school community.



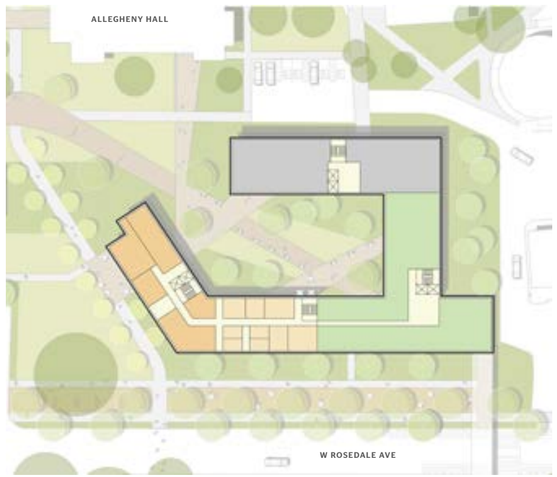


Site Plan

Typical Floor Plan

PROGRAM KEY

- ACADEMIC SUPPORT
- AMENITY
- BED - ADA SINGLE
- BED - DOUBLE
- BED - RA
- BUILDING SUPPORT
- CIRCULATION
- STUDENT AFFAIRS
- STUDENT SUPPORT
- TOILET ROOMS



Ground Floor Plan

KEY ATTRIBUTES

- Bridge connection to Sykes Student Union
- Live Learn Community Opportunity
- Elevated exterior program opportunity
- Create campus gateway

HOUSING METRICS

- 6-8 stories
- 545-585 Bed Capacity
- Student Amenity (+/- 30 sf/student)
- Res Life Support
- Building Support

SCHMIDT HALL

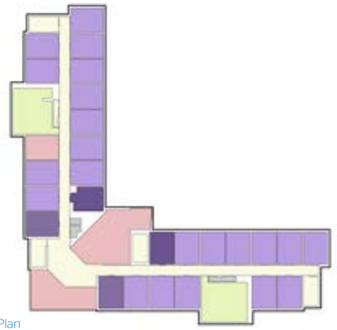
Due to the existing building's location, prominently sited at the corner of S New Street and W Rosedale Avenue, a building addition is recommended to reinforce this corner as a campus gateway and to provide the necessary space to increase amenity offerings. The basement level should also be expanded to create opportunities for daylight access to basement programs.

At the ground level, a lobby expansion affords the opportunity to resolve accessibility issues, as well create a more welcoming and secure entry lobby commons. Renovations to the existing building include overall interior upgrades such as lighting, signage, building systems and security, as well as exterior improvements.

The improved landscape removes the parking in front of Schmidt Hall and refocuses the building's main entrance to the streetscape. A path connects the courtyard to a plaza that sits at the intersection of the two streets, creating a transition zone and arrival moment for students. The landscape vision proposes an art installation that sits at the center of this plaza, further enhancing the sense of prominence and arrival.

At the rear side of Schmidt Hall, another courtyard space is introduced, mirroring the experience at the entry and providing a secondary area for students with more privacy. Existing trees are preserved, and flexible lawns border the pathways and building, offering spaces for recreation and relaxation.

Site Plan



Typical Floor Plan

PROGRAM KEY

- ACADEMIC SUPPORT
- AMENITY
- BED - ADA SINGLE
- BED - DOUBLE
- BED - RA
- BUILDING SUPPORT
- CIRCULATION
- STUDENT AFFAIRS
- STUDENT SUPPORT
- TOILET ROOMS

Ground Floor Plan

KEY ATTRIBUTES

- Improve accessibility
- Improve programmable exterior space

HOUSING METRICS

- 8 stories
- 3720-400 Bed Capacity
- Student Amenity (+/- 26 sf/student)
- Res Life Support
- Building Support

DISTRICT C PROJECTS
NORTH CAMPUS STUDENT SERVICES & SUPPORT

0-5 YEARS
1. Sykes Expansion - Student Services & Welcome Center
2. Rosedale Ave Improvements
3. Existing Geothermal Deferred Maintenance

6-10 YEARS
4. Future Open Space (Across S Church St)

10+ YEARS
5. Sykes Student Union Parking Deck
6. Recreation Improvements (Corner of W Rosedale Ave & S New St)

North Campus

SYKES STUDENT UNION EXPANSION

Sykes Student Union serves the WCU community and is an important destination for commuter students and full-time students. The existing building is at capacity and would benefit from increased space for dining, bookstore, office space for student organizations and multi-purpose space for large events and lectures.

WELCOME CENTER

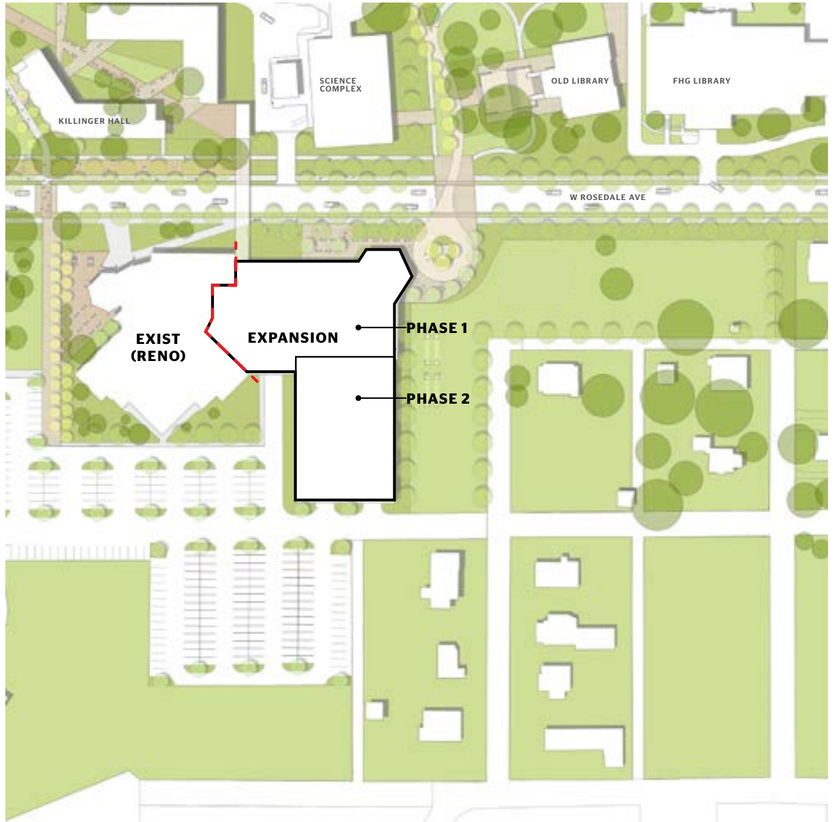
As part of the Sykes Student Union expansion, a new Welcome Center is recommended to be positioned directly east of Sykes in order to share core functions, access to dining, restrooms, and multi-use meeting space. The Welcome Center program would contain gathering and presentation rooms, as well as offices and support space for Admissions.

WELCOME CENTER PLAZA

The front door of the Welcome Center can be situated across from Church Street, along Rosedale Avenue, with the potential to create a new plaza or courtyard for tour groups to gather. This new exterior space is ideally located at the foot of Church Street and serves as a new gateway to the campus. One or more of the existing houses that are slated for demolition could also be an opportunity to create a new programmable open space across Church Street that is accessible and visible.

FUTURE PARKING DECK

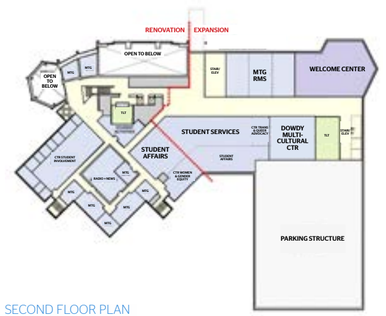
A multi-level parking garage is positioned behind the Welcome Center and can be built in the future, providing direct access to both the Welcome Center and the proposed new Welcome Center Plaza.



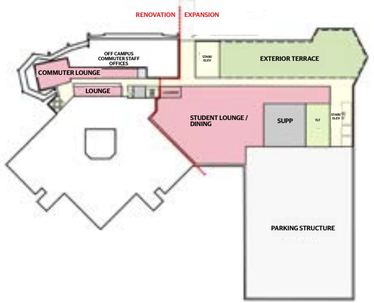
Site Plan

GROUND FLOOR

FIRST FLOOR PLAN



SECOND FLOOR PLAN



THIRD FLOOR PLAN

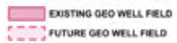
S NEW ST & W ROSEDALE AVE RECREATION AREA

The S New St. & W Rosedale Ave Recreation area is designed as a dynamic hub for outdoor sports and recreation, featuring a series of flexible sports courts that cater to a variety of activities. The courts are integrated into a richly planted landscape, providing a visually appealing and calming environment that fosters focus and engagement. Surrounding this active space, thoughtful landscape design helps to screen the adjacent parking lot and busy street, creating a more peaceful and immersive setting for students. This separation from the distractions of traffic and parking enhances the experience, allowing students to concentrate fully on their training or play. The landscape not only supports the recreational needs of the campus but also contributes to the overall sense of community and well-being.

New Recreation Area at corner of S New St & W Rosedale Ave

GEOTHERMAL SYSTEM

Ongoing maintenance and improvement to the capacity of the existing geothermal system is recommended as part of the overall Buildings & Grounds deferred maintenance program. The existing sytem appears to be operating beyond capacity (thus inefficiently) and in need of immediate improvements and expansion. Repair of existing sysgtems and previously identified well field expansion(s) should be implemented.



ROSEDALE AVENUE IMPROVEMENTS

Rosedale Avenue is a significant edge of West Chester University's North campus because it is anchored by two existing gateways at S High Street and S New Street. Both of these intersections are vital to the university experience as the intersection of High Street is a significant link to the region connecting the core of West Chester Borough to the US 202 corridor. S New Street is the primary physical thoroughfare connection between South and North Campus.

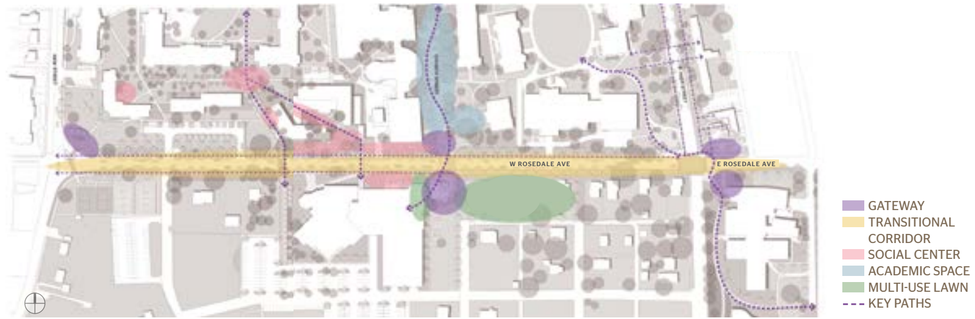
Between these gateways, the streetscape is varied with great assets in large street trees near Killinger Hall and Sykes Student Union, but also fraught with numerous curb cuts and limited safe pedestrian crossing opportunities, creating a lack of cohesiveness. Limited sidewalk capacity exacerbates the unfriendly conditions for pedestrians.

The Rosedale corridor is envisioned as two separate character zones along North Campus with the S Church Street intersection serving as the transition. Heading west from S Church Street to S New Street, the streetscape should redefine its focus to pedestrians leveraging its adjacency to Schmidt, Wayne and Killinger Halls. The relocation of existing parking at Schmidt Hall to Wayne Hall will open the corner of S New Street and W Rosedale Avenue to becoming a more welcoming gateway to campus. In addition, the reductions of curb cuts, the campus edge along Rosedale Avenue should be reconfigured to enlarge the planting street for street tree replanting and a widened sidewalk to support better pedestrian flow. Reducing the lawn areas will also be key and these spaces should be leveraged for supplemental flex programming and seating.

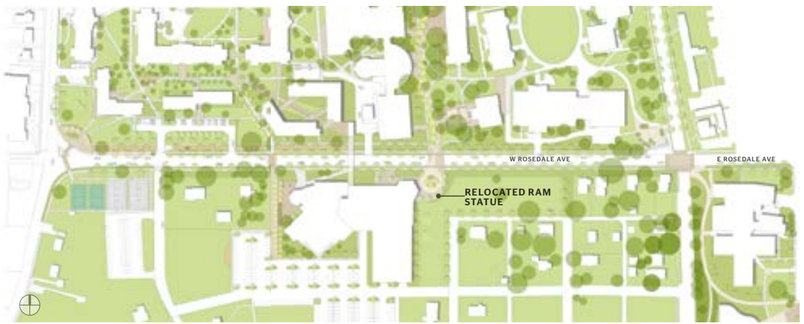
Pedestrian safety at key crosswalks, such as those at Killinger Hall and Sykes Student Union, can be improved by adding traffic calming measures including raising the crosswalk to curb height. At the S Church Street intersection, a new, significant plaza is suggested, linking the entry to the proposed Welcome Center with Church Street Walk and the iconic Old Library with the Ram Statue.

With S Church Street and the Old Library serving as the transition to the Eastern Segment of Rosedale, the emphasis should be on reducing the presence of parking at the back of FHG Library fronting and building upon the existing Gateway at S High Street. A focus should be on density of planting along this edge and building upon the street tree forest canopy to the East. Tactful use of paving materials should highlight crosswalks and curb cuts while blending the plaza into the streetscape.

Example Landscape Opportunities for Consideration



Rosedale Ave - Landscape Programmatic Framework



Rosedale Ave Improvements Site Plan

DISTRICT D PROJECTS
EAST CAMPUS ACADEMIC & SUPPORT

0-5 YEARS
1. Temporary Housing
2. Removal of Temporary Housing & Reinstate M1 Lot as Parking

6-10 YEARS

10+ YEARS
3. E.O. Bull Center for the Arts Addition & Landscape improvements
4. Planning Study for Tanglewood Residence & Grounds (Highest and Best Use of Property)
5. President's Walk Extension (Landscape)

CAMPUS SUPPORT PROJECTS*
*Campus Support Projects can be implemented at any time
- 210 & 220 East Rosedale
- Maintenance Garage
- 201 Carter Utilization
- 204 Carter vacant
- Alumni & Foundation Center
- 887 Matlack – relocate public safety

North Campus

TEMPORARY HOUSING

The University elected to implement a plan to provide 128 beds in a temporary modular configuration at the site identified as Lot M-1 (former parking area). The provision of these modular units are not "additional" beds for the University's total bed count but are intended as swing space to allow the University to take existing beds off-line for deferred maintenance and renovation work that cannot be achieved over the course of a summer term.

Temporary Housing Plan

E.O. BULL EXPANSION & LANDSCAPE IMPROVEMENTS

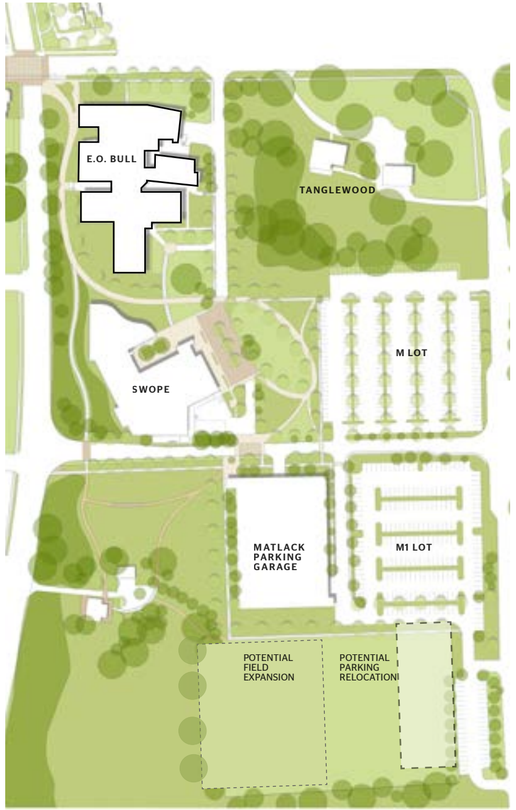
Landscape, streetscape, lighting and signage upgrades are anticipated for the Arts & Music Buildings. Interior renovations, accessibility and building system upgrades are included in the overall deferred maintenance program. There is also potential to expand the footprint of E.O. Bull along Rosedale Avenue to provide increased studio and event space.

PLANNING STUDY FOR PRESIDENT'S WALK AND TANGLEWOOD RESIDENCE & GROUNDS

This plan shows President's Walk redesigned to function as a prominent connector for students and visitors arriving at E.O Bull Center and the Swope Music Building.

The new plaza is an expansion of the existing entry to Swope and establishes a more prominent gateway to the campus. The area will include water features, flexible seating areas, and tree groves that can host various groups of people and program. To accommodate the new plaza, a portion of the M Lot could be relocated south of M1 Lot with some minor adjustments to the boundaries of the existing field.

A more focused programming study to understand the issues and potential for these spaces is recommended as part of the master plan.



East Campus Site Plan

DISTRICT E PROJECTS
SOUTH CAMPUS HOUSING & SUPPORT

0-5 YEARS
1. South Campus Apartments Renovation & Vertical Expansion

6-10 YEARS
2. New South Campus Commons Building
2A. Alternate Location for Commons Building
3. South Campus Gateway Connection to Sturzebecker and Athletic Fields

10+ YEARS

South Campus

RENOVATION & ADDITION TO EXISTING STUDENT HOUSING

South Campus Apartments need complete renovation to achieve parity with USH-managed beds. As part of the renovation strategy, it is possible to increase the bed-count if another floor is added to each of the buildings. In addition, it is recommended to completely renovate the systems and finishes of each building.

GLEN ECHO SITE

The large tract of land, known as the Glen Echo site, is situated between the student apartments and the neighborhood. By increasing the bed-count through the multi-year renovations to South Campus Apartments, the Glen Echo site is recommended to remain an open recreational field, as a buffer to the neighborhood.

Site Plan

KEY ATTRIBUTES

- Complete renovation of all building systems & finishes
- Addition of full story (3rd floor to each building to add 4 units = 20 beds per building)
- Phased over 6 years

HOUSING METRICS

- 11 Buildings Wood Framed Construction
- 7 Buildings 3 1/2 Story
- 4 Buildings 3 Story
- 719 Beds Total (220 New Apartment Style Beds)

NEW COMMUNITY BUILDING

The existing Southside building at the edge of the Glen Echo site can be renovated and expanded to serve anticipated increased population on South Campus. This location, however, is not as well integrated with the new entry drive and pathway connecting to Sturzebecker Health Sciences Center.

Alternatively, a new Commons Building with dining, multi-purpose rooms and event space can be located within the existing surface parking lot between the South Campus Apartments and the Village Apartments.

This shared-use building can be programmed to offer dining options that align with athletic and training programs and help to create a sense of community for the South Campus.

There is also an opportunity to consider underutilized facilities, such as the McCoy Farm House & McCoy Barn, to better serve South Campus' community needs.

Site Plan

NEW GATEWAY CONNECTION

Currently both the Sturzebecker Health Science Center, Ferrell Stadium with associated athletic facilities and South Campus apartments lack defined entrances highlighting their prominence and connection to West Chester University's North campus. With the realignment of the athletics entrance and a new central entry drive to the apartments, the four-way intersection will create a new sense of hierarchy and sense of place for the South campus through improved streetscape, pathway design, lighting and signage.

The new entry drive and pathway connecting Sturzebecker with the residential zone, is anchored by the proposed new Community Building, which is situated at the end of the roadway.

Site Plan

DISTRICT F PROJECTS
SOUTH CAMPUS ATHLETICS & SUPPORT

0-5 YEARS
1. Sturzebecker Renovation

6-10 YEARS
2. Farrell Stadium Improvements
3. Athletic field amenities (restrooms, concessions, etc)

10+ YEARS
4. Gordon Preserve Trail Connections
5. New St. Multi-modal Transportation

South Campus

STURZEBECKER RENOVATION

The renovation of Sturzebecker is ongoing and scheduled for completion by year 2029.

FARRELL STADIUM IMPROVEMENTS

Long-term recommendations include renovation and technology upgrades to the press box, as well as related projects that are part of the ongoing deferred maintenance program.

ATHLETIC FIELD AMENITIES

Ongoing care and maintenance of the athletic fields as part of the deferred maintenance program.

GORDON NATURAL PRESERVE

The Master Plan aims to improve existing walking connectivity to the Gordon Preserve and to better tie into the adjacent residential community. Through a network of paths and a resilient planting palette, this landscape design aims to strengthen the community's relationship to the Preserve while also protecting its ecosystems and habitats.

S NEW STREET MULTI-MODAL TRANSPORTATION

Adding a bike lane along S New Street to improve safety and connections between North and South campus is recommended. Note that this would require collaboration and input between WCU and the surrounding community.

Sturzebecker Health Science Center

Farrell Stadium

Gordon Natural Preserve

Proposed bike lane along S New St Lined with Flexible Bollards for Safety

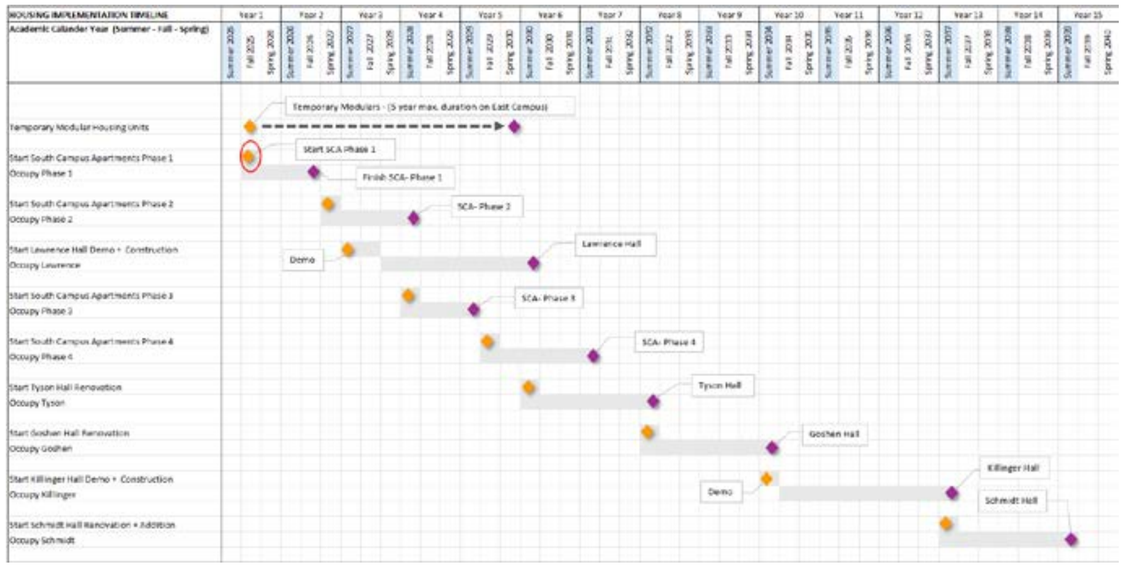
SECTION 06.
IMPLEMENTATION STRATEGY

A. TIMELINE

OVERVIEW

Construction and renovation timelines for student housing expansion projects are the primary determinants for overall master plan project implementation. The chart below indicates the strategy to increase the number of beds on camp over the next decade.

The following sequencing of recommended projects outlined in the master plan can be subject to the availability of funding, changes to project priorities or other factors that impact the development of projects.



Housing Implementation Timeline

2025 – 2030	2031 – 2035	2035
0-5 YEARS	**6-10 YEARS**	**10+ YEARS**
• College Arms Apartments Renovation • Science Center Complex Renovation • Old Library Renovation • FHG Library Renovation • Lawrence Hall – Demo & Build New Housing • Existing Geothermal Deferred Maintenance • Sykes Student Union Expansion (Student Services, Dining, & Welcome Center) • Rosedale Ave Improvements • Temporary Housing • Removal of temporary housing & reinstate M1 Lot as parking • South Campus Apartments – Full Reno w/Vertical Expansion • Improve or Build New South Campus Commons Building (location to be determined) • Renovate Sturzebecker	• S Church Street & University Ave Improvements • Tyson Hall – Full Reno w/ Addition • Goshen Hall – Full Reno w/ Addition • Future Open Space (Across Church St) • South Campus Gateway connection to Sturzebecker and athletic fields • Farrell Stadium Improvements • Athletic field amenities (restrooms, concessions, etc)	• Land acquisition to complete "superblock" (Corner of Sharpless & S High St) • Killinger Hall – Demo & Build New Housing • Schmidt Hall – Full Reno w/ New Entry Addition • Sykes Student Union Parking Deck • Recreation Improvements (corner of W Rosedale Ave & S New St) • EO Bull Center for the Arts Expansion & Landscape Improvements • Planning Study for Tanglewood Residence & Grounds (highest and best use of property) • President's Walk Extension (Landscape) • Gordon Preserve Trail Connections • S New St Multi-Modal Transportation

CMP Project Implementation Timeline

*The following campus support projects which are not included in the above timeline can be implemented at any time

- 210 & 220 East Rosedale
- Maintenance Garage
- 201 Carter Utilization
- 204 Carter vacant
- Alumni & Foundation Center
- 887 Matlack – relocate public safety

PROJECT SEQUENCING (0-5 YEARS)

1. South Campus Apartments, with the intent for all beds to be online within 6 years. During the last year, temporary housing can be taken down and areas returned to use as surface parking.
2. South Campus Commons (alternate location 2A)
3. Sturzebecker Renovation
4. New Lawrence Hall, including decanting existing Lawrence Center programs, new beds, student support services, café and recreational space.
5. Science Center Complex Renovation
6. Old Library Renovation
7. FHG Library Renovation
8. College Arms Apartments Renovation
9. Existing geothermal deferred maintenance
10. Rosedale Avenue Gateway and improvements including traffic calming at pedestrian crossings, landscape, signage, and a new signal at intersection of W Rosedale and S New Street.
11. Renovation and expansion of Sykes Student Union to include included Dining, Student Support, Welcome Center and Admissions.
12. Temporary Housing
13. Remove temporary housing & reinstate M1 Lot as parking

CAMPUS SUPPORT PROJECTS*

*Campus support projects can be implemented at any time

- 210 & 220 East Rosedale
- Maintenance Garage
- 201 Carter Utilization
- 204 Carter vacant
- Alumni & Foundation Center
- 887 Matlack – relocate public safety

South Campus

North Campus

PROJECT SEQUENCING (6-10 YEARS)

1. South Campus Gateway, including connecting paths linking the proposed Commons Building to Sturzebecker Health Sciences Center and athletic fields.
2. Farrell Stadium Improvements.
3. Athletic Field Amenities.
4. Tyson Hall Renovation w/ Addition.
5. Goshen Hall Renovation w/ Addition.
6. S Church Street & University Ave Improvements, including conversion to pedestrian way.
7. Future Open Space adjacent to the new Welcome Center Plaza along Rosedale Avenue.

South Campus

North Campus

PROJECT SEQUENCING (10+ YEARS)

1. S New Street Multi-modal campus connector (bike lane & signage).
2. Trail connections at Gordon Environmental Center.
3. Schmidt Hall Full Renovation & New Entry Addition
4. Recreation Improvements at the corner of S New Street and W Rosedale Avenue.
5. Demolition of existing Killinger Hall and construction of new Killinger Hall for housing.
6. Construct multi-level Parking Garage behind Sykes Student Union.
7. Land Acquisition for properties at the corner of Sharpless and High Streets.
8. President's Walk Extension (Landscape)
9. E.O. Bull Center for the Arts Expansion & Landscape Improvements.
10. Planning study for President's Walk and Tanglewood Residence & Grounds.

South Campus

North Campus

WCU
WEST CHESTER
UNIVERSITY

EWING
COLE

OJB

CVE ChesterValley
ENGINEERS

TPD

PORTER Khouw Consulting
Foodservice Planning & Design
Social Architecture

BECKER & FRONDORF
project management + cost estimating

pfm

WATCHDOG
REAL ESTATE PROJECT MANAGEMENT

BEFORE THE BOROUGH COUNCIL OF WEST CHESTER BOROUGH

In Re: West Chester University of Pennsylvania's Application for Conditional Use for Approval of University Campus Plan

Narrative in Support of Application

I. Introduction & Background

West Chester University of the Pennsylvania State System of Higher Education (the "Applicant") is the record owner of those subject parcels of real property located in the Planned University Campus District of West Chester Borough (together, the "Properties"). The Properties are used for educational uses with associated improvements and accessory uses and improvements incidental to the existing educational use.

The Applicant seeks conditional use approval of its University Campus Plan providing certain University projects in West Chester Borough (the "Borough") over the life of the University Campus Plan. In conformity with the stated purpose of the Planned University Campus District, the Applicant's University Main Campus Plan provides for the orderly, coordinated, and unified development of its campus and related uses through long-range planning, strengthens and preserves surrounding neighborhoods, and advances the mission of West Chester University of the Pennsylvania State System of Higher Education.

II. Request for Conditional Use Approving University Campus Plan

The Applicant requests that the Borough Council grant Conditional Use approval for its University Main Campus Plan in the Borough pursuant to Section 112-314 of the West Chester Borough Zoning Ordinance ("Ordinance"), subject to future land development approval for each specified project.

The Applicant is specifically seeking approval of the enclosed "Master Plan for West Chester University Campus Improvements", which constitutes the Master Site Plan component required per Section 112-314.C(3)(f) of the Ordinance ("Master Site Plan"). The University Campus Plan consists of the Master Site Plan as well as the other components required by Section 112-314.C(3) of the Ordinance. For all projects shown on the Master Site Plan, the ultimate land development application for each project will reflect the actual building footprint, layout, and related details.

The Applicant will demonstrate compliance with the Ordinance's criteria for University Campus Plans and their associated components, Conditional Use criteria, and all other applicable requirements at the time of the hearing on the instant application.

III. Conclusion

The Applicant will present testimony and evidence in support of its Application at the time of the hearing before the Borough Council and hereby requests approval of the Application.

Respectfully submitted,

MacELREE HARVEY, LTD.

Dated: March 31, 2025

_____

Brian L. Nagle
MacElree Harvey, Ltd.
17 West Miner Street
P.O. Box 660
West Chester, PA 19381-0660
(610) 436-0100
Attorney for Applicant

BOROUGH OF WEST CHESTER
CONDITIONAL USE APPLICATION

Property Address: See enclosed plan showing subject West Chester University of Pennsylvania properties in West Chester Borough

Name of Applicant: West Chester University of Pennsylvania

Mailing Address: 700 S. High Street, West Chester, PA 19382

Telephone Number: 610-436-1000 / Fax Number: N/A

Email Address: N/A

Attorney: Brian L. Nagle, Esquire / MacElree Harvey, Ltd.

Mailing Address: 700 S. High Street, West Chester, PA 19382

Telephone Number: 610-840-0224 / Fax Number: 610-430-8245

Zoning District: Planned University Campus District / Proposed Use:
Approval of a "University Campus Plan" for the university-owned property in West Chester Borough.
See Narrative in Support of Application.

Zoning Code Sections Relating to Application: Section 112-314 of the West Chester Borough Zoning Ordinance

***** Attach report in accordance with Section 112-113 and any specific section governing the proposed conditional use with the appropriate fee.***

Note: All conditional use applications will be forwarded to the Borough's Planning Commission for comment. Applicant attendance is recommended. Historic carriage house applications will be forwarded to the Borough's Historical and Architectural Review Board for review and comment. Applicant attendance is recommended.

_____ _____

Signature of Applicant Brian L. Nagle, Esquire, Attorney-in-Fact ***Date***

For Borough Official Use Only

*Fee Paid $*_____ *Date Application Submitted*_____

Borough Official _____

Name Signature Application #

MASTER PLAN
FOR
WEST CHESTER UNIVERSITY CAMPUS IMPROVEMENTS
WEST CHESTER BOROUGH - WEST GOSHEN & EAST BRADFORD TOWNSHIPS - CHESTER COUNTY - PENNSYLVANIA

WEST GOSHEN TOWNSHIP
PLANNED UNIVERSITY MAIN CAMPUS OVERLAY DISTRICT CLASS 1 PUC1

	REQUIRED	PROPOSED
MAXIMUM LOT COVERAGE	50%	15.3%
MINIMUM GREEN AREA	15%	50.5%
SETBACKS		
PRINCIPAL USE:		
CONTIGUOUS TO RESIDENTIAL USE	50 FT.	
ALONG W. ROSEDALE AVE.	20 FT.	
ALL OTHER BOUNDARIES	30 FT.	
SURFACE PARKING LOTS:		
CONTIGUOUS TO RESIDENTIAL USE	25 FT.	
ALL OTHER BOUNDARIES	10 FT.	
MAXIMUM BUILDING HEIGHT	60 FT.	
MINIMUM BUILDING SEPARATION[3]	20 FT.	

WEST GOSHEN TOWNSHIP
PLANNED UNIVERSITY MAIN CAMPUS OVERLAY DISTRICT CLASS 2 PUC2

	REQUIRED	PROPOSED
MAXIMUM LOT COVERAGE	50%	13.6%
MINIMUM GREEN AREA	15%	54.6%
SETBACKS		
PRINCIPAL USE:		
CONTIGUOUS TO RESIDENTIAL USE	50 FT.	
ALONG W. ROSEDALE AVE.	20 FT.	
ALL OTHER BOUNDARIES	30 FT.	
SURFACE PARKING LOTS:		
CONTIGUOUS TO RESIDENTIAL USE	25 FT.	
ALL OTHER BOUNDARIES	10 FT.	
MAXIMUM BUILDING HEIGHT	60 FT.	
MINIMUM BUILDING SEPARATION[3]	20 FT.	

WEST GOSHEN TOWNSHIP
PLANNED UNIVERSITY MAIN CAMPUS OVERLAY DISTRICT CLASS 3 PUC3

	REQUIRED	PROPOSED
MAXIMUM LOT COVERAGE	50%	1.7%
MINIMUM GREEN AREA	15%	89.2%
SETBACKS		
PRINCIPAL USE:		
CONTIGUOUS TO RESIDENTIAL USE	50 FT.	
ALONG E. ROSEDALE AVE.	20 FT.	
ALL OTHER BOUNDARIES	30 FT.	
SURFACE PARKING LOTS:		
CONTIGUOUS TO RESIDENTIAL USE	25 FT.	
ALL OTHER BOUNDARIES	10 FT.	
MAXIMUM BUILDING HEIGHT	60 FT.	
MINIMUM BUILDING SEPARATION[3]	20 FT.	

WEST GOSHEN TOWNSHIP
PLANNED UNIVERSITY MAIN CAMPUS OVERLAY DISTRICT CLASS 4 PUC4

	REQUIRED	PROPOSED	
MAXIMUM LOT COVERAGE	50%	24.0%	NO DEVELOPMENT PROPOSED IN CLASS 4
MINIMUM GREEN AREA	15%	40.1%	
SETBACKS			
PRINCIPAL USE:			
CONTIGUOUS TO RESIDENTIAL USE	50 FT.		
ALONG W. ROSEDALE AVE.	20 FT.		
ALL OTHER BOUNDARIES	30 FT.		
SURFACE PARKING LOTS:			
CONTIGUOUS TO RESIDENTIAL USE	25 FT.		
ALL OTHER BOUNDARIES	10 FT.		
MAXIMUM BUILDING HEIGHT	60 FT.		
MINIMUM BUILDING SEPARATION[3]	20 FT.		

WEST CHESTER BOROUGH
PLANNED UNIVERSITY CAMPUS DISTRICT – PUC

	REQUIRED	PROPOSED
SETBACKS		
MINIMUM PERIMETER	20 FEET	
CONTIGUOUS TO SHARPLESS ST	30 FEET	
SURFACE PARKING LOTS		
MINIMUM SETBACK	20 FEET	
CONTIGUOUS TO RESIDENTIAL USE	30 FEET	
MAXIMUM IMPERVIOUS COVERAGE	80%	52.9%
MINIMUM GREEN SPACE	20%	47.1%
MAXIMUM BUILDING HEIGHT	90 FEET	

EAST BRADFORD TOWNSHIP
PLANNED UNIVERSITY MAIN CAMPUS OVERLAY – PU

IMPROVEMENTS IN EAST BRADFORD TOWNSHIP ARE SHOWN FOR INFORMATION ONLY

SHEET INDEX

SHEET NO.	TITLE
	COVER SHEET
2A	NORTH CAMPUS 0–5 YEAR IMPROVEMENTS
2B	SOUTH CAMPUS 0–5 YEAR IMPROVEMENTS
3A	NORTH CAMPUS 6–10 YEAR IMPROVEMENTS
3B	SOUTH CAMPUS 6–10 YEAR IMPROVEMENTS
4A	NORTH CAMPUS 10+ YEAR IMPROVEMENTS
4B	SOUTH CAMPUS 10+ YEAR IMPROVEMENTS

GENERAL NOTES

1. APPLICANT:
   WEST CHESTER UNIVERSITY OF THE PENNSYLVANIA
   STATE SYSTEM OF HIGHER EDUCATION
   201 CARTER DRIVE, SUITE 200
   WEST CHESTER, PA 19383
2. RECORD OWNER:
   PROPERTIES OF THE UNIVERSITY ARE OWNED BY A COMBINATION OF ENTITIES INCLUDING, THE COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF GENERAL SERVICES, AND WEST CHESTER UNIVERSITY.
3. CONTACT INFORMATION:
   DAVID MCNAMARA
   SENIOR ASSOCIATE VICE PRESIDENT OF FACILITIES
   201 CARTER DRIVE, ROOM 327
   WEST CHESTER, PA 19382
   DMCNAMARA@WCUPA.EDU
4. SITE BEING:

   NORTH CAMPUS: BOROUGH OF WEST CHESTER AND WEST GOSHEN TOWNSHIP

   SUPERBLOCK PARCELS BOUNDED BY THE NORTHERLY SIDE OF WEST ROSEDALE AVENUE, THE WESTERLY SIDE OF HIGH STREET, THE SOUTHERLY SIDE OF SHARPLESS STREET, AND THE EASTERLY SIDE OF SOUTH NEW STREET.

   NORTH CAMPUS PARCELS INCLUDING PLANNED UNIVERSITY BUILDINGS AND STUDENT RESIDENTIAL BUILDINGS ALONG THE SOUTHERLY SIDE OF WEST ROSEDALE AVENUE, THE EASTERLY SIDE OF HIGH STREET, AND MATLACK STREET.

   SOUTH CAMPUS: EAST BRADFORD TOWNSHIP AND WEST GOSHEN TOWNSHIP

   SOUTH CAMPUS PARCELS INCLUDING PLANNED UNIVERSITY BUILDINGS AND STUDENT RESIDENTIAL BUILDINGS ALONG SOUTH CAMPUS DRIVE, CAREY DRIVE, SOUTH NEW STREET AND THE ATHLETICS STADIUM.
5. TOPOGRAPHY AND IMPROVEMENTS ARE COMPILED FROM PRIOR LAND DEVELOPMENTS PLANS PREPARED BY CHESTER VALLEY ENGINEERS AND OTHERS. INFORMATION IS FROM FIELD SURVEYING, AERIAL TOPOGRAPHY AND PUBLICLY AVAILABLE DATA.
6. THE UNIVERSITY IS SERVED BY EXISTING PUBLIC SEWER AND WATER SERVICES.

Scale in Feet
0 60 180 300 600 900 1,200
120 240
1" = 300'

UNIFORM PARCEL IDENTIFIER:

Appendix G

COVER SHEET

NO.	DATE	REVISION

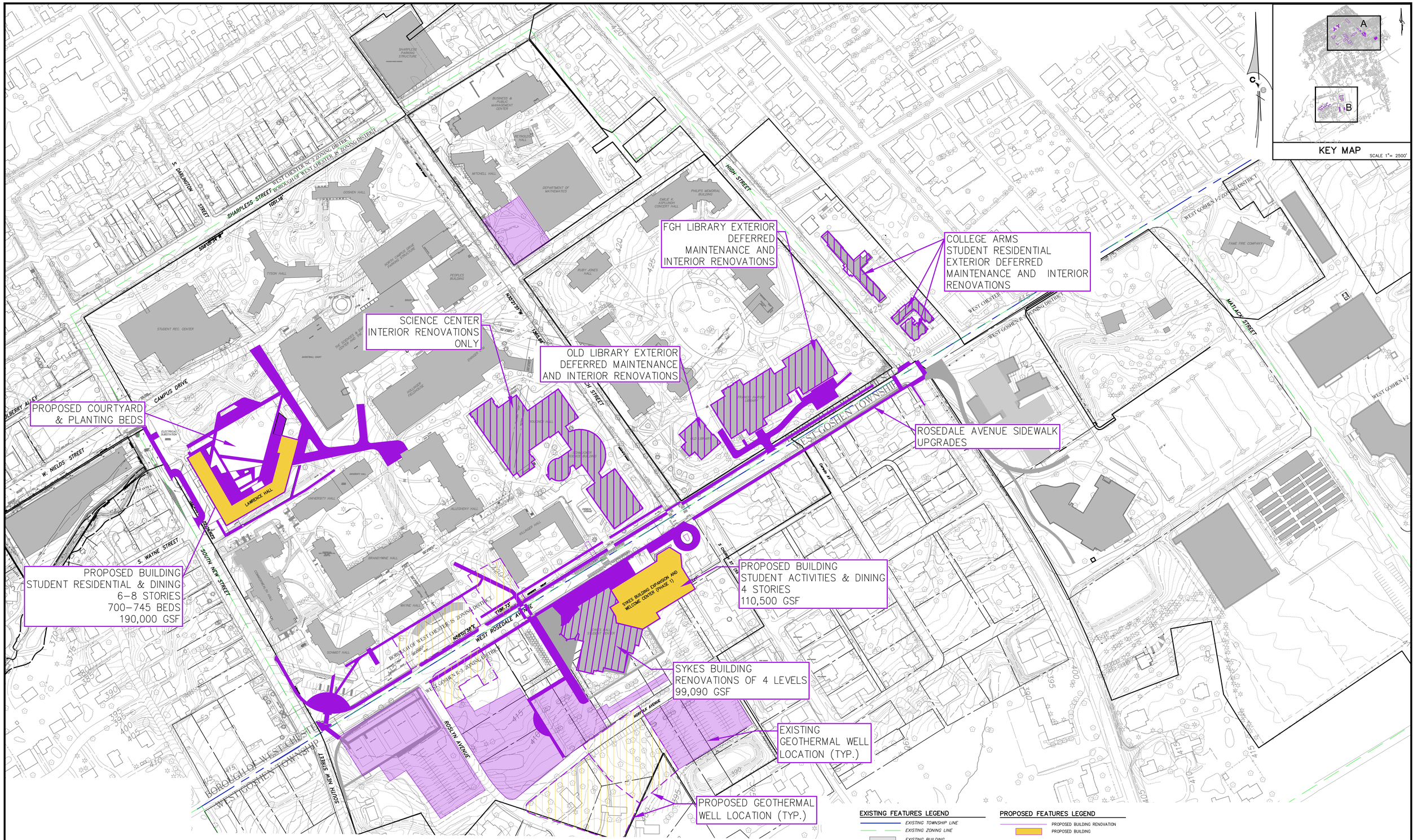
MASTER PLAN
FOR
WEST CHESTER UNIVERSITY
WEST GOSHEN TOWNSHIP, EAST BRADFORD TOWNSHIP, WEST CHESTER BOROUGH - CHESTER COUNTY - PENNSYLVANIA

ChesterValley ENGINEERS, INC.
112 Moores Road, Suite 200, Malvern, PA 19355
610-644-4623
www.chestervalley.com

PROJECT NO.	F.B.
22002	

SCALE	DATE	DRAWN BY	CHECKED BY	DRAWING
1" = 300'	04/02/2025	ND	NC	

J:\CVE-22000\22002-West Chester University\dwg\Sheets\SAT 01 COVER.dwg, 4/7/2025 9:56:48 AM,



0–5 YEARS (NORTH CAMPUS)

- NEW LAWRENCE HALL, INCLUDING DECANTING EXISTING LAWRENCE CENTER PROGRAMS, NEW BEDS, STUDENT SUPPORT SERVICES, CAFÉ AND RECREATIONAL SPACE.
- SCIENCE CENTER COMPLEX RENOVATION
- OLD LIBRARY RENOVATION
- FHG LIBRARY RENOVATION
- COLLEGE ARMS APARTMENTS RENOVATION
- EXISTING GEOTHERMAL DEFERRED MAINTENANCE
- ROSEDALE AVENUE GATEWAY AND IMPROVEMENTS INCLUDING TRAFFIC CALMING AT PEDESTRIAN CROSSINGS, LANDSCAPE, SIGNAGE, AND A NEW SIGNAL AT INTERSECTION OF W ROSEDALE AND S NEW STREET.
- RENOVATION AND EXPANSION OF SYKES STUDENT UNION TO INCLUDE INCLUDED DINING, STUDENT SUPPORT, WELCOME CENTER AND ADMISSIONS.
- TEMPORARY HOUSING
- REMOVE TEMPORARY HOUSING & REINSTATE M1 LOT AS PARKING

NORTH CAMPUS YEARS 0–5 PROJECTS

- LAWRENCE HALL DEMOLITION & REBUILD
- SYKES BUILDING ADDITIONS & RENOVATIONS
- TEMPORARY HOUSING IN LOT M1
- SCIENCE CENTER INTERIOR RENOVATIONS
- OLD LIBRARY INTERIOR RENOVATIONS
- FHG LIBRARY INTERIOR RENOVATIONS
- COLLEGE ARMS INTERIOR RENOVATIONS
- ROSEDALE AVENUE UPGRADES

EXISTING FEATURES LEGEND

- EXISTING TOWNSHIP LINE
- EXISTING ZONING LINE
- EXISTING BUILDING
- 202 EXISTING 2' CONTOURS
- 210 EXISTING 10' CONTOURS
- × 212.20 EXISTING SPOT ELEVATION
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVING
- EXISTING CURB
- FLOOD PLAIN
- EXISTING LIGHT POLE
- STREAM LINE
- EXISTING STORM INLET
- EXISTING STORM MANHOLE
- EXISTING SIGN
- EXISTING UTILITY POLE
- EXISTING POST
- EXISTING DECIDUOUS TREE
- EXISTING CONIFEROUS TREE
- EXISTING TREE & SHRUB LINE
- EXISTING MANHOLE (SAN, STORM, GAS, WATER, WATER, ELECTRIC, TELEPHONE, ETC.)

PROPOSED FEATURES LEGEND

- PROPOSED BUILDING RENOVATION
- PROPOSED BUILDING
- PROPOSED INTERIOR RENOVATION
- PROPOSED RECREATION RENOVATION
- EXISTING GEOTHERMAL WELL LOCATION
- PROPOSED GEOTHERMAL WELL LOCATION
- PROPOSED ASSOCIATED WORK
- PROPOSED IMPROVEMENT APPROXIMATE LOCATION
- PROPOSED TRAIL CONNECTIONS

Scale in Feet
0 20 40 60 80 100 200 300 400
1" = 100'

NORTH CAMPUS 0-5 YEARS

NO.	DATE	REVISION

MASTER PLAN
FOR
WEST CHESTER UNIVERSITY
WEST GOSHEN TOWNSHIP, EAST BRADFORD TOWNSHIP, WEST CHESTER BOROUGH - CHESTER COUNTY - PENNSYLVANIA

ChesterValley ENGINEERS, INC.
112 Moores Road, Suite 200, Malvern, PA 19355
610-644-4623
www.chesterv.com

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UNDERGROUND UTILITIES SERIAL NO.s:
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ALL EXCAVATIONS, TRENCHING, AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING UNITED STATES DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION PUBLICATIONS OR THE LATEST REVISIONS THERETO:

(1) CONSTRUCTION INDUSTRY STANDARDS AND INTERPRETATIONS (OSHA 2207) SUBPART "P", PART 1926/TB10 – "EXCAVATIONS, TRENCHING AND SHORING"

(2) "EXCAVATIONS and TRENCHING OPERATIONS" (OSHA 2226) DATED 1985 (REVISED).

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PENNSYLVANIA ONE CALL SYSTEM, INC.
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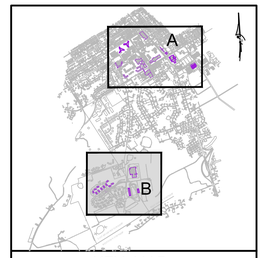
1-800-242-1776
POCS SERIAL NUMBER: ____

I:\CVE 22000s\22000 West Chester University\Dwg\Sheets\Grfx\ 02 NORTH 0-5.dwg, 4/3/2025 9:57:19 AM, .



KEY MAP SCALE 1"= 2500'

Scale in Feet
0 20 40 60 80 100 200 300 400
1" = 100'

SOUTH CAMPUS YEARS 0-5 PROJECTS

- STURZEBECKER BUILDING INTERIOR RENOVATIONS
- SOUTH CAMPUS APARTMENT ADDITIONS
- SOUTH CAMPUS COMMONS ADDITION OR NEW BUILDING IN TO ALTERNATE LOCATION

SOUTH CAMPUS 0-5 YEARS

NO.	DATE	REVISION

MASTER PLAN
FOR
WEST CHESTER UNIVERSITY
WEST GOSHEN TOWNSHIP, EAST BRADFORD TOWNSHIP, WEST CHESTER BOROUGH - CHESTER COUNTY - PENNSYLVANIA

ChesterValley ENGINEERS, INC.
112 Moores Road, Suite 200, Malvern, PA 19355
610-644-6423
www.chesterv.com

PROJECT NO.	F.B.
22002	

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UNDERGROUND UTILITIES SERIAL NO's.
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EXCAVATIONS, TRENCHING, AND SHORING
ALL EXCAVATIONS, TRENCHING, AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING UNITED STATES DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION PUBLICATIONS OR THE LATEST REVISIONS THERETO:

(1) CONSTRUCTION INDUSTRY STANDARDS AND INTERPRETATIONS (OSHA 2207) SUBPART "P", PART 1926/1910 - "EXCAVATIONS, TRENCHING AND SHORING".
(2) "EXCAVATIONS AND TRENCHING OPERATIONS" (OSHA 2226) DATED 1985 (REVISED).

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POCS SERIAL NUMBER: _____

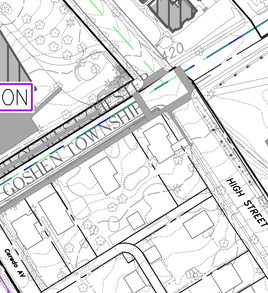
P:\CVE 22000\22002 West Chester University\dwg\Sheets\SHT 01 NORTH 0-5.dwg, 4/2/2025 9:17:47 AM,

GOSHEN HALL ADDITION
7 STORIES
420–445 BED CAPACITY
118,760 GSF

TYSON HALL ADDITION
7 STORIES
420–445 BED CAPACITY
108,040 GSF

CHURCH ST PEDESTRIANIZATION

RAM PARK RELOCATION



KEY MAP
SCALE 1"= 2500'

Scale in Feet
0 20 40 60 80 100 200 300 400
1" = 100'

NORTH CAMPUS YEARS 6–10 PROJECTS
–TYSON HALL & GOSHEN HALL EXPANSIONS AND RENOVATIONS
–CHURCH STREET RENOVATED TO BE PEDESTRIAN ONLY
–RAM PARK RELOCATION ACROSS CHURCH STREET

NORTH CAMPUS 6-10 YEARS

NO.	DATE	REVISION

MASTER PLAN
FOR
WEST CHESTER UNIVERSITY
WEST GOSHEN TOWNSHIP, EAST BRADFORD TOWNSHIP, WEST CHESTER BOROUGH - CHESTER COUNTY - PENNSYLVANIA

ChesterValley ENGINEERS, INC.
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PENNSYLVANIA ACT 187 REQUIREMENTS
UNDERGROUND UTILITIES SERIAL NO(s)__
CHESTER VALLEY ENGINEERS, INC. DOES NOT GUARANTEE THE ACCURACY OF THE LOCATIONS FOR EXISTING SUBSURFACE UTILITY STRUCTURES SHOWN ON THE PLANS, NOR DOES CHESTER VALLEY ENGINEERS, INC. GUARANTEE THAT ALL SUBSURFACE STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE OWNERS OF UNDERGROUND UTILITIES AND STRUCTURES BEFORE THE START OF WORK.

EXCAVATIONS, TRENCHING, AND SHORING
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(2) "EXCAVATIONS and TRENCHING OPERATIONS" (OSHA 2226) DATED 1985 (REVISED).

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UNIFORM PARCEL IDENTIFIER:

P:\CVE 22000\22002 West Chester University\dwg\Sheets\SHT 04 YEARS 6-10.dwg, 4/3/2025 9:58:19 AM,

ATHLETIC FIELD AMENITIES
(CONCESSION & BATHROOM)

SOUTH CAMPUS GATEWAY
CONNECTION TO STURZEBECKER HALL
& ATHLETIC FIELDS

RECONFIGURATION OF
NEW STREET AT INTERSECTION

FARRELL STADIUM
MAINTENANCE UPDATES

KEY MAP
SCALE 1"= 2500'

SOUTH CAMPUS YEARS 6–10 PROJECTS
- FARRELL STADIUM TECHONOLOGY AND PRESS BOX UPDATES
- ATHLETIC FIELDS BATHROOMS AND CONCESSIONS
- SOUTH CAMPUS GATEWAY CONNECTION TO STURZEBECKER HALL & ATHLETIC FIELDS
- RECONFIGURATION OF NEW STREET AT THE INTERSECTION

SOUTH CAMPUS 6-10 YEARS

Scale in Feet
0 20 40 60 80 100 200 300 400
1" = 100'

NO.	DATE	REVISION

MASTER PLAN
FOR
WEST CHESTER UNIVERSITY
WEST GOSHEN TOWNSHIP, EAST BRADFORD TOWNSHIP, WEST CHESTER BOROUGH - CHESTER COUNTY - PENNSYLVANIA

ChesterValley ENGINEERS, INC.
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610-644-4623
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PROJECT NO. 22002
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SHEET 3B OF 4
Page 186 of 903

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LAND ACQUISITION AT CORNER OF SHARPLESS AND HIGH ST

E.O. BULL EXPANSION & RENOVATION
80,630 GSF
(55,630 GSF RENOVATION)
(25,000 GSF ADDITION)
2 STORIES

PRESIDENT'S WALK LANDSCAPE UPGRADES

MULTI-MODAL TRANSPORTATION STATION

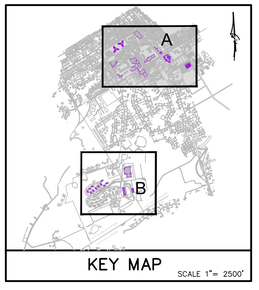
NEW KILLINGER HALL WITH BRIDGE TO SYKES BLDG
6-8 STORIES
545-585 BED CAPACITY
184,250 GSF

NEW PARKING DECK
4 STORIES
96,000 GSF
250 PARKING SPACES
(SYKES BLDG PHASE 2)

SCHMIDT HALL ENTRYWAY ADDITION & RENOVATION
8 STORIES
370-385 BED CAPACITY
91,980 GSF

OUTDOOR RECREATIONAL IMPROVEMENTS

UPGRADED PARKING LOT & STRIPING



KEY MAP SCALE 1"= 2500'

NORTH CAMPUS YEARS 10+ PROJECTS

- -SYKES STUDENT UNION PARKING DECK & PARKING LOT UPGRADE
- -KILLINGER HALL DEMOLITION & NEW BUILD WITH PEDESTRIAN BRIDGE
- -SCHMIDT HALL FULL RENOVATION & NEW ENTRY ADDITION
- -E.O. BULL CENTER FOR THE ARTS EXPANSION & RENOVATIONS
- -PRESIDENT'S WALK UPGRADES
- -OUTDOOR RECREATION AREA LANDSCAPE UPGRADES & IMPROVEMENTS
- -LAND ACQUISITION OF CORNER AT HIGH ST AND SHARPLESS ST

Scale in Feet
0 20 40 60 80 100 200 300 400
1" = 100'

NORTH CAMPUS 10+ YEARS

NO.	DATE	REVISION

MASTER PLAN
FOR
WEST CHESTER UNIVERSITY
WEST GOSHEN TOWNSHIP, EAST BRADFORD TOWNSHIP, WEST CHESTER BOROUGH - CHESTER COUNTY - PENNSYLVANIA

ChesterValley ENGINEERS, INC.
112 Moores Road, Suite 200, Malvern, PA 19355
610-644-4623
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PROJECT NO. 22002
P.B.

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	04/02/2025	ND	NC	

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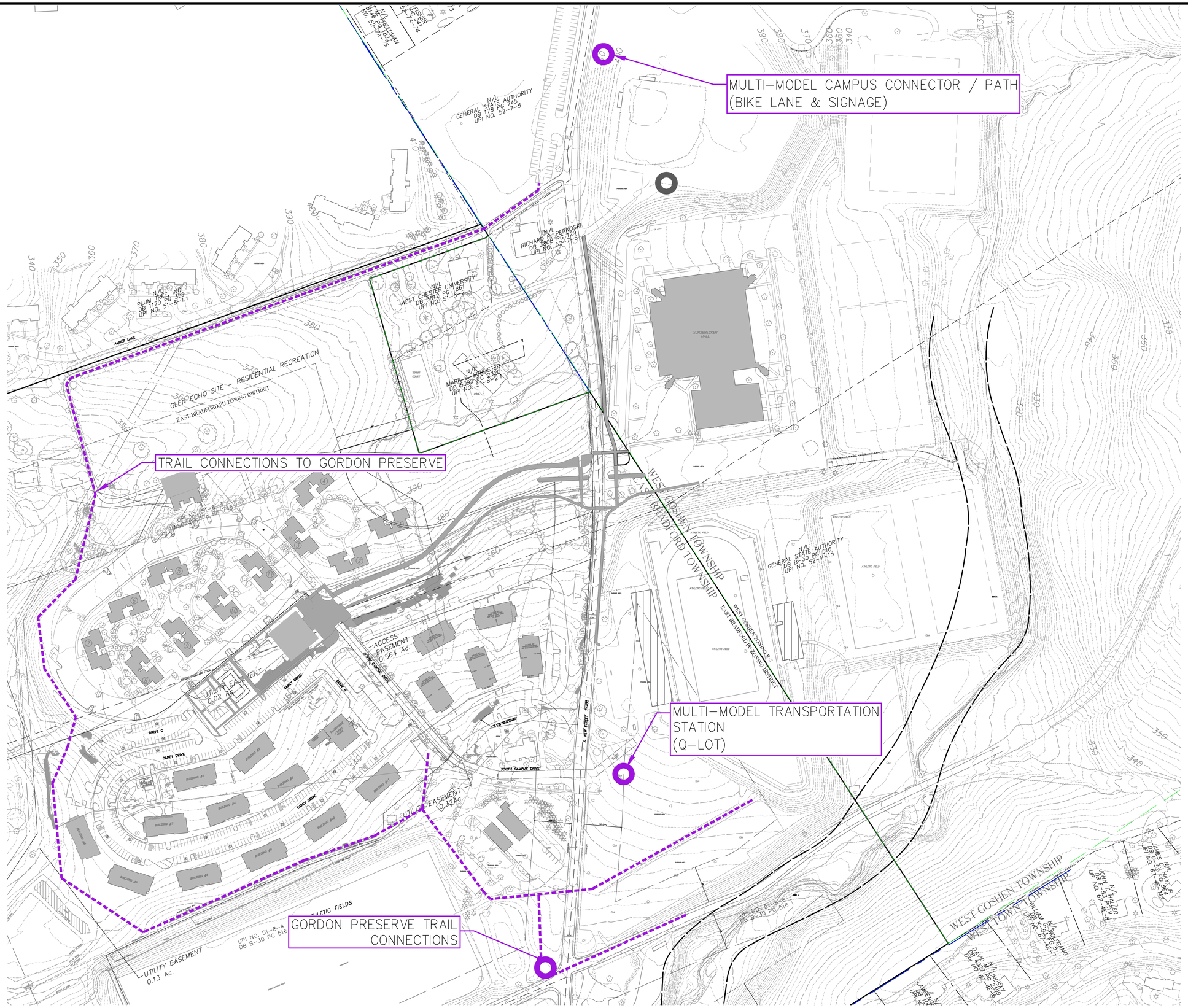

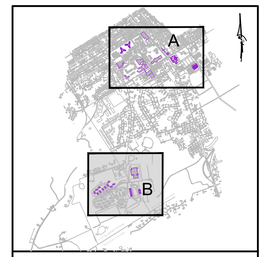

KEY MAP
SCALE 1"= 2500'

SOUTH CAMPUS YEARS 10+ PROJECTS
- GORDON PRESERVE TRAIL CONNECTIONS
- S NEW STREET MILTI-MODEL TRANSPORTATION STATION
- S NEW STREET MULTI-MODEL CAMPUS CONNECTOR / PATH (BIKE LANE & SIGNAGE)

SOUTH CAMPUS 10+ YEARS

NO.	DATE	REVISION

MASTER PLAN
FOR
WEST CHESTER UNIVERSITY
WEST GOSHEN TOWNSHIP, EAST BRADFORD TOWNSHIP, WEST CHESTER BOROUGH - CHESTER COUNTY - PENNSYLVANIA

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1" = 100'

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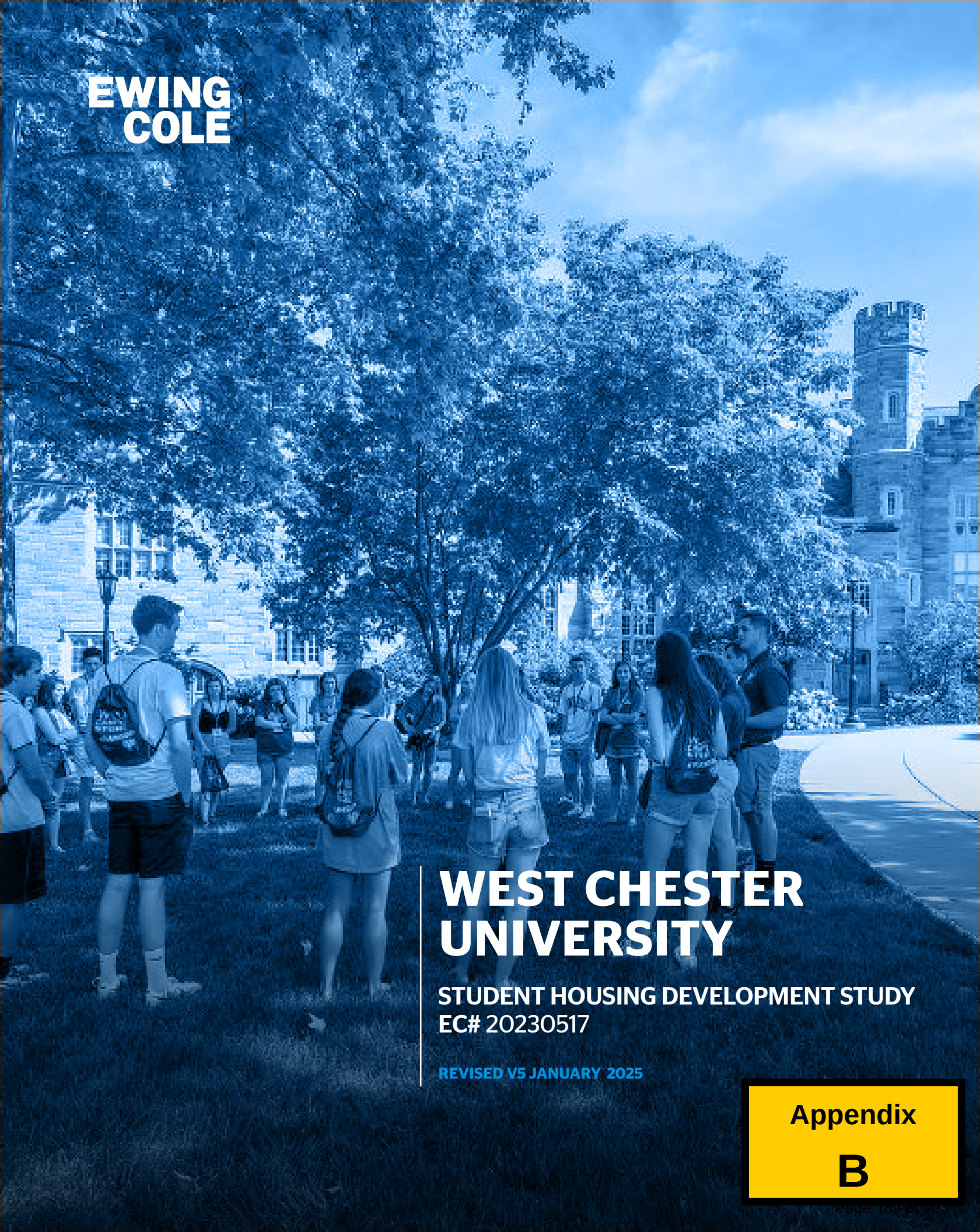

EWING COLE

WEST CHESTER UNIVERSITY

STUDENT HOUSING DEVELOPMENT STUDY

EC# 20230517

REVISED V5 JANUARY 2025

Appendix

B

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CAMPUS HOUSING

CAMPUS HOUSING OVERVIEW

Residential life on university campuses, more specifically first-year undergraduate residential life, has continued to trend toward a community style of living for students. The first-year experience has been proven to be an incredibly important time to develop a communal foundation that relates to the mission of student life at West Chester University and successful outcomes. The Residence Life and Housing team on the WCU campus provides the background for students to engage, explore, and grow via a caring, vibrant, student-centric community. As such, student housing facilities are an essential element in support of the WCU strategic plan in addition to student attraction/retention and ultimately outcomes.

In 2020 WCU engaged MGT Consulting Group to perform a Student Housing Market & Feasibility Study. The 2020 study included:

- Off-campus market analysis
- Student Focus Groups & Survey
- Demand Analysis
- Financial Analysis

The market analysis highlighted that median off-campus rents are some of the most expensive in the extended WCU market area.

The results from student input generally noted on-campus students are more satisfied than off-campus students with their current housing situation citing specific concerns such as:

- Cost differential for on-campus housing
- Desire for more equitable price points
- Significant disparity in quality and amenities between campus options.
- Expensive and highly competitive market (particularly near campus)
- An atmosphere of housing insecurity.

The 2020 study offered an estimated demand of ~950 additional beds based on a midpoint calculated range of 625 to 1,284 beds. Multiple scenarios were developed and five (5) scenarios were evaluated and two (2) Scenarios were identified as the most desirable:

1. *"A Public Private Partnership with 500 existing beds currently housing WCU students and the construction of an additional 500 beds adjacent to the North Campus. WCU provides residence life component only."*

2. *"A Public Private Partnership with 500 existing beds currently housing WCU students, the construction of an additional 500 beds adjacent to the North Campus. WCU provides residence life component only. Additionally, the University will construct and operate 300 additional beds on the South Campus."*

Since the 2020 study the demand for quality on-campus housing continues. In 2024 the University once again had a wait list of students seeking on-campus housing.

This continued demand has been exacerbated by jurisdictional restrictions on the number of permits distributed to property owners allowing WCU student renters resulting in higher off-campus rent costs and more students seeking to remain in on-campus housing that is traditionally established for an incoming 1st year population and some 2nd year returning and transfer students.

It should be noted that due to students having to seek out more affordable housing and live father away from campus this may result in more students electing to drive to campus in lieu of using pedestrian, cycling, or shuttle service modalities.

Campus Program Location Map

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JURISDICTIONAL | ZONING CONSIDERATIONS
The majority of the WCU facilities are within the jurisdictional boundaries of the Borough of West Chester; however, the University also has facilities within West Goshen Township and East Bradford Township. Additionally, Westtown Township is an adjacent jurisdiction that has an interest in the development of University facilities.

The work of this Housing Study and subsequent Comprehensive Master Plan document are intended to satisfy jurisdictional requirements set forth by the authorities noted above. Each of these jurisdictions have provided a Planned University Main Campus Overlay District (PUC) or similar for development planning purposes. Relevant parameters specific to student housing per jurisdiction are as follows:

Borough of West Chester
The current zoning district known as the PUC - Planned University Campus District was established in September 2021. The PUC area of the University is bounded by South High Street, University Avenue, Reynolds Alley, Sharpless Street, South New Street, and West Rosedale Avenue and is considered a stand-alone lot for the application of the area and bulk requirements for the PUC District.

For purpose of this housing study, it is noted that student housing can be constructed by right within the following dimensional parameters:

- Minimum perimeter setback 20 feet
- Minimum perimeter setback 30 feet from Sharpless
- Minimum building/structure separation of 20 feet
- Maximum impervious coverage of 80% in PUC area
- Minimum green space of 20% in PUC area
- Maximum building/structure height of 90 feet

It is also noted that all proposed facilities are to be designed to improve sustainability of the campus and are to be designed to meet the USGBC LEED Silver Certifications as a minimum.

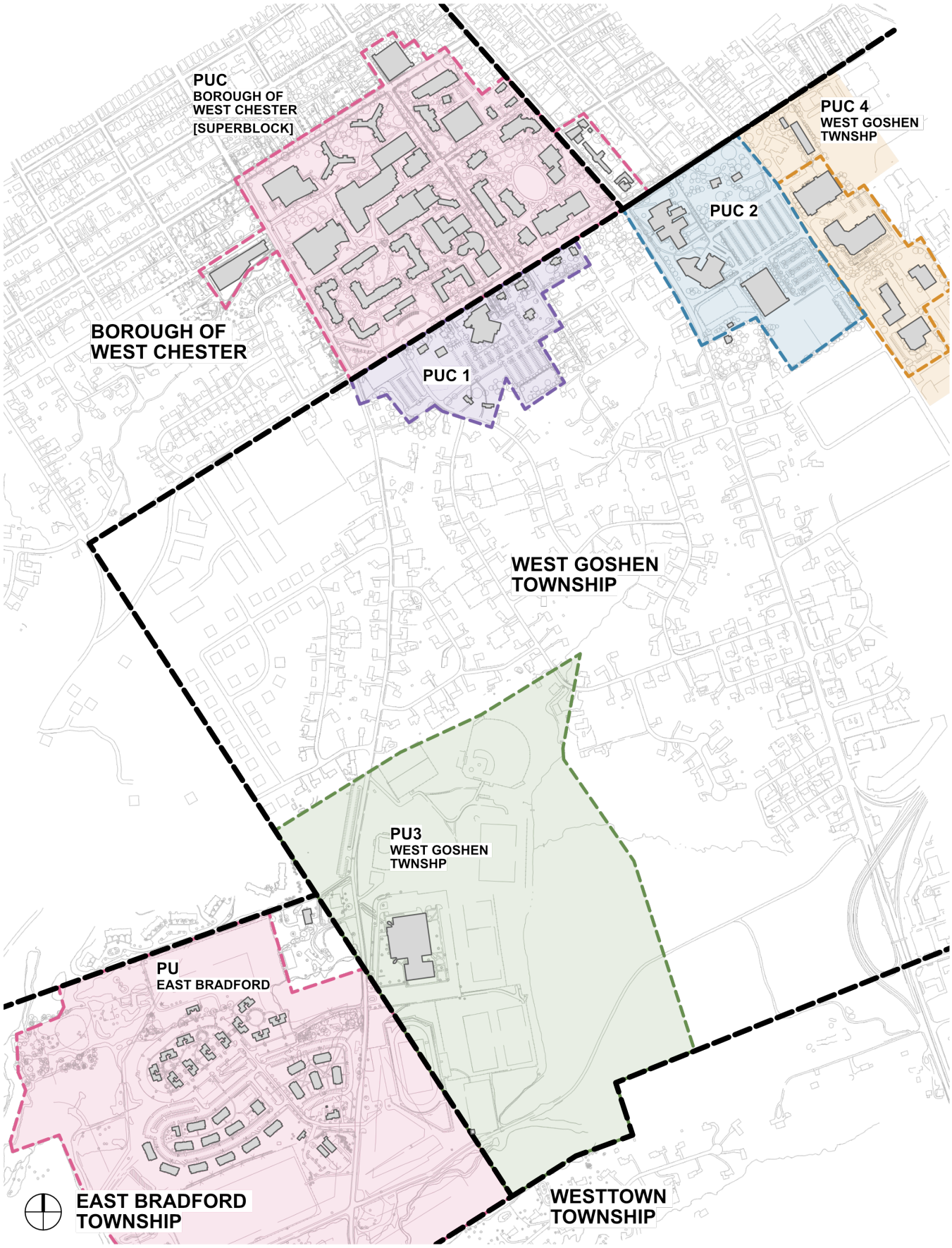
West Goshen Township
The current zoning district known as the Planned University Main Campus Overlay District (PUC) was established in May 2021. The PUC includes four (4) sub districts referred to as PUC Class 1, PUC Class 2, PUC Class 3, and PUC Class 4.

For purpose of this housing study, it is noted that student housing is a prohibited use within all four of the West Goshen sub districts. However, WCU requested and was granted conditonal approval for the provision of Temporary Housing Modules. Additional information can be found in a subsequent section of this report.

East Bradford Township
The current zoning district known as the PU Planned University District was established in April 2003.

For purpose of this housing study, it is noted that student housing can be constructed by right (excluding housing for fraternities or sororities) within the following parameters:

- Minimum perimeter setback 200 feet from property lines
- Minimum perimeter setback 100 feet from right of way adjoining public street(s)
- Maximum impervious coverage of 40% in PUC area as a whole
- Minimum open space of 20% in PUC area
- Open space use limited to passive recreation
- Maximum building/structure height of 40 feet maximum and three (3) stories above grade plane.



Campus Zoning Jurisdiction Map

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EXISTING ASSETS

Currently WCU includes a mix of housing assets that are both self-managed and affiliated housing that is managed by University Student Housing (USH). These twelve (12) campus facilities are home to more than 5,300 students in total between both the "north" campus and the "south" campus. The University offers community-style (traditional dorm rooms) and suites on campus while offering apartment housing at the south campus location.

The WCU managed housing accounts for more than 2,400 student beds. The majority of these units are traditional housing with exception of the apartment offerings within College Arms and the South Campus Apartments.

College Arms	97
Goshen	558
Killinger	308
Schmidt	438
Tyson	558
South Campus Apartments	499
	2,458 Beds

The USH managed housing is primarily suite-style units and is home to nearly 3,000 students.

Allegheny	636
Brandywine	622
Commonwealth	651
University	265
East Village Apartments	264
The Village Apartments	524
	2,962 Beds

Generally, the USH managed buildings are newer, constructed between 2004 and 2009. The WCU managed buildings are much older with College Arms being circa 1920s and majority of the University owned facilities having been constructed between 1959 and 1971 with exception of the South Campus apartments constructed in 1993.

At time of this report, WCU has capacity for 5,420* student beds or ~31.5% total enrollment of 17,076 students.

- 14,344 undergraduates
- 2,732 graduate students

**The 5,420 Total beds includes swing space*

College Arms Apartments

Goshen Hall

Killinger Hall

Schmidt Hall

Tyson Hall

Commonwealth Hall

South Camous Apartments

East Village Apartments

Allegheny Hall

The Village Apartments

Brandywine Hall

University Hall

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STUDENT HOUSING PLAN DRIVERS

The WCU campus has strong collegiate attributes that include iconic spaces and places. Through a combination of renovations, additions and new construction there is opportunity for future student housing to:

- Create places to empower and support the University's mission for building community on campus.
- Improve Student Life assets and experiences
- Accommodate the increasing level of student expectations
- Build upon existing relationships between campus spaces
- Reinforce the University image and brand
- Bring parity to the quality of housing offered by the University (both WCU and USH operated)
- Enhance pathways and campus connections
- Increase the total number of student beds available on campus.
- Address and prioritize the deferred maintenance needs of aging housing stock.
- Define an actionable implementation strategy that provides the necessary phasing consideration and/or swing space for renovation projects acknowledging an academic calendar.
- Establish a road map / framework that aligns with University's fiscal capacity over time.

Student Experience

Bed Count Capacity

Implementation Strategies

Academic Calendar Alignment

Cost to Budget Reconciliation

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TEMPORARY HOUSING CONSIDERATIONS

In response to a need to advance a robust housing renewal campaign the University initiated analysis of opportunities to provide temporary on-campus modular housing to allow existing housing stock to be taken off-line while minimizing impact to campus wide bed count offering.

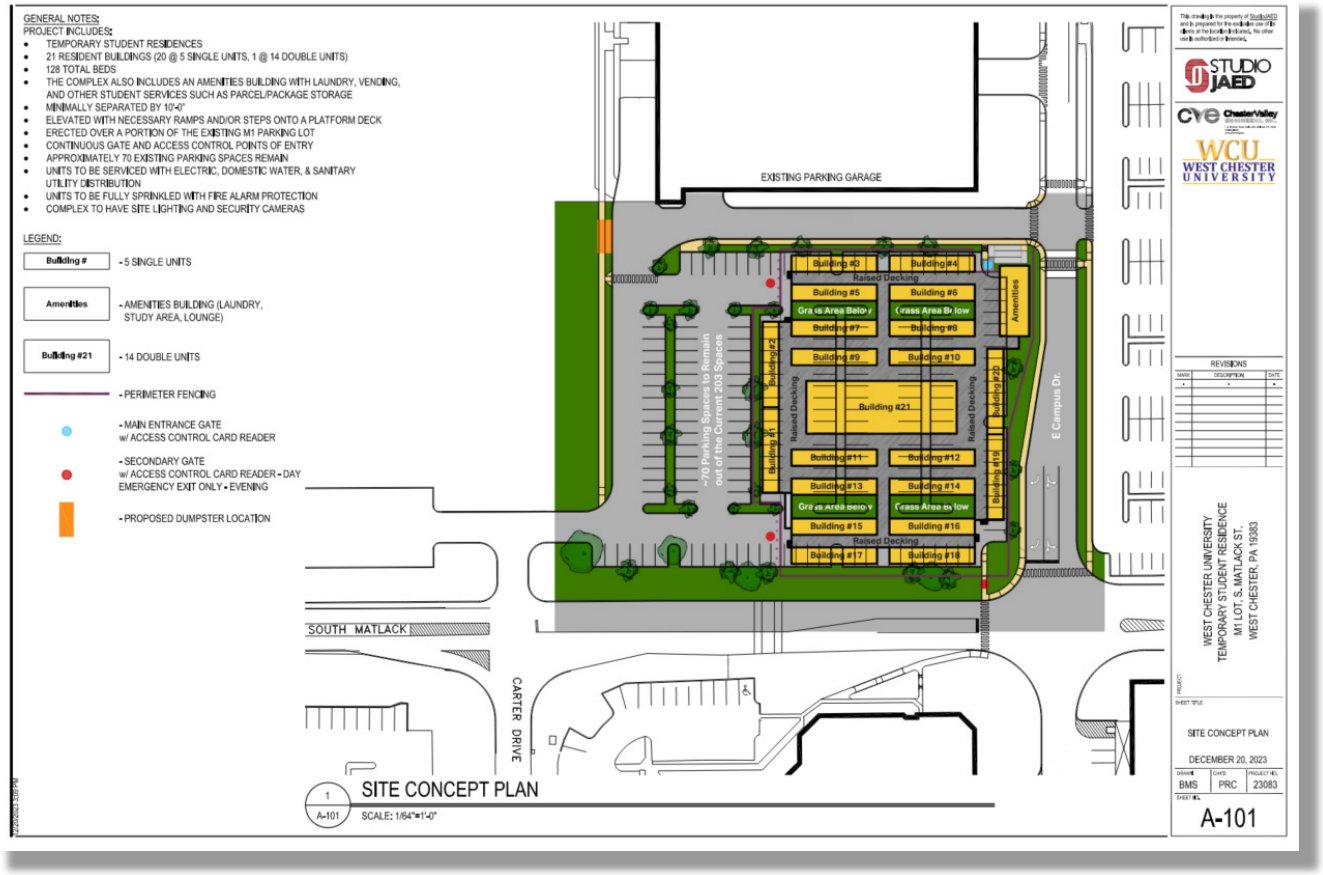
The Team worked with the University to evaluate multiple site locations and configurations on North, East, and South Campus locations. The evaluations considered a variety of modular buildings that were readily available to WCU as well as bed count, proximity to other campus amenities and functions, access to necessary utilities, and jurisdictional constraints.

The adjacent diagrams are examples of nine different sites considered for temporary student housing modulars. The University elected to implement a plan to provide 128 beds in a temporary modular configuration at the site identified as Lot M-1 (former parking area).

It should be noted that the provision of these modular housing units are not "additional" beds for the University's total bed count but rather are intended to allow for swing space to enable the University to take existing beds off-line for much needed deferred maintenance and renovation work that cannot be achieved over the course of a summer term. This does however maximize the University's ability to offer on-campus housing solutions in lieu of students having to seek accommodations off-campus in an artificially inflated / overpriced housing market in areas directly adjacent to the University.

North and East Campus Site Considerations

South Campus Site Considerations



Proposed Temporary Housing Site Plan at M-1 Lot

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PROGRAMMING AND PLANNING CONSIDERATIONS

Much of the existing housing stock, both WCU owned and operated as well the USH operated facilities were constructed more than 20 years ago and in some cases are not equipped to address the needs and expectations of today's student population. The WCU student of today and coming generation of students are arriving with needs for resource access and amenity expectations beyond simply a bed.

Expected Occupants

Ideally the University would have bed count capacity to house all incoming first year students and as many second years students that desire to live on campus. The 2020 study identified a demand for additional on-campus housing and acknowledged that high off-campus housing costs are exacerbating this demand. The stakeholder interviews conducted as part of this study would suggest that the demand opportunity remains.

Bryant University - Fisher Student Center "Living Room"

Industry trends for On-Campus Student Housing

Student housing across the nation and more specifically in the Northeast has experienced several notable trends that reflect changes in student preferences and expectations, technological advancements, and acknowledgment of broader social factors. The quality of housing remains an influencing factor in students' decision-making processes for selecting a university.

- Increased Demand for Amenities
  Students are arriving to campus as consumers seeking housing that offers amenities such as fitness centers, study lounges, high-speed internet access, and communal spaces.

- Technology Integration
  Smart technology has become a standard expectation in student housing beyond just wi-fi access. Features like smart locks, smart thermostats have become popular considerations. Additionally, tech driven operational solutions for maintenance requests and communications are enhancing the residential experience on campus.

- Co-living Spaces
  The co-living trend emphasizes shared living spaces and places for community building. These spaces can offer a balance of private and communal living to foster a sense of community. Program spaces such as shared kitchens, living rooms, study rooms, meeting rooms, along with recreation areas (both indoor and outdoor) are often found to support this request.

- Health and Wellness Focus
  Post 2020 pandemic, there has been a heightened focus on health and wellness both physical and mental. In response, student housing includes improved air quality systems, increased cleaning protocols, access to mental health resources

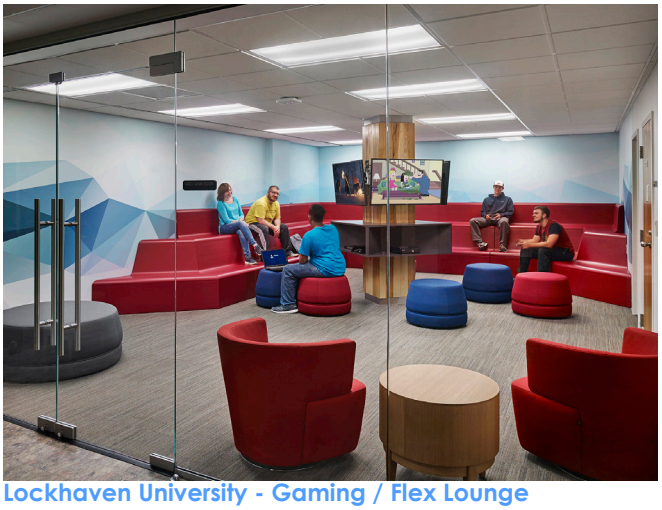
- Sustainability and Green Living
  There is growing awareness and emphasis on sustainability features in student housing. Students have become more environmentally conscious and prefer living in places that incorporate green building practices such as energy efficient systems and sustainable materials. Students also expect program integration for recycling and reduced water usage.

- Remote and hybrid learning adaptation
  While campuses have returned to in-person modalities, the continued inclusion of remote and hybrid learning models has an influence on the design of student housing.

- Cultural and International Accommodations
  Student housing is home away from home for most students. The number of international student population is expected to grow. Properties that cater to culturally sensitives by providing amenities and support services, are becoming more prevalent.

- Proximity to student transit
  Where you create a student housing development is just as important as its design. While many college students have cars, a larger parking is a commodity on college campuses and generally we are encouraging less reliance on cars when possible. To facilitate this, students must have access to reliable campus bus and shuttle systems. Additionally, the housing plan must this into account and create an inclusive plan for pedestrian and cycling modalities as well.

Bryn Mawr College-Wellness Kitchen and Outdoor Patio



Lockhaven University - Gaming / Flex Lounge

Gallaudet University-Entry Lobby and Commons Kitchen

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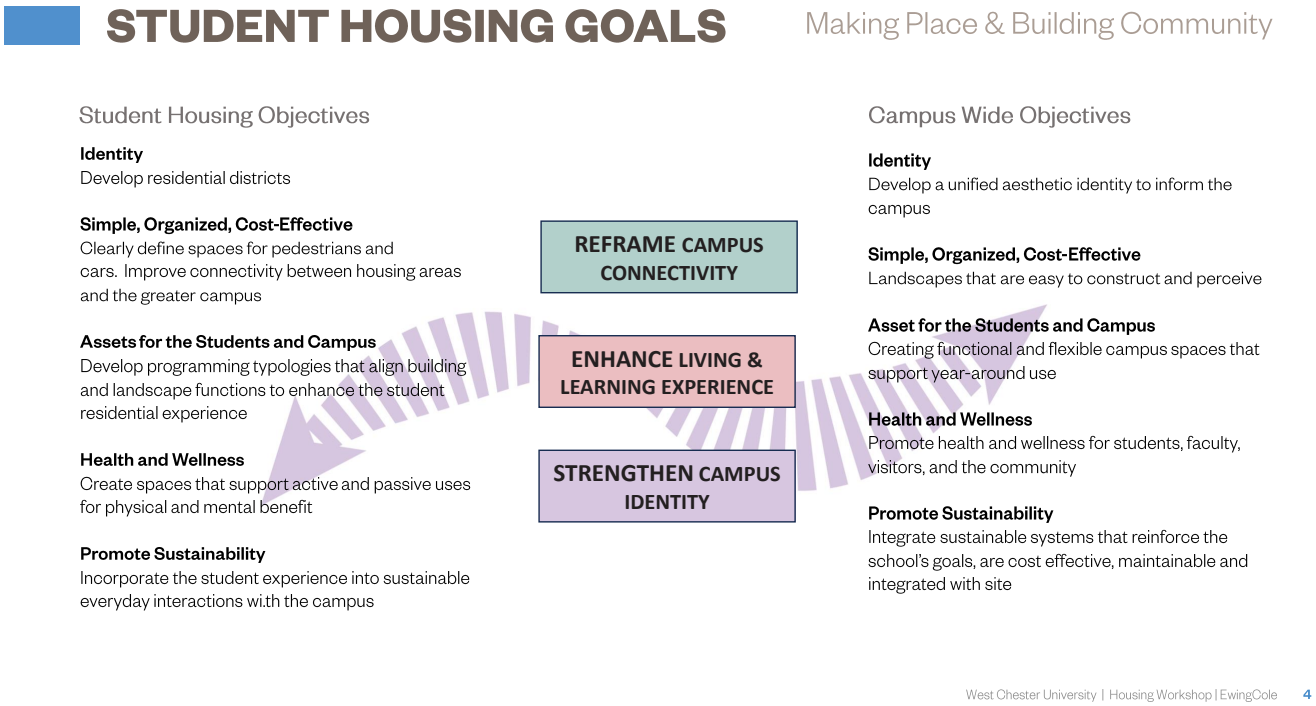
STUDENT AFFAIRS AND RAs INPUT

The Design Team had opportunity to engage with a broad cross section of the University community as we studied opportunities for both the comprehensive campus plan as well a focus on student housing opportunities. This accomplished via focused sessions with WCU Student Affairs leadership, workshops with WCU Residence Life and Housing, as well specific student input via town halls and surveys. Through these sessions several topics emerged such as:

- Student housing – new and renovations – must promote campus community and represent student life mantra of providing "Caring Vibrant Student Centric Community"
- There is a desire to house as many 1st and 2nd year students on campus as possible.
- Traditional housing style is preferred for 1st Year student accommodations
- Live / Learn Community modality is desired for future programming opportunities
- Toilet and Shower accommodations to provide privacy and universal access
- Desire for consistency of amenity provisions across both USH and WCU housing stock.
- Accessibility and Parity of housing stock is desired for all housing offerings.
- Safe & Secure Environment is a must

As the discourse continued, alignments between the overarching comprehensive campus master plan CMP and goals for student housing become more and more apparent.



Comparative alignment of Student Housing Objectives and Campus Wide Objectives

ON-CAMPUS STUDENT HOUSING ELEMENTS

On-campus student housing requires a balanced approach to addresses individual's needs while effectively utilizing University resources by considering highest and best use of available real estate. Additionally, residence halls are active contributors to the overall campus landscape, place making, and community experience for students, faculty, staff, and visitors alike. For these reasons having a variety of options available is important for a vibrant campus experience.

Planning | Configuration

When considering fundamental planning strategies for a residence hall there are many factors at play. Campus place making should always be at the fore of the discussion. Site parameters, campus context, accessibility, sustainable design strategies, functionality, maintenance considerations, and future flexibility for the University are a few. Consideration of individual's needs such as privacy, social interaction, study spaces, convenience, and safety and security are also paramount.

- Traditional Style

  Dormitory style housing is typically arranged in a double loaded corridor configuration which is often the most efficient use of an available site.

  In some cases, a racetrack footprint can be utilized in lieu of a double loaded corridor to better utilize a site's width and length.

  It is noted that a racetrack corridor plan configuration can offer more opportunity for serendipitous interaction and reduced the overall length of corridors. In both cases a collection of bedrooms along with basic core functions and common amenities comprise a neighborhood. The increased opportunity for social interaction makes this an ideal configuration for 1st year and some 2nd year students. The traditional double loaded corridor configuration is utilized at Tyson, Goshen, Kilinger, and Schmidt Halls.

- Suite Style

  Suite style housing is currently employed on the WCU campus and is the primary configuration utilized at the USH managed properties of University, Commonwealth, Brandywine, and Allegheny Halls. This approach provides a shared common living and bathroom area for each suite. This arrangement seeks to balance privacy and social interaction while providing more living space. The audience for this configuration is often the junior and senior class of students.

- Pod Style

  A more recent evolution in the student housing market emphasizes community, flexibility, and efficiency of space. This pod style approach aims to create a more collaborative and supportive environment while maintaining individual privacy. Typically, this arrangement accommodates up to 8 students per pod to allow for a small community feel with sufficient sense of privacy. Options for single and double occupancy bedrooms will depend on individual preferences and cost model.

- Apartment Style

  The WCU campus has both WCU and USH managed apartment style housing units located on the South Campus. These self-contained units offer living/sleeping space, with kitchen and bathrooms. The style offers more privacy and autonomy often desired by older students, graduate students, and some non-traditional student populations. Due to the area per student of these units the cost per semester is often higher.

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Room Types

There are several room types available on the WCU campus each with their own features and benefits.

- Single Occupancy Room
  In recent years there has been an increase of requests for placement in a single occupancy room. Some requests are for convenience or personal comfort while others are specific to medical reasons such as psychological, psychiatric, mobility, visual or hearing impairment related conditions, These conditions may prohibit the student from living with a roommate and some individuals qualify under the Americans with Disabilities Act (ADA), and Section 504 of the Rehabilitation Act of 1973.

- Double Room
  Often utilized for traditional student housing where two students share a single room to encourage social interaction and is considered cost-effective. This is the most common room type offered for traditional on-campus student housing.

- Triple Occupancy
  While WCU currently employs triples (3 students per room) in several housing buildings, this is not a preferred scenario. It has been found that this arrangement is typically not a positive experience for students transitioning to life away from home. Issues cited have included lack of personal space, adjusting personal living habits to accommodate multiple people.

  It should be noted that rooms designed for triple occupancy are less prone to being problematic over rooms design for double occupancy but have three students living in them (forced triples).

Resident Assistant (RA) Accommodations

The Resident Assistant (RA) is a paraprofessional, undergraduate student staff member of the Residence Life and Housing Program. The RA plays a vital role in facilitating an atmosphere of community upon a specific floor, wing, or apartment building. Additionally, RAs are considered an extension of Campus Security. For planning purposes, the RA rooms will be similar to the medical single occupancy with private shower and toilet accommodations.

Unit Mix

Knowing that WCU is seeking to provide housing for any incoming 1st year students as well as 2nd year returning or transfer students who may want to live on campus the majority of the room offerings will be double occupancy to create neighborhood sizes between 30-40 students. In response to rising requests for single occupancy/ medical singles this study has established a ratio of two (2) medical singles with private toilet shower and one (1) RA room, also with private toilet and shower for every neighborhood.

Toilets / Showers / Lavatories

There is a general approach for on-campus residence halls to replace traditional community bathrooms on each floor with a wet core of private bathrooms inclusive of lavatory, toilet and shower. This approach ensures universal accessibility along with flexibility for both gendered and non-gendered facilities. This study has established a ratio of 1:6 for restroom facility to students as a level of service target.

Floor Level Amenities

To accommodate the balance of privacy and social interaction within residence halls it is expected that floor level amenities be provided in additional to building amenities. For WCU the recommended strategy is to provide more parity among the housing offerings by including similar offerings for each neighborhood of 30-40 students.

- Floor Lounge
  These spaces are to include comfortable seating areas with couches, chairs, and tables. The furniture is to be flexible for student configuration to encourage relaxation and socialization.

- Group Study
  To facilitate collaborative work and provide an environment conducive to studying, group projects, and peer to peer learning these rooms may include writing surfaces, interactive displays, and comfortable seating. These are often set up with a room reservation system due to popularity.

- Corridor Lounge
  These "third" spaces are recommended if space allows. These are versatile areas for students to gather, relax, and engage in informal activities. It is designed to provide a comfortable and functional environment that bridges the gap between private dorm rooms and formal study spaces.

- Laundry
  For both renovations and new residence hall buildings there is a desire to provide floor level laundry areas. By provided 2 to 3 washer dryer units per neighborhood WCU can meet student needs effectively and contribute to a more convenient living environment.

Graduate Hall Director (GHD) Apartment

A Graduate Hall Director (GHD) apartment in a university residence hall is designed to provide comfortable and functional living quarters for the hall director, who typically oversees the building and supports the resident students. The apartment should balance the need for personal space with the demands of the director's role. The unit (per residence hall building) is to be a 2-bedroom unit wit private access.

Building Amenity and Support Opportunities

The University's residence halls are expected to provide a range of amenities designed to enhance the living experience, support academic success, and foster a sense of community among students. At WCU there is a need to develop amenity offerings in a manner that provides equitable and inclusive access for both WCU owned and USH managed facilities. As such the recommendation is provision of approximately 20-30 square feet of amenity program area for each student resident per building.

While the actual offerings for amenity and support will vary per building and campus location the program spaces for consideration may include:

- Building Lounge Area
- Study Rooms
- Community Kitchen with Seating
- Wellness / Fitness Area(s)
- Activity / TV Lounge
- Recreation and Game Room
- Meditation / Quiet Room
- Vending
- Meeting Room(s)
- RA Office
- Visitor Restrooms
- Pet Friendly Space
- Package / Delivery Room
- Trash and Recycling Room
- Bike Storage

HOUSING OPPORTUNITIES

In concert with a Comprehensive Campus Master Plan (CMP) effort, specific opportunities to provide new student housing and renovate existing WCU owned student housing has been the focus of an abbreviate plan. The EwingCole Planning Team was tasked with developing a short term "Abbreviated Plan" with a goal of identifying opportunities to increase long term housing capacity (bed count) on campus and prioritizing necessary housing stock improvements for both North and South campus facilities.

The team engaged with multiple stakeholder groups, including student participation, as well the University's Senior Leadership Team (SLT) to define priorities, identify opportunities for evaluation, and develop recommendations.

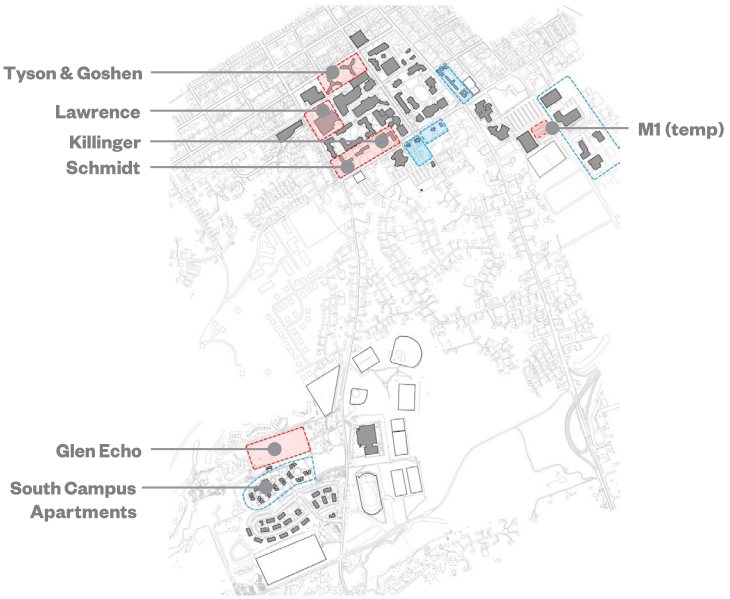
Initial observations suggested that WCU currently has strong campus attributes - iconic places and spaces. Additionally, there were opportunities identified to build upon the existing relationships between campus spaces. The CMP will seek to strengthen these relationships by improving pathway systems, in turn improving student life assets and bolstering the University's image and brand.

For North Campus initial analysis identified the existing Lawrence Hall site as an underutilized location with strong potential for new housing development and associated student life amenities. Goshen, Tyson, Killinger, Schmidt and College Arms were analyzed to establish recommendations for their future.

Analysis at South Campus identified the open space known as Glen Echo as potential location for a new student housing development. The existing South Campus Apartments were reviewed to establish renewal / replacement recommendations.

This report will offer recommendations for provision of new student housing, to be incorporated in the Comprehensive Master Plan (CMP). The recommendations will offer an approach to adding more beds on campus over time as well as keeping, renovating, and maintaining, existing housing stock. These recommendations will be thought of in an actionable implementation plan considering phasing, swing space, and acknowledge need for alignment with the WCU academic calendar.

HOUSING CONSIDERATIONS

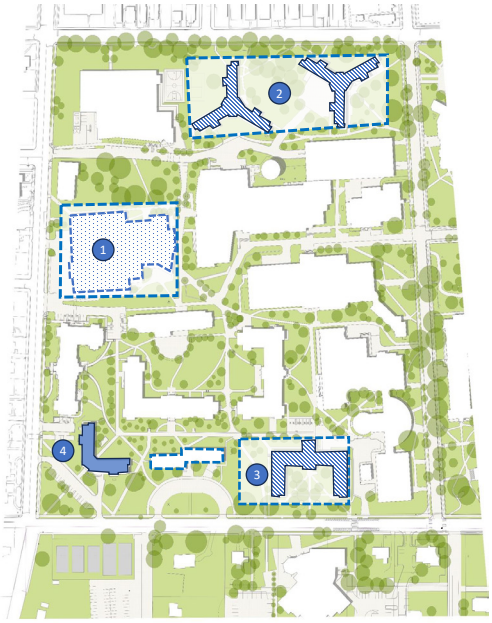


West Chester University | SLT Status Update | EwingCole 3

Map of Campus Housing Sites for Consideration

NORTH CAMPUS HOUSING

Existing



North Campus Initial Observations and Opportunities Diagram

OBSERVATIONS

- Lawrence is an immediate site opportunity
- Wayne conversion to residence life requires significant relocation of multiple programs
- Killinger renovation will not represent highest and best use of site
- WCU owned properties must be brought to a higher standard

OPPORTUNITIES FOR CONSIDERATION

1. Lawrence - Raze and Build new
2. Tyson & Goshen – Full Reno w/ Additions

   or Raze and Build New
3. Killinger - Raze and Build New
4. Schmidt – Full Reno w/ New Entry Addition

SOUTH CAMPUS HOUSING

Existing

South Campus Initial Observations and Opportunities Diagram

OBSERVATIONS

- Glen Echo is an immediate site opportunity
- Sense of Community to be reinforced
- WCU owned properties must be brought to a higher standard for parity
- Township Constraints are Significant
  - 200 Setbacks
  - 1:1 parking

OPPORTUNITIES

1. New Suite Style Housing
2. Amenity / Community Building
3. Extend Loop Road and Parking
4. New Gateway Entrance along New Street
5. Ability to Phase Renovations of Existing housing or raze to build new
6. Connectivity to Athletics Complex Across New Street

WCU Owned (499)

A. South Campus Apartments

USH (788)

B. The Village

C. East Village

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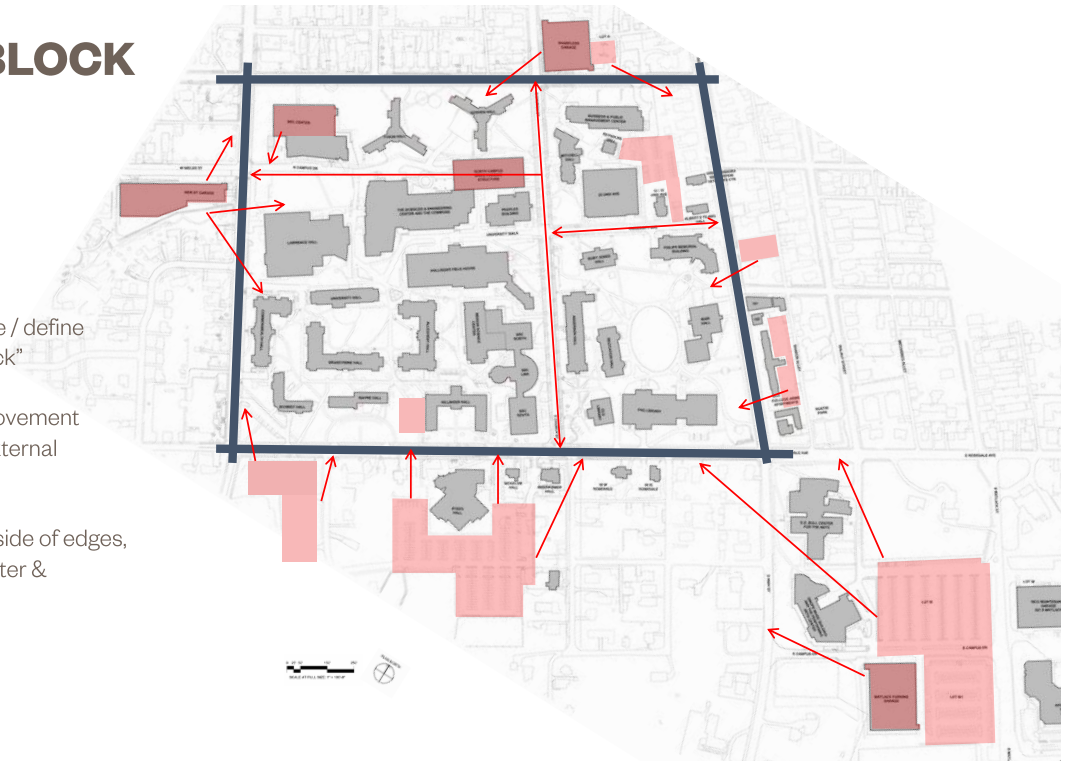
SUPERBLOCK

NORTH CAMPUS

- Major streets create / define edges of "superblock"
- Multi-directional movement across internal & external streets
- Most parking is outside of edges, except for Rec Center & Commons garages

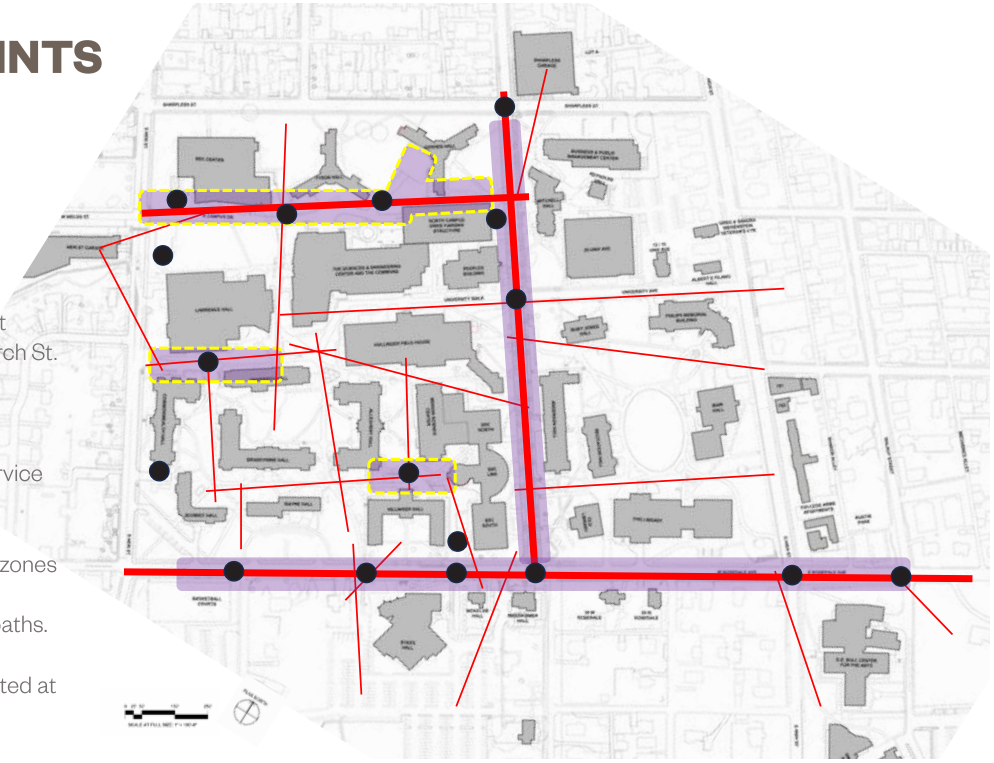


North Campus Superblock Parameters Diagram

CLASH POINTS

NORTH CAMPUS

- Multi-modal use along East Rosedale Ave., South Church St. & North Campus Dr.
- Clash points between pedestrians, vehicles & service access.
- North Campus Dr. service zones and garage access not segregated from student paths.
- Service zones not segregated at Lawrence & Killinger Halls.

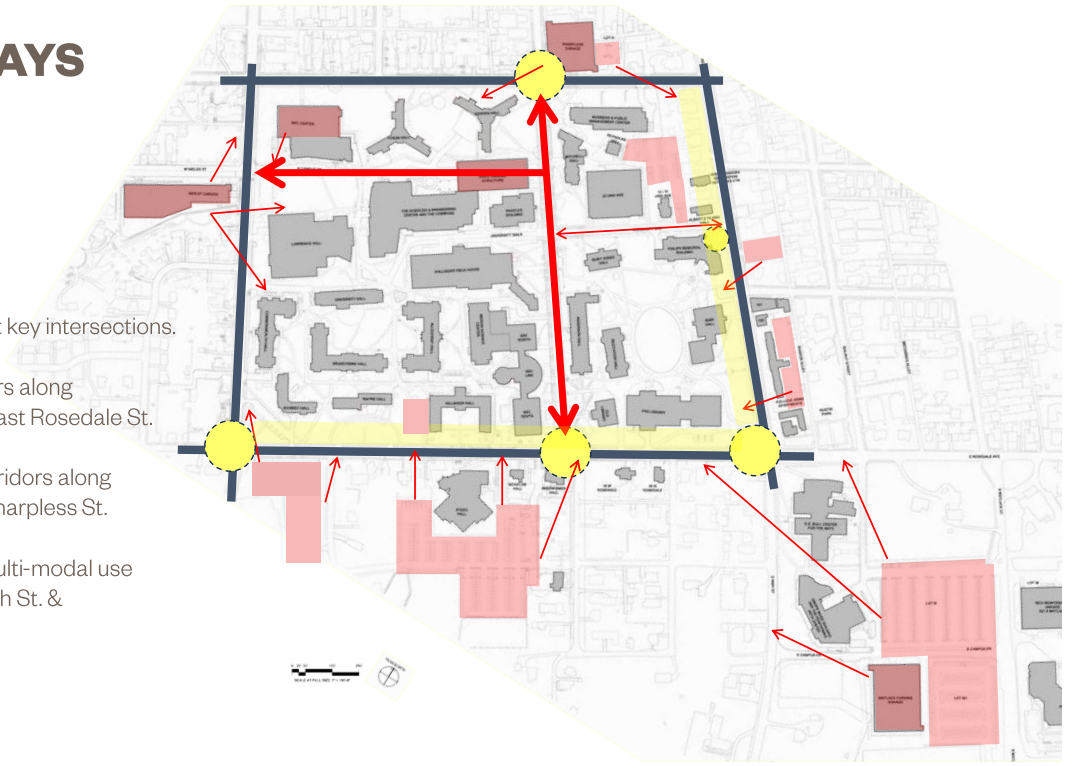


North Campus Multi-modal Diagram

GATEWAYS

NORTH CAMPUS

- Gateways occur at key intersections.
- Key image corridors along South High St. & East Rosedale St.
- Neighborhood corridors along South New St. & Sharpless St.
- High frequency, multi-modal use along South Church St. & North Campus Dr.

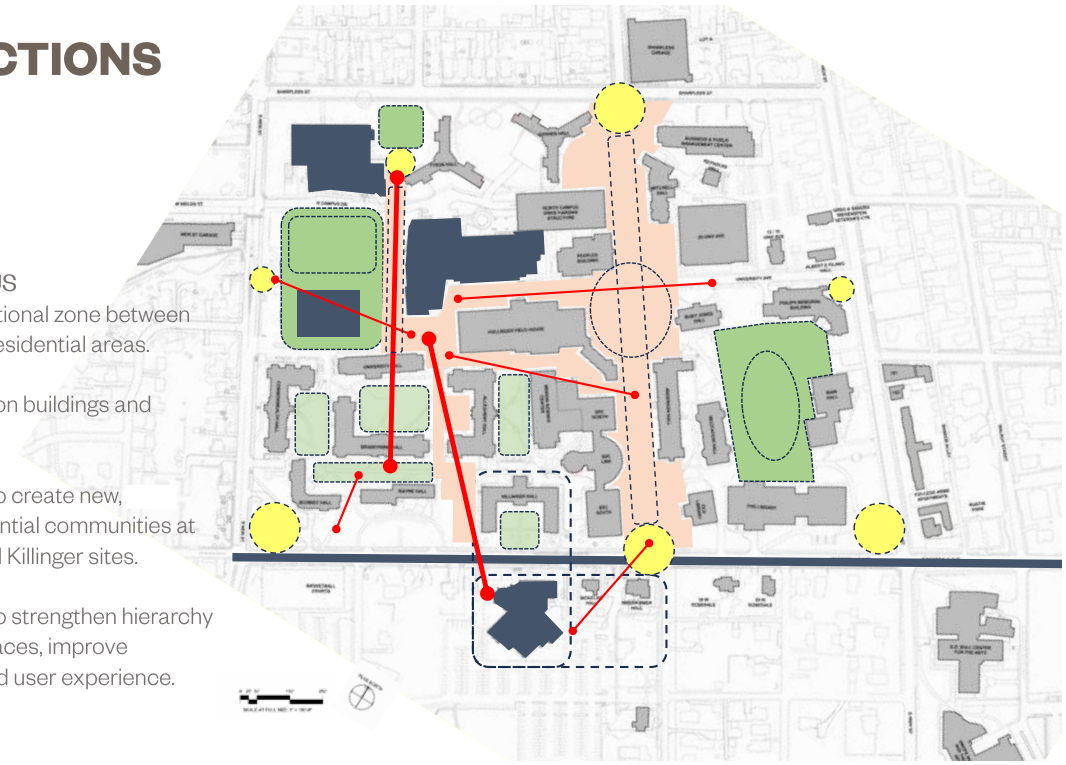


North Campus Gateway Opportunities Diagram

CONNECTIONS

NORTH CAMPUS

- Central transitional zone between academic & residential areas.
- Link destination buildings and spaces.
- Opportunity to create new, residential communities at Lawrence and Killinger sites.
- Opportunity to strengthen hierarchy of exterior spaces, improve wayfinding and user experience.



North Campus Connection Opportunities Diagram

Killinger Hall Site

EXISTING OVERVIEW
The Killinger Hall site was evaluated by the Planning Team for both renovation, addition, and replacement considerations. The existing building was purpose built as a traditional residence hall in 1959, and has since become outmoded by today's standards for campus living. The deferred maintenance needs are significant as well.

PREVIOUS STUDY
The University invested in a feasibility study in 2017 to explore the idea of renovating and adding to this building however the project was not advanced. Recommendations of that study included the following improvements:

- Full bathroom renovations
- Update to interior finishes
- Improves Lighting (natural and artificial)
- HVAC upgrades
- Accessibility Improvements
- Improve Common Space and Shared Amenities
- Introduce new common programming and amenities (indoor and outdoor)
- Improve entrance and facade
- Improve Site Connections
- Activate interstitial Landscape Areas
- Landscape regrading

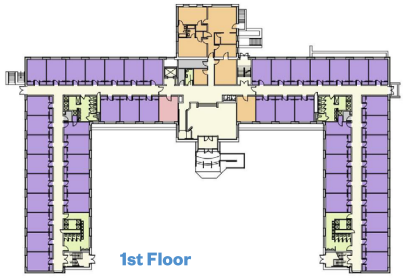
Existing Killinger Hall - Entry View

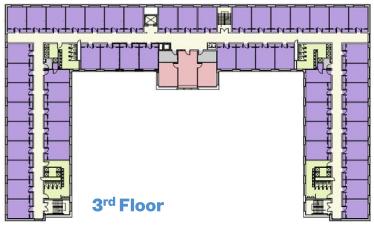
Existing Killinger Hall - Common Area

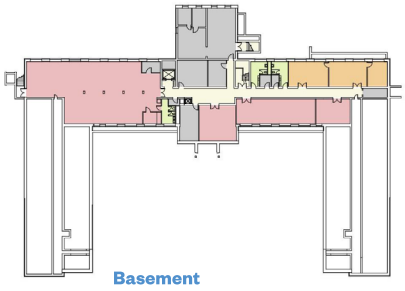
Existing Killinger Hall - Example Room

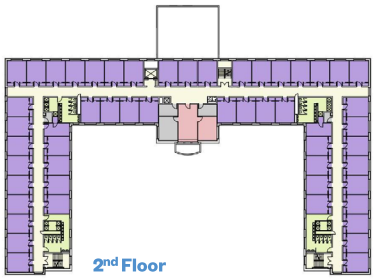
KILLINGER HALL

Existing









Housing Metrics		
GSF	69,382	
NSF	42,655	
Amenity	5,975	19sf/student
Student Affairs	2,645	9sf/student
Academic Support	0	
Bed Count	302	Traditional
Toilet	51	1:6 students
Sink	69	1:4.5 students
Shower	50	1:6 students
Urinal	14	1:22 students

Existing Killinger Hall Plan Diagram

OPPORTUNITIES & RECOMMENDATION

Renovating and adding to this building can be accomplished with significant investment. However, the result will not take advantage of highest and best use of this site. The current 3-story building does not utilize the allowable height of 90 feet. As such the planning team is recommending that the existing Killinger Hall be razed and replaced with a new multipurpose residence hall.

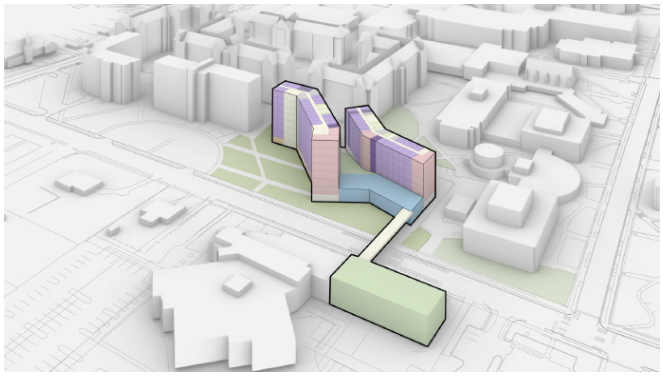
Over the course of the planning process the team further evaluated planning concepts that would reinforce the University's strategic goals and the potential campus place making opportunities. The recommended approach to developing this site is to define the ground plane by acknowledging the desire lines of campus circulation and reinforce those movements with defined program opportunities. Additionally define program synergies between this building and the Sykes Student Union which is directly across the highly trafficked Rosedale Avenue.

There may be opportunity to incorporate a pedestrian bridge across Rosedale as either a Killinger replacement or perhaps an expansion of the Sykes Student Union. Knowing that there is significant program pressures for student services across this campus there may be opportunity to utilize the space at the Killinger site. The Planning Team will explore these opportunities as a part of the Comprehensive Master Plan (CMP).

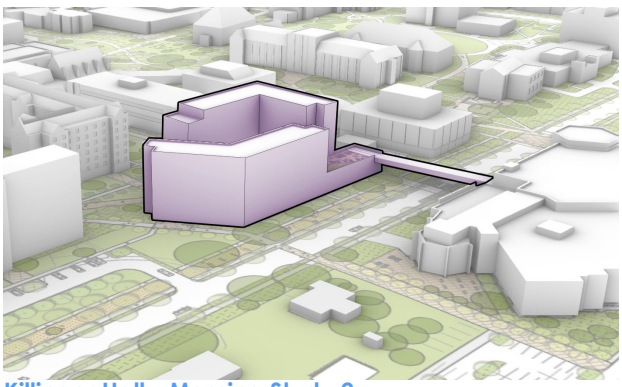
It is also recommended that building height opportunity (90 feet) be maximized for highest and best use. This can yield a building up to 8 stories in height for adding new student housing to campus. An overbuild was evaluated by structural engineers of the Planning Team and it was determined to not be a feasible solution for expansion. This reinforced the recommendation for full replacement at this site.

Killinger Hall - Figure Ground Study 2

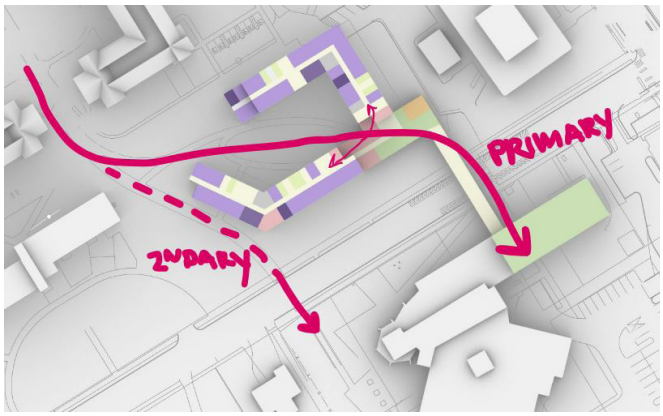
Killinger Hall - Figure Ground Study 1



Killinger Hall - Massing Study 2



Killinger Hall - Massing Study 2



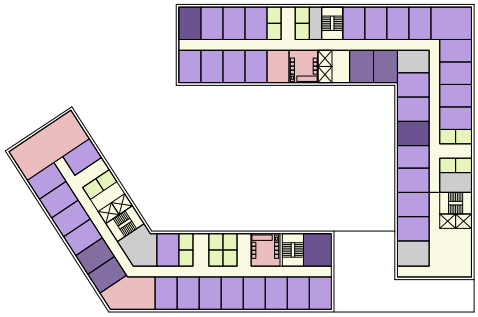
Killinger Hall - Campus Circulation Diagram

To maximize bed count, the recommendation for this site will be provision of primarily double occupancy rooms arranged in a 30-40 person neighborhood configuration. For purpose of this study a double loaded corridor was utilized however, racetrack and/or pod configurations could be considered. A ratio of 1:30-40 RA rooms is assumed long with 2:30-40 ratio of students to medical singles. The bathrooms are arranged together into staked wet cores and are single user gender neutral facilities.

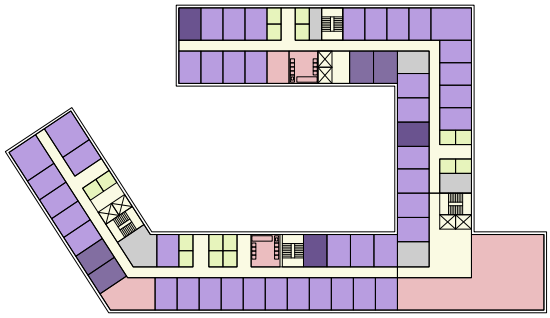
In addition to the student services programming noted earlier this facility should include at least one Graduate Hall Director apartment and 20-30sf of amenity space per student. The basic floor level amenities include lounges and laundry. The suggested building amenities should include

- Building Lounge Area
- Study Rooms
- Community Kitchen with Seating
- Activity / TV Lounge
- Recreation and Game Room
- RA Office
- Visitor Restrooms
- Package / Delivery Room
- Trash and Recycling Room
- Bike Storage

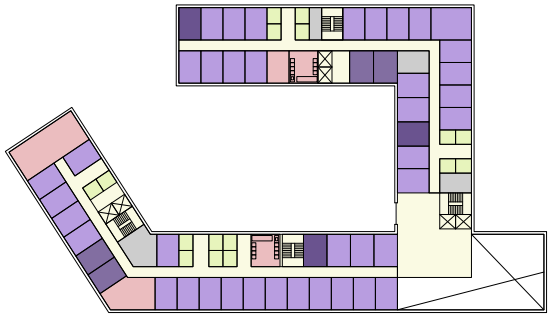
Other amenity program offerings can and should be considered as part of a feasibility study after completion of the CMP.



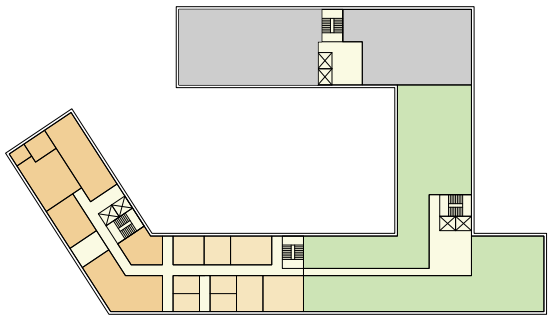
Killinger Hall - Plan Diagram Levels 5-7



Killinger Hall - Plan Diagram Levels 3-4



Killinger Hall - Plan Diagram Level 2



Killinger Hall - Plan Diagram Ground Level

Schmidt Hall

EXISTING OVERVIEW

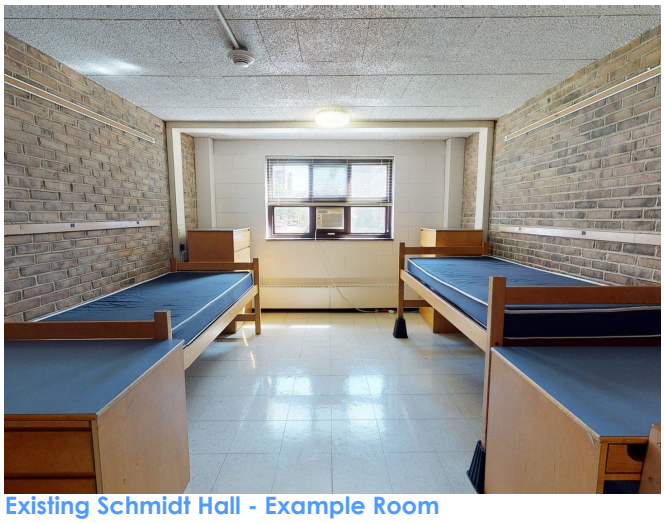
Schmidt Hall site is an 8-story residence hall that was constructed in 1971. The exterior masonry construction is generally in an acceptable state; however, the building will require deferred maintenance work and significant upgrades to be brought up to standard with today's expectations for campus living standards. This will include window refurbishment as well as complete upgrades to both HVAC and Electrical systems.

Additionally, the entry/lobby of this building has been noted as problematic. There is an entry from the street side parking area as well an entry facing internal to the campus. The interior lobby arrangement is cramped and is not optimal for providing a welcoming place nor is it effective for building operations and security.

Ground level accessibility is another element of this building that requires attention. There are 14 student rooms that require students and visitors to navigate stairs for access.

Existing Schmidt Hall - Campus Side Entry View

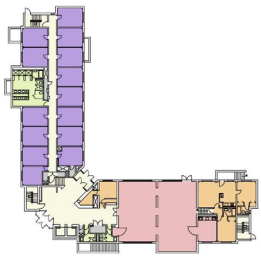
Existing Schmidt Hall - Entry Lobby Area



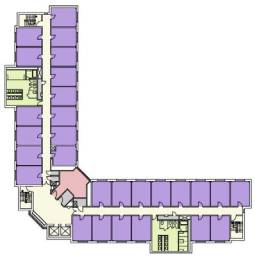
Existing Schmidt Hall - Example Room

SCHIMDT HALL

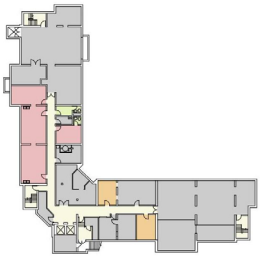
EXISTING



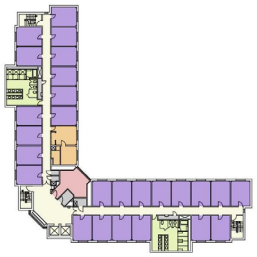
1st Floor



2nd , 4th – 8th Floors



Basement



3rd Floor

Housing Metrics		
GSF	90,048	
NSF	55,581	
Amenity	5,485	13sf/student
Student Affairs	1,965	5sf/student
Academic Support		NA
Bed Count	411	Traditional
Toilet	45	1:6 students
Sink	90	1:4.5 students
Shower	53	1:6 students
Urinal	0	1:22 students
Tub	15	1:27.4 students

Existing Schmidt Hall Plan Diagram

Facade Upgrade Study by D2 Groups LLC - Option A

Facade Upgrade Study by D2 Groups LLC - Option B

Facade Upgrade Study by D2 Groups LLC - Option C

PREVIOUS STUDY

In 2018 the University invested in a study to consider an addition to this building. Recommendations of that study include a facade replacement along with full renovations, and upgrades. The proposed addition included expansion of the building corner and a one story over build to expand opportunities for student amenity as well as increase bed count potential.

OPPORTUNITIES & RECOMMENDATION

Renovating and adding to Schmidt Hall can be accomplished with an intentional investment. At minimum a complete renovation is warranted. Some aspects of that renovation should include:

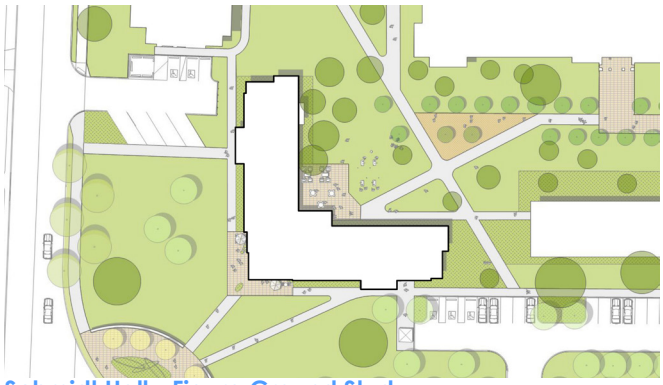
- Full bathroom renovations
- Update to interior finishes
- Improves Lighting (natural and artificial)
- HVAC upgrades
- Accessibility Improvements
- Improve Common Space and Shared Amenities
- Improve entrances and configuration
- Improve Site Connections via Amenity and Landscape

The current building does not utilize the full allowable height of 90 feet. As such the planning team is recommending that a 1-story overbuild be considered in the overall context of construction cost and return on investment via bed count revenue. This was evaluated by the Team's structural engineer for feasibility.

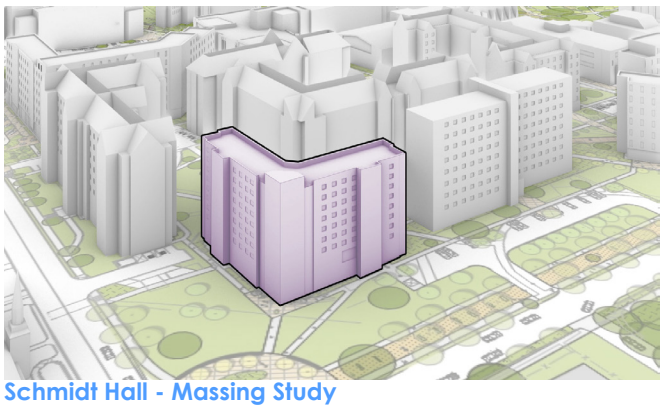
Due the existing building's location, prominently sited at the corner of South New Street and West Rosedale Avenue, a building addition is recommended to reinforce this corner as a campus gateway and to provide the necessary space to increase amenity offerings. Schmidt Hall currently has about 13 square feet of amenity space per student which is well below the targeted allowance. The basement level should also be expanded to create opportunities for daylight access to basement programs.

At the ground level a lobby expansion affords the opportunity to resolve the accessibility issue as well create a more welcoming and secure entry lobby commons.

If the choice is made to expand the building by 1-story there will likely be opportunity to create a unique rooftop amenity via garden as well as an occupied roof.

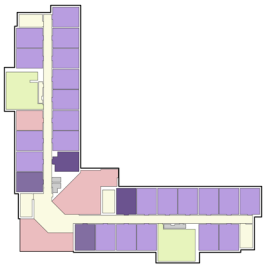


Schmidt Hall - Figure Ground Study



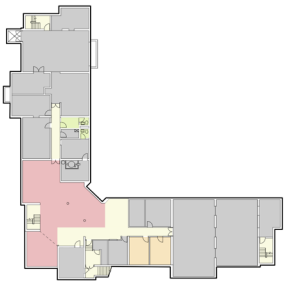
Schmidt Hall - Massing Study

Killinger Hall - Plan Diagram Overbuild Level 9



Schmidt Hall - Plan Diagram Levels 2-8

Schmidt Hall - Plan Diagram Entry Level 1



Schmidt Hall - Plan Diagram Basement Level

Tyson & Goshen Halls

EXISTING OVERVIEW

Both Tyson and Goshen Halls are 7-story residence hall buildings constructed in 1966. The buildings are essentially replicates with some variation at basement and ground level due to site conditions.

The exterior facade construction of Tyson Hall is in fair to poor condition and is in need of repair as well as a replacement of all curtain wall assemblies. The Goshen Hall facade has had some relatively recent facade improvements is categorized as good to fair condition.

Additionally, both buildings will require deferred maintenance work and significant upgrades to be brought up to standard with today's expectations for campus living standards. This will include window refurbishment as well as complete upgrades to both HVAC and Electrical systems.

It is also be noted that both Tyson and Goshen Halls currently have approximately 80 more beds per building than the facilities were originally designed for. Rooms sized for double occupancy were converted to be triples by use of loft bed furniture. This overcrowding has resulted in a heightened strain on the building infrastructure and systems. Elevators are in need of repair/ replacement. The electrical demand, already increased by technology use, is too much for electrical components beyond their useful life.

The toilet and shower to student ratios are generally fair even with the additional occupants; however, the ratio of available amenity space is significantly below the targets by today's standards.

Existing Tyson Hall - Campus Entry View

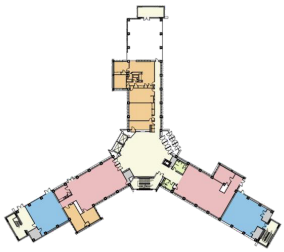
Existing Tyson Hall - View from Sharpless

Existing Goshen Hall - Campus Entry View

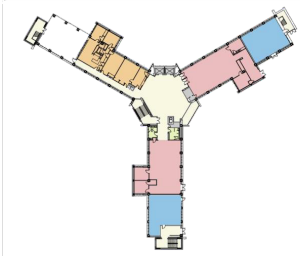
Existing Goshen Hall - Campus View

TYSON & GOSHEN

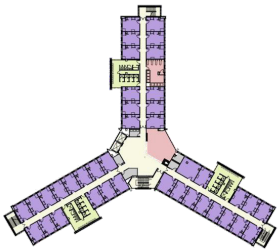
Existing



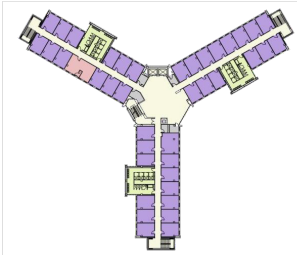
Tyson 1st Floor



Goshen 1st Floor



Tyson 2nd – 7th Floors



Goshen 2nd – 7th Floors

Housing Metrics		
GSF	122,299	
NSF	104,173	
Amenity	6,076	10.9sf/student
Student Affairs	2,645	4.7sf/student
Academic Support	1,842	3.3sf/student
Bed Count	556*	Designed for 460
Toilet	72	1:7.7 students
Sink	144	1:3.8 students
Shower	72	1:7.7 students
Urinal	0	NA

*more than 80 students in triples

Existing Tyson & Goshen Halls Plan Diagram

Existing Tyson Hall - Example Recreation Lounge

Existing Tyson Hall - Example Room (Triple)

Existing Goshen Hall - Example Lobby Lounge

Existing Goshen Hall - Example Room

OPPORTUNITIES & RECOMMENDATION

For the Tyson and Goshen Hall sites the planning team evaluated both renovation and replacement strategies. In the context of the University's strategic goals, potential campus place making opportunities, sustainable design/ carbon footprint, and realities of anticipated capital capacity the recommendation is for the advancement of complete renovation with additions to both Tyson and Goshen Halls.

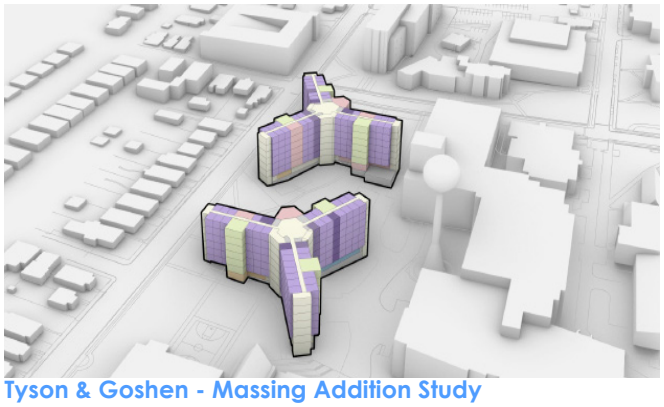
Included in this report is a replacement scenario that shows opportunity for more total beds; however, it is expected that the cost of a new larger complex will be significantly more than that of renovation and addition costs. Additionally, the reuse of the existing superstructure (concrete) alone yields a significantly lower carbon footprint and is a more sustainable solution.

Renovating and adding to both Tyson and Goshen Halls is important to the success of the WCU housing rejuvenation campaign in that renovation in lieu of new construction requires a lesser capital outlay allowing the University to offer renovated beds at a more attainable price point than new construction. It is noted that a complete renovation is warranted. Some aspects of that renovation should include:

- Facade Improvements and Window Replacements
- Full bathroom renovations / conversions
- Update to interior finishes
- Improves Lighting (natural and artificial)
- HVAC upgrades
- Elevator upgrades
- Improve Common Space and Shared Amenities
- Improve entrances and configuration
- Improve Site Connections via Amenity and Landscape
- Improve interface between pedestrians and service areas

Tyson & Goshen - Figure Ground Addition Study

Tyson & Goshen - Figure Ground Addition Study



Tyson & Goshen - Massing Addition Study

Tyson & Goshen Hall - Typical Plan Addition Study

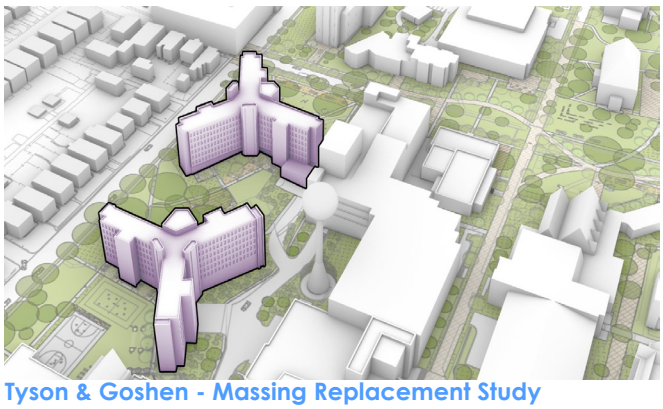
As previously noted, the current building is overpopulated by use of triple occupancies. While counter to the goal of increasing bed count on campus, it is recommended that the University consider converting triples back to doubles. By "de-densifying" the buildings the amenity space allocation ratio will be improved and generally the quality of residence experience.

The construction of an addition to both buildings will facilitate the creation of functional amenity space for students in centralized locations. Additionally, RA ratios, restroom ratios, and provision of medical singles distributed at all floors will offer an experience more closely aligned to current student expectations and offering some parity with USH housing.

Both basement and ground level service areas require careful thought to mitigate the current conflict between pedestrians and service traffic. By reconfiguring and screening the service areas there is opportunity improve safety and overall campus experience.

Tyson & Goshen - Figure Ground Replacement Study

Tyson & Goshen - Figure Ground Replacement Study



Tyson & Goshen - Massing Replacement Study

Tyson & Goshen - Typical Plan Replacement Study

College Arms

EXISTING OVERVIEW
This three-building complex consists of structures constructed in 1920, 1930, and 1970 respectively.

733 South High Street appears to have been constructed as a single family detached home in 1920. This 3-story building with basement was converted for its current use as student apartments.

721 South High Street was constructed in 1930 and is a 3-story apartment building with a partial basement level.

731 South High Street was constructed in 1970 and is a 2-story apartment building.

The buildings in this complex are in varying states of disrepair however the largest of them (721 South High Street) is in need of immediate consideration. Condition assessments have identified the need for exterior rehabilitation, there is a need for sloped floor repairs requiring structural enhancements, and ceiling repairs - that likely have moisture infiltration as a root cause - are a continuing maintenance issue. Additionally, none the buildings are fully accessible and will require significant upgrades to make them compliant by today's standards.

OPPORTUNITIES & RECOMMENDATIONS
As a part of the evaluations for both Campus Housing and the Comprehensive Campus Master Plan (CMP) the Planning Team has considered the opportunities to renovate this facility for continued use as student housing acknowledging the building systems failures noted above and the backlog of deferred maintenance is significant. Renovating this complex can be accomplished with significant investment, but the result will not take advantage of highest and best use of this site. The buildings, as configured, do not utilize the allowable height nor maximize buildable area in a part of campus with high space demand for both academic and student support services.

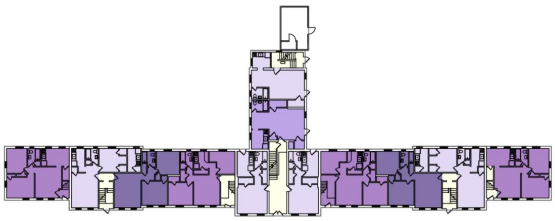
As such the planning team will further evaluate this site for potential future use as an education and general services (E&G) location.

It is worth noting that this site sits outside of the West Chester Borough PUC. As such, the building can be renovated to remain student housing. However, if the University elects to raze these building the future construction will need to comply with the zoning parameters established inclusive of building use. I.e. not residential use.

721 South High Street

COLLEGE ARMS

EXISTING



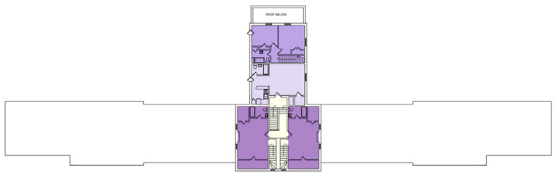
1st Floor
North Building

1st Floor
East and South Building

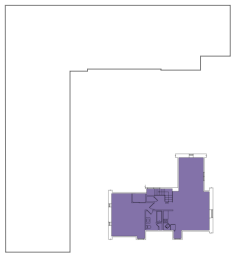
Building Metrics	
GSF	23,201
NSF	21,026
Bed Count	**97**
Single Apt	9
Single, 2 Bed Apt	13
Double, 1 Bed	20
Double, 2 Bed	42
Triple, 1 Bed	9
Perm Offline	4

2nd Floor
North Building

2nd Floor
East and South Building



3rd Floor
North Building



Attic Plan
South Building

731 South High Street

733 South High Street

Wayne Hall

EXISTING OVERVIEW

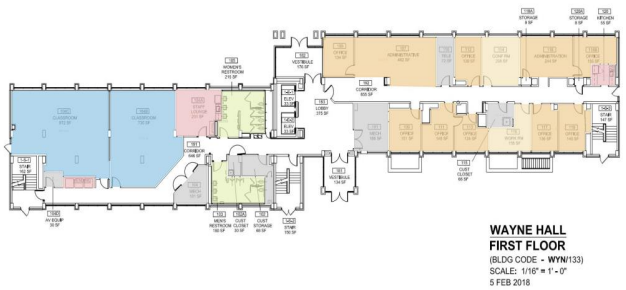
At the outset of the abbreviated housing study it was noted that Wayne Hall was originally constructed as a traditional residence hall with double occupancy rooms arranged along a double loaded corridor. Prior to the 2010 Campus Plan this building was consider for demolition to make way for a larger, suite style, residence. These plans were never realized, but rather the building was converted to an E&G facility and now home various offices departmental space for:

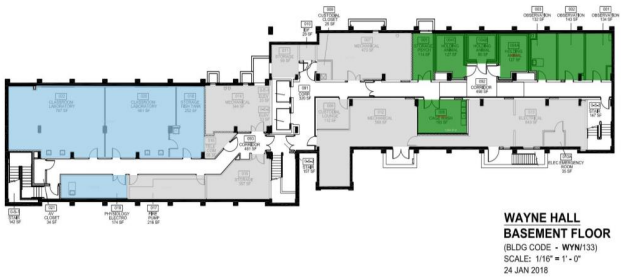
- Admissions
- Communication & Media
- Educational Foundations & Policy Studies
- History
- New Student Programs
- Office of Clinical Experiences & Candidate Services
- Psychology
- Women's and Gender Studies

OPPORTUNITIES & RECOMMENDATION

While the team considered the possibility of converting the building back to a residence hall it was deemed to be a significant disruption to academic and campus operations and this concept was abandoned. The planning team recommendation for Wayne Hall is to advance a deferred maintenance program as identified in the Facilities Assessment report(s).

The Planning Team may explore other potential opportunities as a part of the Comprehensive Master Plan (CMP).





WAYNE HALL
NINTH FLOOR
(BLDG CODE - WYN/133)
SCALE: 1/16" = 1'-0"
13 FEB 2018

WAYNE HALL
EIGHTH FLOOR
(BLDG CODE - WYN/133)
SCALE: 1/16" = 1'-0"
13 FEB 2018

WAYNE HALL
FIFTH FLOOR
(BLDG CODE - WYN/133)
SCALE: 1/16" = 1'-0"
8 FEB 2018

WAYNE HALL
SEVENTH FLOOR
(BLDG CODE - WYN/133)
SCALE: 1/16" = 1'-0"
8 FEB 2018

WAYNE HALL
FOURTH FLOOR
(BLDG CODE - WYN/133)
SCALE: 1/16" = 1'-0"
7 FEB 2018

WAYNE HALL
SIXTH FLOOR
(BLDG CODE - WYN/133)
SCALE: 1/16" = 1'-0"
8 FEB 2018

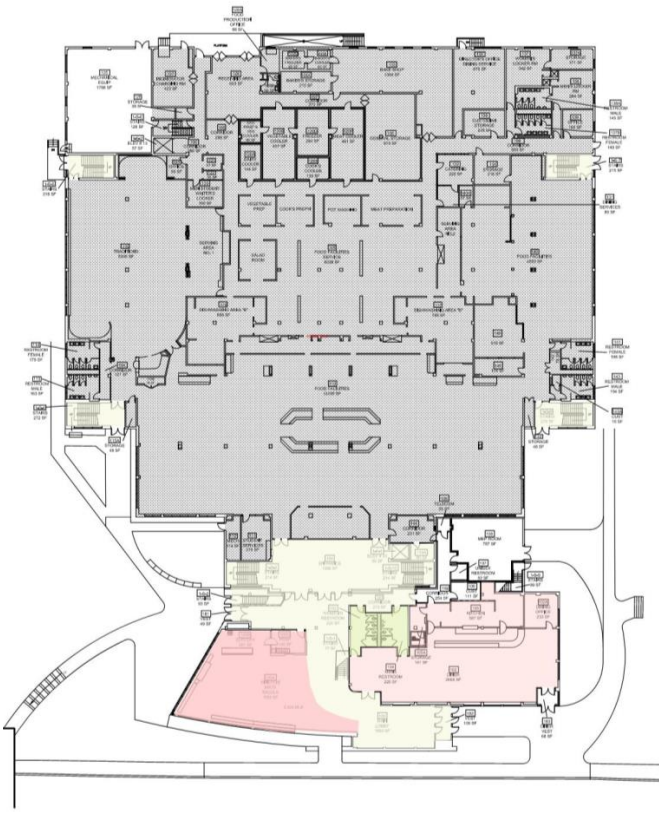
Lawrence Center Site

EXISTING OVERVIEW

This 2-story building was originally constructed on this site in 1965 with an addition in 2006. Per the 2015 Campus Plan update approximately 40,000 square feet of space was vacated after completion of the SECC buildings (former dining hall). The remainder of the building remains active and is home to several student service programs/ departments as well as an Einstein Bagel and Chickie's & Pete's dining amenity.

As a part of the evaluations for both Campus Housing and the Comprehensive Campus Master Plan (CMP) the Planning Team has considered the opportunities to renovate this facility for continued educational and general (E&G) use as suggested by the 2015 plan. Both the HVAC and electrical building systems are beyond their useful life. The University is currently investing in temporary HVAC elements to keep the facility tenable for current occupants. The elevator system is also failing and requires replacement. Additionally, the facility is not fully protected via active sprinkler systems. Beyond the systems failures, the backlog of deferred maintenance is significant.

EXISTING PROGRAM		
Level 1		
Einstein Bagel		2,425 sf
Chickie's & Pete's		3,700 sf
Unused Dining / Servery		46,000 sf
Level 2		
Academic Success Program		1,400 sf
Career Development Center		5,400 sf
Learning Asst & Resource Center		4,500 sf
Office of Educational Accessibility		1,400 sf
Exploratory Studies Academic Advising		1,500 sf
Residence Life & Housing		3,500 sf
University College Dean's Suite		1,400 sf
Center or Women & Gender Equity		1,300 sf
Counseling Center		4,050 sf



Existing Goshen Hall - Example Room

Existing Goshen Hall - Example Room

Existing Goshen Hall - Example Room

Existing Tyson Hall - Example Room (Triple)

OPPORTUNITIES & RECOMMENDATION

The 2015 Campus Plan update suggested there may be potential to re-purpose this facility for E&G programming; however, that plan did not consider campus housing needs at that time. Renovating this building for continued use as an E&G facility can be accomplished with significant investment to overcome system failures and deferred maintenance needs, but the result will not take advantage of highest and best use of this site. The current 2-story building does not utilize the allowable height of 90 feet. Nor does the existing building's location on campus serve as a central position for student support or academic support services meant for the general student population.

As such the planning team is recommending that the existing Lawrence Hall be razed and replaced with a new multipurpose residence hall with student support service programming for the entire WCU community with a focus on the campus residents.

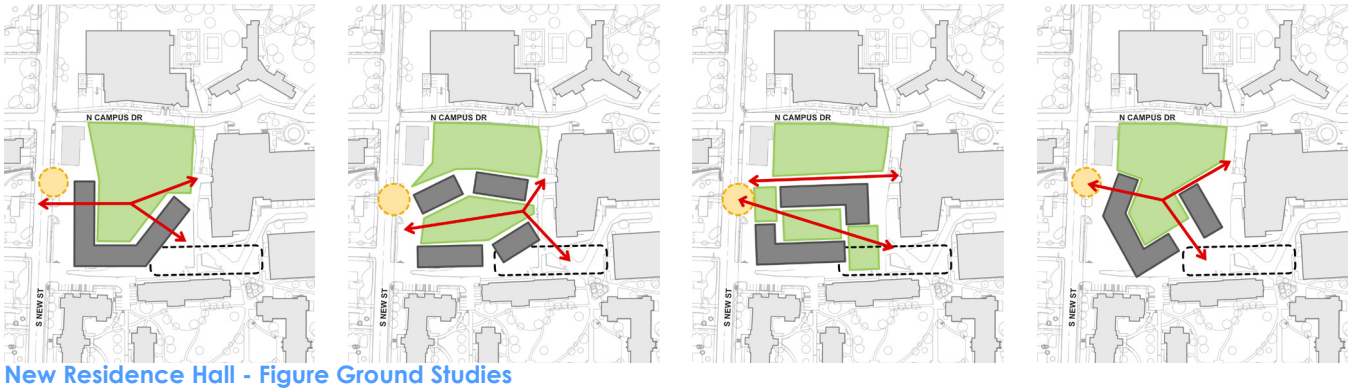
Over the course of the planning process the team further evaluated planning concepts that would reinforce the University's strategic goals and the potential campus place making opportunities.

The results indicated that redevelopment of this site could take on many forms and still achieve the primary objectives of providing new campus housing (increased bed count) and allow for spatial relief on a very densely populated area of campus real estate. Key aspects of this development include:

- Creating a balance of programmable and open outdoor spaces
- Respecting the campus edge along New Street.
- Co locating service access with existing facilities

The recommended approach to developing this site is to define the ground plane by acknowledging the desire lines of campus circulation and reinforce those movements with defined program opportunities. Additionally define program synergies between this building, the Rec Center, and SECC along with the other residence halls within the campus "super block."

Knowing that there is significant program pressures for student support services across this campus there is opportunity to utilize the space at the



New Residence Hall - Figure Ground Studies

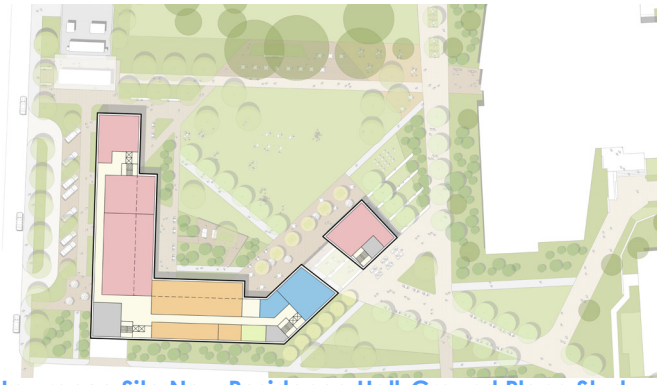
Lawrence site. The Planning Team will further explore these opportunities as a part of the Comprehensive Master Plan (CMP).

To maximize bed count the recommendation for this site will be provision of primarily double occupancy rooms arranged in a 30-40 person neighborhood configuration. For purpose of this study a double loaded corridor was utilized however, racetrack and/or pod configurations could be considered. A ratio of 1:30-40 RA rooms is assumed long with 2:30-40 ratio of students to medical singles. The bathrooms are arranged together into stacked wet cores and are single user gender neutral facilities.

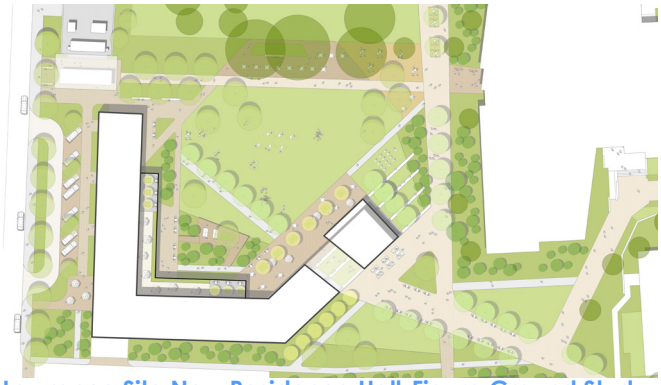
In addition to the student services programming noted earlier this facility should include at least one Graduate Hall Director apartment and 20-30sf of amenity space per student. The basic floor level amenities include lounges and laundry. The suggested building amenities should include

- Building Lounge Area
- Study Rooms
- Community Kitchen with Seating
- Activity / TV Lounge
- Recreation and Game Room
- RA Office
- Visitor Restrooms
- Package / Delivery Room
- Trash and Recycling Room
- Bike Storage

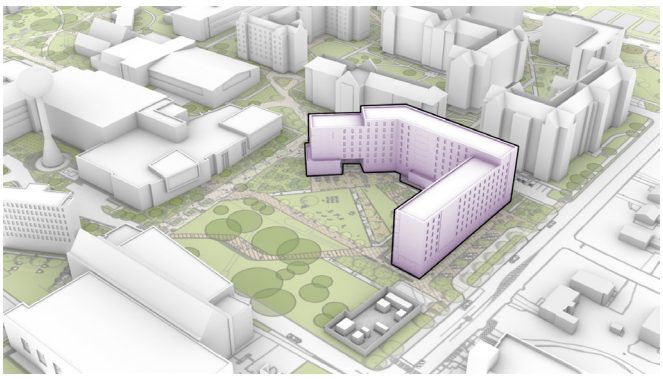
Other amenity program offerings can and should be considered as part of a feasibility study after completion of the CMP.



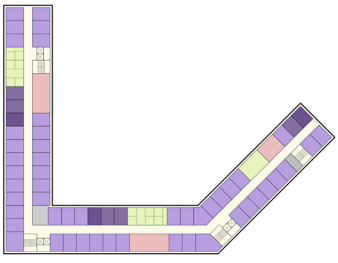
Lawrence Site New Residence Hall-Ground Plane Study



Lawrence Site New Residence Hall-Figure Ground Study



Lawrence Site New Residence Hall - Massing Study



Lawrence Site New Residence Hall-Typical Plan Study

EWING COLE

DECANT CONSIDERATIONS

The construction of a new residence hall on the existing Lawrence Hall site requires a strategy to relocate current programs to other locations across campus. The Planning Team worked with campus leadership to identify potential locations for consideration. The moves noted here are being further considered as part of the CMP process. Many of these recommendations should be considered temporary until a more appropriate location can be created, and some of the recommendations could become permanent locations based on available space and proximity to complimentary programs.

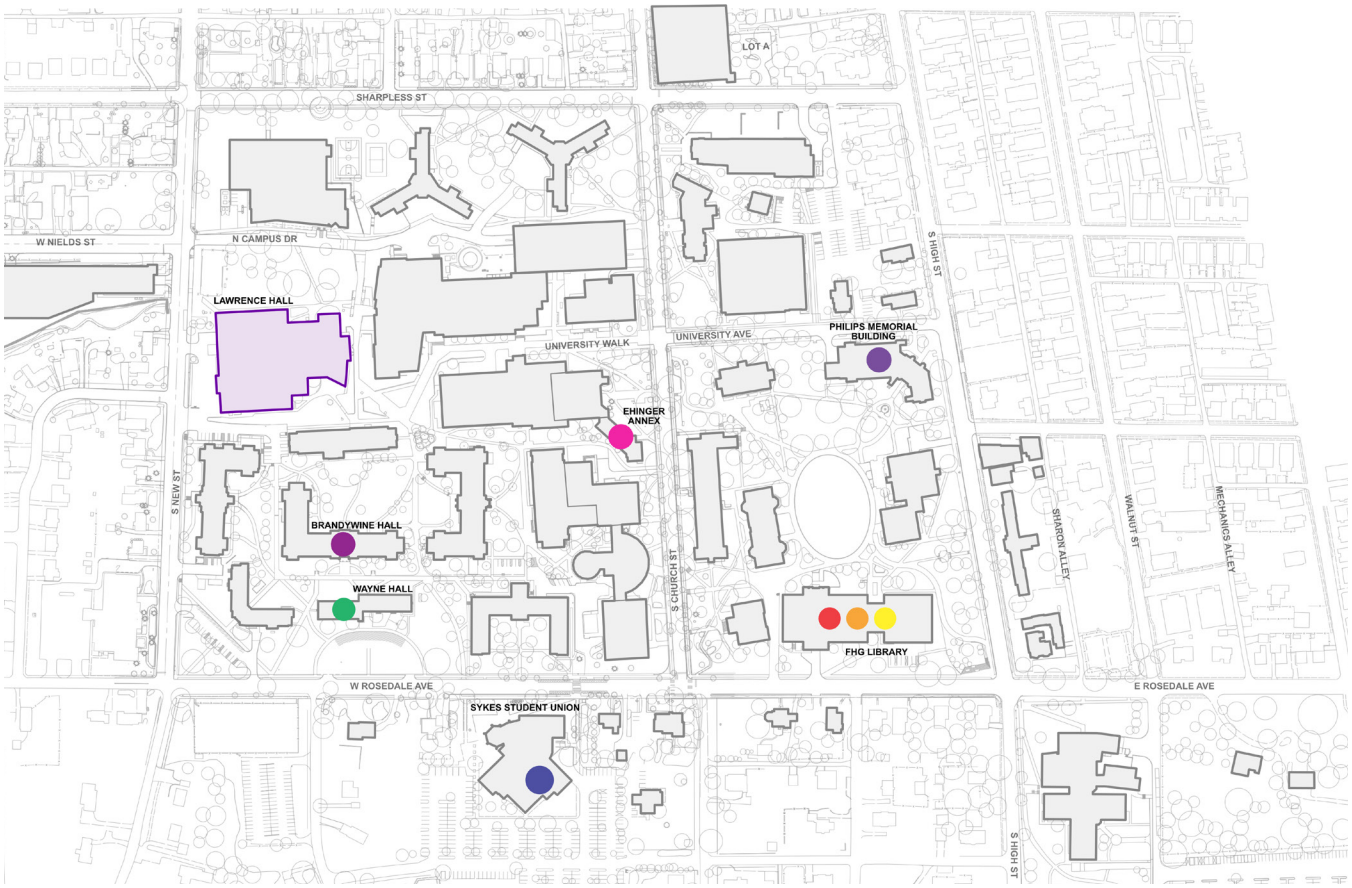
Einstein Bagel: Relocating this food & beverage amenity is two-fold. Re-brand the current EcoGrounds cafe as an Einstein Bagel and second, create an Einstein station within the Commons Dining Hall. Both moves could be considered permanent.

Chickie's & Pete's: The existing Commons Dining Hall has evening hours capacity and equipment capabilities to support this dining experience.

Academic Success Program: The second floor of the FHG Library appear to be a good location for this program. There are program synergies that may suggest FHG could be a permanent location for this program. As Library Services completes their Strategic Plan (currently ongoing) another location my be deemed more appropriate.

Career Development Center: The sixth floor of the FHG Library appears to have space capacity to accommodate Career Development program needs.

Learning Assistance & Resource Center: The first floor of the FHG Library is great location for this program. There are program synergies that may suggest FHG could be a permanent location for



Program Distribution Map

this program. As Library Services completes their Strategic Plan (currently ongoing) anther location my be deemed more appropriate.

Office of Educational Accessibility: Space at the Entry Level of Wayne Hall is being vacated to make room for this program. This location will offer a bit more visibility and easier access to this service.

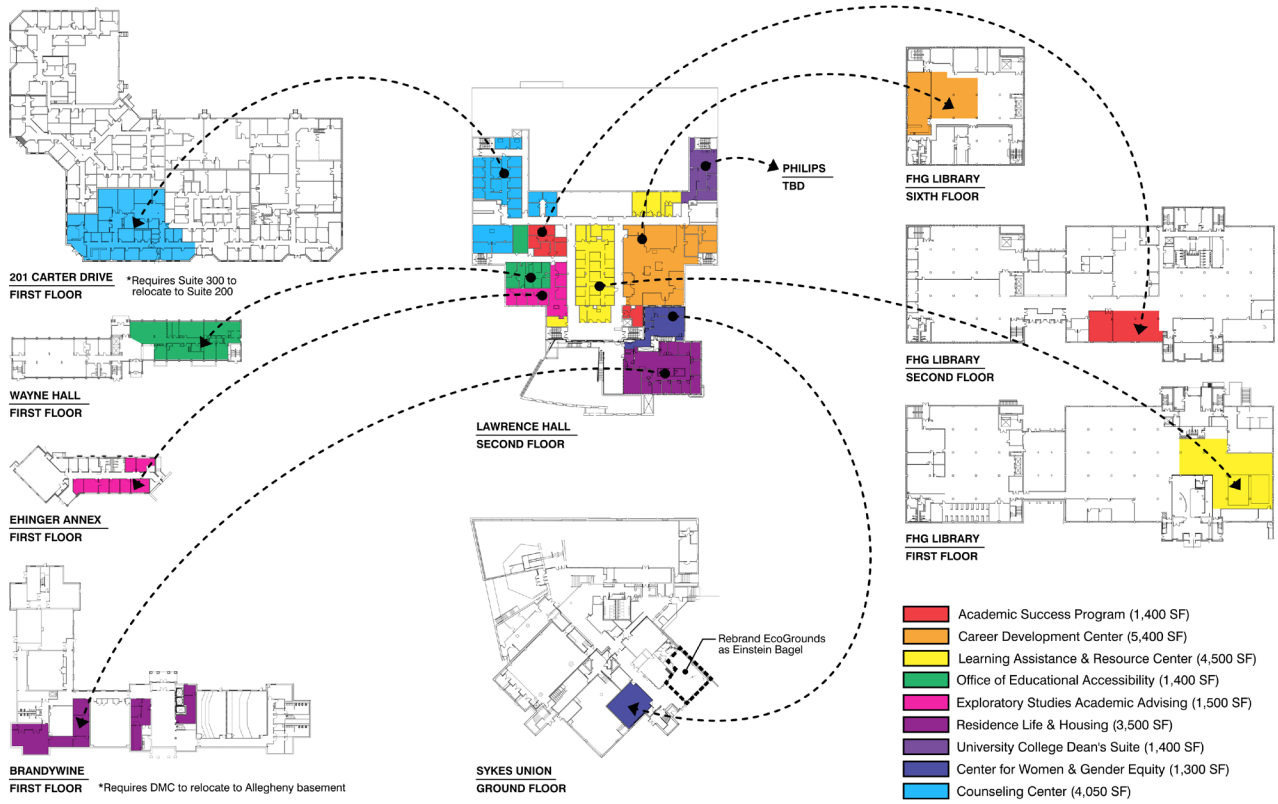
Exploratory Studies Academic Advising: Underutilized office space within the Ehinger Annex can be a temporary home for this program.

Residence Life & Housing: IS&T will consolidate Digital Media Center (DMC) space within Allegheny. Entry Level space at Brandywine will become the new home for Res Life & Housing. While this could be a permanent location, it is more likely that a New Residence Hall at Lawrence site is a permanent location for these services.

University College Dean's Suite: Underutilized office space in Phillips has been earmarked for these functions. It is anticipated that this is a temporary circumstance. The Planning Team will consider other opportunities as part of the CMP process.

Center for Women & Gender Equity: A space within the lower level of the Sykes Student Union building has been identified as a potential location for this program. Along term location will require further investigation.

Counseling Center: Underutilized space at 201 Carter could be adapted to provide a new Counseling Center. This has been noted as potentially inconvenient and not a desirable option. The Planning Team will continue to evaluate as part of the CMP process.



Program Distribution Diagram

EWING COLE

South Campus Apartments

EXISTING OVERVIEW

This complex is comprised of 11 multi-unit apartment buildings that were constructed in 1993. The complex was constructed via the Pennsylvania Department of General Services (DGS) delivery methodology. Seven of the buildings are 2 1/2 stories containing 10 units while the other 4 buildings are 2 stories containing 8 units. Combined this complex provides 499 student beds.

The exterior facade materials appear to generally be in fair condition; however, numerous areas of staining and biological growth is present. Improperly installed flashing and coping details were observed suggesting opportunity for water infiltration.

Majority of building systems are at end of useful life and are in need of repair or replacement. These would include roofing, windows, HVAC units, and electrical distribution equipment.

The interior finishes observed appeared to be in fair; however, it is noted that the units were poorly constructed and moisture has continued to be a maintenance issue for the University. The presence of rotten wood, and rusted metal framing indicates a failure to exhaust warm moist air from the bathrooms and/or water infiltration

Additionally, units observed are not constructed to current accessibility requirements.

PREVIOUS STUDY

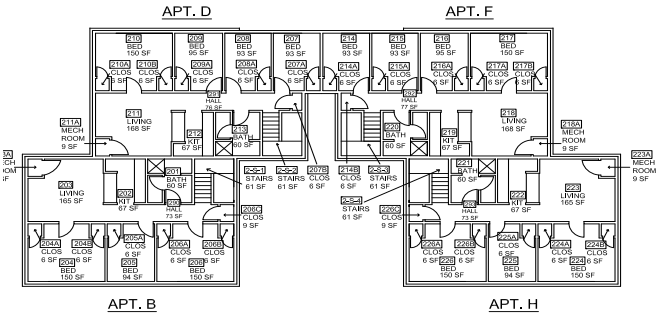
In fall of 2023 the University invested in a feasibility study to determine opportunity for both renovation and/or replacement of the existing apartment complex facilities.

Renovation: The suggested scope was a complete renovation of all interior finishes. The reconfiguration would include a stackable laundry within the unit and add a second full bathroom. Additionally, the kitchen would be refurbished with new cabinets and counter-tops, and appliances. Building systems would include upgrades to HVAC, electrical and plumbing as well a new fire suppression system.

New Construction: The proposal was to provide 12 units per building with one covered exterior stair for vertical circulation. The new buildings are to be constructed on the existing foundations and would be three stories tall. The proposed bedroom configuration is two doubles and two singles per unit. Each unit will accommodate 6 occupants with 2.5 bathrooms, an increase of approx. 250 occupants. Each unit has a stackable laundry, a full kitchen with a fixed peninsula, and a living room. Additionally, the units can be modular and prefabricated using wet and dry modules.

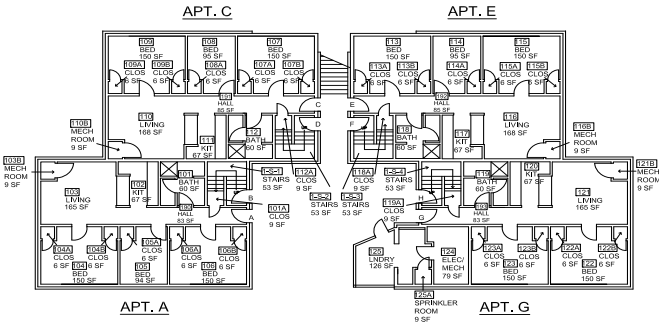
Renovation and Addition: South Campus Apartments need complete renovation to achieve parity with USH-managed beds. As part of the renovation strategy, it is possible to increase the bed-count if another floor is added to each of the buildings. In addition, it is recommended to completely renovate the systems and finishes of each building. The result could be an increase of 20 beds per building increasing the South Campus capacity from 499 to be 719 beds via phased renovations.

Existing South Campus Apartments - Exterior Example



SC APT 831
SECOND FLOOR
(BLDG CODE - **S831**/S69/169
SCALE: 1/16" = 1' - 0"
21 MAY 2007

Existing South Campus Apartments - Kitchen Example



SC APT 831
FIRST FLOOR
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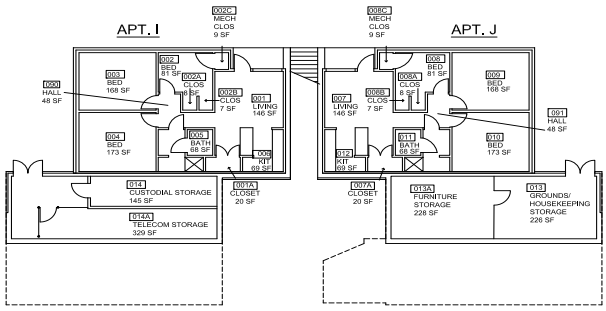
Existing South Campus Apartments - Bathroom Example

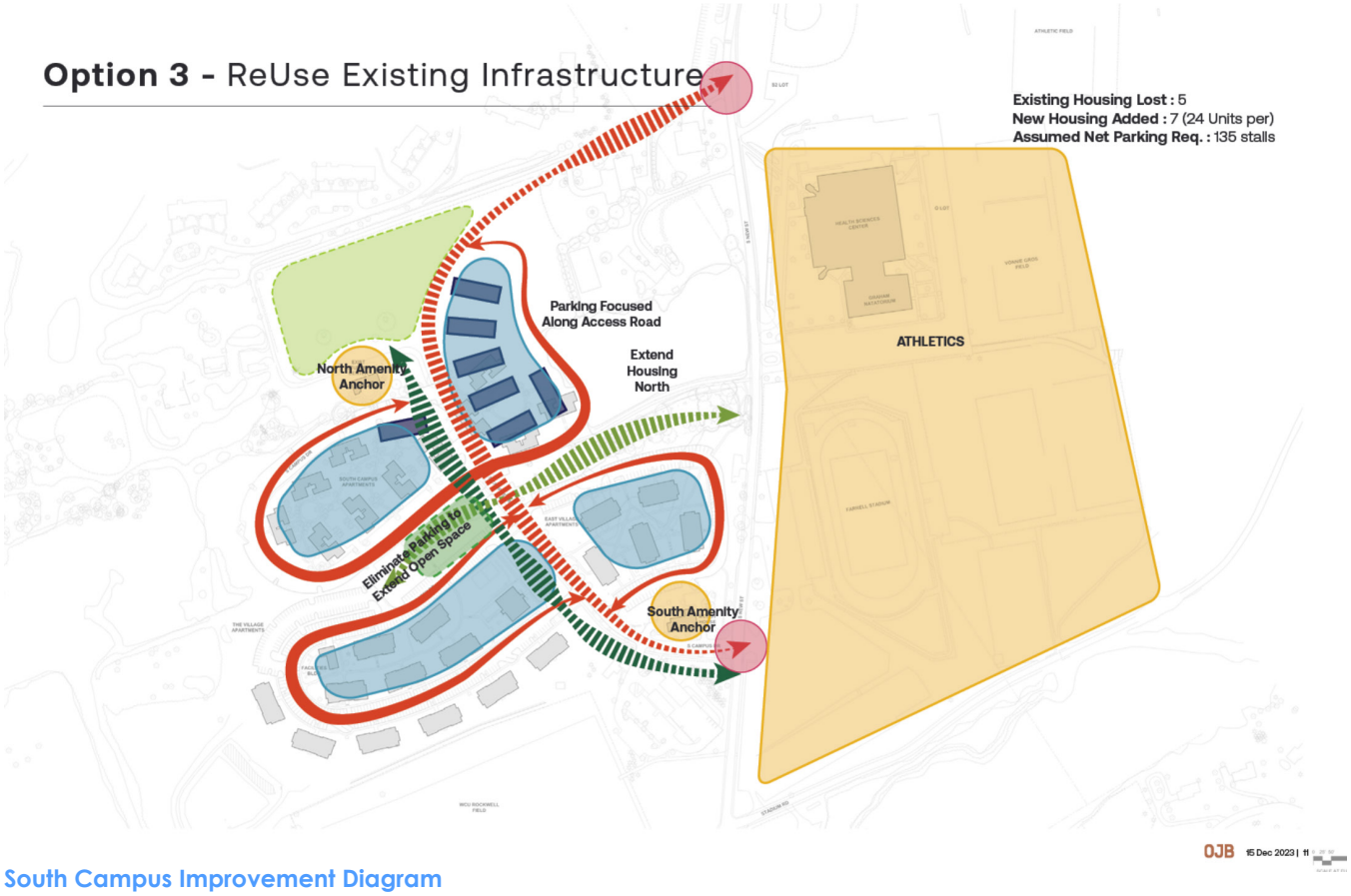


SC APT 831
GROUND FLOOR
(BLDG CODE - **S831**/S69/169)
SCALE: 1/16" = 1' - 0"
21 MAY 2007

OPPORTUNITIES & RECOMMENDATION
Due to the age and failing conditions of the existing South Campus Apartment facilities a full renovation program and /or replacement program should be implemented.

Renovation: The recommendation is to define scope to be achieved over the course of a full summer to allow for construction activities to have minimal impact on campus operations and bed count. To do this will likely require up to five phases.

New Construction: While there may be opportunity to provide new construction on top of existing foundations of the 1993 construction (per 2023 feasibility study) there is also available land for development that can accommodate new construction "by right" within the area of campus referred to as Glen Echo. The Planning Team studied a variety of arrangements on this site for both temporary and permanent development



South Campus Improvement Diagram

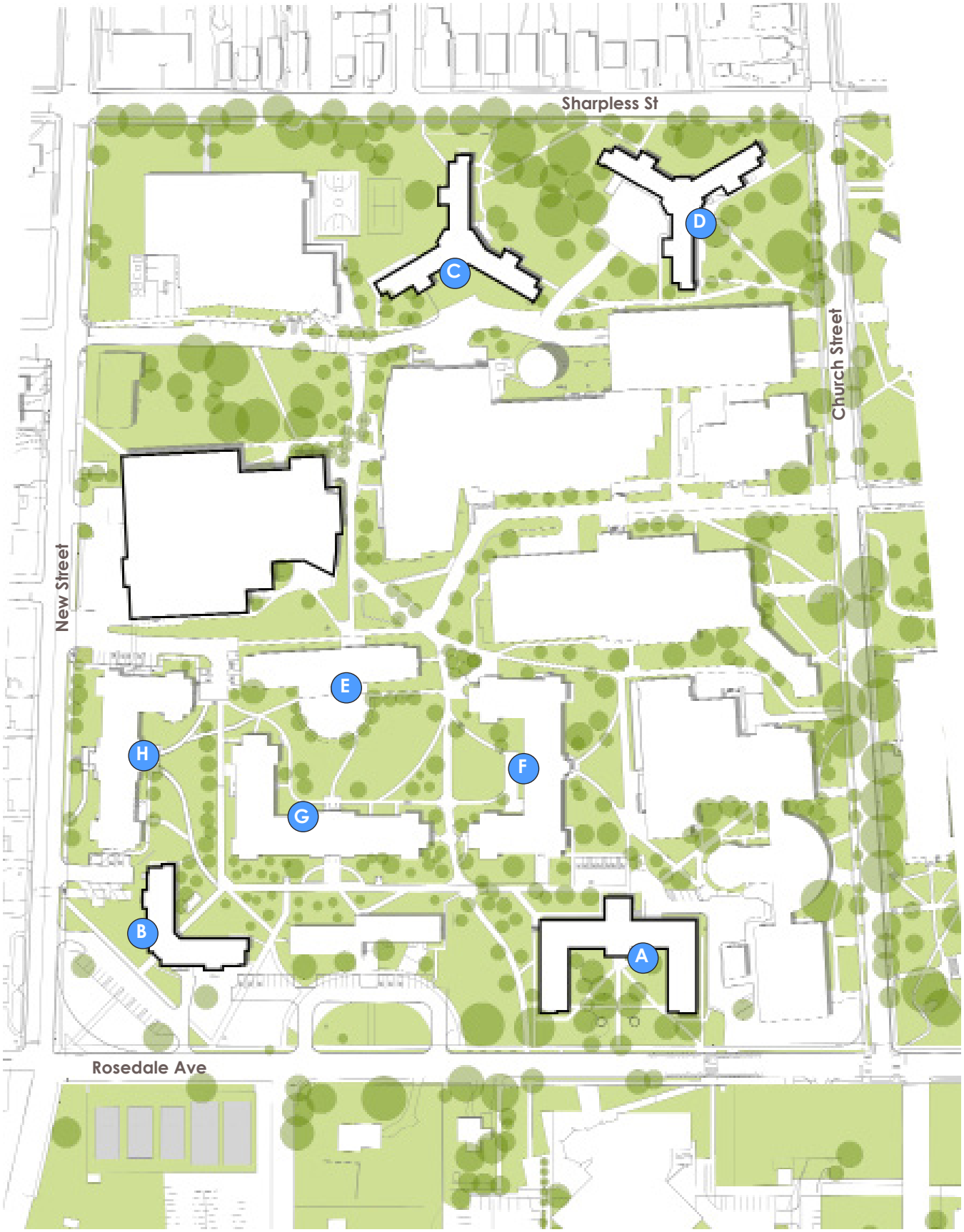
South Campus Site Plan - Proposed Glen Echo Development

Implementation Considerations

EXISTING OVERVIEW

NORTH CAMPUS		BEDS
A	Killinger	308
B	Schimdt	438
C	Tyson	558
D	Goshen	558
E	University	265
F	Allegheny	636
G	Brandywine	622
H	Commonwealth	651
	College Arms*	97
		4,133
SOUTH CAMPUS		**BEDS**
	South Campus Apts	499
	The Village Apts	524
	East Village Apts	264
		1,287
TOTAL CAMPUS BEDS		**5,420**

NOTES:
1. Existing bed count numbers per WCU Fall 2023



North Campus Site Plan - Existing "Super Block" Development

EWING COLE

Implementation Considerations

SCENARIO 1

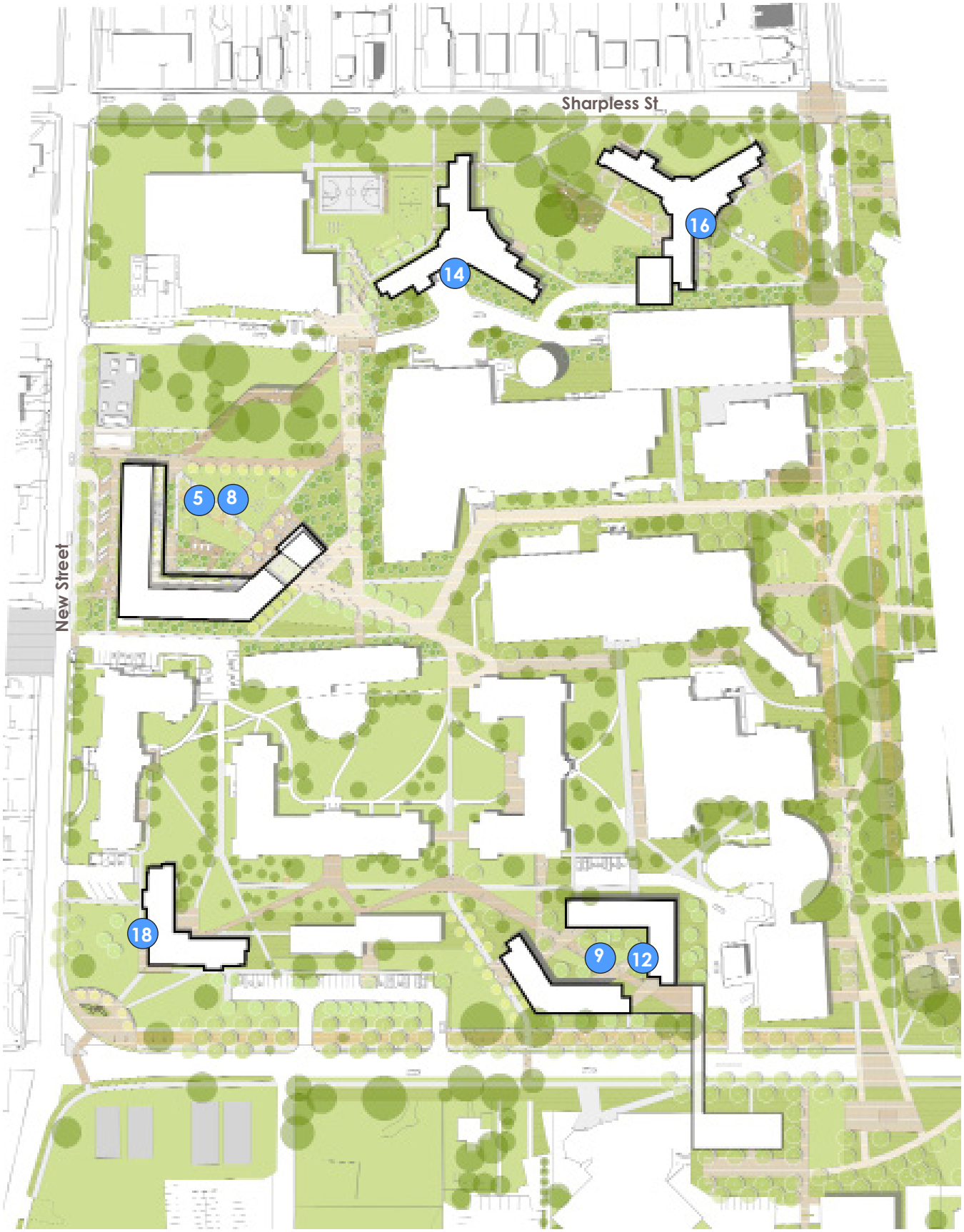
IMPLEMENTATION SCENARIO 1		EXIST BEDS 2024 5,420	TOTAL CAMPUS BED
1	Temp Housing - Lot M1	128	5,548
2	Vacate College Arms	(97)***	5,451
3	SC Apts Phase I	499 (100)	5,451
4	SC Apts Phase 2	499 (100)	5,451
5	Demolish Lawrence		5,451
6	SC Apts Phase 3	499 (100)	5,451
7	SC Apts Phase 4	499 (90)	5,451
8	New Residence Hall	702*	6,153
9	Demolish Killinger	(308)	5,845
10	SC Apts Phase 5	499(120)	5,845
11	Remove M1 Temp	(128)	5,717
12	New Residence Hall	560*	6,277
13	Tyson Off-line	(558)	5,719
14	Tyson Renovated	432**	6,151
15	Goshen Off-line	(558)	5,593
16	Goshen Renovated	432**	6025
17	Schmidt Off-line	(438)	5,587
18	Schmidt Renovated	414	6001
TOTAL CAMPUS BEDS		5,420	**6,001**
			+581
	New Suites/Apts South Campus	256*	6,257
			+837

* Total New Beds contingent on final design configuration / solution
** Bed count reduction assumes de-densification by eliminating forced triples
***Renovation or redevlopment

NOTES:
1. Size of development at South Campus Glen Echo can potentially increase. Residence Hall construction at Glen Echo contingent upon parking agreements with East Bradford Township.

2. Soft Cost Multiplier to be verified after review with University

3. Projected Cost contingent upon escalation factor and estimated timeline for implementation.



North Campus Site Plan - Scenario 1 "Super Block" Development

EWING COLE

Implementation Considerations

SCENARIO 2

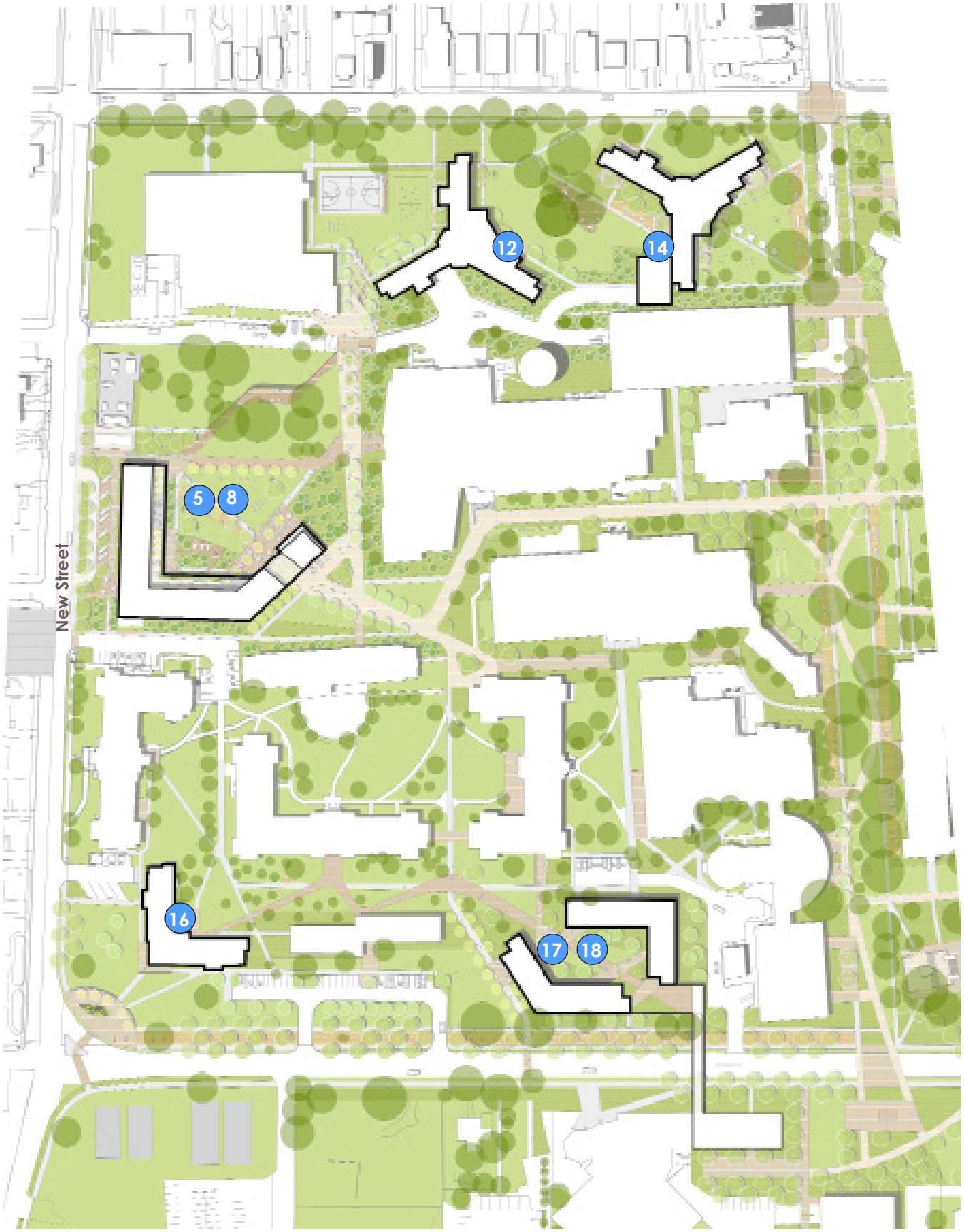
IMPLEMENTATION SCENARIO 1		EXIST BEDS 2024 5,420	TOTAL CAMPUS BED
1	Temp Housing - Lot M1	128	5,548
2	Vacate College Arms	(97)***	5,451
3	SC Apts Phase I	499 (100)	5,451
4	SC Apts Phase 2	499 (100)	5,451
5	Demolish Lawrence		5,451
6	SC Apts Phase 3	499 (100)	5,451
7	SC Apts Phase 4	499 (90)	5,451
8	New Residence Hall	702*	6,153
9	SC Apts Phase 5	499(120)	6,153
10	Remove M1 Temp	(128)	6,025
11	Tyson Off-line	(558)	5,467
12	Tyson Renovated	432**	5,899
13	Goshen Off-line	(558)	5,341
14	Goshen Renovated	432**	5,773
15	Schmidt Off-line	(438)	5,335
16	Schmidt Renovated	414	5,749
17	Demolish Killinger	(308)	5,441
18	New Residence Hall	560*	6,001
TOTAL CAMPUS BEDS		5,420	**6,001**
			+581
	New Suites/Apts South Campus	256*	6,257
			+837

* Total New Beds contingent on final design configuration / solution
** Bed count reduction assumes de-densification by eliminating forced triples
***Renovation or redevlopment

NOTES:
1. Size of development at South Campus Glen Echo can potentially increase. Residence Hall construction at Glen Echo contingent upon parking agreements with East Bradford Township.

2. Soft Cost Multiplier to be verified after review with University

3. Projected Cost contingent upon escalation factor and estimated timeline for implementation.



North Campus Site Plan - Scenario 2 "Super Block" Development

EWING COLE

Implementation Considerations

SCENARIO 3

IMPLEMENTATION SCENARIO 3		EXIST BEDS 2024 5,420	TOTAL CAMPUS BED
1	Temp Housing - Lot M1	128	5,548
2	Vacate College Arms	(97)***	5,451
3	SC Apts Phase I	499 (100)	5,451
4	SC Apts Phase 2	499 (100)	5,451
5	Demolish Lawrence		5,451
6	SC Apts Phase 3	499 (100)	5,451
7	SC Apts Phase 4	499 (90)	5,451
8	New Residence Hall	702*	6,153
9	SC Apts Phase 5	499(120)	6,153
10	Demolish Tyson	(558)	5,595
11	Remove M1 Temp	(128)	5,467
12	Tyson Replacement	504*	5,971
13	Demolish Goshen	(558)	5,413
14	Goshen Replacement	522*	5,935
15	Schmidt Off-line	(438)	5,497
16	Schmidt Renovated	414	5,911
17	Demolish Killinger	(308)	5,603
18	New Residence Hall	560*	6,163
TOTAL CAMPUS BEDS		5,420	**6,163**
			+743
	New Suites/Apts South Campus	256*	6,419
			+999

* Total New Beds contingent on final design configuration / solution
** Bed count reduction assumes de-densification by eliminating forced triples
***Renovation or redevlopment

NOTES:
1. Size of development at South Campus Glen Echo can potentially increase. Residence Hall construction at Glen Echo contingent upon parking agreements with East Bradford Township.

2. Soft Cost Multiplier to be verified after review with University

3. Projected Cost contingent upon escalation factor and estimated timeline for implementation.

North Campus Site Plan - Scenario 3 "Super Block" Development

EWING COLE

Implementation Considerations

SCENARIO 4

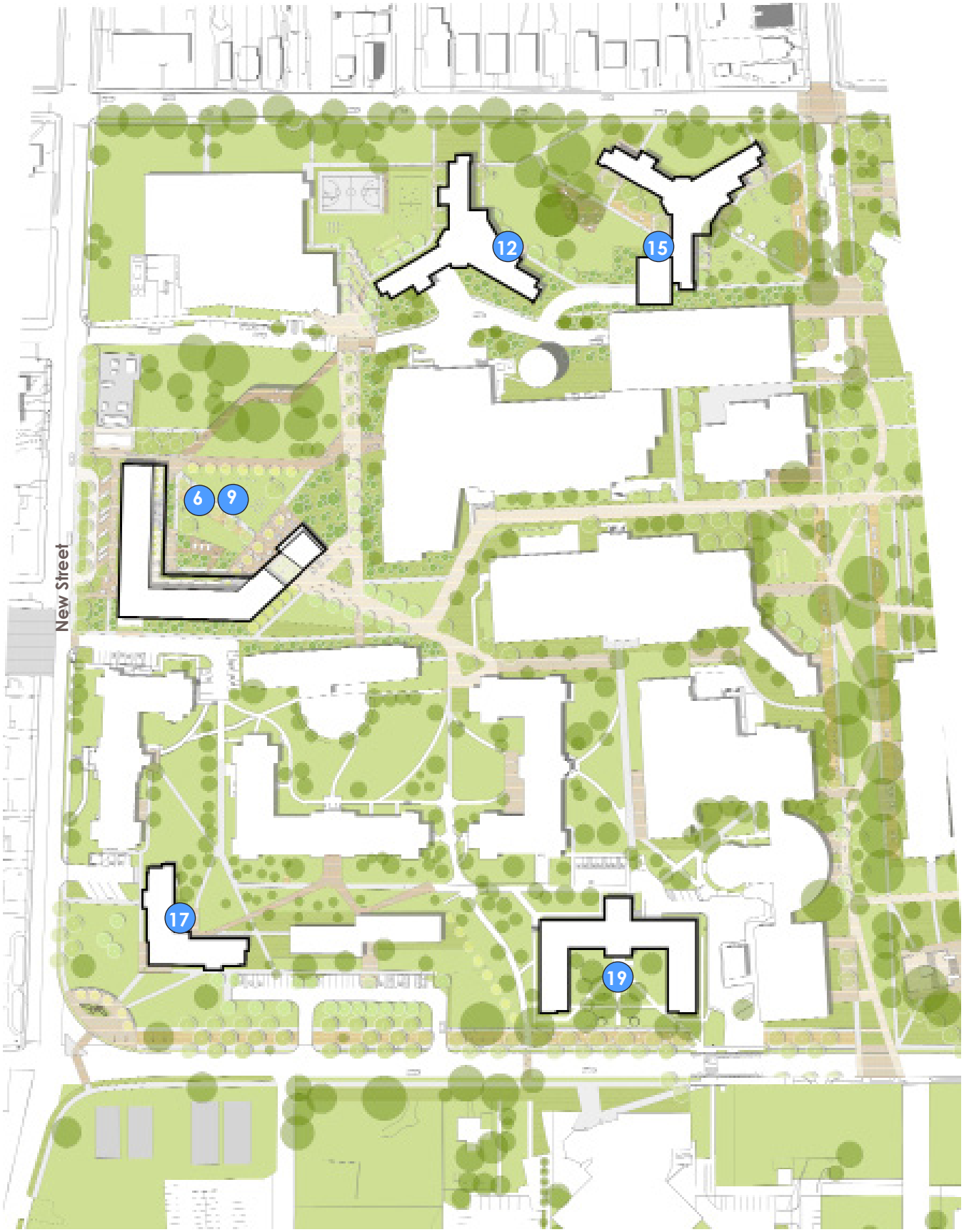
IMPLEMENTATION SCENARIO 4		EXIST BEDS 2024 5,420	TOTAL CAMPUS BED
1	Temp Housing - Lot M1	128	5,548
2	College Arms Off-line	(97)***	5,451
3	SC Apts Phase I	499 (100)	5,451
4	College Arms Reno	97	5,548
5	SC Apts Phase 2	499 (100)	5,548
6	Demolish Lawrence		5,548
7	SC Apts Phase 3	499 (100)	5,548
8	SC Apts Phase 4	499 (90)	5,548
9	New Residence Hall	702*	6,250
10	SC Apts Phase 5	499(120)	6,250
11	Tyson Off-line	(558)	5,692
12	Tyson Renovated	432**	6,124
13	Remove M1 Temp	(128)	5,996
14	Goshen Off-line	(558)	5,438
15	Goshen Renovated	432**	5,870
16	Schmidt Off-line	(438)	5,432
17	Schmidt Renovated	380	5,812
18	Killinger Off-line	(308)	5,504
19	Killinger Renovated	290	5,794
TOTAL CAMPUS BEDS		5,420	**5,794**
			+374
	New Suites/Apts South Campus	256*	6,050
			+630

* Total New Beds contingent on final design configuration / solution
** Bed count reduction assumes de-densification by eliminating forced triples
***Renovation or redevlopment

NOTES:
1. Size of development at South Campus Glen Echo can potentially increase. Residence Hall construction at Glen Echo contingent upon parking agreements with East Bradford Township.

2. Soft Cost Multiplier to be verified after review with University

3. Projected Cost contingent upon escalation factor and estimated timeline for implementation.



North Campus Site Plan - Scenario 4 "Super Block" Development

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WATCHDOG
REAL ESTATE PROJECT MANAGEMENT

Conceptual Stormwater Management Report

for

West Chester University Master Plan

Borough of West Chester & Township of West Goshen
Chester County, Pennsylvania
CVE Project No. 22002

prepared for:

West Chester University

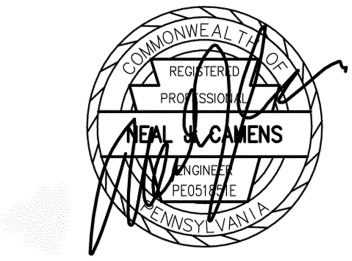
Pennsylvania State System of Higher Education
201 Carter Drive, Suite 200
West Chester, PA 19383

prepared by:

Chester Valley Engineers, Inc.

112 Moores Road, Suite 200
Malvern, PA 19355

Dated: March 28, 2025
Revised: April 2, 2025



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Appendix

F

INTRODUCTION

This document is prepared in accordance with the Borough of West Chester Planned University Campus District[1] and the Township of West Goshen Planned University Main Campus Overlay District[2]. The Borough of West Chester and Township of West Goshen require that the university prepare and submit a university campus plan that accommodates five years of growth and development of the university campus.[3,4] The campus plan must include a conceptual stormwater management strategy that is based on projected three-year growth. The strategy must conceptually meet the criteria and approach outlined in the site design process of the borough and township.[5,6]

Portions of the campus are also located in East Bradford Township within the Planned University District. East Bradford Township requires a campus development plan; such a plan is anticipated to be prepared in conjunction with future land development applications.

West Chester University's master plan includes the expansion of facilities over the next five and ten years; it includes building additions, new buildings, and internal renovations to existing buildings. Stormwater management is required for construction of new exterior impervious areas.

The North Campus expansion includes temporary student housing, an activities and dining building, and a residential/dining center. The South Campus expansion includes the renovation and addition to Southside Commons or the construction of a new South Campus Commons building. Each project will be designed and constructed according to the ordinances of the municipality where it is located.

The site design process outlined by West Chester Borough and West Goshen Township are nearly identical.[7,8] Any development should evaluate what existing natural features can be protected, which existing features can be improved or incorporated into the site design, and which existing features must be considered for alteration, disturbance, or removal. Development, whether new development or redevelopment, will aim to maximize infiltration and the protection or improvement of existing features. To achieve these objectives, site design should minimize the disturbed area, minimize the total area and continuity of impervious surfaces, and minimize peak rate and volume discharges. Stormwater stormwater control measures (SCMs) selected should prioritize nonstructural and vegetation SCMs over surface and subsurface structural SCMs.

[1] Borough of West Chester §112-314
[2] Township of West Goshen §84-134
[3] Borough of West Chester § 112-314.C.2
[4] Township of West Goshen §84-134.B
[5] Borough of West Chester §112-314.I
[6] Township of West Goshen §84-142.A-B
[7] Borough of West Chester §94-304
[8] Township of West Goshen §71-16

This conceptual report analyzes the anticipated development of West Chester University that adds buildings, landscaping, or paving over the next five years within the Borough of West Chester and the Township of West Goshen and makes preliminary recommendations on the method and location of future SCMs.

STORMWATER MANAGEMENT OBJECTIVES

West Chester University is in the Lower Brandywine Creek watershed, which is tributary to the Christina River. Plum Run flows from northeast to southwest from the north campus of West Chester University. Unnamed Tributary (00079) of Plum Run flows through the south campus of West Chester University, from north to south. Plum Run and its Unnamed Tributary (00079) have a Warm Water Fishes (WWF) designated use per Pennsylvania Code, Chapter 93, Title 25. The Pennsylvania Integrated Water Quality and Assessment Report identifies Plum Run and Unnamed Tributary (00079) as impaired due to agriculture and urban runoff/storm sewers. Plum Run is part of the Christina River basin, which has established high-flow and low-flow Total Maximum Daily Load (TMDL) limits.

The design intent of stormwater management systems is to mitigate increases in stormwater peak discharge rate, control excess stormwater volume, and attenuate water quality impacts to Plum Run that are a direct result of development. Stormwater management design requirements in West Chester Borough and West Goshen Township differentiate between new development and redevelopment regulated activities.

Proposed development within East Bradford Township is required to meet the general standards for stormwater management as well as additional standards defined specifically for the Planned University District. Stormwater management meeting these requirements will be designed and implemented in conjunction with individual land development projects within East Bradford Township.

Expansion of West Chester University buildings and landscaping areas will require drainage-area specific stormwater management design. The stormwater management ordinances of both municipalities require a comparison of the pre-development land cover condition to the proposed post-development condition. The requirements listed in this report generally apply to the net increase in volume, impacts to quality, and increase in peak rate that are the consequence of new development or redevelopment.

The proposed expansion projects include a mix of new development and redevelopment, with different design standards applying to the respective areas. Different stormwater requirements will apply to each area.[9,10]

[9] Township of West Goshen §71-21.D.3

[10] Borough of West Chester §94-309.D.3

For example, in new development, the predevelopment conditions must consider all of the existing impervious surface area as meadow ground cover, and in redevelopment, the predevelopment conditions must consider at least 40% of the existing impervious surface area as meadow ground cover.[11,12]

The conceptual stormwater management design must meet the following objectives:

1) **Volume Control:** The postconstruction total runoff volume shall not exceed the predevelopment total runoff volume for all storms equal to or less than the two-year, twenty-four-hour duration precipitation (design storm).[13,14] The volume of a minimum of one inch of runoff from all regulated impervious surfaces shall be infiltrated.[15,16]

2) **Water Quality Control:** Water quality improvements shall be achieved in conjunction with achieving the infiltration requirements of the stormwater management standards.[17,18] Runoff from disturbed areas shall be treated for water quality prior to entering existing waterways or water bodies. Pretreatment SCMs should be used when selected stormwater management measures do not provide water quality treatment.[19,20]

3) **Peak Rate Control:** West Chester Borough and West Goshen Township have the same stormwater peak rate control requirements.[21,22]

Peak Rate Control Standards		
Postconstruction Design Storm Frequency (24-hour duration)	Predevelopment Design Storm	
	New Development Regulated Activity	Redevelopment Regulated Activity
2-Year	1-Year	2-Year
5-Year	2-Year	5-year
10-Year	2-Year	10-Year
25-Year	25-Year	25-Year
50-Year	50-Year	50-Year
100-Year	100-Year	100-Year

[11] Township of West Goshen §71-21.D.2.c
[12] Borough of West Chester §94-309.D.2.c
[13] Borough of West Chester §94-304.A
[14] Township of West Goshen §71-17.A
[15] Borough of West Chester §94-306.B
[16] Township of West Goshen §71-17.A
[17] Borough of West Chester §94-305.E
[18] Township of West Goshen §71-17.E
[19] Borough of West Chester §94-305.F
[20] Township of West Goshen §71-17.F
[21] Borough of West Chester §94-308
[22] Township of West Goshen §71-20

STORMWATER MANAGEMENT IMPLEMENTATION

Volume Control

Surface and subsurface infiltration basins are the preferred method of stormwater management for volume control. Generally, infiltration basins are effective in areas with well-drained soils. They are not advised in areas with hydric soils, a seasonally high water table, or karst topography.

According to NRCS, the eastern portion of West Chester University main campus is situated on UrlB and UrlD soils (Urban land, Gladstone complex). Gladstone complex soils contain Cokesbury as a minor component, which is a hydric soil constituent. Hydric soils were not reported during 2021 infiltration testing for the President's Walk project, and that project area was within the extent of UrlB soils. The conceptual stormwater management has been prepared as though hydric soils are not an issue, but further testing at the time of detailed design would be necessary to confirm that is the case.

Conceptually, stormwater management facilities can be sized based on a loading ratio of 5:1 impervious area within drainage area to stormwater management feature area, and 8:1 total drainage area to stormwater management feature area. (See *Exhibit 1, Loading Area Ratio Calculations*) Above ground and below ground stormwater management infiltration basins should be proposed as close to each source of stormwater runoff as possible. Infiltration testing is required at the bottom elevation of stormwater management facilities and should include a check for a limiting zone two feet below the infiltration elevation. Infiltration facilities should maintain at least two (2) feet of vertical separation between the bottom of the facility and the top of the limiting zone. If infiltration rates are not sufficient to infiltrate the required volume of stormwater, alternatives such as managed release or rain gardens may be used. Given the suitability of existing on-site soils, it is expected that sufficient volume reduction requirements will be met with the use of infiltration-method stormwater management facilities.

Water Quality Control

A combination of quality pretreatment methods and Antidegradation Best Available Combination of Technologies (ABACT) devices should be implemented throughout the various projects planned during the next three years of West Chester University expansion. Stormwater control measures should implement stringent quality control strategies because Plum Run and Unnamed Tributary (00079) to Plum Run are impaired water bodies, and Christina River has a Total Maximum Daily Load (TMDL) requirement for its tributaries.

Above and below ground infiltration basins remove stormwater pollutants at such levels required to satisfy West Goshen Township, West Chester Borough, and Pennsylvania Code requirements. (See Exhibit 2: Pennsylvania Stormwater Best Practices Manual – Appendix A: Infiltration Basin Pollutant Removal Efficiency and Exhibit 3: Pennsylvania Stormwater Best Practices Manual – Appendix A: Subsurface Infiltration Bed Pollutant Removal Efficiency) In unlikely scenarios where pollutant-removal targets are not achieved, further pre-treatment methods can be employed in stormwater management facilities that trap or remove coarse materials and other pollutants before they enter the stormwater system.

Any regulated new development or redevelopment associated with the University expansion will necessitate the development of an Erosion and Sediment Control Plan, which includes the implementation and maintenance of erosion and sediment control best-management practice devices to minimize the potential for accelerated erosion and sedimentation that are a direct result of earth disturbance and construction activities. Furthermore, a project that proposes earth disturbance that exceeds one (1)-acre will require a NPDES Permit.

Stormwater discharges are to surface waters that are tributary to a watercourse with a TMDL. Stormwater discharges into TMDL-regulated water bodies face stricter obligations under the Clean Water Act and Pennsylvania's stormwater management laws, including mandatory pollution reduction requirements and compliance with specific pollutant allocations. The proposed stormwater management facilities meet Clean Water Act and Pennsylvania stormwater management laws.

Peak Rate Control

Stormwater management features will be designed and constructed that control the increase in peak rate that is a consequence of West Chester University facility expansion. Regulated activities requiring SCMs will comply with the West Chester Borough and West Goshen Township peak flow rate control requirements. Runoff from proposed development will be collected within the project limits and conveyed to stormwater management facilities, which depending on infiltration test results would include above or below ground infiltration beds or managed release concept facilities.

The size of proposed stormwater facilities are based on conceptual loading area ratios. Given that the drainage area to each stormwater facility is under the target loading area ratio, it is expected that sufficient peak rate reduction requirements will be met if infiltration or managed release stormwater facilities are implemented.

University MS4 Permit

West Chester University holds NPDES permit no. PAG130169 for operating a small municipal separate storm sewer system (MS4). The key points of this permit are education and reduction in existing pollution levels. Compliance with the criteria noted above is still required, and stormwater measures associated with new development or redevelopment are tabulated separately from MS4 permit compliance projects.

STORMWATER MANAGEMENT FOR SPECIFIC EXPANSION PROJECTS

Refer to Exhibit 4: *Conceptual Stormwater Management Plan* for a preliminary map of post-development drainage boundaries and stormwater management areas for each expansion project with regulated. The contributing impervious areas include paved areas and proposed buildings. The required area to manage stormwater resulting from the proposed development is directly proportional to the amount of impervious area in each drainage area.

Lawrence Hall

The proposed building and landscaping associated with the Lawrence Hall will result in approximately 75,000 to 100,000 SF of impervious area. Conceptually, the drainage area that would be captured by proposed stormwater management facilities will range between 125,000 and 140,000 SF. Two stormwater facilities with a combined footprint of 20,000 to 22,000 SF would provide sufficient treatment. (See *Exhibit 1: Loading Area Ratio Calculations*) The infiltration BMPs selected for the Lawrence Hall improvements are subject to the requirements of the Borough of West Chester.[23]

Two stormwater facilities are proposed. One underground infiltration bed is recommended under the new courtyard and planting beds, and one underground infiltration bed is recommended under or adjacent to the driveway reconfiguration. The courtyard system would capture stormwater that comes from roof drains, new paving, and landscaped areas. Given that Lawrence Hall is a redevelopment and reduction in building footprint compared to the existing condition, the proposed stormwater management facility system could be smaller than shown on *Exhibit 4.* The second system to the west of proposed Lawrence Hall would capture and treat stormwater runoff from the proposed driveway. The proposed stormwater system should be located outside of the South New Street right-of-way. Because there is an existing parking lot in the same location as the proposed improvements, redevelopment requirements would apply. Both systems would discharge to Plum Run. Conceptually, there is sufficient space available to adequately treat stormwater volume, quality, and rate for all Lawrence Hall expansion projects.

[23] Borough of West Chester §94-306

Francis Harvey Green Library Exterior Renovations

The proposed exterior improvements south of Francis Harvey Green Library will add between 10,000 and 15,000 SF of impervious area, and have a capture area of approximately 15,000 to 25,000 SF. One underground infiltration bed with a footprint of 2,500 to 3,500 SF of treatment area would be sufficient to treat stormwater. (See *Exhibit 1: Loading Area Ratio Calculations*)

The proposed underground infiltration bed would capture redevelopment areas and new impervious surfaces. The treatment system should be located outside of Rosedale Avenue right-of-way and should be located at least 25 feet from the library. The lowest elevation of the infiltration system should be set below the elevation of nearby subgrade elements. The system would discharge to Plum Run. Conceptually, there is ample space to design and install a stormwater management system that meets the volume, rate, and quality targets set by the Borough of West Chester.

Rosedale Avenue Sidewalk Upgrades

The proposed sidewalk upgrades along Rosedale Avenue are projected to add between 35,000 and 50,000 SF of impervious area. The drainage area that would be treated by the associated stormwater management facilities is approximately 85,000 to 105,000 SF. (See *Exhibit 1: Loading Area Ratio Calculations*) Proposed stormwater facilities that provide between 12,000 and 14,000 SF of treatment would be sufficient to meet management targets. (See *Exhibit 1: Loading Area Ratio Calculations*)

The proposed underground infiltration trenches and beds along Rosedale Avenue should be located outside of the right of way. Since parcels adjoining the sidewalk improvements near the southwest corner of High Street and Rosedale Avenue are not owned by West Chester University, stormwater from these areas will be compensated for with facilities located along University owned property.

At the northeast intersection of South New Street and West Rosedale Avenue an underground infiltration bed would be appropriate, but it should be designed to stay out of an existing utility easement that parallels West Rosedale Avenue to its north. In areas along Rosedale Avenue where West Chester University owns property the stormwater from proposed sidewalks can be treated using facilities positioned outside of the right of way to manage for volume, rate, and quality. Discharge from Rosedale Avenue sidewalk improvements would flow to Plum Run.

Conceptually, there is sufficient area to design and implement stormwater management facilities along Rosedale Avenue outside of the public right of way that will meet the requirements of the Borough of West Chester and West Goshen Township.

Sykes Building Expansion and Welcome Center (Phase 1)

The Sykes Building Expansion and Welcome Center (Phase 1) development proposes between 30,000 and 40,000 SF of impervious area, and a stormwater facility would need to manage runoff from between 110,000 and 120,000 SF of drainage area. Three stormwater facilities with a combined footprint of 15,000 to 16,000 SF would be sufficient to meet management objectives. (See *Exhibit 1: Loading Area Ratio Calculations*)

The parking lot south of the Sykes Building is a potential location for an underground infiltration bed. In the existing condition the site already drains to the south. The treatment system should be located at least 25 feet from an existing or proposed building, and the bottom elevation of the infiltration BMP should be at or below building subgrade elements. If there are subgrade elements to building the bottom of the infiltration BMP should be lower.

Two more underground infiltration facilities would be suitable for runoff west of the Sykes Building. The first would be perpendicular to West Rosedale Avenue and would collect runoff from west and southwest of the Sykes Building. The discharge point would be south of the Sykes Building and could potentially be linked to the outfall from the other infiltration bed. The other infiltration facility should be parallel to the sidewalk along West Rosedale Avenue but should be outside of the road right of way.

Conceptually, there is adequate space to design and construct stormwater management facilities that meet West Goshen Township volume, peak rate, and quality requirements.

Conclusions

Based on this conceptual analysis, it is expected that sufficient area is available to facilitate effective stormwater management via infiltration methods for the improvements shown in the 0-5 Year Period on the West Chester University Master Plan to meet rate, volume, and quality requirements set forth in the Borough of West Chester and West Goshen Township ordinances.

Exhibit 1:
Loading Area Ratio Calculations

112 Moores Road
Suite 200
Malvern, PA 19355

Date: 3/13/2025
Last Revised: 4/2/2025

Loading Area Ratio Calculations

Region	Approximate Impervious Area (SF)	Approximte Drainage Area (SF)	SWM Facility Area (SF)	Impervious Loading Ratio[1]	Overall Loading Ratio[2]
Lawrence Hall Student Residential and Dining Center	75,000 to 100,000	125,000 to 140,000	20,000 to 22,000	3.75 to 4.55	6.25 to 6.36
Francis Harvey Green Library Exterior Renovations	10,000 to 15,000	15,000 to 25,000	2,500 to 3,500	4.00 to 4.29	6.00 to 7.14
Rosedale Avenue Sidewalk Upgrades*	35,000 to 50,000	85,000 to 105,000	12,000 to 14,000	2.92 to 3.57	7.08 to 7.50
Sykes Building Expansion and Welcome Center (Phase 1)	30,000 to 40,000	110,000 to 120,000	15,000 to 16,000	2.00 to 2.50	7.33 to 7.50

Total (SF)	150,000 to 205,000
Volume of Runoff (CF)[3]	12,500 to 17,000

[1] Impervious Loading Ratio: proportion of impervious area to stormwater facility area. Used for conceptual stormwater management analysis. Ratio should not exceed 5.0

[2] Overall Loading Ratio: proportion of capture area to stomwater facility area. Used for conceptual stormwater management analysis. Ratio should not exceed 8.0

[3] Volume of a minimum of one (1)-inch of runoff from all regulated impervious surfaces shalll be infiltrated. (§94-603.B of West Chester Borough Stormwater Management Ordinance and §71-17.A of West Goshen Township Stormwater Management Ordinance)

Exhibit 2:
Pennsylvania Stormwater Best Practices Manual – Appendix A: Infiltration Basin Pollutant Removal Efficiency

6.4.2 INFILTRATION BASIN

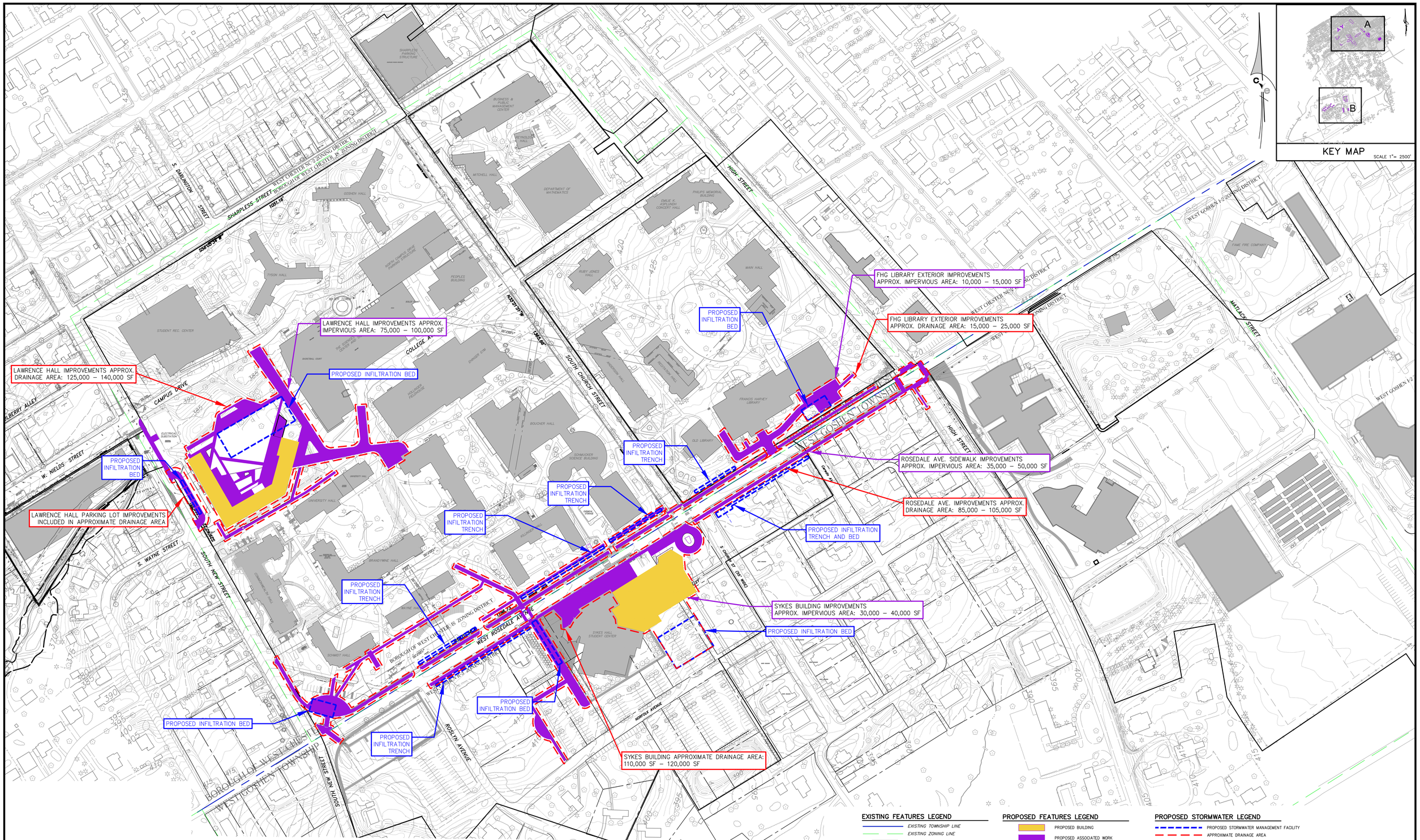
Type	Pollutant Removal % Efficiency						Primary Source	Secondary Source	Comments
	TSS	TN	NO_3	NO_x	TKN	TP			
Infiltration Basin	95	65					Cahill Assoc. Technical BMP Manual & Infiltration Feasibility Report: Infiltration of Stormwater in Areas Underlain by Carbonate Bedrock within the Little Lehigh Creek Watershed. Nov 2002.		
Infiltration Basin	75	45 - 55				50 - 55	Schueler, T. 1987. Controlling urban runoff – a practical manual for planning and designing urban best management practices. Metropolitan Washington Council of Governments, Washington, DC.	FHWA, 1999. *Stormwater Best Management Practices in an Ultra-Urban Setting: Selection and Monitoring*. Federal Highway Administration, U.S. Department of Transportation.	Capture of 12.7 mm (0.5 in) of runoff (first flush)
Infiltration Basin	99	60 - 70				65 - 75	Schueler, T. 1987. Controlling urban runoff – a practical manual for planning and designing urban best management practices. Metropolitan Washington Council of Governments, Washington, DC.	FHWA, 1999. *Stormwater Best Management Practices in an Ultra-Urban Setting: Selection and Monitoring*. Federal Highway Administration, U.S. Department of Transportation.	Capture of 25.4 mm (1 in) of runoff
Infiltration Basin	90	55 - 60				60 - 70	Schueler, T. 1987. Controlling urban runoff – a practical manual for planning and designing urban best management practices. Metropolitan Washington Council of Governments, Washington, DC.	FHWA, 1999. *Stormwater Best Management Practices in an Ultra-Urban Setting: Selection and Monitoring*. Federal Highway Administration, U.S. Department of Transportation.	Capture of 50.8 mm (2 in) of runoff
Infiltration Basin	50-80	50-80				50-80	USEPA. Preliminary Data Summary of Urban Storm Water Best Management Practices. Aug 1999.		
RANGE	**50 - 99**	**45 - 80**				**50 - 80**			

Exhibit 3:
Pennsylvania Stormwater Best Practices Manual – Appendix A: Subsurface Infiltration Bed Pollutant Removal Efficiency

6.4.3 SUBSURFACE INFILTRATION BED

Type	Pollutant Removal % Efficiency								
	TSS	TN	NO_3	NO_x	TKN	TP	Primary Source	Secondary Source	Comments
Subsurface Infiltration Bed	90	60	27				Cahill Assoc. Technical BMP Manual & Infiltration Feasibility Report: Infiltration of Stormwater in Areas Underlain by Carbonate Bedrock within the Little Lehigh Creek Watershed. Nov 2002.		
Subsurface Infiltration Bed	95	51				70	Chester County Conservation District. *Chester County Stormwater BMP Tour Guide: Infiltration Beds* . 2002.		
RANGE	**90 - 95**	**51 - 60**	**27**			**70**			

Exhibit 4:
Conceptual Stormwater Management Plan



EXISTING FEATURES LEGEND

- EXISTING TOWNSHIP LINE
- EXISTING ZONING LINE
- EXISTING BUILDING
- 202 EXISTING 2' CONTOURS
- 210 EXISTING 10' CONTOURS
- × 212.20 EXISTING SPOT ELEVATION
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVING
- EXISTING CURB
- FLOOD PLAIN
- EXISTING LIGHT POLE
- STREAM LINE
- EXISTING STORM INLET
- EXISTING STORM MANHOLE
- EXISTING SIGN
- EXISTING UTILITY POLE
- EXISTING POST
- EXISTING DECIDUOUS TREE
- EXISTING CONIFEROUS TREE
- EXISTING TREE & SHRUB LINE
- EXISTING MANHOLE (SAN, STORM, GAS, WATER, WATER, ELECTRIC, TELEPHONE, ETC.)

PROPOSED FEATURES LEGEND

- PROPOSED BUILDING
- PROPOSED ASSOCIATED WORK

PROPOSED STORMWATER LEGEND

- PROPOSED STORMWATER MANAGEMENT FACILITY
- APPROXIMATE DRAINAGE AREA

Scale in Feet
0 20 40 60 80 100 200 300 400
1" = 100'

0–5 YEARS (NORTH CAMPUS)

- NEW LAWRENCE HALL, INCLUDING DECANTING EXISTING LAWRENCE CENTER PROGRAMS, NEW BEDS, STUDENT SUPPORT SERVICES, CAFÉ AND RECREATIONAL SPACE.
- SCIENCE CENTER COMPLEX RENOVATION
- OLD LIBRARY RENOVATION
- FHG LIBRARY RENOVATION
- COLLEGE ARMS APARTMENTS RENOVATION
- EXISTING GEOTHERMAL DEFERRED MAINTENANCE
- ROSEDALE AVENUE GATEWAY AND IMPROVEMENTS INCLUDING TRAFFIC CALMING AT PEDESTRIAN CROSSINGS, LANDSCAPE, SIGNAGE, AND A NEW SIGNAL AT INTERSECTION OF W ROSEDALE AND S NEW STREET.
- RENOVATION AND EXPANSION OF SYKES STUDENT UNION TO INCLUDE INCLUDED DINING, STUDENT SUPPORT, WELCOME CENTER AND ADMISSIONS.
- TEMPORARY HOUSING
- REMOVE TEMPORARY HOUSING & REINSTATE M1 LOT AS PARKING

NORTH CAMPUS YEARS 0–5 PROJECTS

- LAWRENCE HALL DEMOLITION & REBUILD
- SYKES BUILDING ADDITIONS & RENOVATIONS
- TEMPORARY HOUSING IN LOT M1
- SCIENCE CENTER INTERIOR RENOVATIONS
- OLD LIBRARY INTERIOR RENOVATIONS
- FHG LIBRARY INTERIOR RENOVATIONS
- COLLEGE ARMS INTERIOR RENOVATIONS
- ROSEDALE AVENUE UPGRADES

NORTH CAMPUS 0-5 YEARS

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1-800-242-1776
POCS SERIAL NUMBER: _____

NO.	DATE	REVISION

CONCEPTUAL STORMWATER MASTER PLAN
FOR
WEST CHESTER UNIVERSITY
WEST GOSHEN TOWNSHIP, EAST BRADFORD TOWNSHIP, WEST CHESTER BOROUGH - CHESTER COUNTY - PENNSYLVANIA

ChesterValley ENGINEERS, INC.
112 Moores Road, Suite 200, Malvern, PA 19355
610-644-4623
www.chestervy.com

PROJECT NO.	
22002	F.B.

SCALE	DATE	DRAWN BY	CHECKED BY	DRAWING
1" = 100'	04/02/2025	LT	NC	

KEY MAP SCALE 1"= 2500'

EXISTING FEATURES LEGEND

- EXISTING TOWNSHIP LINE
- EXISTING ZONING LINE
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- 202 EXISTING 2' CONTOURS
- 210 EXISTING 10' CONTOURS
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- PROPOSED BUILDING
- PROPOSED ASSOCIATED WORK

PROPOSED STORMWATER LEGEND

- PROPOSED STORMWATER MANAGEMENT FACILITY
- APPROXIMATE DRAINAGE AREA

SOUTH CAMPUS YEARS 0-5 PROJECTS

- -STURZEBECKER BUILDING INTERIOR RENOVATIONS
- -SOUTH CAMPUS APARTMENT ADDITIONS
- -SOUTH CAMPUS COMMONS ADDITION OR NEW BUILDING IN TO ALTERNATE LOCATION

SOUTH CAMPUS 0-5 YEARS

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Scale in Feet
0 20 40 60 80 100 200 300 400
1" = 100'

Appendix F

NO.	DATE	REVISION

CONCEPTUAL STORMWATER MASTER PLAN
FOR
WEST CHESTER UNIVERSITY
WEST GOSHEN TOWNSHIP, EAST BRADFORD TOWNSHIP, WEST CHESTER BOROUGH - CHESTER COUNTY - PENNSYLVANIA

ChesterValley ENGINEERS, INC.
112 Moores Road, Suite 200, Malvern, PA 19355
610-644-4623
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PROJECT NO. 22002
F.B.

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1" = 100'	04/02/2025	LT	NC	

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April 1, 2025

Via Hand Delivery

West Chester Borough Council
Attn: Sean Metrick, Borough Manager
401 East Gay Street
West Chester, PA 19380

Re: Conditional Use Application of West Chester University of the Pennsylvania State System of Higher Education; University Main Campus Plan

Dear Sean:

I am submitting on behalf of my client, West Chester University of the Pennsylvania State System of Higher Education (the "University"), five (5) copies of the following:

- Application for Conditional Use;
- Narrative in Support of Application;
- West Chester University Master Plan Report by Ewing Cole and the following separately marked appendices thereto:
    - Appendix "A" – Enrollment Report and Projection Analysis by West Chester University Office of Institutional Research
    - Appendix "B" -- Student Housing Development Study by Ewing Cole
    - Appendix "C" – Student Housing Study by MGT
    - Appendix "D" – Transportation Impact Study by TPD
        - Five (5) copies of Executive Summary
        - One complete physical copy and electronic copy submitted with application
    - Appendix "E" – Parking Study by TPD
    - Appendix "F" – Conceptual Stormwater Management Report w/ Stormwater Management Plan by Chester Valley Engineers (to be submitted separately)
    - Appendix "G" – Master Plan for West Chester University Campus Improvements by Chester Valley Engineers (to be submitted separately)
- Electronic copy of the above Application and associated materials (submitted separately)
- Application fee of $800.00.

Please let me know if you require additional physical copies of any materials.

Additionally, the University hereby grants the Borough Council an extension of the timeframe within which the Borough is required to commence the hearing on the Application through August 31, 2025. Thus,

commencement of the hearing on the Application on or before August 31, 2025 shall be considered timely under the applicable timeframes of the Pennsylvania Municipalities Planning Code.

Very truly yours,

Brian L. Nagle

/cfg
Enclosures

cc: Nathan M. Cline, P.E., Borough Engineer (w/enclosures) *[via Electronic Mail Only]*
Kristin S. Camp, Esquire, Solicitor (w/enclosures) *[via Electronic Mail Only]*
Mike Barbieri, Zoning Officer (w/enclosures) *[via Electronic Mail Only]*
West Chester University of the Pennsylvania State System of Higher Education

6200368v1
160785.75985

March 27, 2025
TPD# WCU.00004

Info@TPDinc.com

West Chester University Master Plan

Transportation Impact Study

West Chester Borough, West Goshen Township, and East Bradford Township, Chester County, PA

For Submission To:
West Chester Borough, West Goshen Township, and East Bradford Township

EXHIBIT
tabbies
Appx. D

WEST CHESTER UNIVERSITY
MASTER PLAN
TRANSPORTATION IMPACT STUDY

FOR SUBMISSION TO:

West Chester Borough, West Goshen Township, and East Bradford Township,
Chester County, PA

Prepared For:
West Chester University

March 27, 2025
TPD # WCU.00004

Prepared By:
TPD
1025 Andrew Drive, Suite 110
West Chester, Pennsylvania 19380

Phone: (610) 326-3100
Fax: (610) 326-9410
E-mail: TPD@TPDinc.com
Website: www.TPDinc.com

TABLE OF CONTENTS

EXECUTIVE SUMMARY I
INTRODUCTION 1
MULTI-MODAL FACILITIES 1
EXISTING TRAFFIC CONDITIONS 2
SCHEDULED ROADWAY IMPROVEMENTS 4
DESIGN YEAR VOLUME DEVELOPMENT 5
LEVELS OF SERVICE FOR AN INTERSECTION 6
CAPACITY ANALYSIS METHODOLOGY 6
CAPACITY ANALYSIS SUMMARY 8
TRANSPORTATION DEMAND MANAGEMENT (TDM) PLAN 17
RECOMMENDATIONS & CONCLUSIONS 17

FIGURES 1 – 18

TECHNICAL APPENDICES

Appendix A: WCU Shuttle Routes
Appendix B: Study Area Photographs and Traffic Count Data
Appendix C: Planned Improvement Plans
Appendix D: Volume Development Worksheets
Appendix E: Capacity Analyses
Appendix F: Traffic Signal Diagrams

EXECUTIVE SUMMARY

The purpose of this study is to examine the potential traffic impact associated with the West Chester University Master Plan on the roadway network in West Chester Borough, West Goshen Township, and East Bradford Township, Chester County, PA:

1. The study area intersections included in this TIS are as follows:
   - South New Street & Sharpless Street
   - Darlington Street & Sharpless Street
   - Church Street & Sharpless Street
   - Reynolds Alley &Sharpless Street
   - South High Street & Sharpless Street
   - South High Street & East Nields Street
   - South High Street & University Avenue
   - Reynolds Alley & University Avenue
   - Church Street & University Avenue
   - South High Street & Linden Street
   - South High Street & Rosedale Avenue
   - Matlack Street & Rosedale Avenue
   - Matlack Street & Carter Drive
   - Church Street (both legs) & Rosedale Avenue
   - Ped Crosswalk & Rosedale Avenue
   - South New Street & Rosedale Avenue
   - South New Street & Nields Street/Campus Drive
   - South New Street & Pomona Hill Drive
   - South New Street & Glen Echo Field Access
   - South New Street & 855 S. New Street Access
   - South New Street & S. Campus Drive
   - South New Street & Tigue Road/Stadium Drive
   - Matlack Street & E. Campus Drive
   - Matlack Street & southern M2 Lot Driveway
   - High Street & E. Campus Drive
2. The WCU campus is generally divided into the "north campus" which is situated within West Chester Borough and West Goshen Township, and the "south campus", which is situated in West Goshen Township and East Bradford Township.
3. The Master Plan includes the providing connectivity between the north and south campus and enhancements to the residential and learning experiences by adding and renovated beds and educational space.

4. The proposed Master Plan consists of adding an estimated ±819 new beds on campus. Enrollment is not anticipated to increase in line with the additional beds, but rather the additional beds are anticipated to accommodate existing students who currently commute to campus and/or currently live off-campus. Additionally, the following roadway segments within West Chester Borough are proposed to be closed to vehicular traffic and open for pedestrian traffic only to enhance pedestrian mobility, subject to the Borough's review and approval:
   - Church Street from North Campus Drive (Parking Garage Access) to University Avenue.
   - University Avenue from approximately 120' west of Reynolds Alley to Church Street.
   - The southern leg of Church Avenue at Rosedale Avenue.

   The Church Street and University Avenue closures would both include turnaround loops and the portion of roadway remaining open would be converted to two-way traffic.

5. This Master Plan traffic study considers the planned High Street corridor improvements, between W. Miner Street and E. Rosedale Avenue, and the South New Street/Rosedale Avenue intersection improvements.

6. Based on the WCU Enrollment Projected Report data, from 2023 to 2029 enrollment is anticipated to increase by 0.19% on average per year.

7. Under 2040 projected conditions with implementation of the planned improvements and with the WCU Master-Plan, the study area intersections are anticipated to operate at the same overall intersection level of service (ILOS) as under existing conditions, during the weekday A.M. and P.M. peak hours. All levels of service at the study area intersection are anticipated to comply with the applicable PennDOT and municipal requirements.

8. WCU currently implements a number of Transportation Demand Management (TDM) measures in order to reduce parking and traffic in the area and to create a pedestrian friendly environment, including the following:
   - Shuttle system to both on-campus and off-campus locations
   - Discounted transit fare program
   - Carpool preferential parking
   - On-site car-sharing vehicles
   - Commuter information center
   - Flexible or alternative work hours for workers
   - TDM education programs directed at the students and employees

9. Traffic Planning and Design Inc. (TPD) recommends the following in conjunction with the Master Plan from a traffic perspective:
   - Pursue a pedestrian path/walkway along New Street, between the North Campus and South Campus.
   - As an additional TDM measure, consider implementing real time display of parking garage utilization.
   - As specific Land Development applications are pursued for projects contemplated under the WCU Master Plan, monitor and evaluate traffic and pedestrian circulation in the immediate area the given application.
   - Continue to monitor and provide convenient shuttle service to facilitate parking in lots that may be more remote to a desired building/destination on campus.
   - In conjunction with specific Land Development applications, provide pedestrian paths/walkways to facilitate pedestrian connections to the specific application.

- In conjunction with specific applications which would close Church Street and University Avenue, further evaluate the traffic/pedestrian impact in the area.
- Coordinate any possible modifications with PennDOT as appropriate (i.e. University Avenue conversion).
- Provide high-volume bike storage area on campus, as needed in high bike use areas.
- Coordinate special events with the Borough, Townships and social media as appropriate.
- Investigate improving signage/wayfinding to key areas on WCU.

10. Levels of Service (LOS) for the study area intersections have been summarized in matrix form. **Tables I and II** detail the overall intersection LOS for each study area intersection.

TABLE I
OVERALL INTERSECTION LEVEL OF SERVICE SUMMARY

Intersection	Peak Hour	Existing	2040 Projected Conditions with Planned Improvements	Meets LOS Requirements?
South New Street & Sharpless Street	AM	A (9.2)	A (9.8)	Yes
	PM	A (10.0)	B (11.2)	
Darlington Street & Sharpless Street	AM	A (0.4)	A (0.4)	Yes
	PM	A (0.9)	A (1.0)	
Church Street & Sharpless Street	AM	A (3.0)	A (4.1)	Yes
	PM	A (3.4)	A (5.0)	
Reynolds Alley & Sharpless Street	AM	A (1.0)	A (0.8)	Yes
	PM	A (1.6)	A (1.4)	
South High Street & Sharpless Street	AM	A (2.3)	B (10.5)	Yes
	PM	A (4.5)	B (13.1)	
South High Street & East Nields Street	AM	A (1.6)	A (1.6)	Yes
	PM	A (1.4)	A (1.5)	
South High Street & University Avenue	AM	A (0.6)	A (4.2)	Yes
	PM	A (0.8)	A (4.5)	
Reynolds Alley & University Avenue	AM	A (0.5)	A (0.9)	Yes
	PM	A (0.4)	A (0.7)	
Church Street & University Avenue	AM	A (8.9)	A (0.0)	Yes
	PM	A (5.5)	A (0.0)	
South High Street & Linden Street	AM	A (4.6)	A (5.0)	Yes
	PM	A (8.1)	A (8.9)	

Projected = With Planned Improvements and WCU Master Plan

TABLE II

OVERALL INTERSECTION LEVEL OF SERVICE SUMMARY

Intersection	Peak Hour	Existing	2040 Projected Conditions with Planned Improvements	Meets LOS Requirements?
South High Street & Rosedale Avenue	AM	B (14.4)	B (15.1)	Yes
	PM	B (16.0)	B (16.5)	
Matlack Street & Rosedale Avenue	AM	B (13.6)	C (16.7)	Yes
	PM	B (13.4)	C (16.4)	
Matlack Street & Carter Drive	AM	A (3.1)	A (3.9)	Yes
	PM	A (4.0)	A (4.7)	
Rosedale Avenue & Church Street	AM	B (11.7)	A (2.7)	Yes
	PM	B (12.7)	A (2.6)	
South New Street & Rosedale Avenue	AM	B (15.5)	C (26.8)	Yes
	PM	B (15.9)	C (26.7)	
South New Street & Nields Street/Campus Drive	AM	A (6.4)	A (7.8)	Yes
	PM	A (8.8)	B (10.4)	
South New Street & Pomona Hill Drive	AM	A (8.9)	A (9.4)	Yes
	PM	A (9.9)	B (10.7)	
South New Street & Glen Echo Field Access	AM	A (0.0)	A (0.0)	Yes
	PM	A (0.1)	A (0.1)	
South New Street & 855 S. New Street Access	AM	A (1.8)	A (1.8)	Yes
	PM	A (1.8)	A (1.9)	
South New Street & S. Campus Drive	AM	A (3.3)	A (3.4)	Yes
	PM	A (3.8)	A (4.0)	
South New Street & Tigue Road/Stadium Drive	AM	A (7.9)	A (8.1)	Yes
	PM	A (8.3)	A (8.7)	
Matlack Street & E. Campus Drive	AM	A (3.8)	A (4.1)	Yes
	PM	A (2.7)	A (2.9)	
Matlack Street & southern M2 Lot Driveway	AM	A (0.2)	A (0.2)	Yes
	PM	A (0.1)	A (0.1)	
High Street & E. Campus Drive	AM	A (1.6)	A (1.6)	Yes
	PM	A (2.0)	A (2.4)	

Projected = With Planned Improvements and WCU Master Plan

March 27, 2025
TPD# WCU.00004

Info@TPDinc.com

West Chester University Master Plan

Transportation Impact Study

West Chester Borough, West Goshen Township, and East Bradford Township, Chester County, PA

For Submission To:

West Chester Borough, West Goshen Township, and East Bradford Township

EXHIBIT
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Moving *Forward* Together®

WEST CHESTER UNIVERSITY
MASTER PLAN
TRANSPORTATION IMPACT STUDY

FOR SUBMISSION TO:

West Chester Borough, West Goshen Township, and East Bradford Township,
Chester County, PA

Prepared For:
West Chester University

March 27, 2025
TPD # WCU.00004

Prepared By:
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TABLE OF CONTENTS

EXECUTIVE SUMMARY I
INTRODUCTION 1
MULTI-MODAL FACILITIES 1
EXISTING TRAFFIC CONDITIONS 2
SCHEDULED ROADWAY IMPROVEMENTS 4
DESIGN YEAR VOLUME DEVELOPMENT 5
LEVELS OF SERVICE FOR AN INTERSECTION 6
CAPACITY ANALYSIS METHODOLOGY 6
CAPACITY ANALYSIS SUMMARY 8
TRANSPORTATION DEMAND MANAGEMENT (TDM) PLAN 17
RECOMMENDATIONS & CONCLUSIONS 17

FIGURES 1 – 18

TECHNICAL APPENDICES

Appendix A: WCU Shuttle Routes
Appendix B: Study Area Photographs and Traffic Count Data
Appendix C: Planned Improvement Plans
Appendix D: Volume Development Worksheets
Appendix E: Capacity Analyses
Appendix F: Traffic Signal Diagrams

EXECUTIVE SUMMARY

The purpose of this study is to examine the potential traffic impact associated with the West Chester University Master Plan on the roadway network in West Chester Borough, West Goshen Township, and East Bradford Township, Chester County, PA:

1. The study area intersections included in this TIS are as follows:
    - South New Street & Sharpless Street
    - Darlington Street & Sharpless Street
    - Church Street & Sharpless Street
    - Reynolds Alley &Sharpless Street
    - South High Street & Sharpless Street
    - South High Street & East Nields Street
    - South High Street & University Avenue
    - Reynolds Alley & University Avenue
    - Church Street & University Avenue
    - South High Street & Linden Street
    - South High Street & Rosedale Avenue
    - Matlack Street & Rosedale Avenue
    - Matlack Street & Carter Drive
    - Church Street (both legs) & Rosedale Avenue
    - Ped Crosswalk & Rosedale Avenue
    - South New Street & Rosedale Avenue
    - South New Street & Nields Street/Campus Drive
    - South New Street & Pomona Hill Drive
    - South New Street & Glen Echo Field Access
    - South New Street & 855 S. New Street Access
    - South New Street & S. Campus Drive
    - South New Street & Tigue Road/Stadium Drive
    - Matlack Street & E. Campus Drive
    - Matlack Street & southern M2 Lot Driveway
    - High Street & E. Campus Drive
2. The WCU campus is generally divided into the "north campus" which is situated within West Chester Borough and West Goshen Township, and the "south campus", which is situated in West Goshen Township and East Bradford Township.
3. The Master Plan includes the providing connectivity between the north and south campus and enhancements to the residential and learning experiences by adding and renovated beds and educational space.

4. The proposed Master Plan consists of adding an estimated ±819 new beds on campus. Enrollment is not anticipated to increase in line with the additional beds, but rather the additional beds are anticipated to accommodate existing students who currently commute to campus and/or currently live off-campus. Additionally, the following roadway segments within West Chester Borough are proposed to be closed to vehicular traffic and open for pedestrian traffic only to enhance pedestrian mobility, subject to the Borough's review and approval:
    - Church Street from North Campus Drive (Parking Garage Access) to University Avenue.
    - University Avenue from approximately 120' west of Reynolds Alley to Church Street.
    - The southern leg of Church Avenue at Rosedale Avenue.

    The Church Street and University Avenue closures would both include turnaround loops and the portion of roadway remaining open would be converted to two-way traffic.

5. This Master Plan traffic study considers the planned High Street corridor improvements, between W. Miner Street and E. Rosedale Avenue, and the South New Street/Rosedale Avenue intersection improvements.

6. Based on the WCU Enrollment Projected Report data, from 2023 to 2029 enrollment is anticipated to increase by 0.19% on average per year.

7. Under 2040 projected conditions with implementation of the planned improvements and with the WCU Master-Plan, the study area intersections are anticipated to operate at the same overall intersection level of service (ILOS) as under existing conditions, during the weekday A.M. and P.M. peak hours. All levels of service at the study area intersection are anticipated to comply with the applicable PennDOT and municipal requirements.

8. WCU currently implements a number of Transportation Demand Management (TDM) measures in order to reduce parking and traffic in the area and to create a pedestrian friendly environment, including the following:
    - Shuttle system to both on-campus and off-campus locations
    - Discounted transit fare program
    - Carpool preferential parking
    - On-site car-sharing vehicles
    - Commuter information center
    - Flexible or alternative work hours for workers
    - TDM education programs directed at the students and employees

9. Traffic Planning and Design Inc. (TPD) recommends the following in conjunction with the Master Plan from a traffic perspective:
    - Pursue a pedestrian path/walkway along New Street, between the North Campus and South Campus.
    - As an additional TDM measure, consider implementing real time display of parking garage utilization.
    - As specific Land Development applications are pursued for projects contemplated under the WCU Master Plan, monitor and evaluate traffic and pedestrian circulation in the immediate area the given application.
    - Continue to monitor and provide convenient shuttle service to facilitate parking in lots that may be more remote to a desired building/destination on campus.
    - In conjunction with specific Land Development applications, provide pedestrian paths/walkways to facilitate pedestrian connections to the specific application.

- In conjunction with specific applications which would close Church Street and University Avenue, further evaluate the traffic/pedestrian impact in the area.
- Coordinate any possible modifications with PennDOT as appropriate (i.e. University Avenue conversion).
- Provide high-volume bike storage area on campus, as needed in high bike use areas.
- Coordinate special events with the Borough, Townships and social media as appropriate.
- Investigate improving signage/wayfinding to key areas on WCU.

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	PM	A (10.0)	B (11.2)	
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	PM	A (0.9)	A (1.0)	
Church Street & Sharpless Street	AM	A (3.0)	A (4.1)	Yes
	PM	A (3.4)	A (5.0)	
Reynolds Alley & Sharpless Street	AM	A (1.0)	A (0.8)	Yes
	PM	A (1.6)	A (1.4)	
South High Street & Sharpless Street	AM	A (2.3)	B (10.5)	Yes
	PM	A (4.5)	B (13.1)	
South High Street & East Nields Street	AM	A (1.6)	A (1.6)	Yes
	PM	A (1.4)	A (1.5)	
South High Street & University Avenue	AM	A (0.6)	A (4.2)	Yes
	PM	A (0.8)	A (4.5)	
Reynolds Alley & University Avenue	AM	A (0.5)	A (0.9)	Yes
	PM	A (0.4)	A (0.7)	
Church Street & University Avenue	AM	A (8.9)	A (0.0)	Yes
	PM	A (5.5)	A (0.0)	
South High Street & Linden Street	AM	A (4.6)	A (5.0)	Yes
	PM	A (8.1)	A (8.9)	

Projected = With Planned Improvements and WCU Master Plan

TABLE II
OVERALL INTERSECTION LEVEL OF SERVICE SUMMARY

Intersection	Peak Hour	Existing	2040 Projected Conditions with Planned Improvements	Meets LOS Requirements?
South High Street & Rosedale Avenue	AM	B (14.4)	B (15.1)	Yes
	PM	B (16.0)	B (16.5)	
Matlack Street & Rosedale Avenue	AM	B (13.6)	C (16.7)	Yes
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Matlack Street & Carter Drive	AM	A (3.1)	A (3.9)	Yes
	PM	A (4.0)	A (4.7)	
Rosedale Avenue & Church Street	AM	B (11.7)	A (2.7)	Yes
	PM	B (12.7)	A (2.6)	
South New Street & Rosedale Avenue	AM	B (15.5)	C (26.8)	Yes
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South New Street & Nields Street/Campus Drive	AM	A (6.4)	A (7.8)	Yes
	PM	A (8.8)	B (10.4)	
South New Street & Pomona Hill Drive	AM	A (8.9)	A (9.4)	Yes
	PM	A (9.9)	B (10.7)	
South New Street & Glen Echo Field Access	AM	A (0.0)	A (0.0)	Yes
	PM	A (0.1)	A (0.1)	
South New Street & 855 S. New Street Access	AM	A (1.8)	A (1.8)	Yes
	PM	A (1.8)	A (1.9)	
South New Street & S. Campus Drive	AM	A (3.3)	A (3.4)	Yes
	PM	A (3.8)	A (4.0)	
South New Street & Tigue Road/Stadium Drive	AM	A (7.9)	A (8.1)	Yes
	PM	A (8.3)	A (8.7)	
Matlack Street & E. Campus Drive	AM	A (3.8)	A (4.1)	Yes
	PM	A (2.7)	A (2.9)	
Matlack Street & southern M2 Lot Driveway	AM	A (0.2)	A (0.2)	Yes
	PM	A (0.1)	A (0.1)	
High Street & E. Campus Drive	AM	A (1.6)	A (1.6)	Yes
	PM	A (2.0)	A (2.4)	

Projected = With Planned Improvements and WCU Master Plan

INTRODUCTION

Traffic Planning and Design, Inc. (TPD) has completed a Transportation Impact Study (TIS) for the West Chester University (WCU) Master Plan in West Chester Borough, West Goshen Township, and East Bradford Township, Chester County, Pennsylvania. The WCU campus is generally divided into the "north campus" which is situated within West Chester Borough and West Goshen Township, and the "south campus", which is situated in West Goshen Township and East Bradford Township.

The Master Plan includes the providing connectivity between the north and south campus and enhancements to the residential and learning experiences by adding and renovated beds and educational space. The proposed Master Plan consists of adding an estimated ±819 new beds on campus. Enrollment is not anticipated to increase in line with the additional beds, but rather the additional beds are anticipated to accommodate existing students who currently commute to campus and/or currently live off-campus. Additionally, the following roadway segments within West Chester Borough are proposed to be closed to vehicular traffic and open for pedestrian traffic only to enhance pedestrian mobility, subject to the Borough's review and approval:

- Church Street from North Campus Drive (Parking Garage Access) to University Avenue.
- University Avenue from approximately 120' west of Reynolds Alley to Church Street.
- The southern leg of Church Avenue at Rosedale Avenue.

The Church Street and University Avenue closures would both include turnaround loops and the portion of roadway remaining open would be converted to two-way traffic.

The Master Plan study area for both the University's north and south campus are shown in **Figures 1 and 2**. This report has been prepared in accordance with the following ordinances:

- West Chester Borough Section 112-314.G *Planned University Campus District, University Campus Transportation Study*.
- West Goshen Township Section 84-140, *Planned University Main Campus Overlay District*, *University Campus Transportation Study*.
- East Bradford Township Subdivision and Land Development Ordinance, Article IV. Plan Requirement, Section 95.13 Preliminary Plan

MULTI-MODAL FACILITIES

Bicycle and Pedestrian Facilities

Based on observations during field visits at the study area intersections, sidewalks and crosswalks currently accommodate pedestrian and bicycle traffic in the vicinity of the proposed development. A summary of the pedestrian facilities at the signalized study area intersections in summarized in **Table 1**.

TABLE 1
PEDESTRIAN ACCOMODATIONS WITHIN STUDY AREA

Signalized Intersection	Crossing Signal	Pedestrian Push Buttons	Pedestrian Crosswalks
High Street & Linden Street	Yes	Yes	Northern & Western Leg only
High Street & Rosedale Avenue	Yes	Yes	All Legs
New Street & Rosedale Avenue	No	Yes	Northern & Eastern Leg only
New Street & Nields Street/Campus Drive	Yes	Yes	Southern & Eastern Leg Only

Mass Transit Facilities

WCU provides shittle transportation both on-campus and to off-campus locations. The on-campus shuttle has four routes and provides service between North and South Campus during the fall and spring semesters as well as limited service during the winter and summer sessions. The Gold Route runs daily from 7:15 A.M. - 2:15 A.M. on weekdays and from 10:00 A.M. - 2:15 A.M. The off-camp shuttle has four routes providing regular connections between shopping areas in the Borough, off-campus facilities and the Exton SEPTA Regional Rail/Amtrack Station. There is an app for live tracking of the shuttle locations. Data pertaining to the shuttle routes are included in **Appendix A**.

In addition to the WCU shuttles, SEPTA and Chester County's SCOOT provide the following public transportation in the vicinity of the University:

- SEPTA 104 - stops along High Street & at SOMPAC in M Lot and provides local service to Philadelphia.
- SEPTA 92 -stops at the West Chester Transportation Center on Market Street and goes to Exton, Malvern, and King of Prussia.
- SEPTA 135 - stops at the West Chester Transportation Center and goes to Coatesville.
- Chesco SCCOOT - bus stops on New Street, just north of Rosedale Avenue, connecting West Chester to WCU, Kennett Square, West Grove, and other destinations to Oxford.

EXISTING TRAFFIC CONDITIONS

Intersection traffic counts were conducted on 15-minute intervals during the weekday morning (7:00 to 10:00 A.M.), weekday evening (3:00 to 6:00 P.M.) peak periods. Data pertaining to heavy vehicles, pedestrians and transit vehicles were observed during the turning movement counts. Peak hours and count dates for the study area intersections are identified in **Table 2**.

TABLE 2
TRAFFIC COUNT INFORMATION

Intersection	Date of Traffic Counts	Time Period	Intersection Peak Hour[1]
South New Street & Sharpless Street	Wednesday, December 6, 2023	Weekday A.M.	8:00 to 9:00 A.M.
		Weekday P.M.	4:00 to 5:00 P.M.
Darlington Street & Sharpless Street	Wednesday, December 6, 2023	Weekday A.M.	8:00 to 9:00 A.M.
		Weekday P.M.	4:00 to 5:00 P.M.
Church Street & Sharpless Street	Wednesday, December 6, 2023	Weekday A.M.	7:15 to 8:15 A.M.
		Weekday P.M.	4:00 to 5:00 P.M.
Reynolds Alley & Sharpless Street	Wednesday, December 6, 2023	Weekday A.M.	7:30 to 8:30 A.M.
		Weekday P.M.	3:45 to 4:45 P.M.
South High Street & Sharpless Street	Wednesday, December 6, 2023	Weekday A.M.	7:30 to 8:30 A.M.
		Weekday P.M.	3:45 to 4:45 P.M.
South High Street & East Nields Street	Wednesday, December 6, 2023	Weekday A.M.	7:30 to 8:30 A.M.
		Weekday P.M.	3:45 to 4:45 P.M.
South High Street & University Avenue	Wednesday, December 6, 2023	Weekday A.M.	7:30 to 8:30 A.M.
		Weekday P.M.	3:45 to 4:45 P.M.
Reynolds Alley & University Avenue	Wednesday, December 6, 2023	Weekday A.M.	7:15 to 8:15 A.M.
		Weekday P.M.	3:45 to 4:45 P.M.
Church Street & University Avenue	Wednesday, December 6, 2023	Weekday A.M.	9:00 to 10:00 A.M.
		Weekday P.M.	4:00 to 5:00 P.M.
South High Street & Linden Street	Wednesday, December 6, 2023	Weekday A.M.	7:30 to 8:30 A.M.
		Weekday P.M.	3:45 to 4:45 P.M.
South High Street & Rosedale Avenue	Wednesday, December 6, 2023	Weekday A.M.	7:30 to 8:30 A.M.
		Weekday P.M.	4:00 to 5:00 P.M.
Matlack Street & Rosedale Avenue	Wednesday, December 6, 2023	Weekday A.M.	7:45 to 8:45 A.M.
		Weekday P.M.	4:15 to 5:15 P.M.
Matlack Street & Carter Drive	Wednesday, December 6, 2023	Weekday A.M.	8:45 to 8:45 A.M.
		Weekday P.M.	5:00 to 6:00 P.M.
Church Street & Rosedale Avenue	Wednesday, December 6, 2023	Weekday A.M.	7:45 to 8:45 A.M.
		Weekday P.M.	4:15 to 5:15 P.M.
Ped Crosswalk & Rosedale Avenue	Wednesday, December 6, 2023	Weekday A.M.	7:45 to 8:45 A.M.
		Weekday P.M.	4:15 to 5:15 P.M.
South New Street & Rosedale Avenue	Wednesday, December 6, 2023	Weekday A.M.	7:30 to 8:30 A.M.
		Weekday P.M.	3:45 to 4:45 P.M.
South New Street & Nields Street/Campus Drive	Wednesday, December 6, 2023	Weekday A.M.	9:00 to 10:00 A.M.
		Weekday P.M.	5:00 to 6:00 P.M.
South New Street & Pomona Hill Drive	Wednesday, December 6, 2023	Weekday A.M.	7:45 to 8:45 A.M.
		Weekday P.M.	4:00 to 5:00 P.M.
South New Street & Glen Echo Field Access	Wednesday, December 6, 2023	Weekday A.M.	7:45 to 8:45 A.M.
		Weekday P.M.	4:00 to 5:00 P.M.

1. *Peak Hour consists of the four consecutive 15-minute intervals where the highest traffic volumes occur.*

TABLE 2 (CONTINUED)
TRAFFIC COUNT INFORMATION

Intersection	Date of Traffic Counts	Time Period	Intersection Peak Hour[1]
South New Street & 855 S. New Street Access	Wednesday, December 6, 2023	Weekday A.M.	7:45 to 8:45 A.M.
		Weekday P.M.	4:00 to 5:00 P.M.
South New Street & S. Campus Drive	Wednesday, December 6, 2023	Weekday A.M.	7:45 to 8:45 A.M.
		Weekday P.M.	4:00 to 5:00 P.M.
South New Street & Tigue Road/Stadium Drive	Wednesday, December 6, 2023	Weekday A.M.	7:30 to 8:30 A.M.
		Weekday P.M.	4:00 to 5:00 P.M.
Matlack Street & E. Campus Drive	Thursday April 25, 2024	Weekday A.M.	8:30 to 9:30 A.M.
		Weekday P.M.	3:45 to 4:45 P.M.
Matlack Stret & Southern M2 Lot Driveway	Thursday April 25, 2024	Weekday A.M.	8:30 to 9:30 A.M.
		Weekday P.M.	3:45 to 4:45 P.M.
High Stret & E. Campus Drive	Thursday April 25, 2024	Weekday A.M.	8:30 to 9:30 A.M.
		Weekday P.M.	3:15 to 4:15 P.M.

1. Peak Hour consists of the four consecutive 15-minute intervals where the highest traffic volumes occur.

Existing condition traffic volumes and pedestrian volumes for the weekday A.M. and weekday P.M. peak hours are illustrated in **Figures 3-10**, respectively. Photographs of the study area intersections and traffic count data sheets are provided in **Appendix B**.

SCHEDULED ROADWAY IMPROVEMENTS

There are programmed roadway improvements within the study area. These improvements include the High Street Pedestrian Improvements along S. High Street, between W. Miner Street and E. Rosedale Avenue, and improvements at the Rosedale Avenue intersections with New Street and Church Street, as summarized below.

High Street Pedestrian Improvements – planned to reduce the high frequency of crashes involving pedestrians along High Street between Rosedale Ave & Miller St. The project is currently under construction and planned to be completed in early 2026. The project includes the following:

- Installation of retroreflective backplates on signals
- Addition of pedestrian countdown timings at signalized intersections
- Installation of signals at University Avenue and Sharpless Street intersections with High Street
- Addition of a northbound High Street left turn lane at Sharpless Street
- Addition of a southbound High Street left turn lane at Nields Street
- Extension of the existing northbound High Street left turn lane at Rosedale Avenue from 150' to 255'
- Installation of additional lighting at the following intersections:
  - Linden Street
  - University Avenue
  - Sharpless Street
  - Price Street
  - Union Street
- Installation of curb bump-outs at the following intersections:
  - Linden Street
  - University Avenue
  - Nields Street
  - Sharpless Street

    - Lacey Street
- Installation of high visibility crosswalks at the following intersections:
    - Linden Street
    - University Avenue
    - Sharpless Street
    - Price Street

South New Street and Rosedale Avenue Improvements – the project includes providing a separate left, thru and right turn lane on the eastbound Rosedale Avenue approach, a separate New Street left turn and channelized right turn lane on the southbound approach, enhanced pedestrian facilities and related traffic signal improvements.

Church Street and Rosedale Avenue Improvements – the project included signalizing the intersection and ADA upgrades. This intersection operated as an all-way stop at the time the traffic counts were performed for this study, but the traffic signal is now operational.

Plans related to the above improvements are included in **Appendix C**.

DESIGN YEAR VOLUME DEVELOPMENT

The West Chester Borough and West Goshen Township ordinances related to the University Campus Transportation Study note that the potential transportation impacts of future development must be assessed for three-year projections based on enrollment and census data. As noted below, the enrollment projections are anticipated to be nominal. In addition, based on the anticipated Master Plan schedule, there will be slightly less total beds on campus in 3 years than currently exist. Therefore, no discernible difference in WCU traffic is anticipated in 3 years. As such, this Master Plan was prepared for a 2040 design year, as over 60% of the estimated 819 new beds are planned to be added between 2035 and 2040.

Background Growth

A background growth factor for the roadways in the study area was developed based on enrollment projections and growth factors for September 2023 to July 2024 obtained from the PennDOT Bureau of Planning and Research (BPR). The PennDOT BPR suggests using a background growth trend factor of 0.48% per year in Chester County for urban non-interstate roadways. In addition, based on the Enrollment Projected Report data, from 2023 to 2029 enrollment is anticipated to increase by 0.19% per year. In total, this results in a total annual growth of 0.67%.

Although the enrollment projections do not specifically relate to peak hour traffic growth, in order to provide a conservative evaluation (i.e. highest traffic volumes), a total background growth factor of 0.75% was applied annually to yield overall growth percentages of 13.5% (0.75% per year, compounded over 17 years) for the 2040 design year.

Volume Redistribution

The 2040 future year volumes were redistributed within the study area to account for the three road closures and associated conversion to two-way traffic flow on Church Street, University Avenue and Church Avenue.

The additional traffic volumes due to background growth and redistribution were added to the existing traffic data to produce 2040 future condition traffic volumes. The redistributed traffic volumes are depicted in **Figures**

11-14. Future condition volumes for the weekday A.M. and weekday P.M. peak hours are illustrated in **Figures 15-18** for the 2040 future year conditions. Volume development worksheets are included in **Appendix D**.

LEVELS OF SERVICE FOR AN INTERSECTION

For analysis of intersections, level of service is defined in terms of delay, which is a measure of driver discomfort and frustration, fuel consumption, and lost travel time. LOS criteria is stated in terms of control delay per vehicle for a one-hour analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The criteria are shown in **Table 3**. Delay, as it relates to level of service, is a complex measure and is dependent upon a number of variables. For signalized intersections, these variables include the quality of vehicle progression, the cycle length, the green time ratio, and the volume/capacity ratio for the lane group in question. For unsignalized intersections, delay is related to the availability of gaps in the flow of traffic on the major street and the driver's discretion in selecting an appropriate gap for a particular movement from the minor street (straight across, left or right turn).

TABLE 3
LEVEL OF SERVICE CRITERIA
UNSIGNALIZED AND SIGNALIZED INTERSECTIONS[1]

Level of Service	Control Delay Per Vehicle (Seconds)	
	Signalized	Unsignalized
A	< 10	< 10
B	> 10 and < 20	> 10 and < 15
C	> 20 and < 35	> 15 and < 25
D	> 35 and < 55	> 25 and < 35
E	> 55 and < 80	> 35 and < 50
F	> 80 or v/c > 1.0	> 50 or v/c > 1.0

[1] Obtained from Exhibits 19-8 and 20-2 of the Transportation Research Board's Highway Capacity Manual 6th Edition.

CAPACITY ANALYSIS METHODOLOGY

Capacity analyses were conducted for the weekday A.M. and P.M. peak hours at the study area intersections. These analyses were conducted according to the methodologies contained in the *Highway Capacity Manual 6th Edition* (HCM) using *Synchro 11* software, a Trafficware product. The following conditions were analyzed, as applicable:

- Existing Conditions;
- 2040 Projected Conditions (Master Plan Design Year);

Please note, the High Street corridor improvements, the New Street/Rosedale Avenue intersection improvements, and the Church Street/Rosedale Avenue intersection improvements were included in the 2040 projected conditions analysis. In addition, based on methodologies contained in Chapter 10 of PennDOT's Publication 46, TPD adjusted the following HCM default values in the *Synchro 11* capacity analysis. These adjustments were made at the signalized intersections within the study area for all time periods based on the study area location being classified as Suburban:

- Base saturation flow rates for signalized intersections. The saturation flow rate was changed from the default value of 1900 to 1800 based on Exhibit 10-9.

- Start-up lost time and extension of effective green time for signalized intersections. The startup lost time was changed from the default value of 2.0 seconds to 2.5 seconds. Based on the total clearance time (yellow plus all-red time) being greater than 5 seconds, the extension of green time was changed from the default value of 2 seconds to 3.5 seconds. These adjusted values were based on Exhibit 10-10.

The capacity analysis worksheets are included in **Appendix E**. The PennDOT-approved signal plans are included in **Appendix F**.

PennDOT's Transportation Impact Study Guidelines outlined in PennDOT's *Policies and Procedures for Transportation Impact Studies*, found in PennDOT's Publication 282, Appendix A, dated February 2024 contain the following criteria regarding levels of service:

- If evaluation of the With Development Horizon Year Scenario to the Without Development Horizon Year Scenario indicates that the overall intersection level of service has dropped, the applicant will be required to mitigate the level of service if the increase in overall intersection delay is greater than 10-seconds. If the overall intersection delay increase is less than or equal to 10-seconds, mitigation of the intersection will not be required.
- For mitigation scenarios, applicants are expected to mitigate the overall intersection LOS to the original Without Development LOS; the 10-second delay variance is not applied to mitigation scenarios. Applicants may be required to address available storage and queue lengths at critical movements or approaches even if the overall LOS requirements are met.
- If signalization is the preferred alternative for mitigation, overall intersection LOS C in rural areas and LOS D in urban areas is acceptable.
- New signalized or unsignalized intersection established to serve as access to the development shall be designed to operate at minimum LOS C for rural areas, and minimum LOS D for urban areas.

The West Chester Borough Planned University Campus District §112-314G references utilizing accepted traffic engineering standards and criteria, and providing recommendations for improvements in order to accommodate the projected transportation impacts. As such, PennDOT's guidelines were followed as the accepted engineering standard related to levels of service.

The West Goshen Township Planned University Main Campus Overlay District §84-140 also references providing recommendations for improvements in order to order to accommodate the projected transportation impacts. PennDOT's guidelines were followed as the engineering standard related to levels of service.

The East Bradford Township SALDO §95-13.E.7-10 states the following regarding levels of service:

- Existing Conditions: Roadways and/or signalized intersections experiencing level of service D, E or F and v/c ratios greater than or equal to 1.0 shall be noted as deficient. Unsignalized intersections with level of service D, E or F shall be noted as deficient.
- Projected (Build) Conditions: Levels of service (LOS), volume/capacity (v/c) ratios and delays (seconds) shall be listed for all roadways, intersections and approaches. All roadways and intersections showing a level of service D, E or F and v/c ratios equal to or greater than 1.0 shall be considered deficient.
- Specific recommendations for the elimination of all deficiencies shall be listed and shall include internal circulation design, site access location and design, external roadway intersection design and improvements, traffic signal installation and operation, including signal timing, and transit design improvements.
- Signal timing shall be evaluated for any intersection with a level or service D, E or F but a volume/capacity (v/c) ratio less than 1.0. Warrants for signalization shall be examined for unsignalized intersections with level of service D, E or F.

CAPACITY ANALYSIS SUMMARY

Level of Service in the Study Area

Level of service (LOS) matrices for the study area intersections are shown in **Tables 4 and 5** for the weekday A.M. and weekday P.M. peak hours. Please note signal timings were optimized under 2040 design year conditions.

95th Percentile Queue Analysis

Queue analyses were conducted at the study area intersections using *Synchro 11* software. For this analysis, the 95th percentile queue is defined as the queue length that is exceeded in 5% of the signal cycles. As an example, for a signal with a 90-second cycle, this means that the 95th percentile queue length will be exceeded during 2 of the 40 signal cycles that occur during the peak hour. The queue analysis results are summarized in **Table 4 and 5** for the analyzed peak hours.

TABLE 4A: CAPACITY ANALYSIS – WEEKDAY AM PEAK HOUR

Movement	Available Storage*	Existing Conditions			2040 Future Conditions with Planned Improvements		
		LOS	Delay (sec)	Queue (ft)	LOS	Delay (sec)	Queue (ft)
S New Street & Sharpless Street							
EBLTR	100+	A	9.7	<25	B	10.2	<25
WBLTR	100+	A	8.8	<25	A	9.2	<25
NBLTR	100+	A	9.4	30	B	10.1	38
SBLTR	100+	A	9.0	<25	A	9.6	28
ILOS	**--**	**A**	**9.2**	**--**	**A**	**9.8**	**--**
Sharpless Street & Darlington Street							
EBL	100+	A	8.2	<25	A	8.3	<25
EBT	100+	A	0.0	<25	A	0.0	<25
WBTR	100+	A	0.0	<25	A	0.0	<25
SBLR	100+	A	9.2	<25	A	9.5	<25
ILOS	**--**	**A**	**0.4**	**--**	**A**	**0.4**	**--**
Church Street & Sharpless Street							
EBTR	100+	A	0.0	<25	A	0.0	<25
WBLT	100+	A	8.9	<25	A	9.1	<25
NB LTR	100+	--	--	--	A	9.8	<25
SBLTR	100+	A	9.6	<25	B	11.4	<25
ILOS	**--**	**A**	**3.0**	**--**	**A**	**4.1**	**--**
Reynolds Alley & Sharpless Street							
EBTR	100+	A	0.0	<25	A	0.0	<25
WBL	100+	A	8.5	<25	A	8.7	<25
WBT	100+	A	0.0	<25	A	0.0	<25
NBLR	100+	A	9.5	<25	B	10.1	<25
ILOS	**--**	**A**	**1.0**	**--**	**A**	**0.8**	**--**
S High Street & Sharpless Street							
EBLR	130	C	19.9	38	D	39.8	193
NBL	100	B	10.8	<25	A	4.7	<25
NBT	100+	A	0.0	<25	A	0.8	<25
SBTR	100+	A	0.0	<25	A	9.2	293
ILOS	**--**	**A**	**2.3**	**--**	**B**	**10.5**	**--**
S High Street & E Nields Street							
NBTR	100+	A	0.0	<25	A	0.0	<25
SBL	100	B	10.5	<25	B	11.3	25
ILOS	**--**	**A**	**1.6**	**--**	**A**	**1.6**	**--**

Projected = With Planned Improvements and WCU Master Plan
ILOS = Overall Intersection Level of Service
**Reflects the applicable planned lane lengths for intersections planned to be improved.*

TABLE 4B: CAPACITY ANALYSIS – WEEKDAY AM PEAK HOUR

Movement	Available Storage*	Existing Conditions			2040 Future Conditions with Planned Improvements		
		LOS	Delay (sec)	Queue (ft)	LOS	Delay (sec)	Queue (ft)
S High Street & University Avenue							
EB LR	50+	--	--	--	D	38.1	<25
NBLT	100+	B	10.3	<25	A	3.3	90
SBTR	100+	A	0.0	<25	A	3.7	113
ILOS	**--**	**A**	**0.6**	**--**	**A**	**4.2**	**--**
University Avenue & Reynolds Alley							
WBTR	100+	A	0.0	<25	A	0.0	<25
SBLR	100+	A	9.0	<25	A	8.7	<25
ILOS	**--**	**A**	**0.5**	**--**	**A**	**0.9**	**--**
Church Street & University Avenue							
WBL	100+	C	24.4	30	B	0.0	<25
SBTR	100+	A	0.0	<25	A	0.0	<25
ILOS	**--**	**A**	**8.9**	**--**	**A**	**0.0**	**--**
S High Street & Linden Street							
WBLR	300	C	27.7	33	C	27.8	38
NBT	600	A	3.4	68	A	3.6	75
SBT	175	A	3.5	73	A	4.2	108
ILOS	**--**	**A**	**4.6**	**--**	**A**	**5.0**	**--**
S High Street & Rosedale Avenue							
EBL	250	B	16.5	<25	B	15.2	<25
EBTR	500+	B	19.2	218	B	16.9	210
WBL	100	C	21.6	<25	C	21.4	40
WBTR	500+	B	13.6	115	B	12.4	110
NBL	255	B	13.6	<25	B	18.9	48
NBTR	500+	B	11.7	140	B	13.6	163
SBL	110	B	13.4	<25	B	16.7	43
SBTR	600	B	11.5	150	B	14.4	200
ILOS	**--**	**B**	**14.4**	**--**	**B**	**15.1**	**--**
Matlack Street & Rosedale Avenue							
EBTR	100+	B	14.7	95	C	19.3	140
WBLT	100+	B	10.4	<25	B	11.3	<25
NBL	100+	C	15.2	63	C	18.3	85
NBR	100+	A	8.7	<25	A	9.1	<25
SBLTR	100+	A	9.9	<25	B	10.7	<25
ILOS	**--**	**B**	**13.6**	**--**	**C**	**16.7**	**--**
Matlack Street & WCU M Lot Complex/Carter Drive							
EBLTR	100+	C	20.4	<25	C	24.5	<25
WBLTR	100+	C	22.2	35	D	30.6	55
NBL	100+	A	9.0	<25	A	9.1	<25
NBTR	100+	A	0.0	<25	A	0.0	<25
SBL	100+	B	10.1	<25	B	10.5	<25
SBTR	100+	A	0.0	<25	A	0.0	<25
ILOS	**--**	**A**	**3.1**	**--**	**A**	**3.9**	**--**

Projected = With Planned Improvements and WCU Master Plan
ILOS = Overall Intersection Level of Service
**Reflects the applicable planned lane lengths for intersections planned to be improved.*

TABLE 4C: CAPACITY ANALYSIS – WEEKDAY AM PEAK HOUR

Movement	Available Storage*	Existing Conditions			2040 Future Conditions with Planned Improvements		
		LOS	Delay (sec)	Queue (ft)	LOS	Delay (sec)	Queue (ft)
Rosedale Avenue & Church Street/Church Avenue							
EBTR	100+	B	13.0	88	A	2.7	155
WBLT	100+	B	10.1	38	A	2.5	91
SBLTR	100+	A	9.7	<25	A	0.0	0
ILOS	**--**	**B**	**11.7**	**--**	**A**	**2.7**	**--**
S New Street & Rosedale Avenue (1)							
EBLTR	500+	B	10.9	178	C	26.2	365
WBL	150	A	9.1	26	B	19.6	38
WBTR	500+	A	9.5	94	B	16.1	68
NB L	500+	C	26.8	140	C	23.2	<25
NB TR	130				C	34.2	205
SB L	105	C	20.7	95	C	28.5	93
SB T	500+				C	27.3	63
SB R	105				C	26.1	<25
ILOS	**--**	**B**	**15.5**	**--**	**C**	**26.8**	**--**
S New Street & W Nields Street/N Campus Drive							
EBLTR	500+	C	25.4	40	C	25.3	45
WBLTR	500+	C	24.2	<25	C	25.2	48
NBL	160	A	2.6	<25	A	2.7	<25
NBTR	500+	A	3.4	38	A	4.1	55
SBLTR	285	A	3.0	28	A	3.3	35
ILOS	**--**	**A**	**6.4**	**--**	**A**	**7.8**	**--**
S New Street & Pomona Hill Drive							
EBLR	100+	A	8.6	<25	A	8.8	<25
NBLTR	100+	A	8.7	35	A	9.6	43
SBTR	100+	A	9.1	<25	A	9.1	28
ILOS	**--**	**A**	**8.9**	**--**	**A**	**9.4**	**--**
S New Street & Glen Echo Field Access							
EBLR	100+	A	8.9	<25	A	9.1	<25
NBLTR	100+	A	0.0	<25	A	0.0	<25
SBTR	100+	A	0.0	<25	A	0.0	<25
ILOS	**--**	**A**	**0.0**	**--**	**A**	**0.0**	--
S New Street & 855 S New Street Access							
WBL	100+	B	13.6	<25	B	14.6	<25
WBR	100+	B	10.4	<25	B	10.7	<25
NBTR	100+	A	0.0	<25	A	0.0	<25
SBLT	100+	A	9.2	<25	A	9.4	<25
ILOS	**--**	**A**	**1.8**	**--**	**A**	**1.8**	**--**

Projected = With Planned Improvements and WCU Master Plan
ILOS = Overall Intersection Level of Service
**Reflects the applicable planned lane lengths for intersections planned to be improved.*
[1]= Analyzed utilizing synchro percentile methodology under existing conditions

TABLE 4D: CAPACITY ANALYSIS – WEEKDAY AM PEAK HOUR

Movement	Available Storage*	Existing Conditions			2040 Future Conditions with Planned Improvements		
		LOS	Delay (sec)	Queue (ft)	LOS	Delay (sec)	Queue (ft)
S New Street & S Campus Drive/Parking Lot							
EBL	100+	B	10.8	<25	B	11.4	<25
EBTR	100+	B	10.7	<25	B	11.0	<25
WBL	100+	A	0.0	<25	A	0.0	<25
WBTR	100+	B	10.8	<25	B	11.0	<25
NBL	100+	A	8.7	<25	A	8.8	<25
NBTR	100+	A	0.0	<25	A	0.0	<25
SBL	100+	A	8.8	<25	A	8.9	<25
SBTR	100+	A	0.0	<25	A	0.0	<25
ILOS	**--**	**A**	**3.3**	**--**	**A**	**3.4**	**--**
S New Street & Tigue Road/Stadium Drive							
EBLTR	100+	A	7.7	<25	A	7.8	<25
WBLTR	100+	A	7.5	<25	A	7.6	<25
NBLTR	100+	A	8.2	<25	A	8.4	<25
SBLTR	100+	A	7.6	<25	A	7.8	<25
ILOS	**--**	**A**	**7.9**	**--**	**A**	**8.1**	**--**
Matlack Street & Campus Drive/Parking Lot							
EBLT	100+	C	24.9	<25	D	31.6	<25
EBR	100+	B	10.3	<25	B	10.6	<25
WBLTR	100+	C	15.2	<25	C	17.1	<25
NBL	100+	A	9.5	<25	A	9.8	<25
NBTR	100+	A	0.0	<25	A	0.0	<25
SBL	100+	A	8.8	<25	A	8.9	<25
SBT	100+	A	0.0	<25	A	0.0	<25
SBR	100+	A	0.0	<25	A	0.0	<25
ILOS	**--**	**A**	**3.8**	**--**	**A**	**4.1**	**--**
Matlack Street & M1 Lot Southern Driveway							
EBLR	100+	A	9.5	<25	A	9.8	<25
NBL	100+	A	9.0	<25	A	9.1	<25
NBT	100+	A	0.0	<25	A	0.0	<25
SBTR	100+	A	0.0	<25	A	0.0	<25
ILOS	**--**	**A**	**0.2**	**--**	**A**	**0.2**	**--**
S High Street & Campus Drive							
WBL	100+	C	16.6	<25	C	19.3	<25
WBR	100+	B	12.1	<25	B	0.3	<25
NBT	100+	A	0.0	<25	A	0.0	<25
NBR	100+	A	0.0	<25	A	0.0	<25
SBL	100+	B	10.8	<25	B	11.5	<25
SBT	100+	A	0.0	<25	A	0.0	<25
ILOS	**--**	**A**	**1.6**	**--**	**A**	**1.6**	**--**

Projected = With Planned Improvements and WCU Master Plan
ILOS = Overall Intersection Level of Service
**Reflects the applicable planned lane lengths for intersections planned to be improved.*

TABLE 5A: CAPACITY ANALYSIS – WEEKDAY PM PEAK HOUR

Movement	Available Storage*	Existing Conditions			2040 Future Conditions with Planned Improvements		
		LOS	Delay (sec)	Queue (ft)	LOS	Delay (sec)	Queue (ft)
S New Street & Sharpless Street							
EBLTR	100+	A	8.6	<25	A	9	<25
WBLTR	100+	A	9.4	<25	B	10.1	<25
NBLTR	100+	B	10.8	58	B	3	75
SBLTR	100+	A	9.1	<25	A	1.2	30
ILOS	**--**	**A**	**10.0**	**--**	**B**	**11.2**	**--**
Sharpless Street & Darlington Street							
EBL	100+	A	8.5	<25	A	8.6	<25
EBT	100+	A	0.0	<25	A	0	<25
WBTR	100+	A	0.0	<25	A	0	<25
SBLR	100+	B	10.2	<25	B	0.1	<25
ILOS	**--**	**A**	**0.9**	**--**	**A**	**1.0**	**--**
Church Street & Sharpless Street							
EBTR	100+	A	0.0	<25	A	0	<25
WBLT	100+	A	9.0	<25	A	9.4	<25
NBLTR	100+	--	--	--	B	11.8	<25
SBLTR	100+	B	10.9	<25	B	14.7	28
ILOS	**--**	**A**	**3.4**	**--**	**A**	**5.0**	**--**
Reynolds Alley & Sharpless Street							
EBTR	100+	A	0.0	<25	A	0	<25
WBL	100+	A	8.8	<25	A	9.1	<25
WBT	100+	A	0.0	<25	A	0	<25
NBLR	100+	B	10.0	<25	B	10.9	<25
ILOS	**--**	**A**	**1.6**	**--**	**A**	**1.4**	**--**
S High Street & Sharpless Street							
EBLR	130	D	29.9	100	D	45.3	278
NBL	100	B	11.3	<25	A	5.5	28
NBT	100+	A	0.0	<25	A	1.4	<25
SBTR	100+	A	0.0	<25	B	10.8	300
ILOS	**--**	**A**	**4.5**	**--**	**B**	**13.1**	**--**
S High Street & E Nields Street							
NBTR	100+	A	0.0	<25	A	0	<25
SBL	100	B	12.5	<25	B	14.1	33
SBT	100+	A	0.0	<25	A	0	<25
ILOS	**--**	**A**	**1.4**	**--**	**A**	**1.5**	**--**

Projected = With Planned Improvements and WCU Master Plan
ILOS = Overall Intersection Level of Service
**Reflects the applicable planned lane lengths for intersections planned to be improved.*

TABLE 5B: CAPACITY ANALYSIS – WEEKDAY PM PEAK HOUR

Movement	Available Storage*	Existing Conditions			2040 Future Conditions with Planned Improvements		
		LOS	Delay (sec)	Queue (ft)	LOS	Delay (sec)	Queue (ft)
S High Street & University Avenue							
EB LR	50+	--	--	--	D	38.3	28
NBLT	100+	B	11.8	<25	A	4	138
SBTR	100+	A	0.0	<25	A	3.7	120
ILOS	**--**	**A**	**0.8**	**--**	**A**	**4.5**	**--**
University Avenue & Reynolds Alley							
WBTR	100+	A	0.0	<25	A	0	<25
SBLR	100+	A	9.4	<25	A	9.4	<25
ILOS	**--**	**A**	**0.4**	**--**	**A**	**0.7**	**--**
Church Street & University Avenue							
WBL	100+	B	14.5	<25	A	0	<25
SBTR	100+	A	0.0	<25	A	0	<25
ILOS	**--**	**A**	**5.5**	**--**	**A**	**0**	**--**
S High Street & Linden Street							
WBLR	300	C	28.5	85	C	29.3	98
NBT	600	A	6.4	173	A	6.8	190
SBT	175	A	5.6	130	A	7	198
ILOS	**--**	**A**	**8.1**	**--**	**A**	**8.9**	**--**
S High Street & Rosedale Avenue							
EBL	250	C	23.8	35	C	24.0	40
EBTR	500+	B	19.9	190	B	15.5	130
WBL	100	C	22.8	28	C	20.2	45
WBTR	500+	C	20.4	210	B	20.0	215
NBL	255	B	13.3	30	B	19.2	68
NBTR	500+	B	13.0	200	B	14.5	220
SBL	110	B	15.5	<25	C	21.0	75
SBTR	600	B	10.7	148	B	13.0	208
ILOS	**--**	**B**	**16.0**	**--**	**B**	**16.5**	**--**
Matlack Street & Rosedale Avenue							
EBTR	100+	B	13.3	63	C	16.7	93
WBLT	100+	B	12.6	45	B	15	60
NBL	100+	C	16.7	75	C	21.4	108
NBR	100+	A	9.4	<25	B	10.2	<25
SBLTR	100+	B	10.6	<25	B	11.8	<25
ILOS	**--**	**B**	**13.4**	**--**	**C**	**16.4**	**--**
Matlack Street & WCU M Lot Complex/Carter Drive							
EBLTR	100+	B	13.6	<25	C	15.5	<25
WBLTR	100+	C	16.5	33	C	20.6	50
NBL	100+	A	8.8	<25	A	9.0	<25
NBTR	100+	A	0.0	<25	A	0	<25
SBL	100+	A	9.2	<25	A	9.4	<25
SBTR	100+	A	0.0	<25	A	0	<25
ILOS	**--**	**A**	**4.0**	**--**	**A**	**4.7**	**--**

Projected = With Planned Improvements and WCU Master Plan
ILOS = Overall Intersection Level of Service
**Reflects the applicable planned lane lengths for intersections planned to be improved.*

TABLE 5C: CAPACITY ANALYSIS – WEEKDAY PM PEAK HOUR

Movement	Available Storage*	Existing Conditions			2040 Future Conditions with Planned Improvements		
		LOS	Delay (sec)	Queue (ft)	LOS	Delay (sec)	Queue (ft)
Rosedale Avenue & Church Street/Church Avenue							
EBTR	100+	B	12.1	60	A	2.4	106
WBLT	200+	B	13.8	88	A	2.8	156
SBLTR	100+	B	10.9	28	A	0	0
ILOS	**--**	**B**	**12.7**	**--**	**A**	**2.6**	**--**
S New Street & Rosedale Avenue (1)							
EBLTR	500+	A	9.9	95	C	20.6	145
WBL	150	B	10.2	46	B	20.0	53
WBTR	500+	B	13.8	203	C	22.1	193
NB L	500+	C	22.1	126	C	21.1	<25
NB TR	130				C	33.5	248
SB L	105	C	20.3	124	C	30.5	118
SB T	500+				C	30.3	118
SB R	105				C	28.0	40
ILOS	**--**	**B**	**15.9**	**--**	**C**	**26.7**	**--**
S New Street & W Nields Street/N Campus Drive							
EBLTR	500+	B	15.6	<25	B	14.2	<25
WBLTR	500+	B	16.2	45	B	16.0	78
NBL	160	A	5.3	<25	A	6.1	<25
NBTR	500+	A	7.3	85	A	9.7	133
SBLTR	285	A	6.1	45	A	7.2	60
ILOS	**--**	**A**	**8.8**	**--**	**B**	**10.4**	**--**
S New Street & Pomona Hill Drive							
EBLR	100+	A	8.8	<25	A	9	<25
NBLTR	100+	A	9.3	35	A	9.9	43
SBTR	100+	B	10.3	53	B	11.4	68
ILOS	**--**	**A**	**9.9**	**--**	**B**	**10.7**	**--**
S New Street & Glen Echo Field Access							
EBLR	100+	B	12.0	<25	B	12.9	<25
NBLTR	100+	A	0.0	<25	A	0	<25
SBTR	100+	A	0.0	<25	A	0	<25
ILOS	**--**	**A**	**0.1**	--	**A**	**0.1**	**--**
S New Street & 855 S New Street Access							
WBL	100+	B	13.7	<25	B	14.8	<25
WBR	100+	A	9.7	<25	A	9.9	<25
NBTR	100+	A	0.0	<25	A	0	<25
SBLT	100+	A	9.2	<25	A	9.3	<25
ILOS	**--**	**A**	**1.8**	**--**	**A**	**1.9**	**--**

Projected = With Planned Improvements and WCU Master Plan
ILOS = Overall Intersection Level of Service
**Reflects the applicable planned lane lengths for intersections planned to be improved.*
[1] = Analyzed utilizing synchro percentile methodology under existing conditions

TABLE 5D: CAPACITY ANALYSIS – WEEKDAY PM PEAK HOUR

Movement	Available Storage*	Existing Conditions			2040 Future Conditions with Planned Improvements		
		LOS	Delay (sec)	Queue (ft)	LOS	Delay (sec)	Queue (ft)
S New Street & S Campus Drive/Parking Lot							
EBL	100+	B	12.1	<25	B	13.1	<25
EBTR	100+	B	10.5	<25	B	10.8	<25
WBL	100+	B	10.7	<25	B	11.3	<25
WBTR	100+	B	11.6	<25	B	12	<25
NBL	100+	A	9.1	<25	A	9.3	<25
NBTR	100+	A	0.0	<25	A	0	<25
SBL	100+	A	8.2	<25	A	8.2	<25
SBTR	100+	A	0.0	<25	A	0	<25
ILOS	**--**	**A**	**3.8**	**--**	**A**	**4.0**	**--**
S New Street & Tigue Road/Stadium Drive							
EBLTR	100+	A	7.7	<25	A	7.9	<25
WBLTR	100+	A	7.7	<25	A	7.8	<25
NBLTR	100+	A	8.2	<25	A	8.5	<25
SBLTR	100+	A	8.5	<25	A	8.9	38
ILOS	**--**	**A**	**8.3**	**--**	**A**	**8.7**	**--**
Matlack Street & Campus Drive/Parking Lot							
EBLT	100+	C	19.3	<25	C	23.1	<25
EBR	100+	B	10.0	<25	B	10.3	<25
WBLTR	100+	B	14.5	<25	C	15.7	<25
NBL	100+	A	9.0	<25	A	9.2	<25
NBTR	100+	A	0.0	<25	A	0	<25
SBL	100+	A	9.1	<25	A	9.3	<25
SBT	100+	A	0.0	<25	A	0	<25
SBR	100+	A	0.0	<25	A	0	<25
ILOS	**--**	**A**	**2.7**	**--**	**A**	**2.9**	**--**
Matlack Street & M1 Lot Southern Driveway							
EBLR	100+	B	10.0	<25	B	10.3	<25
NBL	100+	B	10.1	<25	B	10.3	<25
NBT	100+	A	0.0	<25	A	0	<25
SBTR	100+	A	0.0	<25	A	0	<25
ILOS	**--**	**A**	**0.1**	**--**	**A**	**0.1**	**--**
S High Street & Campus Drive							
WBL	100+	C	20.8	25	D	26.8	38
WBR	100+	B	13.6	<25	C	15.1	<25
NBT	100+	A	0.0	<25	A	0	<25
NBR	100+	A	0.0	<25	A	0	<25
SBL	100+	B	10.3	<25	B	10.8	<25
SBT	100+	A	0.0	<25	A	0	<25
ILOS	**--**	**A**	**2.0**	**--**	**A**	**2.4**	**--**

Projected = With Planned Improvements and WCU Master Plan
ILOS = Overall Intersection Level of Service
**Reflects the applicable planned lane lengths for intersections planned to be improved.*

As shown in **Tables 4 and 5**, under 2040 projected conditions with implementation of the planned improvements and with the WCU Master-Plan, the study area intersections are anticipated to operate at the same overall intersection level of service (ILOS) as under existing conditions, during the weekday A.M. and

P.M. peak hours. All levels of service at the study area intersection are anticipated to comply with the applicable PennDOT and municipal requirements.

As shown in **Tables 4 and 5,** adequate queue storage will be provided for the turn lanes in the 2040 design year conditions. Queue analysis worksheets are included with the capacity analysis worksheets provided in **Appendix F.**

TRANSPORTATION DEMAND MANAGEMENT (TDM) PLAN

WCU currently implements a number of TDM measures in order to reduce parking and traffic in the area, and to create a pedestrian friendly environment. Consistent with the West Chester Borough and West Goshen Township ordinances, these current measures include:

- Shuttle system to both on-campus and off-campus locations
- Discounted transit fare program
- Carpool preferential parking
- On-site car-sharing vehicles
- Commuter information center
- Flexible or alternative work hours for workers
- TDM education programs directed at the students and employees

In addition to the above measures, the current Master Plan is proposing additional housing on-campus which will serve students who may otherwise commuter or live in off-campus house. Therefore, the additional housing is anticipated to reduce vehicular traffic during the peak periods. In addition, in conjunction with the Master Plan, WCU envisions a pedestrian path/walkway along New Street, between the North Campus and South Campus. Furthermore, TPD recommends that WCU consider implementing real time display of parking garage utilization.

RECOMMENDATIONS & CONCLUSIONS

Please refer to the Executive Summary for the Recommendations and Conclusion.

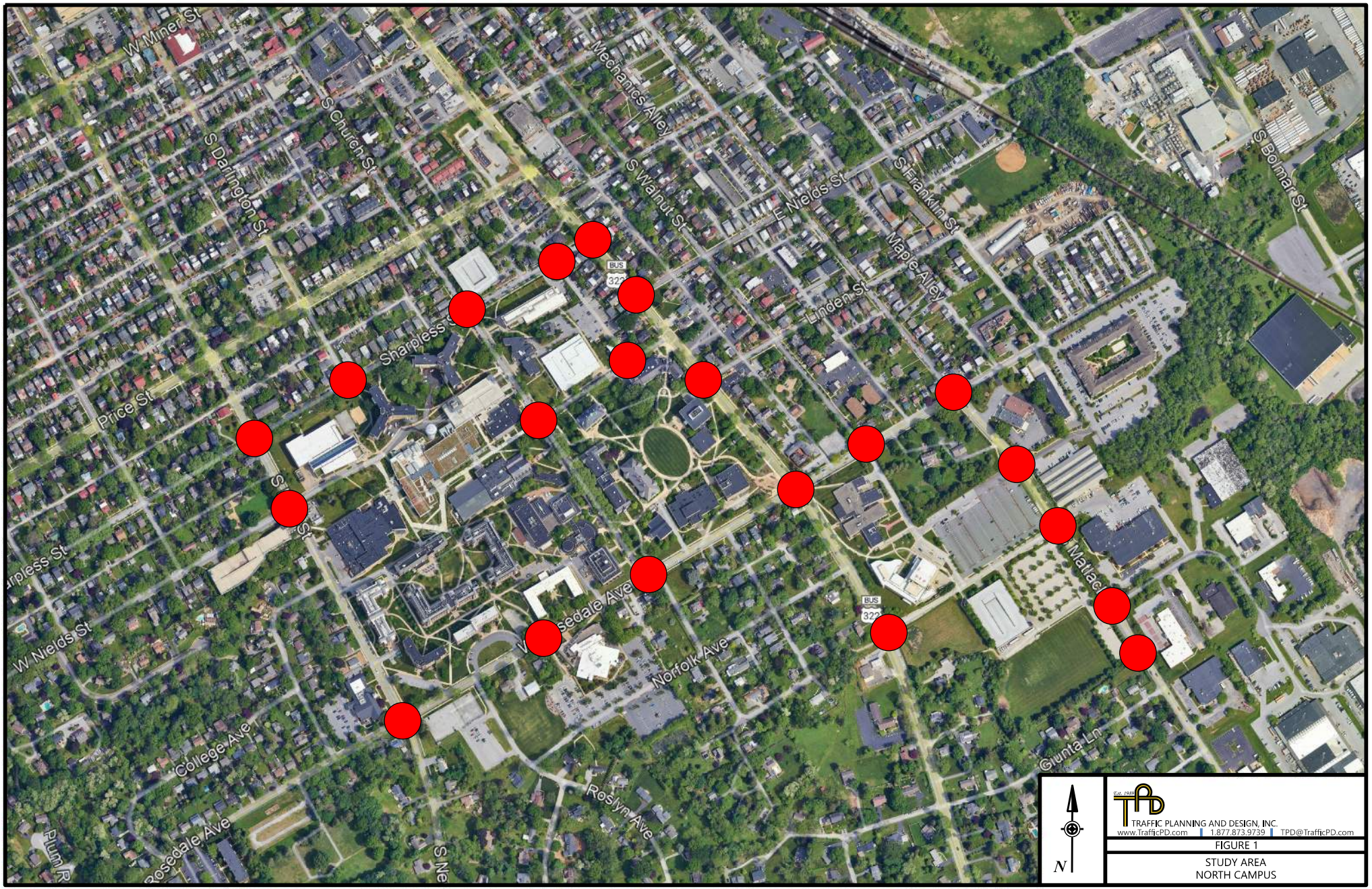
W Miner St
S Darlington St
S Church St
Mechanics Alley
S Walnut St
E Nields St
S Franklin St
S Bomar St
Maple Alley
Linden St
Sharpless St
Price St
S St
W Nields St
Rosedale Ave
Norfolk Ave
College Ave
Roslyn Ave
Giunta Ln
BUS
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FIGURE 1
STUDY AREA
NORTH CAMPUS
N

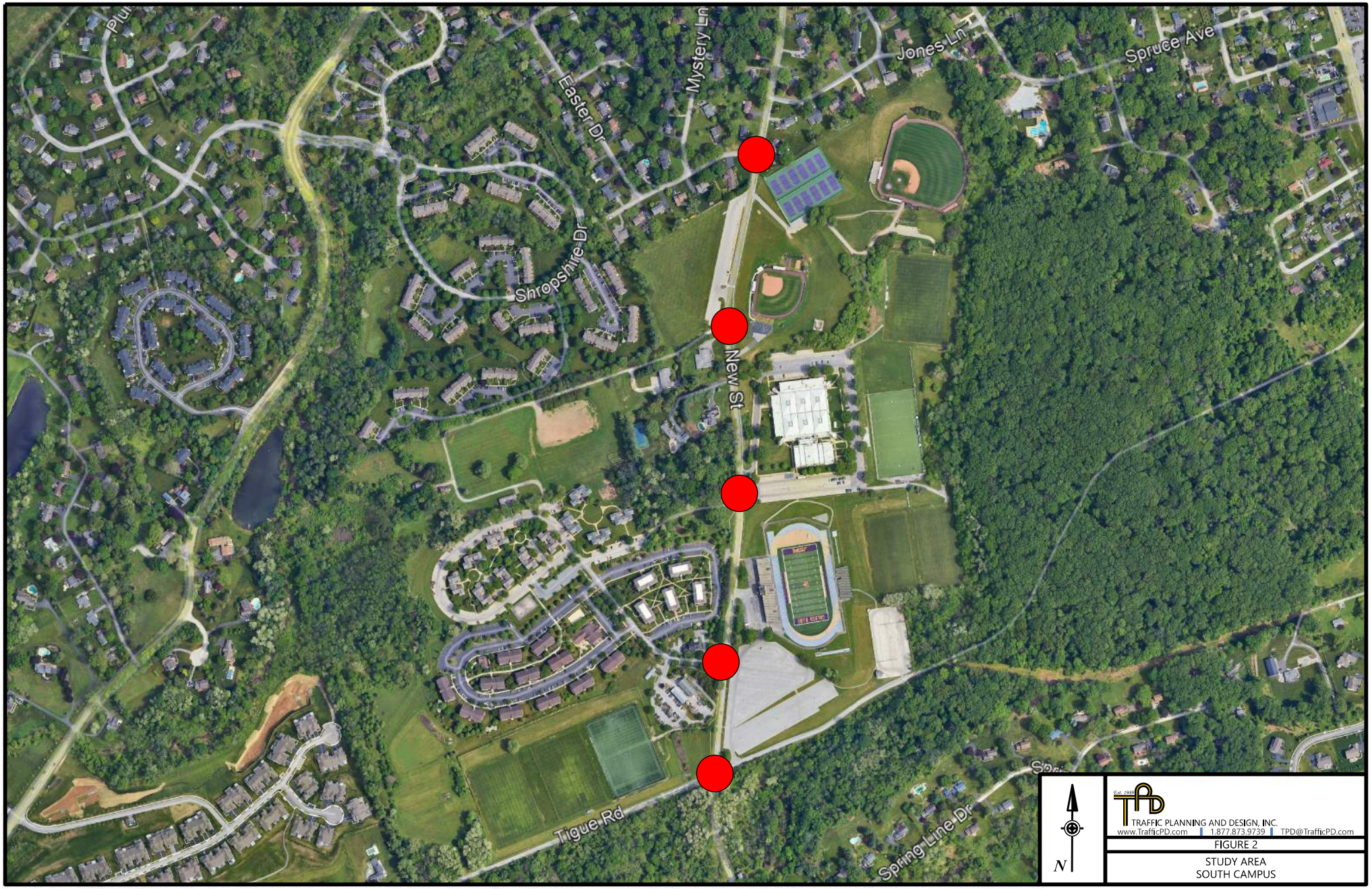
Mystery Ln
Jones Ln
Spruce Ave
Easter Dr
Shropshire Dr
New St
Tigue Rd
Spring Line Dr
N
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FIGURE 2
STUDY AREA
SOUTH CAMPUS

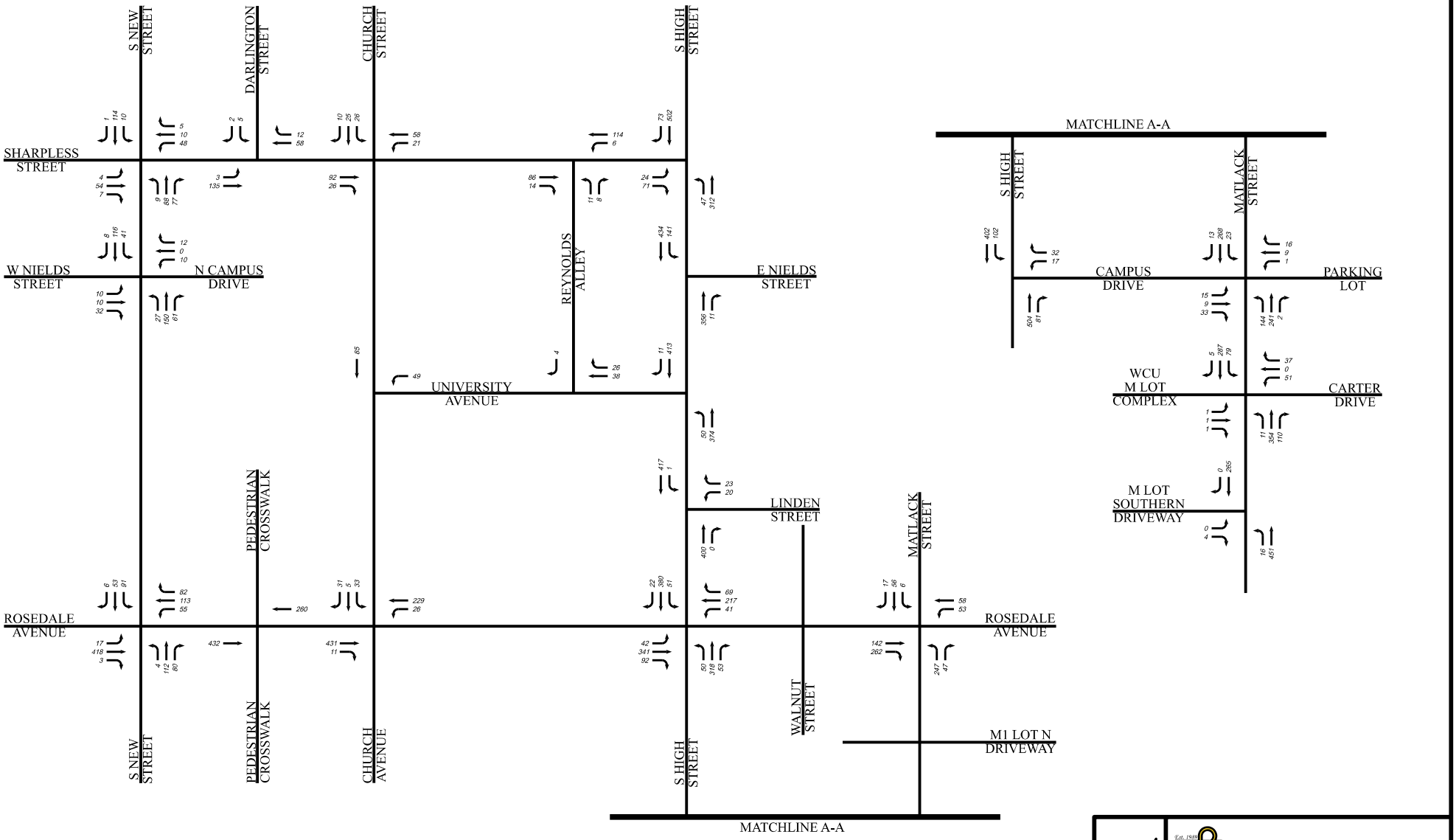
S NEW STREET
DARLINGTON STREET
CHURCH STREET
S HIGH STREET
SHARPLESS STREET
W NIELDS STREET
N CAMPUS DRIVE
REYNOLDS ALLEY
E NIELDS STREET
UNIVERSITY AVENUE
PEDESTRIAN CROSSWALK
LINDEN STREET
MATLACK STREET
ROSEDALE AVENUE
WALNUT STREET
M1 LOT N DRIVEWAY
CHURCH AVENUE
MATCHLINE A-A
MATLACK STREET
CAMPUS DRIVE
PARKING LOT
WCU M LOT COMPLEX
CARTER DRIVE
M LOT SOUTHERN DRIVEWAY
MATCHLINE A-A
KEY:
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FIGURE 3
EXISTING VEHICULAR TRAFFIC VOLUMES
NORTH CAMPUS
WEEKDAY AM PEAK HOUR

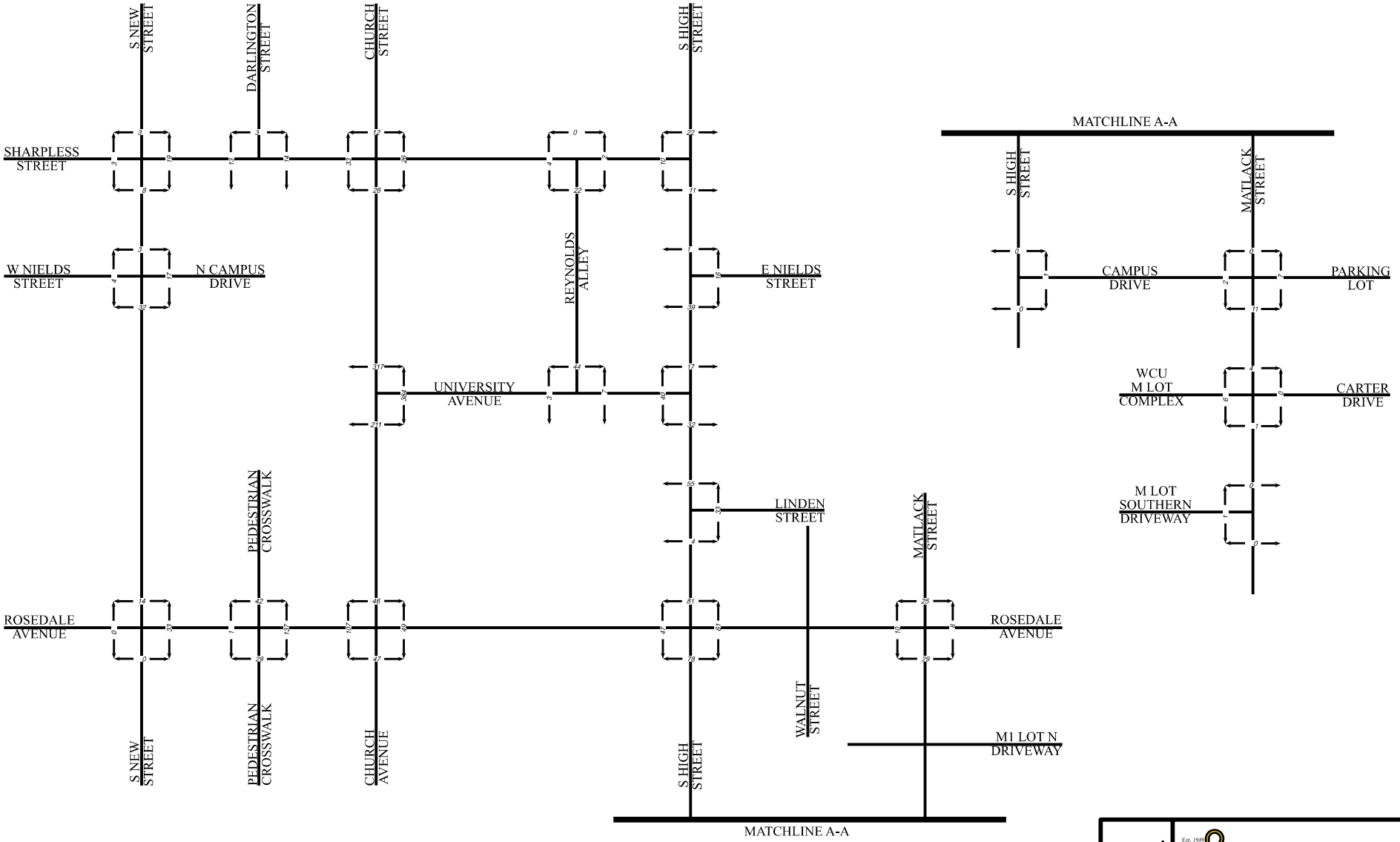

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FIGURE 4
EXISTING PEDESTRIAN TRAFFIC VOLUMES
NORTH CAMPUS
WEEKDAY AM PEAK HOUR

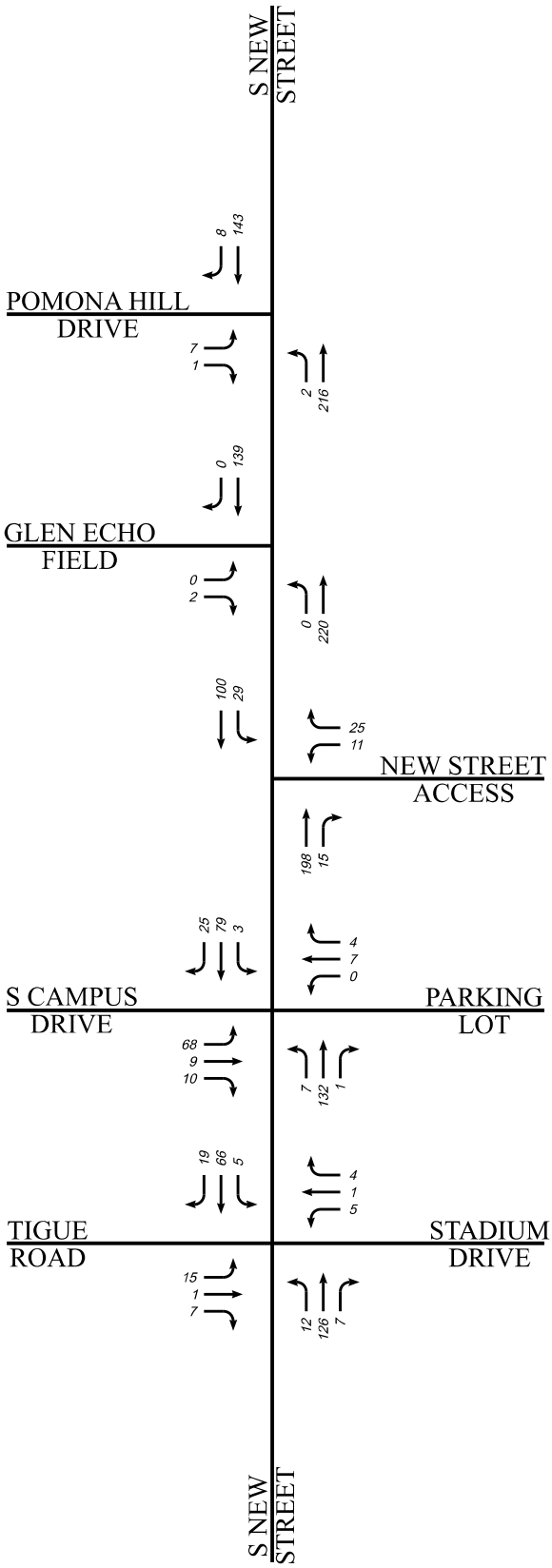

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FIGURE 5

EXISTING VEHICULAR TRAFFIC VOLUMES
SOUTH CAMPUS
WEEKDAY AM PEAK HOUR

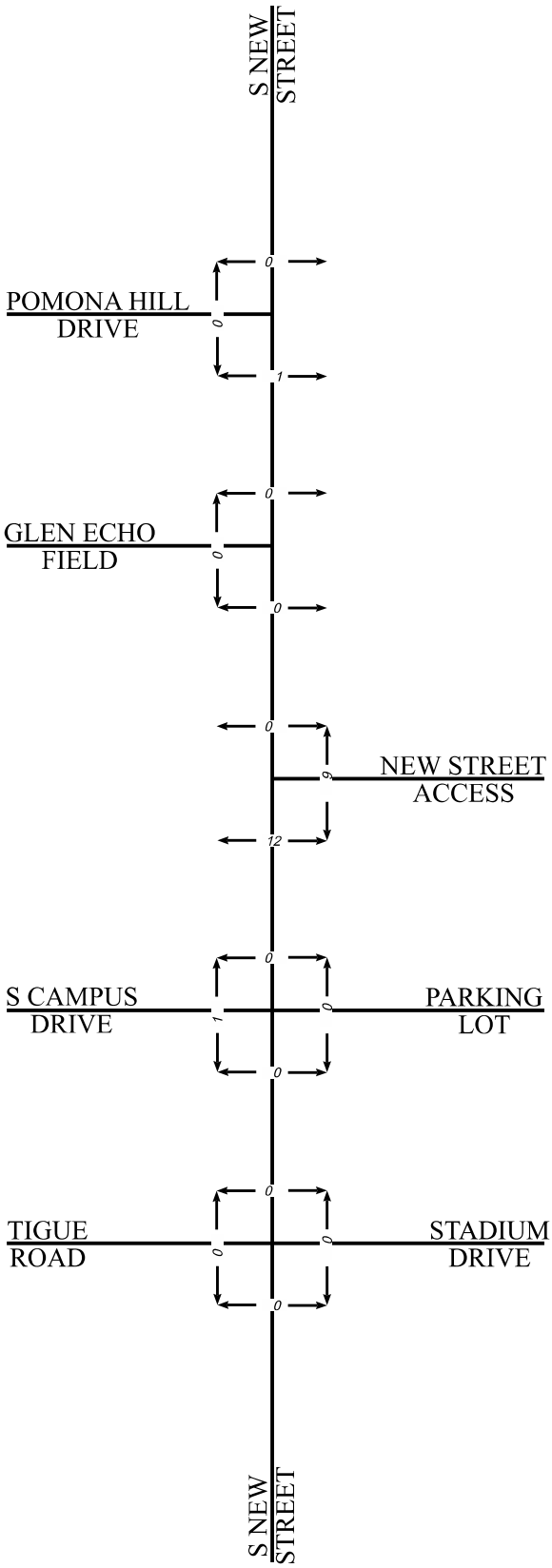

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FIGURE 6

EXISTING PEDESTRIAN TRAFFIC VOLUMES
SOUTH CAMPUS
WEEKDAY AM PEAK HOUR

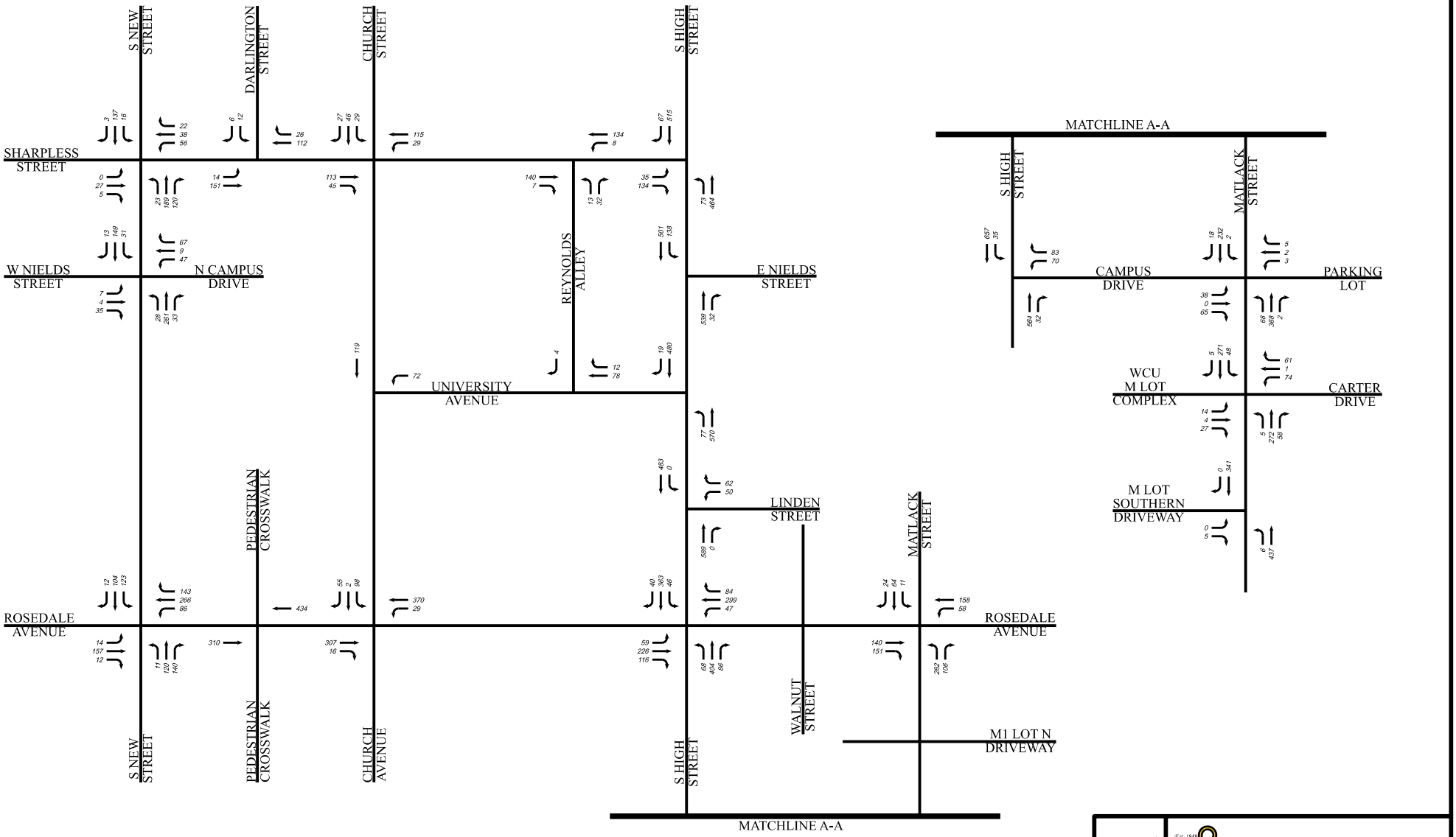

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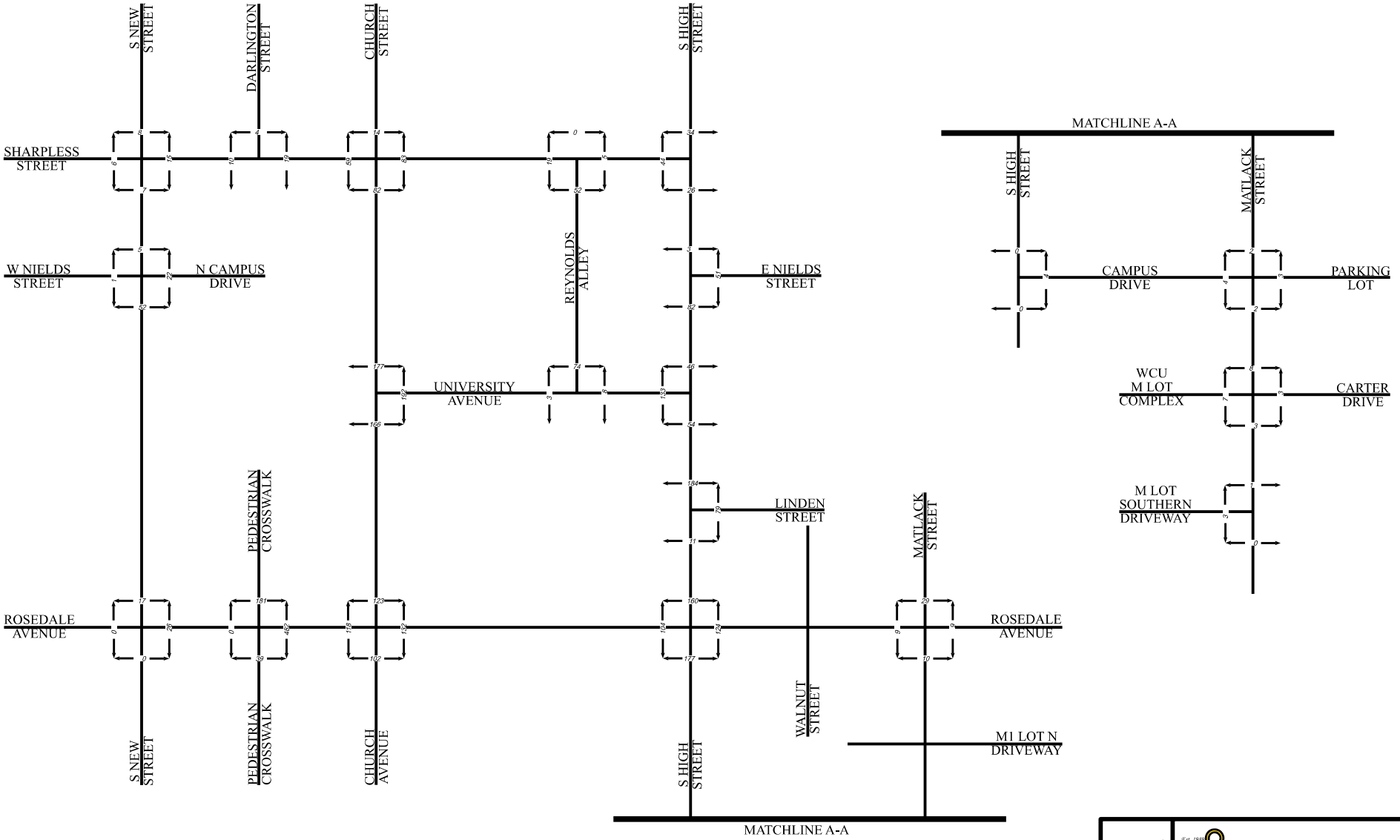
FIGURE 7
EXISTING VEHICULAR TRAFFIC VOLUMES
NORTH CAMPUS
WEEKDAY PM PEAK HOUR



KEY:
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FIGURE 8
EXISTING PEDESTRIAN TRAFFIC VOLUMES
NORTH CAMPUS
WEEKDAY PM PEAK HOUR

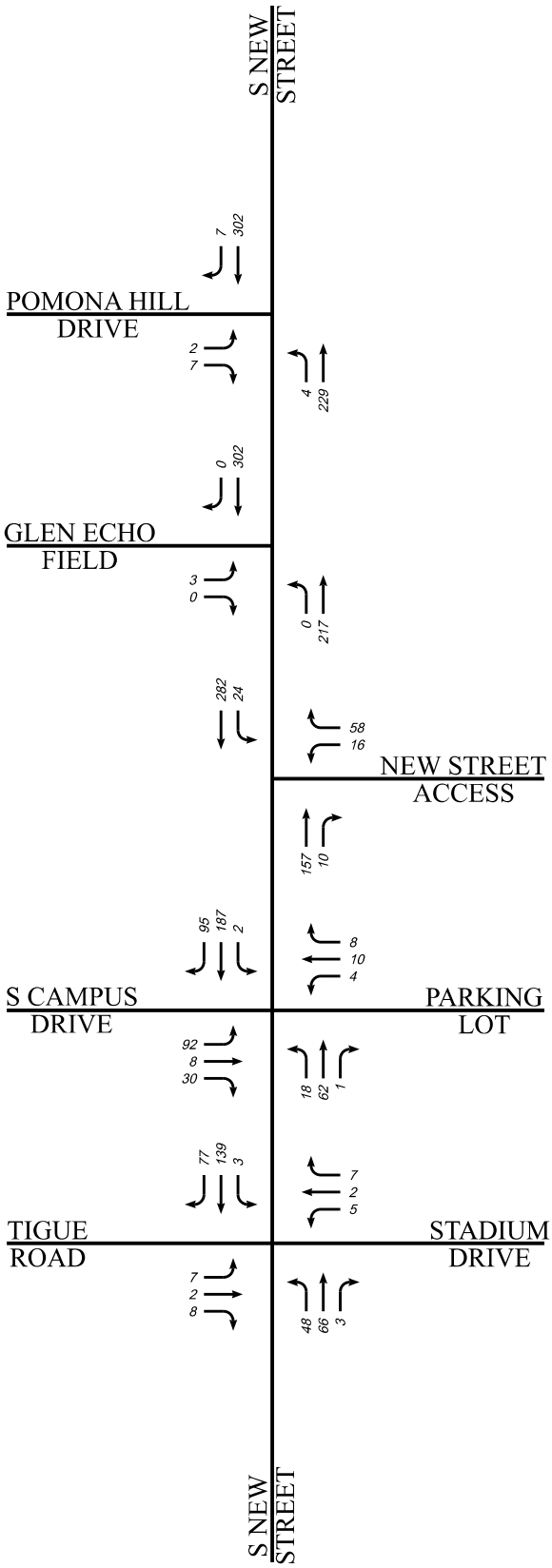

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FIGURE 9

EXISTING VEHICULAR TRAFFIC VOLUMES
SOUTH CAMPUS
WEEKDAY PM PEAK HOUR

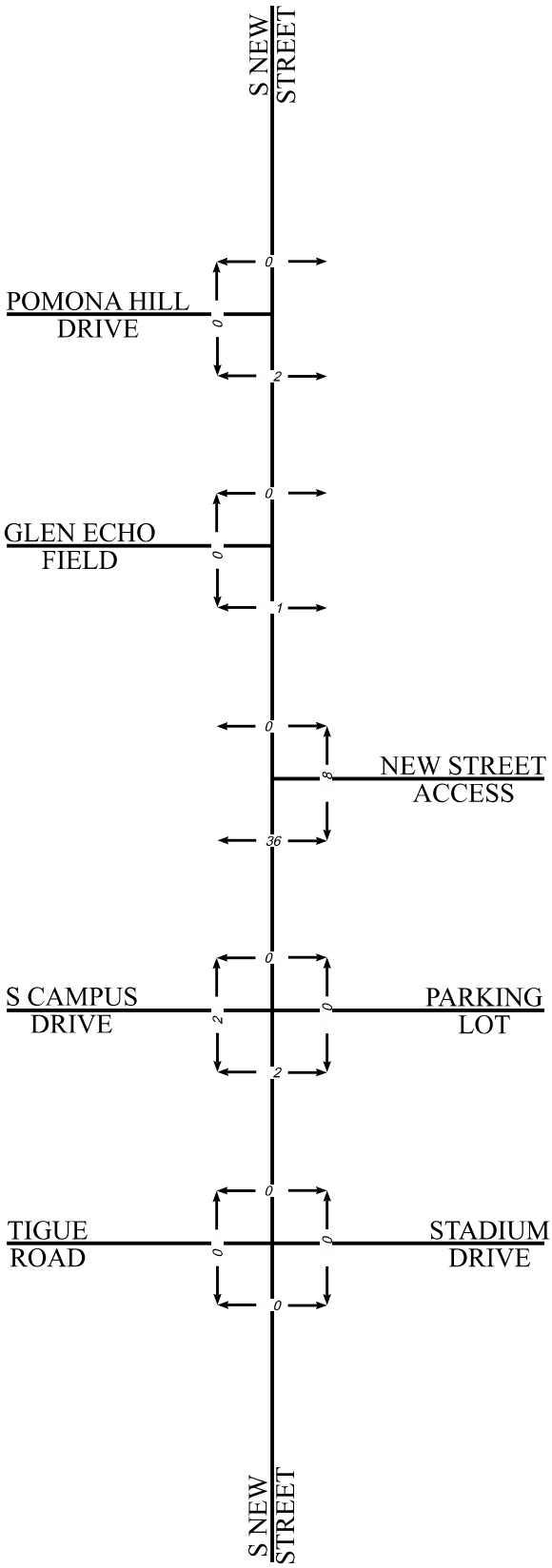

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FIGURE 10

EXISTING PEDESTRIAN TRAFFIC VOLUMES
SOUTH CAMPUS
WEEKDAY PM PEAK HOUR

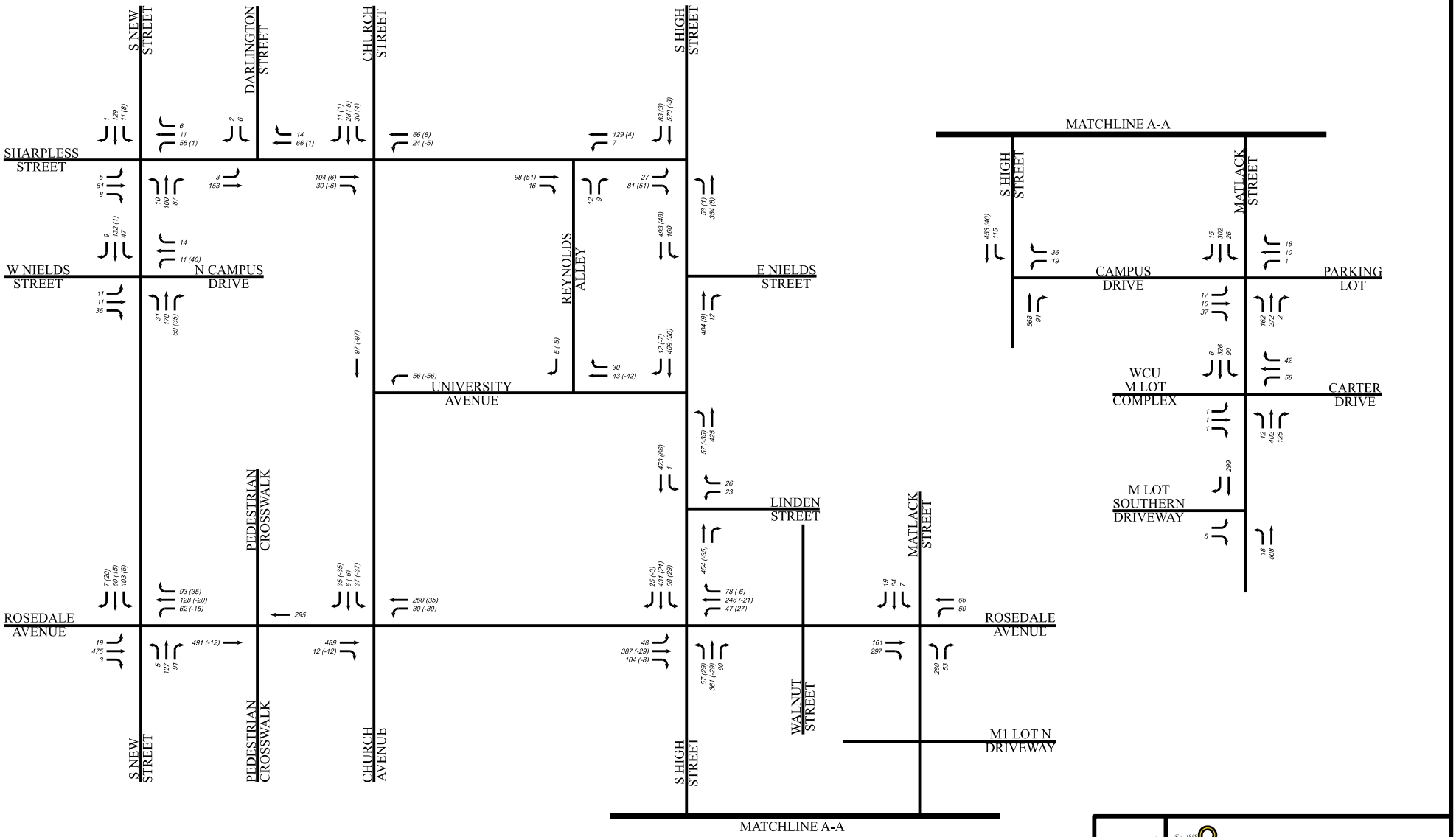

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FIGURE 11
2040 BASE VEHICULAR TRAFFIC VOLUMES
NORTH CAMPUS
WEEKDAY AM PEAK HOUR

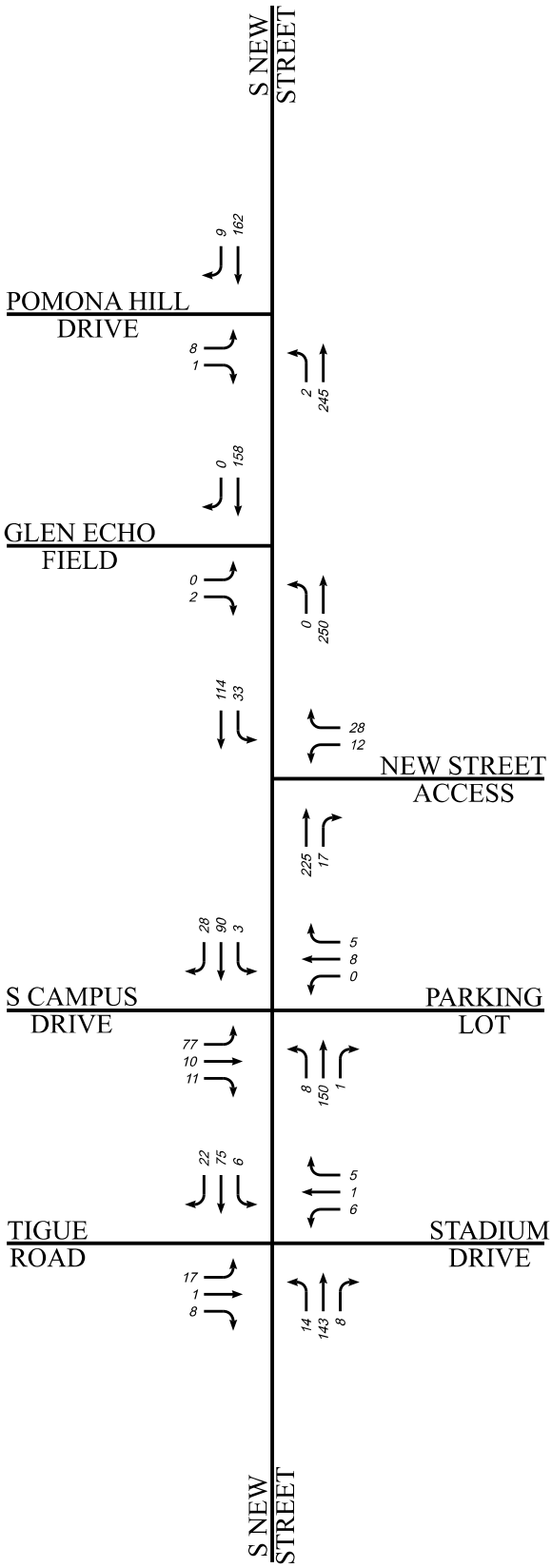

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FIGURE 12

2040 BASE VEHICULAR TRAFFIC VOLUMES
SOUTH CAMPUS
WEEKDAY AM PEAK HOUR

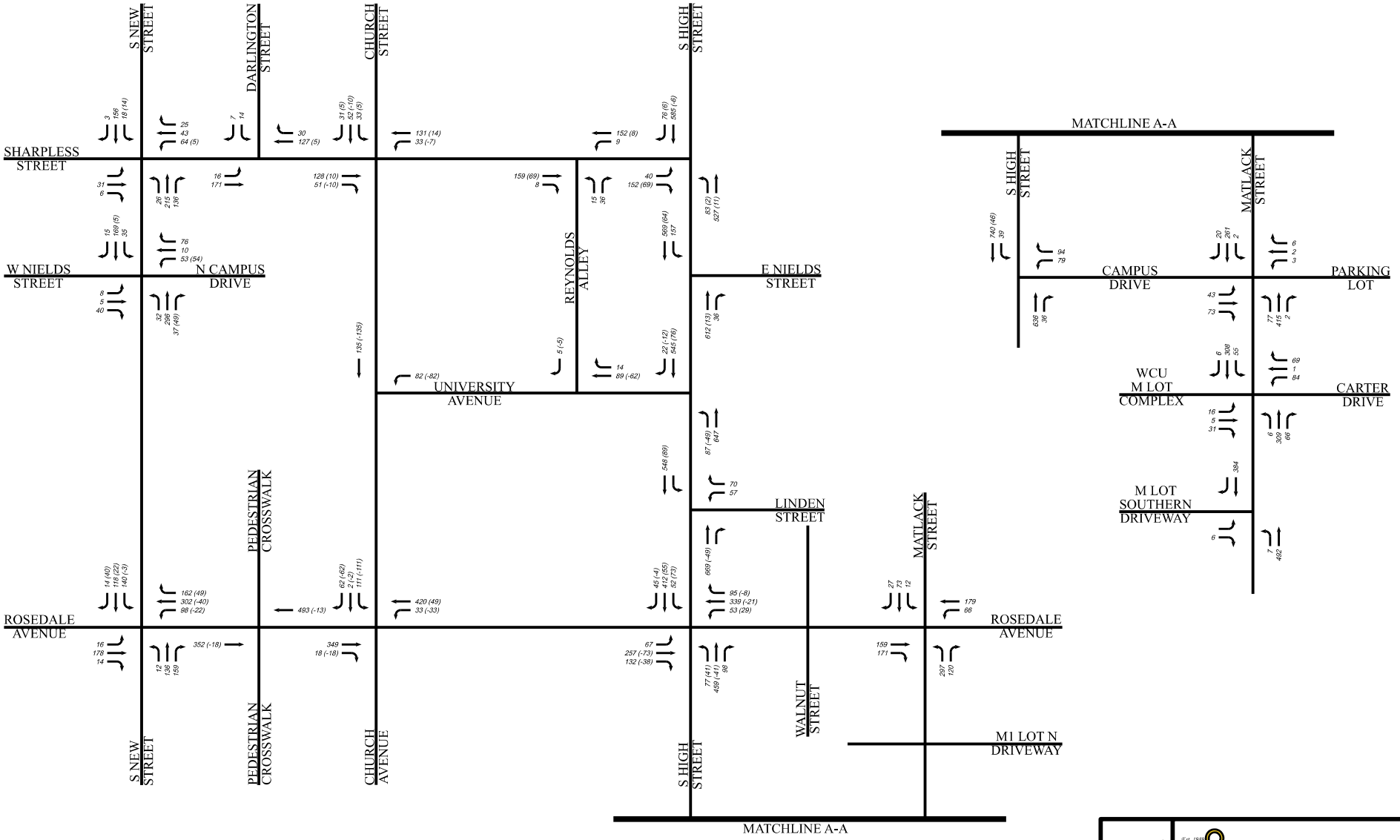

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FIGURE 13
2040 BASE VEHICULAR TRAFFIC VOLUMES
NORTH CAMPUS
WEEKDAY PM PEAK HOUR

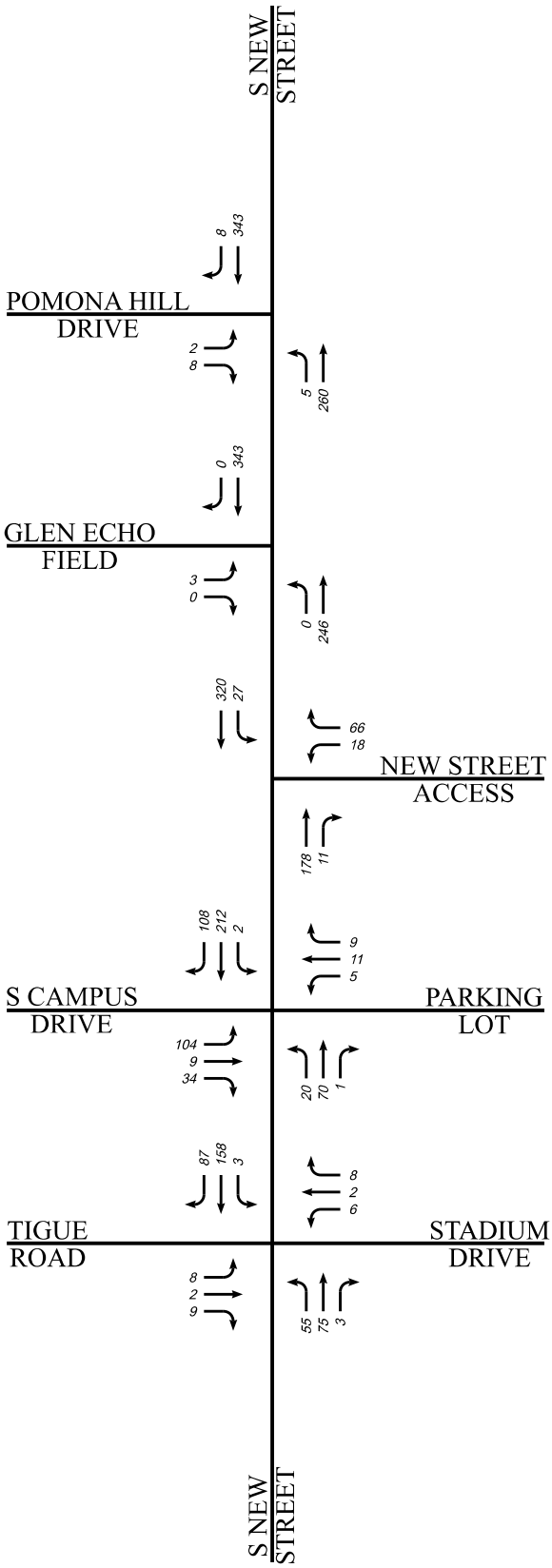

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FIGURE 14

2040 BASE VEHICULAR TRAFFIC VOLUMES
SOUTH CAMPUS
WEEKDAY PM PEAK HOUR

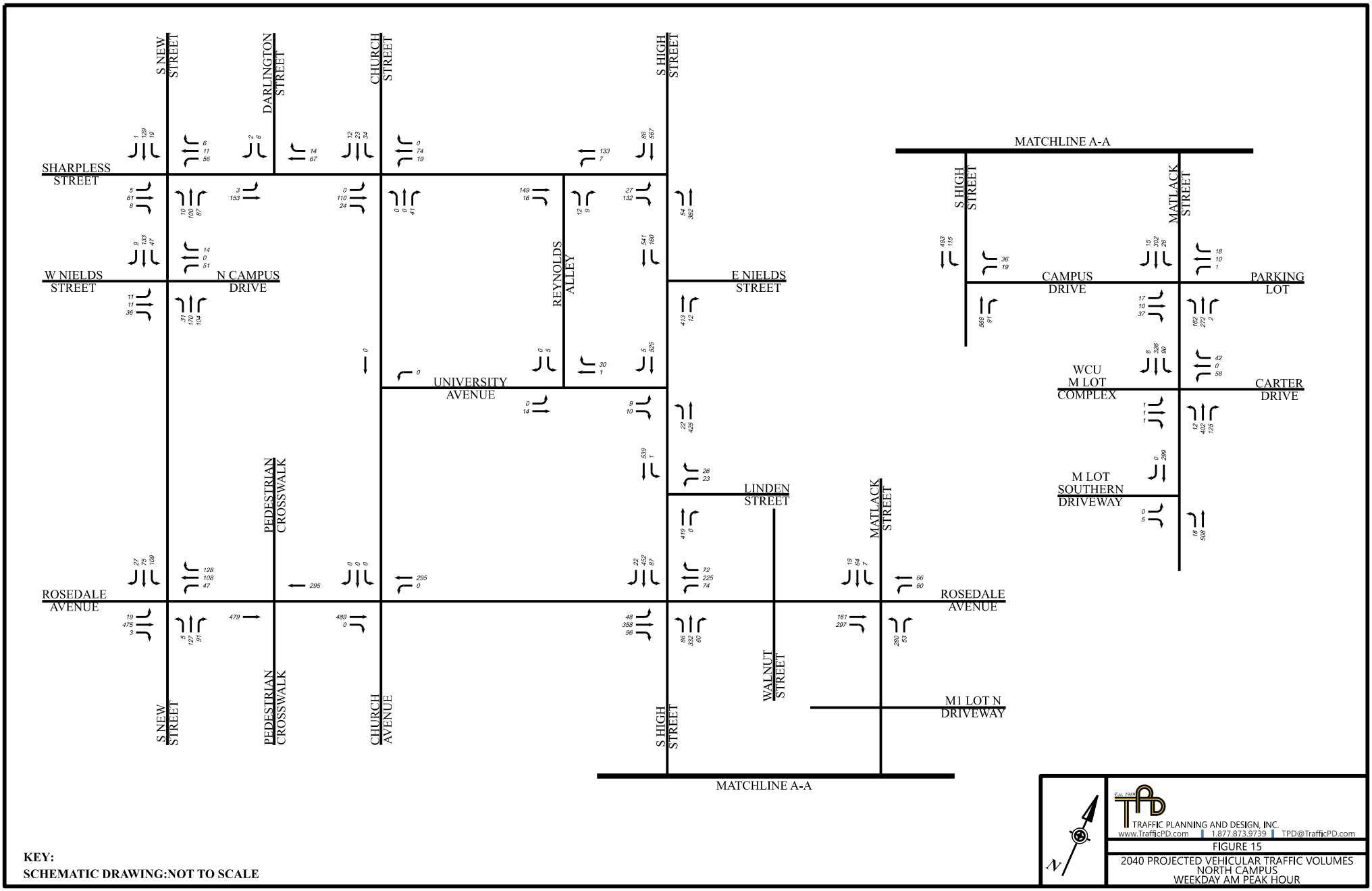

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FIGURE 15
2040 PROJECTED VEHICULAR TRAFFIC VOLUMES
NORTH CAMPUS
WEEKDAY AM PEAK HOUR

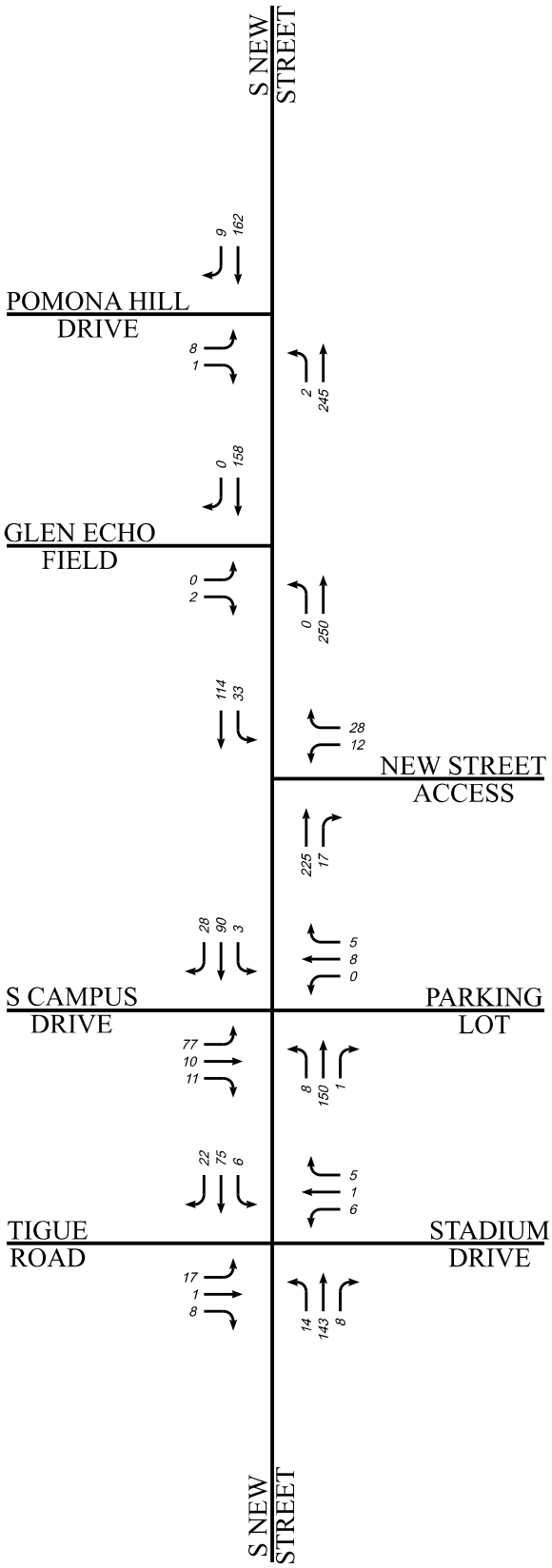

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FIGURE 16

2040 PROJECTED VEHICULAR TRAFFIC VOLUMES
SOUTH CAMPUS
WEEKDAY AM PEAK HOUR

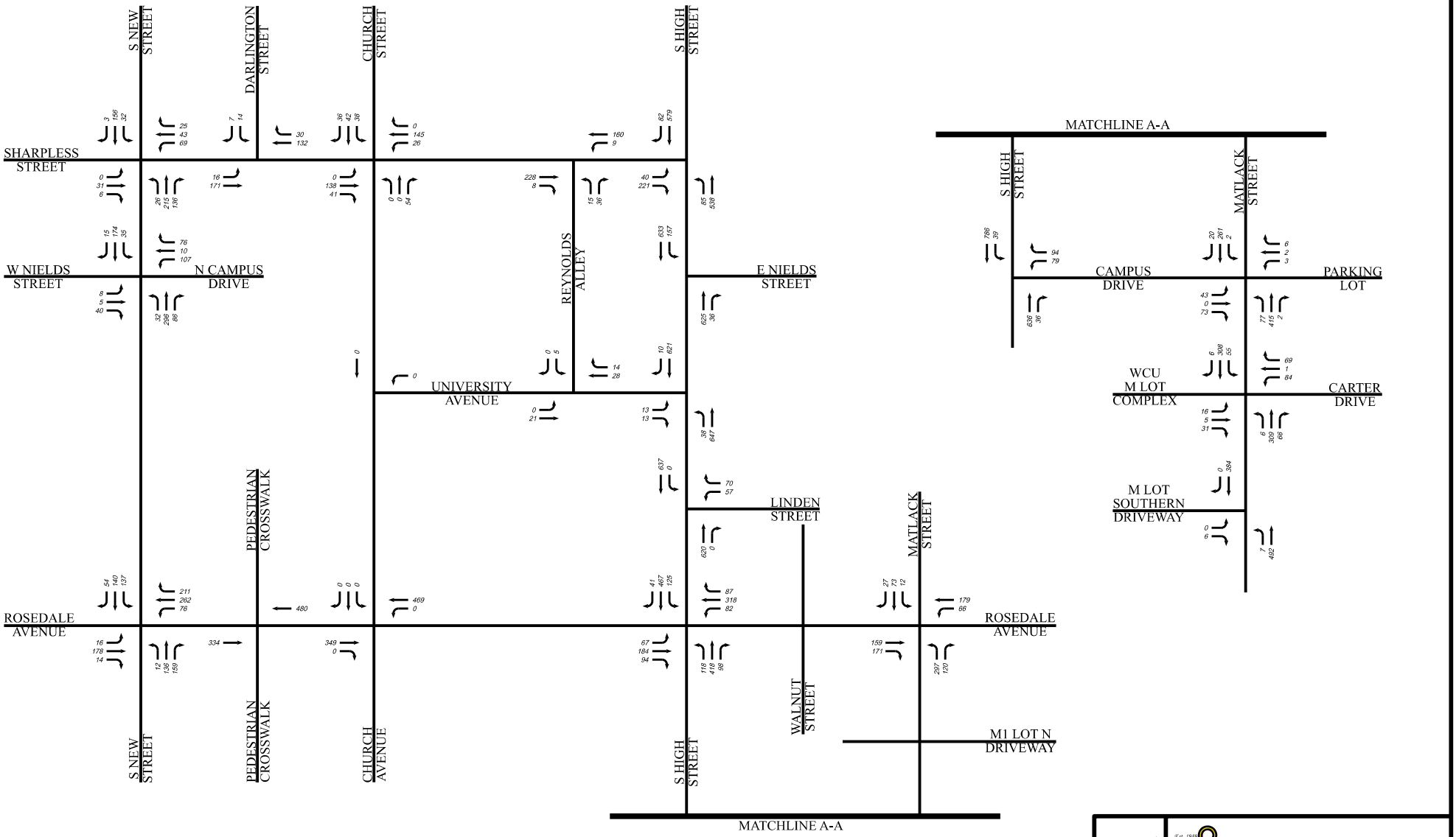
S NEW STREET
DARLINGTON STREET
CHURCH STREET
S HIGH STREET
SHARPLESS STREET
W NIELDS STREET
N CAMPUS DRIVE
REYNOLDS ALLEY
E NIELDS STREET
UNIVERSITY AVENUE
PEDESTRIAN CROSSWALK
LINDEN STREET
MATLACK STREET
ROSEDALE AVENUE
WALNUT STREET
M1 LOT N DRIVEWAY
CHURCH AVENUE
MATCHLINE A-A
CAMPUS DRIVE
PARKING LOT
WCU M LOT COMPLEX
CARTER DRIVE
M LOT SOUTHERN DRIVEWAY
KEY:
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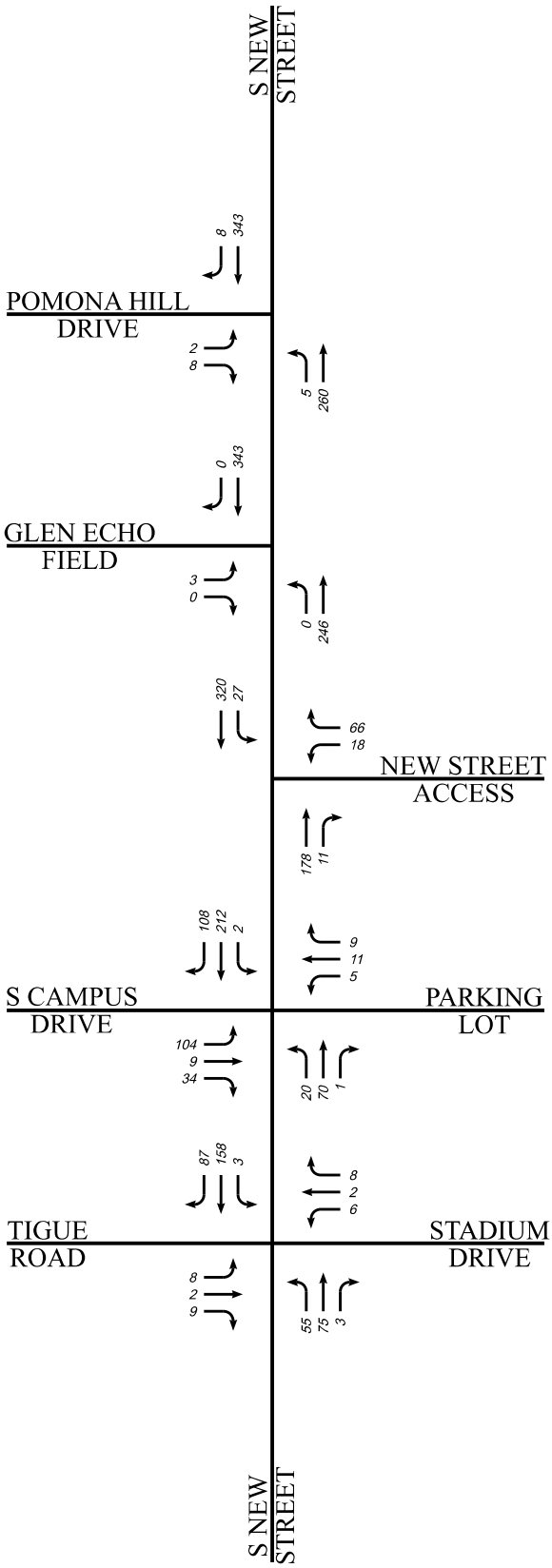
FIGURE 17
2040 PROJECTED VEHICULAR TRAFFIC VOLUMES
NORTH CAMPUS
WEEKDAY PM PEAK HOUR



KEY:

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FIGURE 18

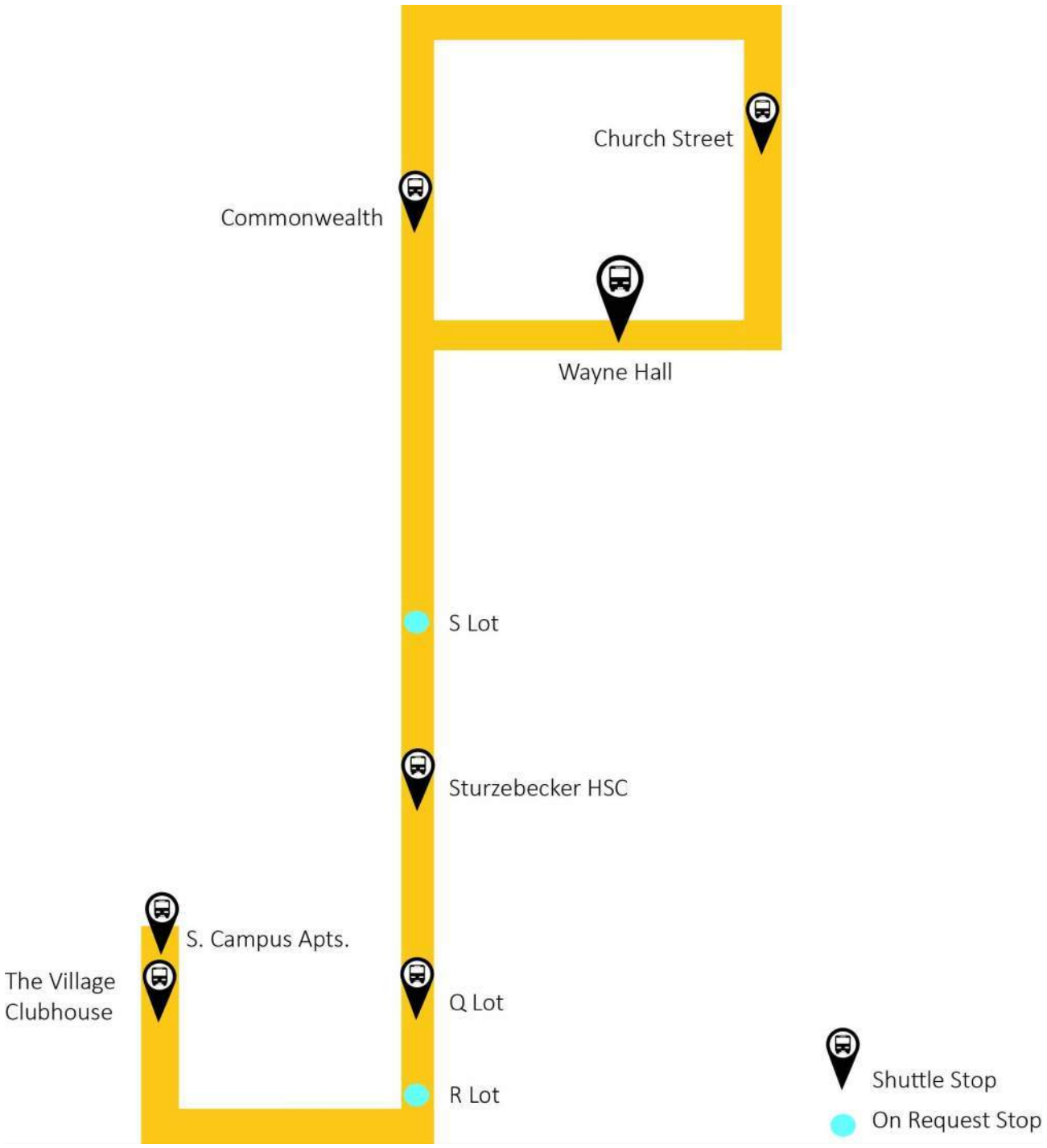
2040 PROJECTED VEHICULAR TRAFFIC VOLUMES
SOUTH CAMPUS
WEEKDAY PM PEAK HOUR

APPENDIX A:
WCU Shuttle Routes

WCU Shuttles

Gold Route

Monday-Friday: 7:15 AM - 2:15 AM
Saturday-Sunday: 10:00 AM - 2:15 AM



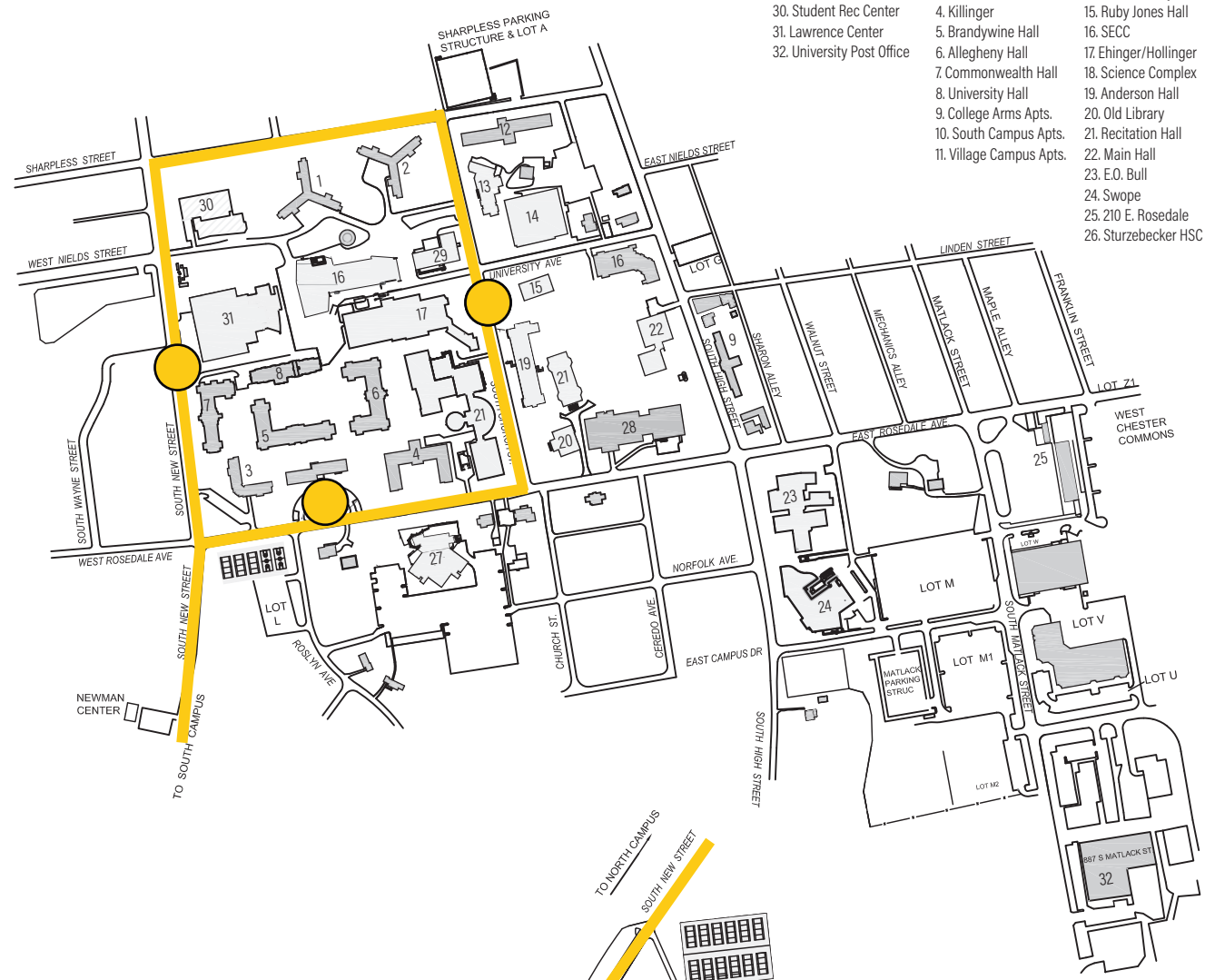
GOLD ROUTE

STUDENT SERVICES
27. Sykes Student Union
28. FHG Library
29. Peoples
30. Student Rec Center
31. Lawrence Center
32. University Post Office

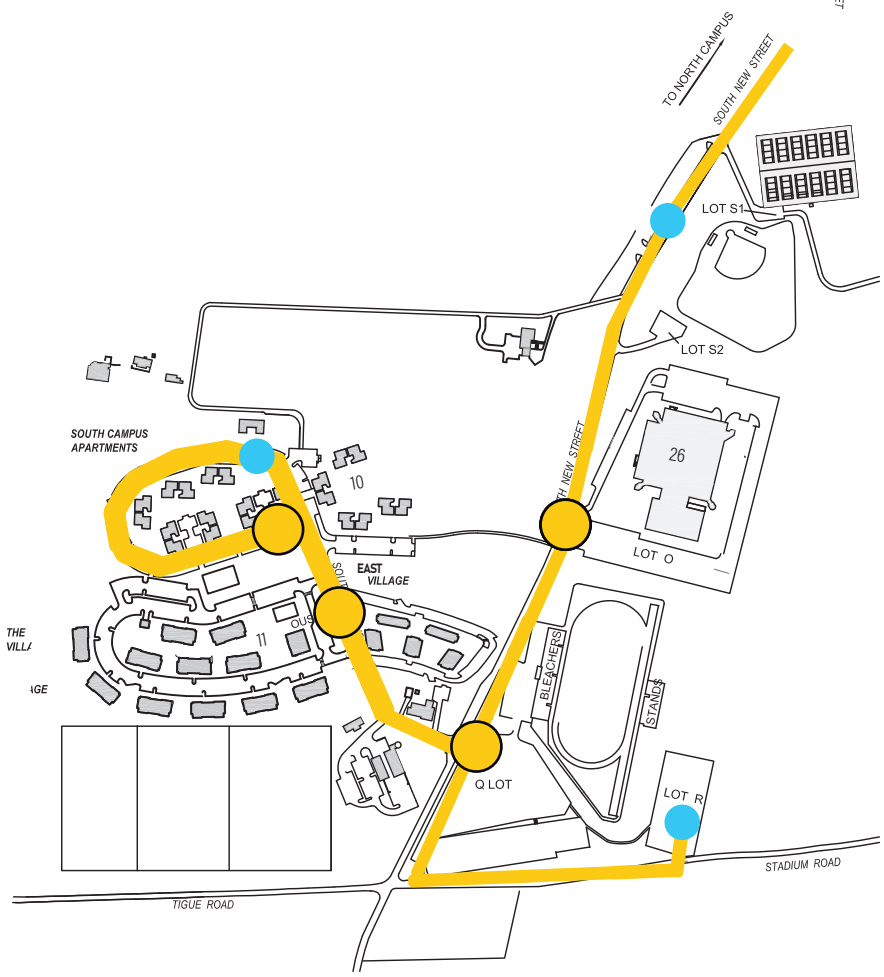
STUDENT HOUSING
1. Tyson
2. Goshen
3. Schmidt
4. Killinger
5. Brandywine Hall
6. Allegheny Hall
7. Commonwealth Hall
8. University Hall
9. College Arms Apts.
10. South Campus Apts.
11. Village Campus Apts.

ACADEMIC BUILDINGS
12. BPMC
13. Mitchell
14. 25 University Ave.
15. Ruby Jones Hall
16. SECC
17. Ehinger/Hollinger
18. Science Complex
19. Anderson Hall
20. Old Library
21. Recitation Hall
22. Main Hall
23. E.O. Bull
24. Swope
25. 210 E. Rosedale
26. Sturzebecker HSC

NORTH CAMPUS



SOUTH CAMPUS



STOPS

Church St.
Wayne Hall
Sturzebecker (HSC)
Q-Lot
Village Clubhouse
South Campus Apts.
Commonwealth

On-Request Stops:
S-Lot, R-Lot,
Southside (drop off only)

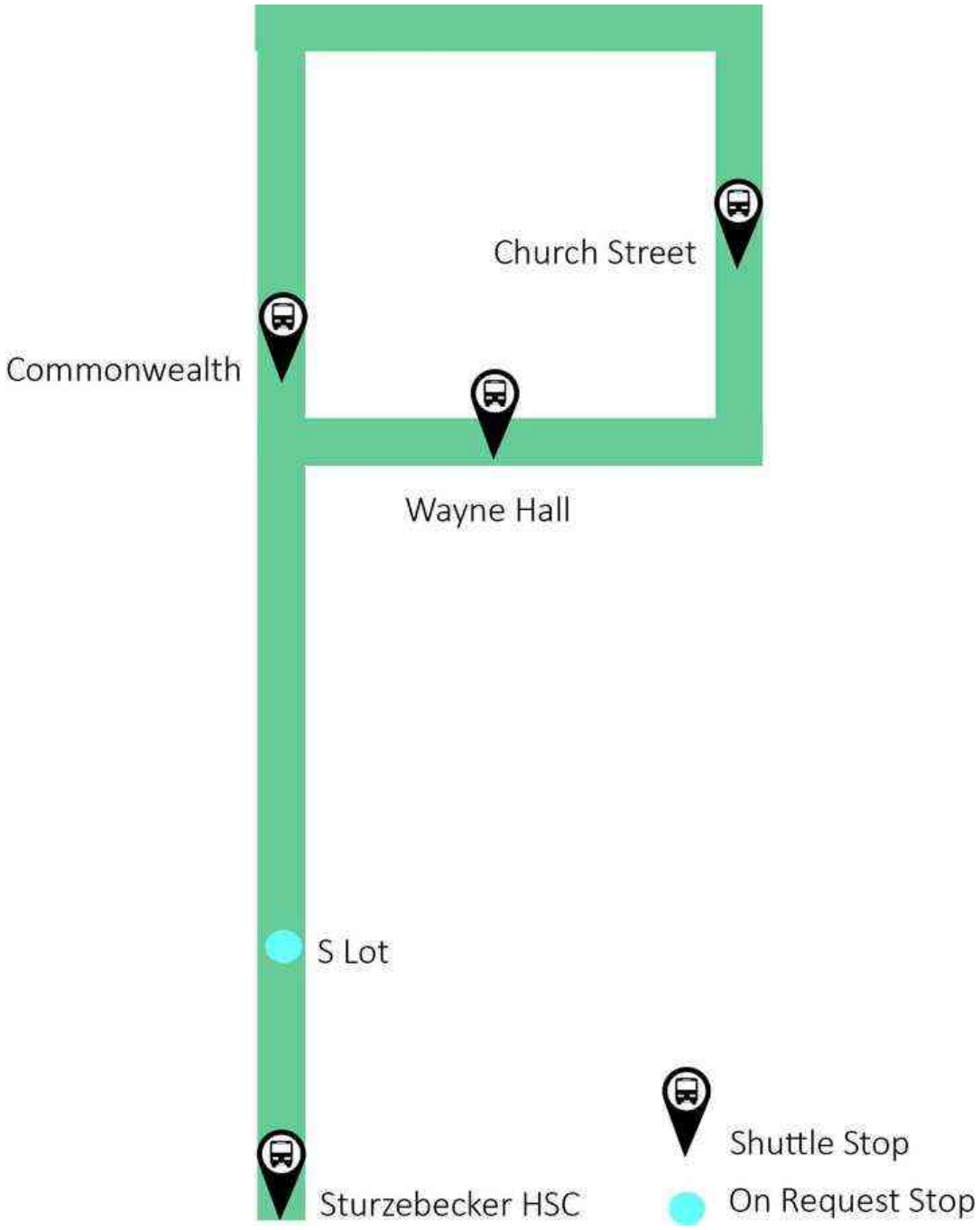
Shuttle Stops On-Request Shuttle Stops

WCU WEST CHESTER UNIVERSITY

WCU Shuttles

Green Route

Monday-Thursday: 8:30 AM - 6:00 PM
Friday: 8:30 AM - 4:00 PM



GREEN ROUTE

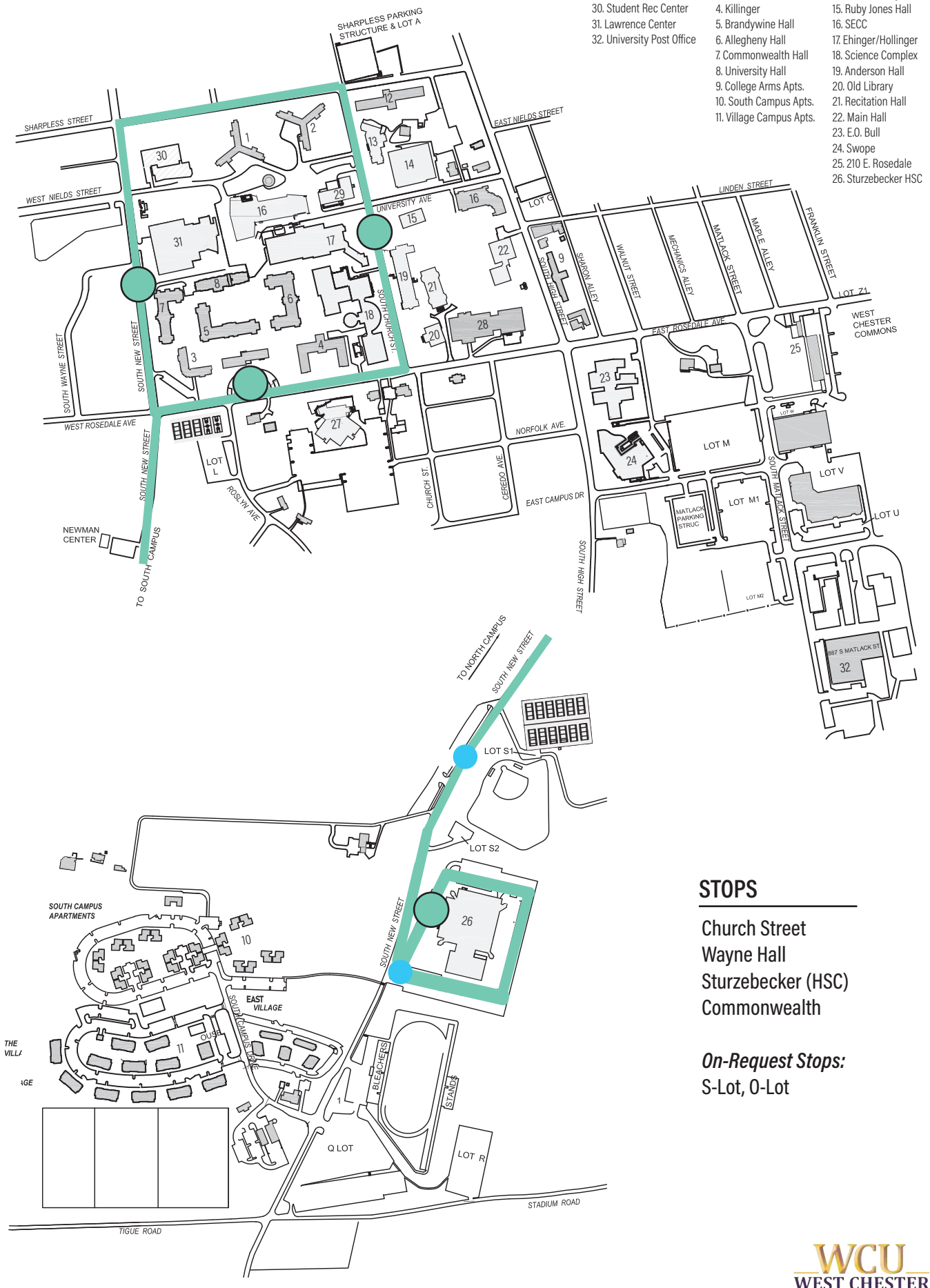
NORTH CAMPUS

SOUTH CAMPUS

STUDENT SERVICES
27. Sykes Student Union
28. FHG Library
29. Peoples
30. Student Rec Center
31. Lawrence Center
32. University Post Office

STUDENT HOUSING
1. Tyson
2. Goshen
3. Schmidt
4. Killinger
5. Brandywine Hall
6. Allegheny Hall
7. Commonwealth Hall
8. University Hall
9. College Arms Apts.
10. South Campus Apts.
11. Village Campus Apts.

ACADEMIC BUILDINGS
12. BPMC
13. Mitchell
14. 25 University Ave.
15. Ruby Jones Hall
16. SECC
17. Ehinger/Hollinger
18. Science Complex
19. Anderson Hall
20. Old Library
21. Recitation Hall
22. Main Hall
23. E.O. Bull
24. Swope
25. 210 E. Rosedale
26. Sturzebecker HSC



STOPS

Church Street
Wayne Hall
Sturzebecker (HSC)
Commonwealth

On-Request Stops:
S-Lot, O-Lot

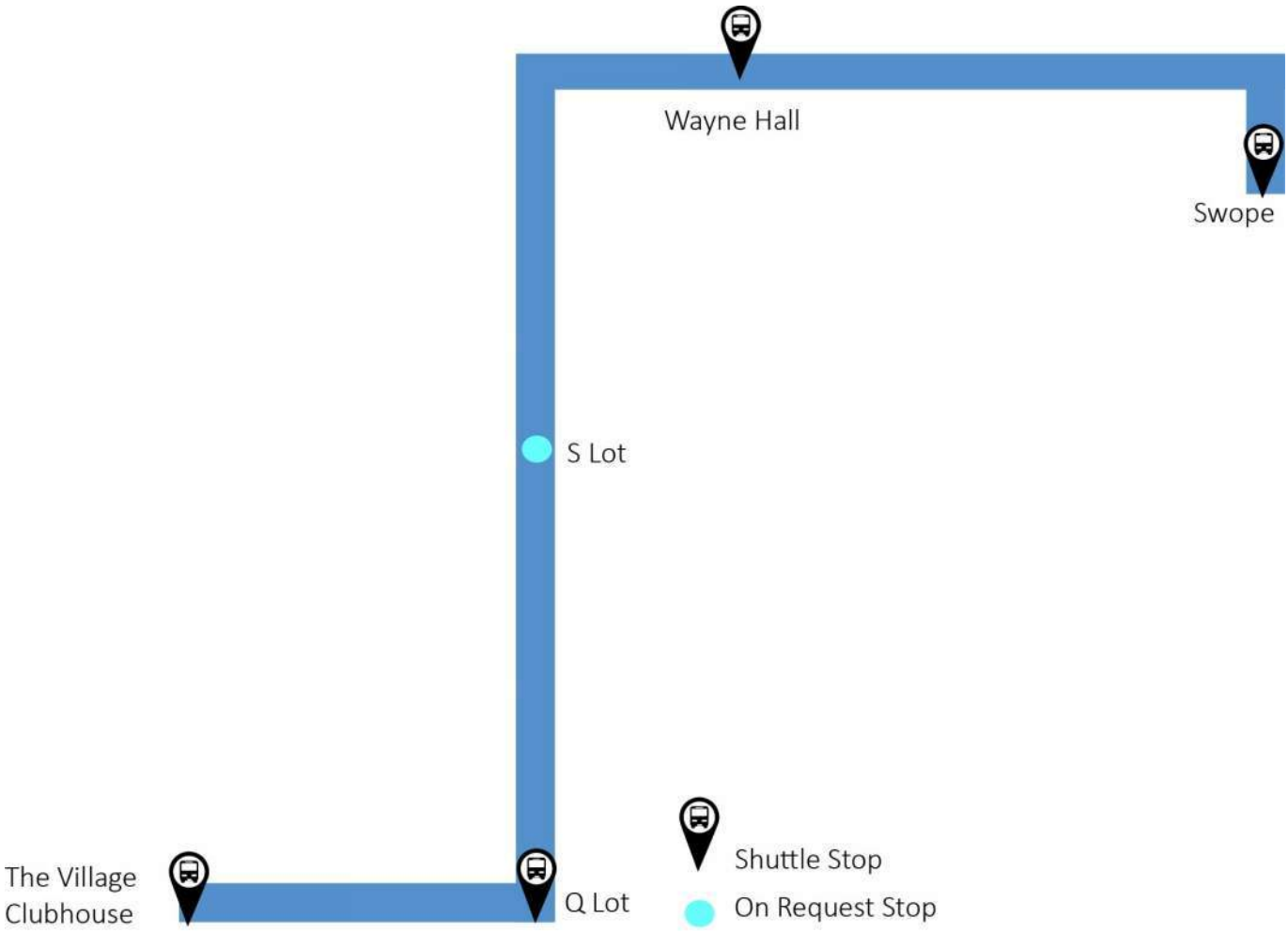
Shuttle Stops On-Request Shuttle Stops

WCU WEST CHESTER UNIVERSITY

WCU Shuttles

Blue Route

Monday-Thursday: 7:15 AM - 8:00 PM
Friday: 7:15 AM - 4:00 PM



BLUE ROUTE

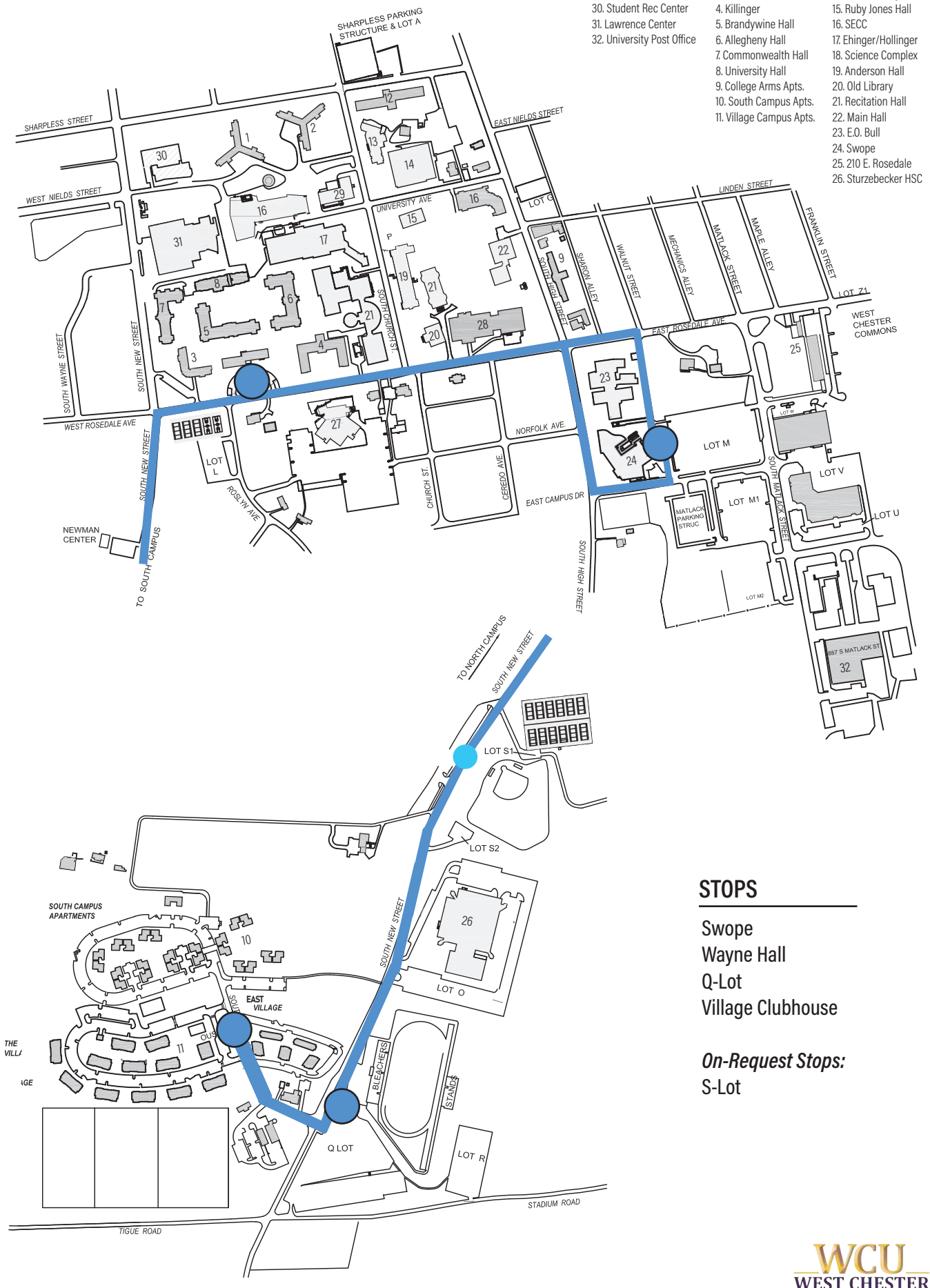
STUDENT SERVICES
27. Sykes Student Union
28. FHG Library
29. Peoples
30. Student Rec Center
31. Lawrence Center
32. University Post Office

STUDENT HOUSING
1. Tyson
2. Goshen
3. Schmidt
4. Killinger
5. Brandywine Hall
6. Allegheny Hall
7. Commonwealth Hall
8. University Hall
9. College Arms Apts.
10. South Campus Apts.
11. Village Campus Apts.

ACADEMIC BUILDINGS
12. BPMC
13. Mitchell
14. 25 University Ave.
15. Ruby Jones Hall
16. SECC
17. Ehinger/Hollinger
18. Science Complex
19. Anderson Hall
20. Old Library
21. Recitation Hall
22. Main Hall
23. E.O. Bull
24. Swope
25. 210 E. Rosedale
26. Sturzebecker HSC

NORTH CAMPUS

SOUTH CAMPUS



STOPS

Swope
Wayne Hall
Q-Lot
Village Clubhouse

On-Request Stops:
S-Lot

Shuttle Stops

On-Request Shuttle Stops

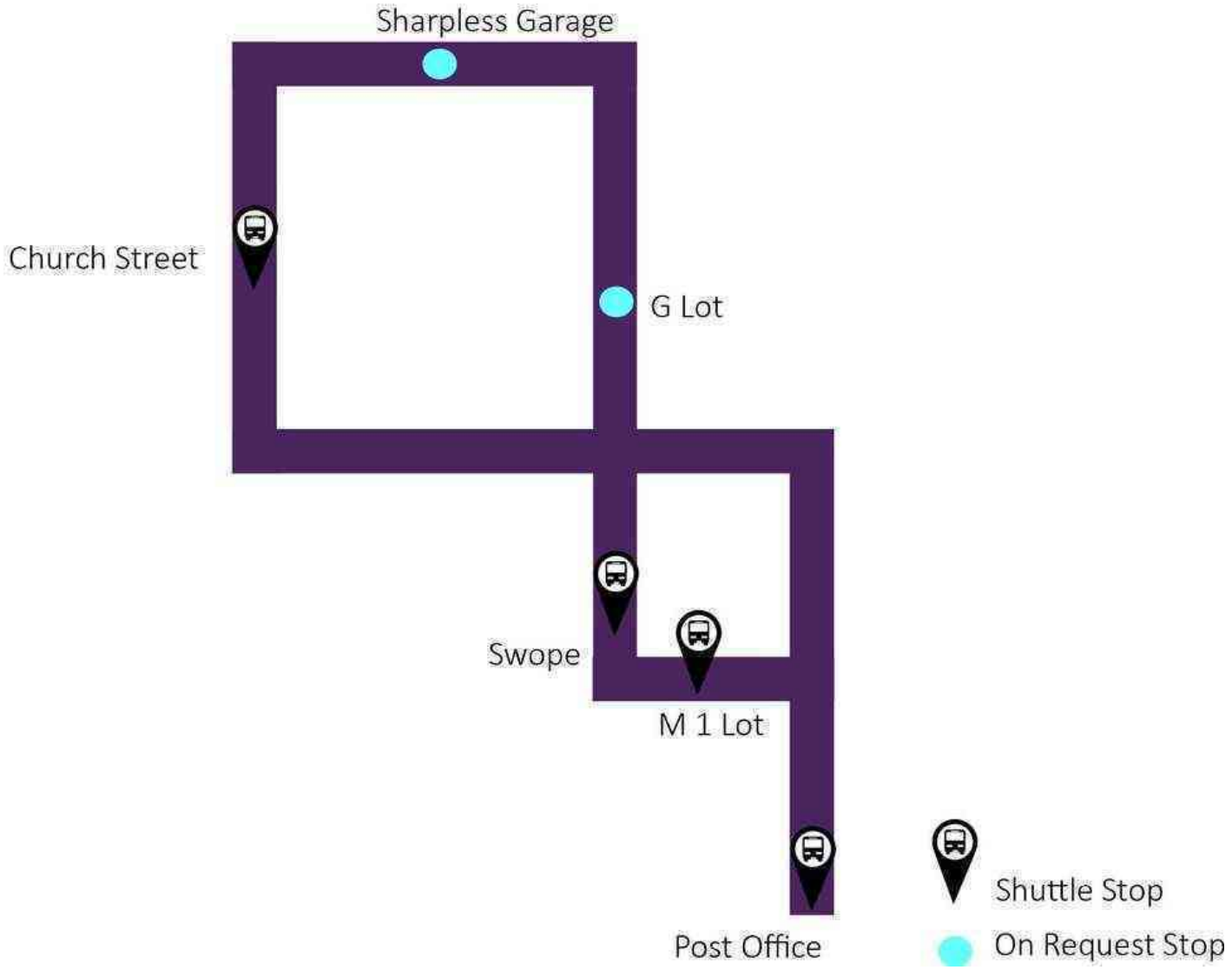
WCU WEST CHESTER UNIVERSITY

WCU Shuttles

Purple Route

Monday-Friday: 7:15 AM - 4:00 PM

This shuttle may change its route to operate as an Accessible Shuttle, which could lead to service disruptions.

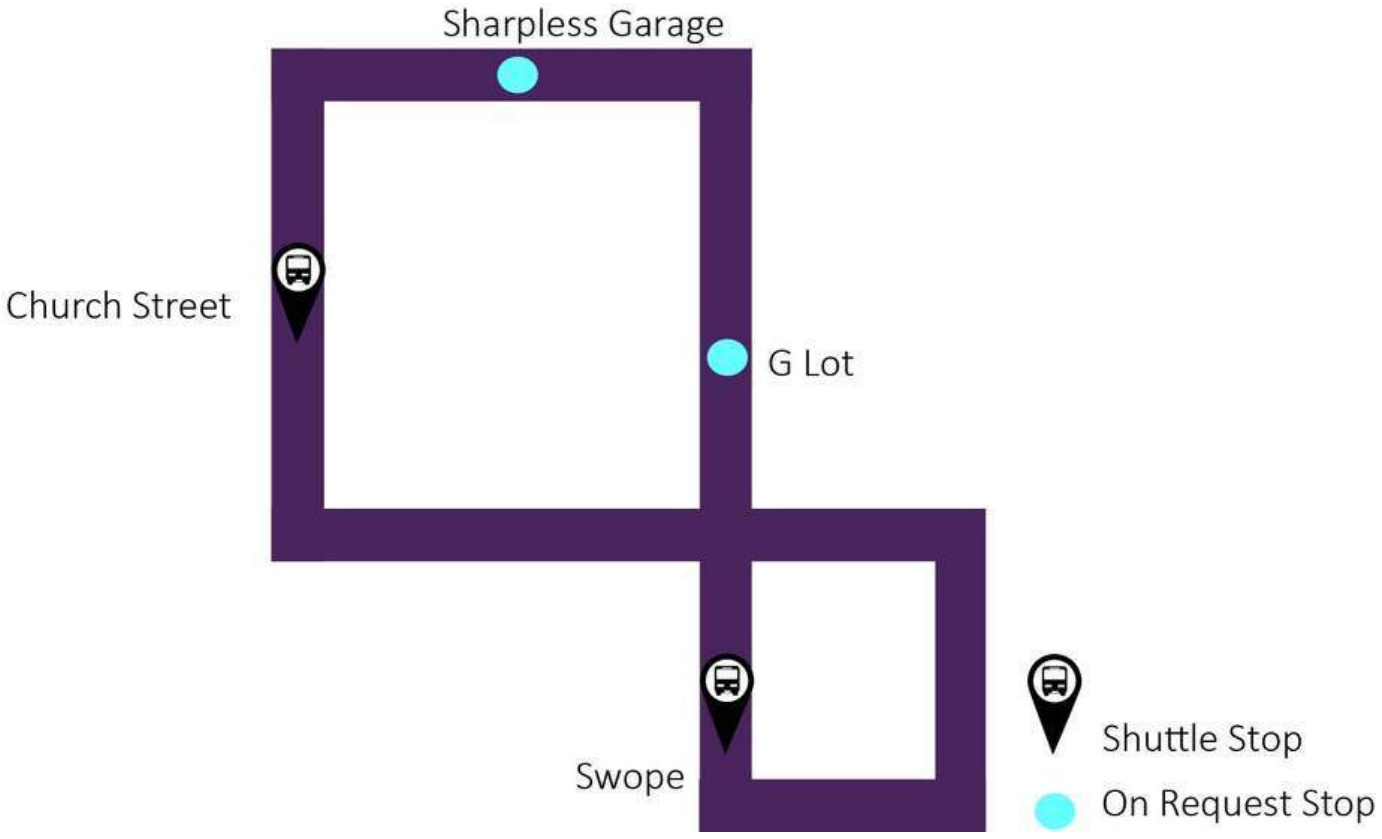


WCU Shuttles

Purple Route

Monday-Friday: 4:00 PM - 9:00 PM

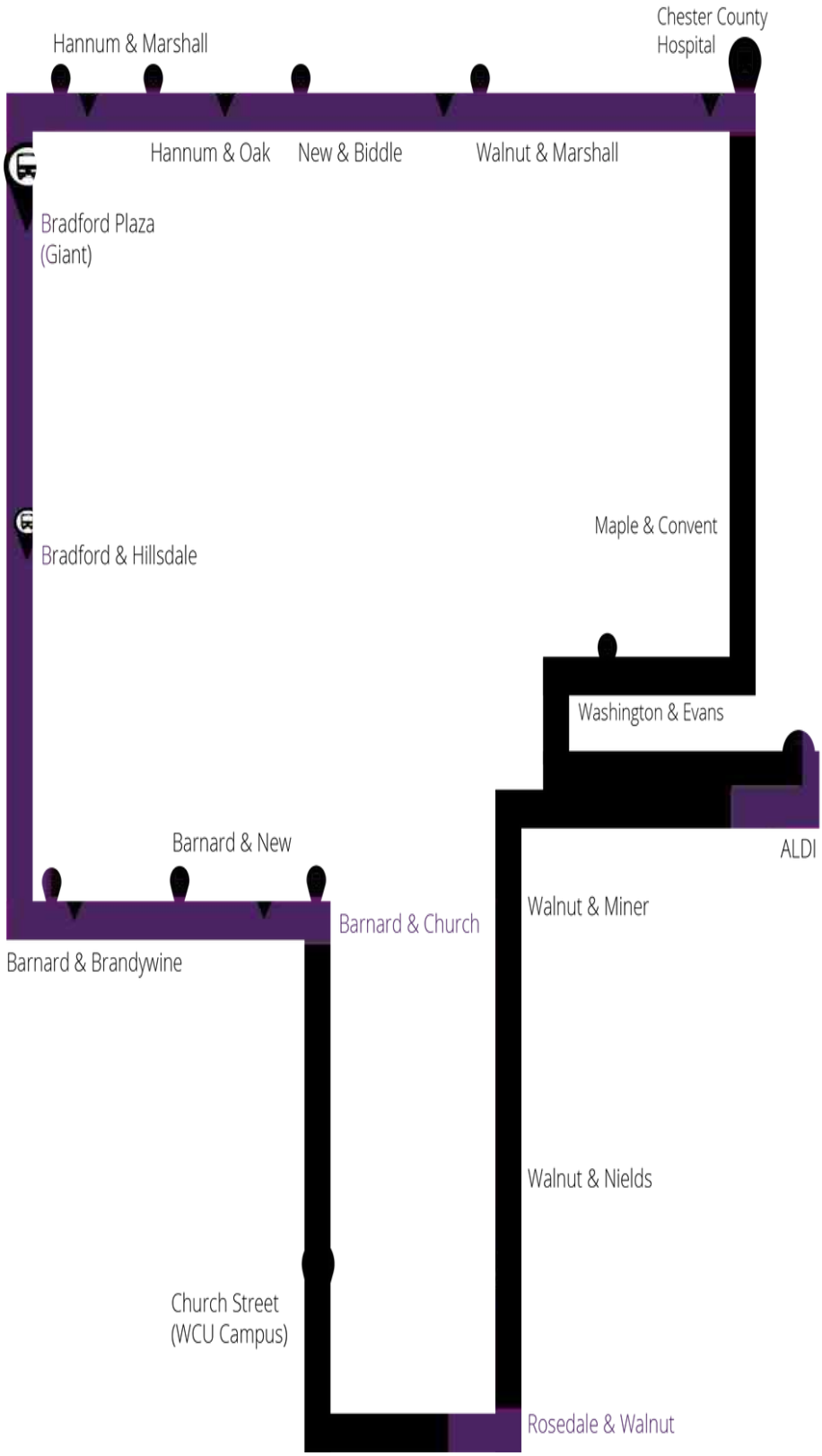
This shuttle may change its route to operate as an Accessible Shuttle, which could lead to service disruptions.



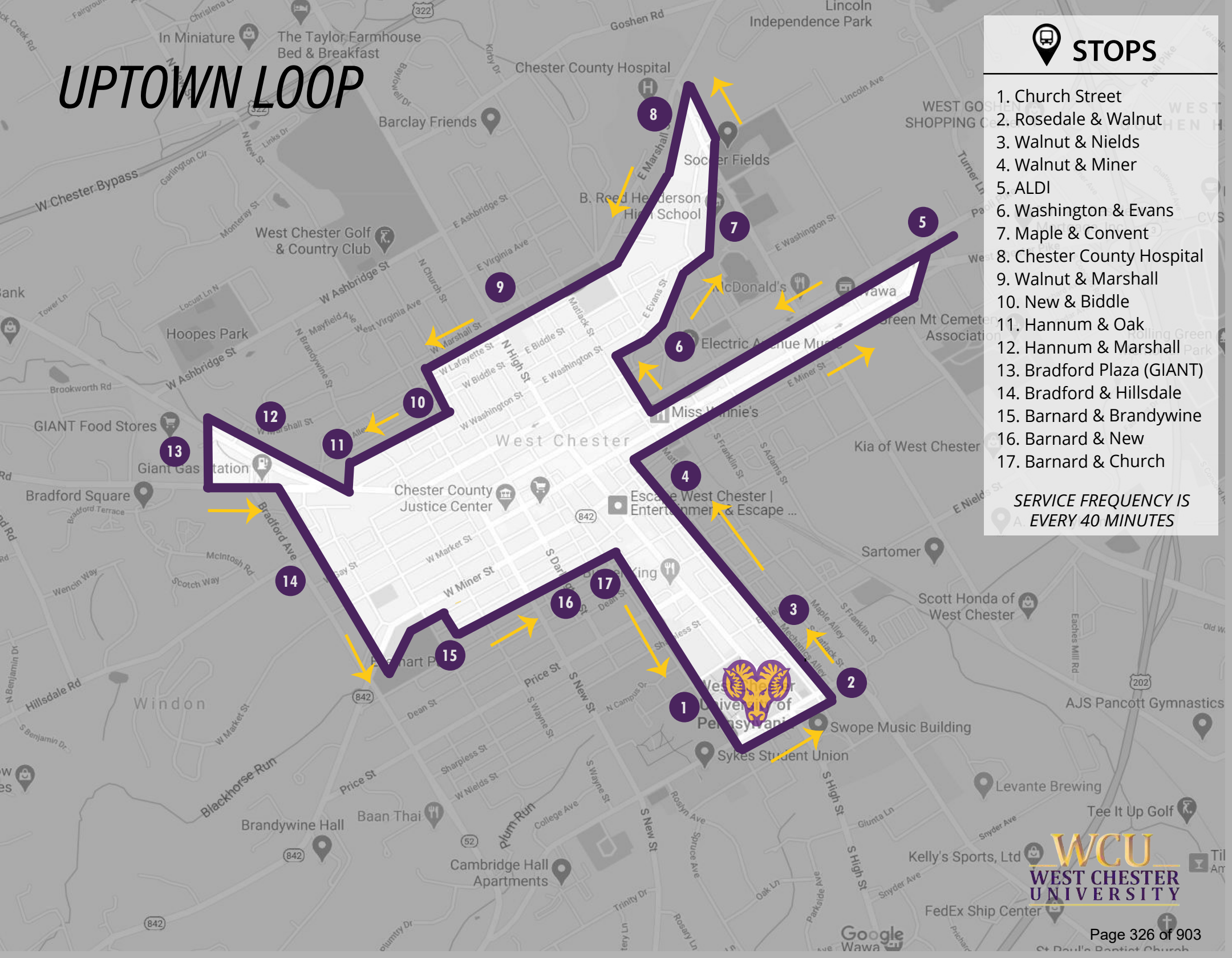
WCU Shuttles

Uptown Loop

Monday-Friday: 6:45 AM - 10:45 PM
Saturday: 12:00 PM - 10:00 PM



UPTOWN LOOP



STOPS

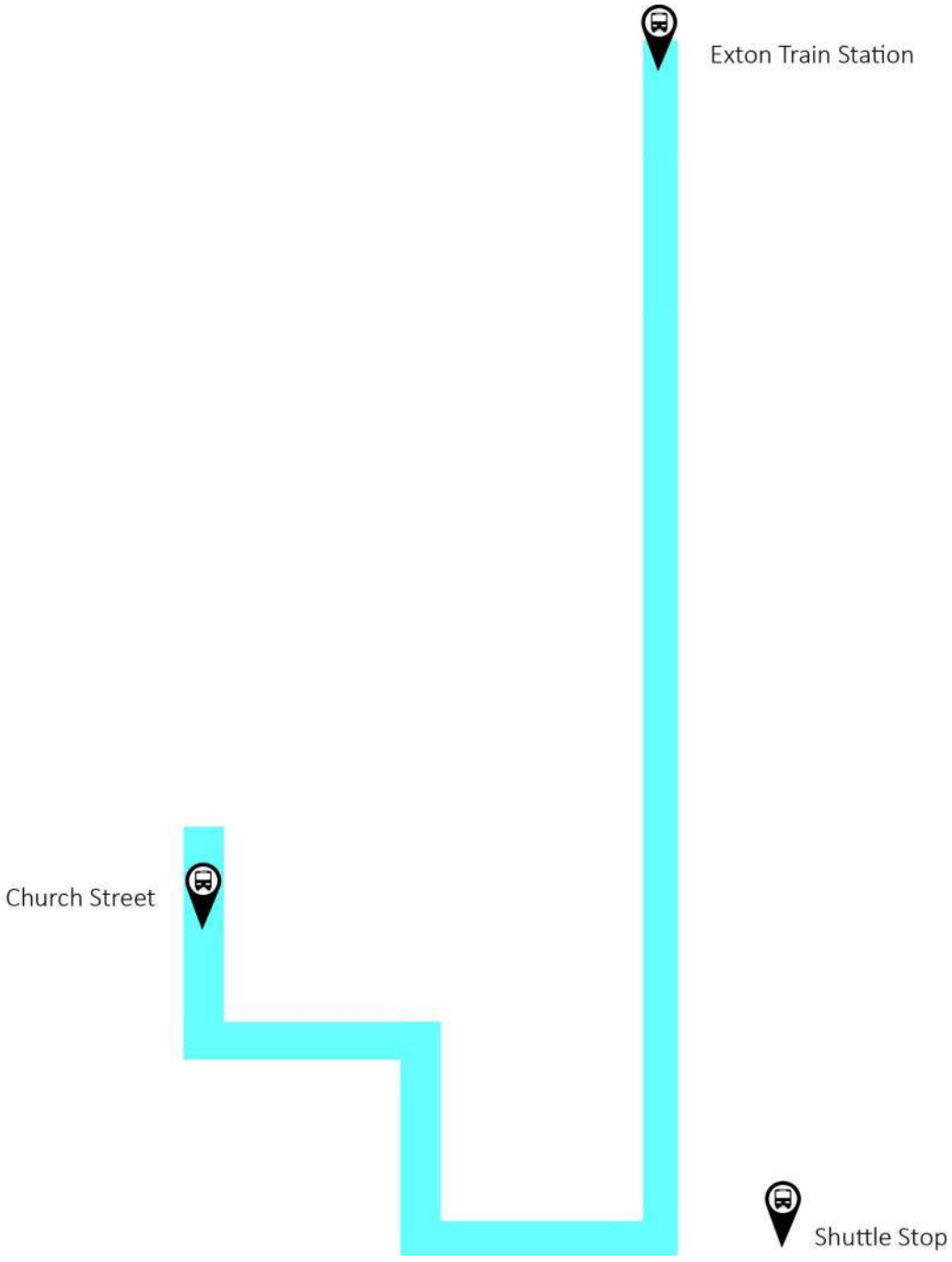
1. Church Street
2. Rosedale & Walnut
3. Walnut & Nields
4. Walnut & Miner
5. ALDI
6. Washington & Evans
7. Maple & Convent
8. Chester County Hospital
9. Walnut & Marshall
10. New & Biddle
11. Hannum & Oak
12. Hannum & Marshall
13. Bradford Plaza (GIANT)
14. Bradford & Hillsdale
15. Barnard & Brandywine
16. Barnard & New
17. Barnard & Church

SERVICE FREQUENCY IS EVERY 40 MINUTES

WCU WEST CHESTER UNIVERSITY

WCU Shuttles
Exton Train Shuttle

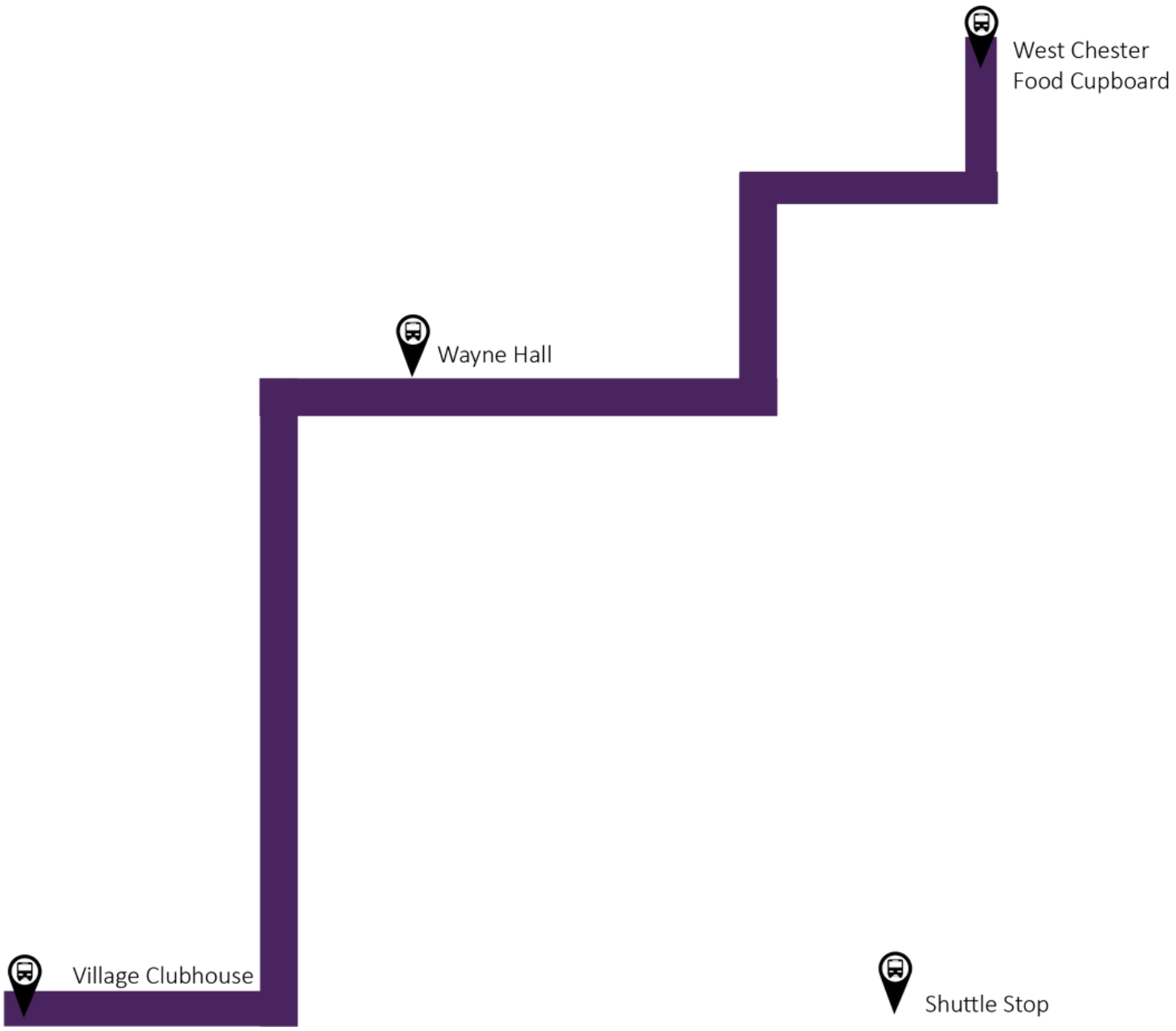
Monday-Friday: 7:15 AM-10:10 AM & 3:00 PM - 5:15 PM



WCU Shuttles

West Chester Food Cupboard

Saturday: 10:00 AM - 11:45 AM



WCU Shuttles

Graduate Business Center (GBC)

M,T,W,TR | First three weeks of each semester ONLY

	DEPART WCU (Wayne Hall)	DEPART GBC
M	***7:35 AM***	***11:10 AM***
	8:35 AM	***12:10 PM***
T	***7:35 AM***	***11:10 AM***
W	***7:35 AM***	***11:10 AM***
	8:35 AM	***12:10 PM***
TR	***7:35 AM***	***11:10 AM***

The GBC Shuttle will depart from the **WAYNE HALL** shuttle stop and will run for the first three (3) weeks of each fall and spring semester **ONLY.**

APPENDIX B:
Study Area Photographs & Manual Traffic Count Printouts

Study Area Photographs

Direction / Road: NB S New Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: NB S New Street
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: SB S New Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: SB S New Street
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: EB Sharpless Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: EB Sharpless Street
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: WB Sharpless Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: WB Sharpless Street
Approach / Departure: Approach
Distance: 200 Feet

Job #: *WCU.00004* *Date Taken:* *12/14/2023* *Intersection Of:* *(2) Darlington Street x Sharpless Street*

Direction / Road: SB Darlington Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: SB Darlington Street
Approach / Departure: Approach
Distance: 200 Feet

Job #: WCU.00004 *Date Taken:* 12/14/2023 *Intersection Of:* (2) Darlington Street x Sharpless Street

Direction / Road: EB Sharpless Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: EB Sharpless Street
Approach / Departure: Approach
Distance: 200 Feet

Job #: *WCU.00004* *Date Taken:* *12/14/2023* *Intersection Of:* *(2) Darlington Street x Sharpless Street*

Direction / Road: WB Sharpless Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: WB Sharpless Street
Approach / Departure: Approach
Distance: 200 Feet

Job #: WCU.00004 *Date Taken:* 12/14/2023 *Intersection Of:* (3) Church Street x Sharpless Street

Direction / Road: NB S Church Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: NB S Church Street
Approach / Departure: Approach
Distance: 200 Feet

Job #: WCU.00004 *Date Taken:* 12/14/2023 *Intersection Of:* (3) Church Street x Sharpless Street

Direction / Road: SB S Church Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: SB S Church Street
Approach / Departure: Approach
Distance: 200 Feet

Job #: WCU.00004 *Date Taken:* 12/14/2023 *Intersection Of:* (3) Church Street x Sharpless Street

Direction / Road: EB Sharpless Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: EB Sharpless Street
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: WB Sharpless Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: WB Sharpless Street
Approach / Departure: Approach
Distance: 200 Feet

Job #: *WCU.00004* *Date Taken:* *12/14/2023* *Intersection Of:* *(4) Reynolds Alley x Sharpless Street*

Direction / Road: NB Reynolds Alley
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: NB Reynolds Alley
Approach / Departure: Approach
Distance: 200 Feet

Job #: WCU.00004 *Date Taken:* 12/14/2023 *Intersection Of:* (4) Reynolds Alley x Sharpless Street

Direction / Road: EB Sharpless Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: EB Sharpless Street
Approach / Departure: Approach
Distance: 200 Feet

Job #: WCU.00004 *Date Taken:* 12/14/2023 *Intersection Of:* (4) Reynolds Alley x Sharpless Street

Direction / Road: WB Sharpless Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: WB Sharpless Street
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: NB South High Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: NB South High Street
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: SB South High Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: SB South High Street
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: EB Sharpless Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: EB Sharpless Street
Approach / Departure: Approach
Distance: 200 Feet

Job #: WCU.00004 *Date Taken:* 12/14/2023 *Intersection Of:* (6) South High Street x East Nields Street

Direction / Road: NB South High Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: NB South High Street
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: SB South High Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: SB South High Street
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: NB South High Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: NB South High Street
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: SB South High Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: SB South High Street
Approach / Departure: Approach
Distance: 200 Feet

Job #: WCU.00004 *Date Taken:* 12/14/2023 *Intersection Of:* (8) Reynolds Alley x University Ave

Direction / Road: SB Reynolds Alley
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: SB Reynolds Alley
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: WB University Ave
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: WB University Ave
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: SB S Church Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: SB S Church Street
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: WB University Ave
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: WB University Ave
Approach / Departure: Approach
Distance: 200 Feet

Job #: *WCU.00004* *Date Taken:* *12/14/2023* *Intersection Of:* *(10) South High Street x Linden Street*

Direction / Road: NB South High Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: NB South High Street
Approach / Departure: Approach
Distance: 200 Feet

Job #: *WCU.00004* *Date Taken:* *12/14/2023* *Intersection Of:* *(10) South High Street x Linden Street*

Direction / Road: SB South High Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: SB South High Street
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: WB Linden Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: WB Linden Street
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: NB South New Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: NB South New Street
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: SB South New Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: SB South New Street
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: EB W Nields Street
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: EB W Nields Street
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: WB N Campus Drive
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: WB N Campus Drive
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Nb. *South High Street***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Nb. *South High Street***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Sb. *South High Street***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Sb. *South High Street***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Eb. *Rosedale Avenue***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Eb. *Rosedale Avenue***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Wb. *Rosedale Avenue***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Wb. *Rosedale Avenue***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Nb. *Matlack Street***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Nb. *Matlack Street***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Sb. *Matlack Street***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Sb. *Matlack Street***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Eb. *Rosedale Avenue***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Eb. *Rosedale Avenue***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Wb. *Rosedale Avenue***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Wb. *Rosedale Avenue***
Approach / Departure: Approach
Distance: 200 Feet

Job #: WCU.00004 *Date Taken:* 4/25/2024 *Intersection Of:* Matlack St & M1 Lot Northern DW

Direction / Road: **Wb. M1 Lot N DW**
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Wb. M1 Lot N DW**
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road:	**Nb. Matlack St**
Approach / Departure:	Approach
Distance:	50 feet

Direction / Road:	**Nb. Matlack St**
Approach / Departure:	Approach
Distance:	200 Feet

Job #: WCU.00004 *Date Taken:* 4/25/2024 *Intersection Of:* Matlack St & M1 Lot Northern DW

Direction / Road: **Sb. Matlack St**
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Sb. Matlack St**
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Nb. *Matlack Street***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Nb. *Matlack Street***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Sb. *Matlack Street***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Sb. *Matlack Street***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road:	**Eb. *WCU M Lot Complex***
Approach / Departure:	Approach
Distance:	50 feet

Direction / Road: **Wb. *Carter Drive***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Wb. *Carter Drive***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Nb. *Church Street***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Nb. *Church Street***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Sb. *Church Street***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Sb. *Church Street***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Eb. *Rosedale Avenue***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Eb. *Rosedale Avenue***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Wb. *Rosedale Avenue***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Wb. *Rosedale Avenue***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Eb. *Rosedale Avenue***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Eb. *Rosedale Avenue***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Wb. *Rosedale Avenue***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Wb. *Rosedale Avenue***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Nb. *South New Street***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Nb. *South New Street***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Sb. *South New Street***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Sb. *South New Street***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road:	**Eb. *Rosedale Avenue***
Approach / Departure:	Approach
Distance:	50 feet

Direction / Road:	**Eb. *Rosedale Avenue***
Approach / Departure:	Approach
Distance:	200 Feet

Direction / Road: **Wb. *Rosedale Avenue***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Wb. *Rosedale Avenue***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Nb. *South New Street***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Nb. *South New Street***
Approach / Departure: Approach
Distance: 200 Feet

Job #: WCU.00004 *Date Taken:* 12-05-2023 *Intersection Of:* South New Street & Pomona Hill Drive

Direction / Road: **Sb. *South New Street***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Sb. *South New Street***
Approach / Departure: Approach
Distance: 200 Feet

Job #: *WCU.00004* *Date Taken:* *12-05-2023* *Intersection Of:* *South New Street & Pomona Hill Drive*

Direction / Road: **Eb. *Pomona Hill Drive***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Eb. *Pomona Hill Drive***
Approach / Departure: Approach
Distance: 200 Feet

Job #: *WCU.00004* *Date Taken:* *12-05-2023* *Intersection Of:* *South New Street & Glen Echo Field Access*

Direction / Road: **Nb. *South New Street***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Nb. *South New Street***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Sb. *South New Street***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Sb. *South New Street***
Approach / Departure: Approach
Distance: 200 Feet

Job #: *WCU.00004* *Date Taken:* *12-05-2023* *Intersection Of:* *South New Street & Glen Echo Field Access*

Direction / Road: **Eb. *Glen Echo Field Access***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Eb. *Glen Echo Field Access***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road:	**Nb. *South New Street***
Approach / Departure:	Approach
Distance:	50 feet

Direction / Road:	**Nb. *South New Street***
Approach / Departure:	Approach
Distance:	200 Feet

Job #: *WCU.00004* *Date Taken:* *12-05-2023* *Intersection Of:* *South New Street & 855 S New Street Access*

Direction / Road:	**Sb.** ***South New Street***
Approach / Departure:	Approach
Distance:	50 feet

Direction / Road:	**Sb.** ***South New Street***
Approach / Departure:	Approach
Distance:	200 Feet

Direction / Road: **Wb.** ***855 S New Street Access***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Wb.** ***855 S New Street Access***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Nb. *South New Street***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Nb. *South New Street***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Sb. *South New Street***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Sb. *South New Street***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Eb. *S Campus Drive***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Eb. *S Campus Drive***
Approach / Departure: Approach
Distance: 200 Feet

Job #: *WCU.00004* *Date Taken:* *12-08-2023* *Intersection Of:* *South New Street & S Campus Drive*

Direction / Road:	**Wb.** ***Parking Lot***
Approach / Departure:	Approach
Distance:	50 feet

Direction / Road: **Nb. *South New Street***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Nb. *South New Street***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road:	**Sb. *South New Street***
Approach / Departure:	Approach
Distance:	50 feet

Direction / Road:	**Sb. *South New Street***
Approach / Departure:	Approach
Distance:	200 Feet

Direction / Road: **Eb. *Tigue Road***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Eb. *Tigue Road***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Wb. *Stadium Drive***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Wb. *Stadium Drive***
Approach / Departure: Approach
Distance: 200 Feet

Direction / Road: **Nb. Matlack St**
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Nb. Matlack St**
Approach / Departure: Approach
Distance: 200 Feet

Job #: WCU.00004 *Date Taken:* 4/25/2024 *Intersection Of:* Matlack St & Campus Dr

Direction / Road: **Sb. Matlack St**
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Sb. Matlack St**
Approach / Departure: Approach
Distance: 200 Feet

Job #: WCU.00004 *Date Taken:* 4/25/2024 *Intersection Of:* Matlack St & Campus Dr

Direction / Road:	**Eb. Campus Dr**
Approach / Departure:	Approach
Distance:	50 feet

Direction / Road:	**Eb. Campus Dr**
Approach / Departure:	Approach
Distance:	200 Feet

Job #: *WCU.00004* *Date Taken:* *4/25/2024* *Intersection Of:* *Matlack St & Campus Dr*

Direction / Road:	**Wb. Parking Lot DW**
Approach / Departure:	Approach
Distance:	50 feet

Direction / Road:	**Wb. Parking Lot DW**
Approach / Departure:	Approach
Distance:	200 Feet

Job #: *WCU.00004* *Date Taken:* *4/25/2024* *Intersection Of:* *Matlack St & M1 Lot Southern DW*

Direction / Road:	**Eb. M1 Lot S DW**
Approach / Departure:	Approach
Distance:	50 feet

Direction / Road:	**Eb. M1 Lot S DW**
Approach / Departure:	Approach
Distance:	200 Feet

Direction / Road: **Nb. Matlack St**
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Nb. Matlack St**
Approach / Departure: Approach
Distance: 200 Feet

Job #: WCU.00004 *Date Taken:* 4/25/2024 *Intersection Of:* Matlack St & M1 Lot Southern DW

Direction / Road: **Sb. Matlack St**
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Sb. Matlack St**
Approach / Departure: Approach
Distance: 200 Feet

Job #: *WCU.00004* *Date Taken:* *4/25/2024* *Intersection Of:* *High St & Campus Dr*

Direction / Road: **Wb. Campus Dr**
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Wb. Campus Dr**
Approach / Departure: Approach
Distance: 200 Feet

Job #: *WCU.00004* *Date Taken:* *4/25/2024* *Intersection Of:* *High St & Campus Dr*

Direction / Road: **Nb. High St**
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Nb. High St**
Approach / Departure: Approach
Distance: 200 Feet

Job #: WCU.00004 *Date Taken:* 4/25/2024 *Intersection Of:* High St & Campus Dr

Direction / Road: **Sb. High St**
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Sb. High St**
Approach / Departure: Approach
Distance: 200 Feet

Manual Traffic Count Printouts

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (1) AM/PM South New Street x Sharpless Street
Site Code:
Start Date: 12/06/2023

Turning Movement Data

Start Time	Sharpless Street Eastbound					Sharpless Street Westbound					South New Street Northbound					South New Street Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	1	4	1	0	6	1	1	1	0	3	0	13	4	2	17	5	19	2	1	26	52
7:15 AM	1	10	2	2	13	6	2	1	2	9	1	9	13	3	23	2	12	0	0	14	59
7:30 AM	1	15	2	1	18	15	0	0	9	15	2	19	14	2	35	1	23	1	1	25	93
7:45 AM	1	12	2	0	15	17	1	0	6	18	1	29	18	0	48	7	34	0	0	41	122
Hourly Total	4	41	7	3	52	39	4	2	17	45	4	70	49	7	123	15	88	3	2	106	326
8:00 AM	1	8	2	1	11	17	2	1	6	20	1	20	17	2	38	4	25	0	0	29	98
8:15 AM	1	7	0	2	8	9	2	2	1	13	2	19	14	1	35	0	21	0	2	21	77
8:30 AM	1	19	2	0	22	13	1	1	3	15	1	20	20	1	41	2	28	0	1	30	108
8:45 AM	1	20	3	0	24	9	5	1	9	15	5	29	26	4	60	4	40	1	0	45	144
Hourly Total	4	54	7	3	65	48	10	5	19	63	9	88	77	8	174	10	114	1	3	125	427
9:00 AM	1	6	5	0	12	8	1	1	3	10	2	31	11	3	44	6	22	1	1	29	95
9:15 AM	0	2	1	3	3	10	2	0	1	12	2	17	19	1	38	2	20	2	3	24	77
9:30 AM	0	10	3	0	13	15	2	1	6	18	2	16	24	5	42	1	28	1	0	30	103
9:45 AM	1	9	1	0	11	12	6	1	4	19	2	27	23	4	52	9	28	0	1	37	119
Hourly Total	2	27	10	3	39	45	11	3	14	59	8	91	77	13	176	18	98	4	5	120	394
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	1	3	0	1	4	10	8	1	5	19	4	45	25	4	74	1	27	0	1	28	125
3:15 PM	1	5	0	3	6	11	6	2	6	19	5	38	24	4	67	3	22	0	1	25	117
3:30 PM	0	3	1	1	4	10	7	4	6	21	4	36	22	4	62	2	24	1	0	27	114
3:45 PM	0	2	1	0	3	13	7	2	2	22	9	36	20	5	65	4	36	2	0	42	132
Hourly Total	2	13	2	5	17	44	28	9	19	81	22	155	91	17	268	10	109	3	2	122	488
4:00 PM	0	5	0	0	5	12	12	5	6	29	2	36	42	1	80	9	27	1	6	37	151
4:15 PM	0	12	1	2	13	13	6	8	3	27	5	42	21	2	68	5	44	1	0	50	158
4:30 PM	0	6	2	2	8	13	9	6	4	28	6	63	27	3	96	1	39	0	0	40	172
4:45 PM	0	4	2	2	6	18	11	3	2	32	10	48	30	1	88	1	27	1	2	29	155
Hourly Total	0	27	5	6	32	56	38	22	15	116	23	189	120	7	332	16	137	3	8	156	636
5:00 PM	1	6	2	1	9	15	8	4	1	27	6	29	19	2	54	4	33	1	2	38	128
5:15 PM	1	6	3	3	10	13	12	1	4	26	3	28	25	6	56	2	26	1	0	29	121
5:30 PM	0	3	0	0	3	6	7	4	3	17	1	25	24	0	50	1	40	1	0	42	112
5:45 PM	2	3	1	2	6	17	8	2	3	27	6	29	18	2	53	3	32	0	2	35	121
Hourly Total	4	18	6	6	28	51	35	11	11	97	16	111	86	10	213	10	131	3	4	144	482
Grand Total	16	180	37	26	233	283	126	52	95	461	82	704	500	62	1286	79	677	17	24	773	2753
Approach %	6.9	77.3	15.9	-	-	61.4	27.3	11.3	-	-	6.4	54.7	38.9	-	-	10.2	87.6	2.2	-	-	-
Total %	0.6	6.5	1.3	-	8.5	10.3	4.6	1.9	-	16.7	3.0	25.6	18.2	-	46.7	2.9	24.6	0.6	-	28.1	-
Lights	12	175	34	-	221	275	125	51	-	451	80	683	419	-	1182	76	656	16	-	748	2602
% Lights	75.0	97.2	91.9	-	94.8	97.2	99.2	98.1	-	97.8	97.6	97.0	83.8	-	91.9	96.2	96.9	94.1	-	96.8	94.5
Other Vehicles	4	5	3	-	12	8	1	1	-	10	2	21	81	-	104	3	21	1	-	25	151
% Other Vehicles	25.0	2.8	8.1	-	5.2	2.8	0.8	1.9	-	2.2	2.4	3.0	16.2	-	8.1	3.8	3.1	5.9	-	3.2	5.5
Pedestrians	-	-	-	26	-	-	-	-	95	-	-	-	-	62	-	-	-	-	24	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

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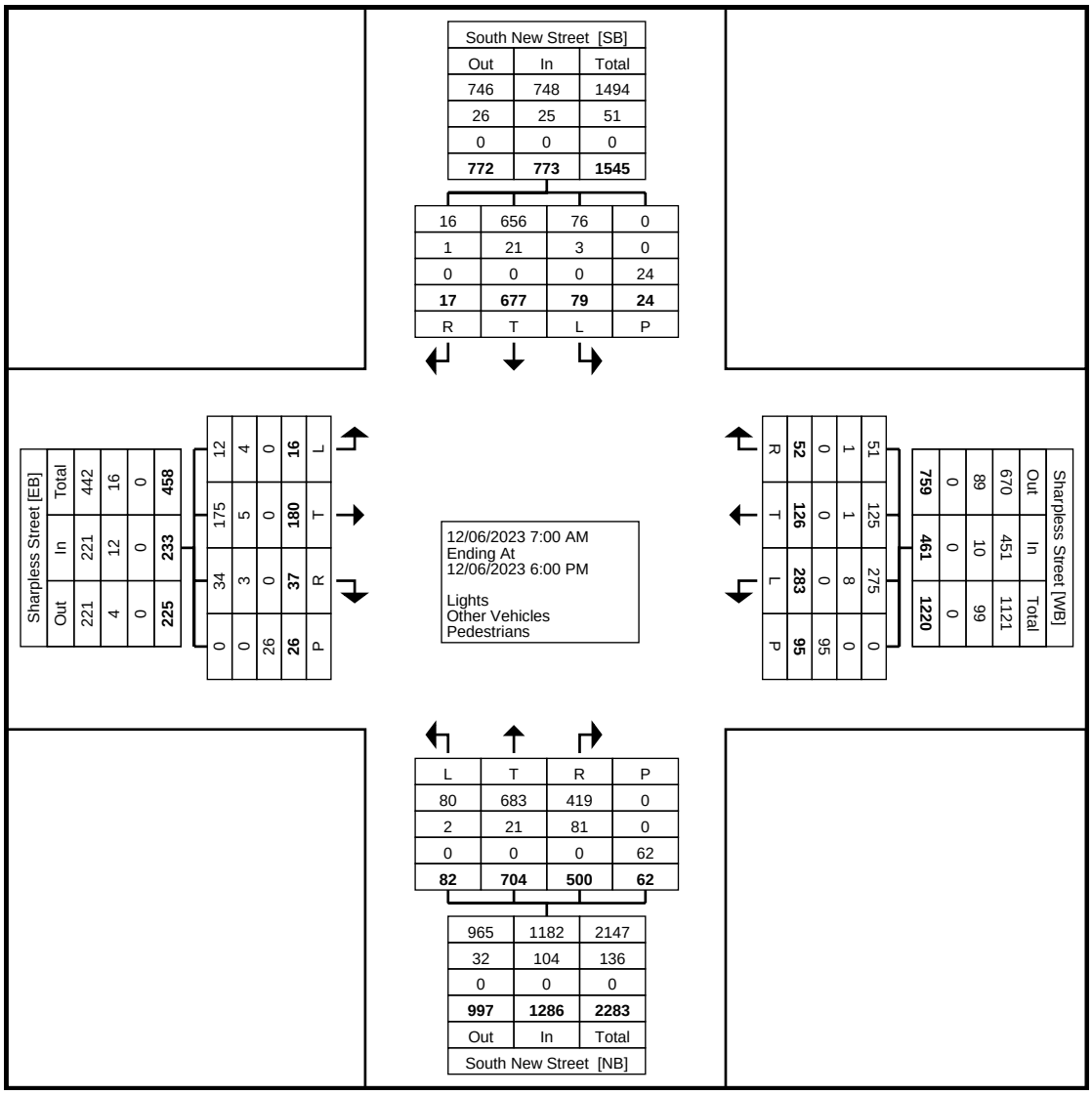
Site Code:
Start Date: 12/06/2023



Turning Movement Data Plot

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Counter: MIO:
Set up by: KY:

Count Name: (1) AM/PM South New Street x Sharpless Street
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Sharpless Street Eastbound					Sharpless Street Westbound					South New Street Northbound					South New Street Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
8:00 AM	1	8	2	1	11	17	2	1	6	20	1	20	17	2	38	4	25	0	0	29	98
8:15 AM	1	7	0	2	8	9	2	2	1	13	2	19	14	1	35	0	21	0	2	21	77
8:30 AM	1	19	2	0	22	13	1	1	3	15	1	20	20	1	41	2	28	0	1	30	108
8:45 AM	1	20	3	0	24	9	5	1	9	15	5	29	26	4	60	4	40	1	0	45	144
Total	4	54	7	3	65	48	10	5	19	63	9	88	77	8	174	10	114	1	3	125	427
Approach %	6.2	83.1	10.8	-	-	76.2	15.9	7.9	-	-	5.2	50.6	44.3	-	-	8.0	91.2	0.8	-	-	-
Total %	0.9	12.6	1.6	-	15.2	11.2	2.3	1.2	-	14.8	2.1	20.6	18.0	-	40.7	2.3	26.7	0.2	-	29.3	-
PHF	1.000	0.675	0.583	-	0.677	0.706	0.500	0.625	-	0.788	0.450	0.759	0.740	-	0.725	0.625	0.713	0.250	-	0.694	0.741
Lights	2	52	7	-	61	48	10	5	-	63	8	80	62	-	150	10	109	1	-	120	394
% Lights	50.0	96.3	100.0	-	93.8	100.0	100.0	100.0	-	100.0	88.9	90.9	80.5	-	86.2	100.0	95.6	100.0	-	96.0	92.3
Other Vehicles	2	2	0	-	4	0	0	0	-	0	1	8	15	-	24	0	5	0	-	5	33
% Other Vehicles	50.0	3.7	0.0	-	6.2	0.0	0.0	0.0	-	0.0	11.1	9.1	19.5	-	13.8	0.0	4.4	0.0	-	4.0	7.7
Pedestrians	-	-	-	3	-	-	-	-	19	-	-	-	-	8	-	-	-	-	3	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

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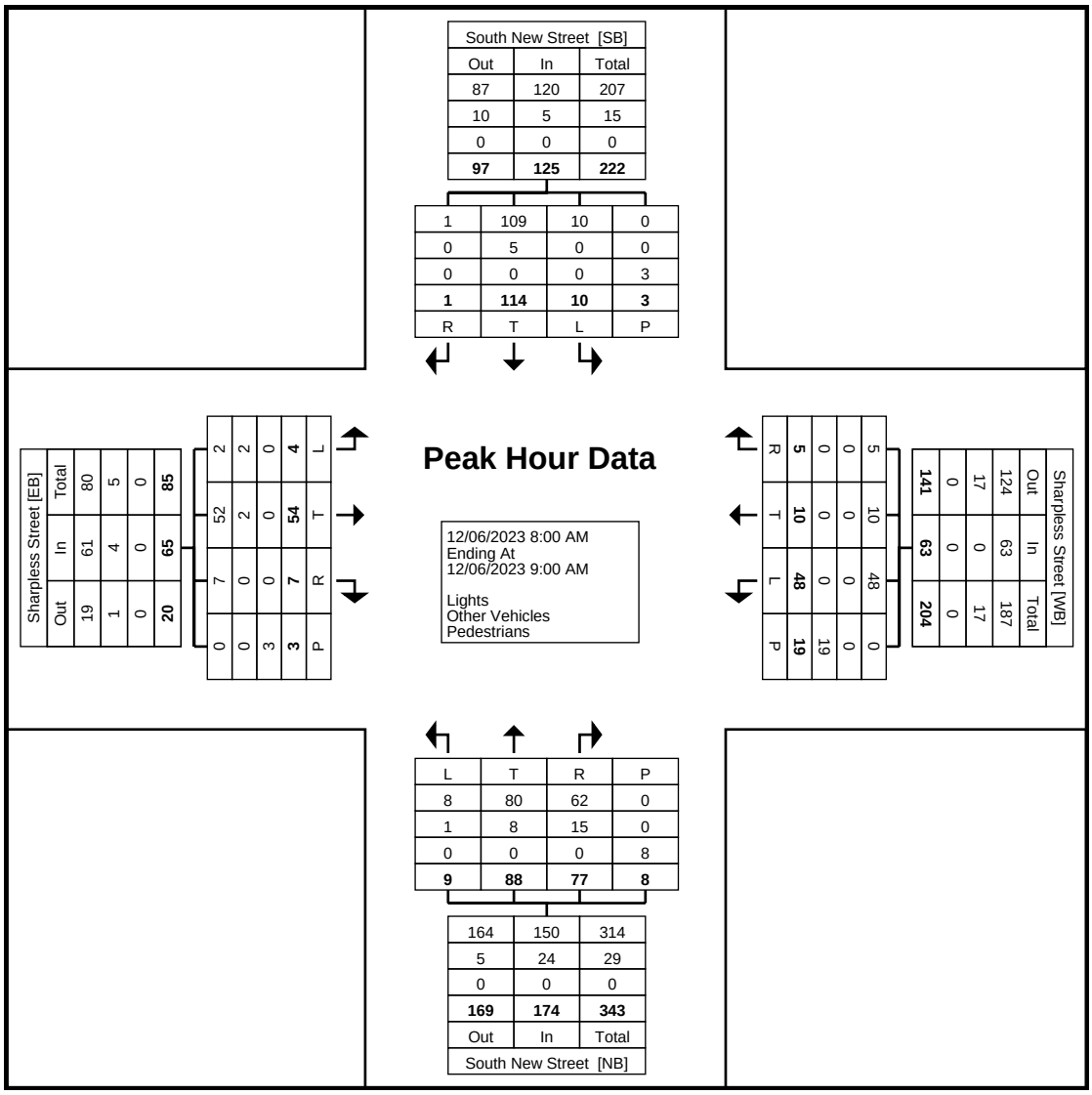

Turning Movement Peak Hour Data Plot (8:00 AM)

Traffic Planning and Design, Inc
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Counter: MIO:
Set up by: KY:

Count Name: (1) AM/PM South New Street x Sharpless Street
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Sharpless Street Eastbound					Sharpless Street Westbound					South New Street Northbound					South New Street Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
4:00 PM	0	5	0	0	5	12	12	5	6	29	2	36	42	1	80	9	27	1	6	37	151
4:15 PM	0	12	1	2	13	13	6	8	3	27	5	42	21	2	68	5	44	1	0	50	158
4:30 PM	0	6	2	2	8	13	9	6	4	28	6	63	27	3	96	1	39	0	0	40	172
4:45 PM	0	4	2	2	6	18	11	3	2	32	10	48	30	1	88	1	27	1	2	29	155
Total	0	27	5	6	32	56	38	22	15	116	23	189	120	7	332	16	137	3	8	156	636
Approach %	0.0	84.4	15.6	-	-	48.3	32.8	19.0	-	-	6.9	56.9	36.1	-	-	10.3	87.8	1.9	-	-	-
Total %	0.0	4.2	0.8	-	5.0	8.8	6.0	3.5	-	18.2	3.6	29.7	18.9	-	52.2	2.5	21.5	0.5	-	24.5	-
PHF	0.000	0.563	0.625	-	0.615	0.778	0.792	0.688	-	0.906	0.575	0.750	0.714	-	0.865	0.444	0.778	0.750	-	0.780	0.924
Lights	0	26	3	-	29	53	38	21	-	112	22	187	107	-	316	16	135	3	-	154	611
% Lights	-	96.3	60.0	-	90.6	94.6	100.0	95.5	-	96.6	95.7	98.9	89.2	-	95.2	100.0	98.5	100.0	-	98.7	96.1
Other Vehicles	0	1	2	-	3	3	0	1	-	4	1	2	13	-	16	0	2	0	-	2	25
% Other Vehicles	-	3.7	40.0	-	9.4	5.4	0.0	4.5	-	3.4	4.3	1.1	10.8	-	4.8	0.0	1.5	0.0	-	1.3	3.9
Pedestrians	-	-	-	6	-	-	-	-	15	-	-	-	-	7	-	-	-	-	8	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

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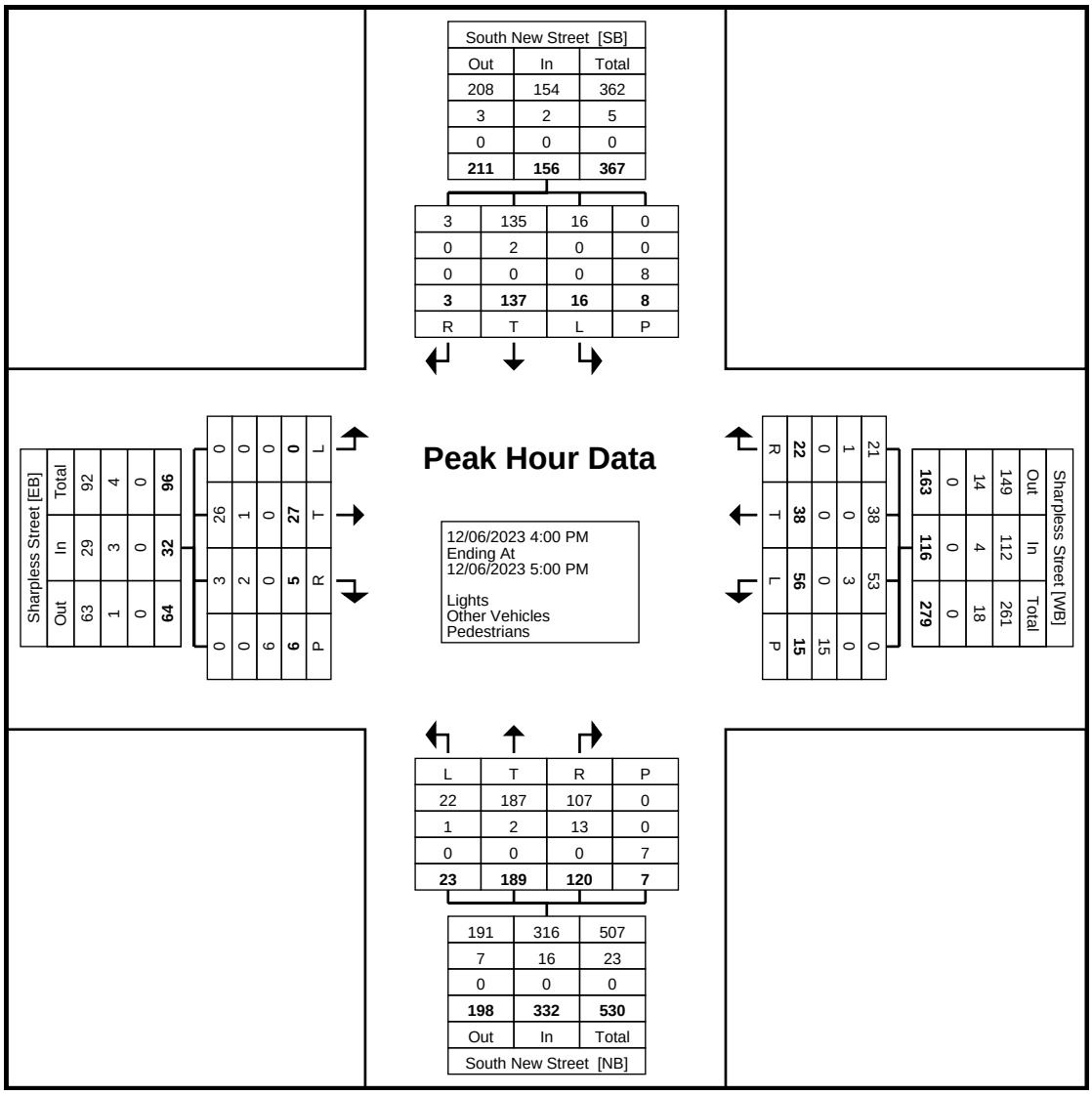
Count Name: (1) AM/PM South New Street x Sharpless Street
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (4:00 PM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (2) AM/PM
Darlington Street x Sharpless Street
Site Code:
Start Date: 12/06/2023

Turning Movement Data

Start Time	Sharpless Street Eastbound				Sharpless Street Westbound					S Darlington Street Southbound				
	Left	Thru	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
7:00 AM	2	12	0	14	0	4	0	1	4	0	0	0	0	18
7:15 AM	0	25	1	25	0	9	0	1	9	1	1	0	2	36
7:30 AM	0	32	1	32	0	14	0	2	14	1	1	1	2	48
7:45 AM	1	39	10	40	1	21	2	6	24	0	0	3	0	64
Hourly Total	3	108	12	111	1	48	2	10	51	2	2	4	4	166
8:00 AM	0	28	1	28	0	18	4	0	22	0	1	0	1	51
8:15 AM	0	21	2	21	0	12	0	2	12	0	0	2	0	33
8:30 AM	1	39	1	40	0	16	3	1	19	4	0	0	4	63
8:45 AM	2	47	9	49	0	12	5	11	17	1	1	1	2	68
Hourly Total	3	135	13	138	0	58	12	14	70	5	2	3	7	215
9:00 AM	1	22	0	23	0	10	2	2	12	2	0	3	2	37
9:15 AM	0	23	1	23	0	10	1	6	11	0	0	2	0	34
9:30 AM	0	34	2	34	0	19	2	2	21	1	1	2	2	57
9:45 AM	0	36	4	36	0	19	1	7	20	2	1	4	3	59
Hourly Total	1	115	7	116	0	58	6	17	64	5	2	11	7	187
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	5	26	4	31	0	14	5	6	19	1	1	1	2	52
3:15 PM	2	29	1	31	1	17	2	3	20	0	1	2	1	52
3:30 PM	2	25	1	27	0	18	4	0	22	2	4	1	6	55
3:45 PM	2	29	2	31	0	22	6	1	28	0	0	0	0	59
Hourly Total	11	109	8	120	1	71	17	10	89	3	6	4	9	218
4:00 PM	5	53	2	58	0	33	9	4	42	4	3	1	7	107
4:15 PM	0	38	3	38	1	21	5	8	27	3	0	1	3	68
4:30 PM	5	29	4	34	0	28	6	5	34	2	2	0	4	72
4:45 PM	4	31	1	35	1	30	6	2	37	3	1	2	4	76
Hourly Total	14	151	10	165	2	112	26	19	140	12	6	4	18	323
5:00 PM	1	31	1	32	0	26	3	1	29	0	0	2	0	61
5:15 PM	3	31	3	34	0	26	3	6	29	1	1	4	2	65
5:30 PM	4	27	1	31	0	14	10	4	24	0	1	3	1	56
5:45 PM	3	21	5	24	0	29	5	4	34	2	2	1	4	62
Hourly Total	11	110	10	121	0	95	21	15	116	3	4	10	7	244
Grand Total	43	728	60	771	4	442	84	85	530	30	22	36	52	1353
Approach %	5.6	94.4	-	-	0.8	83.4	15.8	-	-	57.7	42.3	-	-	-
Total %	3.2	53.8	-	57.0	0.3	32.7	6.2	-	39.2	2.2	1.6	-	3.8	-
Lights	43	641	-	684	4	431	82	-	517	30	21	-	51	1252
% Lights	100.0	88.0	-	88.7	100.0	97.5	97.6	-	97.5	100.0	95.5	-	98.1	92.5
Other Vehicles	0	87	-	87	0	11	2	-	13	0	1	-	1	101
% Other Vehicles	0.0	12.0	-	11.3	0.0	2.5	2.4	-	2.5	0.0	4.5	-	1.9	7.5
Pedestrians	-	-	60	-	-	-	-	85	-	-	-	36	-	-
% Pedestrians	-	-	100.0	-	-	-	-	100.0	-	-	-	100.0	-	-

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Darlington Street x Sharpless Street
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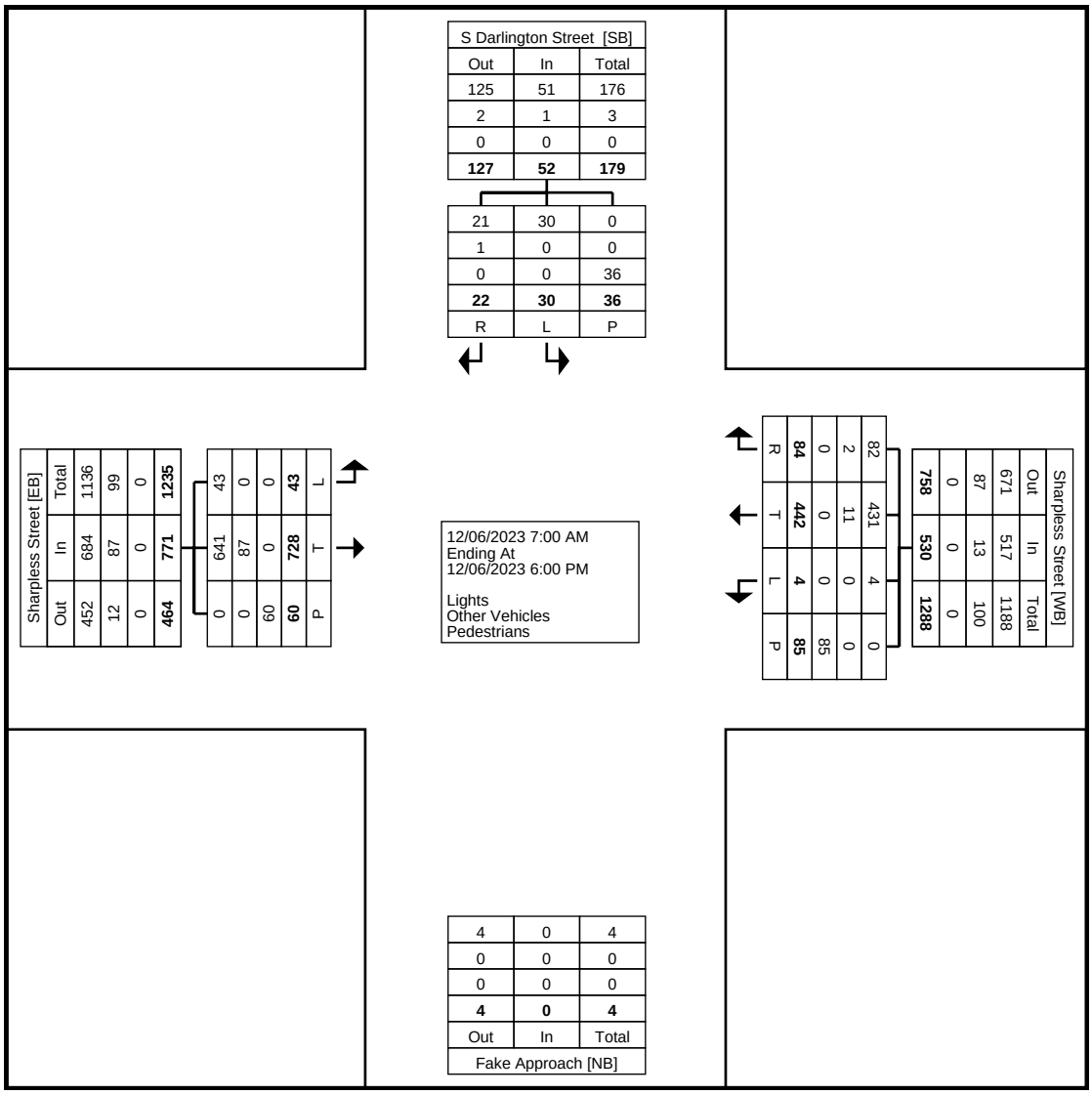
Start Date: 12/06/2023



Turning Movement Data Plot

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Counter: MIO:
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Darlington Street x Sharpless Street
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Sharpless Street Eastbound				Sharpless Street Westbound					S Darlington Street Southbound				
	Left	Thru	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
8:00 AM	0	28	1	28	0	18	4	0	22	0	1	0	1	51
8:15 AM	0	21	2	21	0	12	0	2	12	0	0	2	0	33
8:30 AM	1	39	1	40	0	16	3	1	19	4	0	0	4	63
8:45 AM	2	47	9	49	0	12	5	11	17	1	1	1	2	68
Total	3	135	13	138	0	58	12	14	70	5	2	3	7	215
Approach %	2.2	97.8	-	-	0.0	82.9	17.1	-	-	71.4	28.6	-	-	-
Total %	1.4	62.8	-	64.2	0.0	27.0	5.6	-	32.6	2.3	0.9	-	3.3	-
PHF	0.375	0.718	-	0.704	0.000	0.806	0.600	-	0.795	0.313	0.500	-	0.438	0.790
Lights	3	118	-	121	0	57	12	-	69	5	2	-	7	197
% Lights	100.0	87.4	-	87.7	-	98.3	100.0	-	98.6	100.0	100.0	-	100.0	91.6
Other Vehicles	0	17	-	17	0	1	0	-	1	0	0	-	0	18
% Other Vehicles	0.0	12.6	-	12.3	-	1.7	0.0	-	1.4	0.0	0.0	-	0.0	8.4
Pedestrians	-	-	13	-	-	-	-	14	-	-	-	3	-	-
% Pedestrians	-	-	100.0	-	-	-	-	100.0	-	-	-	100.0	-	-

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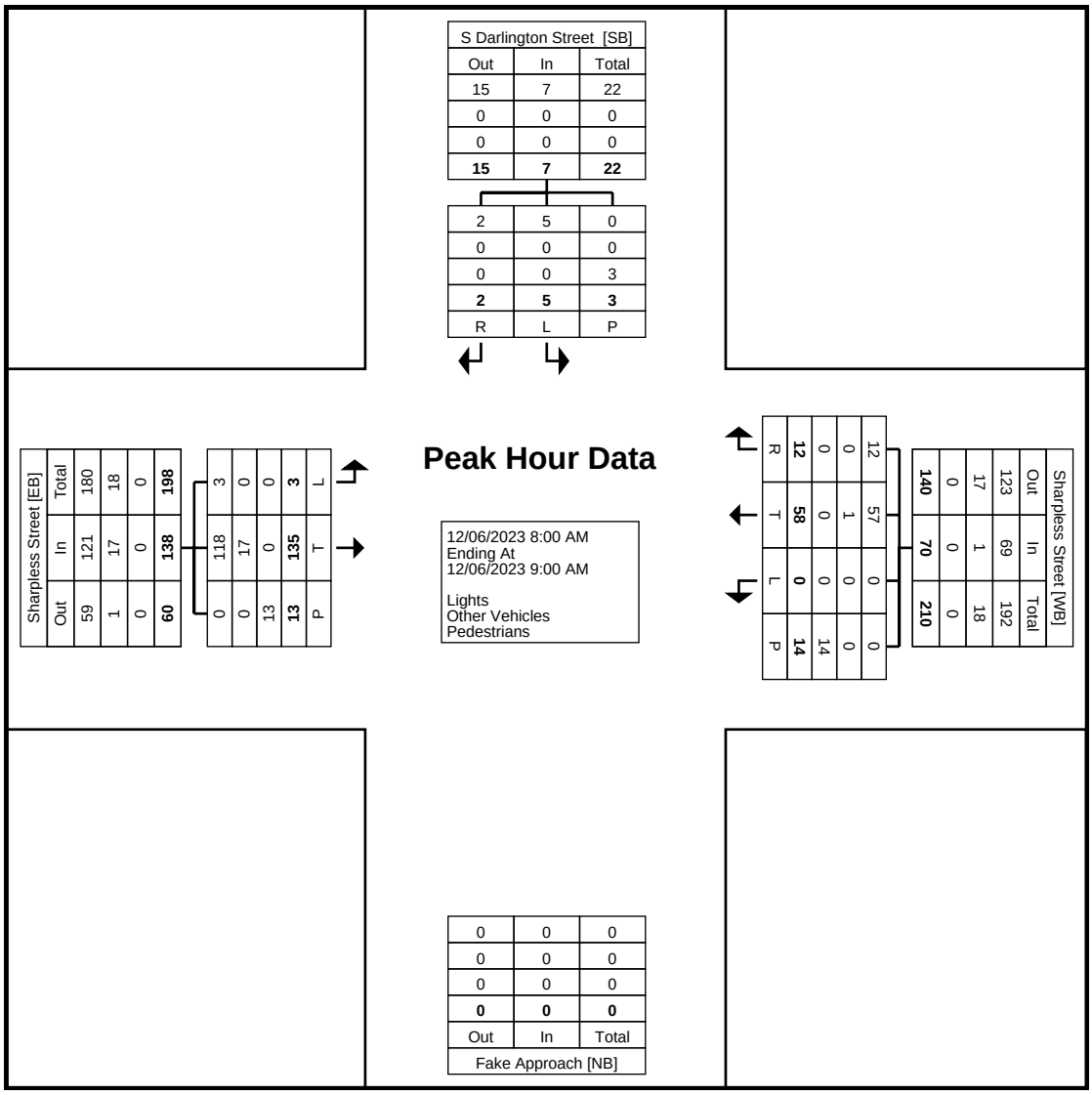
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (2) AM/PM
Darlington Street x Sharpless Street
Site Code:
Start Date: 12/06/2023
Page No: 4



Turning Movement Peak Hour Data Plot (8:00 AM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (2) AM/PM
Darlington Street x Sharpless Street
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Sharpless Street Eastbound				Sharpless Street Westbound					S Darlington Street Southbound				
	Left	Thru	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
4:00 PM	5	53	2	58	0	33	9	4	42	4	3	1	7	107
4:15 PM	0	38	3	38	1	21	5	8	27	3	0	1	3	68
4:30 PM	5	29	4	34	0	28	6	5	34	2	2	0	4	72
4:45 PM	4	31	1	35	1	30	6	2	37	3	1	2	4	76
Total	14	151	10	165	2	112	26	19	140	12	6	4	18	323
Approach %	8.5	91.5	-	-	1.4	80.0	18.6	-	-	66.7	33.3	-	-	-
Total %	4.3	46.7	-	51.1	0.6	34.7	8.0	-	43.3	3.7	1.9	-	5.6	-
PHF	0.700	0.712	-	0.711	0.500	0.848	0.722	-	0.833	0.750	0.500	-	0.643	0.755
Lights	14	138	-	152	2	109	25	-	136	12	6	-	18	306
% Lights	100.0	91.4	-	92.1	100.0	97.3	96.2	-	97.1	100.0	100.0	-	100.0	94.7
Other Vehicles	0	13	-	13	0	3	1	-	4	0	0	-	0	17
% Other Vehicles	0.0	8.6	-	7.9	0.0	2.7	3.8	-	2.9	0.0	0.0	-	0.0	5.3
Pedestrians	-	-	10	-	-	-	-	19	-	-	-	4	-	-
% Pedestrians	-	-	100.0	-	-	-	-	100.0	-	-	-	100.0	-	-

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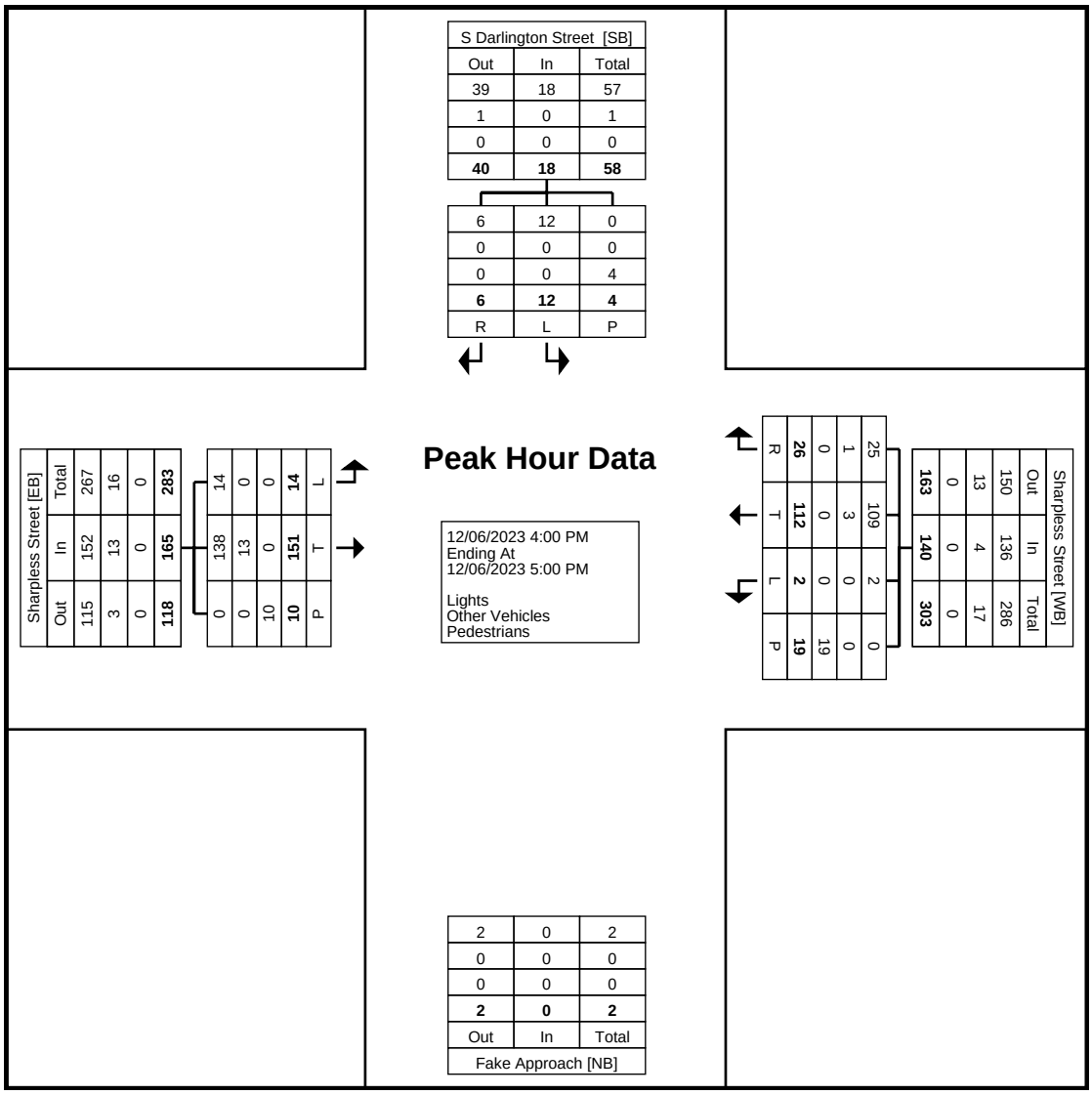
Counter: MIO:
Set up by: KY:

Count Name: (2) AM/PM
Darlington Street x Sharpless Street
Site Code:
Start Date: 12/06/2023
Page No: 6



Turning Movement Peak Hour Data Plot (4:00 PM)

Counter: MIO:
Set up by: KY:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Count Name: (3) AM/PM Church Street x Sharpless Street
Site Code:
Start Date: 12/06/2023

Turning Movement Data

Start Time	Sharpless Street Eastbound					Sharpless Street Westbound					S Church Street Northbound					S Church Street Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	13	1	7	14	2	2	0	1	4	0	0	0	5	0	3	1	2	3	6	24
7:15 AM	0	20	5	4	25	3	9	0	4	12	0	0	0	2	0	4	5	1	2	10	47
7:30 AM	0	21	7	6	28	9	13	0	2	22	0	0	0	7	0	9	6	1	1	16	66
7:45 AM	0	30	7	18	37	6	20	0	17	26	0	0	0	14	0	10	9	2	6	21	84
Hourly Total	0	84	20	35	104	20	44	0	24	64	0	0	0	28	0	26	21	6	12	53	221
8:00 AM	0	21	7	5	28	3	16	0	3	19	0	0	0	3	0	3	5	6	3	14	61
8:15 AM	0	16	6	8	22	6	8	0	4	14	0	0	0	3	0	2	3	3	4	8	44
8:30 AM	0	31	6	5	37	3	14	0	16	17	0	0	0	6	0	4	6	4	0	14	68
8:45 AM	0	30	15	22	45	4	15	0	34	19	0	0	0	33	0	4	4	1	5	9	73
Hourly Total	0	98	34	40	132	16	53	0	57	69	0	0	0	45	0	13	18	14	12	45	246
9:00 AM	0	13	10	8	23	4	13	0	6	17	0	0	0	9	0	3	7	0	3	10	50
9:15 AM	0	12	8	3	20	4	8	0	5	12	0	0	0	3	0	2	4	3	2	9	41
9:30 AM	0	24	9	16	33	6	14	0	8	20	0	0	0	3	0	2	6	7	6	15	68
9:45 AM	0	30	13	24	43	13	15	0	27	28	0	0	0	52	0	3	5	4	1	12	83
Hourly Total	0	79	40	51	119	27	50	0	46	77	0	0	0	67	0	10	22	14	12	46	242
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	24	7	14	31	3	16	0	9	19	0	0	0	14	0	6	6	5	5	17	67
3:15 PM	0	26	5	9	31	7	10	0	23	17	0	0	0	26	0	3	8	9	0	20	68
3:30 PM	0	19	9	14	28	2	18	0	7	20	0	0	0	7	0	3	3	3	12	9	57
3:45 PM	0	19	7	9	26	5	22	0	14	27	0	0	0	8	0	7	10	5	2	22	75
Hourly Total	0	88	28	46	116	17	66	0	53	83	0	0	0	55	0	19	27	22	19	68	267
4:00 PM	0	36	13	14	49	8	41	0	30	49	0	0	0	23	0	9	9	6	5	24	122
4:15 PM	0	33	12	20	45	8	25	0	27	33	0	0	0	38	0	10	15	5	4	30	108
4:30 PM	0	22	8	12	30	7	27	0	13	34	0	0	0	9	0	6	12	4	5	22	86
4:45 PM	0	22	12	13	34	6	22	0	13	28	0	0	0	12	0	4	10	12	0	26	88
Hourly Total	0	113	45	59	158	29	115	0	83	144	0	0	0	82	0	29	46	27	14	102	404
5:00 PM	0	19	8	10	27	5	24	0	14	29	0	0	0	9	0	5	7	6	7	18	74
5:15 PM	0	21	11	15	32	3	26	0	15	29	0	0	0	16	0	4	6	3	9	13	74
5:30 PM	0	16	12	14	28	7	16	0	15	23	0	0	0	13	0	3	3	7	4	13	64
5:45 PM	0	18	7	12	25	8	26	0	9	34	0	0	0	11	0	3	6	7	4	16	75
Hourly Total	0	74	38	51	112	23	92	0	53	115	0	0	0	49	0	15	22	23	24	60	287
Grand Total	0	536	205	282	741	132	420	0	316	552	0	0	0	326	0	112	156	106	93	374	1667
Approach %	0.0	72.3	27.7	-	-	23.9	76.1	0.0	-	-	0.0	0.0	0.0	-	-	29.9	41.7	28.3	-	-	-
Total %	0.0	32.2	12.3	-	44.5	7.9	25.2	0.0	-	33.1	0.0	0.0	0.0	-	0.0	6.7	9.4	6.4	-	22.4	-
Lights	0	525	128	-	653	108	412	0	-	520	0	0	0	-	0	110	138	104	-	352	1525
% Lights	-	97.9	62.4	-	88.1	81.8	98.1	-	-	94.2	-	-	-	-	-	98.2	88.5	98.1	-	94.1	91.5
Other Vehicles	0	11	77	-	88	24	8	0	-	32	0	0	0	-	0	2	18	2	-	22	142
% Other Vehicles	-	2.1	37.6	-	11.9	18.2	1.9	-	-	5.8	-	-	-	-	-	1.8	11.5	1.9	-	5.9	8.5
Pedestrians	-	-	-	282	-	-	-	-	316	-	-	-	-	326	-	-	-	-	93	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

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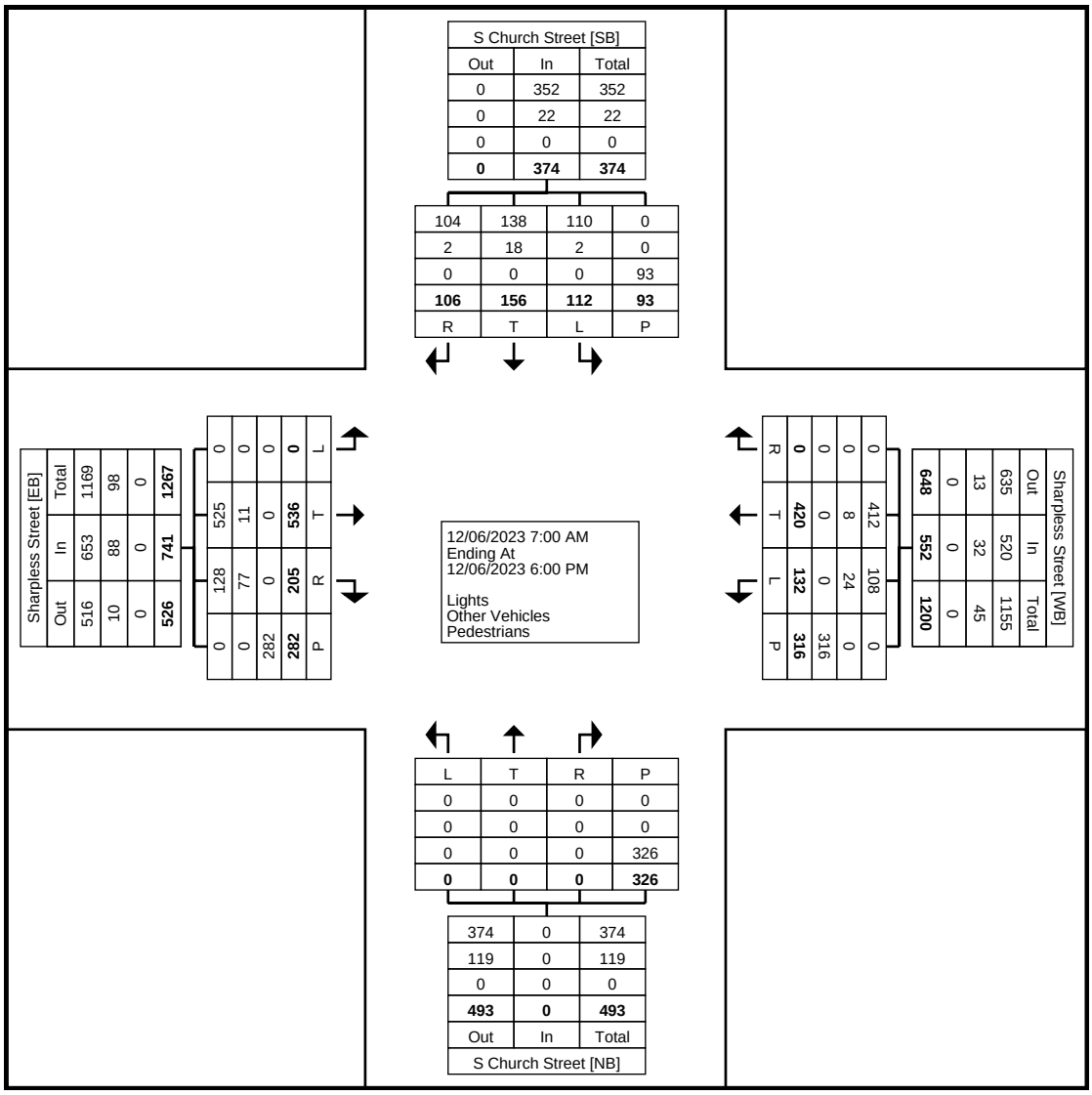
Site Code:
Start Date: 12/06/2023



Turning Movement Data Plot

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Counter: MIO:
Set up by: KY:

Count Name: (3) AM/PM Church Street x Sharpless Street
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Sharpless Street Eastbound					Sharpless Street Westbound					S Church Street Northbound					S Church Street Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:15 AM	0	20	5	4	25	3	9	0	4	12	0	0	0	2	0	4	5	1	2	10	47
7:30 AM	0	21	7	6	28	9	13	0	2	22	0	0	0	7	0	9	6	1	1	16	66
7:45 AM	0	30	7	18	37	6	20	0	17	26	0	0	0	14	0	10	9	2	6	21	84
8:00 AM	0	21	7	5	28	3	16	0	3	19	0	0	0	3	0	3	5	6	3	14	61
Total	0	92	26	33	118	21	58	0	26	79	0	0	0	26	0	26	25	10	12	61	258
Approach %	0.0	78.0	22.0	-	-	26.6	73.4	0.0	-	-	0.0	0.0	0.0	-	-	42.6	41.0	16.4	-	-	-
Total %	0.0	35.7	10.1	-	45.7	8.1	22.5	0.0	-	30.6	0.0	0.0	0.0	-	0.0	10.1	9.7	3.9	-	23.6	-
PHF	0.000	0.767	0.929	-	0.797	0.583	0.725	0.000	-	0.760	0.000	0.000	0.000	-	0.000	0.650	0.694	0.417	-	0.726	0.768
Lights	0	92	17	-	109	14	58	0	-	72	0	0	0	-	0	26	22	10	-	58	239
% Lights	-	100.0	65.4	-	92.4	66.7	100.0	-	-	91.1	-	-	-	-	-	100.0	88.0	100.0	-	95.1	92.6
Other Vehicles	0	0	9	-	9	7	0	0	-	7	0	0	0	-	0	0	3	0	-	3	19
% Other Vehicles	-	0.0	34.6	-	7.6	33.3	0.0	-	-	8.9	-	-	-	-	-	0.0	12.0	0.0	-	4.9	7.4
Pedestrians	-	-	-	33	-	-	-	-	26	-	-	-	-	26	-	-	-	-	12	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

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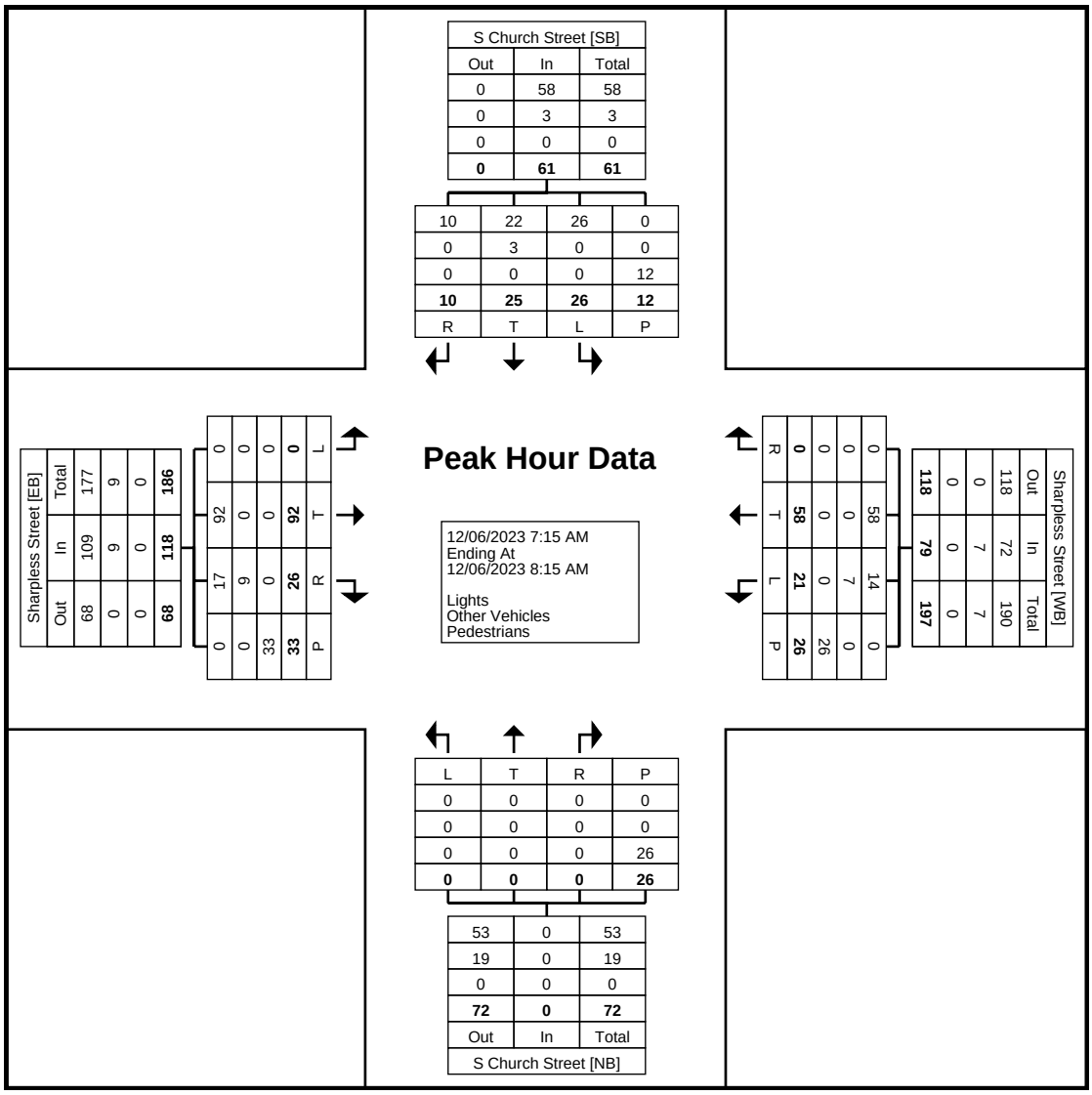
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (7:15 AM)

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Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (3) AM/PM Church Street x Sharpless Street
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Sharpless Street Eastbound					Sharpless Street Westbound					S Church Street Northbound					S Church Street Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
4:00 PM	0	36	13	14	49	8	41	0	30	49	0	0	0	23	0	9	9	6	5	24	122
4:15 PM	0	33	12	20	45	8	25	0	27	33	0	0	0	38	0	10	15	5	4	30	108
4:30 PM	0	22	8	12	30	7	27	0	13	34	0	0	0	9	0	6	12	4	5	22	86
4:45 PM	0	22	12	13	34	6	22	0	13	28	0	0	0	12	0	4	10	12	0	26	88
Total	0	113	45	59	158	29	115	0	83	144	0	0	0	82	0	29	46	27	14	102	404
Approach %	0.0	71.5	28.5	-	-	20.1	79.9	0.0	-	-	0.0	0.0	0.0	-	-	28.4	45.1	26.5	-	-	-
Total %	0.0	28.0	11.1	-	39.1	7.2	28.5	0.0	-	35.6	0.0	0.0	0.0	-	0.0	7.2	11.4	6.7	-	25.2	-
PHF	0.000	0.785	0.865	-	0.806	0.906	0.701	0.000	-	0.735	0.000	0.000	0.000	-	0.000	0.725	0.767	0.563	-	0.850	0.828
Lights	0	111	32	-	143	25	113	0	-	138	0	0	0	-	0	29	44	25	-	98	379
% Lights	-	98.2	71.1	-	90.5	86.2	98.3	-	-	95.8	-	-	-	-	-	100.0	95.7	92.6	-	96.1	93.8
Other Vehicles	0	2	13	-	15	4	2	0	-	6	0	0	0	-	0	0	2	2	-	4	25
% Other Vehicles	-	1.8	28.9	-	9.5	13.8	1.7	-	-	4.2	-	-	-	-	-	0.0	4.3	7.4	-	3.9	6.2
Pedestrians	-	-	-	59	-	-	-	-	83	-	-	-	-	82	-	-	-	-	14	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

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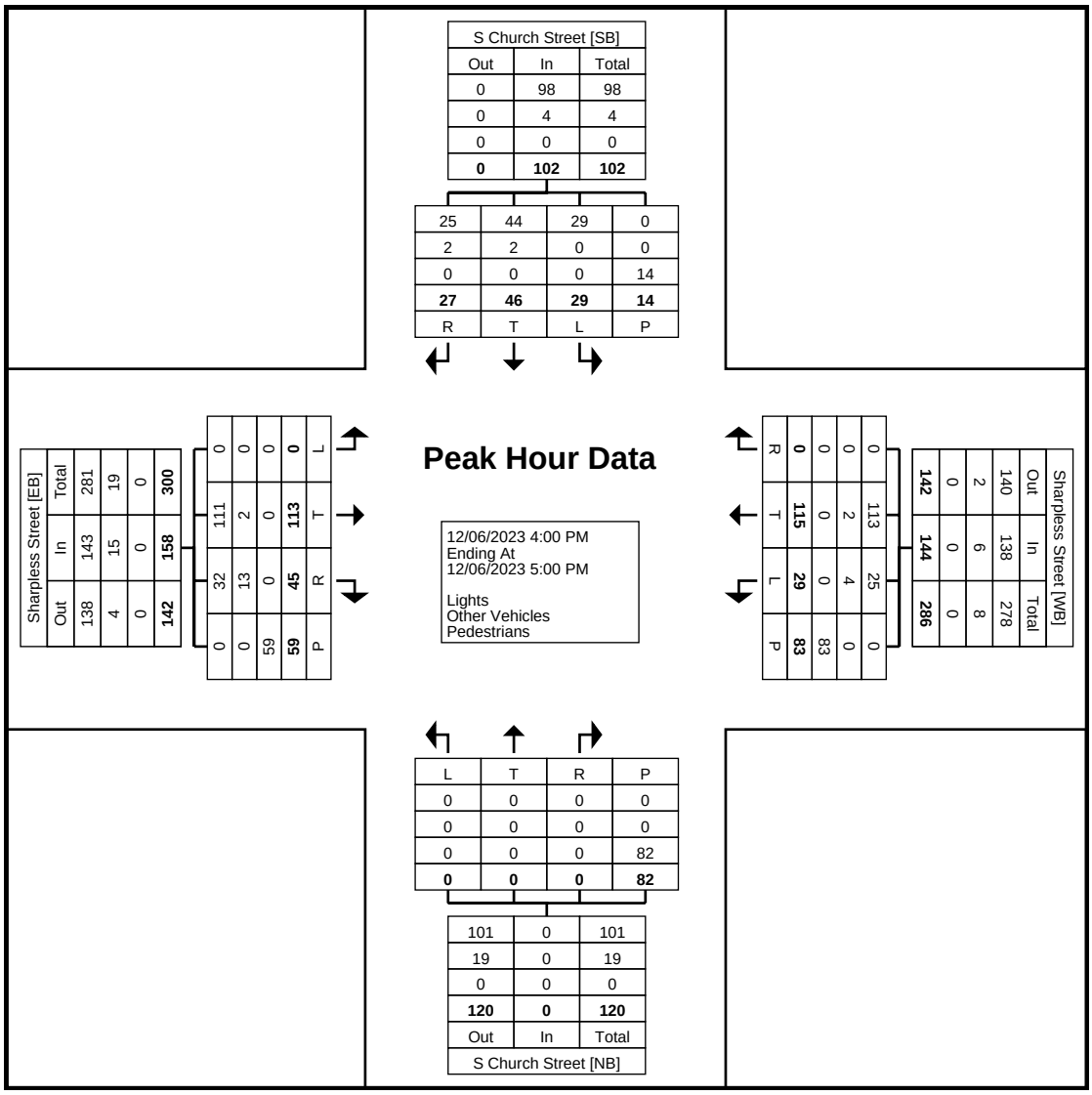
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (4:00 PM)

Counter: MIO:
Set up by: KY:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
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610.326.3100 kyoung@trafficpd.com

Count Name: (4) AM/PM
Reynolds Alley x Sharpless Street
Site Code:
Start Date: 12/06/2023

Turning Movement Data

Start Time	Sharpless Street Eastbound					Sharpless Street Westbound				Reynolds Alley Northbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
7:00 AM	0	13	2	1	15	2	6	0	8	1	1	2	2	25
7:15 AM	0	17	7	1	24	3	11	0	14	0	1	3	1	39
7:30 AM	0	18	6	0	24	3	32	0	35	6	2	6	8	67
7:45 AM	0	30	5	3	35	2	36	1	38	1	2	12	3	76
Hourly Total	0	78	20	5	98	10	85	1	95	8	6	23	14	207
8:00 AM	0	22	3	1	25	0	26	0	26	2	2	2	4	55
8:15 AM	0	16	0	0	16	1	20	1	21	2	2	2	4	41
8:30 AM	0	28	0	0	28	1	34	0	35	1	1	4	2	65
8:45 AM	0	41	1	4	42	1	28	7	29	1	4	38	5	76
Hourly Total	0	107	4	5	111	3	108	8	111	6	9	46	15	237
9:00 AM	0	15	1	1	16	2	21	0	23	2	2	9	4	43
9:15 AM	0	12	1	3	13	0	18	0	18	1	5	4	6	37
9:30 AM	0	19	1	3	20	0	33	0	33	0	3	6	3	56
9:45 AM	1	31	2	4	34	0	35	6	35	2	1	49	3	72
Hourly Total	1	77	5	11	83	2	107	6	109	5	11	68	16	208
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	36	4	2	40	0	14	4	14	3	6	4	9	63
3:15 PM	0	35	1	3	36	2	16	2	18	0	6	13	6	60
3:30 PM	0	22	2	1	24	4	15	2	19	4	6	11	10	53
3:45 PM	0	29	2	3	31	1	33	0	34	1	4	7	5	70
Hourly Total	0	122	9	9	131	7	78	8	85	8	22	35	30	246
4:00 PM	0	33	2	8	35	1	46	4	47	1	3	17	4	86
4:15 PM	1	38	3	5	42	2	35	1	37	3	7	25	10	89
4:30 PM	0	40	0	3	40	4	20	0	24	8	18	3	26	90
4:45 PM	0	27	3	2	30	2	26	1	28	0	4	17	4	62
Hourly Total	1	138	8	18	147	9	127	6	136	12	32	62	44	327
5:00 PM	0	25	1	2	26	0	28	2	28	3	5	11	8	62
5:15 PM	0	35	0	2	35	2	27	4	29	1	3	15	4	68
5:30 PM	0	23	1	2	24	2	22	0	24	1	4	11	5	53
5:45 PM	0	25	1	3	26	5	32	1	37	2	3	7	5	68
Hourly Total	0	108	3	9	111	9	109	7	118	7	15	44	22	251
Grand Total	2	630	49	57	681	40	614	36	654	46	95	278	141	1476
Approach %	0.3	92.5	7.2	-	-	6.1	93.9	-	-	32.6	67.4	-	-	-
Total %	0.1	42.7	3.3	-	46.1	2.7	41.6	-	44.3	3.1	6.4	-	9.6	-
Lights	2	617	48	-	667	39	585	-	624	45	94	-	139	1430
% Lights	100.0	97.9	98.0	-	97.9	97.5	95.3	-	95.4	97.8	98.9	-	98.6	96.9
Other Vehicles	0	13	1	-	14	1	29	-	30	1	1	-	2	46
% Other Vehicles	0.0	2.1	2.0	-	2.1	2.5	4.7	-	4.6	2.2	1.1	-	1.4	3.1
Pedestrians	-	-	-	57	-	-	-	36	-	-	-	278	-	-
% Pedestrians	-	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-

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Reynolds Alley x Sharpless Street
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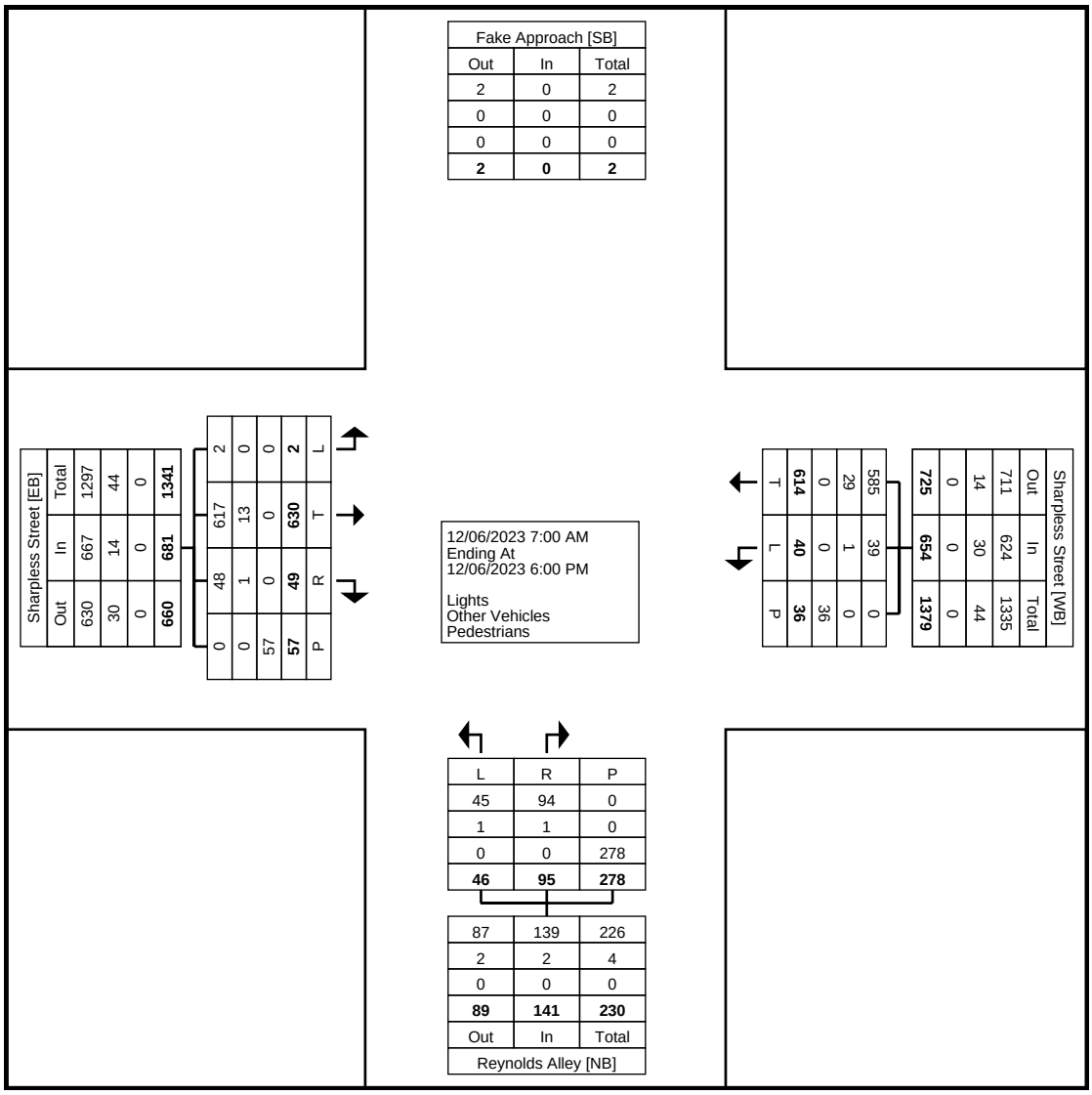

Turning Movement Data Plot

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610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (4) AM/PM
Reynolds Alley x Sharpless Street
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Sharpless Street Eastbound					Sharpless Street Westbound				Reynolds Alley Northbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
7:30 AM	0	18	6	0	24	3	32	0	35	6	2	6	8	67
7:45 AM	0	30	5	3	35	2	36	1	38	1	2	12	3	76
8:00 AM	0	22	3	1	25	0	26	0	26	2	2	2	4	55
8:15 AM	0	16	0	0	16	1	20	1	21	2	2	2	4	41
Total	0	86	14	4	100	6	114	2	120	11	8	22	19	239
Approach %	0.0	86.0	14.0	-	-	5.0	95.0	-	-	57.9	42.1	-	-	-
Total %	0.0	36.0	5.9	-	41.8	2.5	47.7	-	50.2	4.6	3.3	-	7.9	-
PHF	0.000	0.717	0.583	-	0.714	0.500	0.792	-	0.789	0.458	1.000	-	0.594	0.786
Lights	0	85	14	-	99	6	110	-	116	11	8	-	19	234
% Lights	-	98.8	100.0	-	99.0	100.0	96.5	-	96.7	100.0	100.0	-	100.0	97.9
Other Vehicles	0	1	0	-	1	0	4	-	4	0	0	-	0	5
% Other Vehicles	-	1.2	0.0	-	1.0	0.0	3.5	-	3.3	0.0	0.0	-	0.0	2.1
Pedestrians	-	-	-	4	-	-	-	2	-	-	-	22	-	-
% Pedestrians	-	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
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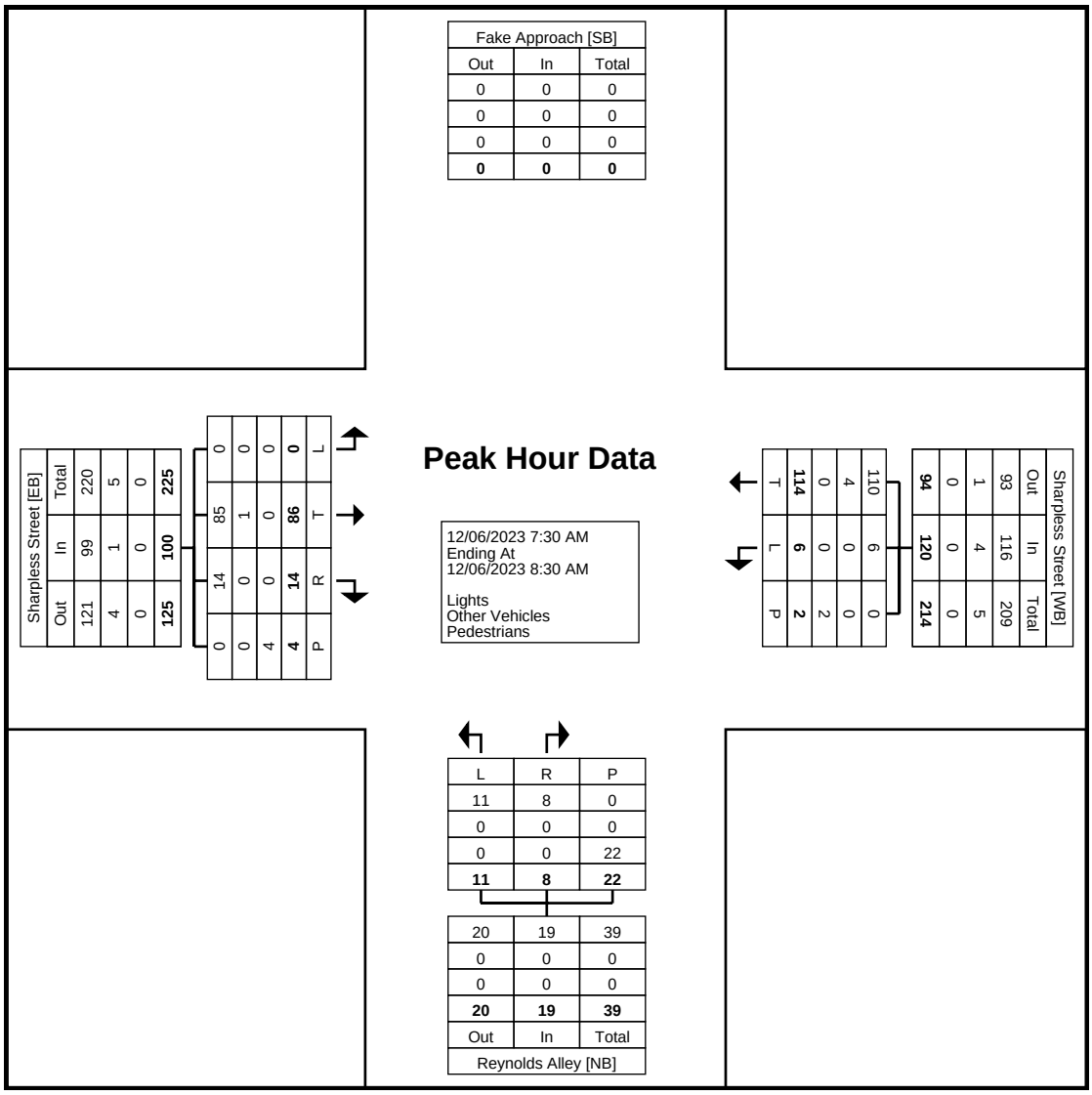
Counter: MIO:
Set up by: KY:

Count Name: (4) AM/PM
Reynolds Alley x Sharpless Street
Site Code:
Start Date: 12/06/2023



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

Traffic Planning and Design, Inc
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Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (4) AM/PM
Reynolds Alley x Sharpless Street
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (3:45 PM)

Start Time	Sharpless Street Eastbound					Sharpless Street Westbound				Reynolds Alley Northbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
3:45 PM	0	29	2	3	31	1	33	0	34	1	4	7	5	70
4:00 PM	0	33	2	8	35	1	46	4	47	1	3	17	4	86
4:15 PM	1	38	3	5	42	2	35	1	37	3	7	25	10	89
4:30 PM	0	40	0	3	40	4	20	0	24	8	18	3	26	90
Total	1	140	7	19	148	8	134	5	142	13	32	52	45	335
Approach %	0.7	94.6	4.7	-	-	5.6	94.4	-	-	28.9	71.1	-	-	-
Total %	0.3	41.8	2.1	-	44.2	2.4	40.0	-	42.4	3.9	9.6	-	13.4	-
PHF	0.250	0.875	0.583	-	0.881	0.500	0.728	-	0.755	0.406	0.444	-	0.433	0.931
Lights	1	138	7	-	146	8	128	-	136	13	32	-	45	327
% Lights	100.0	98.6	100.0	-	98.6	100.0	95.5	-	95.8	100.0	100.0	-	100.0	97.6
Other Vehicles	0	2	0	-	2	0	6	-	6	0	0	-	0	8
% Other Vehicles	0.0	1.4	0.0	-	1.4	0.0	4.5	-	4.2	0.0	0.0	-	0.0	2.4
Pedestrians	-	-	-	19	-	-	-	5	-	-	-	52	-	-
% Pedestrians	-	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-

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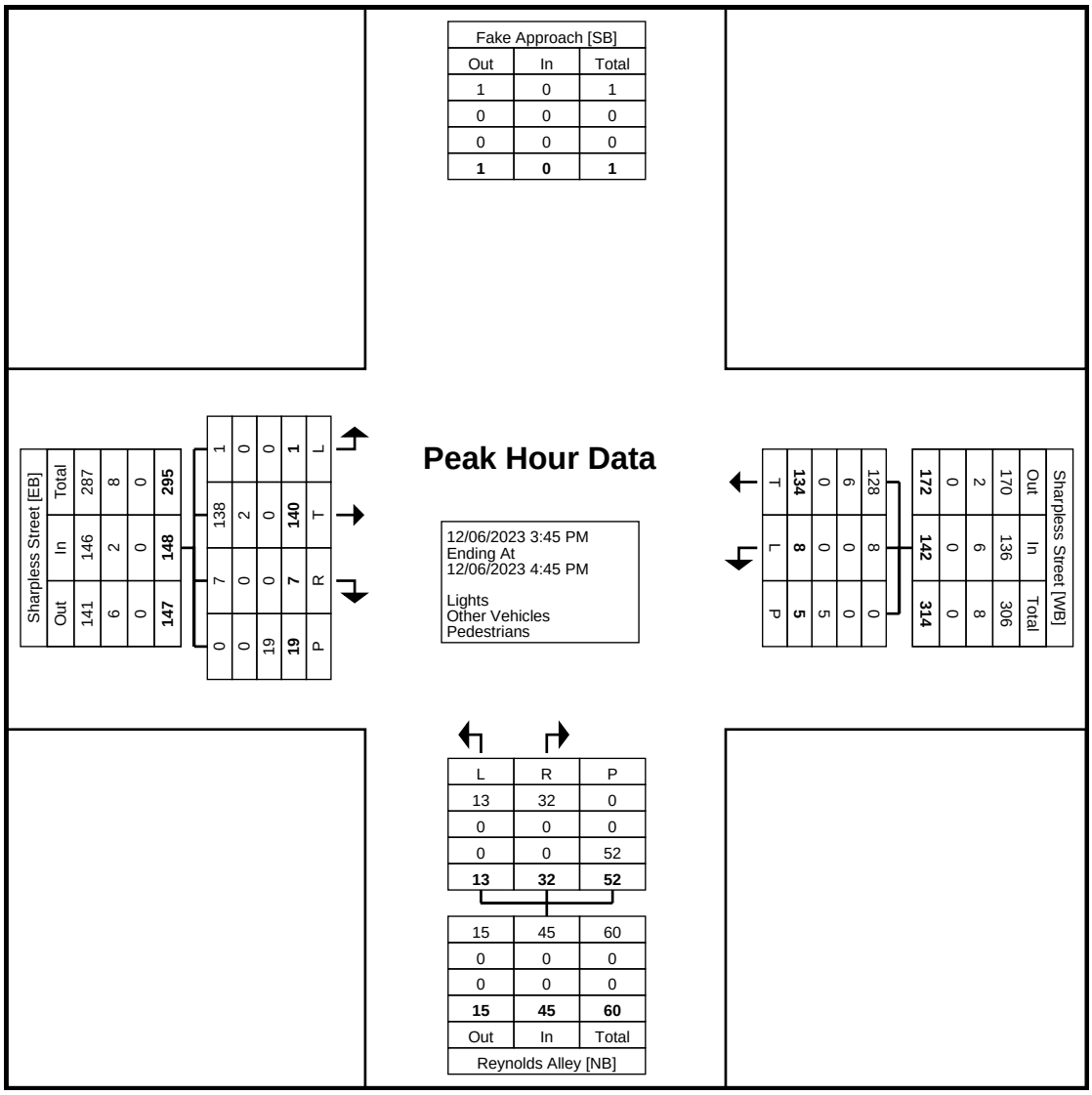
Counter: MIO:
Set up by: KY:

Count Name: (4) AM/PM
Reynolds Alley x Sharpless Street
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (3:45 PM)

Counter: MIO:
Set up by: KY:

Traffic Planning and Design, Inc
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Suite 650
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610.326.3100 kyoung@trafficpd.com

Count Name: (5) AM/PM South High Street x Sharpless Street
Site Code:
Start Date: 12/06/2023

Turning Movement Data

Start Time	Sharpless Street Eastbound				S High Street Northbound				S High Street Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	3	11	1	14	2	61	3	63	72	3	1	75	152
7:15 AM	7	11	1	18	6	50	1	56	108	8	2	116	190
7:30 AM	3	15	5	18	12	86	3	98	142	22	4	164	280
7:45 AM	10	25	3	35	14	77	5	91	157	26	15	183	309
Hourly Total	23	62	10	85	34	274	12	308	479	59	22	538	931
8:00 AM	6	17	1	23	11	79	1	90	117	16	2	133	246
8:15 AM	5	14	1	19	10	70	2	80	86	9	1	95	194
8:30 AM	6	23	6	29	17	90	6	107	99	17	3	116	252
8:45 AM	12	30	22	42	13	77	10	90	107	15	29	122	254
Hourly Total	29	84	30	113	51	316	19	367	409	57	35	466	946
9:00 AM	3	13	3	16	7	98	5	105	91	16	10	107	228
9:15 AM	5	12	5	17	11	72	2	83	74	8	5	82	182
9:30 AM	5	17	4	22	19	77	2	96	75	14	10	89	207
9:45 AM	11	21	25	32	17	91	17	108	83	13	21	96	236
Hourly Total	24	63	37	87	54	338	26	392	323	51	46	374	853
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	11	28	21	39	8	112	2	120	123	6	1	129	288
3:15 PM	11	32	9	43	6	97	6	103	96	10	4	106	252
3:30 PM	14	14	7	28	15	114	5	129	94	8	6	102	259
3:45 PM	8	26	9	34	11	126	6	137	114	25	4	139	310
Hourly Total	44	100	46	144	40	449	19	489	427	49	15	476	1109
4:00 PM	7	28	15	35	21	103	8	124	132	23	13	155	314
4:15 PM	7	37	14	44	25	109	12	134	133	12	12	145	323
4:30 PM	13	43	6	56	16	126	0	142	136	7	5	143	341
4:45 PM	8	24	4	32	15	112	3	127	107	13	10	120	279
Hourly Total	35	132	39	167	77	450	23	527	508	55	40	563	1257
5:00 PM	4	27	12	31	16	120	2	136	110	14	4	124	291
5:15 PM	8	29	11	37	16	133	8	149	117	10	8	127	313
5:30 PM	7	20	15	27	8	121	5	129	111	15	9	126	282
5:45 PM	9	21	6	30	21	126	4	147	107	15	5	122	299
Hourly Total	28	97	44	125	61	500	19	561	445	54	26	499	1185
Grand Total	183	538	206	721	317	2327	118	2644	2591	325	184	2916	6281
Approach %	25.4	74.6	-	-	12.0	88.0	-	-	88.9	11.1	-	-	-
Total %	2.9	8.6	-	11.5	5.0	37.0	-	42.1	41.3	5.2	-	46.4	-
Lights	180	527	-	707	304	2255	-	2559	2543	312	-	2855	6121
% Lights	98.4	98.0	-	98.1	95.9	96.9	-	96.8	98.1	96.0	-	97.9	97.5
Other Vehicles	3	11	-	14	13	72	-	85	48	13	-	61	160
% Other Vehicles	1.6	2.0	-	1.9	4.1	3.1	-	3.2	1.9	4.0	-	2.1	2.5
Pedestrians	-	-	206	-	-	-	118	-	-	-	184	-	-
% Pedestrians	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
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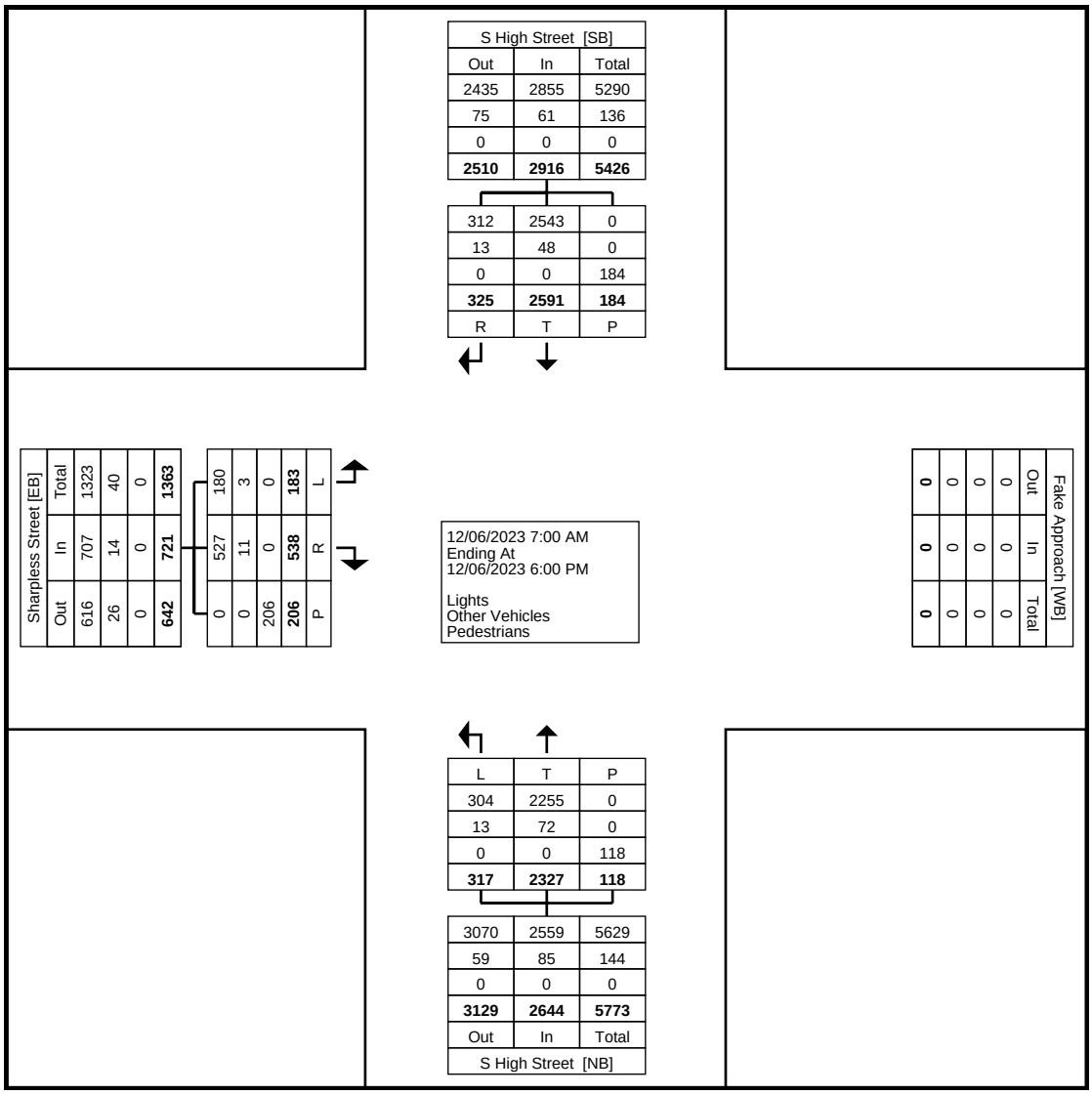
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (5) AM/PM South High Street x Sharpless Street
Site Code:
Start Date: 12/06/2023



Turning Movement Data Plot

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Counter: MIO:
Set up by: KY:

Count Name: (5) AM/PM South High Street x Sharpless Street
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Sharpless Street Eastbound				S High Street Northbound				S High Street Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
7:30 AM	3	15	5	18	12	86	3	98	142	22	4	164	280
7:45 AM	10	25	3	35	14	77	5	91	157	26	15	183	309
8:00 AM	6	17	1	23	11	79	1	90	117	16	2	133	246
8:15 AM	5	14	1	19	10	70	2	80	86	9	1	95	194
Total	24	71	10	95	47	312	11	359	502	73	22	575	1029
Approach %	25.3	74.7	-	-	13.1	86.9	-	-	87.3	12.7	-	-	-
Total %	2.3	6.9	-	9.2	4.6	30.3	-	34.9	48.8	7.1	-	55.9	-
PHF	0.600	0.710	-	0.679	0.839	0.907	-	0.916	0.799	0.702	-	0.786	0.833
Lights	24	70	-	94	45	297	-	342	496	71	-	567	1003
% Lights	100.0	98.6	-	98.9	95.7	95.2	-	95.3	98.8	97.3	-	98.6	97.5
Other Vehicles	0	1	-	1	2	15	-	17	6	2	-	8	26
% Other Vehicles	0.0	1.4	-	1.1	4.3	4.8	-	4.7	1.2	2.7	-	1.4	2.5
Pedestrians	-	-	10	-	-	-	11	-	-	-	22	-	-
% Pedestrians	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-

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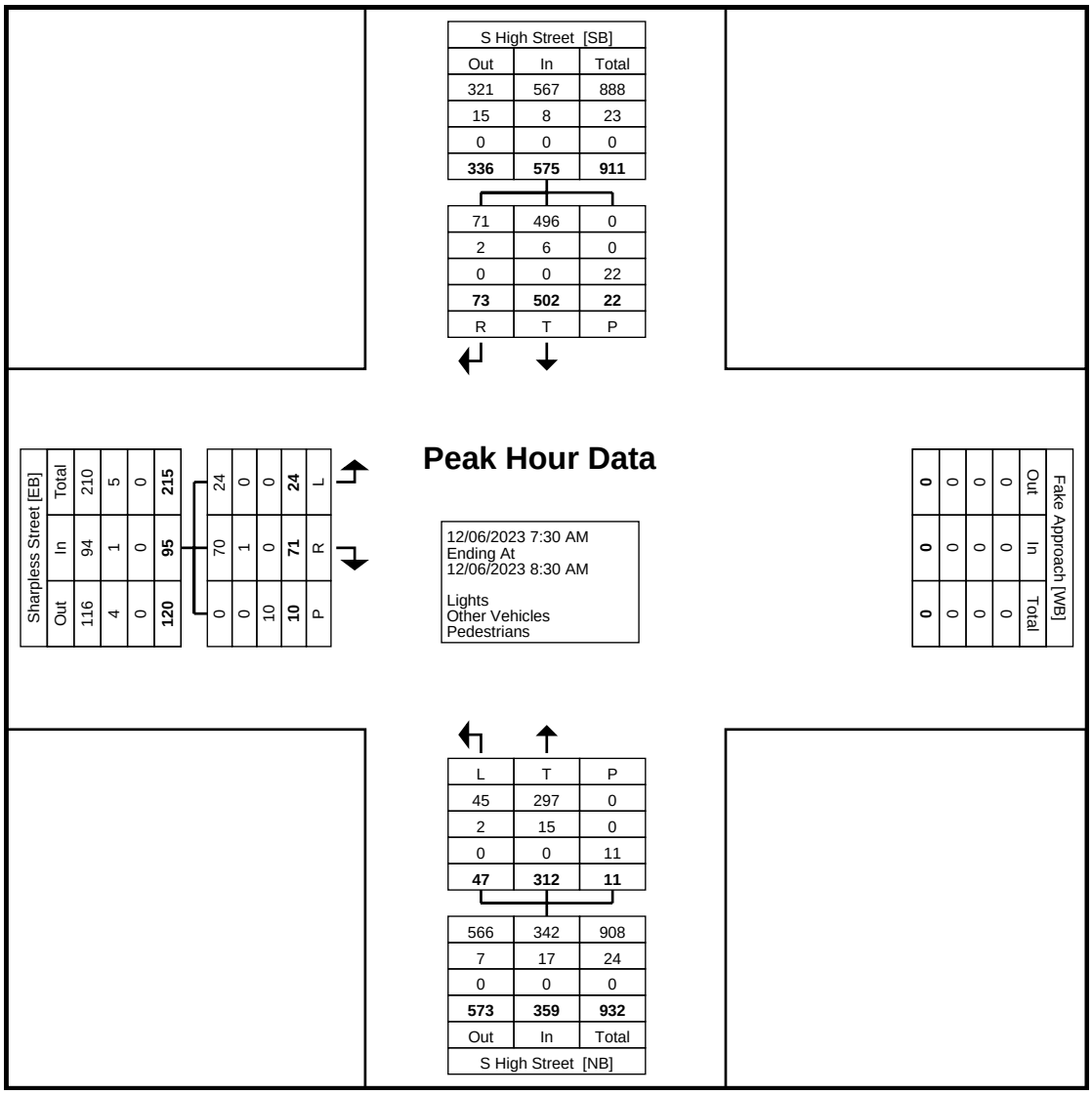
Count Name: (5) AM/PM South High Street x Sharpless Street
Site Code:
Start Date: 12/06/2023



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

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Counter: MIO:
Set up by: KY:

Count Name: (5) AM/PM South High Street x Sharpless Street
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (3:45 PM)

Start Time	Sharpless Street Eastbound				S High Street Northbound				S High Street Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
3:45 PM	8	26	9	34	11	126	6	137	114	25	4	139	310
4:00 PM	7	28	15	35	21	103	8	124	132	23	13	155	314
4:15 PM	7	37	14	44	25	109	12	134	133	12	12	145	323
4:30 PM	13	43	6	56	16	126	0	142	136	7	5	143	341
Total	35	134	44	169	73	464	26	537	515	67	34	582	1288
Approach %	20.7	79.3	-	-	13.6	86.4	-	-	88.5	11.5	-	-	-
Total %	2.7	10.4	-	13.1	5.7	36.0	-	41.7	40.0	5.2	-	45.2	-
PHF	0.673	0.779	-	0.754	0.730	0.921	-	0.945	0.947	0.670	-	0.939	0.944
Lights	35	132	-	167	69	450	-	519	511	65	-	576	1262
% Lights	100.0	98.5	-	98.8	94.5	97.0	-	96.6	99.2	97.0	-	99.0	98.0
Other Vehicles	0	2	-	2	4	14	-	18	4	2	-	6	26
% Other Vehicles	0.0	1.5	-	1.2	5.5	3.0	-	3.4	0.8	3.0	-	1.0	2.0
Pedestrians	-	-	44	-	-	-	26	-	-	-	34	-	-
% Pedestrians	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-

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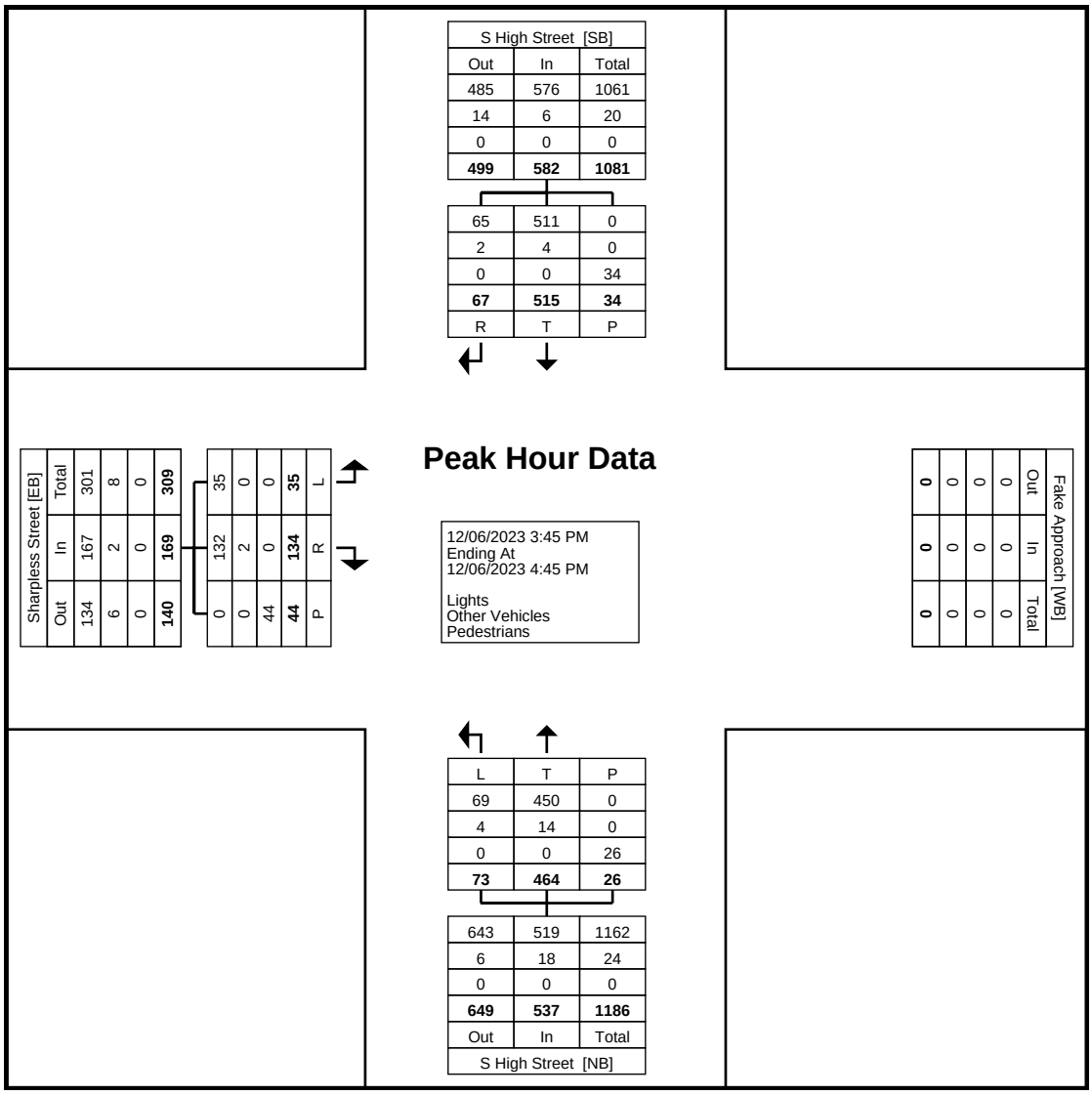

Turning Movement Peak Hour Data Plot (3:45 PM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
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610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (6) AM/PM South High Street x East Nields Street
Site Code:
Start Date: 12/06/2023
Page No: 1

Turning Movement Data

Start Time	E Nields Street Westbound				S High Street Northbound				S High Street Southbound				
	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
7:00 AM	0	0	1	0	63	1	0	64	13	70	2	83	147
7:15 AM	0	0	1	0	58	0	0	58	19	95	0	114	172
7:30 AM	0	0	4	0	96	2	7	98	29	119	0	148	246
7:45 AM	0	0	7	0	90	4	25	94	53	134	0	187	281
Hourly Total	0	0	13	0	307	7	32	314	114	418	2	532	846
8:00 AM	0	0	0	0	88	2	3	90	34	107	0	141	231
8:15 AM	0	0	5	0	82	3	4	85	25	74	1	99	184
8:30 AM	0	0	3	0	106	6	5	112	33	87	0	120	232
8:45 AM	0	0	10	0	94	4	22	98	36	90	0	126	224
Hourly Total	0	0	18	0	370	15	34	385	128	358	1	486	871
9:00 AM	0	1	6	1	102	5	7	107	20	89	0	109	217
9:15 AM	0	0	5	0	83	3	8	86	22	67	1	89	175
9:30 AM	0	0	6	0	98	3	6	101	12	76	0	88	189
9:45 AM	0	0	26	0	103	4	57	107	19	86	3	105	212
Hourly Total	0	1	43	1	386	15	78	401	73	318	4	391	793
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	0	10	0	120	12	11	132	36	112	0	148	280
3:15 PM	0	0	9	0	102	8	3	110	30	104	0	134	244
3:30 PM	0	0	6	0	128	7	8	135	17	90	0	107	242
3:45 PM	0	0	14	0	137	5	9	142	25	110	0	135	277
Hourly Total	0	0	39	0	487	32	31	519	108	416	0	524	1043
4:00 PM	0	0	13	0	124	6	23	130	44	119	1	163	293
4:15 PM	0	0	18	0	136	18	42	154	36	136	2	172	326
4:30 PM	0	0	6	0	142	3	8	145	33	136	0	169	314
4:45 PM	0	0	13	0	123	5	4	128	35	107	2	142	270
Hourly Total	0	0	50	0	525	32	77	557	148	498	5	646	1203
5:00 PM	0	0	6	0	138	3	10	141	37	98	1	135	276
5:15 PM	0	0	7	0	143	8	14	151	27	115	0	142	293
5:30 PM	0	0	13	0	131	6	12	137	32	101	4	133	270
5:45 PM	1	0	5	1	138	4	10	142	25	94	1	119	262
Hourly Total	1	0	31	1	550	21	46	571	121	408	6	529	1101
Grand Total	1	1	194	2	2625	122	298	2747	692	2416	18	3108	5857
Approach %	50.0	50.0	-	-	95.6	4.4	-	-	22.3	77.7	-	-	-
Total %	0.0	0.0	-	0.0	44.8	2.1	-	46.9	11.8	41.2	-	53.1	-
Lights	1	1	-	2	2545	119	-	2664	689	2363	-	3052	5718
% Lights	100.0	100.0	-	100.0	97.0	97.5	-	97.0	99.6	97.8	-	98.2	97.6
Other Vehicles	0	0	-	0	80	3	-	83	3	53	-	56	139
% Other Vehicles	0.0	0.0	-	0.0	3.0	2.5	-	3.0	0.4	2.2	-	1.8	2.4
Pedestrians	-	-	194	-	-	-	298	-	-	-	18	-	-
% Pedestrians	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-

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Counter: MIO:
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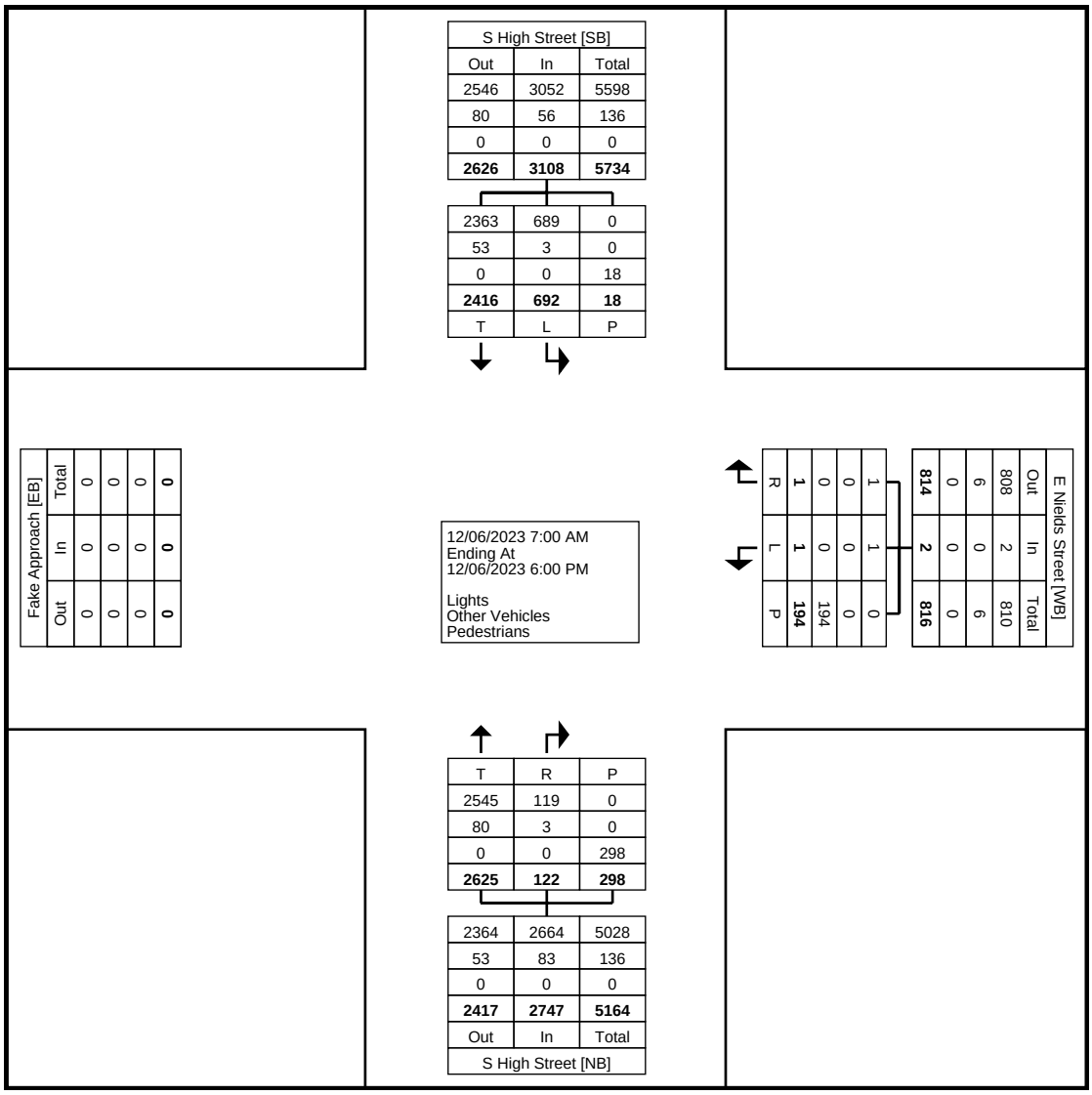
Count Name: (6) AM/PM South High Street x East Nields Street
Site Code:
Start Date: 12/06/2023
Page No: 2



Turning Movement Data Plot

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Counter: MIO:
Set up by: KY:

Count Name: (6) AM/PM South High Street x East Nields Street
Site Code:
Start Date: 12/06/2023

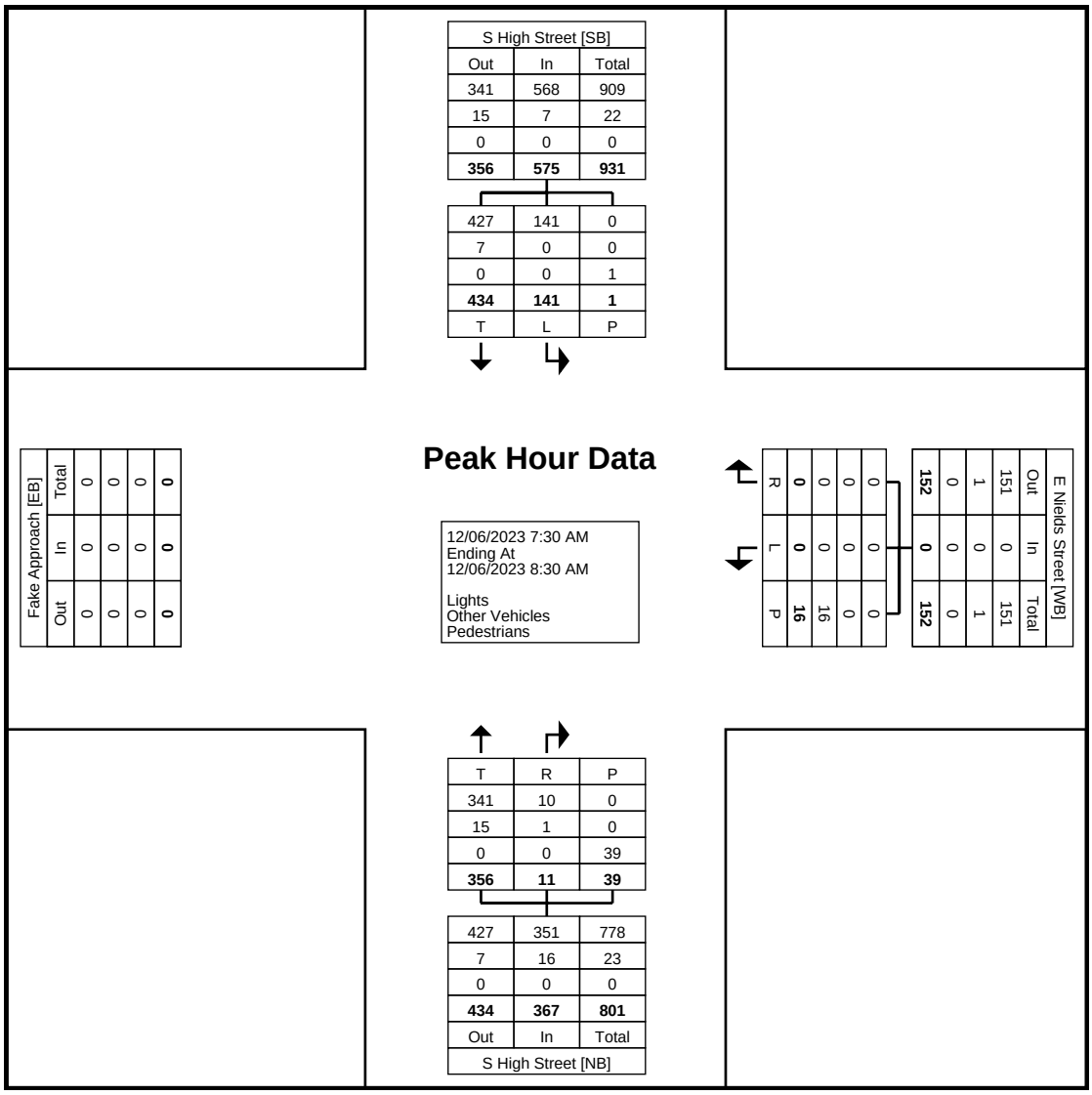
Turning Movement Peak Hour Data (7:30 AM)

Start Time	E Nields Street Westbound				S High Street Northbound				S High Street Southbound				
	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
7:30 AM	0	0	4	0	96	2	7	98	29	119	0	148	246
7:45 AM	0	0	7	0	90	4	25	94	53	134	0	187	281
8:00 AM	0	0	0	0	88	2	3	90	34	107	0	141	231
8:15 AM	0	0	5	0	82	3	4	85	25	74	1	99	184
Total	0	0	16	0	356	11	39	367	141	434	1	575	942
Approach %	0.0	0.0	-	-	97.0	3.0	-	-	24.5	75.5	-	-	-
Total %	0.0	0.0	-	0.0	37.8	1.2	-	39.0	15.0	46.1	-	61.0	-
PHF	0.000	0.000	-	0.000	0.927	0.688	-	0.936	0.665	0.810	-	0.769	0.838
Lights	0	0	-	0	341	10	-	351	141	427	-	568	919
% Lights	-	-	-	-	95.8	90.9	-	95.6	100.0	98.4	-	98.8	97.6
Other Vehicles	0	0	-	0	15	1	-	16	0	7	-	7	23
% Other Vehicles	-	-	-	-	4.2	9.1	-	4.4	0.0	1.6	-	1.2	2.4
Pedestrians	-	-	16	-	-	-	39	-	-	-	1	-	-
% Pedestrians	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (6) AM/PM South High Street x East Nields Street
Site Code:
Start Date: 12/06/2023



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

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (6) AM/PM South High Street x East Nields Street
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (3:45 PM)

Start Time	E Nields Street Westbound				S High Street Northbound				S High Street Southbound				
	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
3:45 PM	0	0	14	0	137	5	9	142	25	110	0	135	277
4:00 PM	0	0	13	0	124	6	23	130	44	119	1	163	293
4:15 PM	0	0	18	0	136	18	42	154	36	136	2	172	326
4:30 PM	0	0	6	0	142	3	8	145	33	136	0	169	314
Total	0	0	51	0	539	32	82	571	138	501	3	639	1210
Approach %	0.0	0.0	-	-	94.4	5.6	-	-	21.6	78.4	-	-	-
Total %	0.0	0.0	-	0.0	44.5	2.6	-	47.2	11.4	41.4	-	52.8	-
PHF	0.000	0.000	-	0.000	0.949	0.444	-	0.927	0.784	0.921	-	0.929	0.928
Lights	0	0	-	0	524	31	-	555	138	497	-	635	1190
% Lights	-	-	-	-	97.2	96.9	-	97.2	100.0	99.2	-	99.4	98.3
Other Vehicles	0	0	-	0	15	1	-	16	0	4	-	4	20
% Other Vehicles	-	-	-	-	2.8	3.1	-	2.8	0.0	0.8	-	0.6	1.7
Pedestrians	-	-	51	-	-	-	82	-	-	-	3	-	-
% Pedestrians	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-

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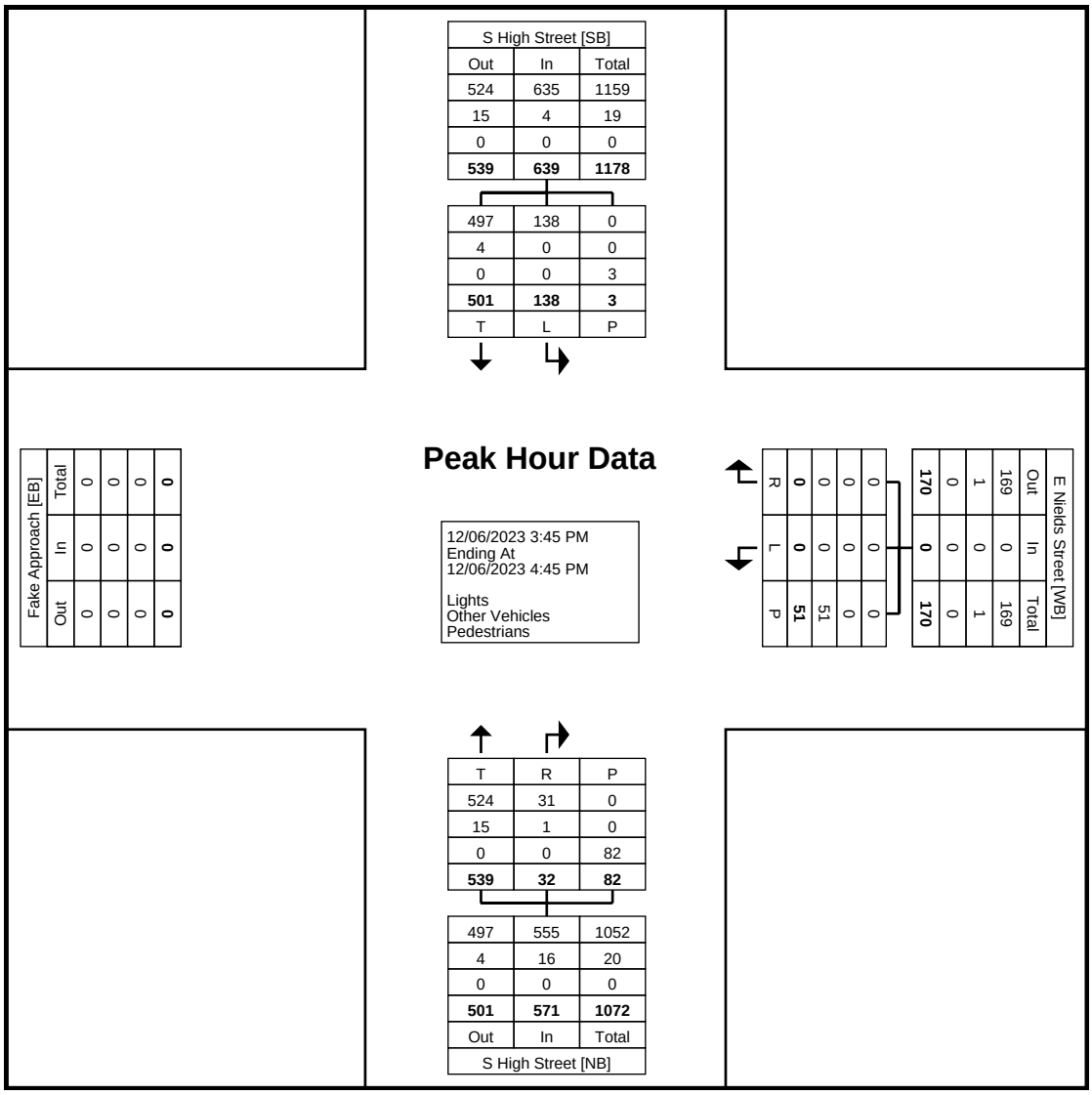
Counter: MIO:
Set up by: KY:

Count Name: (6) AM/PM South High Street x East Nields Street
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (3:45 PM)

Counter: MIO:
Set up by: KY:

Traffic Planning and Design, Inc
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Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Count Name: (7) AM/PM South High Street x University Ave
Site Code:
Start Date: 12/06/2023

Turning Movement Data

Start Time	University Ave Eastbound				S High Street Northbound				S High Street Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	0	1	0	4	63	2	67	68	0	0	68	135
7:15 AM	0	0	8	0	12	62	2	74	95	2	0	97	171
7:30 AM	0	0	14	0	12	99	10	111	115	2	3	117	228
7:45 AM	0	0	15	0	13	93	12	106	128	3	8	131	237
Hourly Total	0	0	38	0	41	317	26	358	406	7	11	413	771
8:00 AM	0	0	7	0	12	96	7	108	97	5	0	102	210
8:15 AM	0	0	4	0	13	86	3	99	73	1	6	74	173
8:30 AM	0	0	19	0	10	114	3	124	85	2	1	87	211
8:45 AM	0	0	60	0	22	98	13	120	89	3	17	92	212
Hourly Total	0	0	90	0	57	394	26	451	344	11	24	355	806
9:00 AM	0	0	16	0	13	110	6	123	81	4	8	85	208
9:15 AM	0	0	22	0	9	81	8	90	65	1	6	66	156
9:30 AM	0	0	20	0	16	99	9	115	75	3	2	78	193
9:45 AM	0	0	70	0	22	116	20	138	80	4	21	84	222
Hourly Total	0	0	128	0	60	406	43	466	301	12	37	313	779
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	0	36	0	6	129	16	135	115	2	11	117	252
3:15 PM	0	0	15	0	4	116	9	120	94	2	13	96	216
3:30 PM	0	0	13	0	8	131	2	139	88	2	9	90	229
3:45 PM	0	0	21	0	9	146	11	155	102	3	3	105	260
Hourly Total	0	0	85	0	27	522	38	549	399	9	36	408	957
4:00 PM	0	0	40	0	26	132	13	158	107	8	16	115	273
4:15 PM	0	0	57	0	28	148	12	176	130	6	21	136	312
4:30 PM	0	0	15	0	14	144	18	158	141	2	6	143	301
4:45 PM	0	0	8	0	7	128	14	135	98	0	5	98	233
Hourly Total	0	0	120	0	75	552	57	627	476	16	48	492	1119
5:00 PM	0	0	10	0	8	143	16	151	99	1	6	100	251
5:15 PM	0	0	21	0	3	153	16	156	114	3	3	117	273
5:30 PM	0	0	14	0	10	133	21	143	92	5	8	97	240
5:45 PM	0	0	4	0	6	150	4	156	90	2	6	92	248
Hourly Total	0	0	49	0	27	579	57	606	395	11	23	406	1012
Grand Total	0	0	510	0	287	2770	247	3057	2321	66	179	2387	5444
Approach %	0.0	0.0	-	-	9.4	90.6	-	-	97.2	2.8	-	-	-
Total %	0.0	0.0	-	0.0	5.3	50.9	-	56.2	42.6	1.2	-	43.8	-
Lights	0	0	-	0	279	2687	-	2966	2268	65	-	2333	5299
% Lights	-	-	-	-	97.2	97.0	-	97.0	97.7	98.5	-	97.7	97.3
Other Vehicles	0	0	-	0	8	83	-	91	53	1	-	54	145
% Other Vehicles	-	-	-	-	2.8	3.0	-	3.0	2.3	1.5	-	2.3	2.7
Pedestrians	-	-	510	-	-	-	247	-	-	-	179	-	-
% Pedestrians	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-

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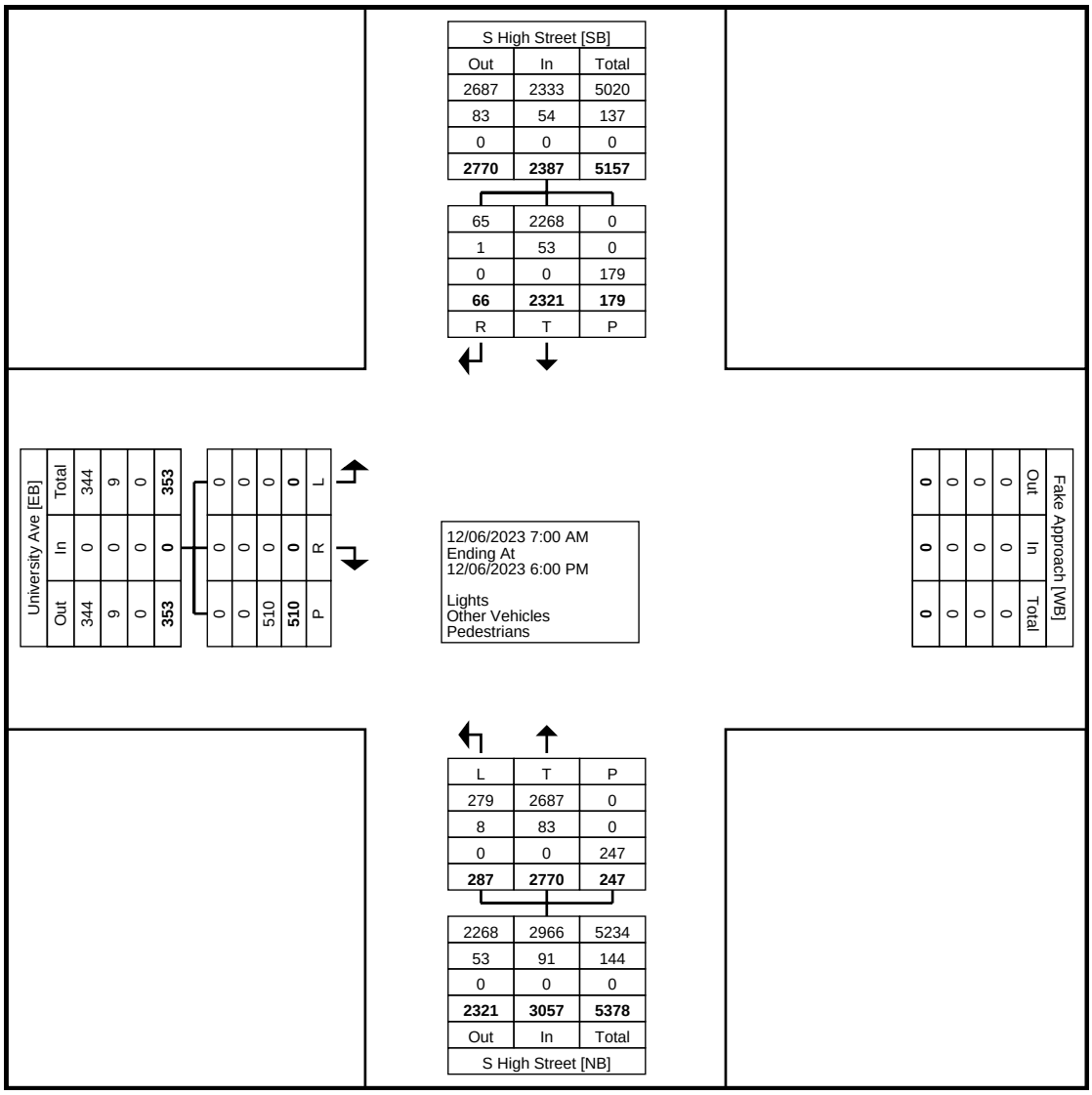
Counter: MIO:
Set up by: KY:

Count Name: (7) AM/PM South High Street x University Ave
Site Code:
Start Date: 12/06/2023



Turning Movement Data Plot

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2500 East High Street
Suite 650
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Counter: MIO:
Set up by: KY:

Count Name: (7) AM/PM South High Street x University Ave
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (7:30 AM)

Start Time	University Ave Eastbound				S High Street Northbound				S High Street Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
7:30 AM	0	0	14	0	12	99	10	111	115	2	3	117	228
7:45 AM	0	0	15	0	13	93	12	106	128	3	8	131	237
8:00 AM	0	0	7	0	12	96	7	108	97	5	0	102	210
8:15 AM	0	0	4	0	13	86	3	99	73	1	6	74	173
Total	0	0	40	0	50	374	32	424	413	11	17	424	848
Approach %	0.0	0.0	-	-	11.8	88.2	-	-	97.4	2.6	-	-	-
Total %	0.0	0.0	-	0.0	5.9	44.1	-	50.0	48.7	1.3	-	50.0	-
PHF	0.000	0.000	-	0.000	0.962	0.944	-	0.955	0.807	0.550	-	0.809	0.895
Lights	0	0	-	0	47	356	-	403	408	11	-	419	822
% Lights	-	-	-	-	94.0	95.2	-	95.0	98.8	100.0	-	98.8	96.9
Other Vehicles	0	0	-	0	3	18	-	21	5	0	-	5	26
% Other Vehicles	-	-	-	-	6.0	4.8	-	5.0	1.2	0.0	-	1.2	3.1
Pedestrians	-	-	40	-	-	-	32	-	-	-	17	-	-
% Pedestrians	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-

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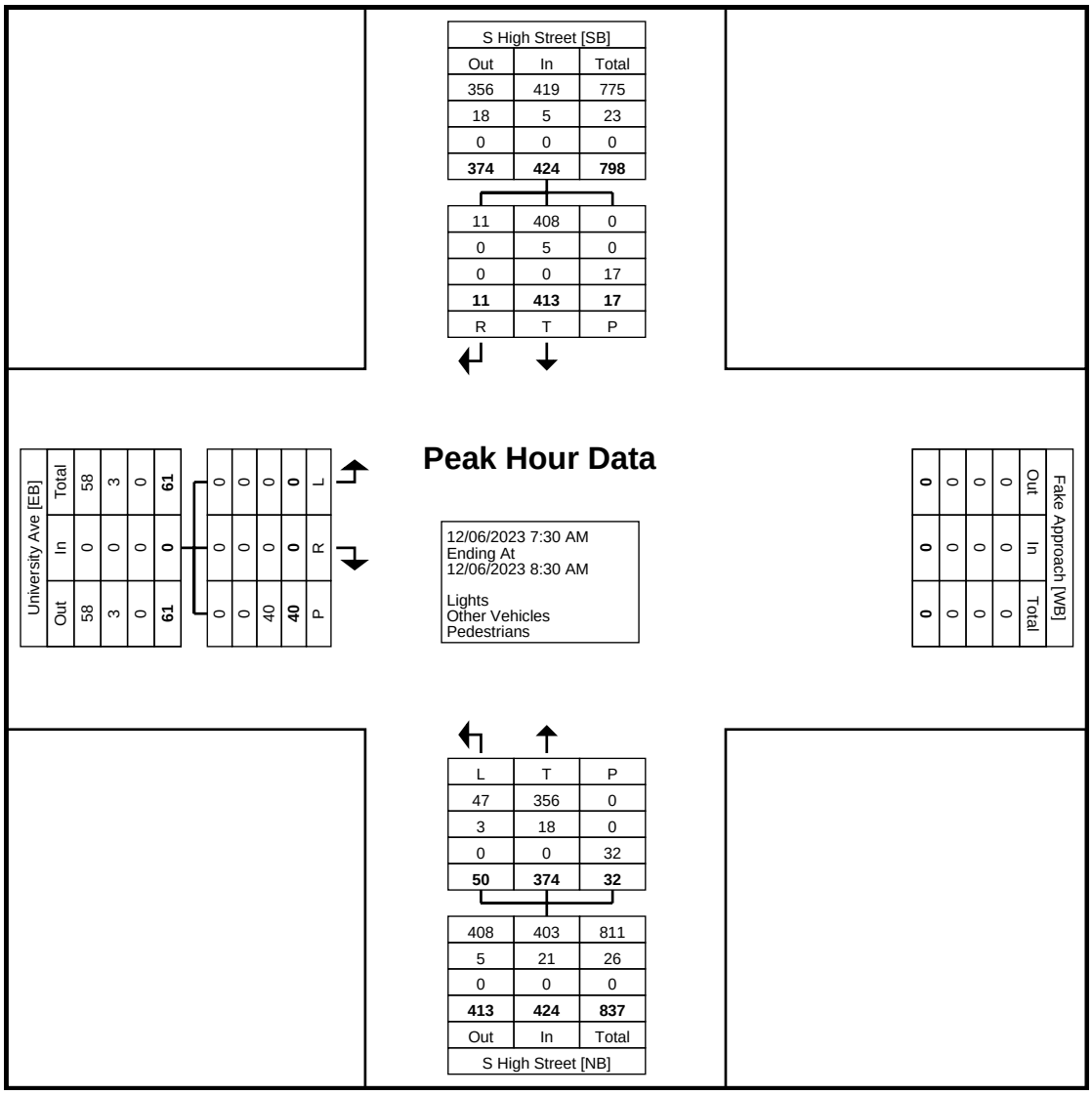
Counter: MIO:
Set up by: KY:

Count Name: (7) AM/PM South High Street x University Ave
Site Code:
Start Date: 12/06/2023
Page No: 4



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

Traffic Planning and Design, Inc
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Suite 650
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610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (7) AM/PM South High Street x University Ave
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (3:45 PM)

Start Time	University Ave Eastbound				S High Street Northbound				S High Street Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
3:45 PM	0	0	21	0	9	146	11	155	102	3	3	105	260
4:00 PM	0	0	40	0	26	132	13	158	107	8	16	115	273
4:15 PM	0	0	57	0	28	148	12	176	130	6	21	136	312
4:30 PM	0	0	15	0	14	144	18	158	141	2	6	143	301
Total	0	0	133	0	77	570	54	647	480	19	46	499	1146
Approach %	0.0	0.0	-	-	11.9	88.1	-	-	96.2	3.8	-	-	-
Total %	0.0	0.0	-	0.0	6.7	49.7	-	56.5	41.9	1.7	-	43.5	-
PHF	0.000	0.000	-	0.000	0.688	0.963	-	0.919	0.851	0.594	-	0.872	0.918
Lights	0	0	-	0	75	555	-	630	477	19	-	496	1126
% Lights	-	-	-	-	97.4	97.4	-	97.4	99.4	100.0	-	99.4	98.3
Other Vehicles	0	0	-	0	2	15	-	17	3	0	-	3	20
% Other Vehicles	-	-	-	-	2.6	2.6	-	2.6	0.6	0.0	-	0.6	1.7
Pedestrians	-	-	133	-	-	-	54	-	-	-	46	-	-
% Pedestrians	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-

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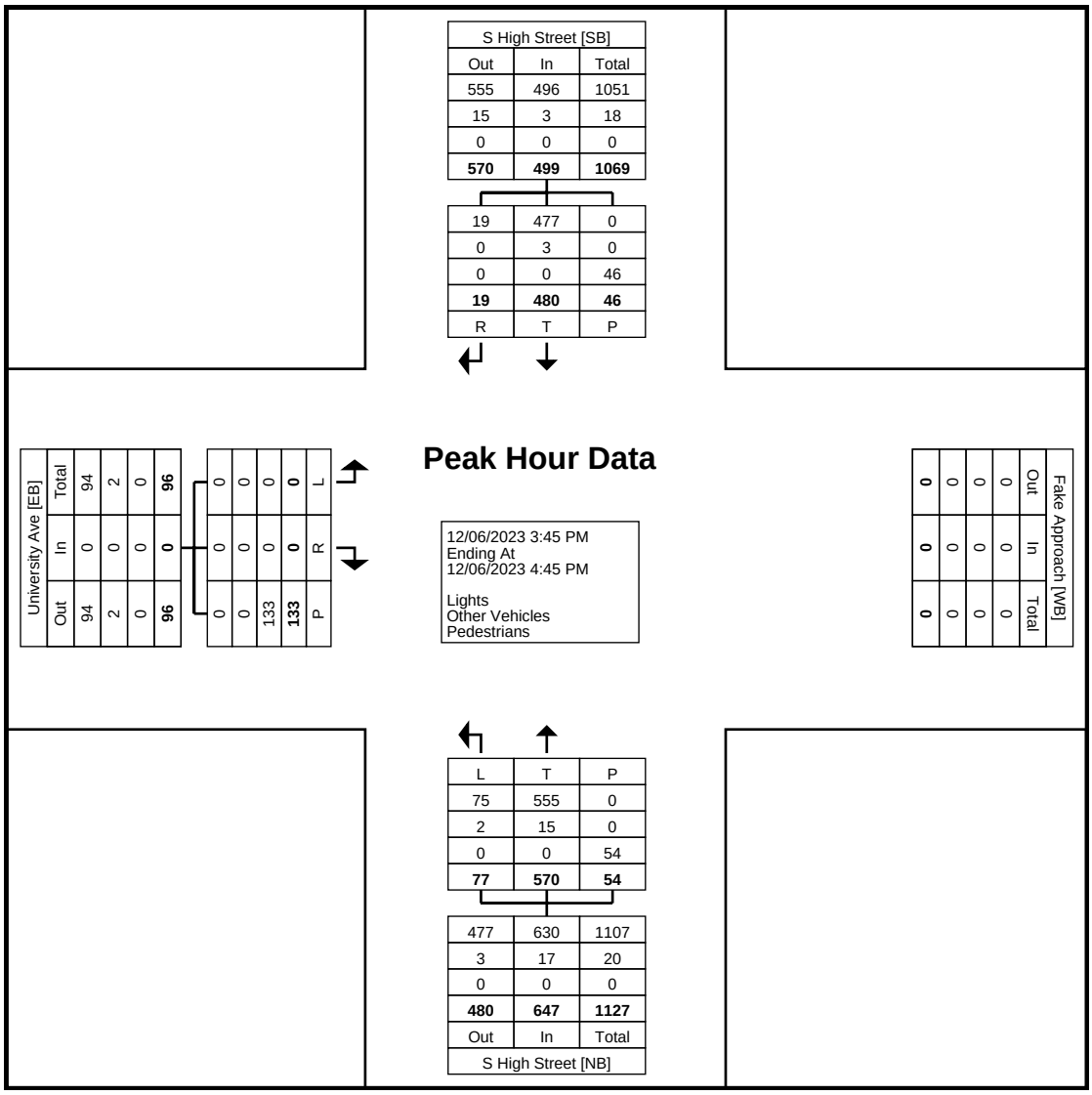
Counter: MIO:
Set up by: KY:

Count Name: (7) AM/PM South High Street x University Ave
Site Code:
Start Date: 12/06/2023
Page No: 6



Turning Movement Peak Hour Data Plot (3:45 PM)

Counter: MIO:
Set up by: KY:

Traffic Planning and Design, Inc
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610.326.3100 kyoung@trafficpd.com

Count Name: (8) AM/PM
Reynolds Alley x University Ave
Site Code:
Start Date: 12/06/2023

Turning Movement Data

Start Time	University Ave Eastbound				University Ave Westbound				Reynolds Alley Southbound				
	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	1	4	0	5	0	0	0	0	5
7:15 AM	0	0	0	0	3	11	2	14	0	0	1	0	14
7:30 AM	0	0	0	0	10	7	2	17	0	1	13	1	18
7:45 AM	0	0	0	0	15	3	3	18	0	1	21	1	19
Hourly Total	0	0	0	0	29	25	7	54	0	2	35	2	56
8:00 AM	0	0	3	0	10	5	0	15	0	2	9	2	17
8:15 AM	0	0	0	0	9	4	0	13	0	0	7	0	13
8:30 AM	0	0	1	0	6	6	0	12	0	0	5	0	12
8:45 AM	0	0	1	0	13	5	0	18	0	0	38	0	18
Hourly Total	0	0	5	0	38	20	0	58	0	2	59	2	60
9:00 AM	0	0	1	0	13	2	0	15	0	0	8	0	15
9:15 AM	0	0	0	0	8	2	1	10	0	0	11	0	10
9:30 AM	0	0	1	0	14	0	1	14	0	0	7	0	14
9:45 AM	0	0	7	0	25	3	5	28	0	1	42	1	29
Hourly Total	0	0	9	0	60	7	7	67	0	1	68	1	68
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	0	2	0	6	3	4	9	0	1	13	1	10
3:15 PM	0	0	0	0	6	2	3	8	0	1	8	1	9
3:30 PM	0	0	0	0	8	3	1	11	0	0	11	0	11
3:45 PM	0	0	0	0	8	2	1	10	0	0	5	0	10
Hourly Total	0	0	2	0	28	10	9	38	0	2	37	2	40
4:00 PM	0	0	2	0	23	6	3	29	0	1	27	1	30
4:15 PM	0	0	1	0	29	4	3	33	0	1	28	1	34
4:30 PM	0	0	0	0	18	0	1	18	0	2	14	2	20
4:45 PM	0	0	0	0	6	1	1	7	0	0	8	0	7
Hourly Total	0	0	3	0	76	11	8	87	0	4	77	4	91
5:00 PM	0	0	0	0	9	0	2	9	0	0	10	0	9
5:15 PM	0	0	0	0	5	0	1	5	0	1	12	1	6
5:30 PM	0	0	0	0	14	2	0	16	0	0	12	0	16
5:45 PM	0	0	0	0	8	0	0	8	0	2	8	2	10
Hourly Total	0	0	0	0	36	2	3	38	0	3	42	3	41
Grand Total	0	0	19	0	267	75	34	342	0	14	318	14	356
Approach %	0.0	0.0	-	-	78.1	21.9	-	-	0.0	100.0	-	-	-
Total %	0.0	0.0	-	0.0	75.0	21.1	-	96.1	0.0	3.9	-	3.9	-
Lights	0	0	-	0	259	74	-	333	0	13	-	13	346
% Lights	-	-	-	-	97.0	98.7	-	97.4	-	92.9	-	92.9	97.2
Other Vehicles	0	0	-	0	8	1	-	9	0	1	-	1	10
% Other Vehicles	-	-	-	-	3.0	1.3	-	2.6	-	7.1	-	7.1	2.8
Pedestrians	-	-	19	-	-	-	34	-	-	-	318	-	-
% Pedestrians	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-

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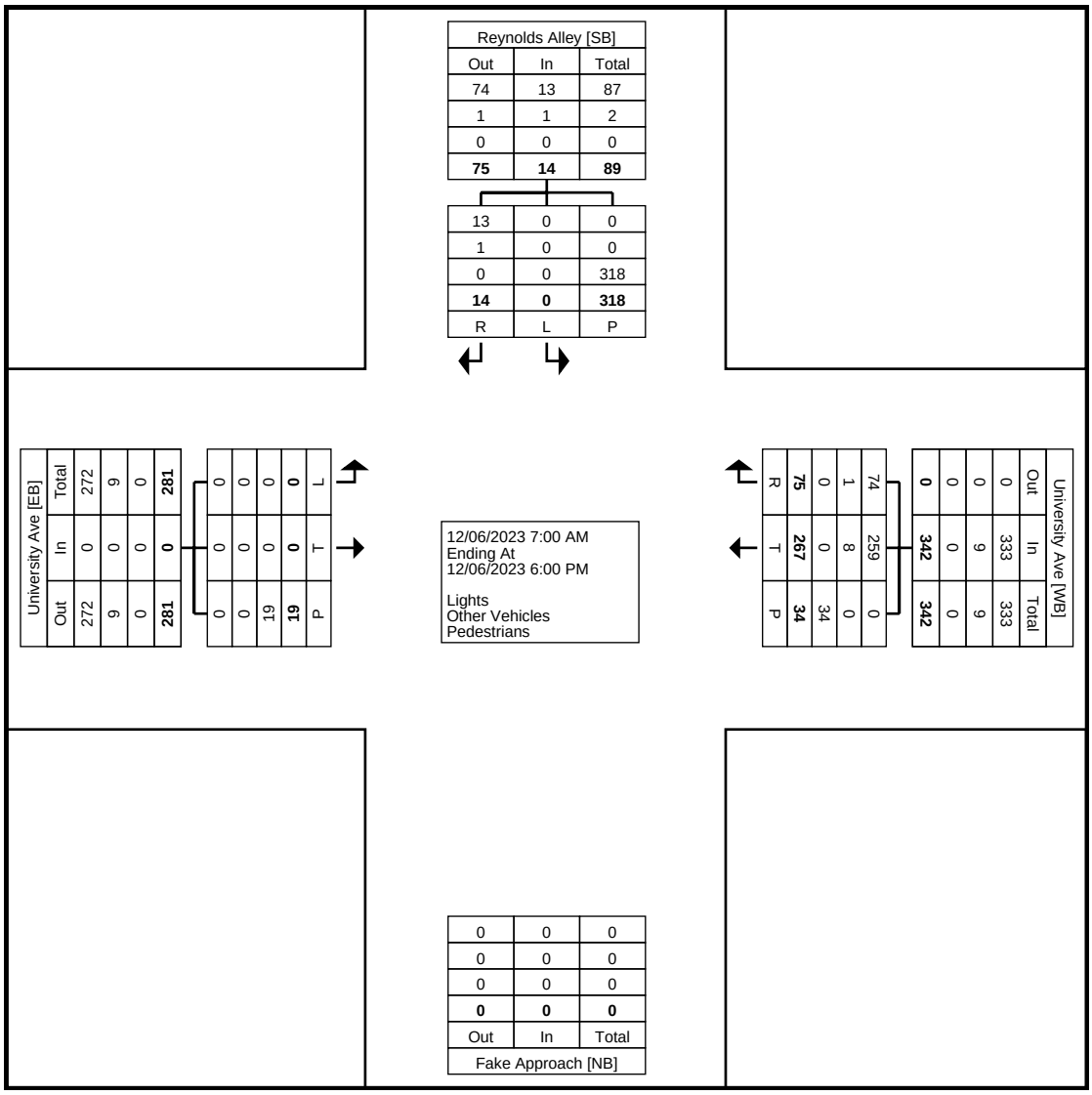
Counter: MIO:
Set up by: KY:

Count Name: (8) AM/PM
Reynolds Alley x University Ave
Site Code:
Start Date: 12/06/2023
Page No: 2



Turning Movement Data Plot

Counter: MIO:
Set up by: KY:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
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610.326.3100 kyoung@trafficpd.com

Count Name: (8) AM/PM
Reynolds Alley x University Ave
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (7:15 AM)

Start Time	University Ave Eastbound				University Ave Westbound				Reynolds Alley Southbound				
	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
7:15 AM	0	0	0	0	3	11	2	14	0	0	1	0	14
7:30 AM	0	0	0	0	10	7	2	17	0	1	13	1	18
7:45 AM	0	0	0	0	15	3	3	18	0	1	21	1	19
8:00 AM	0	0	3	0	10	5	0	15	0	2	9	2	17
Total	0	0	3	0	38	26	7	64	0	4	44	4	68
Approach %	0.0	0.0	-	-	59.4	40.6	-	-	0.0	100.0	-	-	-
Total %	0.0	0.0	-	0.0	55.9	38.2	-	94.1	0.0	5.9	-	5.9	-
PHF	0.000	0.000	-	0.000	0.633	0.591	-	0.889	0.000	0.500	-	0.500	0.895
Lights	0	0	-	0	37	26	-	63	0	3	-	3	66
% Lights	-	-	-	-	97.4	100.0	-	98.4	-	75.0	-	75.0	97.1
Other Vehicles	0	0	-	0	1	0	-	1	0	1	-	1	2
% Other Vehicles	-	-	-	-	2.6	0.0	-	1.6	-	25.0	-	25.0	2.9
Pedestrians	-	-	3	-	-	-	7	-	-	-	44	-	-
% Pedestrians	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-

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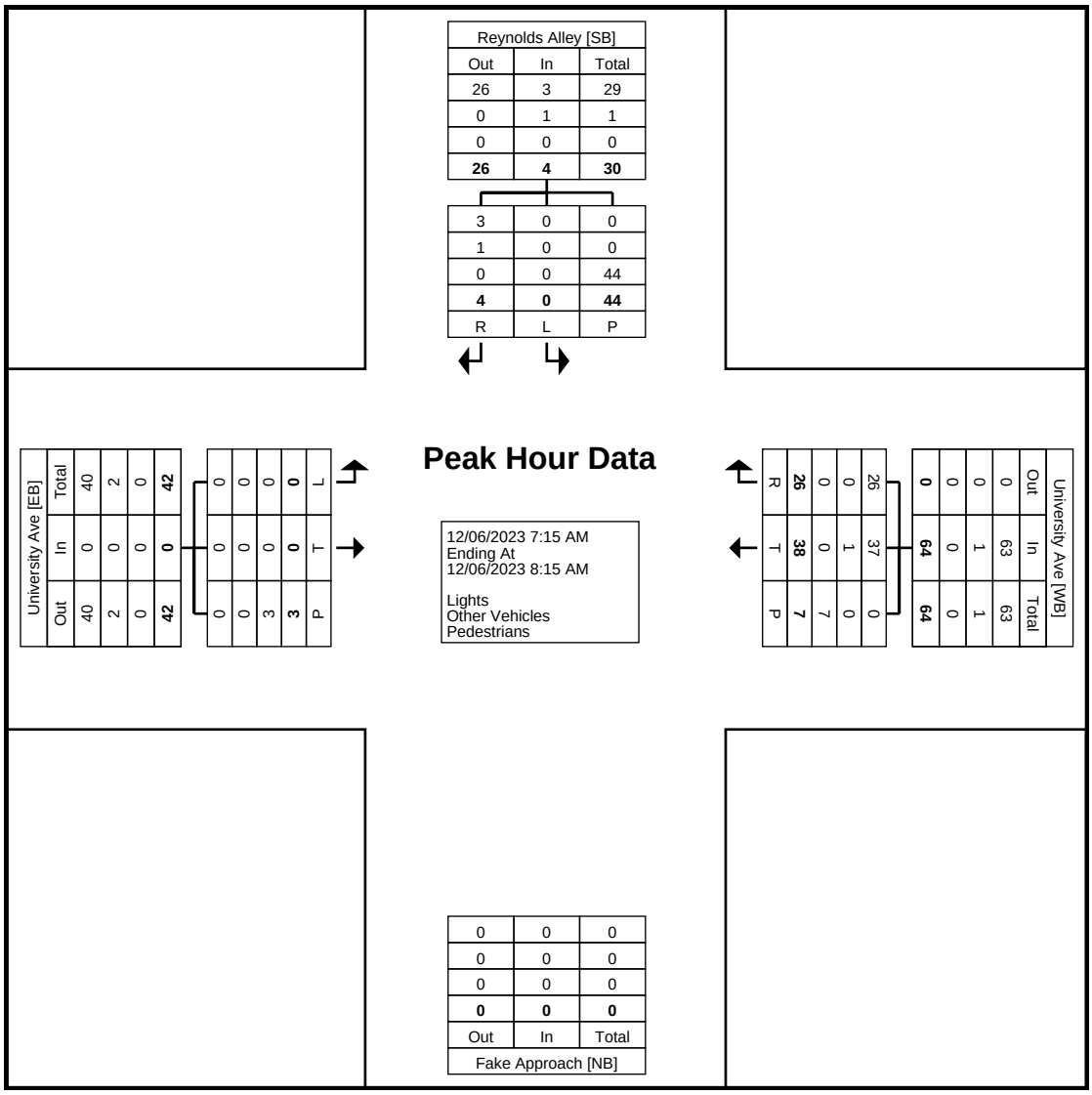
Counter: MIO:
Set up by: KY:

Count Name: (8) AM/PM
Reynolds Alley x University Ave
Site Code:
Start Date: 12/06/2023
Page No: 4



Turning Movement Peak Hour Data Plot (7:15 AM)

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Suite 650
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Counter: MIO:
Set up by: KY:

Count Name: (8) AM/PM
Reynolds Alley x University Ave
Site Code:
Start Date: 12/06/2023

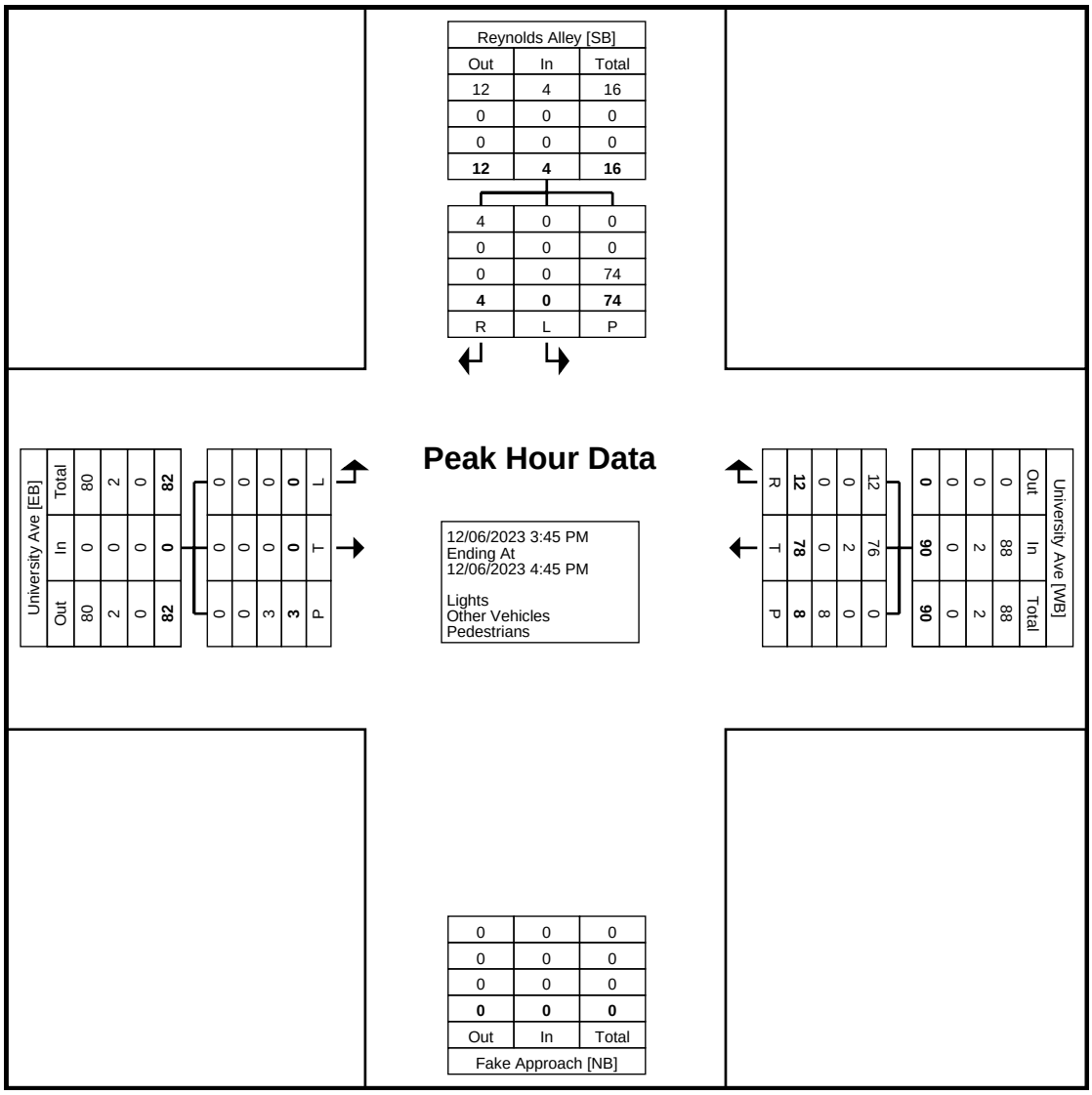
Turning Movement Peak Hour Data (3:45 PM)

Start Time	University Ave Eastbound				University Ave Westbound				Reynolds Alley Southbound				
	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
3:45 PM	0	0	0	0	8	2	1	10	0	0	5	0	10
4:00 PM	0	0	2	0	23	6	3	29	0	1	27	1	30
4:15 PM	0	0	1	0	29	4	3	33	0	1	28	1	34
4:30 PM	0	0	0	0	18	0	1	18	0	2	14	2	20
Total	0	0	3	0	78	12	8	90	0	4	74	4	94
Approach %	0.0	0.0	-	-	86.7	13.3	-	-	0.0	100.0	-	-	-
Total %	0.0	0.0	-	0.0	83.0	12.8	-	95.7	0.0	4.3	-	4.3	-
PHF	0.000	0.000	-	0.000	0.672	0.500	-	0.682	0.000	0.500	-	0.500	0.691
Lights	0	0	-	0	76	12	-	88	0	4	-	4	92
% Lights	-	-	-	-	97.4	100.0	-	97.8	-	100.0	-	100.0	97.9
Other Vehicles	0	0	-	0	2	0	-	2	0	0	-	0	2
% Other Vehicles	-	-	-	-	2.6	0.0	-	2.2	-	0.0	-	0.0	2.1
Pedestrians	-	-	3	-	-	-	8	-	-	-	74	-	-
% Pedestrians	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (8) AM/PM
Reynolds Alley x University Ave
Site Code:
Start Date: 12/06/2023
Page No: 6



Turning Movement Peak Hour Data Plot (3:45 PM)

Counter: MIO:
Set up by: KY:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Count Name: (9) AM/PM Church Street x University Ave
Site Code:
Start Date: 12/06/2023

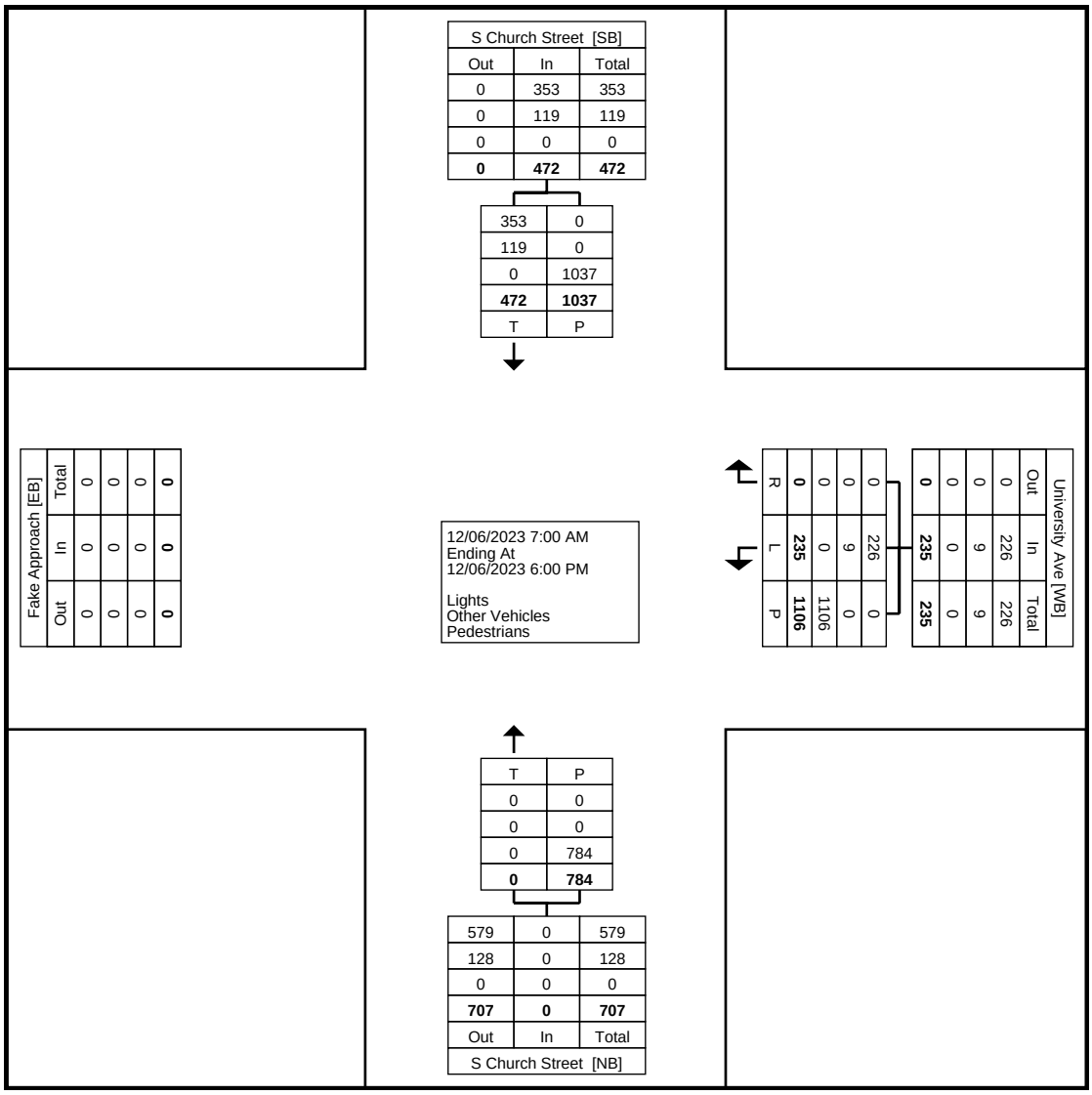
Turning Movement Data

Start Time	University Ave Westbound				S Church Street Northbound			S Church Street Southbound			
	Left	Right	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
7:00 AM	1	0	3	1	0	1	0	5	2	5	6
7:15 AM	2	0	6	2	0	0	0	14	4	14	16
7:30 AM	8	0	13	8	0	9	0	19	12	19	27
7:45 AM	6	0	48	6	0	32	0	18	70	18	24
Hourly Total	17	0	70	17	0	42	0	56	88	56	73
8:00 AM	5	0	24	5	0	14	0	10	26	10	15
8:15 AM	9	0	16	9	0	8	0	10	23	10	19
8:30 AM	6	0	23	6	0	24	0	14	34	14	20
8:45 AM	10	0	146	10	0	90	0	22	164	22	32
Hourly Total	30	0	209	30	0	136	0	56	247	56	86
9:00 AM	10	0	33	10	0	24	0	19	36	19	29
9:15 AM	7	0	25	7	0	25	0	15	39	15	22
9:30 AM	10	0	48	10	0	37	0	19	47	19	29
9:45 AM	22	0	278	22	0	125	0	32	195	32	54
Hourly Total	49	0	384	49	0	211	0	85	317	85	134
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	3	0	42	3	0	38	0	17	27	17	20
3:15 PM	8	0	34	8	0	25	0	20	16	20	28
3:30 PM	6	0	17	6	0	10	0	11	16	11	17
3:45 PM	8	0	38	8	0	28	0	22	26	22	30
Hourly Total	25	0	131	25	0	101	0	70	85	70	95
4:00 PM	20	0	66	20	0	65	0	26	59	26	46
4:15 PM	27	0	76	27	0	62	0	34	68	34	61
4:30 PM	19	0	26	19	0	24	0	29	32	29	48
4:45 PM	6	0	24	6	0	15	0	30	18	30	36
Hourly Total	72	0	192	72	0	166	0	119	177	119	191
5:00 PM	13	0	28	13	0	27	0	18	21	18	31
5:15 PM	4	0	36	4	0	25	0	24	27	24	28
5:30 PM	12	0	36	12	0	45	0	20	41	20	32
5:45 PM	13	0	20	13	0	31	0	24	34	24	37
Hourly Total	42	0	120	42	0	128	0	86	123	86	128
Grand Total	235	0	1106	235	0	784	0	472	1037	472	707
Approach %	100.0	0.0	-	-	0.0	-	-	100.0	-	-	-
Total %	33.2	0.0	-	33.2	0.0	-	0.0	66.8	-	66.8	-
Lights	226	0	-	226	0	-	0	353	-	353	579
% Lights	96.2	-	-	96.2	-	-	-	74.8	-	74.8	81.9
Other Vehicles	9	0	-	9	0	-	0	119	-	119	128
% Other Vehicles	3.8	-	-	3.8	-	-	-	25.2	-	25.2	18.1
Pedestrians	-	-	1106	-	-	784	-	-	1037	-	-
% Pedestrians	-	-	100.0	-	-	100.0	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (9) AM/PM Church Street x University Ave
Site Code:
Start Date: 12/06/2023



Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (9) AM/PM Church Street x University Ave
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (9:00 AM)

Start Time	University Ave Westbound				S Church Street Northbound			S Church Street Southbound			
	Left	Right	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
9:00 AM	10	0	33	10	0	24	0	19	36	19	29
9:15 AM	7	0	25	7	0	25	0	15	39	15	22
9:30 AM	10	0	48	10	0	37	0	19	47	19	29
9:45 AM	22	0	278	22	0	125	0	32	195	32	54
Total	49	0	384	49	0	211	0	85	317	85	134
Approach %	100.0	0.0	-	-	0.0	-	-	100.0	-	-	-
Total %	36.6	0.0	-	36.6	0.0	-	0.0	63.4	-	63.4	-
PHF	0.557	0.000	-	0.557	0.000	-	0.000	0.664	-	0.664	0.620
Lights	48	0	-	48	0	-	0	53	-	53	101
% Lights	98.0	-	-	98.0	-	-	-	62.4	-	62.4	75.4
Other Vehicles	1	0	-	1	0	-	0	32	-	32	33
% Other Vehicles	2.0	-	-	2.0	-	-	-	37.6	-	37.6	24.6
Pedestrians	-	-	384	-	-	211	-	-	317	-	-
% Pedestrians	-	-	100.0	-	-	100.0	-	-	100.0	-	-

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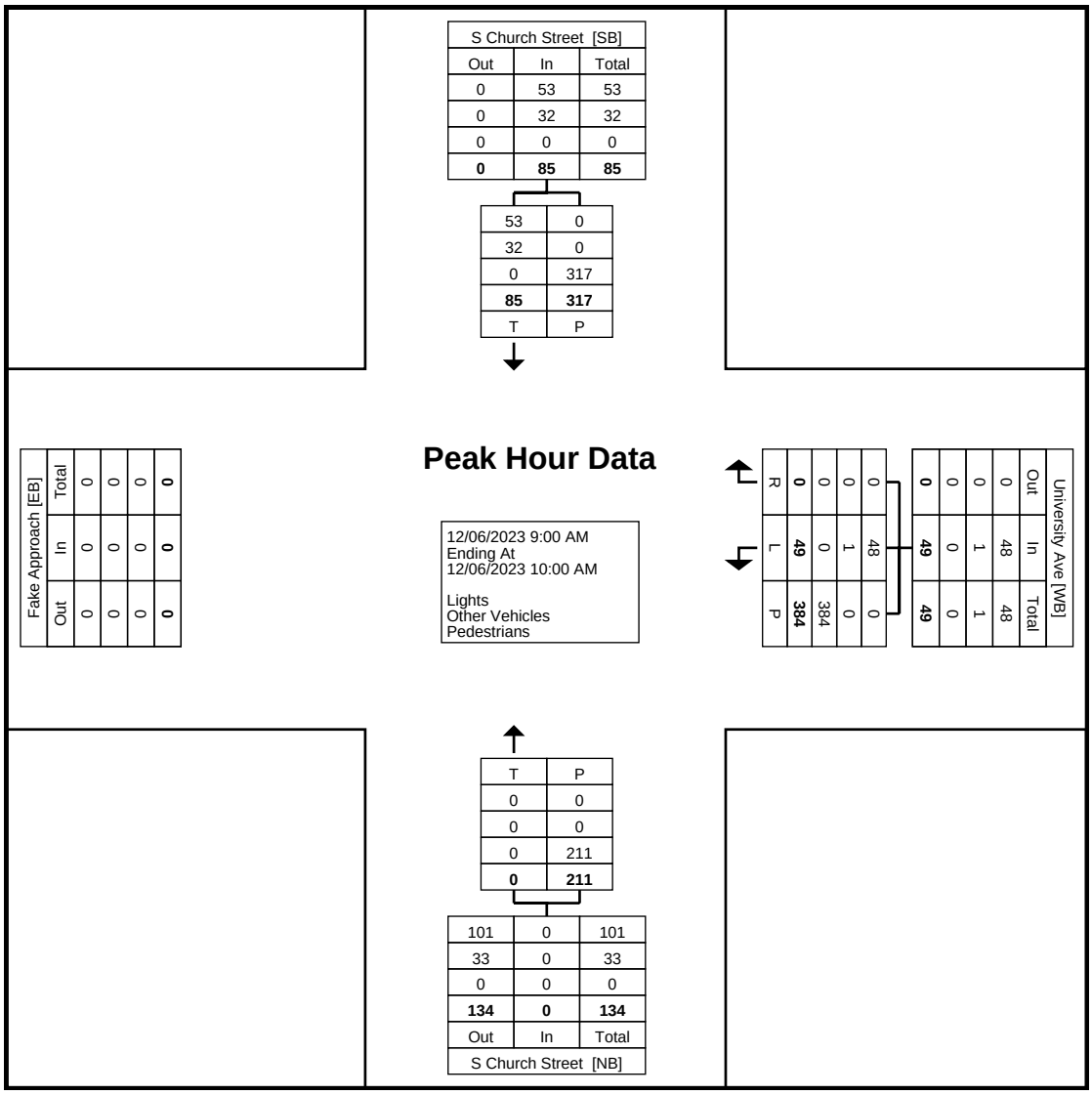
Counter: MIO:
Set up by: KY:

Count Name: (9) AM/PM Church Street x University Ave
Site Code:
Start Date: 12/06/2023
Page No: 4



Turning Movement Peak Hour Data Plot (9:00 AM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (9) AM/PM Church Street x University Ave
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (4:00 PM)

Start Time	University Ave Westbound				S Church Street Northbound			S Church Street Southbound			
	Left	Right	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
4:00 PM	20	0	66	20	0	65	0	26	59	26	46
4:15 PM	27	0	76	27	0	62	0	34	68	34	61
4:30 PM	19	0	26	19	0	24	0	29	32	29	48
4:45 PM	6	0	24	6	0	15	0	30	18	30	36
Total	72	0	192	72	0	166	0	119	177	119	191
Approach %	100.0	0.0	-	-	0.0	-	-	100.0	-	-	-
Total %	37.7	0.0	-	37.7	0.0	-	0.0	62.3	-	62.3	-
PHF	0.667	0.000	-	0.667	0.000	-	0.000	0.875	-	0.875	0.783
Lights	71	0	-	71	0	-	0	99	-	99	170
% Lights	98.6	-	-	98.6	-	-	-	83.2	-	83.2	89.0
Other Vehicles	1	0	-	1	0	-	0	20	-	20	21
% Other Vehicles	1.4	-	-	1.4	-	-	-	16.8	-	16.8	11.0
Pedestrians	-	-	192	-	-	166	-	-	177	-	-
% Pedestrians	-	-	100.0	-	-	100.0	-	-	100.0	-	-

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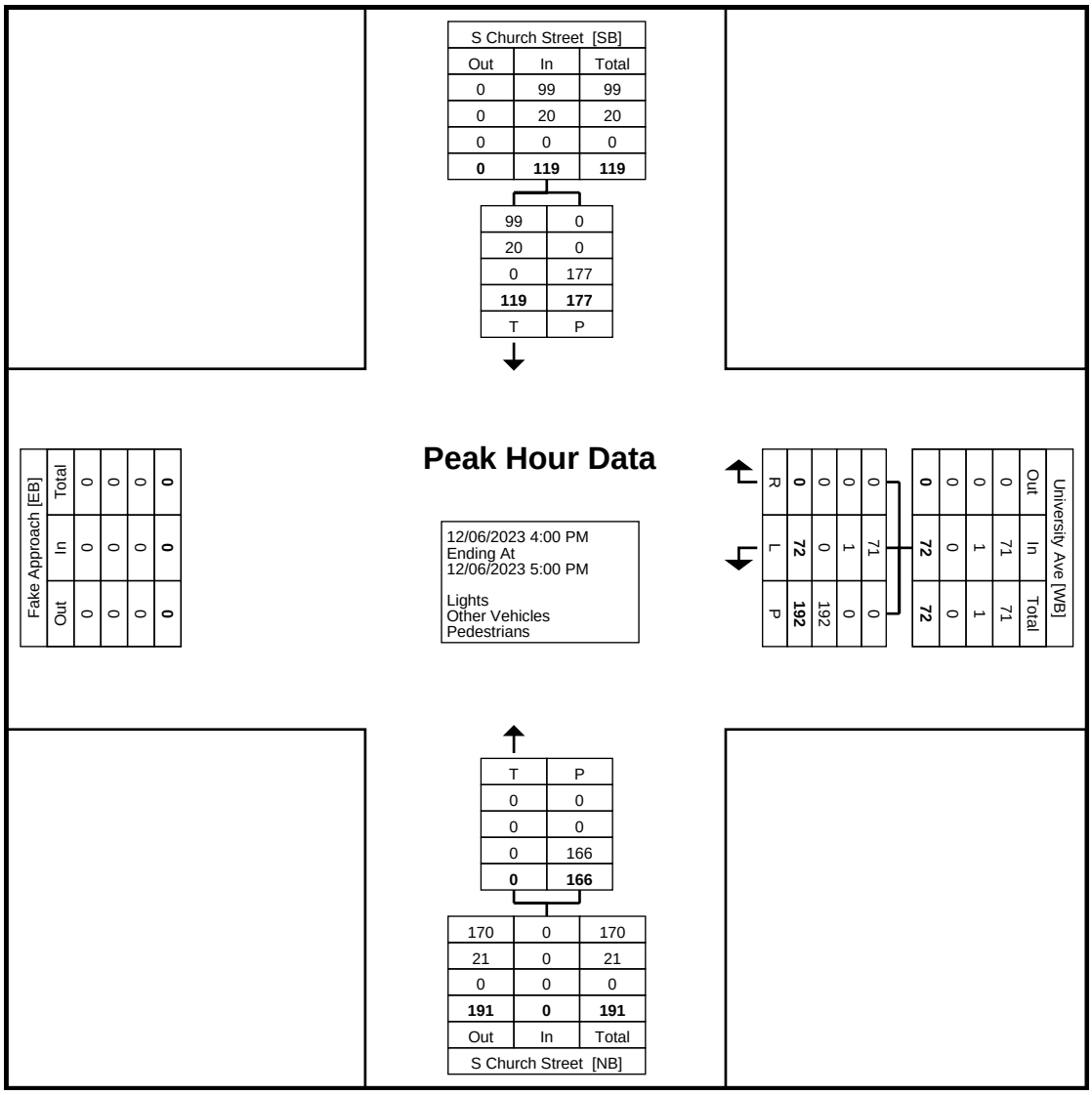
Counter: MIO:
Set up by: KY:

Count Name: (9) AM/PM Church Street x University Ave
Site Code:
Start Date: 12/06/2023
Page No: 6



Turning Movement Peak Hour Data Plot (4:00 PM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (10) AM/PM South High Street x Linden Street
Site Code:
Start Date: 12/06/2023

Turning Movement Data

Start Time	Linden Street Westbound					S High Street Northbound					S High Street Southbound				
	Left	Right	Right on Red	Peds	App. Total	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
7:00 AM	2	3	0	0	5	64	0	0	0	64	0	68	0	68	137
7:15 AM	3	0	4	2	7	70	0	0	0	70	0	83	5	83	160
7:30 AM	3	6	0	5	9	105	0	0	0	105	0	112	10	112	226
7:45 AM	7	3	2	8	12	110	0	0	3	110	1	136	27	137	259
Hourly Total	15	12	6	15	33	349	0	0	3	349	1	399	42	400	782
8:00 AM	5	4	0	11	9	96	0	0	1	96	0	98	10	98	203
8:15 AM	5	6	2	9	13	89	0	0	0	89	0	71	8	71	173
8:30 AM	5	5	0	13	10	115	0	0	2	115	0	82	10	82	207
8:45 AM	6	7	1	25	14	112	0	0	2	112	0	85	55	85	211
Hourly Total	21	22	3	58	46	412	0	0	5	412	0	336	83	336	794
9:00 AM	6	3	0	12	9	117	0	0	3	117	0	85	19	85	211
9:15 AM	2	3	0	7	5	92	0	0	2	92	0	66	13	66	163
9:30 AM	0	1	0	18	1	113	0	0	1	113	0	67	22	67	181
9:45 AM	6	9	3	42	18	120	0	0	4	120	0	85	93	85	223
Hourly Total	14	16	3	79	33	442	0	0	10	442	0	303	147	303	778
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	3	12	2	23	17	122	0	0	9	122	0	106	37	106	245
3:15 PM	6	5	2	19	13	111	0	0	8	111	0	105	28	105	229
3:30 PM	12	9	1	17	22	126	0	0	4	126	0	88	20	88	236
3:45 PM	16	8	3	16	27	144	0	0	5	144	0	105	28	105	276
Hourly Total	37	34	8	75	79	503	0	0	26	503	0	404	113	404	986
4:00 PM	10	15	2	20	27	142	0	0	4	142	0	107	45	107	276
4:15 PM	12	24	2	24	38	152	0	0	2	152	0	128	76	128	318
4:30 PM	12	8	0	19	20	151	0	0	0	151	0	143	35	143	314
4:45 PM	5	15	1	14	21	124	0	0	5	124	0	107	24	107	252
Hourly Total	39	62	5	77	106	569	0	0	11	569	0	485	180	485	1160
5:00 PM	7	12	1	11	20	138	0	0	2	138	0	96	16	96	254
5:15 PM	11	13	2	19	26	138	0	0	0	138	0	109	31	109	273
5:30 PM	8	9	3	11	20	135	0	0	0	135	0	102	21	102	257
5:45 PM	7	10	4	3	21	133	0	0	3	133	0	90	22	90	244
Hourly Total	33	44	10	44	87	544	0	0	5	544	0	397	90	397	1028
Grand Total	159	190	35	348	384	2819	0	0	60	2819	1	2324	655	2325	5528
Approach %	41.4	49.5	9.1	-	-	100.0	0.0	0.0	-	-	0.0	100.0	-	-	-
Total %	2.9	3.4	0.6	-	6.9	51.0	0.0	0.0	-	51.0	0.0	42.0	-	42.1	-
Lights	155	188	35	-	378	2727	0	0	-	2727	1	2269	-	2270	5375
% Lights	97.5	98.9	100.0	-	98.4	96.7	-	-	-	96.7	100.0	97.6	-	97.6	97.2
Other Vehicles	4	2	0	-	6	92	0	0	-	92	0	55	-	55	153
% Other Vehicles	2.5	1.1	0.0	-	1.6	3.3	-	-	-	3.3	0.0	2.4	-	2.4	2.8
Pedestrians	-	-	-	348	-	-	-	-	60	-	-	-	655	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
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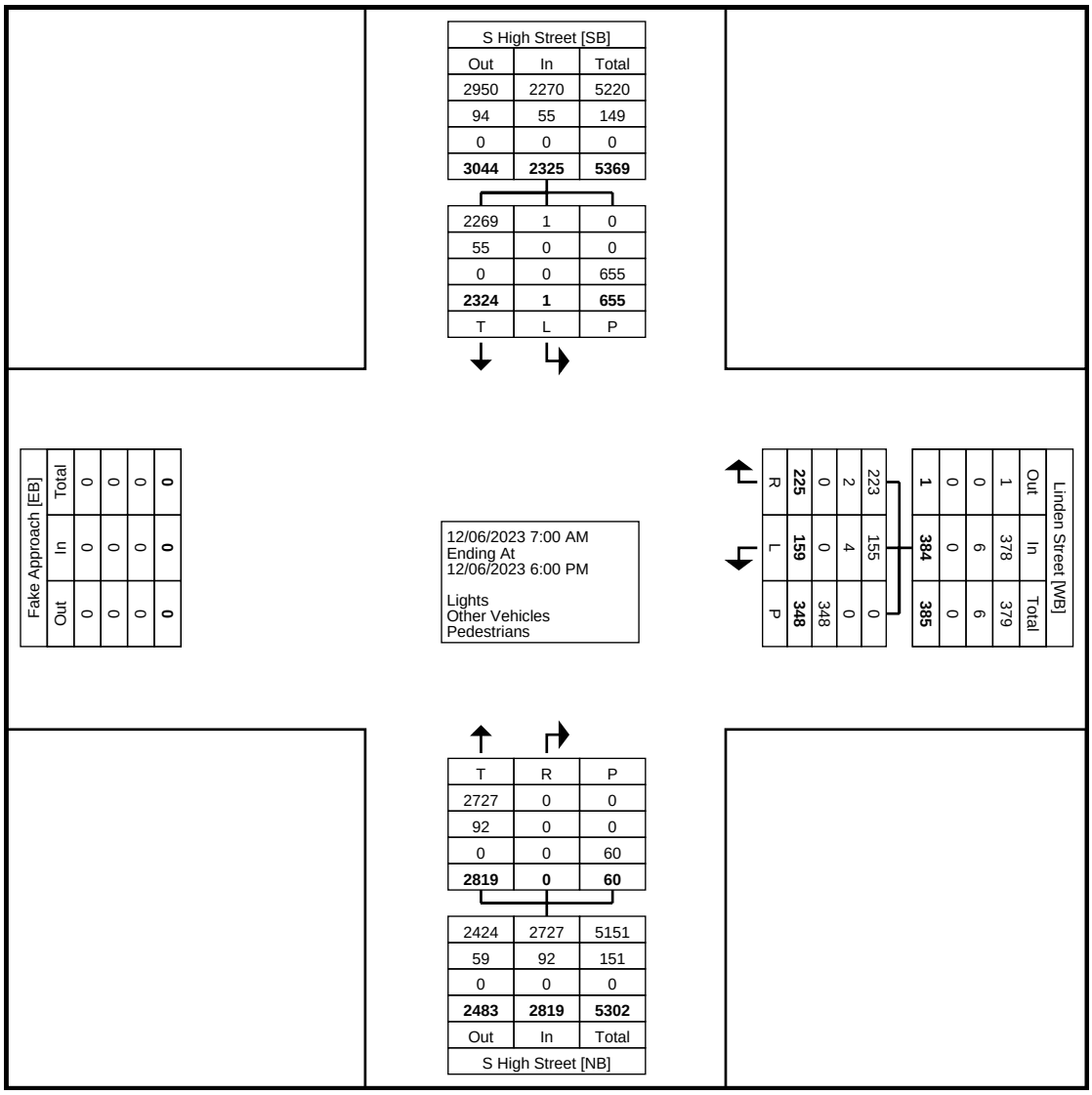
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (10) AM/PM South High Street x Linden Street
Site Code:
Start Date: 12/06/2023



Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (10) AM/PM South High Street x Linden Street
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Linden Street Westbound					S High Street Northbound					S High Street Southbound				
	Left	Right	Right on Red	Peds	App. Total	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
7:30 AM	3	6	0	5	9	105	0	0	0	105	0	112	10	112	226
7:45 AM	7	3	2	8	12	110	0	0	3	110	1	136	27	137	259
8:00 AM	5	4	0	11	9	96	0	0	1	96	0	98	10	98	203
8:15 AM	5	6	2	9	13	89	0	0	0	89	0	71	8	71	173
Total	20	19	4	33	43	400	0	0	4	400	1	417	55	418	861
Approach %	46.5	44.2	9.3	-	-	100.0	0.0	0.0	-	-	0.2	99.8	-	-	-
Total %	2.3	2.2	0.5	-	5.0	46.5	0.0	0.0	-	46.5	0.1	48.4	-	48.5	-
PHF	0.714	0.792	0.500	-	0.827	0.909	0.000	0.000	-	0.909	0.250	0.767	-	0.763	0.831
Lights	18	18	4	-	40	381	0	0	-	381	1	409	-	410	831
% Lights	90.0	94.7	100.0	-	93.0	95.3	-	-	-	95.3	100.0	98.1	-	98.1	96.5
Other Vehicles	2	1	0	-	3	19	0	0	-	19	0	8	-	8	30
% Other Vehicles	10.0	5.3	0.0	-	7.0	4.8	-	-	-	4.8	0.0	1.9	-	1.9	3.5
Pedestrians	-	-	-	33	-	-	-	-	4	-	-	-	55	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	100.0	-	-

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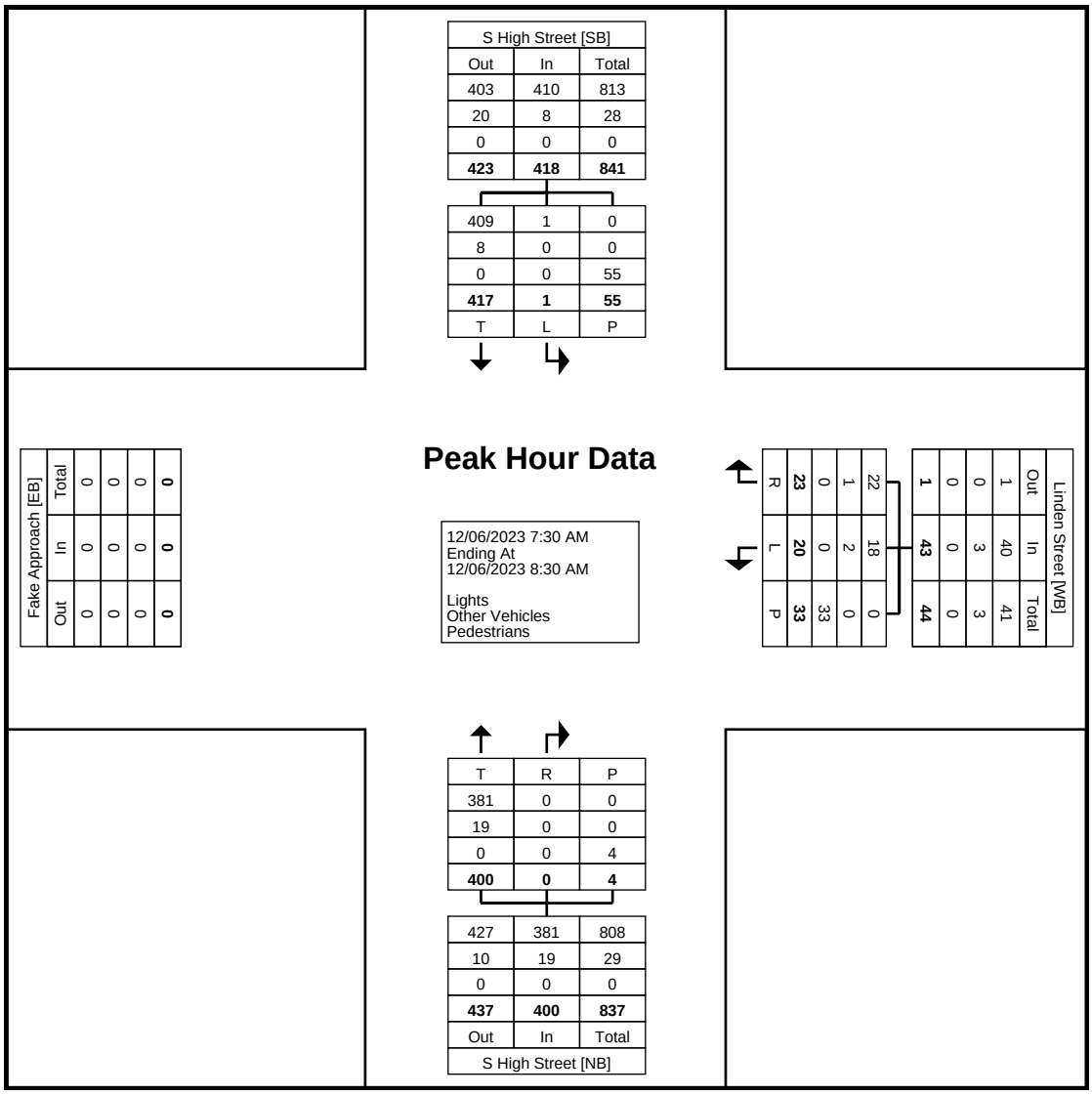
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (10) AM/PM South High Street x Linden Street
Site Code:
Start Date: 12/06/2023
Page No: 4



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

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (10) AM/PM South High Street x Linden Street
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (3:45 PM)

Start Time	Linden Street Westbound					S High Street Northbound					S High Street Southbound				
	Left	Right	Right on Red	Peds	App. Total	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
3:45 PM	16	8	3	16	27	144	0	0	5	144	0	105	28	105	276
4:00 PM	10	15	2	20	27	142	0	0	4	142	0	107	45	107	276
4:15 PM	12	24	2	24	38	152	0	0	2	152	0	128	76	128	318
4:30 PM	12	8	0	19	20	151	0	0	0	151	0	143	35	143	314
Total	50	55	7	79	112	589	0	0	11	589	0	483	184	483	1184
Approach %	44.6	49.1	6.3	-	-	100.0	0.0	0.0	-	-	0.0	100.0	-	-	-
Total %	4.2	4.6	0.6	-	9.5	49.7	0.0	0.0	-	49.7	0.0	40.8	-	40.8	-
PHF	0.781	0.573	0.583	-	0.737	0.969	0.000	0.000	-	0.969	0.000	0.844	-	0.844	0.931
Lights	50	55	7	-	112	570	0	0	-	570	0	477	-	477	1159
% Lights	100.0	100.0	100.0	-	100.0	96.8	-	-	-	96.8	-	98.8	-	98.8	97.9
Other Vehicles	0	0	0	-	0	19	0	0	-	19	0	6	-	6	25
% Other Vehicles	0.0	0.0	0.0	-	0.0	3.2	-	-	-	3.2	-	1.2	-	1.2	2.1
Pedestrians	-	-	-	79	-	-	-	-	11	-	-	-	184	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	100.0	-	-

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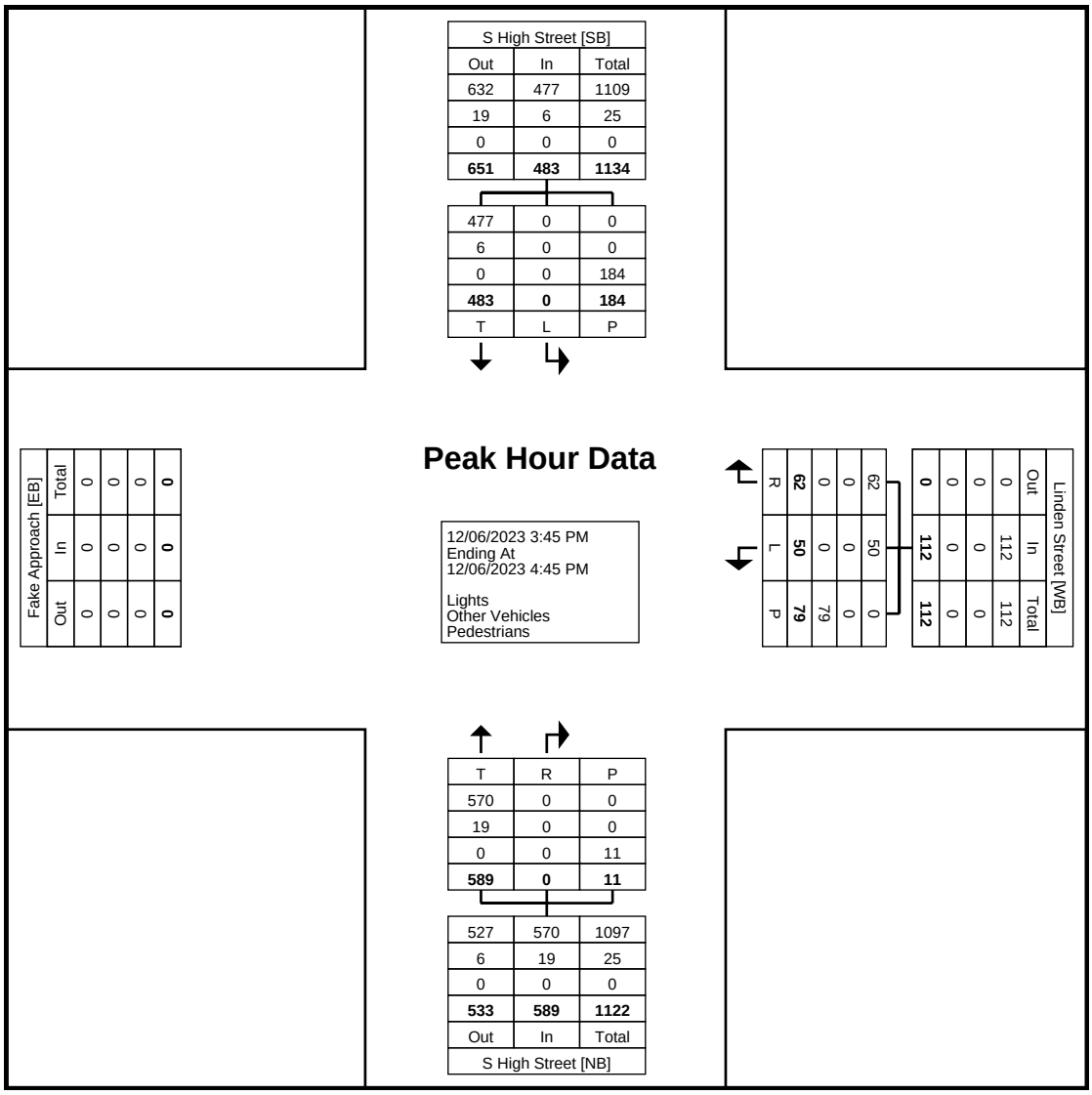
Counter: MIO:
Set up by: KY:

Count Name: (10) AM/PM South High Street x Linden Street
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (3:45 PM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 11 South High Street & Rosedale Avenue
Site Code:
Start Date: 12/05/2023

Turning Movement Data

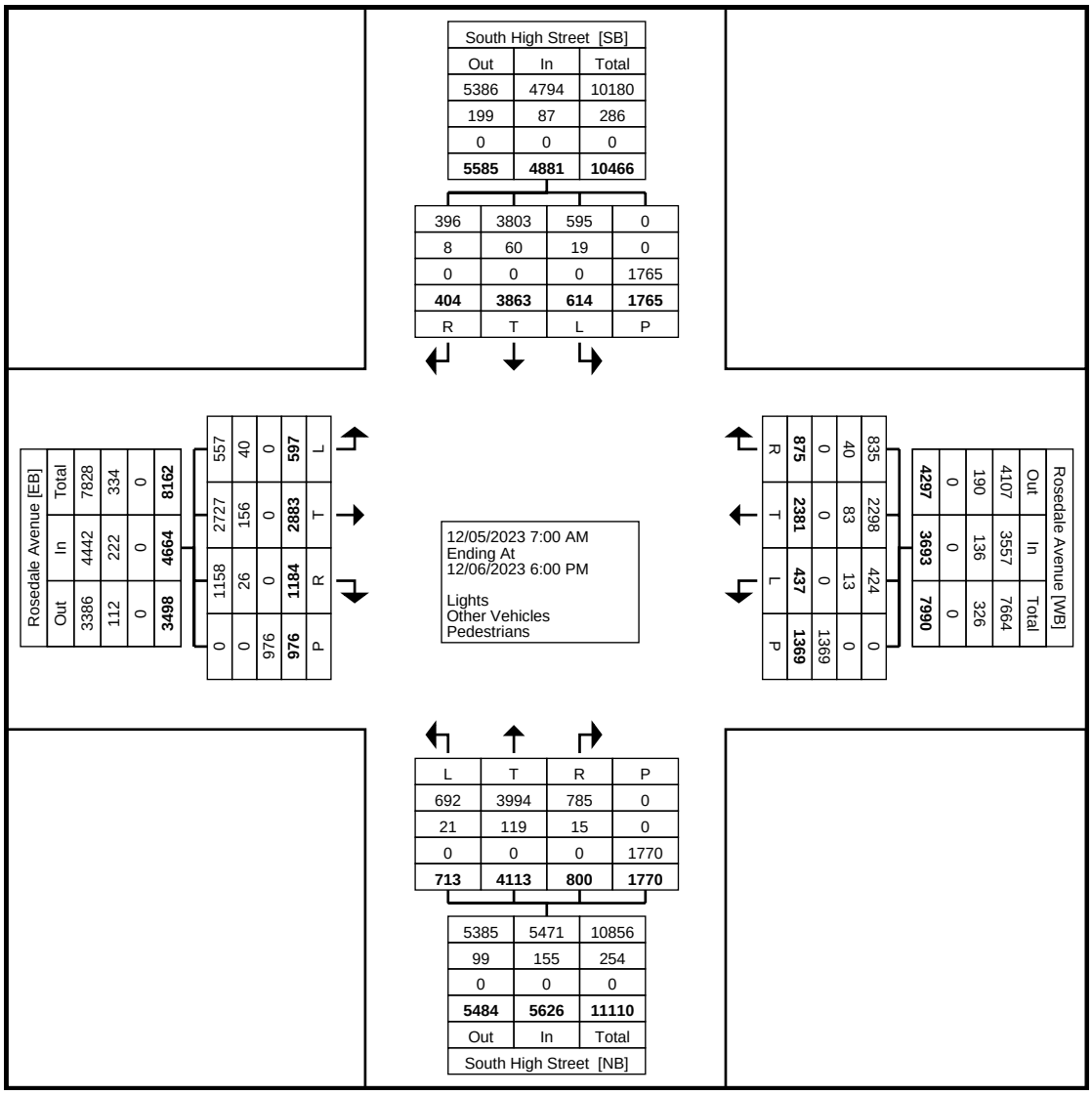
Start Time	Rosedale Avenue Eastbound						Rosedale Avenue Westbound						South High Street Northbound						South High Street Southbound						Int. Total
	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	
7:00 AM	10	73	27	0	3	110	6	20	5	1	1	32	4	54	15	1	2	74	10	67	4	0	4	81	297
7:15 AM	8	83	20	0	2	111	6	31	6	3	2	46	11	56	14	0	2	81	15	72	3	1	5	91	329
7:30 AM	12	80	30	0	9	122	9	59	21	3	10	92	13	73	7	1	13	94	11	117	3	0	13	131	439
7:45 AM	14	81	22	0	17	117	16	66	16	5	30	103	9	84	15	0	37	108	12	85	9	0	47	106	434
Hourly Total	44	317	99	0	31	460	37	176	48	12	43	273	37	267	51	2	54	357	48	341	19	1	69	409	1499
8:00 AM	4	95	18	1	12	118	5	43	11	0	6	59	15	72	16	0	16	103	15	97	3	1	7	116	396
8:15 AM	12	85	21	0	9	118	11	49	13	0	15	73	13	89	14	0	12	116	13	81	6	0	14	100	407
8:30 AM	10	79	20	0	6	109	7	30	16	0	13	53	12	78	10	0	12	100	6	68	5	0	12	79	341
8:45 AM	8	75	19	0	23	102	5	41	13	0	26	59	15	71	12	0	31	98	8	71	7	0	21	86	345
Hourly Total	34	334	78	1	50	447	28	163	53	0	60	244	55	310	52	0	71	417	42	317	21	1	54	381	1489
9:00 AM	12	75	15	0	19	102	7	47	19	0	39	73	17	83	16	0	32	116	11	70	10	1	52	92	383
9:15 AM	15	68	20	0	98	103	1	44	29	0	138	74	12	73	15	1	128	101	11	67	8	0	138	86	364
9:30 AM	18	55	18	0	27	91	11	27	28	0	58	66	18	73	17	0	55	108	7	55	7	0	64	69	334
9:45 AM	17	45	16	1	8	79	6	28	12	1	26	47	18	71	12	0	22	101	17	50	4	0	34	71	298
Hourly Total	62	243	69	1	152	375	25	146	88	1	261	260	65	300	60	1	237	426	46	242	29	1	288	318	1379
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	16	51	21	1	36	89	9	27	15	1	57	52	12	85	15	6	79	118	16	106	5	2	62	129	388
3:15 PM	17	44	32	0	45	93	13	57	17	1	60	88	12	97	20	1	72	130	16	91	13	1	66	121	432
3:30 PM	10	48	36	2	19	96	12	69	21	1	26	103	18	104	19	1	34	142	17	88	6	3	32	114	455
3:45 PM	12	53	32	3	36	100	9	55	20	0	24	84	19	108	16	5	47	148	16	94	12	1	18	123	455
Hourly Total	55	196	121	6	136	378	43	208	73	3	167	327	61	394	70	13	232	538	65	379	36	7	178	487	1730
4:00 PM	13	49	24	0	30	86	11	78	27	1	26	117	17	97	24	0	48	138	3	97	12	1	36	113	454
4:15 PM	20	57	29	1	28	107	12	65	18	0	32	95	9	102	22	3	44	136	10	84	11	2	48	107	445
4:30 PM	11	57	35	1	26	104	12	85	18	0	32	115	25	92	18	3	51	138	18	80	4	1	43	103	460
4:45 PM	15	63	26	0	20	104	12	71	18	2	34	103	17	113	14	2	34	146	15	102	9	0	33	126	479
Hourly Total	59	226	114	2	104	401	47	299	81	3	124	430	68	404	78	8	177	558	46	363	36	4	160	449	1838
5:00 PM	12	50	19	1	10	82	13	66	20	1	11	100	13	96	14	3	30	126	7	75	10	0	17	92	400
5:15 PM	9	44	31	0	24	84	20	52	26	0	26	98	20	121	12	0	23	153	12	92	10	0	23	114	449
5:30 PM	11	39	20	2	34	72	13	62	17	0	31	92	15	106	15	1	48	137	18	74	9	0	39	101	402
5:45 PM	16	50	29	0	17	95	7	51	20	0	19	78	23	104	11	3	30	141	13	69	8	0	28	90	404
Hourly Total	48	183	99	3	85	333	53	231	83	1	87	368	71	427	52	7	131	557	50	310	37	0	107	397	1655
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	10	55	13	0	1	78	6	23	5	1	0	35	10	47	14	0	1	71	14	51	2	0	2	67	251
7:15 AM	6	77	15	0	0	98	6	33	12	0	5	51	12	47	14	1	1	74	10	71	3	0	6	84	307
7:30 AM	9	71	23	0	7	103	3	44	26	0	12	73	7	75	12	0	18	94	9	92	3	0	14	104	374
7:45 AM	13	79	21	0	23	113	11	54	19	0	8	84	7	71	11	0	39	89	20	103	6	0	31	129	415
Hourly Total	38	282	72	0	31	392	26	154	62	1	25	243	36	240	51	1	59	328	53	317	14	0	53	384	1347
8:00 AM	5	76	32	0	6	113	7	56	18	0	9	81	13	63	13	1	9	90	9	87	6	0	9	102	386
8:15 AM	6	77	26	0	5	109	5	38	11	2	9	56	12	61	20	0	10	93	10	66	8	0	7	84	342
8:30 AM	7	86	17	0	11	110	7	42	16	1	22	66	18	78	9	1	26	106	12	66	5	0	40	83	365
8:45 AM	12	66	21	0	28	99	8	36	19	6	37	69	15	65	15	1	72	96	12	63	4	2	85	81	345
Hourly Total	30	305	96	0	50	431	27	172	64	9	77	272	58	267	57	3	117	385	43	282	23	2	141	350	1438
9:00 AM	12	70	22	0	23	104	3	36	16	0	37	55	12	92	10	0	32	114	17	68	7	0	28	92	365
9:15 AM	12	43	13	0	10	68	9	24	7	0	23	40	17	67	9	0	21	93	13	51	5	0	36	69	270
9:30 AM	13	46	19	0	20	78	5	32	29	1	34	67	17	73	15	0	36	105	10	49	6	0	35	65	315
9:45 AM	13	43	22	0	51	78	2	37	22	0	78	61	12	81	12	0	88	105	13	65	6	0	127	84	328
Hourly Total	50	202	76	0	104	328	19	129	74	1	172	223	58	313	46	0	177	417	53	233	24	0	226	310	1278
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	10	50	38	2	33	100	4	52	11	1	32	68	13	100	26	0	73	139	14	89	9	0	40	112	419
3:15 PM	15	44	26	0	5	85	10	58	14	1	14	83	9	78	19	0	32	106	17	87	8	0	26	112	386
3:30 PM	11	30	16	2	19	59	6	59	29	1	9	95	16	90	18	1	32	125	12	74	17	0	22	103	382
3:45 PM	15	34	23	0	9	72	15	65	17	0	6	97	12	115	19	0	28	146	11	88	15	0	22	114	429
Hourly Total	51	158	103	4	66	316	35	234	71	3	61	343	50	383	82	1	165	516	54	338	49	0	110	441	1616
4:00 PM	15	53	19	0	34	87	17	50	17	0	98	84	16	107	25	1	95	149	17	101	6	0	111	124	444
4:15 PM	18	65	27	0	33	110	12	62	20	0	49	94	21	113	12	1	78	147	14	107	11	0	95	132	483
4:30 PM	25	48	44	0	29	117	12	55	16	0	27	83	29	107	18	0	38	154	19	114	15	1	28	149	503
4:45 PM	18	61	23	0	17	102	14	79	11	0	28	104	15	88	25	0	27	128	14	88	10	0	32	112	446
Hourly Total	76	227	113	0	113	416	55	246	64	0	202	365	81	415	80	2	238	578	64	410	42	1	266	517	1876
5:00 PM	5	56	26	1	18	88	9	64	23	0	25	96	18	107	22	0	29	147	12	83	9	0	34	104	435

5:15 PM	12	45	22	2	10	81	13	53	19	0	20	85	13	102	16	2	26	133	13	90	16	0	25	119	418
5:30 PM	19	52	34	0	13	105	11	48	13	0	25	72	17	99	19	1	29	136	10	85	17	1	32	113	426
5:45 PM	14	57	42	0	13	113	9	58	24	1	20	92	25	85	20	3	28	133	15	73	13	1	22	102	440
Hourly Total	50	210	124	3	54	387	42	223	79	1	90	345	73	393	77	6	112	549	50	331	55	2	113	438	1719
Grand Total	597	2883	1164	20	976	4664	437	2381	840	35	1369	3693	713	4113	756	44	1770	5626	614	3863	385	19	1765	4881	18864
Approach %	12.8	61.8	25.0	0.4	-	-	11.8	64.5	22.7	0.9	-	-	12.7	73.1	13.4	0.8	-	-	12.6	79.1	7.9	0.4	-	-	-
Total %	3.2	15.3	6.2	0.1	-	24.7	2.3	12.6	4.5	0.2	-	19.6	3.8	21.8	4.0	0.2	-	29.8	3.3	20.5	2.0	0.1	-	25.9	-
Lights	557	2727	1138	20	-	4442	424	2298	801	34	-	3557	692	3994	742	43	-	5471	595	3803	378	18	-	4794	18264
% Lights	93.3	94.6	97.8	100.0	-	95.2	97.0	96.5	95.4	97.1	-	96.3	97.1	97.1	98.1	97.7	-	97.2	96.9	98.4	98.2	94.7	-	98.2	96.8
Other Vehicles	40	156	26	0	-	222	13	83	39	1	-	136	21	119	14	1	-	155	19	60	7	1	-	87	600
% Other Vehicles	6.7	5.4	2.2	0.0	-	4.8	3.0	3.5	4.6	2.9	-	3.7	2.9	2.9	1.9	2.3	-	2.8	3.1	1.6	1.8	5.3	-	1.8	3.2
Pedestrians	-	-	-	-	976	-	-	-	-	-	1369	-	-	-	-	-	1770	-	-	-	-	-	1765	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 11 South High Street & Rosedale Avenue
Site Code:
Start Date: 12/05/2023



Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 11 South High Street & Rosedale Avenue
Site Code:
Start Date: 12/05/2023

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Rosedale Avenue Eastbound						Rosedale Avenue Westbound						South High Street Northbound						South High Street Southbound						Int. Total
	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	
7:30 AM	12	80	30	0	9	122	9	59	21	3	10	92	13	73	7	1	13	94	11	117	3	0	13	131	439
7:45 AM	14	81	22	0	17	117	16	66	16	5	30	103	9	84	15	0	37	108	12	85	9	0	47	106	434
8:00 AM	4	95	18	1	12	118	5	43	11	0	6	59	15	72	16	0	16	103	15	97	3	1	7	116	396
8:15 AM	12	85	21	0	9	118	11	49	13	0	15	73	13	89	14	0	12	116	13	81	6	0	14	100	407
Total	42	341	91	1	47	475	41	217	61	8	61	327	50	318	52	1	78	421	51	380	21	1	81	453	1676
Approach %	8.8	71.8	19.2	0.2	-	-	12.5	66.4	18.7	2.4	-	-	11.9	75.5	12.4	0.2	-	-	11.3	83.9	4.6	0.2	-	-	-
Total %	2.5	20.3	5.4	0.1	-	28.3	2.4	12.9	3.6	0.5	-	19.5	3.0	19.0	3.1	0.1	-	25.1	3.0	22.7	1.3	0.1	-	27.0	-
PHF	0.750	0.897	0.758	0.250	-	0.973	0.641	0.822	0.726	0.400	-	0.794	0.833	0.893	0.813	0.250	-	0.907	0.850	0.812	0.583	0.250	-	0.865	0.954
Lights	39	323	90	1	-	453	38	204	56	8	-	306	47	308	51	1	-	407	50	372	21	1	-	444	1610
% Lights	92.9	94.7	98.9	100.0	-	95.4	92.7	94.0	91.8	100.0	-	93.6	94.0	96.9	98.1	100.0	-	96.7	98.0	97.9	100.0	100.0	-	98.0	96.1
Other Vehicles	3	18	1	0	-	22	3	13	5	0	-	21	3	10	1	0	-	14	1	8	0	0	-	9	66
% Other Vehicles	7.1	5.3	1.1	0.0	-	4.6	7.3	6.0	8.2	0.0	-	6.4	6.0	3.1	1.9	0.0	-	3.3	2.0	2.1	0.0	0.0	-	2.0	3.9
Pedestrians	-	-	-	-	47	-	-	-	-	-	61	-	-	-	-	-	78	-	-	-	-	-	81	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
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Counter: MIO:
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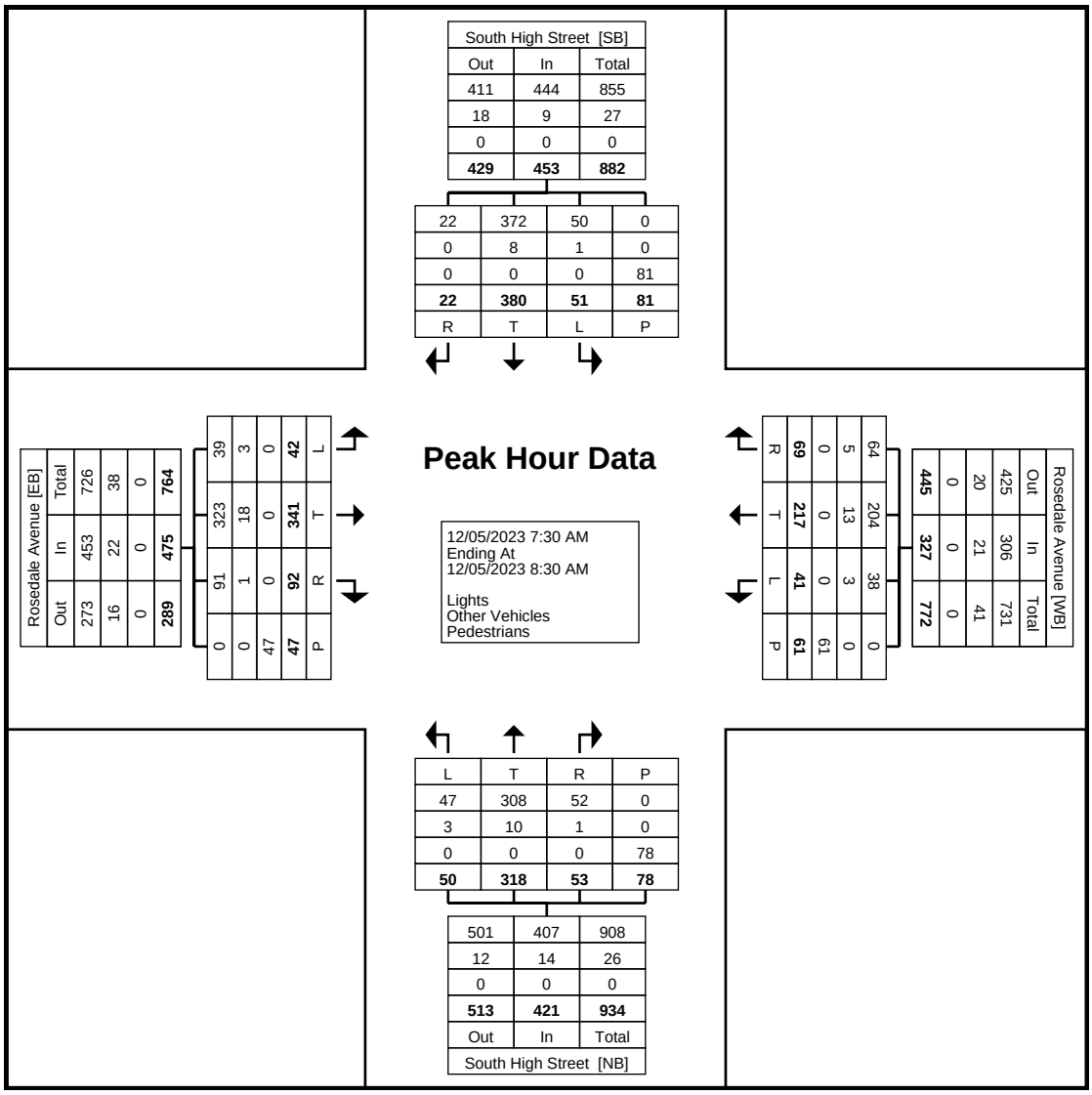
Count Name: 11 South High Street & Rosedale Avenue
Site Code:
Start Date: 12/05/2023



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

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 11 South High Street & Rosedale Avenue
Site Code:
Start Date: 12/05/2023

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Rosedale Avenue Eastbound						Rosedale Avenue Westbound						South High Street Northbound						South High Street Southbound						Int. Total
	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	
4:00 PM	13	49	24	0	30	86	11	78	27	1	26	117	17	97	24	0	48	138	3	97	12	1	36	113	454
4:15 PM	20	57	29	1	28	107	12	65	18	0	32	95	9	102	22	3	44	136	10	84	11	2	48	107	445
4:30 PM	11	57	35	1	26	104	12	85	18	0	32	115	25	92	18	3	51	138	18	80	4	1	43	103	460
4:45 PM	15	63	26	0	20	104	12	71	18	2	34	103	17	113	14	2	34	146	15	102	9	0	33	126	479
Total	59	226	114	2	104	401	47	299	81	3	124	430	68	404	78	8	177	558	46	363	36	4	160	449	1838
Approach %	14.7	56.4	28.4	0.5	-	-	10.9	69.5	18.8	0.7	-	-	12.2	72.4	14.0	1.4	-	-	10.2	80.8	8.0	0.9	-	-	-
Total %	3.2	12.3	6.2	0.1	-	21.8	2.6	16.3	4.4	0.2	-	23.4	3.7	22.0	4.2	0.4	-	30.4	2.5	19.7	2.0	0.2	-	24.4	-
PHF	0.738	0.897	0.814	0.500	-	0.937	0.979	0.879	0.750	0.375	-	0.919	0.680	0.894	0.813	0.667	-	0.955	0.639	0.890	0.750	0.500	-	0.891	0.959
Lights	56	212	110	2	-	380	46	294	77	3	-	420	68	397	76	8	-	549	45	359	35	4	-	443	1792
% Lights	94.9	93.8	96.5	100.0	-	94.8	97.9	98.3	95.1	100.0	-	97.7	100.0	98.3	97.4	100.0	-	98.4	97.8	98.9	97.2	100.0	-	98.7	97.5
Other Vehicles	3	14	4	0	-	21	1	5	4	0	-	10	0	7	2	0	-	9	1	4	1	0	-	6	46
% Other Vehicles	5.1	6.2	3.5	0.0	-	5.2	2.1	1.7	4.9	0.0	-	2.3	0.0	1.7	2.6	0.0	-	1.6	2.2	1.1	2.8	0.0	-	1.3	2.5
Pedestrians	-	-	-	-	104	-	-	-	-	-	124	-	-	-	-	-	177	-	-	-	-	-	160	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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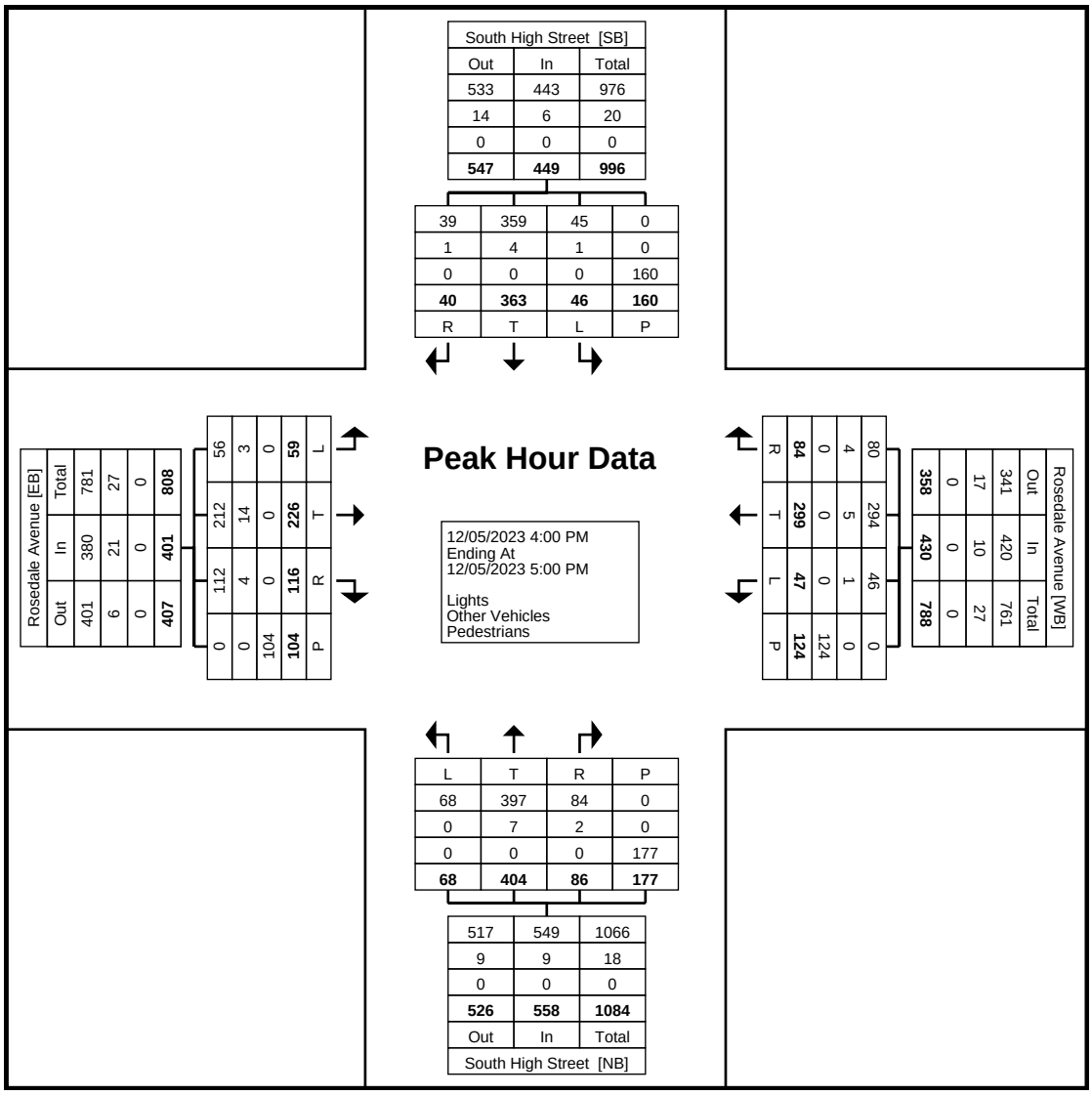
Count Name: 11 South High Street & Rosedale Avenue
Site Code:
Start Date: 12/05/2023



Turning Movement Peak Hour Data Plot (4:00 PM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 11 South High Street & Rosedale Avenue
Site Code:
Start Date: 12/05/2023

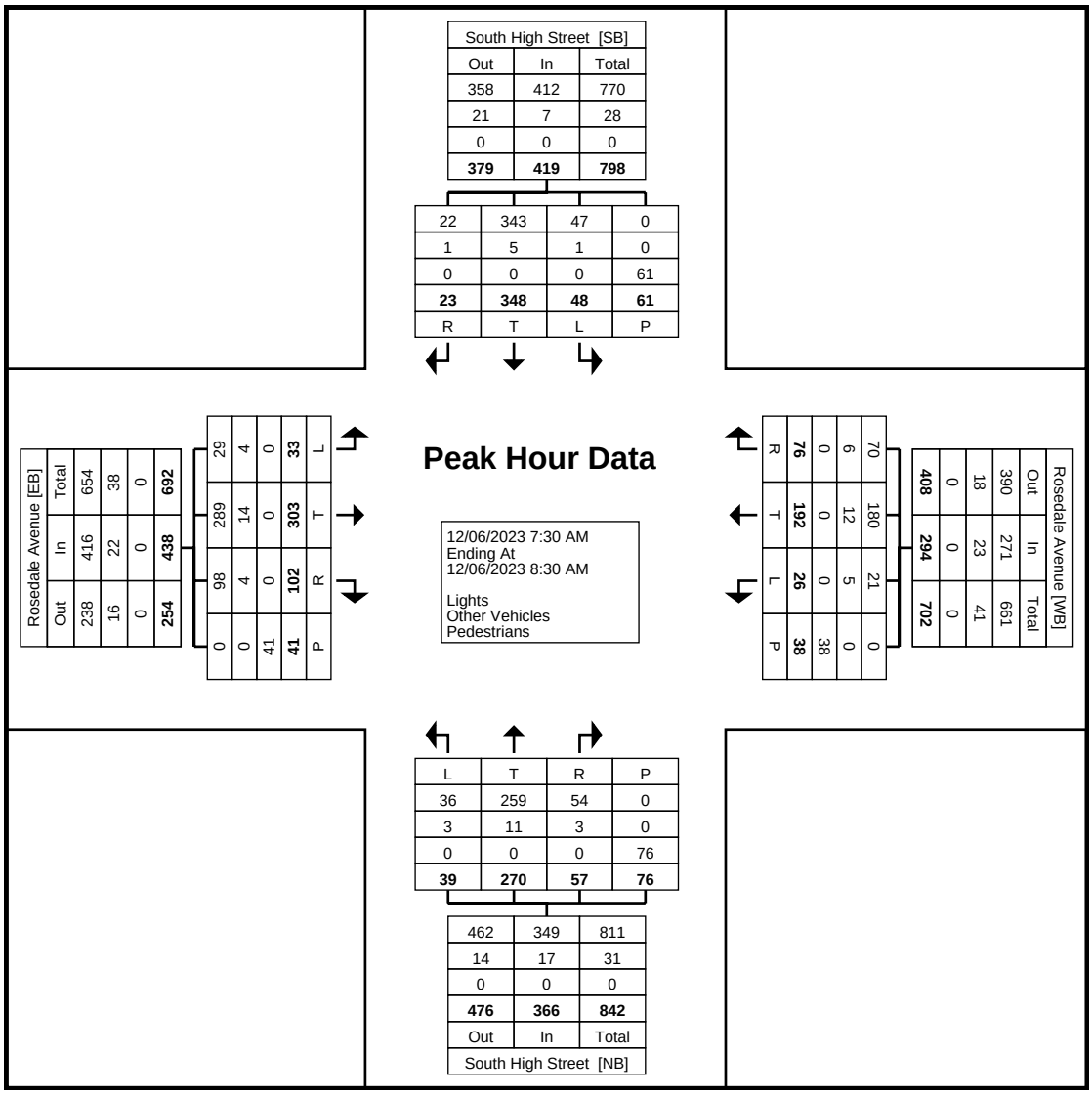
Turning Movement Peak Hour Data (7:30 AM)

Start Time	Rosedale Avenue Eastbound						Rosedale Avenue Westbound						South High Street Northbound						South High Street Southbound						Int. Total
	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	
7:30 AM	9	71	23	0	7	103	3	44	26	0	12	73	7	75	12	0	18	94	9	92	3	0	14	104	374
7:45 AM	13	79	21	0	23	113	11	54	19	0	8	84	7	71	11	0	39	89	20	103	6	0	31	129	415
8:00 AM	5	76	32	0	6	113	7	56	18	0	9	81	13	63	13	1	9	90	9	87	6	0	9	102	386
8:15 AM	6	77	26	0	5	109	5	38	11	2	9	56	12	61	20	0	10	93	10	66	8	0	7	84	342
Total	33	303	102	0	41	438	26	192	74	2	38	294	39	270	56	1	76	366	48	348	23	0	61	419	1517
Approach %	7.5	69.2	23.3	0.0	-	-	8.8	65.3	25.2	0.7	-	-	10.7	73.8	15.3	0.3	-	-	11.5	83.1	5.5	0.0	-	-	-
Total %	2.2	20.0	6.7	0.0	-	28.9	1.7	12.7	4.9	0.1	-	19.4	2.6	17.8	3.7	0.1	-	24.1	3.2	22.9	1.5	0.0	-	27.6	-
PHF	0.635	0.959	0.797	0.000	-	0.969	0.591	0.857	0.712	0.250	-	0.875	0.750	0.900	0.700	0.250	-	0.973	0.600	0.845	0.719	0.000	-	0.812	0.914
Lights	29	289	98	0	-	416	21	180	68	2	-	271	36	259	53	1	-	349	47	343	22	0	-	412	1448
% Lights	87.9	95.4	96.1	-	-	95.0	80.8	93.8	91.9	100.0	-	92.2	92.3	95.9	94.6	100.0	-	95.4	97.9	98.6	95.7	-	-	98.3	95.5
Other Vehicles	4	14	4	0	-	22	5	12	6	0	-	23	3	11	3	0	-	17	1	5	1	0	-	7	69
% Other Vehicles	12.1	4.6	3.9	-	-	5.0	19.2	6.3	8.1	0.0	-	7.8	7.7	4.1	5.4	0.0	-	4.6	2.1	1.4	4.3	-	-	1.7	4.5
Pedestrians	-	-	-	-	41	-	-	-	-	-	38	-	-	-	-	-	76	-	-	-	-	-	61	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 11 South High Street & Rosedale Avenue
Site Code:
Start Date: 12/05/2023



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

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 11 South High Street & Rosedale Avenue
Site Code:
Start Date: 12/05/2023

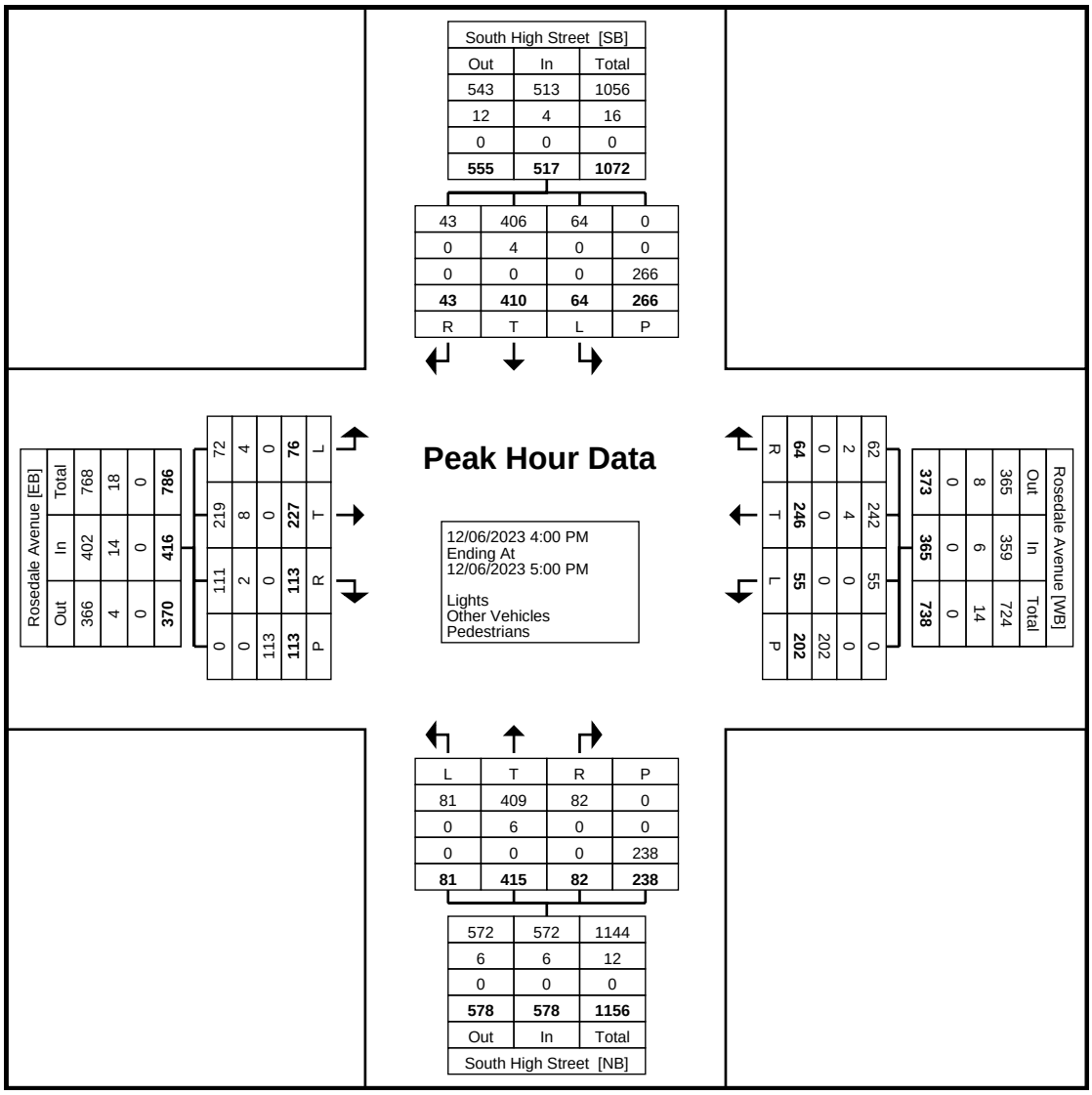
Turning Movement Peak Hour Data (4:00 PM)

Start Time	Rosedale Avenue Eastbound						Rosedale Avenue Westbound						South High Street Northbound						South High Street Southbound						Int. Total
	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	
4:00 PM	15	53	19	0	34	87	17	50	17	0	98	84	16	107	25	1	95	149	17	101	6	0	111	124	444
4:15 PM	18	65	27	0	33	110	12	62	20	0	49	94	21	113	12	1	78	147	14	107	11	0	95	132	483
4:30 PM	25	48	44	0	29	117	12	55	16	0	27	83	29	107	18	0	38	154	19	114	15	1	28	149	503
4:45 PM	18	61	23	0	17	102	14	79	11	0	28	104	15	88	25	0	27	128	14	88	10	0	32	112	446
Total	76	227	113	0	113	416	55	246	64	0	202	365	81	415	80	2	238	578	64	410	42	1	266	517	1876
Approach %	18.3	54.6	27.2	0.0	-	-	15.1	67.4	17.5	0.0	-	-	14.0	71.8	13.8	0.3	-	-	12.4	79.3	8.1	0.2	-	-	-
Total %	4.1	12.1	6.0	0.0	-	22.2	2.9	13.1	3.4	0.0	-	19.5	4.3	22.1	4.3	0.1	-	30.8	3.4	21.9	2.2	0.1	-	27.6	-
PHF	0.760	0.873	0.642	0.000	-	0.889	0.809	0.778	0.800	0.000	-	0.877	0.698	0.918	0.800	0.500	-	0.938	0.842	0.899	0.700	0.250	-	0.867	0.932
Lights	72	219	111	0	-	402	55	242	62	0	-	359	81	409	80	2	-	572	64	406	42	1	-	513	1846
% Lights	94.7	96.5	98.2	-	-	96.6	100.0	98.4	96.9	-	-	98.4	100.0	98.6	100.0	100.0	-	99.0	100.0	99.0	100.0	100.0	-	99.2	98.4
Other Vehicles	4	8	2	0	-	14	0	4	2	0	-	6	0	6	0	0	-	6	0	4	0	0	-	4	30
% Other Vehicles	5.3	3.5	1.8	-	-	3.4	0.0	1.6	3.1	-	-	1.6	0.0	1.4	0.0	0.0	-	1.0	0.0	1.0	0.0	0.0	-	0.8	1.6
Pedestrians	-	-	-	-	113	-	-	-	-	-	202	-	-	-	-	-	238	-	-	-	-	-	266	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 11 South High Street & Rosedale Avenue
Site Code:
Start Date: 12/05/2023



Turning Movement Peak Hour Data Plot (4:00 PM)

Counter: MIO:
Set up By JH::

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 12 Matlack Street & Rosedale Avenue
Site Code:
Start Date: 12/06/2023
Page No: 1

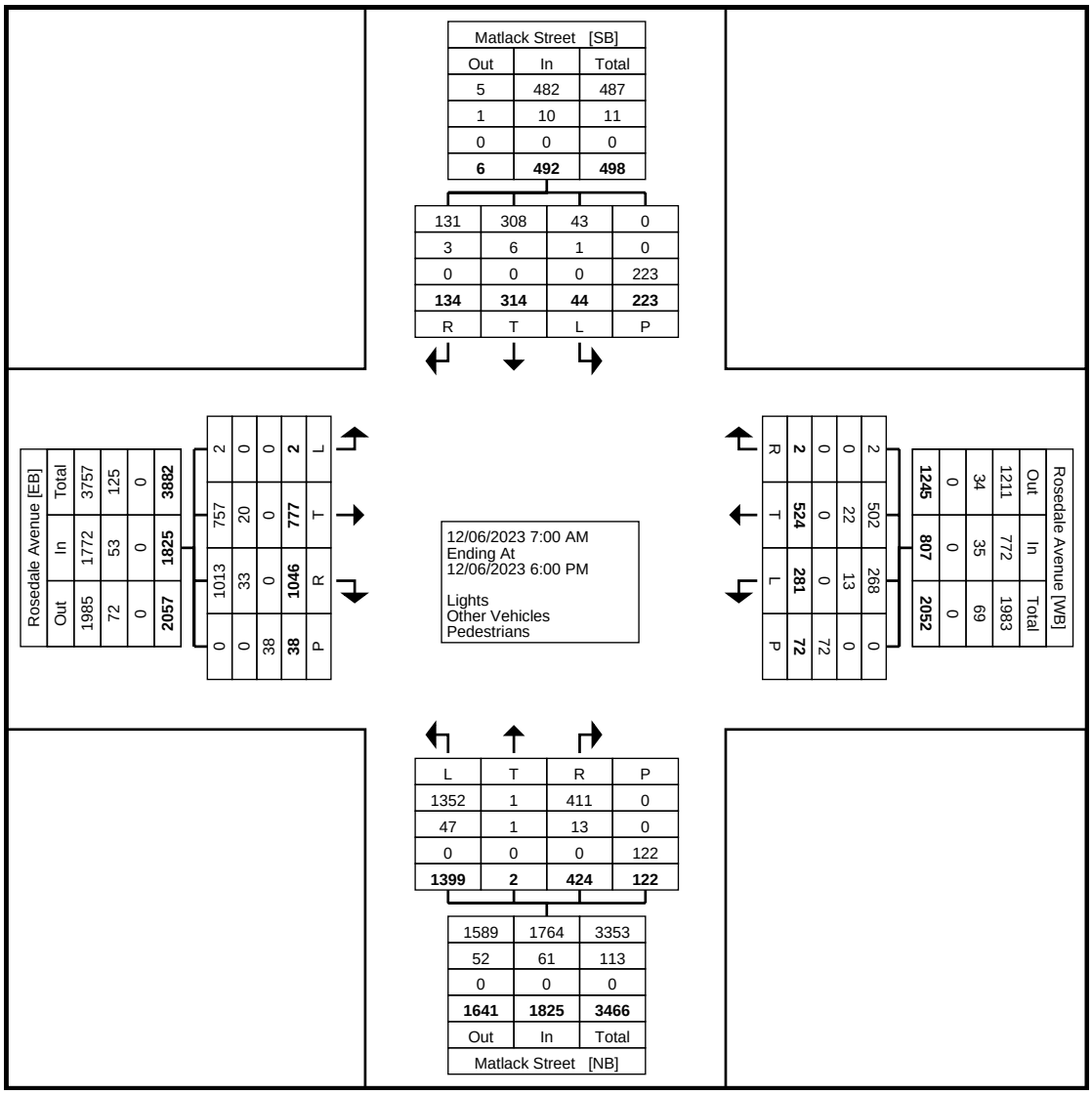
Turning Movement Data

Start Time	Rosedale Avenue Eastbound					Rosedale Avenue Westbound					Matlack Street Northbound					Matlack Street Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	38	57	0	95	0	8	0	0	8	24	0	13	0	37	1	8	4	1	13	153
7:15 AM	0	43	56	0	99	7	13	0	0	20	40	0	6	0	46	2	9	4	0	15	180
7:30 AM	0	34	55	2	89	8	14	0	3	22	66	0	10	7	76	1	12	1	10	14	201
7:45 AM	0	35	61	3	96	15	20	0	4	35	66	0	11	22	77	0	13	5	11	18	226
Hourly Total	0	150	229	5	379	30	55	0	7	85	196	0	40	29	236	4	42	14	22	60	760
8:00 AM	0	34	64	2	98	12	17	0	1	29	70	0	12	3	82	2	16	5	3	23	232
8:15 AM	0	46	60	1	106	14	12	0	2	26	48	0	8	3	56	1	13	2	2	16	204
8:30 AM	0	27	77	4	104	12	9	0	1	21	63	0	16	1	79	3	14	5	9	22	226
8:45 AM	0	40	56	2	96	9	7	0	2	16	65	0	18	27	83	2	10	2	19	14	209
Hourly Total	0	147	257	9	404	47	45	0	6	92	246	0	54	34	300	8	53	14	33	75	871
9:00 AM	0	27	59	4	86	9	16	0	6	25	51	0	18	2	69	1	13	2	8	16	196
9:15 AM	1	19	41	2	61	12	14	0	5	26	28	0	13	5	41	0	13	1	10	14	142
9:30 AM	0	25	26	1	51	8	9	0	0	17	65	0	13	2	78	0	8	3	13	11	157
9:45 AM	0	26	25	1	51	5	12	0	7	17	54	0	11	7	65	0	15	4	36	19	152
Hourly Total	1	97	151	8	249	34	51	0	18	85	198	0	55	16	253	1	49	10	67	60	647
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	36	36	2	72	16	20	0	3	36	63	1	28	10	92	3	17	8	6	28	228
3:15 PM	0	29	31	1	60	14	23	0	3	37	57	0	21	3	78	2	15	10	9	27	202
3:30 PM	0	23	31	0	54	23	33	0	2	56	73	0	16	5	89	2	11	6	4	19	218
3:45 PM	0	26	26	1	52	13	24	0	4	37	57	0	21	4	78	2	15	10	6	27	194
Hourly Total	0	114	124	4	238	66	100	0	12	166	250	1	86	22	337	9	58	34	25	101	842
4:00 PM	0	34	41	3	75	10	32	0	9	42	71	1	30	9	102	4	11	8	26	23	242
4:15 PM	0	36	34	0	70	19	38	0	8	57	63	0	26	3	89	4	12	7	15	23	239
4:30 PM	0	30	38	1	68	11	31	0	1	42	61	0	34	4	95	3	19	6	5	28	233
4:45 PM	0	39	41	5	80	15	43	0	0	58	72	0	19	3	91	1	21	9	3	31	260
Hourly Total	0	139	154	9	293	55	144	0	18	199	267	1	109	19	377	12	63	30	49	105	974
5:00 PM	1	35	38	3	74	13	46	0	0	59	66	0	27	0	93	3	12	2	6	17	243
5:15 PM	0	30	28	0	58	11	29	1	4	41	60	0	21	1	81	2	13	8	8	23	203
5:30 PM	0	36	23	0	59	12	23	0	5	35	47	0	10	0	57	1	14	12	9	27	178
5:45 PM	0	29	42	0	71	13	31	1	2	45	69	0	22	1	91	4	10	10	4	24	231
Hourly Total	1	130	131	3	262	49	129	2	11	180	242	0	80	2	322	10	49	32	27	91	855
Grand Total	2	777	1046	38	1825	281	524	2	72	807	1399	2	424	122	1825	44	314	134	223	492	4949
Approach %	0.1	42.6	57.3	-	-	34.8	64.9	0.2	-	-	76.7	0.1	23.2	-	-	8.9	63.8	27.2	-	-	-
Total %	0.0	15.7	21.1	-	36.9	5.7	10.6	0.0	-	16.3	28.3	0.0	8.6	-	36.9	0.9	6.3	2.7	-	9.9	-
Lights	2	757	1013	-	1772	268	502	2	-	772	1352	1	411	-	1764	43	308	131	-	482	4790
% Lights	100.0	97.4	96.8	-	97.1	95.4	95.8	100.0	-	95.7	96.6	50.0	96.9	-	96.7	97.7	98.1	97.8	-	98.0	96.8
Other Vehicles	0	20	33	-	53	13	22	0	-	35	47	1	13	-	61	1	6	3	-	10	159
% Other Vehicles	0.0	2.6	3.2	-	2.9	4.6	4.2	0.0	-	4.3	3.4	50.0	3.1	-	3.3	2.3	1.9	2.2	-	2.0	3.2
Pedestrians	-	-	-	38	-	-	-	-	72	-	-	-	-	122	-	-	-	-	223	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 12 Matlack Street & Rosedale Avenue
Site Code:
Start Date: 12/06/2023



Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 12 Matlack Street & Rosedale Avenue
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Rosedale Avenue Eastbound					Rosedale Avenue Westbound					Matlack Street Northbound					Matlack Street Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:45 AM	0	35	61	3	96	15	20	0	4	35	66	0	11	22	77	0	13	5	11	18	226
8:00 AM	0	34	64	2	98	12	17	0	1	29	70	0	12	3	82	2	16	5	3	23	232
8:15 AM	0	46	60	1	106	14	12	0	2	26	48	0	8	3	56	1	13	2	2	16	204
8:30 AM	0	27	77	4	104	12	9	0	1	21	63	0	16	1	79	3	14	5	9	22	226
Total	0	142	262	10	404	53	58	0	8	111	247	0	47	29	294	6	56	17	25	79	888
Approach %	0.0	35.1	64.9	-	-	47.7	52.3	0.0	-	-	84.0	0.0	16.0	-	-	7.6	70.9	21.5	-	-	-
Total %	0.0	16.0	29.5	-	45.5	6.0	6.5	0.0	-	12.5	27.8	0.0	5.3	-	33.1	0.7	6.3	1.9	-	8.9	-
PHF	0.000	0.772	0.851	-	0.953	0.883	0.725	0.000	-	0.793	0.882	0.000	0.734	-	0.896	0.500	0.875	0.850	-	0.859	0.957
Lights	0	137	255	-	392	50	49	0	-	99	237	0	43	-	280	6	55	17	-	78	849
% Lights	-	96.5	97.3	-	97.0	94.3	84.5	-	-	89.2	96.0	-	91.5	-	95.2	100.0	98.2	100.0	-	98.7	95.6
Other Vehicles	0	5	7	-	12	3	9	0	-	12	10	0	4	-	14	0	1	0	-	1	39
% Other Vehicles	-	3.5	2.7	-	3.0	5.7	15.5	-	-	10.8	4.0	-	8.5	-	4.8	0.0	1.8	0.0	-	1.3	4.4
Pedestrians	-	-	-	10	-	-	-	-	8	-	-	-	-	29	-	-	-	-	25	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

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Counter: MIO:
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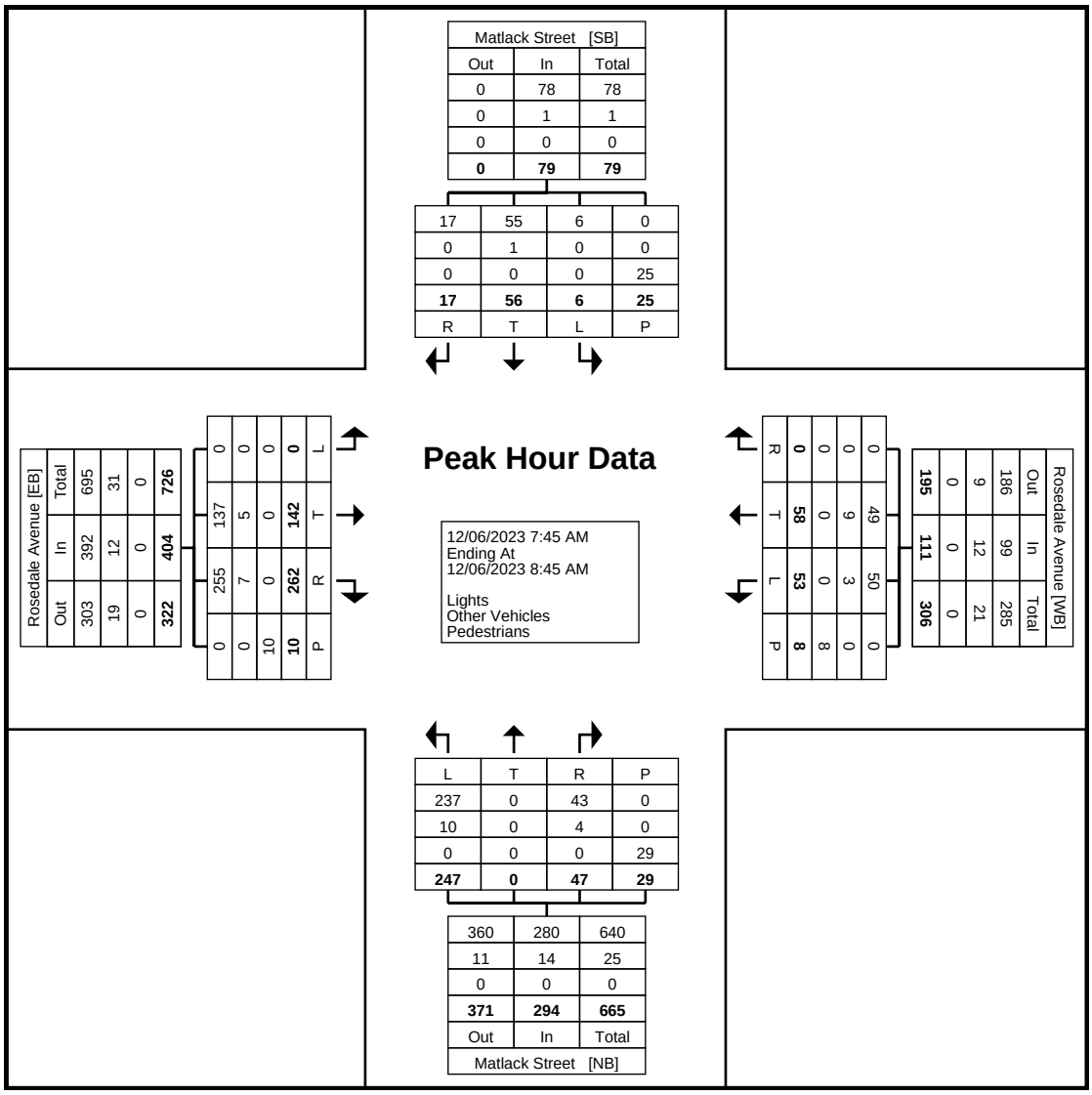
Count Name: 12 Matlack Street & Rosedale Avenue
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (7:45 AM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 12 Matlack Street & Rosedale Avenue
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (4:15 PM)

Start Time	Rosedale Avenue Eastbound					Rosedale Avenue Westbound					Matlack Street Northbound					Matlack Street Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
4:15 PM	0	36	34	0	70	19	38	0	8	57	63	0	26	3	89	4	12	7	15	23	239
4:30 PM	0	30	38	1	68	11	31	0	1	42	61	0	34	4	95	3	19	6	5	28	233
4:45 PM	0	39	41	5	80	15	43	0	0	58	72	0	19	3	91	1	21	9	3	31	260
5:00 PM	1	35	38	3	74	13	46	0	0	59	66	0	27	0	93	3	12	2	6	17	243
Total	1	140	151	9	292	58	158	0	9	216	262	0	106	10	368	11	64	24	29	99	975
Approach %	0.3	47.9	51.7	-	-	26.9	73.1	0.0	-	-	71.2	0.0	28.8	-	-	11.1	64.6	24.2	-	-	-
Total %	0.1	14.4	15.5	-	29.9	5.9	16.2	0.0	-	22.2	26.9	0.0	10.9	-	37.7	1.1	6.6	2.5	-	10.2	-
PHF	0.250	0.897	0.921	-	0.913	0.763	0.859	0.000	-	0.915	0.910	0.000	0.779	-	0.968	0.688	0.762	0.667	-	0.798	0.938
Lights	1	134	147	-	282	58	155	0	-	213	257	0	106	-	363	11	63	24	-	98	956
% Lights	100.0	95.7	97.4	-	96.6	100.0	98.1	-	-	98.6	98.1	-	100.0	-	98.6	100.0	98.4	100.0	-	99.0	98.1
Other Vehicles	0	6	4	-	10	0	3	0	-	3	5	0	0	-	5	0	1	0	-	1	19
% Other Vehicles	0.0	4.3	2.6	-	3.4	0.0	1.9	-	-	1.4	1.9	-	0.0	-	1.4	0.0	1.6	0.0	-	1.0	1.9
Pedestrians	-	-	-	9	-	-	-	-	9	-	-	-	-	10	-	-	-	-	29	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
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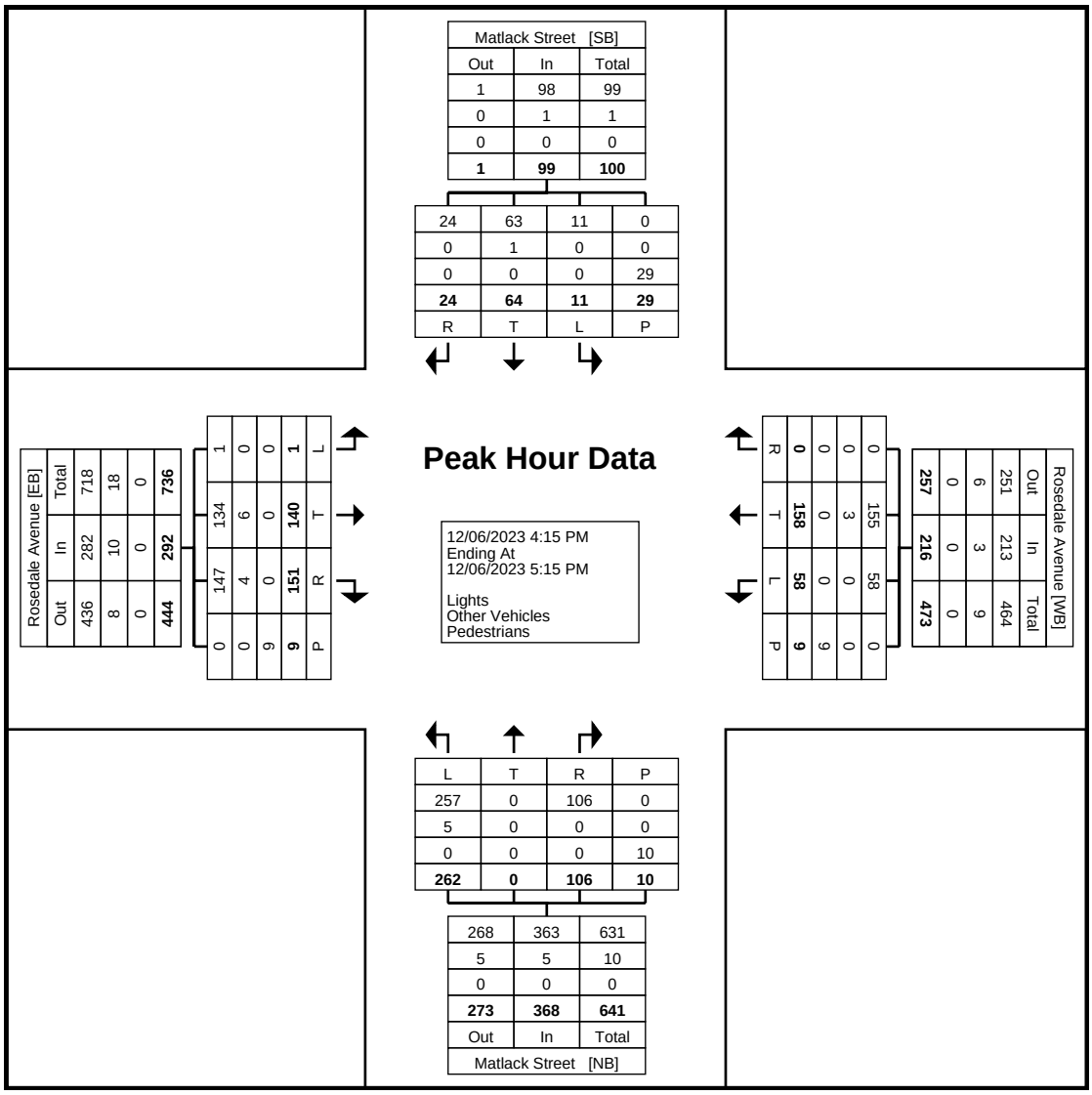
Counter: MIO:
Set up By JH::

Count Name: 12 Matlack Street & Rosedale Avenue
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (4:15 PM)

Counter: MIO:
Set up By JH::

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 13 Matlack Street & Carter Drive
Site Code:
Start Date: 12/06/2023
Page No: 1

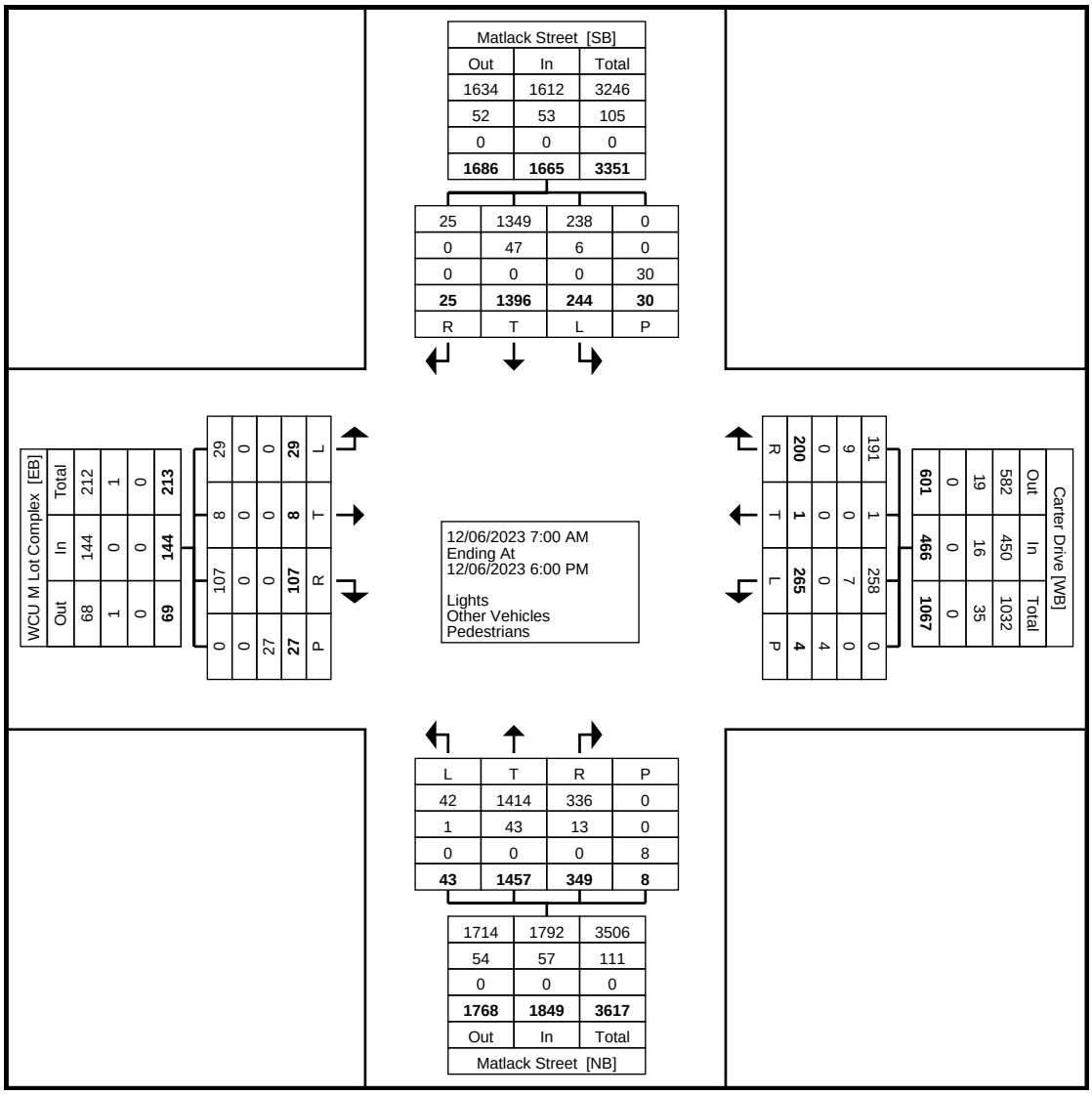
Turning Movement Data

Start Time	WCU M Lot Complex Eastbound					Carter Drive Westbound					Matlack Street Northbound					Matlack Street Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	0	2	0	2	0	6	7	0	13	4	14	0	0	18	33
7:15 AM	0	0	0	0	0	1	0	4	0	5	0	12	2	0	14	3	20	0	0	23	42
7:30 AM	0	0	0	0	0	1	0	1	0	2	2	20	9	0	31	5	31	0	0	36	69
7:45 AM	0	0	0	0	0	2	0	6	0	8	0	18	14	0	32	6	46	0	0	52	92
Hourly Total	0	0	0	0	0	4	0	13	0	17	2	56	32	0	90	18	111	0	0	129	236
8:00 AM	0	0	0	0	0	5	0	2	0	7	0	38	8	0	46	4	61	0	0	65	118
8:15 AM	0	0	0	0	0	1	0	6	0	7	0	52	13	0	65	15	59	1	0	75	147
8:30 AM	0	0	0	0	0	3	0	9	0	12	1	77	18	0	96	8	68	0	0	76	184
8:45 AM	1	1	0	3	2	18	0	7	0	25	2	94	36	1	132	25	66	3	0	94	253
Hourly Total	1	1	0	3	2	27	0	24	0	51	3	261	75	1	339	52	254	4	0	310	702
9:00 AM	0	0	0	1	0	16	0	14	0	30	3	88	44	0	135	25	71	1	2	97	262
9:15 AM	0	0	0	2	0	11	0	8	0	19	0	64	20	0	84	19	65	1	1	85	188
9:30 AM	0	0	1	0	1	6	0	8	0	14	6	108	10	0	124	10	85	0	1	95	234
9:45 AM	0	0	0	2	0	5	0	11	0	16	7	109	15	1	131	7	66	3	2	76	223
Hourly Total	0	0	1	5	1	38	0	41	0	79	16	369	89	1	474	61	287	5	6	353	907
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	4	0	18	3	22	10	0	2	0	12	3	47	12	0	62	7	60	0	5	67	163
3:15 PM	2	0	13	0	15	8	0	8	0	16	2	65	13	0	80	6	64	1	1	71	182
3:30 PM	1	0	7	0	8	10	0	6	0	16	3	68	29	0	100	12	57	1	0	70	194
3:45 PM	0	1	10	1	11	32	0	10	0	42	3	62	14	0	79	6	62	1	1	69	201
Hourly Total	7	1	48	4	56	60	0	26	0	86	11	242	68	0	321	31	243	3	7	277	740
4:00 PM	4	0	14	1	18	20	0	14	1	34	4	53	7	0	64	8	70	1	3	79	195
4:15 PM	2	1	8	4	11	9	0	9	0	18	0	66	5	2	71	9	49	2	2	60	160
4:30 PM	1	0	5	1	6	16	0	6	0	22	0	69	8	1	77	10	62	1	0	73	178
4:45 PM	0	1	4	2	5	17	0	6	0	23	2	69	7	0	78	7	49	4	4	60	166
Hourly Total	7	2	31	8	40	62	0	35	1	97	6	257	27	3	290	34	230	8	9	272	699
5:00 PM	5	1	7	1	13	20	0	16	2	36	4	73	8	0	85	15	69	1	2	85	219
5:15 PM	3	1	13	3	17	14	0	11	0	25	1	68	17	2	86	9	75	0	2	84	212
5:30 PM	3	2	4	1	9	22	0	21	0	43	0	67	19	0	86	14	65	2	0	81	219
5:45 PM	3	0	3	2	6	18	1	13	1	32	0	64	14	1	78	10	62	2	4	74	190
Hourly Total	14	4	27	7	45	74	1	61	3	136	5	272	58	3	335	48	271	5	8	324	840
Grand Total	29	8	107	27	144	265	1	200	4	466	43	1457	349	8	1849	244	1396	25	30	1665	4124
Approach %	20.1	5.6	74.3	-	-	56.9	0.2	42.9	-	-	2.3	78.8	18.9	-	-	14.7	83.8	1.5	-	-	-
Total %	0.7	0.2	2.6	-	3.5	6.4	0.0	4.8	-	11.3	1.0	35.3	8.5	-	44.8	5.9	33.9	0.6	-	40.4	-
Lights	29	8	107	-	144	258	1	191	-	450	42	1414	336	-	1792	238	1349	25	-	1612	3998
% Lights	100.0	100.0	100.0	-	100.0	97.4	100.0	95.5	-	96.6	97.7	97.0	96.3	-	96.9	97.5	96.6	100.0	-	96.8	96.9
Other Vehicles	0	0	0	-	0	7	0	9	-	16	1	43	13	-	57	6	47	0	-	53	126
% Other Vehicles	0.0	0.0	0.0	-	0.0	2.6	0.0	4.5	-	3.4	2.3	3.0	3.7	-	3.1	2.5	3.4	0.0	-	3.2	3.1
Pedestrians	-	-	-	27	-	-	-	-	4	-	-	-	-	8	-	-	-	-	30	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 13 Matlack Street & Carter Drive
Site Code:
Start Date: 12/06/2023



Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 13 Matlack Street & Carter Drive
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (8:45 AM)

Start Time	WCU M Lot Complex Eastbound					Carter Drive Westbound					Matlack Street Northbound					Matlack Street Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
8:45 AM	1	1	0	3	2	18	0	7	0	25	2	94	36	1	132	25	66	3	0	94	253
9:00 AM	0	0	0	1	0	16	0	14	0	30	3	88	44	0	135	25	71	1	2	97	262
9:15 AM	0	0	0	2	0	11	0	8	0	19	0	64	20	0	84	19	65	1	1	85	188
9:30 AM	0	0	1	0	1	6	0	8	0	14	6	108	10	0	124	10	85	0	1	95	234
Total	1	1	1	6	3	51	0	37	0	88	11	354	110	1	475	79	287	5	4	371	937
Approach %	33.3	33.3	33.3	-	-	58.0	0.0	42.0	-	-	2.3	74.5	23.2	-	-	21.3	77.4	1.3	-	-	-
Total %	0.1	0.1	0.1	-	0.3	5.4	0.0	3.9	-	9.4	1.2	37.8	11.7	-	50.7	8.4	30.6	0.5	-	39.6	-
PHF	0.250	0.250	0.250	-	0.375	0.708	0.000	0.661	-	0.733	0.458	0.819	0.625	-	0.880	0.790	0.844	0.417	-	0.956	0.894
Lights	1	1	1	-	3	50	0	35	-	85	11	344	107	-	462	78	276	5	-	359	909
% Lights	100.0	100.0	100.0	-	100.0	98.0	-	94.6	-	96.6	100.0	97.2	97.3	-	97.3	98.7	96.2	100.0	-	96.8	97.0
Other Vehicles	0	0	0	-	0	1	0	2	-	3	0	10	3	-	13	1	11	0	-	12	28
% Other Vehicles	0.0	0.0	0.0	-	0.0	2.0	-	5.4	-	3.4	0.0	2.8	2.7	-	2.7	1.3	3.8	0.0	-	3.2	3.0
Pedestrians	-	-	-	6	-	-	-	-	0	-	-	-	-	1	-	-	-	-	4	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-

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Counter: MIO:
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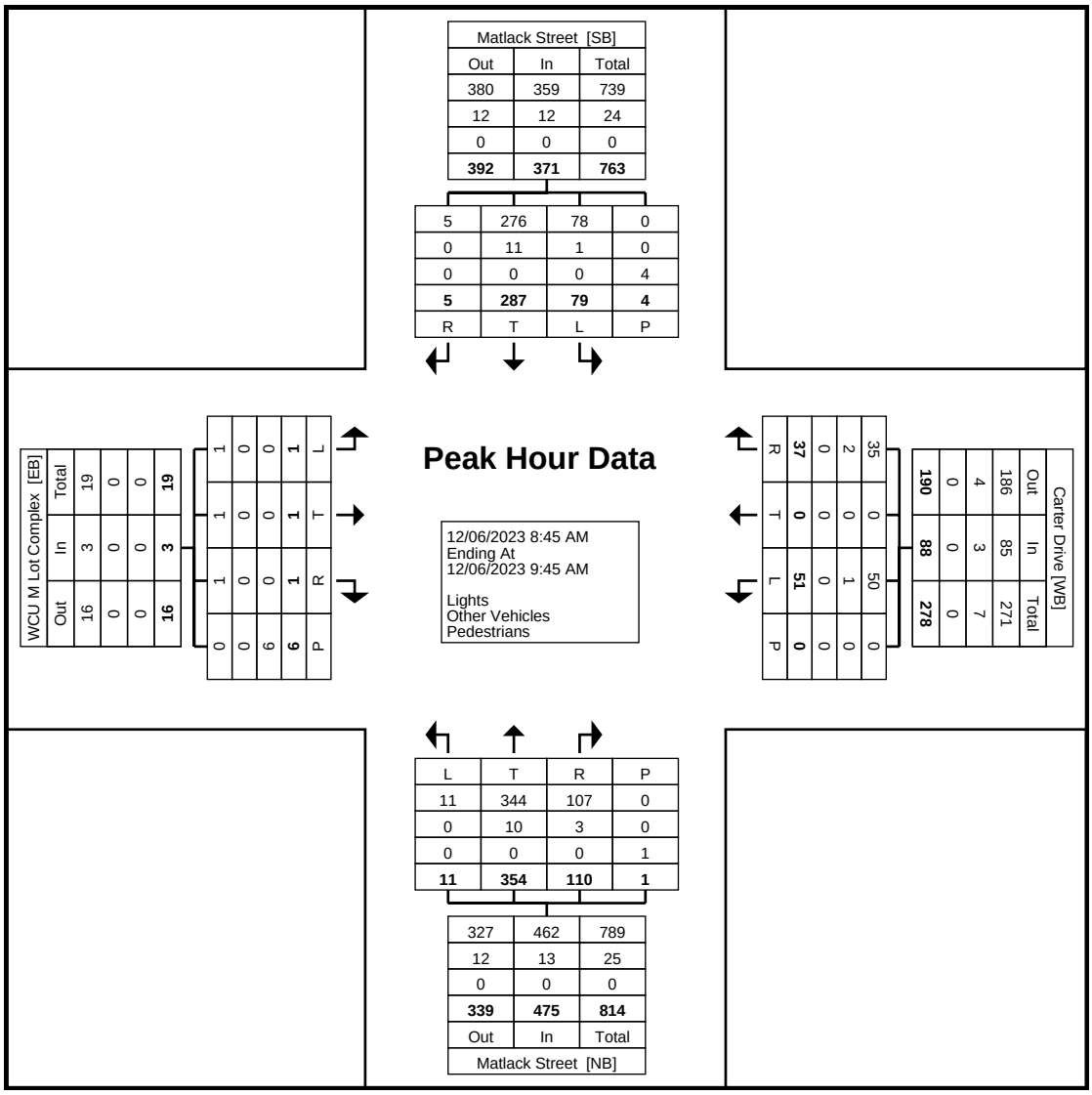
Count Name: 13 Matlack Street & Carter Drive
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (8:45 AM)

Traffic Planning and Design, Inc
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Suite 650
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Counter: MIO:
Set up By JH::

Count Name: 13 Matlack Street & Carter Drive
Site Code:
Start Date: 12/06/2023
Page No: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	WCU M Lot Complex Eastbound					Carter Drive Westbound					Matlack Street Northbound					Matlack Street Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
5:00 PM	5	1	7	1	13	20	0	16	2	36	4	73	8	0	85	15	69	1	2	85	219
5:15 PM	3	1	13	3	17	14	0	11	0	25	1	68	17	2	86	9	75	0	2	84	212
5:30 PM	3	2	4	1	9	22	0	21	0	43	0	67	19	0	86	14	65	2	0	81	219
5:45 PM	3	0	3	2	6	18	1	13	1	32	0	64	14	1	78	10	62	2	4	74	190
Total	14	4	27	7	45	74	1	61	3	136	5	272	58	3	335	48	271	5	8	324	840
Approach %	31.1	8.9	60.0	-	-	54.4	0.7	44.9	-	-	1.5	81.2	17.3	-	-	14.8	83.6	1.5	-	-	-
Total %	1.7	0.5	3.2	-	5.4	8.8	0.1	7.3	-	16.2	0.6	32.4	6.9	-	39.9	5.7	32.3	0.6	-	38.6	-
PHF	0.700	0.500	0.519	-	0.662	0.841	0.250	0.726	-	0.791	0.313	0.932	0.763	-	0.974	0.800	0.903	0.625	-	0.953	0.959
Lights	14	4	27	-	45	73	1	60	-	134	5	267	57	-	329	48	265	5	-	318	826
% Lights	100.0	100.0	100.0	-	100.0	98.6	100.0	98.4	-	98.5	100.0	98.2	98.3	-	98.2	100.0	97.8	100.0	-	98.1	98.3
Other Vehicles	0	0	0	-	0	1	0	1	-	2	0	5	1	-	6	0	6	0	-	6	14
% Other Vehicles	0.0	0.0	0.0	-	0.0	1.4	0.0	1.6	-	1.5	0.0	1.8	1.7	-	1.8	0.0	2.2	0.0	-	1.9	1.7
Pedestrians	-	-	-	7	-	-	-	-	3	-	-	-	-	3	-	-	-	-	8	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

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Counter: MIO:
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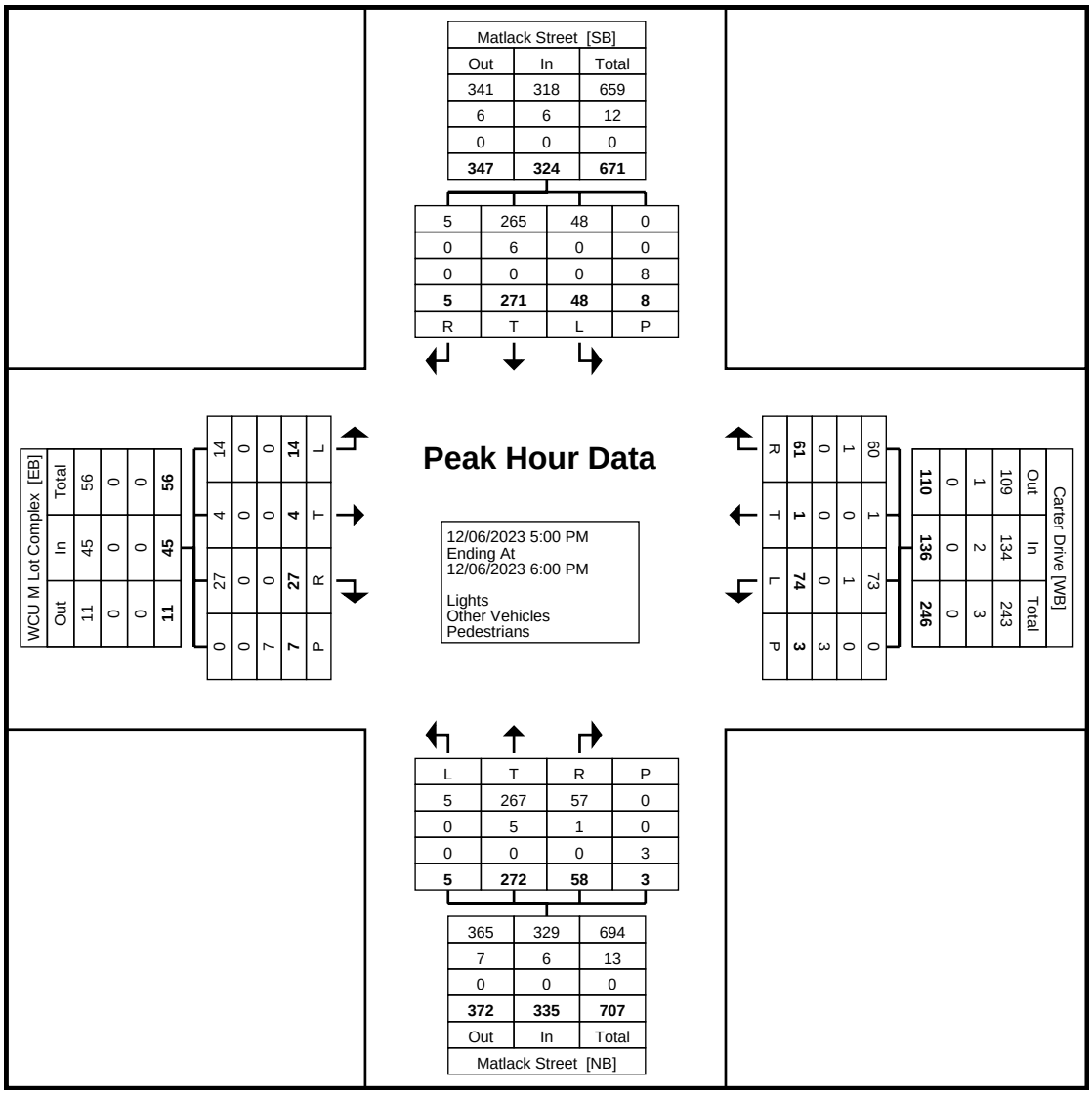
Count Name: 13 Matlack Street & Carter Drive
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (5:00 PM)

Counter: MIO:
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Traffic Planning and Design, Inc
2500 East High Street
Suite 650
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610.326.3100

Count Name: 14 Church Street & Rosedale Avenue
Site Code:
Start Date: 12/06/2023
Page No: 1

Turning Movement Data

Start Time	Rosedale Avenue Eastbound					Rosedale Avenue Westbound						Church Street Northbound					Church Street Southbound						Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	
7:00 AM	1	89	0	2	90	1	33	0	0	0	34	0	0	0	0	0	4	0	0	2	4	6	130
7:15 AM	0	93	4	11	97	2	43	1	0	9	46	0	0	0	2	0	7	1	5	1	12	14	157
7:30 AM	0	106	2	20	108	7	50	1	0	7	58	0	0	0	10	0	9	2	3	3	6	17	183
7:45 AM	0	103	2	54	105	10	52	0	0	21	62	0	0	0	27	0	8	1	3	5	14	17	184
Hourly Total	1	391	8	87	400	20	178	2	0	37	200	0	0	0	39	0	28	4	11	11	36	54	654
8:00 AM	0	106	3	26	109	4	62	0	0	10	66	0	0	0	7	0	6	3	5	5	9	19	194
8:15 AM	0	110	2	12	112	7	57	0	0	4	64	0	0	0	5	0	10	0	3	2	6	15	191
8:30 AM	0	112	4	15	116	5	58	0	0	14	63	0	0	0	8	0	9	1	4	4	17	18	197
8:45 AM	0	105	3	37	108	3	45	0	0	24	48	0	0	0	39	0	19	1	2	3	30	25	181
Hourly Total	0	433	12	90	445	19	222	0	0	52	241	0	0	0	59	0	44	5	14	14	62	77	763
9:00 AM	0	80	3	16	83	3	49	0	0	10	52	0	0	0	11	0	18	1	4	8	20	31	166
9:15 AM	0	61	5	11	66	4	43	0	0	14	47	0	0	0	9	0	7	0	4	5	16	16	129
9:30 AM	0	55	3	19	58	3	51	0	0	17	54	0	0	1	15	1	23	0	3	2	14	28	141
9:45 AM	0	55	1	37	56	2	51	0	0	45	53	0	0	0	30	0	24	0	8	9	61	41	150
Hourly Total	0	251	12	83	263	12	194	0	0	86	206	0	0	1	65	1	72	1	19	24	111	116	586
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	82	6	37	88	1	84	0	0	61	85	0	0	0	33	0	11	1	2	9	41	23	196
3:15 PM	0	56	1	33	57	4	71	0	0	27	75	0	0	0	28	0	15	1	4	8	26	28	160
3:30 PM	0	59	1	32	60	8	88	0	0	24	96	0	0	0	24	0	6	1	2	6	29	15	171
3:45 PM	0	53	2	57	55	10	77	0	0	34	87	0	0	0	24	0	14	1	6	8	34	29	171
Hourly Total	0	250	10	159	260	23	320	0	0	146	343	0	0	0	109	0	46	4	14	31	130	95	698
4:00 PM	0	65	5	58	70	5	69	0	0	56	74	0	0	0	58	0	26	2	4	13	56	45	189
4:15 PM	0	87	4	39	91	9	84	0	0	69	93	0	0	0	52	0	30	0	2	14	52	46	230
4:30 PM	0	72	3	31	75	8	94	0	0	28	102	0	0	0	21	0	32	0	2	11	18	45	222
4:45 PM	0	80	5	17	85	9	104	0	0	21	113	1	0	0	13	1	16	1	4	12	28	33	232
Hourly Total	0	304	17	145	321	31	351	0	0	174	382	1	0	0	144	1	104	3	12	50	154	169	873
5:00 PM	0	68	4	31	72	3	88	0	0	14	91	0	0	0	16	0	20	1	6	4	25	31	194
5:15 PM	0	65	1	33	66	5	83	0	0	27	88	0	0	0	18	0	13	1	5	9	12	28	182
5:30 PM	0	80	2	28	82	6	73	0	0	51	79	0	0	0	15	0	23	0	6	6	17	35	196
5:45 PM	0	81	4	23	85	5	93	0	0	23	98	0	0	0	17	0	22	0	5	8	11	35	218
Hourly Total	0	294	11	115	305	19	337	0	0	115	356	0	0	0	66	0	78	2	22	27	65	129	790
Grand Total	1	1923	70	679	1994	124	1602	2	0	610	1728	1	0	1	482	2	372	19	92	157	558	640	4364
Approach %	0.1	96.4	3.5	-	-	7.2	92.7	0.1	0.0	-	-	50.0	0.0	50.0	-	-	58.1	3.0	14.4	24.5	-	-	-
Total %	0.0	44.1	1.6	-	45.7	2.8	36.7	0.0	0.0	-	39.6	0.0	0.0	0.0	-	0.0	8.5	0.4	2.1	3.6	-	14.7	-
Lights	1	1861	69	-	1931	123	1553	2	0	-	1678	1	0	1	-	2	323	19	58	114	-	514	4125
% Lights	100.0	96.8	98.6	-	96.8	99.2	96.9	100.0	-	-	97.1	100.0	-	100.0	-	100.0	86.8	100.0	63.0	72.6	-	80.3	94.5
Other Vehicles	0	62	1	-	63	1	49	0	0	-	50	0	0	0	-	0	49	0	34	43	-	126	239
% Other Vehicles	0.0	3.2	1.4	-	3.2	0.8	3.1	0.0	-	-	2.9	0.0	-	0.0	-	0.0	13.2	0.0	37.0	27.4	-	19.7	5.5
Pedestrians	-	-	-	679	-	-	-	-	-	610	-	-	-	-	482	-	-	-	-	-	558	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
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Counter: MIO:
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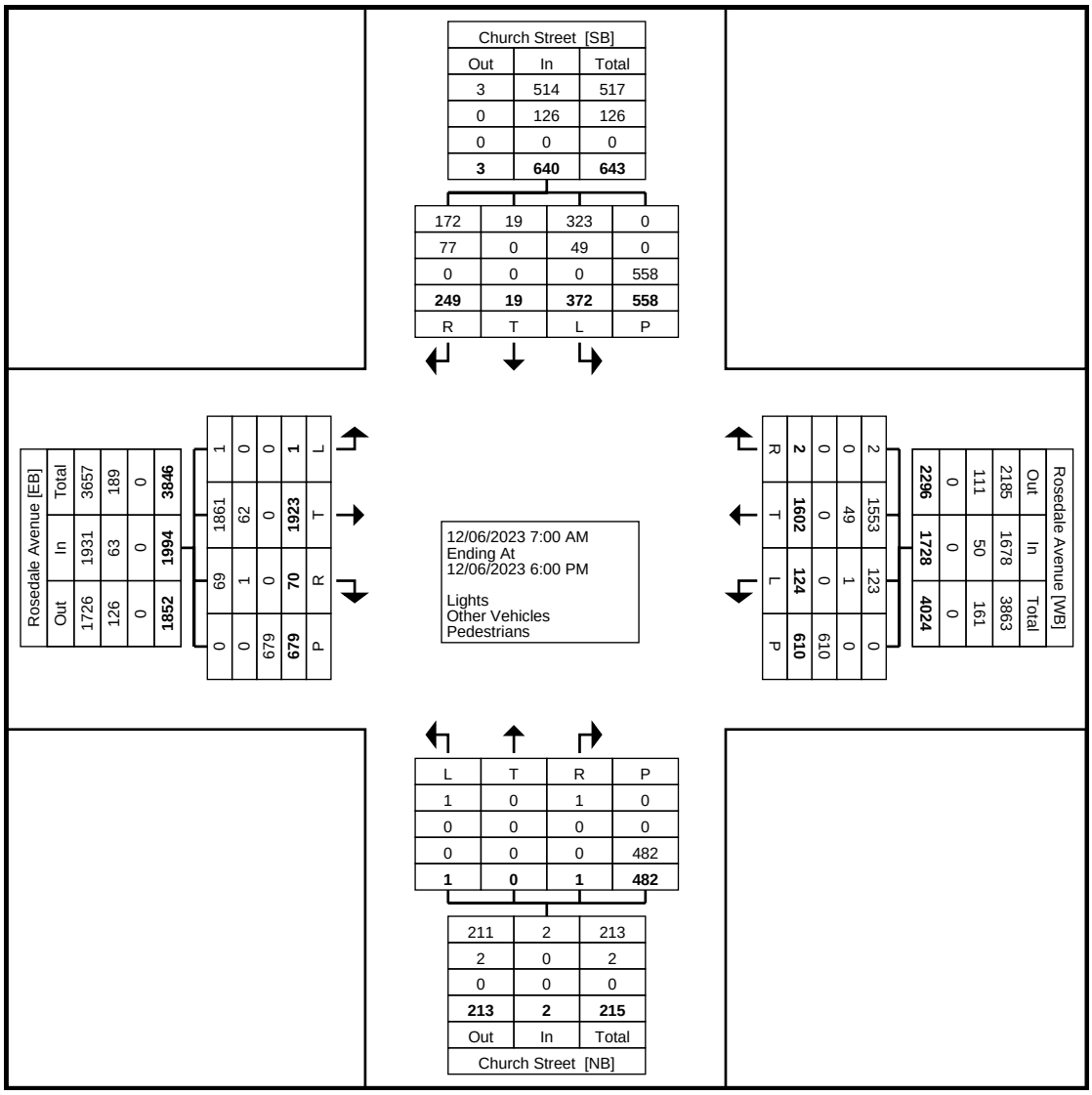
Count Name: 14 Church Street & Rosedale Avenue
Site Code:
Start Date: 12/06/2023



Turning Movement Data Plot

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2500 East High Street
Suite 650
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610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 14 Church Street & Rosedale Avenue
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Rosedale Avenue Eastbound					Rosedale Avenue Westbound						Church Street Northbound					Church Street Southbound						
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Int. Total
7:45 AM	0	103	2	54	105	10	52	0	0	21	62	0	0	0	27	0	8	1	3	5	14	17	184
8:00 AM	0	106	3	26	109	4	62	0	0	10	66	0	0	0	7	0	6	3	5	5	9	19	194
8:15 AM	0	110	2	12	112	7	57	0	0	4	64	0	0	0	5	0	10	0	3	2	6	15	191
8:30 AM	0	112	4	15	116	5	58	0	0	14	63	0	0	0	8	0	9	1	4	4	17	18	197
Total	0	431	11	107	442	26	229	0	0	49	255	0	0	0	47	0	33	5	15	16	46	69	766
Approach %	0.0	97.5	2.5	-	-	10.2	89.8	0.0	0.0	-	-	0.0	0.0	0.0	-	-	47.8	7.2	21.7	23.2	-	-	-
Total %	0.0	56.3	1.4	-	57.7	3.4	29.9	0.0	0.0	-	33.3	0.0	0.0	0.0	-	0.0	4.3	0.7	2.0	2.1	-	9.0	-
PHF	0.000	0.962	0.688	-	0.953	0.650	0.923	0.000	0.000	-	0.966	0.000	0.000	0.000	-	0.000	0.825	0.417	0.750	0.800	-	0.908	0.972
Lights	0	417	11	-	428	25	214	0	0	-	239	0	0	0	-	0	22	5	5	13	-	45	712
% Lights	-	96.8	100.0	-	96.8	96.2	93.4	-	-	-	93.7	-	-	-	-	-	66.7	100.0	33.3	81.3	-	65.2	93.0
Other Vehicles	0	14	0	-	14	1	15	0	0	-	16	0	0	0	-	0	11	0	10	3	-	24	54
% Other Vehicles	-	3.2	0.0	-	3.2	3.8	6.6	-	-	-	6.3	-	-	-	-	-	33.3	0.0	66.7	18.8	-	34.8	7.0
Pedestrians	-	-	-	107	-	-	-	-	-	49	-	-	-	-	47	-	-	-	-	-	46	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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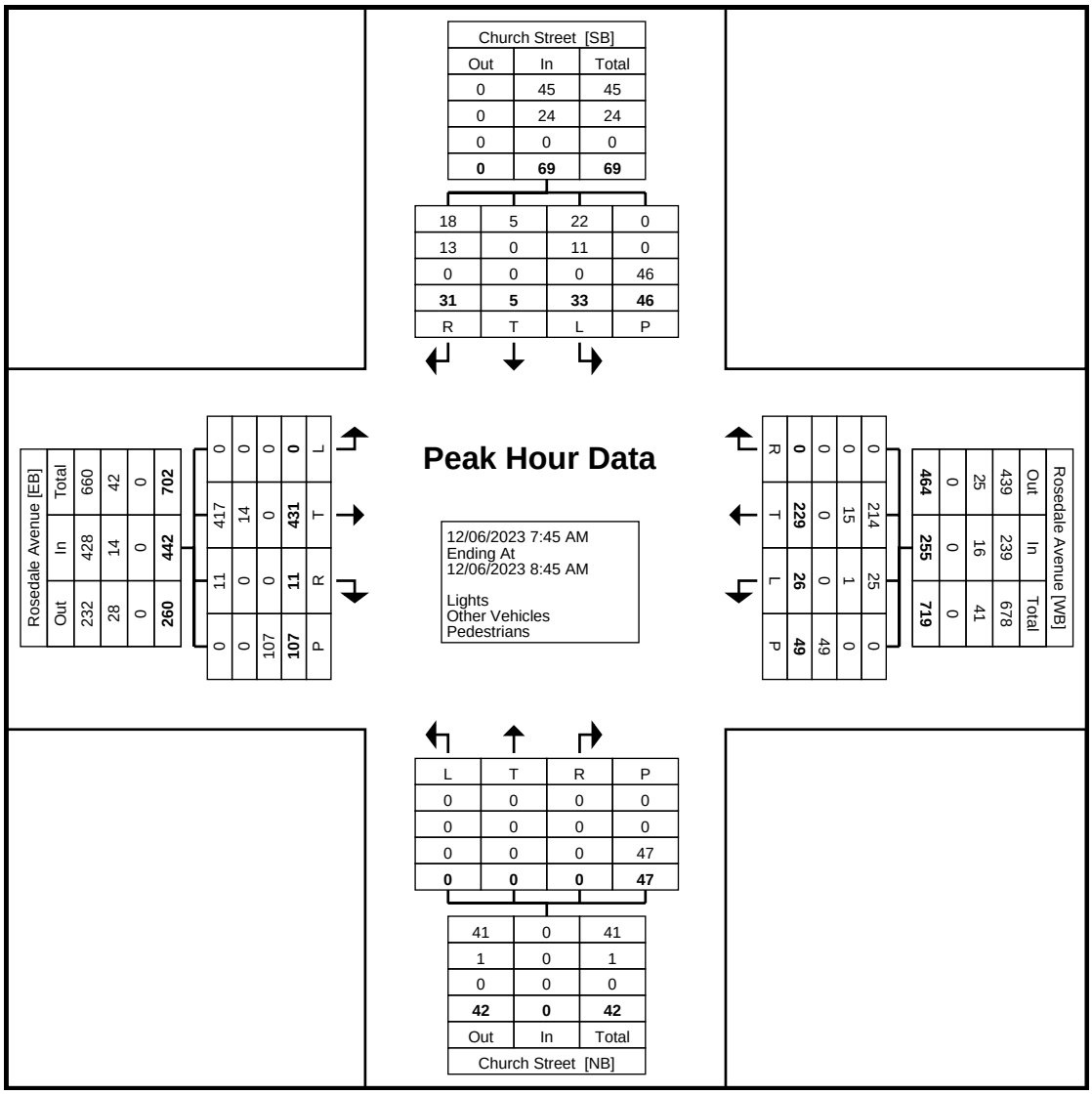
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (7:45 AM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 14 Church Street & Rosedale Avenue
Site Code:
Start Date: 12/06/2023

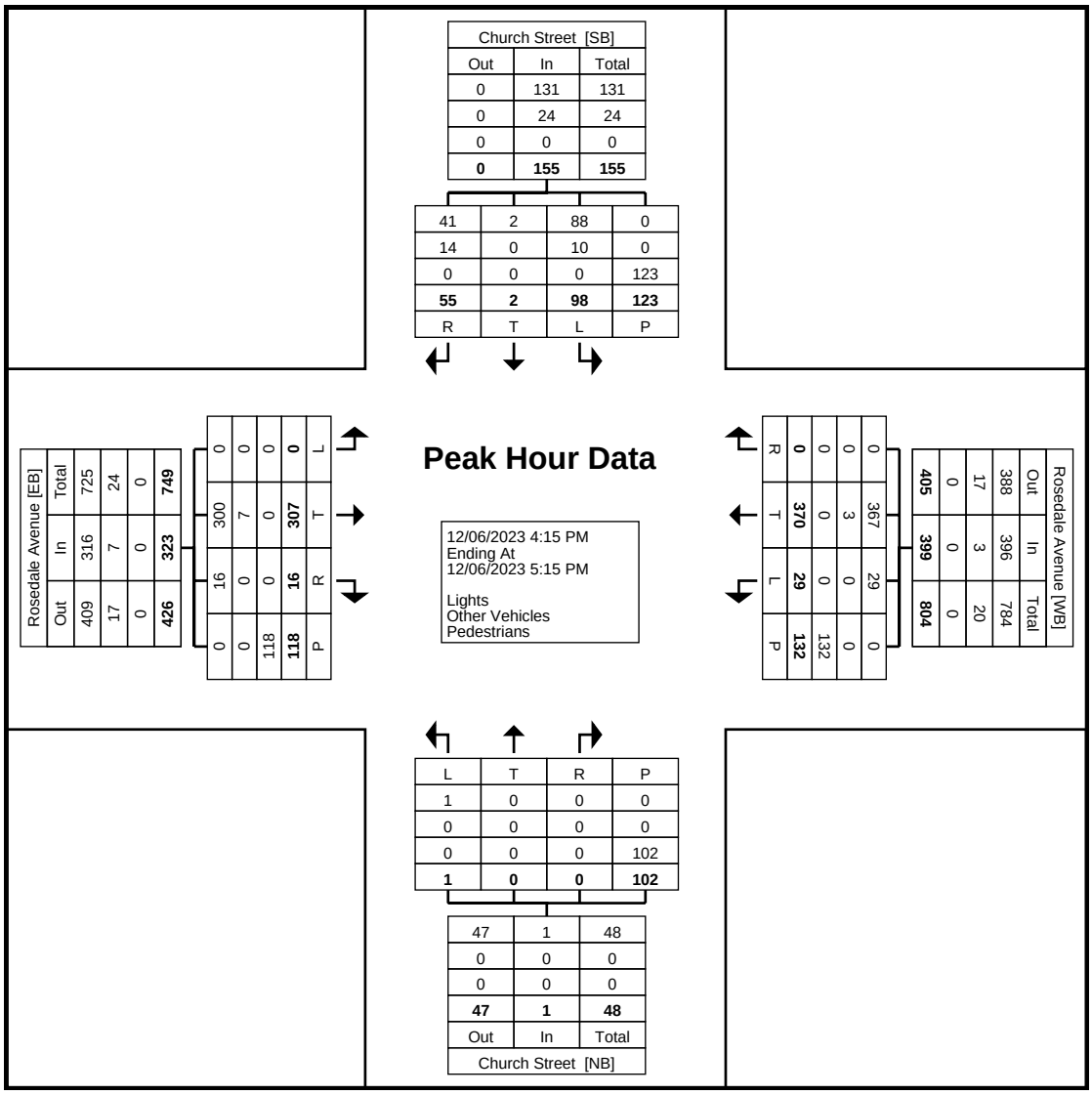
Turning Movement Peak Hour Data (4:15 PM)

Start Time	Rosedale Avenue Eastbound					Rosedale Avenue Westbound						Church Street Northbound					Church Street Southbound						
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Int. Total
4:15 PM	0	87	4	39	91	9	84	0	0	69	93	0	0	0	52	0	30	0	2	14	52	46	230
4:30 PM	0	72	3	31	75	8	94	0	0	28	102	0	0	0	21	0	32	0	2	11	18	45	222
4:45 PM	0	80	5	17	85	9	104	0	0	21	113	1	0	0	13	1	16	1	4	12	28	33	232
5:00 PM	0	68	4	31	72	3	88	0	0	14	91	0	0	0	16	0	20	1	6	4	25	31	194
Total	0	307	16	118	323	29	370	0	0	132	399	1	0	0	102	1	98	2	14	41	123	155	878
Approach %	0.0	95.0	5.0	-	-	7.3	92.7	0.0	0.0	-	-	100.0	0.0	0.0	-	-	63.2	1.3	9.0	26.5	-	-	-
Total %	0.0	35.0	1.8	-	36.8	3.3	42.1	0.0	0.0	-	45.4	0.1	0.0	0.0	-	0.1	11.2	0.2	1.6	4.7	-	17.7	-
PHF	0.000	0.882	0.800	-	0.887	0.806	0.889	0.000	0.000	-	0.883	0.250	0.000	0.000	-	0.250	0.766	0.500	0.583	0.732	-	0.842	0.946
Lights	0	300	16	-	316	29	367	0	0	-	396	1	0	0	-	1	88	2	9	32	-	131	844
% Lights	-	97.7	100.0	-	97.8	100.0	99.2	-	-	-	99.2	100.0	-	-	-	100.0	89.8	100.0	64.3	78.0	-	84.5	96.1
Other Vehicles	0	7	0	-	7	0	3	0	0	-	3	0	0	0	-	0	10	0	5	9	-	24	34
% Other Vehicles	-	2.3	0.0	-	2.2	0.0	0.8	-	-	-	0.8	0.0	-	-	-	0.0	10.2	0.0	35.7	22.0	-	15.5	3.9
Pedestrians	-	-	-	118	-	-	-	-	-	132	-	-	-	-	102	-	-	-	-	-	123	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 14 Church Street & Rosedale Avenue
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (4:15 PM)

Counter: MIO:
Set up By JH::

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 15 Ped Crosswalk & Rosedale Avenue
Site Code:
Start Date: 12/06/2023

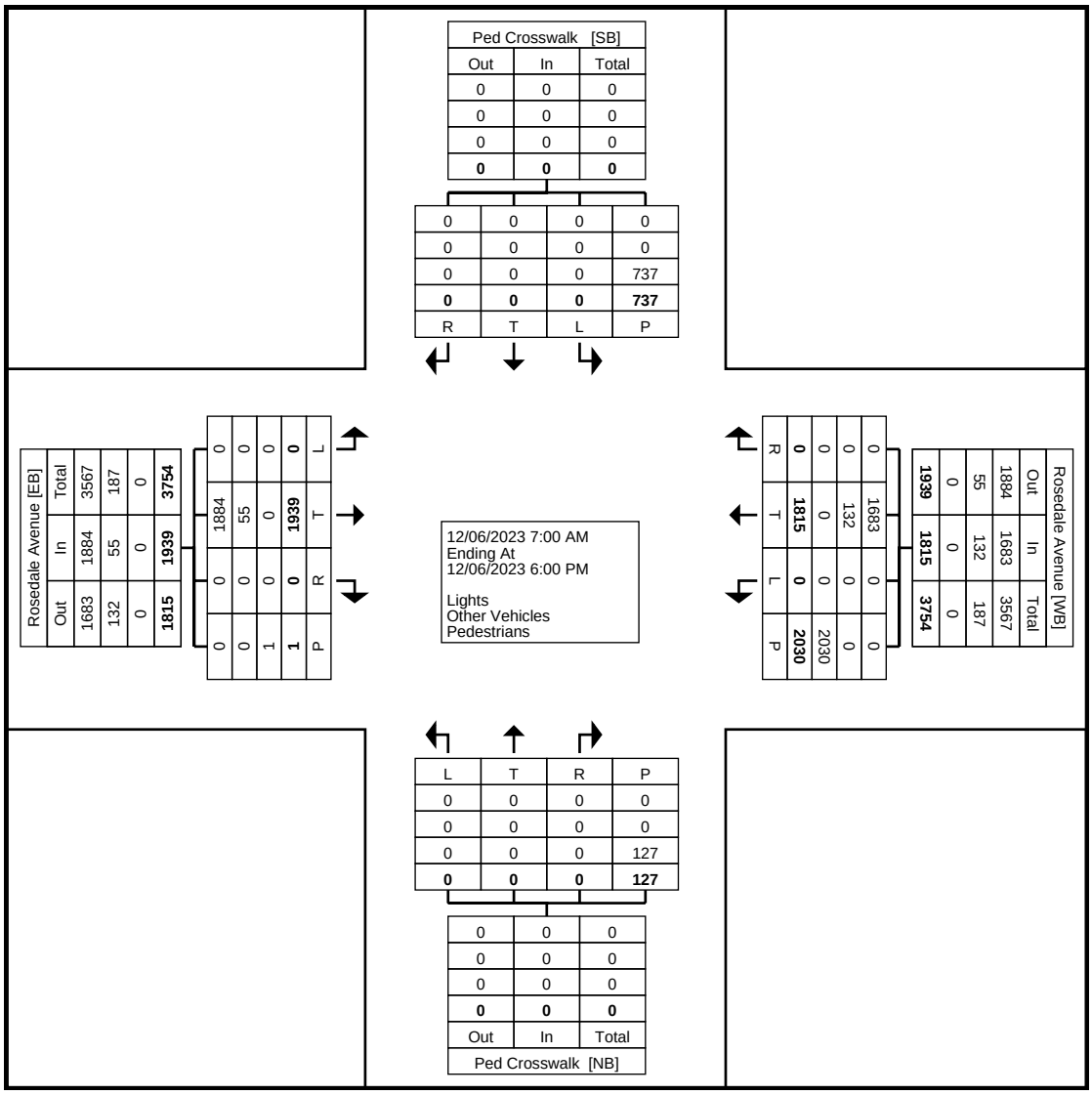
Turning Movement Data

Start Time	Rosedale Avenue Eastbound					Rosedale Avenue Westbound					Ped Crosswalk Northbound					Ped Crosswalk Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	88	0	0	88	0	31	0	7	31	0	0	0	0	0	0	0	0	9	0	119
7:15 AM	0	102	0	0	102	0	38	0	7	38	0	0	0	5	0	0	0	0	6	0	140
7:30 AM	0	108	0	0	108	0	51	0	25	51	0	0	0	5	0	0	0	0	6	0	159
7:45 AM	0	111	0	0	111	0	60	0	64	60	0	0	0	12	0	0	0	0	15	0	171
Hourly Total	0	409	0	0	409	0	180	0	103	180	0	0	0	22	0	0	0	0	36	0	589
8:00 AM	0	100	0	0	100	0	75	0	28	75	0	0	0	12	0	0	0	0	8	0	175
8:15 AM	0	108	0	0	108	0	60	0	16	60	0	0	0	2	0	0	0	0	7	0	168
8:30 AM	0	113	0	1	113	0	65	0	29	65	0	0	0	3	0	0	0	0	12	0	178
8:45 AM	0	108	0	0	108	0	60	0	64	60	0	0	0	4	0	0	0	0	21	0	168
Hourly Total	0	429	0	1	429	0	260	0	137	260	0	0	0	21	0	0	0	0	48	0	689
9:00 AM	0	81	0	0	81	0	58	0	24	58	0	0	0	1	0	0	0	0	11	0	139
9:15 AM	0	67	0	0	67	0	48	0	40	48	0	0	0	5	0	0	0	0	23	0	115
9:30 AM	0	51	0	0	51	0	52	0	39	52	0	0	0	2	0	0	0	0	17	0	103
9:45 AM	0	55	0	0	55	0	66	0	76	66	0	0	0	5	0	0	0	0	30	0	121
Hourly Total	0	254	0	0	254	0	224	0	179	224	0	0	0	13	0	0	0	0	81	0	478
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	74	0	0	74	0	93	0	161	93	0	0	0	5	0	0	0	0	40	0	167
3:15 PM	0	57	0	0	57	0	77	0	135	77	0	0	0	3	0	0	0	0	32	0	134
3:30 PM	0	61	0	0	61	0	89	0	151	89	0	0	0	3	0	0	0	0	71	0	150
3:45 PM	0	50	0	0	50	0	88	0	126	88	0	0	0	9	0	0	0	0	49	0	138
Hourly Total	0	242	0	0	242	0	347	0	573	347	0	0	0	20	0	0	0	0	192	0	589
4:00 PM	0	71	0	0	71	0	80	0	145	80	0	0	0	6	0	0	0	0	55	0	151
4:15 PM	0	85	0	0	85	0	105	0	121	105	0	0	0	9	0	0	0	0	58	0	190
4:30 PM	0	79	0	0	79	0	114	0	112	114	0	0	0	22	0	0	0	0	38	0	193
4:45 PM	0	72	0	0	72	0	120	0	111	120	0	0	0	7	0	0	0	0	33	0	192
Hourly Total	0	307	0	0	307	0	419	0	489	419	0	0	0	44	0	0	0	0	184	0	726
5:00 PM	0	74	0	0	74	0	95	0	138	95	0	0	0	1	0	0	0	0	52	0	169
5:15 PM	0	63	0	0	63	0	98	0	125	98	0	0	0	3	0	0	0	0	42	0	161
5:30 PM	0	82	0	0	82	0	86	0	154	86	0	0	0	1	0	0	0	0	66	0	168
5:45 PM	0	79	0	0	79	0	106	0	132	106	0	0	0	2	0	0	0	0	36	0	185
Hourly Total	0	298	0	0	298	0	385	0	549	385	0	0	0	7	0	0	0	0	196	0	683
Grand Total	0	1939	0	1	1939	0	1815	0	2030	1815	0	0	0	127	0	0	0	0	737	0	3754
Approach %	0.0	100.0	0.0	-	-	0.0	100.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	-
Total %	0.0	51.7	0.0	-	51.7	0.0	48.3	0.0	-	48.3	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-
Lights	0	1884	0	-	1884	0	1683	0	-	1683	0	0	0	-	0	0	0	0	-	0	3567
% Lights	-	97.2	-	-	97.2	-	92.7	-	-	92.7	-	-	-	-	-	-	-	-	-	-	95.0
Other Vehicles	0	55	0	-	55	0	132	0	-	132	0	0	0	-	0	0	0	0	-	0	187
% Other Vehicles	-	2.8	-	-	2.8	-	7.3	-	-	7.3	-	-	-	-	-	-	-	-	-	-	5.0
Pedestrians	-	-	-	1	-	-	-	-	2030	-	-	-	-	127	-	-	-	-	737	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 15 Ped Crosswalk & Rosedale Avenue
Site Code:
Start Date: 12/06/2023



Turning Movement Data Plot

Counter: MIO:
Set up By JH::

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 15 Ped Crosswalk & Rosedale Avenue
Site Code:
Start Date: 12/06/2023

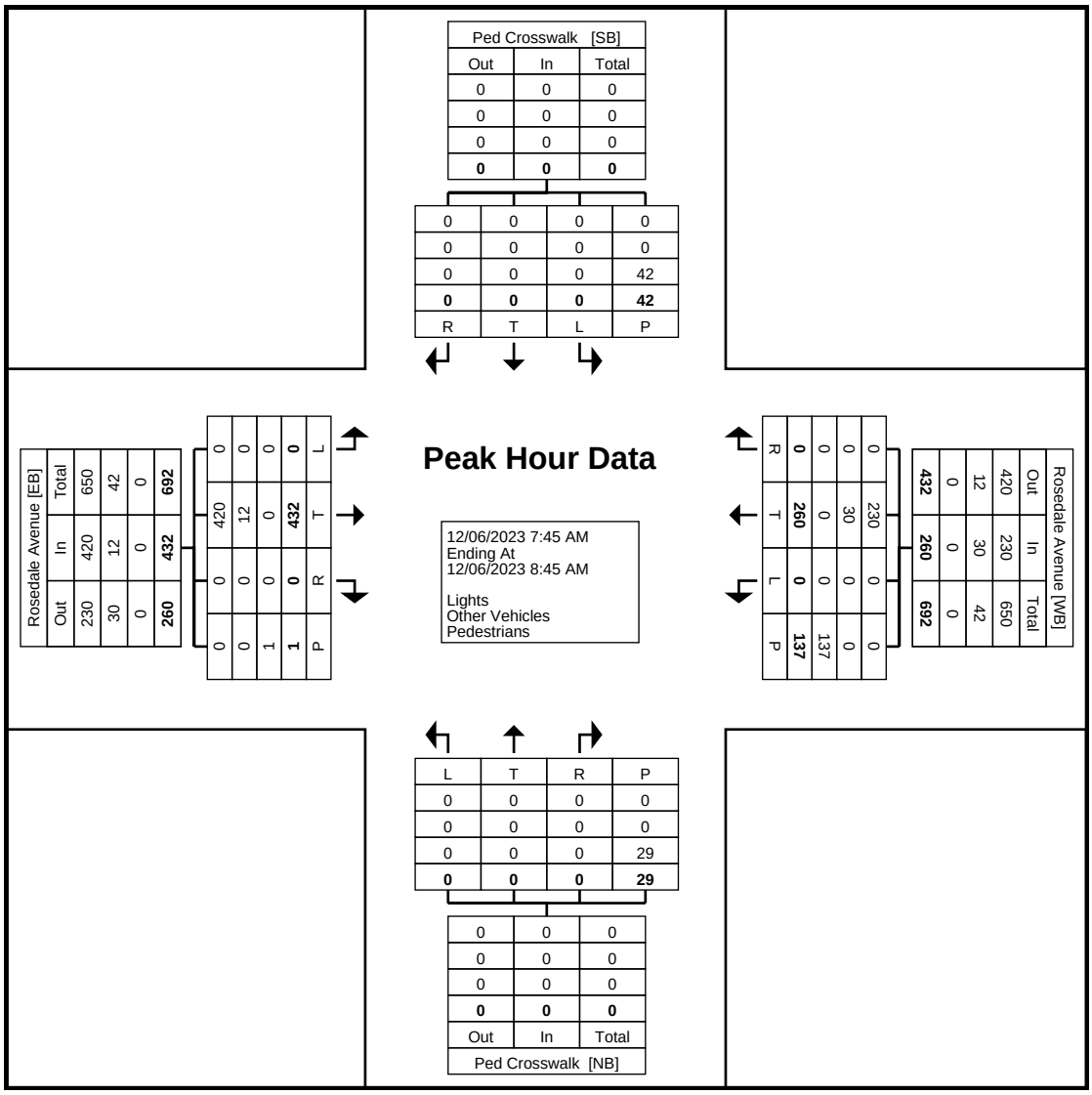
Turning Movement Peak Hour Data (7:45 AM)

Start Time	Rosedale Avenue Eastbound					Rosedale Avenue Westbound					Ped Crosswalk Northbound					Ped Crosswalk Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:45 AM	0	111	0	0	111	0	60	0	64	60	0	0	0	12	0	0	0	0	15	0	171
8:00 AM	0	100	0	0	100	0	75	0	28	75	0	0	0	12	0	0	0	0	8	0	175
8:15 AM	0	108	0	0	108	0	60	0	16	60	0	0	0	2	0	0	0	0	7	0	168
8:30 AM	0	113	0	1	113	0	65	0	29	65	0	0	0	3	0	0	0	0	12	0	178
Total	0	432	0	1	432	0	260	0	137	260	0	0	0	29	0	0	0	0	42	0	692
Approach %	0.0	100.0	0.0	-	-	0.0	100.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	-
Total %	0.0	62.4	0.0	-	62.4	0.0	37.6	0.0	-	37.6	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-
PHF	0.000	0.956	0.000	-	0.956	0.000	0.867	0.000	-	0.867	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	-	0.000	0.972
Lights	0	420	0	-	420	0	230	0	-	230	0	0	0	-	0	0	0	0	-	0	650
% Lights	-	97.2	-	-	97.2	-	88.5	-	-	88.5	-	-	-	-	-	-	-	-	-	-	93.9
Other Vehicles	0	12	0	-	12	0	30	0	-	30	0	0	0	-	0	0	0	0	-	0	42
% Other Vehicles	-	2.8	-	-	2.8	-	11.5	-	-	11.5	-	-	-	-	-	-	-	-	-	-	6.1
Pedestrians	-	-	-	1	-	-	-	-	137	-	-	-	-	29	-	-	-	-	42	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 15 Ped Crosswalk & Rosedale Avenue
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (7:45 AM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 15 Ped Crosswalk & Rosedale Avenue
Site Code:
Start Date: 12/06/2023

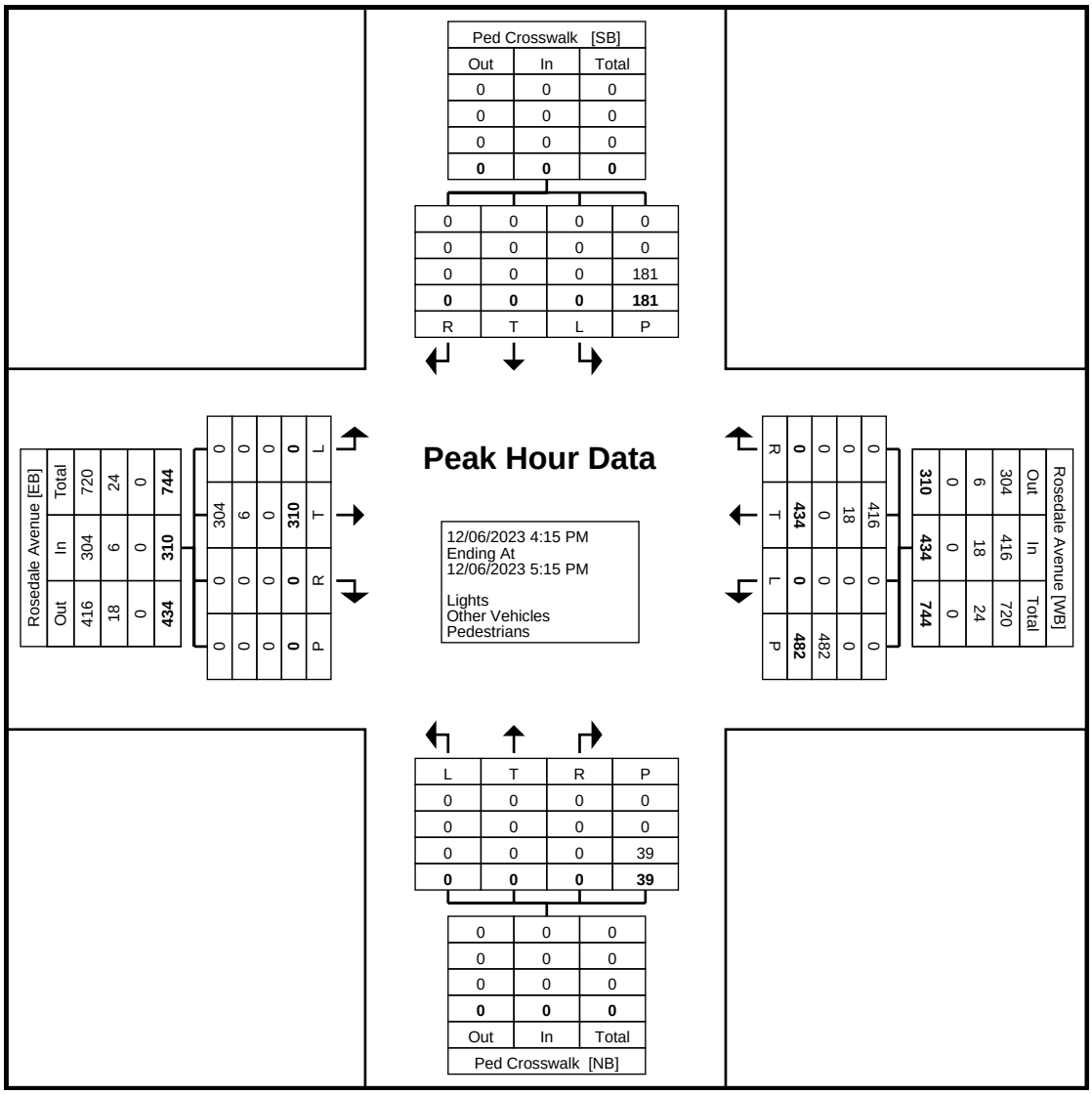
Turning Movement Peak Hour Data (4:15 PM)

Start Time	Rosedale Avenue Eastbound					Rosedale Avenue Westbound					Ped Crosswalk Northbound					Ped Crosswalk Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
4:15 PM	0	85	0	0	85	0	105	0	121	105	0	0	0	9	0	0	0	0	58	0	190
4:30 PM	0	79	0	0	79	0	114	0	112	114	0	0	0	22	0	0	0	0	38	0	193
4:45 PM	0	72	0	0	72	0	120	0	111	120	0	0	0	7	0	0	0	0	33	0	192
5:00 PM	0	74	0	0	74	0	95	0	138	95	0	0	0	1	0	0	0	0	52	0	169
Total	0	310	0	0	310	0	434	0	482	434	0	0	0	39	0	0	0	0	181	0	744
Approach %	0.0	100.0	0.0	-	-	0.0	100.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	-
Total %	0.0	41.7	0.0	-	41.7	0.0	58.3	0.0	-	58.3	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-
PHF	0.000	0.912	0.000	-	0.912	0.000	0.904	0.000	-	0.904	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	-	0.000	0.964
Lights	0	304	0	-	304	0	416	0	-	416	0	0	0	-	0	0	0	0	-	0	720
% Lights	-	98.1	-	-	98.1	-	95.9	-	-	95.9	-	-	-	-	-	-	-	-	-	-	96.8
Other Vehicles	0	6	0	-	6	0	18	0	-	18	0	0	0	-	0	0	0	0	-	0	24
% Other Vehicles	-	1.9	-	-	1.9	-	4.1	-	-	4.1	-	-	-	-	-	-	-	-	-	-	3.2
Pedestrians	-	-	-	0	-	-	-	-	482	-	-	-	-	39	-	-	-	-	181	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 15 Ped Crosswalk & Rosedale Avenue
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (4:15 PM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 16 South New Street & Rosedale Avenue
Site Code:
Start Date: 12/05/2023

Turning Movement Data

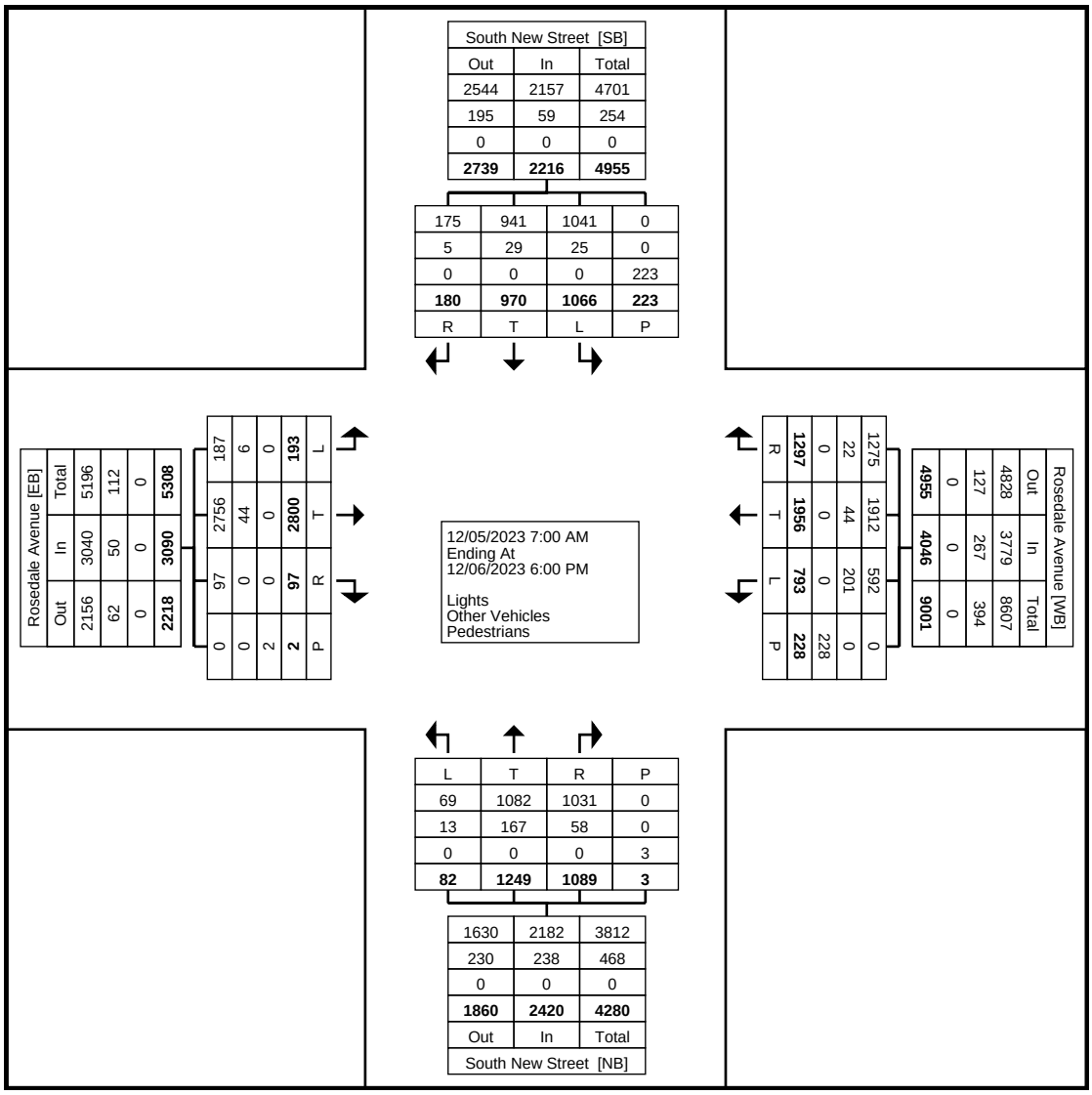
Start Time	Rosedale Avenue Eastbound						Rosedale Avenue Westbound						South New Street Northbound						South New Street Southbound						Int. Total
	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	
7:00 AM	2	83	2	0	0	87	7	16	11	0	4	34	1	6	15	0	0	22	15	13	0	1	0	29	172
7:15 AM	3	86	1	0	0	90	4	19	13	0	1	36	2	14	25	0	0	41	13	12	1	1	0	27	194
7:30 AM	5	102	0	0	0	107	18	19	21	0	6	58	1	22	16	0	0	39	18	13	0	0	3	31	235
7:45 AM	5	124	1	0	0	130	9	32	23	0	16	64	1	30	23	0	0	54	30	14	2	1	6	47	295
Hourly Total	15	395	4	0	0	414	38	86	68	0	27	192	5	72	79	0	0	156	76	52	3	3	9	134	896
8:00 AM	5	103	0	0	0	108	20	33	14	0	8	67	2	35	16	1	0	54	21	16	0	2	3	39	268
8:15 AM	2	89	2	0	0	93	8	29	24	0	3	61	0	25	24	0	0	49	22	10	0	1	2	33	236
8:30 AM	1	84	1	0	0	86	8	25	19	0	1	52	4	23	20	0	0	47	13	20	3	3	1	39	224
8:45 AM	1	73	0	0	0	74	14	30	18	0	4	62	3	32	16	2	0	53	26	15	1	2	3	44	233
Hourly Total	9	349	3	0	0	361	50	117	75	0	16	242	9	115	76	3	0	203	82	61	4	8	9	155	961
9:00 AM	6	59	0	1	0	66	21	28	30	8	10	87	1	29	12	0	0	42	23	17	5	3	9	48	243
9:15 AM	14	67	6	0	0	87	24	24	35	5	5	88	1	39	17	0	0	57	19	40	1	0	18	60	292
9:30 AM	3	44	0	0	0	47	19	16	39	4	0	78	0	16	17	0	0	33	10	10	0	1	6	21	179
9:45 AM	2	37	1	0	1	40	12	24	42	0	0	78	1	16	14	0	1	31	19	13	0	0	3	32	181
Hourly Total	25	207	7	1	1	240	76	92	146	17	15	331	3	100	60	0	1	163	71	80	6	4	36	161	895
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	1	39	3	0	0	43	15	32	27	0	2	74	2	25	26	0	0	53	15	24	4	0	9	43	213
3:15 PM	7	26	4	0	0	37	21	46	24	0	3	91	4	28	24	0	0	56	26	24	6	3	12	59	243
3:30 PM	3	38	6	0	0	47	21	61	28	1	6	111	1	23	30	0	0	54	32	23	7	3	3	65	277
3:45 PM	3	37	3	0	0	43	23	66	19	0	3	108	3	36	36	0	0	75	38	27	1	2	2	68	294
Hourly Total	14	140	16	0	0	170	80	205	98	1	14	384	10	112	116	0	0	238	111	98	18	8	26	235	1027
4:00 PM	4	34	2	0	0	40	14	63	36	1	5	114	4	26	38	3	0	71	33	24	3	1	5	61	286
4:15 PM	3	43	4	0	0	50	24	66	49	0	5	139	3	30	38	2	0	73	22	27	4	1	5	54	316
4:30 PM	4	43	3	0	0	50	25	71	38	0	13	134	1	28	18	5	0	52	30	26	0	0	5	56	292
4:45 PM	5	40	1	0	0	46	15	64	33	0	9	112	1	24	24	3	0	52	22	25	4	0	3	51	261
Hourly Total	16	160	10	0	0	186	78	264	156	1	32	499	9	108	118	13	0	248	107	102	11	2	18	222	1155
5:00 PM	3	35	0	0	1	38	19	53	30	0	8	102	1	24	18	0	1	43	28	17	5	4	1	54	237
5:15 PM	1	24	0	1	0	26	17	54	30	0	6	101	0	38	23	0	1	61	18	29	1	3	4	51	239
5:30 PM	2	30	0	1	0	33	24	61	30	0	5	115	3	23	31	0	0	57	23	18	3	1	5	45	250
5:45 PM	4	40	3	0	0	47	24	58	26	0	2	108	3	27	32	0	0	62	27	24	2	4	4	57	274
Hourly Total	10	129	3	2	1	144	84	226	116	0	21	426	7	112	104	0	2	223	96	88	11	12	14	207	1000
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	2	72	0	0	0	74	4	16	5	3	2	28	0	5	13	0	0	18	7	12	0	2	1	21	141
7:15 AM	3	81	2	1	0	87	2	15	11	0	1	28	3	12	22	1	0	38	16	6	2	1	1	25	178
7:30 AM	5	107	2	0	0	114	11	17	11	0	6	39	0	29	17	0	0	46	18	7	1	0	4	26	225
7:45 AM	8	110	1	0	0	119	9	16	25	0	13	50	0	35	38	0	0	73	25	16	2	2	3	45	287
Hourly Total	18	370	5	1	0	394	26	64	52	3	22	145	3	81	90	1	0	175	66	41	5	5	9	117	831
8:00 AM	1	96	1	1	0	99	11	29	22	1	7	63	0	33	24	1	0	58	19	18	2	0	4	39	259
8:15 AM	1	90	0	0	0	91	7	26	20	0	1	53	1	25	21	0	0	47	13	14	1	0	3	28	219
8:30 AM	6	101	5	1	0	113	9	26	31	1	4	67	2	29	21	0	0	52	18	20	3	1	7	42	274
8:45 AM	4	93	1	0	0	98	15	24	32	1	1	72	0	47	23	0	0	70	23	21	1	4	9	49	289
Hourly Total	12	380	7	2	0	401	42	105	105	3	13	255	3	134	89	1	0	227	73	73	7	5	23	158	1041
9:00 AM	9	65	1	0	0	75	12	31	11	7	3	61	2	25	11	0	0	38	15	15	6	4	4	40	214
9:15 AM	7	46	2	0	0	55	12	17	27	0	0	56	2	17	12	0	0	31	12	14	1	2	4	29	171
9:30 AM	1	40	1	0	0	42	8	17	29	0	1	54	1	23	11	0	0	35	17	14	0	0	4	31	162
9:45 AM	3	39	3	0	0	45	18	22	29	1	2	70	0	27	19	0	0	46	12	21	1	0	9	34	195
Hourly Total	20	190	7	0	0	217	50	87	96	8	6	241	5	92	53	0	0	150	56	64	8	6	21	134	742
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	8	43	2	0	0	53	26	56	24	1	3	107	2	22	19	0	0	43	28	22	2	5	6	57	260
3:15 PM	4	29	5	0	0	38	22	42	26	0	10	90	5	27	19	0	0	51	28	28	1	0	6	57	236
3:30 PM	4	34	4	0	0	42	24	62	23	0	1	109	3	17	29	0	0	49	28	18	6	0	5	52	252
3:45 PM	5	29	3	0	0	37	14	56	28	1	3	99	2	26	22	0	0	50	26	28	1	2	4	57	243
Hourly Total	21	135	14	0	0	170	86	216	101	2	17	405	12	92	89	0	0	193	110	96	10	7	21	223	991
4:00 PM	5	53	1	1	0	60	15	58	31	1	11	105	2	32	41	0	0	75	23	32	1	4	8	60	300
4:15 PM	6	47	2	0	0	55	24	68	27	0	4	119	2	33	18	0	0	53	37	33	3	0	6	73	300
4:30 PM	5	48	3	0	0	56	25	61	53	0	15	139	2	31	21	0	0	54	24	31	4	3	8	62	311
4:45 PM	4	41	4	0	0	49	21	70	43	0	4	134	2	40	21	0	0	63	24	29	3	3	5	59	305
Hourly Total	20	189	10	1	0	220	85	257	154	1	34	497	8	136	101	0	0	245	108	125	11	10	27	254	1216
5:00 PM	3	39	2	0	0	44	26	68	23	2	2	119	5	26	22	0	0	53	39	19	2	1	1	61	277

5:15 PM	5	32	1	0	0	38	18	65	23	0	6	106	0	28	16	0	0	44	21	24	3	1	6	49	237
5:30 PM	5	41	0	0	0	46	26	52	14	1	1	93	1	24	30	0	0	55	24	28	2	3	0	57	251
5:45 PM	0	44	1	0	0	45	28	52	31	0	2	111	2	17	28	0	0	47	26	19	3	1	3	49	252
Hourly Total	13	156	4	0	0	173	98	237	91	3	11	429	8	95	96	0	0	199	110	90	10	6	10	216	1017
Grand Total	193	2800	90	7	2	3090	793	1956	1258	39	228	4046	82	1249	1071	18	3	2420	1066	970	104	76	223	2216	11772
Approach %	6.2	90.6	2.9	0.2	-	-	19.6	48.3	31.1	1.0	-	-	3.4	51.6	44.3	0.7	-	-	48.1	43.8	4.7	3.4	-	-	-
Total %	1.6	23.8	0.8	0.1	-	26.2	6.7	16.6	10.7	0.3	-	34.4	0.7	10.6	9.1	0.2	-	20.6	9.1	8.2	0.9	0.6	-	18.8	-
Lights	187	2756	90	7	-	3040	592	1912	1238	37	-	3779	69	1082	1014	17	-	2182	1041	941	101	74	-	2157	11158
% Lights	96.9	98.4	100.0	100.0	-	98.4	74.7	97.8	98.4	94.9	-	93.4	84.1	86.6	94.7	94.4	-	90.2	97.7	97.0	97.1	97.4	-	97.3	94.8
Other Vehicles	6	44	0	0	-	50	201	44	20	2	-	267	13	167	57	1	-	238	25	29	3	2	-	59	614
% Other Vehicles	3.1	1.6	0.0	0.0	-	1.6	25.3	2.2	1.6	5.1	-	6.6	15.9	13.4	5.3	5.6	-	9.8	2.3	3.0	2.9	2.6	-	2.7	5.2
Pedestrians	-	-	-	-	2	-	-	-	-	-	228	-	-	-	-	-	3	-	-	-	-	-	223	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 16 South New Street & Rosedale Avenue
Site Code:
Start Date: 12/05/2023



Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 16 South New Street & Rosedale Avenue
Site Code:
Start Date: 12/05/2023

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Rosedale Avenue Eastbound						Rosedale Avenue Westbound						South New Street Northbound						South New Street Southbound						Int. Total
	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	
7:30 AM	5	102	0	0	0	107	18	19	21	0	6	58	1	22	16	0	0	39	18	13	0	0	3	31	235
7:45 AM	5	124	1	0	0	130	9	32	23	0	16	64	1	30	23	0	0	54	30	14	2	1	6	47	295
8:00 AM	5	103	0	0	0	108	20	33	14	0	8	67	2	35	16	1	0	54	21	16	0	2	3	39	268
8:15 AM	2	89	2	0	0	93	8	29	24	0	3	61	0	25	24	0	0	49	22	10	0	1	2	33	236
Total	17	418	3	0	0	438	55	113	82	0	33	250	4	112	79	1	0	196	91	53	2	4	14	150	1034
Approach %	3.9	95.4	0.7	0.0	-	-	22.0	45.2	32.8	0.0	-	-	2.0	57.1	40.3	0.5	-	-	60.7	35.3	1.3	2.7	-	-	-
Total %	1.6	40.4	0.3	0.0	-	42.4	5.3	10.9	7.9	0.0	-	24.2	0.4	10.8	7.6	0.1	-	19.0	8.8	5.1	0.2	0.4	-	14.5	-
PHF	0.850	0.843	0.375	0.000	-	0.842	0.688	0.856	0.854	0.000	-	0.933	0.500	0.800	0.823	0.250	-	0.907	0.758	0.828	0.250	0.500	-	0.798	0.876
Lights	16	412	3	0	-	431	39	104	79	0	-	222	2	100	77	1	-	180	87	50	2	4	-	143	976
% Lights	94.1	98.6	100.0	-	-	98.4	70.9	92.0	96.3	-	-	88.8	50.0	89.3	97.5	100.0	-	91.8	95.6	94.3	100.0	100.0	-	95.3	94.4
Other Vehicles	1	6	0	0	-	7	16	9	3	0	-	28	2	12	2	0	-	16	4	3	0	0	-	7	58
% Other Vehicles	5.9	1.4	0.0	-	-	1.6	29.1	8.0	3.7	-	-	11.2	50.0	10.7	2.5	0.0	-	8.2	4.4	5.7	0.0	0.0	-	4.7	5.6
Pedestrians	-	-	-	-	0	-	-	-	-	-	33	-	-	-	-	-	0	-	-	-	-	-	14	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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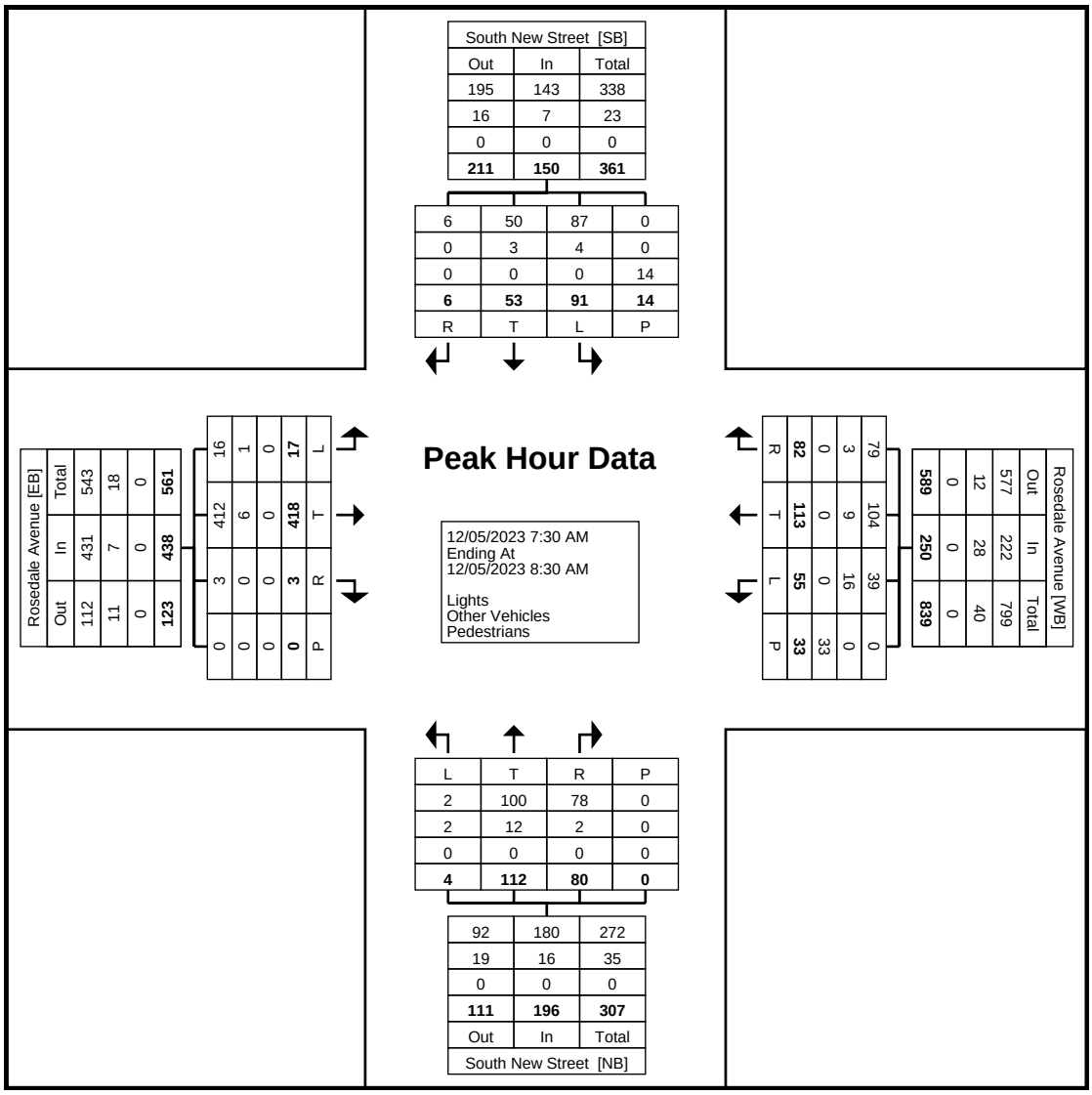
Site Code:
Start Date: 12/05/2023



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

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 16 South New Street & Rosedale Avenue
Site Code:
Start Date: 12/05/2023

Turning Movement Peak Hour Data (3:45 PM)

Start Time	Rosedale Avenue Eastbound						Rosedale Avenue Westbound						South New Street Northbound						South New Street Southbound						Int. Total
	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	
3:45 PM	3	37	3	0	0	43	23	66	19	0	3	108	3	36	36	0	0	75	38	27	1	2	2	68	294
4:00 PM	4	34	2	0	0	40	14	63	36	1	5	114	4	26	38	3	0	71	33	24	3	1	5	61	286
4:15 PM	3	43	4	0	0	50	24	66	49	0	5	139	3	30	38	2	0	73	22	27	4	1	5	54	316
4:30 PM	4	43	3	0	0	50	25	71	38	0	13	134	1	28	18	5	0	52	30	26	0	0	5	56	292
Total	14	157	12	0	0	183	86	266	142	1	26	495	11	120	130	10	0	271	123	104	8	4	17	239	1188
Approach %	7.7	85.8	6.6	0.0	-	-	17.4	53.7	28.7	0.2	-	-	4.1	44.3	48.0	3.7	-	-	51.5	43.5	3.3	1.7	-	-	-
Total %	1.2	13.2	1.0	0.0	-	15.4	7.2	22.4	12.0	0.1	-	41.7	0.9	10.1	10.9	0.8	-	22.8	10.4	8.8	0.7	0.3	-	20.1	-
PHF	0.875	0.913	0.750	0.000	-	0.915	0.860	0.937	0.724	0.250	-	0.890	0.688	0.833	0.855	0.500	-	0.903	0.809	0.963	0.500	0.500	-	0.879	0.940
Lights	13	150	12	0	-	175	67	264	142	1	-	474	10	106	124	10	-	250	122	102	8	4	-	236	1135
% Lights	92.9	95.5	100.0	-	-	95.6	77.9	99.2	100.0	100.0	-	95.8	90.9	88.3	95.4	100.0	-	92.3	99.2	98.1	100.0	100.0	-	98.7	95.5
Other Vehicles	1	7	0	0	-	8	19	2	0	0	-	21	1	14	6	0	-	21	1	2	0	0	-	3	53
% Other Vehicles	7.1	4.5	0.0	-	-	4.4	22.1	0.8	0.0	0.0	-	4.2	9.1	11.7	4.6	0.0	-	7.7	0.8	1.9	0.0	0.0	-	1.3	4.5
Pedestrians	-	-	-	-	0	-	-	-	-	-	26	-	-	-	-	-	0	-	-	-	-	-	17	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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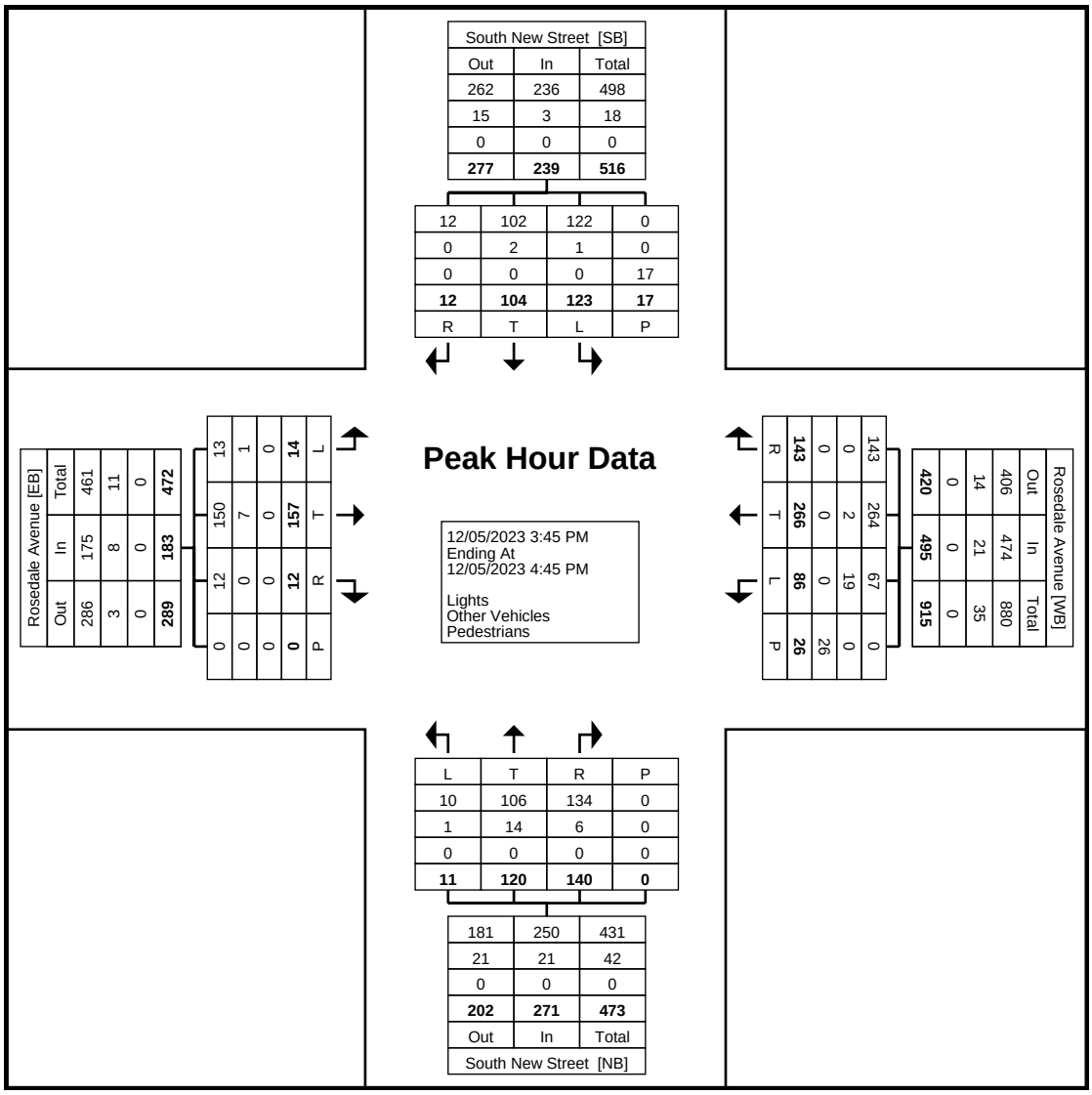
Count Name: 16 South New Street & Rosedale Avenue
Site Code:
Start Date: 12/05/2023



Turning Movement Peak Hour Data Plot (3:45 PM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 16 South New Street & Rosedale Avenue
Site Code:
Start Date: 12/05/2023

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Rosedale Avenue Eastbound						Rosedale Avenue Westbound						South New Street Northbound						South New Street Southbound						Int. Total
	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	
8:00 AM	1	96	1	1	0	99	11	29	22	1	7	63	0	33	24	1	0	58	19	18	2	0	4	39	259
8:15 AM	1	90	0	0	0	91	7	26	20	0	1	53	1	25	21	0	0	47	13	14	1	0	3	28	219
8:30 AM	6	101	5	1	0	113	9	26	31	1	4	67	2	29	21	0	0	52	18	20	3	1	7	42	274
8:45 AM	4	93	1	0	0	98	15	24	32	1	1	72	0	47	23	0	0	70	23	21	1	4	9	49	289
Total	12	380	7	2	0	401	42	105	105	3	13	255	3	134	89	1	0	227	73	73	7	5	23	158	1041
Approach %	3.0	94.8	1.7	0.5	-	-	16.5	41.2	41.2	1.2	-	-	1.3	59.0	39.2	0.4	-	-	46.2	46.2	4.4	3.2	-	-	-
Total %	1.2	36.5	0.7	0.2	-	38.5	4.0	10.1	10.1	0.3	-	24.5	0.3	12.9	8.5	0.1	-	21.8	7.0	7.0	0.7	0.5	-	15.2	-
PHF	0.500	0.941	0.350	0.500	-	0.887	0.700	0.905	0.820	0.750	-	0.885	0.375	0.713	0.927	0.250	-	0.811	0.793	0.869	0.583	0.313	-	0.806	0.901
Lights	12	374	7	2	-	395	26	100	99	3	-	228	3	116	84	0	-	203	69	70	7	5	-	151	977
% Lights	100.0	98.4	100.0	100.0	-	98.5	61.9	95.2	94.3	100.0	-	89.4	100.0	86.6	94.4	0.0	-	89.4	94.5	95.9	100.0	100.0	-	95.6	93.9
Other Vehicles	0	6	0	0	-	6	16	5	6	0	-	27	0	18	5	1	-	24	4	3	0	0	-	7	64
% Other Vehicles	0.0	1.6	0.0	0.0	-	1.5	38.1	4.8	5.7	0.0	-	10.6	0.0	13.4	5.6	100.0	-	10.6	5.5	4.1	0.0	0.0	-	4.4	6.1
Pedestrians	-	-	-	-	0	-	-	-	-	-	13	-	-	-	-	-	0	-	-	-	-	-	23	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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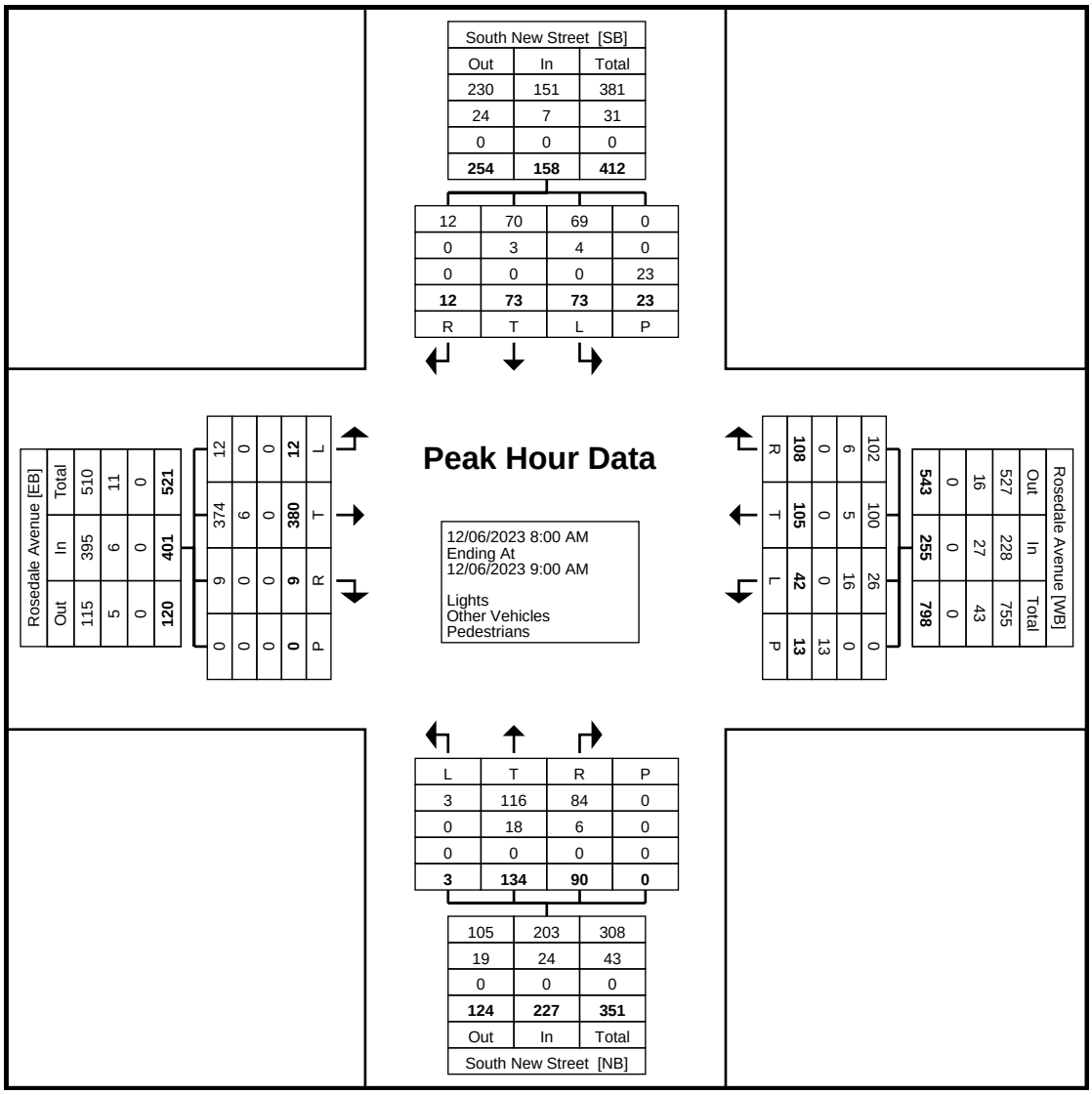
Count Name: 16 South New Street & Rosedale Avenue
Site Code:
Start Date: 12/05/2023



Turning Movement Peak Hour Data Plot (8:00 AM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 16 South New Street & Rosedale Avenue
Site Code:
Start Date: 12/05/2023

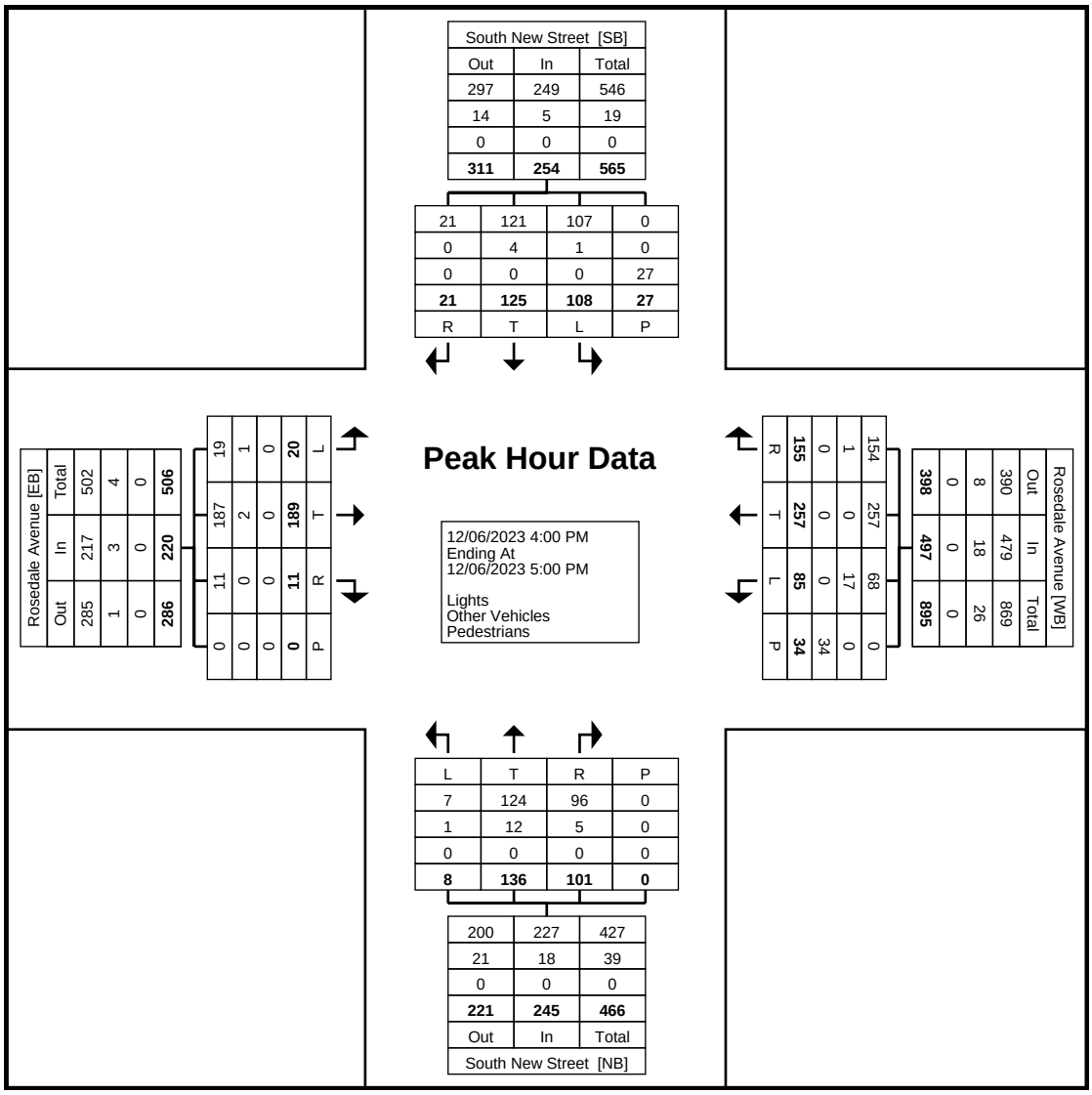
Turning Movement Peak Hour Data (4:00 PM)

Start Time	Rosedale Avenue Eastbound						Rosedale Avenue Westbound						South New Street Northbound						South New Street Southbound						Int. Total
	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	
4:00 PM	5	53	1	1	0	60	15	58	31	1	11	105	2	32	41	0	0	75	23	32	1	4	8	60	300
4:15 PM	6	47	2	0	0	55	24	68	27	0	4	119	2	33	18	0	0	53	37	33	3	0	6	73	300
4:30 PM	5	48	3	0	0	56	25	61	53	0	15	139	2	31	21	0	0	54	24	31	4	3	8	62	311
4:45 PM	4	41	4	0	0	49	21	70	43	0	4	134	2	40	21	0	0	63	24	29	3	3	5	59	305
Total	20	189	10	1	0	220	85	257	154	1	34	497	8	136	101	0	0	245	108	125	11	10	27	254	1216
Approach %	9.1	85.9	4.5	0.5	-	-	17.1	51.7	31.0	0.2	-	-	3.3	55.5	41.2	0.0	-	-	42.5	49.2	4.3	3.9	-	-	-
Total %	1.6	15.5	0.8	0.1	-	18.1	7.0	21.1	12.7	0.1	-	40.9	0.7	11.2	8.3	0.0	-	20.1	8.9	10.3	0.9	0.8	-	20.9	-
PHF	0.833	0.892	0.625	0.250	-	0.917	0.850	0.918	0.726	0.250	-	0.894	1.000	0.850	0.616	0.000	-	0.817	0.730	0.947	0.688	0.625	-	0.870	0.977
Lights	19	187	10	1	-	217	68	257	153	1	-	479	7	124	96	0	-	227	107	121	11	10	-	249	1172
% Lights	95.0	98.9	100.0	100.0	-	98.6	80.0	100.0	99.4	100.0	-	96.4	87.5	91.2	95.0	-	-	92.7	99.1	96.8	100.0	100.0	-	98.0	96.4
Other Vehicles	1	2	0	0	-	3	17	0	1	0	-	18	1	12	5	0	-	18	1	4	0	0	-	5	44
% Other Vehicles	5.0	1.1	0.0	0.0	-	1.4	20.0	0.0	0.6	0.0	-	3.6	12.5	8.8	5.0	-	-	7.3	0.9	3.2	0.0	0.0	-	2.0	3.6
Pedestrians	-	-	-	-	0	-	-	-	-	-	34	-	-	-	-	-	0	-	-	-	-	-	27	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 16 South New Street & Rosedale Avenue
Site Code:
Start Date: 12/05/2023



Turning Movement Peak Hour Data Plot (4:00 PM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (17) AM/PM South New Street x Nields Street.Campus Drive
Site Code:
Start Date: 12/06/2023
Page No: 1

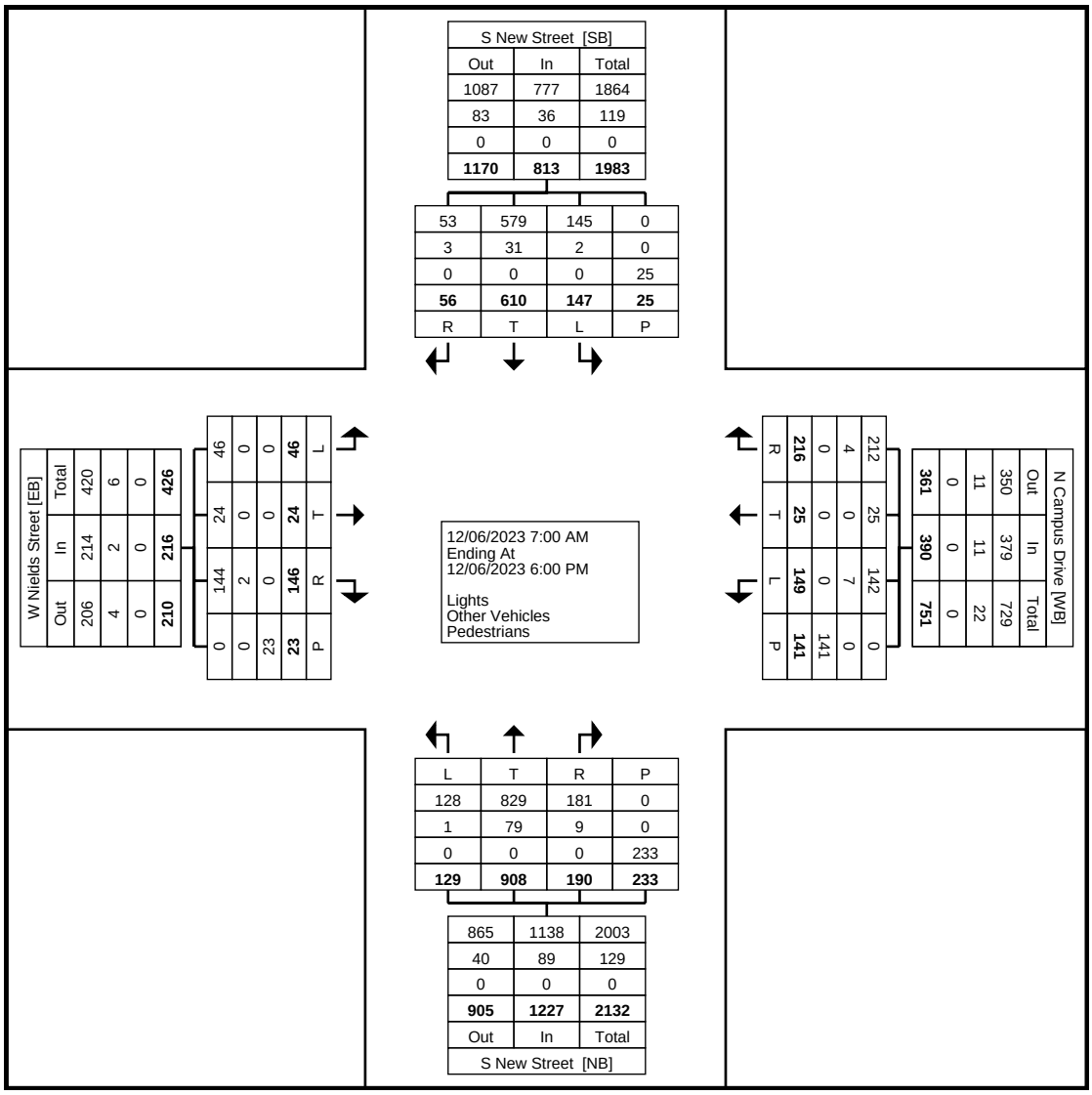
Turning Movement Data

Start Time	W Nields Street Eastbound						N Campus Drive Westbound						S New Street Northbound						S New Street Southbound						Int. Total
	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	
7:00 AM	2	0	1	0	1	3	2	1	1	1	2	5	4	2	0	1	5	7	0	1	0	0	1	1	16
7:15 AM	0	0	1	0	0	1	0	0	0	0	4	0	1	8	2	0	2	11	0	4	0	0	0	4	16
7:30 AM	3	2	4	0	0	9	2	0	1	0	2	3	1	5	6	0	3	12	2	5	0	0	1	7	31
7:45 AM	2	2	3	0	0	7	0	0	0	1	2	1	4	6	0	0	0	10	3	12	0	0	0	15	33
Hourly Total	7	4	9	0	1	20	4	1	2	2	10	9	10	21	8	1	10	40	5	22	0	0	2	27	96
8:00 AM	1	0	5	0	0	6	2	0	1	0	1	3	0	15	4	0	4	19	1	18	2	0	0	21	49
8:15 AM	2	0	5	0	0	7	1	0	2	1	3	4	3	18	5	0	2	26	4	15	1	0	0	20	57
8:30 AM	1	1	2	0	1	4	4	0	2	1	7	7	2	32	8	1	6	43	10	24	3	1	0	38	92
8:45 AM	4	2	8	0	0	14	4	0	1	1	3	6	7	42	16	0	20	65	16	33	2	0	3	51	136
Hourly Total	8	3	20	0	1	31	11	0	6	3	14	20	12	107	33	1	32	153	31	90	8	1	3	130	334
9:00 AM	3	5	10	0	1	18	3	0	1	0	3	4	7	32	11	5	5	55	16	25	1	0	1	42	119
9:15 AM	4	2	6	1	0	13	0	0	1	1	1	2	6	29	6	1	5	42	6	21	2	0	0	29	86
9:30 AM	2	2	7	1	0	12	2	0	0	1	5	3	3	38	15	3	8	59	11	28	2	0	1	41	115
9:45 AM	1	1	6	1	3	9	5	0	4	4	8	13	11	51	19	1	14	82	8	42	3	0	1	53	157
Hourly Total	10	10	29	3	4	52	10	0	6	6	17	22	27	150	51	10	32	238	41	116	8	0	3	165	477
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	1	1	6	0	0	8	14	1	13	2	12	30	6	54	10	1	7	71	7	25	3	1	2	36	145
3:15 PM	0	0	5	0	0	5	11	2	13	1	6	27	5	37	3	0	20	45	4	24	1	0	0	29	106
3:30 PM	2	0	5	2	1	9	5	1	4	0	7	10	8	33	9	0	11	50	5	31	1	1	2	38	107
3:45 PM	4	1	6	0	10	11	12	1	17	4	19	34	8	58	11	0	17	77	3	39	3	0	3	45	167
Hourly Total	7	2	22	2	11	33	42	5	47	7	44	101	27	182	33	1	55	243	19	119	8	2	7	148	525
4:00 PM	3	0	4	0	2	7	12	1	13	9	8	35	10	47	6	0	22	63	4	29	3	1	1	37	142
4:15 PM	1	1	8	0	2	10	7	3	5	8	12	23	7	53	7	0	20	67	2	23	4	2	2	31	131
4:30 PM	1	0	6	1	1	8	8	3	11	5	8	27	3	44	1	0	3	48	4	27	3	0	0	34	117
4:45 PM	2	0	7	0	0	9	8	3	16	3	6	30	5	43	5	0	7	53	10	35	3	0	2	48	140
Hourly Total	7	1	25	1	5	34	35	10	45	25	34	115	25	187	19	0	52	231	20	114	13	3	5	150	530
5:00 PM	1	1	8	0	0	10	14	3	12	9	3	38	6	58	10	0	12	74	6	30	1	1	1	38	160
5:15 PM	1	1	10	1	1	13	16	2	5	6	11	29	4	56	9	0	13	69	10	43	1	0	0	54	165
5:30 PM	2	1	7	0	0	10	9	4	15	9	6	37	10	73	6	0	9	89	9	42	3	5	1	59	195
5:45 PM	3	1	8	1	0	13	8	0	6	5	2	19	8	74	8	0	18	90	6	34	1	1	3	42	164
Hourly Total	7	4	33	2	1	46	47	9	38	29	22	123	28	261	33	0	52	322	31	149	6	7	5	193	684
Grand Total	46	24	138	8	23	216	149	25	144	72	141	390	129	908	177	13	233	1227	147	610	43	13	25	813	2646
Approach %	21.3	11.1	63.9	3.7	-	-	38.2	6.4	36.9	18.5	-	-	10.5	74.0	14.4	1.1	-	-	18.1	75.0	5.3	1.6	-	-	-
Total %	1.7	0.9	5.2	0.3	-	8.2	5.6	0.9	5.4	2.7	-	14.7	4.9	34.3	6.7	0.5	-	46.4	5.6	23.1	1.6	0.5	-	30.7	-
Lights	46	24	136	8	-	214	142	25	141	71	-	379	128	829	168	13	-	1138	145	579	41	12	-	777	2508
% Lights	100.0	100.0	98.6	100.0	-	99.1	95.3	100.0	97.9	98.6	-	97.2	99.2	91.3	94.9	100.0	-	92.7	98.6	94.9	95.3	92.3	-	95.6	94.8
Other Vehicles	0	0	2	0	-	2	7	0	3	1	-	11	1	79	9	0	-	89	2	31	2	1	-	36	138
% Other Vehicles	0.0	0.0	1.4	0.0	-	0.9	4.7	0.0	2.1	1.4	-	2.8	0.8	8.7	5.1	0.0	-	7.3	1.4	5.1	4.7	7.7	-	4.4	5.2
Pedestrians	-	-	-	-	23	-	-	-	-	-	141	-	-	-	-	-	233	-	-	-	-	-	25	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (17) AM/PM South New Street x Nields Street.Campus Drive
Site Code:
Start Date: 12/06/2023



Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (17) AM/PM South New Street x Nields Street.Campus Drive
Site Code:
Start Date: 12/06/2023

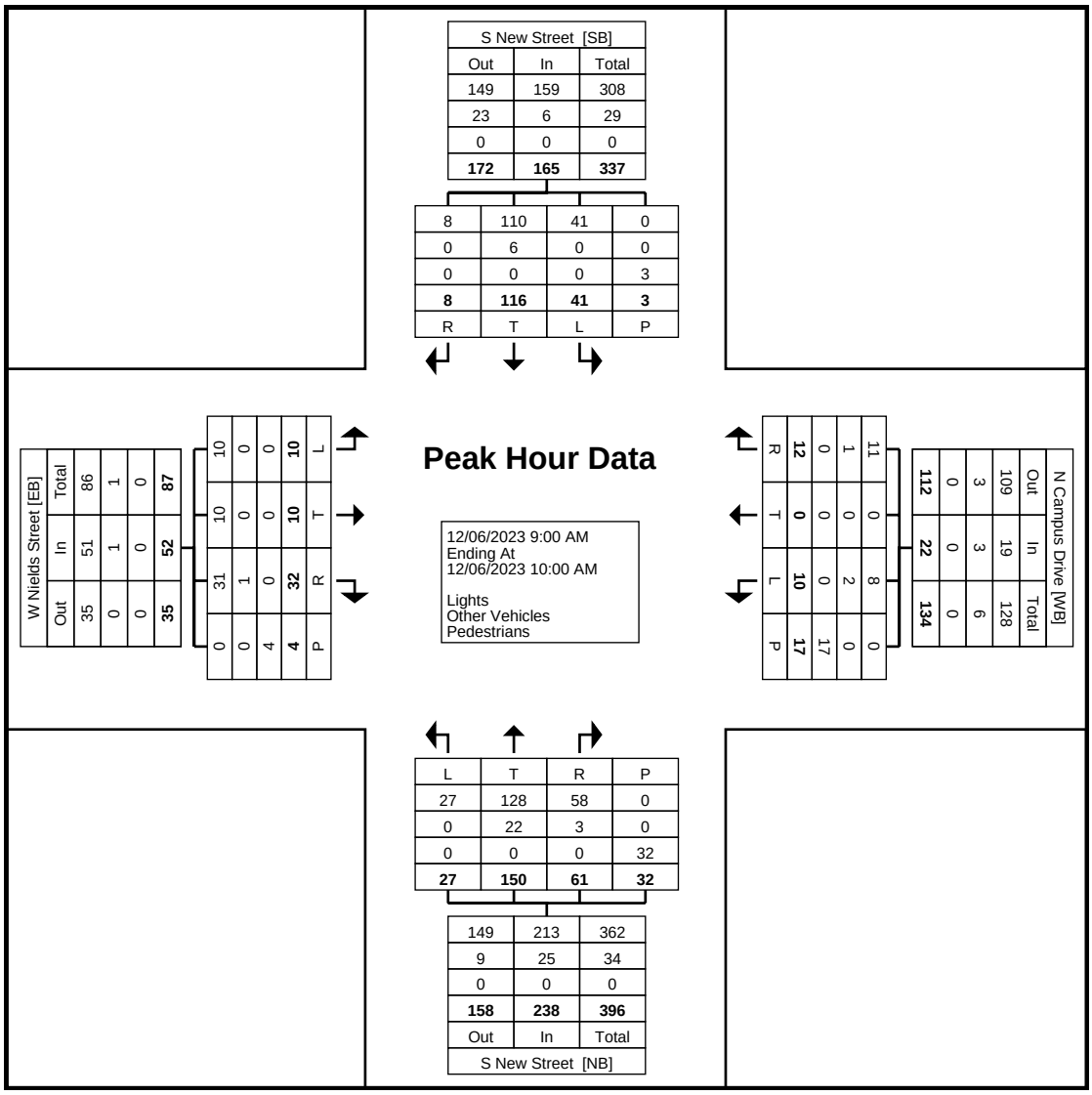
Turning Movement Peak Hour Data (9:00 AM)

Start Time	W Nields Street Eastbound						N Campus Drive Westbound						S New Street Northbound						S New Street Southbound						Int. Total
	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	
9:00 AM	3	5	10	0	1	18	3	0	1	0	3	4	7	32	11	5	5	55	16	25	1	0	1	42	119
9:15 AM	4	2	6	1	0	13	0	0	1	1	1	2	6	29	6	1	5	42	6	21	2	0	0	29	86
9:30 AM	2	2	7	1	0	12	2	0	0	1	5	3	3	38	15	3	8	59	11	28	2	0	1	41	115
9:45 AM	1	1	6	1	3	9	5	0	4	4	8	13	11	51	19	1	14	82	8	42	3	0	1	53	157
Total	10	10	29	3	4	52	10	0	6	6	17	22	27	150	51	10	32	238	41	116	8	0	3	165	477
Approach %	19.2	19.2	55.8	5.8	-	-	45.5	0.0	27.3	27.3	-	-	11.3	63.0	21.4	4.2	-	-	24.8	70.3	4.8	0.0	-	-	-
Total %	2.1	2.1	6.1	0.6	-	10.9	2.1	0.0	1.3	1.3	-	4.6	5.7	31.4	10.7	2.1	-	49.9	8.6	24.3	1.7	0.0	-	34.6	-
PHF	0.625	0.500	0.725	0.750	-	0.722	0.500	0.000	0.375	0.375	-	0.423	0.614	0.735	0.671	0.500	-	0.726	0.641	0.690	0.667	0.000	-	0.778	0.760
Lights	10	10	28	3	-	51	8	0	5	6	-	19	27	128	48	10	-	213	41	110	8	0	-	159	442
% Lights	100.0	100.0	96.6	100.0	-	98.1	80.0	-	83.3	100.0	-	86.4	100.0	85.3	94.1	100.0	-	89.5	100.0	94.8	100.0	-	-	96.4	92.7
Other Vehicles	0	0	1	0	-	1	2	0	1	0	-	3	0	22	3	0	-	25	0	6	0	0	-	6	35
% Other Vehicles	0.0	0.0	3.4	0.0	-	1.9	20.0	-	16.7	0.0	-	13.6	0.0	14.7	5.9	0.0	-	10.5	0.0	5.2	0.0	-	-	3.6	7.3
Pedestrians	-	-	-	-	4	-	-	-	-	-	17	-	-	-	-	-	32	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (17) AM/PM South New Street x Nields Street.Campus Drive
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (9:00 AM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (17) AM/PM South New Street x Nields Street.Campus Drive
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (5:00 PM)

Start Time	W Nields Street Eastbound						N Campus Drive Westbound						S New Street Northbound						S New Street Southbound						Int. Total
	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	
5:00 PM	1	1	8	0	0	10	14	3	12	9	3	38	6	58	10	0	12	74	6	30	1	1	1	38	160
5:15 PM	1	1	10	1	1	13	16	2	5	6	11	29	4	56	9	0	13	69	10	43	1	0	0	54	165
5:30 PM	2	1	7	0	0	10	9	4	15	9	6	37	10	73	6	0	9	89	9	42	3	5	1	59	195
5:45 PM	3	1	8	1	0	13	8	0	6	5	2	19	8	74	8	0	18	90	6	34	1	1	3	42	164
Total	7	4	33	2	1	46	47	9	38	29	22	123	28	261	33	0	52	322	31	149	6	7	5	193	684
Approach %	15.2	8.7	71.7	4.3	-	-	38.2	7.3	30.9	23.6	-	-	8.7	81.1	10.2	0.0	-	-	16.1	77.2	3.1	3.6	-	-	-
Total %	1.0	0.6	4.8	0.3	-	6.7	6.9	1.3	5.6	4.2	-	18.0	4.1	38.2	4.8	0.0	-	47.1	4.5	21.8	0.9	1.0	-	28.2	-
PHF	0.583	1.000	0.825	0.500	-	0.885	0.734	0.563	0.633	0.806	-	0.809	0.700	0.882	0.825	0.000	-	0.894	0.775	0.866	0.500	0.350	-	0.818	0.877
Lights	7	4	33	2	-	46	47	9	38	29	-	123	28	246	32	0	-	306	30	146	6	6	-	188	663
% Lights	100.0	100.0	100.0	100.0	-	100.0	100.0	100.0	100.0	100.0	-	100.0	100.0	94.3	97.0	-	-	95.0	96.8	98.0	100.0	85.7	-	97.4	96.9
Other Vehicles	0	0	0	0	-	0	0	0	0	0	-	0	0	15	1	0	-	16	1	3	0	1	-	5	21
% Other Vehicles	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	5.7	3.0	-	-	5.0	3.2	2.0	0.0	14.3	-	2.6	3.1
Pedestrians	-	-	-	-	1	-	-	-	-	-	22	-	-	-	-	-	52	-	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
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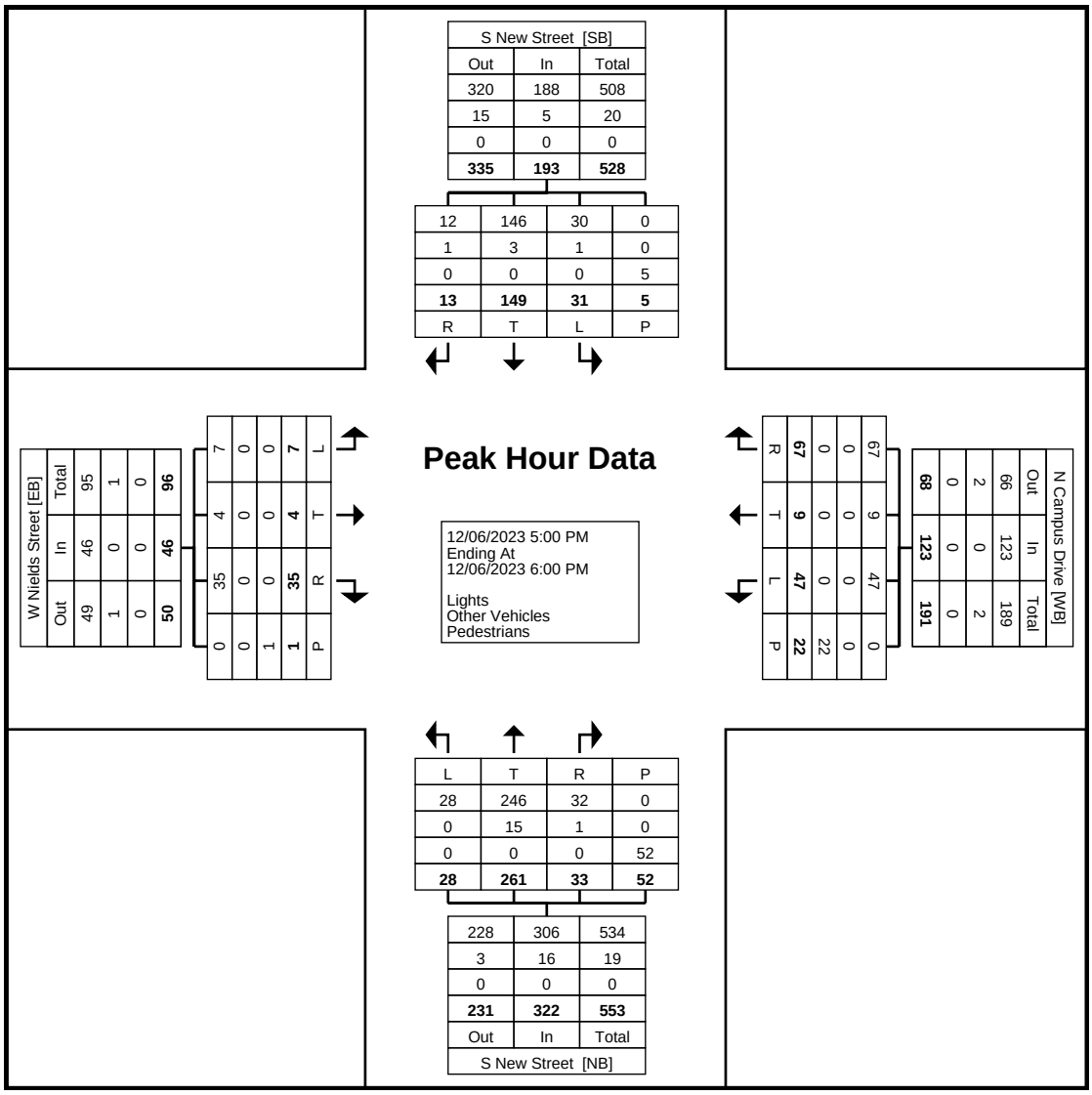
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 kyoung@trafficpd.com

Counter: MIO:
Set up by: KY:

Count Name: (17) AM/PM South New Street x Nields Street.Campus Drive
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (5:00 PM)

Counter: MIO:
Set up By JH::

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 18 South New Street & Pomona Hill Drive
Site Code:
Start Date: 12/06/2023
Page No: 1

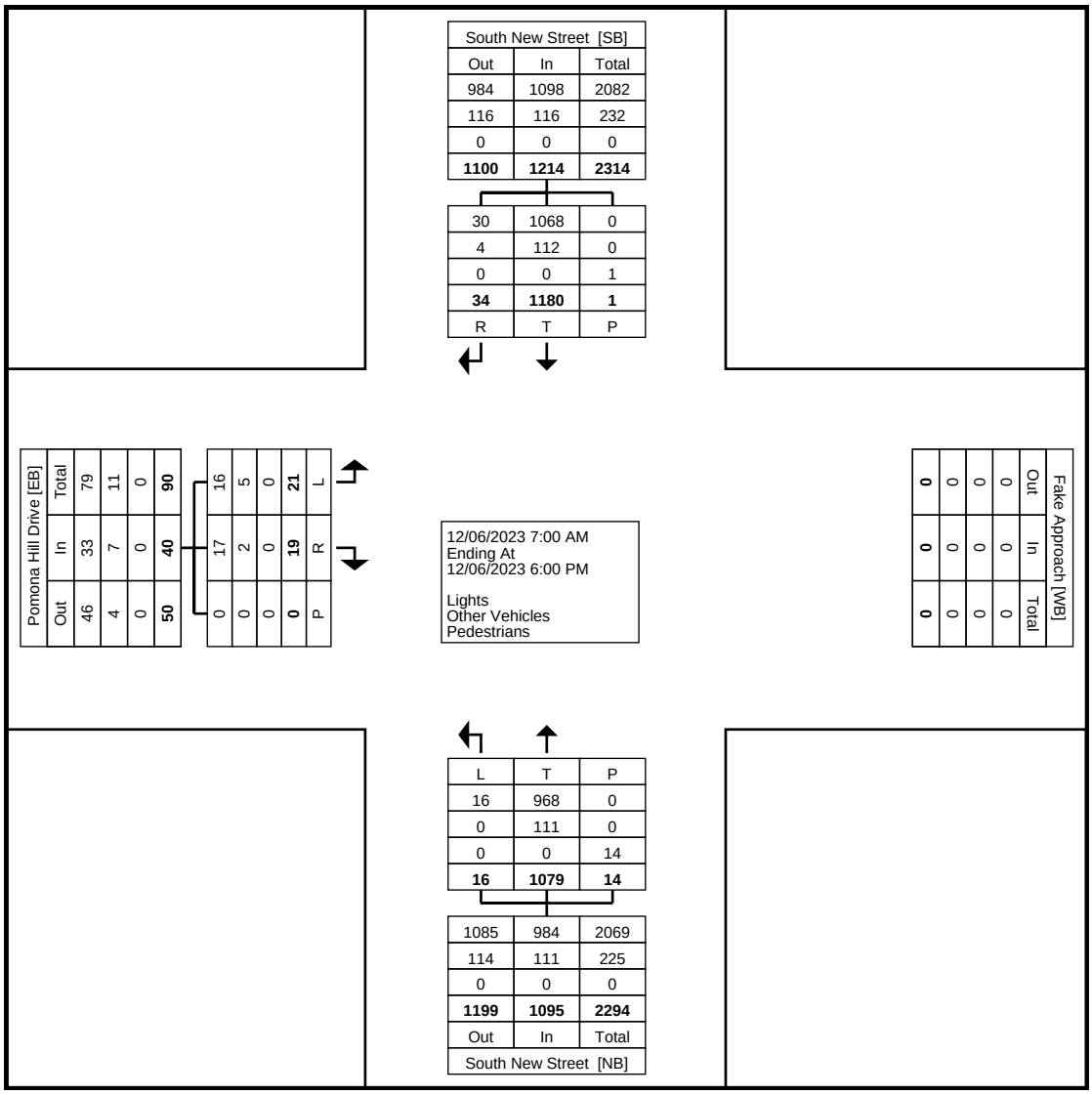
Turning Movement Data

Start Time	Pomona Hill Drive Eastbound				South New Street Northbound				South New Street Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	1	1	0	2	0	17	1	17	14	1	0	15	34
7:15 AM	4	1	0	5	0	20	1	20	16	2	0	18	43
7:30 AM	0	2	0	2	0	45	0	45	34	2	0	36	83
7:45 AM	2	0	0	2	1	83	0	84	35	3	0	38	124
Hourly Total	7	4	0	11	1	165	2	166	99	8	0	107	284
8:00 AM	1	0	0	1	0	41	1	41	40	3	0	43	85
8:15 AM	2	0	0	2	1	38	0	39	28	0	0	28	69
8:30 AM	2	1	0	3	0	54	0	54	40	2	0	42	99
8:45 AM	1	2	0	3	1	54	1	55	49	0	0	49	107
Hourly Total	6	3	0	9	2	187	2	189	157	5	0	162	360
9:00 AM	1	0	0	1	0	28	0	28	37	0	0	37	66
9:15 AM	0	1	0	1	0	30	1	30	29	1	0	30	61
9:30 AM	0	1	0	1	0	32	2	32	29	1	1	30	63
9:45 AM	0	0	0	0	0	43	0	43	57	2	0	59	102
Hourly Total	1	2	0	3	0	133	3	133	152	4	1	156	292
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	1	0	0	1	1	35	0	36	49	1	0	50	87
3:15 PM	0	0	0	0	1	53	2	54	60	0	0	60	114
3:30 PM	0	0	0	0	0	50	0	50	60	1	0	61	111
3:45 PM	2	0	0	2	2	53	2	55	48	0	0	48	105
Hourly Total	3	0	0	3	4	191	4	195	217	2	0	219	417
4:00 PM	1	3	0	4	2	73	1	75	73	3	0	76	155
4:15 PM	0	1	0	1	0	43	1	43	75	0	0	75	119
4:30 PM	0	3	0	3	2	65	0	67	88	0	0	88	158
4:45 PM	1	0	0	1	0	48	0	48	66	4	0	70	119
Hourly Total	2	7	0	9	4	229	2	233	302	7	0	309	551
5:00 PM	0	2	0	2	0	39	0	39	74	3	0	77	118
5:15 PM	0	1	0	1	1	51	0	52	53	1	0	54	107
5:30 PM	0	0	0	0	3	46	0	49	68	0	0	68	117
5:45 PM	2	0	0	2	1	38	1	39	58	4	0	62	103
Hourly Total	2	3	0	5	5	174	1	179	253	8	0	261	445
Grand Total	21	19	0	40	16	1079	14	1095	1180	34	1	1214	2349
Approach %	52.5	47.5	-	-	1.5	98.5	-	-	97.2	2.8	-	-	-
Total %	0.9	0.8	-	1.7	0.7	45.9	-	46.6	50.2	1.4	-	51.7	-
Lights	16	17	-	33	16	968	-	984	1068	30	-	1098	2115
% Lights	76.2	89.5	-	82.5	100.0	89.7	-	89.9	90.5	88.2	-	90.4	90.0
Other Vehicles	5	2	-	7	0	111	-	111	112	4	-	116	234
% Other Vehicles	23.8	10.5	-	17.5	0.0	10.3	-	10.1	9.5	11.8	-	9.6	10.0
Pedestrians	-	-	0	-	-	-	14	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	100.0	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 18 South New Street & Pomona Hill Drive
Site Code:
Start Date: 12/06/2023



Turning Movement Data Plot

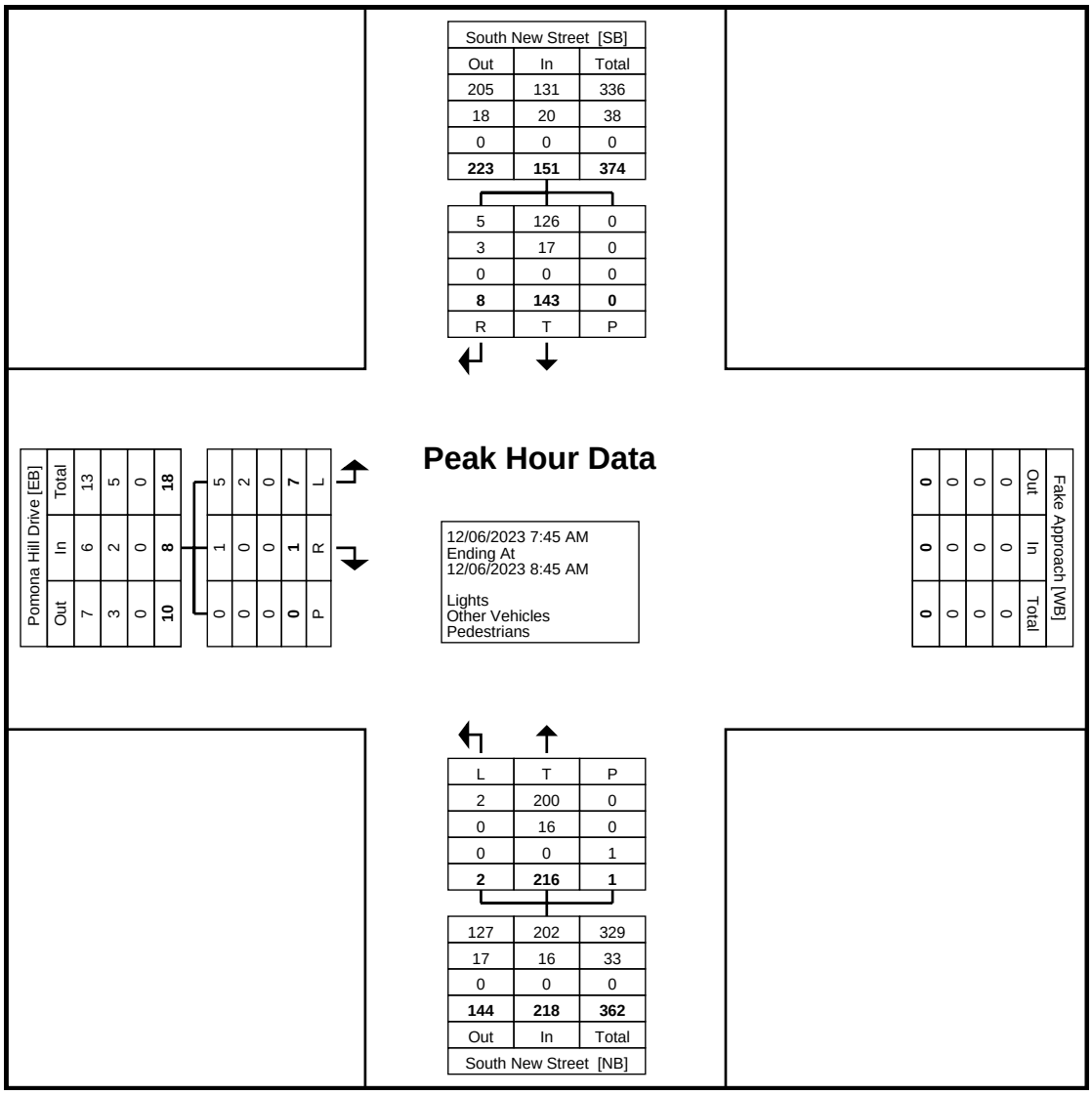
Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 18 South New Street & Pomona Hill Drive
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Pomona Hill Drive Eastbound				South New Street Northbound				South New Street Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
7:45 AM	2	0	0	2	1	83	0	84	35	3	0	38	124
8:00 AM	1	0	0	1	0	41	1	41	40	3	0	43	85
8:15 AM	2	0	0	2	1	38	0	39	28	0	0	28	69
8:30 AM	2	1	0	3	0	54	0	54	40	2	0	42	99
Total	7	1	0	8	2	216	1	218	143	8	0	151	377
Approach %	87.5	12.5	-	-	0.9	99.1	-	-	94.7	5.3	-	-	-
Total %	1.9	0.3	-	2.1	0.5	57.3	-	57.8	37.9	2.1	-	40.1	-
PHF	0.875	0.250	-	0.667	0.500	0.651	-	0.649	0.894	0.667	-	0.878	0.760
Lights	5	1	-	6	2	200	-	202	126	5	-	131	339
% Lights	71.4	100.0	-	75.0	100.0	92.6	-	92.7	88.1	62.5	-	86.8	89.9
Other Vehicles	2	0	-	2	0	16	-	16	17	3	-	20	38
% Other Vehicles	28.6	0.0	-	25.0	0.0	7.4	-	7.3	11.9	37.5	-	13.2	10.1
Pedestrians	-	-	0	-	-	-	1	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	100.0	-	-	-	-	-	-



Turning Movement Peak Hour Data Plot (7:45 AM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 18 South New Street & Pomona Hill Drive
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Pomona Hill Drive Eastbound				South New Street Northbound				South New Street Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
4:00 PM	1	3	0	4	2	73	1	75	73	3	0	76	155
4:15 PM	0	1	0	1	0	43	1	43	75	0	0	75	119
4:30 PM	0	3	0	3	2	65	0	67	88	0	0	88	158
4:45 PM	1	0	0	1	0	48	0	48	66	4	0	70	119
Total	2	7	0	9	4	229	2	233	302	7	0	309	551
Approach %	22.2	77.8	-	-	1.7	98.3	-	-	97.7	2.3	-	-	-
Total %	0.4	1.3	-	1.6	0.7	41.6	-	42.3	54.8	1.3	-	56.1	-
PHF	0.500	0.583	-	0.563	0.500	0.784	-	0.777	0.858	0.438	-	0.878	0.872
Lights	1	6	-	7	4	208	-	212	281	6	-	287	506
% Lights	50.0	85.7	-	77.8	100.0	90.8	-	91.0	93.0	85.7	-	92.9	91.8
Other Vehicles	1	1	-	2	0	21	-	21	21	1	-	22	45
% Other Vehicles	50.0	14.3	-	22.2	0.0	9.2	-	9.0	7.0	14.3	-	7.1	8.2
Pedestrians	-	-	0	-	-	-	2	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	100.0	-	-	-	-	-	-

Traffic Planning and Design, Inc
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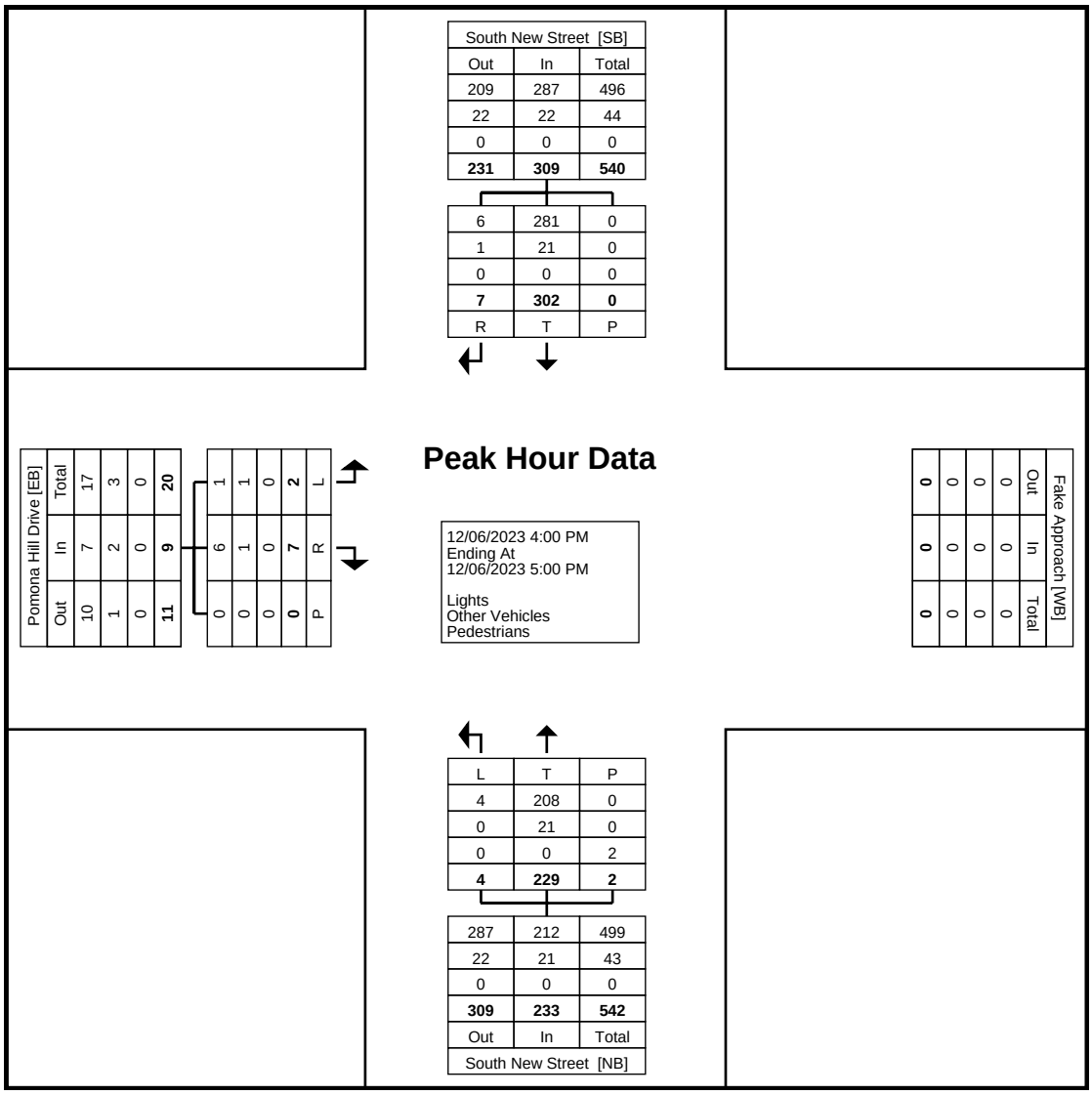
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 18 South New Street & Pomona Hill Drive
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (4:00 PM)

Counter: MIO:
Set up By JH::

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 19 South New Street & Glen Echo Field Access
Site Code:
Start Date: 12/06/2023
Page No: 1

Turning Movement Data

Start Time	Glen Echo Field Access Eastbound				South New Street Northbound				South New Street Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	18	0	18	16	0	0	16	34
7:15 AM	0	0	0	0	0	18	0	18	17	0	0	17	35
7:30 AM	0	0	0	0	0	48	0	48	33	1	0	34	82
7:45 AM	0	1	0	1	0	79	0	79	35	0	0	35	115
Hourly Total	0	1	0	1	0	163	0	163	101	1	0	102	266
8:00 AM	0	0	0	0	0	45	0	45	35	0	0	35	80
8:15 AM	0	0	0	0	0	39	0	39	30	0	0	30	69
8:30 AM	0	1	0	1	0	57	0	57	39	0	0	39	97
8:45 AM	0	0	0	0	0	55	0	55	50	0	0	50	105
Hourly Total	0	1	0	1	0	196	0	196	154	0	0	154	351
9:00 AM	0	0	0	0	0	29	0	29	32	1	0	33	62
9:15 AM	0	0	0	0	0	29	0	29	30	1	0	31	60
9:30 AM	0	0	0	0	0	34	0	34	29	0	0	29	63
9:45 AM	0	0	0	0	0	46	0	46	56	1	0	57	103
Hourly Total	0	0	0	0	0	138	0	138	147	3	0	150	288
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	0	0	0	0	33	0	33	51	1	0	52	85
3:15 PM	0	2	0	2	1	55	0	56	58	1	0	59	117
3:30 PM	0	0	0	0	0	47	0	47	57	0	0	57	104
3:45 PM	1	0	0	1	0	57	0	57	50	0	0	50	108
Hourly Total	1	2	0	3	1	192	0	193	216	2	0	218	414
4:00 PM	0	0	0	0	0	69	0	69	71	0	0	71	140
4:15 PM	1	0	0	1	0	39	1	39	77	0	0	77	117
4:30 PM	2	0	0	2	0	61	0	61	86	0	0	86	149
4:45 PM	0	0	0	0	0	48	0	48	68	0	0	68	116
Hourly Total	3	0	0	3	0	217	1	217	302	0	0	302	522
5:00 PM	0	0	0	0	0	35	0	35	76	0	0	76	111
5:15 PM	0	0	0	0	0	54	0	54	54	0	0	54	108
5:30 PM	0	0	0	0	0	51	0	51	67	0	0	67	118
5:45 PM	0	0	0	0	0	35	0	35	60	1	0	61	96
Hourly Total	0	0	0	0	0	175	0	175	257	1	0	258	433
Grand Total	4	4	0	8	1	1081	1	1082	1177	7	0	1184	2274
Approach %	50.0	50.0	-	-	0.1	99.9	-	-	99.4	0.6	-	-	-
Total %	0.2	0.2	-	0.4	0.0	47.5	-	47.6	51.8	0.3	-	52.1	-
Lights	4	4	-	8	1	975	-	976	1066	6	-	1072	2056
% Lights	100.0	100.0	-	100.0	100.0	90.2	-	90.2	90.6	85.7	-	90.5	90.4
Other Vehicles	0	0	-	0	0	106	-	106	111	1	-	112	218
% Other Vehicles	0.0	0.0	-	0.0	0.0	9.8	-	9.8	9.4	14.3	-	9.5	9.6
Pedestrians	-	-	0	-	-	-	1	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	100.0	-	-	-	-	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
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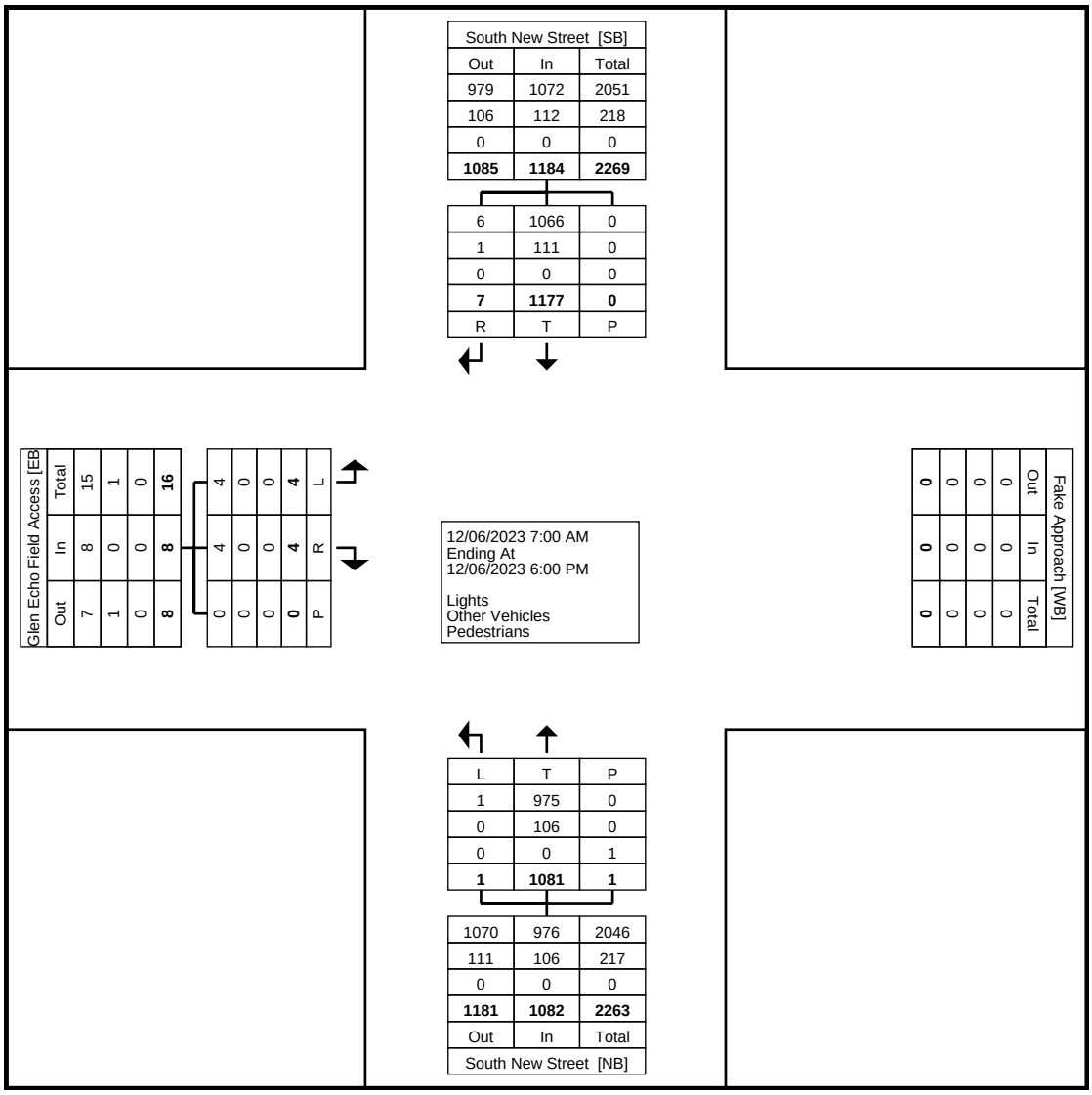
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 19 South New Street & Glen Echo Field Access
Site Code:
Start Date: 12/06/2023



Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 19 South New Street & Glen Echo Field Access
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Glen Echo Field Access Eastbound				South New Street Northbound				South New Street Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
7:45 AM	0	1	0	1	0	79	0	79	35	0	0	35	115
8:00 AM	0	0	0	0	0	45	0	45	35	0	0	35	80
8:15 AM	0	0	0	0	0	39	0	39	30	0	0	30	69
8:30 AM	0	1	0	1	0	57	0	57	39	0	0	39	97
Total	0	2	0	2	0	220	0	220	139	0	0	139	361
Approach %	0.0	100.0	-	-	0.0	100.0	-	-	100.0	0.0	-	-	-
Total %	0.0	0.6	-	0.6	0.0	60.9	-	60.9	38.5	0.0	-	38.5	-
PHF	0.000	0.500	-	0.500	0.000	0.696	-	0.696	0.891	0.000	-	0.891	0.785
Lights	0	2	-	2	0	201	-	201	121	0	-	121	324
% Lights	-	100.0	-	100.0	-	91.4	-	91.4	87.1	-	-	87.1	89.8
Other Vehicles	0	0	-	0	0	19	-	19	18	0	-	18	37
% Other Vehicles	-	0.0	-	0.0	-	8.6	-	8.6	12.9	-	-	12.9	10.2
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
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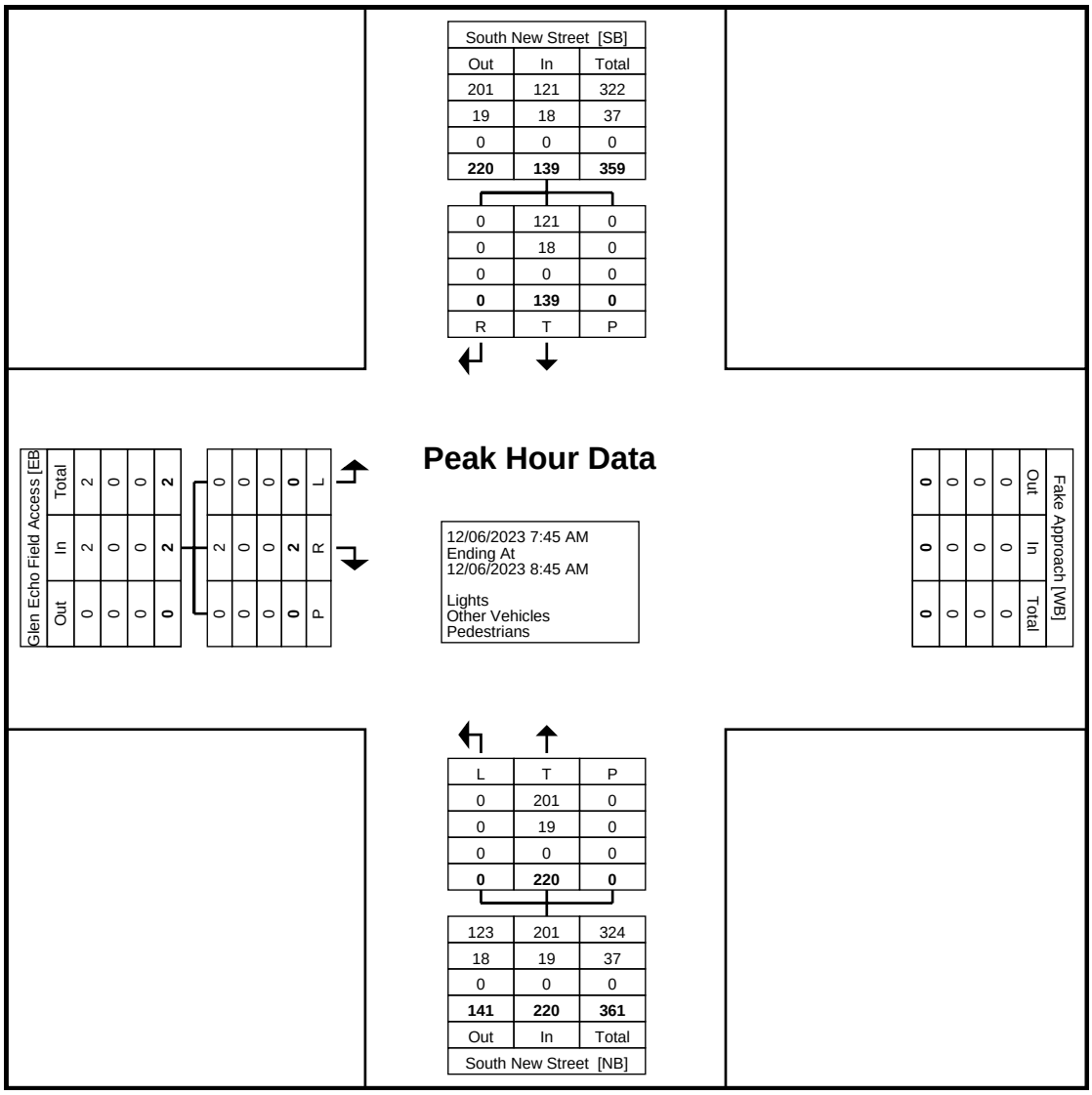
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 19 South New Street & Glen Echo Field Access
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (7:45 AM)

Counter: MIO:
Set up By JH::

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Glen Echo Field Access Eastbound				South New Street Northbound				South New Street Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
4:00 PM	0	0	0	0	0	69	0	69	71	0	0	71	140
4:15 PM	1	0	0	1	0	39	1	39	77	0	0	77	117
4:30 PM	2	0	0	2	0	61	0	61	86	0	0	86	149
4:45 PM	0	0	0	0	0	48	0	48	68	0	0	68	116
Total	3	0	0	3	0	217	1	217	302	0	0	302	522
Approach %	100.0	0.0	-	-	0.0	100.0	-	-	100.0	0.0	-	-	-
Total %	0.6	0.0	-	0.6	0.0	41.6	-	41.6	57.9	0.0	-	57.9	-
PHF	0.375	0.000	-	0.375	0.000	0.786	-	0.786	0.878	0.000	-	0.878	0.876
Lights	3	0	-	3	0	200	-	200	283	0	-	283	486
% Lights	100.0	-	-	100.0	-	92.2	-	92.2	93.7	-	-	93.7	93.1
Other Vehicles	0	0	-	0	0	17	-	17	19	0	-	19	36
% Other Vehicles	0.0	-	-	0.0	-	7.8	-	7.8	6.3	-	-	6.3	6.9
Pedestrians	-	-	0	-	-	-	1	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	100.0	-	-	-	-	-	-

Traffic Planning and Design, Inc
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Count Name: 19 South New Street & Glen Echo Field Access
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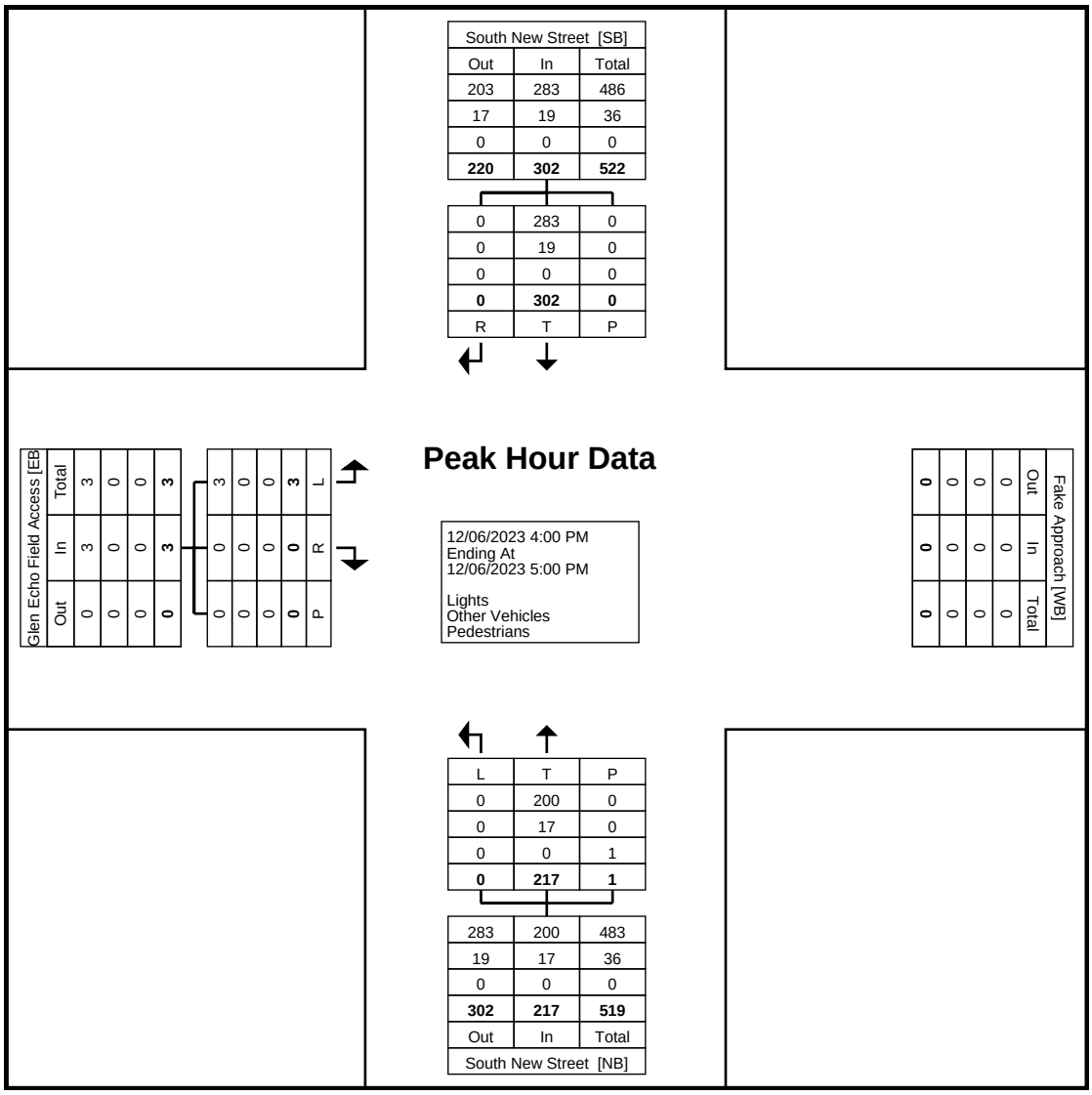

Turning Movement Peak Hour Data Plot (4:00 PM)

Counter: MIO:
Set up By JH::

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 20 South New Street & 855 S New Street Access
Site Code:
Start Date: 12/06/2023
Page No: 1

Turning Movement Data

Start Time	Pedestrian Cross Walk Eastbound					855 S New Street Access Westbound					South New Street Northbound					South New Street Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	18	0	0	18	0	16	0	0	16	34
7:15 AM	0	0	0	0	0	0	0	1	2	1	0	16	1	1	17	0	16	0	0	16	34
7:30 AM	0	0	0	0	0	2	0	9	1	11	0	43	4	1	47	5	25	0	0	30	88
7:45 AM	0	0	0	0	0	2	0	10	3	12	0	68	4	3	72	9	27	0	0	36	120
Hourly Total	0	0	0	0	0	4	0	20	6	24	0	145	9	5	154	14	84	0	0	98	276
8:00 AM	0	0	0	0	0	4	0	3	0	7	0	46	4	0	50	4	23	0	0	27	84
8:15 AM	0	0	0	0	0	1	0	3	4	4	0	35	3	4	38	3	28	0	0	31	73
8:30 AM	0	0	0	1	0	4	0	9	2	13	0	49	4	5	53	13	22	0	0	35	101
8:45 AM	0	0	0	2	0	4	0	10	0	14	0	46	10	4	56	18	20	0	0	38	108
Hourly Total	0	0	0	3	0	13	0	25	6	38	0	176	21	13	197	38	93	0	0	131	366
9:00 AM	0	0	0	0	0	2	0	2	2	4	0	26	6	3	32	4	19	0	0	23	59
9:15 AM	0	0	0	0	0	2	0	7	3	9	0	23	4	6	27	3	22	0	0	25	61
9:30 AM	0	0	0	2	0	2	0	5	1	7	0	32	3	2	35	5	21	0	0	26	68
9:45 AM	0	0	0	4	0	5	0	13	0	18	0	33	3	12	36	28	20	0	0	48	102
Hourly Total	0	0	0	6	0	11	0	27	6	38	0	114	16	23	130	40	82	0	0	122	290
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	0	0	0	0	7	0	8	0	15	0	25	3	4	28	9	43	0	0	52	95
3:15 PM	0	0	0	3	0	7	0	17	1	24	0	37	3	5	40	13	46	0	0	59	123
3:30 PM	0	0	0	8	0	6	0	16	0	22	0	32	2	8	34	9	46	0	0	55	111
3:45 PM	0	0	0	6	0	4	0	15	3	19	0	39	3	8	42	12	37	0	0	49	110
Hourly Total	0	0	0	17	0	24	0	56	4	80	0	133	11	25	144	43	172	0	0	215	439
4:00 PM	0	0	0	0	0	4	0	18	3	22	0	48	2	4	50	9	65	0	0	74	146
4:15 PM	0	0	0	0	0	5	0	11	3	16	0	26	5	20	31	4	74	0	0	78	125
4:30 PM	0	0	0	0	0	6	0	19	0	25	0	44	1	7	45	7	77	0	0	84	154
4:45 PM	0	0	0	0	0	1	0	10	2	11	0	39	2	5	41	4	66	0	0	70	122
Hourly Total	0	0	0	0	0	16	0	58	8	74	0	157	10	36	167	24	282	0	0	306	547
5:00 PM	0	0	0	0	0	1	0	3	0	4	0	30	1	3	31	1	73	0	0	74	109
5:15 PM	0	0	0	0	0	0	0	4	1	4	0	49	0	3	49	1	52	0	0	53	106
5:30 PM	0	0	0	0	0	2	0	7	2	9	0	45	1	6	46	1	64	0	0	65	120
5:45 PM	0	0	0	0	0	0	0	5	2	5	0	30	1	5	31	5	52	0	0	57	93
Hourly Total	0	0	0	0	0	3	0	19	5	22	0	154	3	17	157	8	241	0	0	249	428
Grand Total	0	0	0	26	0	71	0	205	35	276	0	879	70	119	949	167	954	0	0	1121	2346
Approach %	0.0	0.0	0.0	-	-	25.7	0.0	74.3	-	-	0.0	92.6	7.4	-	-	14.9	85.1	0.0	-	-	-
Total %	0.0	0.0	0.0	-	0.0	3.0	0.0	8.7	-	11.8	0.0	37.5	3.0	-	40.5	7.1	40.7	0.0	-	47.8	-
Lights	0	0	0	-	0	39	0	147	-	186	0	825	30	-	855	129	889	0	-	1018	2059
% Lights	-	-	-	-	-	54.9	-	71.7	-	67.4	-	93.9	42.9	-	90.1	77.2	93.2	-	-	90.8	87.8
Other Vehicles	0	0	0	-	0	32	0	58	-	90	0	54	40	-	94	38	65	0	-	103	287
% Other Vehicles	-	-	-	-	-	45.1	-	28.3	-	32.6	-	6.1	57.1	-	9.9	22.8	6.8	-	-	9.2	12.2
Pedestrians	-	-	-	26	-	-	-	-	35	-	-	-	-	119	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
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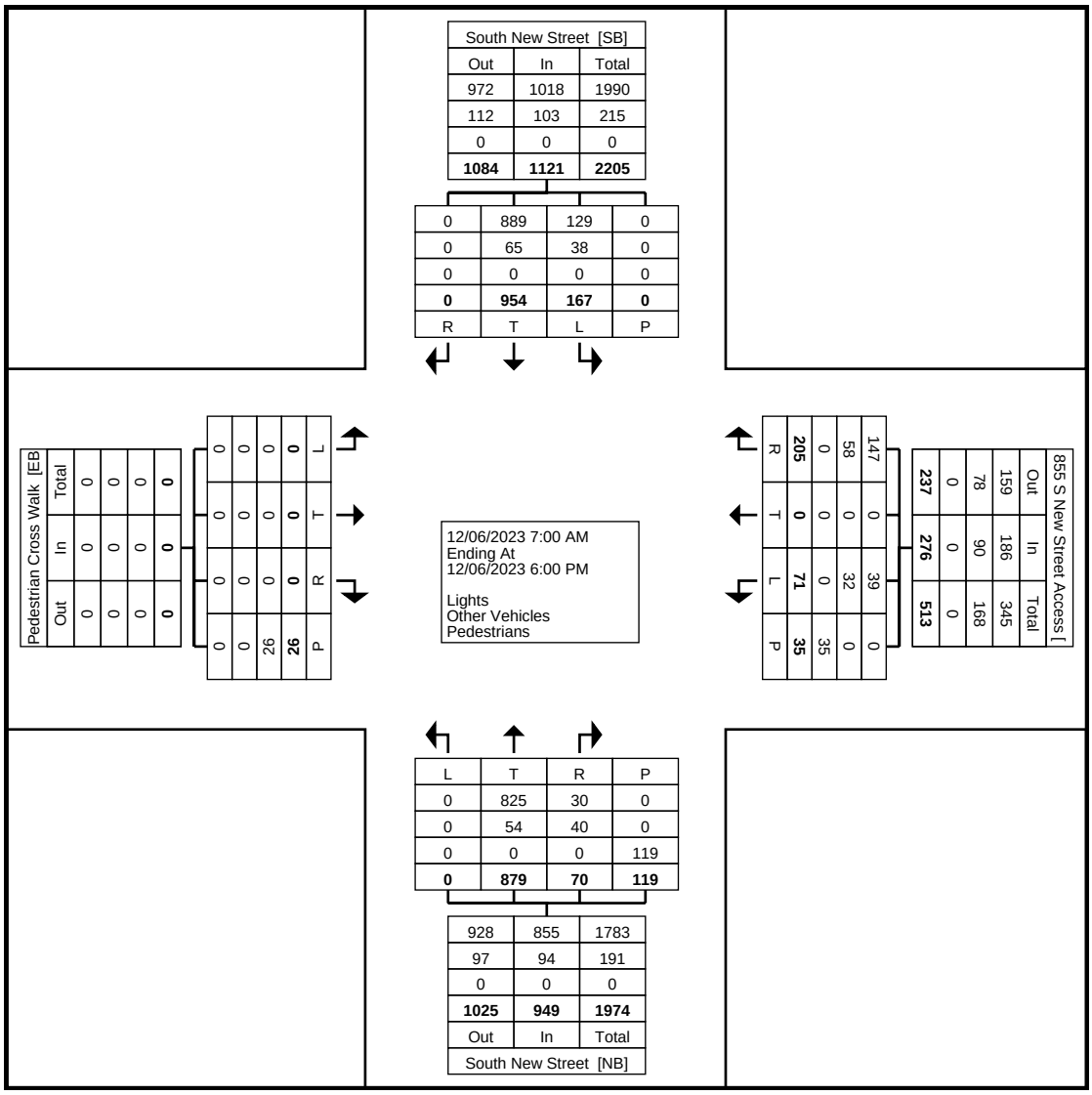
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 20 South New Street & 855 S New Street Access
Site Code:
Start Date: 12/06/2023



Turning Movement Data Plot

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2500 East High Street
Suite 650
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Counter: MIO:
Set up By JH::

Count Name: 20 South New Street & 855 S New Street Access
Site Code:
Start Date: 12/06/2023

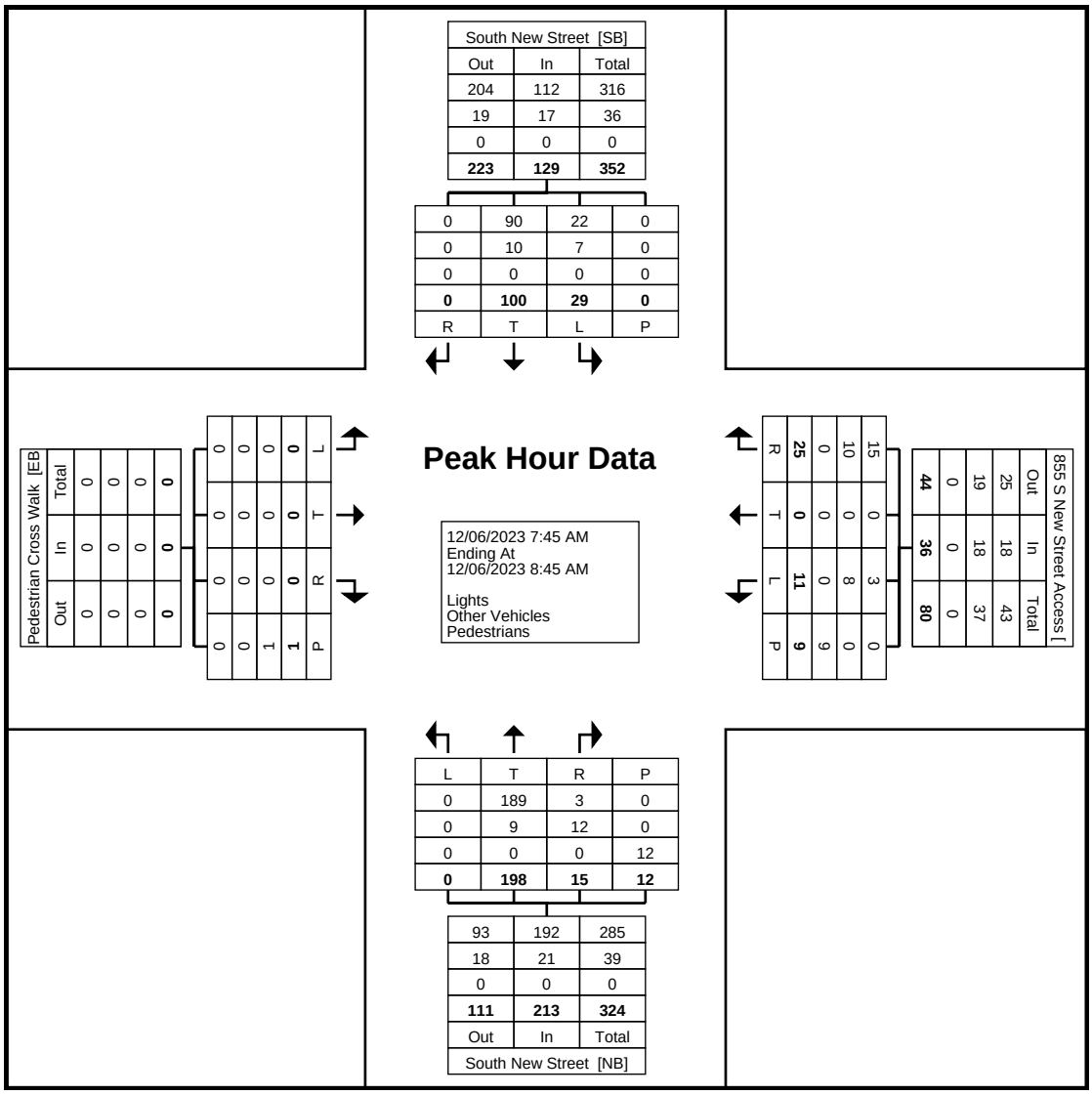
Turning Movement Peak Hour Data (7:45 AM)

Start Time	Pedestrian Cross Walk Eastbound					855 S New Street Access Westbound					South New Street Northbound					South New Street Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:45 AM	0	0	0	0	0	2	0	10	3	12	0	68	4	3	72	9	27	0	0	36	120
8:00 AM	0	0	0	0	0	4	0	3	0	7	0	46	4	0	50	4	23	0	0	27	84
8:15 AM	0	0	0	0	0	1	0	3	4	4	0	35	3	4	38	3	28	0	0	31	73
8:30 AM	0	0	0	1	0	4	0	9	2	13	0	49	4	5	53	13	22	0	0	35	101
Total	0	0	0	1	0	11	0	25	9	36	0	198	15	12	213	29	100	0	0	129	378
Approach %	0.0	0.0	0.0	-	-	30.6	0.0	69.4	-	-	0.0	93.0	7.0	-	-	22.5	77.5	0.0	-	-	-
Total %	0.0	0.0	0.0	-	0.0	2.9	0.0	6.6	-	9.5	0.0	52.4	4.0	-	56.3	7.7	26.5	0.0	-	34.1	-
PHF	0.000	0.000	0.000	-	0.000	0.688	0.000	0.625	-	0.692	0.000	0.728	0.938	-	0.740	0.558	0.893	0.000	-	0.896	0.788
Lights	0	0	0	-	0	3	0	15	-	18	0	189	3	-	192	22	90	0	-	112	322
% Lights	-	-	-	-	-	27.3	-	60.0	-	50.0	-	95.5	20.0	-	90.1	75.9	90.0	-	-	86.8	85.2
Other Vehicles	0	0	0	-	0	8	0	10	-	18	0	9	12	-	21	7	10	0	-	17	56
% Other Vehicles	-	-	-	-	-	72.7	-	40.0	-	50.0	-	4.5	80.0	-	9.9	24.1	10.0	-	-	13.2	14.8
Pedestrians	-	-	-	1	-	-	-	-	9	-	-	-	-	12	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 20 South New Street & 855 S New Street Access
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (7:45 AM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 20 South New Street & 855 S New Street Access
Site Code:
Start Date: 12/06/2023

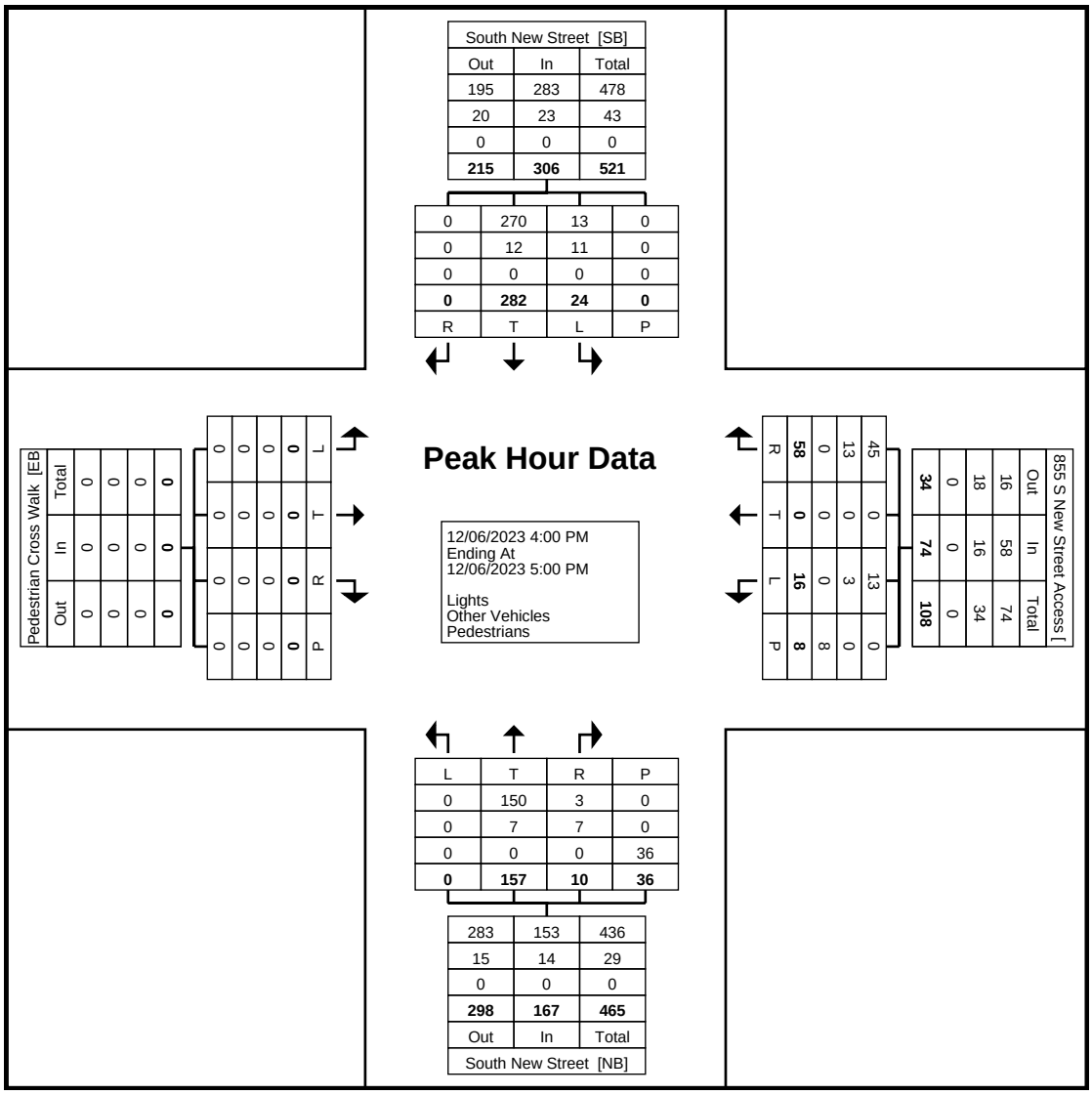
Turning Movement Peak Hour Data (4:00 PM)

Start Time	Pedestrian Cross Walk Eastbound					855 S New Street Access Westbound					South New Street Northbound					South New Street Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
4:00 PM	0	0	0	0	0	4	0	18	3	22	0	48	2	4	50	9	65	0	0	74	146
4:15 PM	0	0	0	0	0	5	0	11	3	16	0	26	5	20	31	4	74	0	0	78	125
4:30 PM	0	0	0	0	0	6	0	19	0	25	0	44	1	7	45	7	77	0	0	84	154
4:45 PM	0	0	0	0	0	1	0	10	2	11	0	39	2	5	41	4	66	0	0	70	122
Total	0	0	0	0	0	16	0	58	8	74	0	157	10	36	167	24	282	0	0	306	547
Approach %	0.0	0.0	0.0	-	-	21.6	0.0	78.4	-	-	0.0	94.0	6.0	-	-	7.8	92.2	0.0	-	-	-
Total %	0.0	0.0	0.0	-	0.0	2.9	0.0	10.6	-	13.5	0.0	28.7	1.8	-	30.5	4.4	51.6	0.0	-	55.9	-
PHF	0.000	0.000	0.000	-	0.000	0.667	0.000	0.763	-	0.740	0.000	0.818	0.500	-	0.835	0.667	0.916	0.000	-	0.911	0.888
Lights	0	0	0	-	0	13	0	45	-	58	0	150	3	-	153	13	270	0	-	283	494
% Lights	-	-	-	-	-	81.3	-	77.6	-	78.4	-	95.5	30.0	-	91.6	54.2	95.7	-	-	92.5	90.3
Other Vehicles	0	0	0	-	0	3	0	13	-	16	0	7	7	-	14	11	12	0	-	23	53
% Other Vehicles	-	-	-	-	-	18.8	-	22.4	-	21.6	-	4.5	70.0	-	8.4	45.8	4.3	-	-	7.5	9.7
Pedestrians	-	-	-	0	-	-	-	-	8	-	-	-	-	36	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 20 South New Street & 855 S New Street Access
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (4:00 PM)

Counter: MIO:
Set up By JH::

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 21 South New Street & S Campus Drive
Site Code:
Start Date: 12/06/2023
Page No: 1

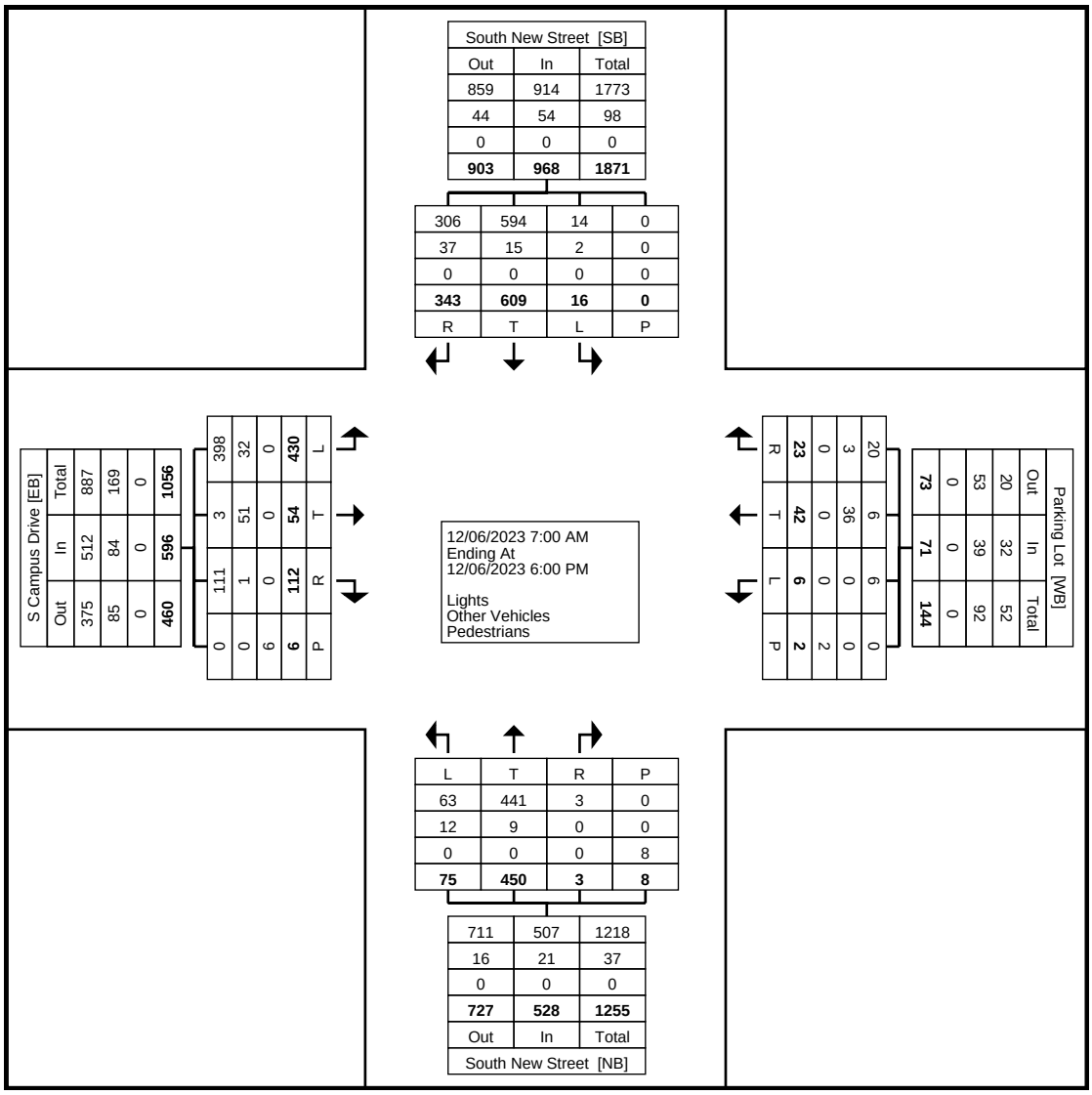
Turning Movement Data

Start Time	S Campus Drive Eastbound					Parking Lot Westbound					South New Street Northbound					South New Street Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	5	0	5	0	10	0	0	0	0	0	0	13	0	0	13	0	11	5	0	16	39
7:15 AM	10	3	6	0	19	0	1	0	0	1	2	9	0	0	11	0	14	2	0	16	47
7:30 AM	15	3	2	0	20	0	0	1	0	1	1	28	0	0	29	1	19	5	0	25	75
7:45 AM	26	2	3	0	31	0	2	0	0	2	0	46	0	0	46	0	21	7	0	28	107
Hourly Total	56	8	16	0	80	0	3	1	0	4	3	96	0	0	99	1	65	19	0	85	268
8:00 AM	5	2	3	0	10	0	1	1	0	2	4	37	0	0	41	1	19	7	0	27	80
8:15 AM	11	3	1	0	15	0	4	2	0	6	1	26	1	0	28	0	22	5	0	27	76
8:30 AM	26	2	3	1	31	0	0	1	0	1	2	23	0	0	25	2	17	6	0	25	82
8:45 AM	23	2	1	0	26	0	2	0	0	2	0	29	0	0	29	1	12	8	0	21	78
Hourly Total	65	9	8	1	82	0	7	4	0	11	7	115	1	0	123	4	70	26	0	100	316
9:00 AM	8	2	1	0	11	0	2	0	0	2	3	23	0	0	26	1	8	8	0	17	56
9:15 AM	9	2	5	0	16	0	1	1	1	2	1	13	0	0	14	0	13	8	0	21	53
9:30 AM	18	3	4	1	25	0	0	1	0	1	4	11	0	0	15	0	11	12	0	23	64
9:45 AM	22	3	2	0	27	0	1	0	0	1	2	12	0	0	14	1	14	10	0	25	67
Hourly Total	57	10	12	1	79	0	4	2	1	6	10	59	0	0	69	2	46	38	0	86	240
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	12	2	4	2	18	0	3	0	0	3	6	14	0	2	20	1	21	24	0	46	87
3:15 PM	24	2	4	0	30	1	2	2	0	5	4	13	0	2	17	0	28	24	0	52	104
3:30 PM	16	2	9	0	27	0	2	1	0	3	5	16	0	0	21	0	31	18	0	49	100
3:45 PM	20	1	13	0	34	0	3	3	1	6	3	21	0	2	24	0	20	17	0	37	101
Hourly Total	72	7	30	2	109	1	10	6	1	17	18	64	0	6	82	1	100	83	0	184	392
4:00 PM	32	3	8	0	43	1	3	8	0	12	2	13	0	0	15	1	45	21	0	67	137
4:15 PM	15	1	7	0	23	0	3	0	0	3	6	11	0	0	17	0	49	26	0	75	118
4:30 PM	25	4	8	2	37	1	3	0	0	4	8	21	0	2	29	0	50	26	0	76	146
4:45 PM	20	0	7	0	27	2	1	0	0	3	2	17	1	0	20	1	43	22	0	66	116
Hourly Total	92	8	30	2	130	4	10	8	0	22	18	62	1	2	81	2	187	95	0	284	517
5:00 PM	18	3	6	0	27	0	3	1	0	4	6	7	0	0	13	0	50	19	0	69	113
5:15 PM	23	4	2	0	29	1	2	0	0	3	6	24	1	0	31	1	33	15	0	49	112
5:30 PM	25	2	2	0	29	0	1	1	0	2	4	16	0	0	20	3	36	23	0	62	113
5:45 PM	22	3	6	0	31	0	2	0	0	2	3	7	0	0	10	2	22	25	0	49	92
Hourly Total	88	12	16	0	116	1	8	2	0	11	19	54	1	0	74	6	141	82	0	229	430
Grand Total	430	54	112	6	596	6	42	23	2	71	75	450	3	8	528	16	609	343	0	968	2163
Approach %	72.1	9.1	18.8	-	-	8.5	59.2	32.4	-	-	14.2	85.2	0.6	-	-	1.7	62.9	35.4	-	-	-
Total %	19.9	2.5	5.2	-	27.6	0.3	1.9	1.1	-	3.3	3.5	20.8	0.1	-	24.4	0.7	28.2	15.9	-	44.8	-
Lights	398	3	111	-	512	6	6	20	-	32	63	441	3	-	507	14	594	306	-	914	1965
% Lights	92.6	5.6	99.1	-	85.9	100.0	14.3	87.0	-	45.1	84.0	98.0	100.0	-	96.0	87.5	97.5	89.2	-	94.4	90.8
Other Vehicles	32	51	1	-	84	0	36	3	-	39	12	9	0	-	21	2	15	37	-	54	198
% Other Vehicles	7.4	94.4	0.9	-	14.1	0.0	85.7	13.0	-	54.9	16.0	2.0	0.0	-	4.0	12.5	2.5	10.8	-	5.6	9.2
Pedestrians	-	-	-	6	-	-	-	-	2	-	-	-	-	8	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 21 South New Street & S Campus Drive
Site Code:
Start Date: 12/06/2023



Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 21 South New Street & S Campus Drive
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (7:45 AM)

Start Time	S Campus Drive Eastbound					Parking Lot Westbound					South New Street Northbound					South New Street Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:45 AM	26	2	3	0	31	0	2	0	0	2	0	46	0	0	46	0	21	7	0	28	107
8:00 AM	5	2	3	0	10	0	1	1	0	2	4	37	0	0	41	1	19	7	0	27	80
8:15 AM	11	3	1	0	15	0	4	2	0	6	1	26	1	0	28	0	22	5	0	27	76
8:30 AM	26	2	3	1	31	0	0	1	0	1	2	23	0	0	25	2	17	6	0	25	82
Total	68	9	10	1	87	0	7	4	0	11	7	132	1	0	140	3	79	25	0	107	345
Approach %	78.2	10.3	11.5	-	-	0.0	63.6	36.4	-	-	5.0	94.3	0.7	-	-	2.8	73.8	23.4	-	-	-
Total %	19.7	2.6	2.9	-	25.2	0.0	2.0	1.2	-	3.2	2.0	38.3	0.3	-	40.6	0.9	22.9	7.2	-	31.0	-
PHF	0.654	0.750	0.833	-	0.702	0.000	0.438	0.500	-	0.458	0.438	0.717	0.250	-	0.761	0.375	0.898	0.893	-	0.955	0.806
Lights	61	0	10	-	71	0	3	4	-	7	5	127	1	-	133	2	77	15	-	94	305
% Lights	89.7	0.0	100.0	-	81.6	-	42.9	100.0	-	63.6	71.4	96.2	100.0	-	95.0	66.7	97.5	60.0	-	87.9	88.4
Other Vehicles	7	9	0	-	16	0	4	0	-	4	2	5	0	-	7	1	2	10	-	13	40
% Other Vehicles	10.3	100.0	0.0	-	18.4	-	57.1	0.0	-	36.4	28.6	3.8	0.0	-	5.0	33.3	2.5	40.0	-	12.1	11.6
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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2500 East High Street
Suite 650
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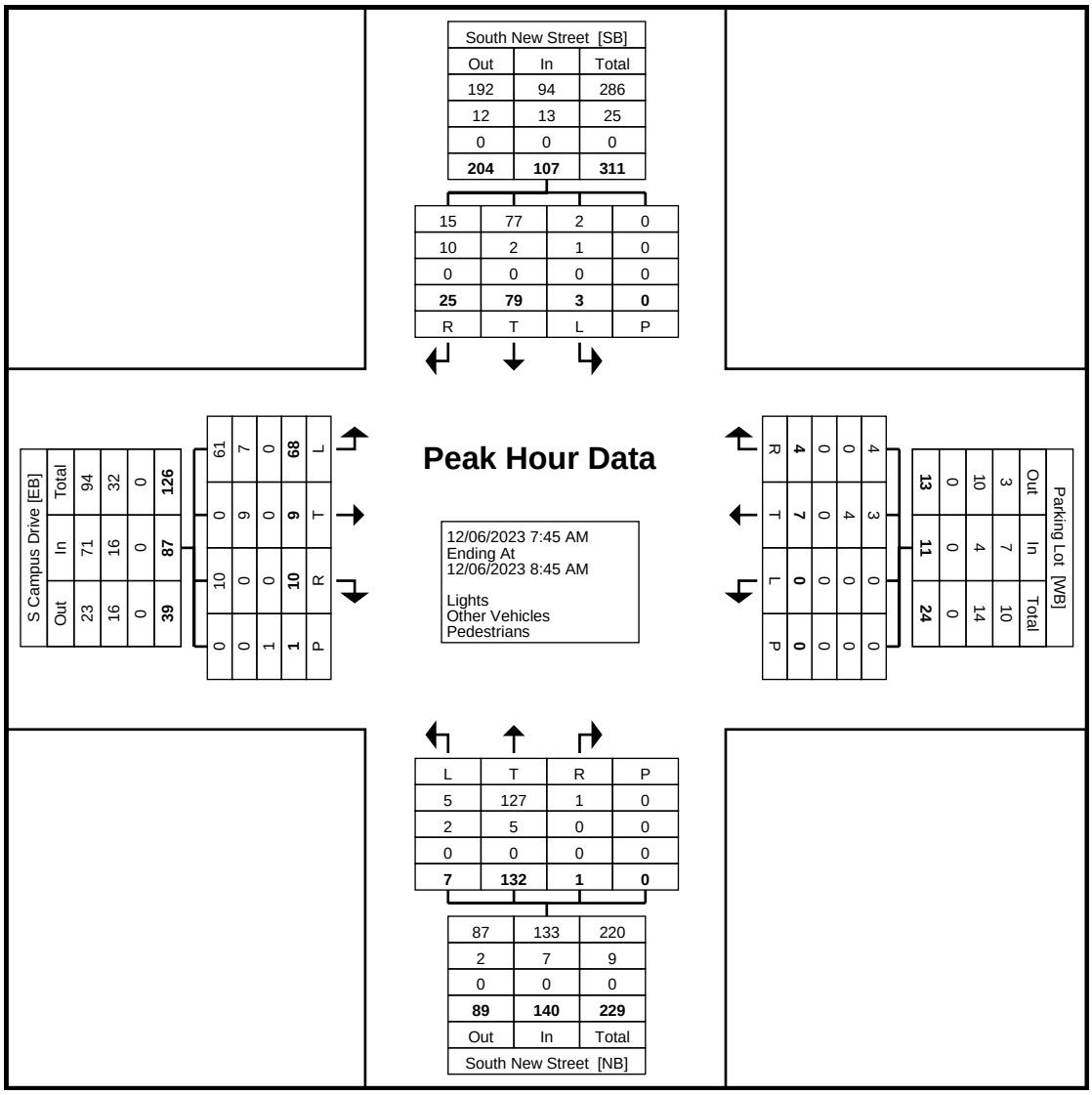
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 21 South New Street & S Campus Drive
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (7:45 AM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 21 South New Street & S Campus Drive
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (4:00 PM)

Start Time	S Campus Drive Eastbound					Parking Lot Westbound					South New Street Northbound					South New Street Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
4:00 PM	32	3	8	0	43	1	3	8	0	12	2	13	0	0	15	1	45	21	0	67	137
4:15 PM	15	1	7	0	23	0	3	0	0	3	6	11	0	0	17	0	49	26	0	75	118
4:30 PM	25	4	8	2	37	1	3	0	0	4	8	21	0	2	29	0	50	26	0	76	146
4:45 PM	20	0	7	0	27	2	1	0	0	3	2	17	1	0	20	1	43	22	0	66	116
Total	92	8	30	2	130	4	10	8	0	22	18	62	1	2	81	2	187	95	0	284	517
Approach %	70.8	6.2	23.1	-	-	18.2	45.5	36.4	-	-	22.2	76.5	1.2	-	-	0.7	65.8	33.5	-	-	-
Total %	17.8	1.5	5.8	-	25.1	0.8	1.9	1.5	-	4.3	3.5	12.0	0.2	-	15.7	0.4	36.2	18.4	-	54.9	-
PHF	0.719	0.500	0.938	-	0.756	0.500	0.833	0.250	-	0.458	0.563	0.738	0.250	-	0.698	0.500	0.935	0.913	-	0.934	0.885
Lights	86	2	29	-	117	4	1	6	-	11	16	62	1	-	79	2	183	94	-	279	486
% Lights	93.5	25.0	96.7	-	90.0	100.0	10.0	75.0	-	50.0	88.9	100.0	100.0	-	97.5	100.0	97.9	98.9	-	98.2	94.0
Other Vehicles	6	6	1	-	13	0	9	2	-	11	2	0	0	-	2	0	4	1	-	5	31
% Other Vehicles	6.5	75.0	3.3	-	10.0	0.0	90.0	25.0	-	50.0	11.1	0.0	0.0	-	2.5	0.0	2.1	1.1	-	1.8	6.0
Pedestrians	-	-	-	2	-	-	-	-	0	-	-	-	-	2	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
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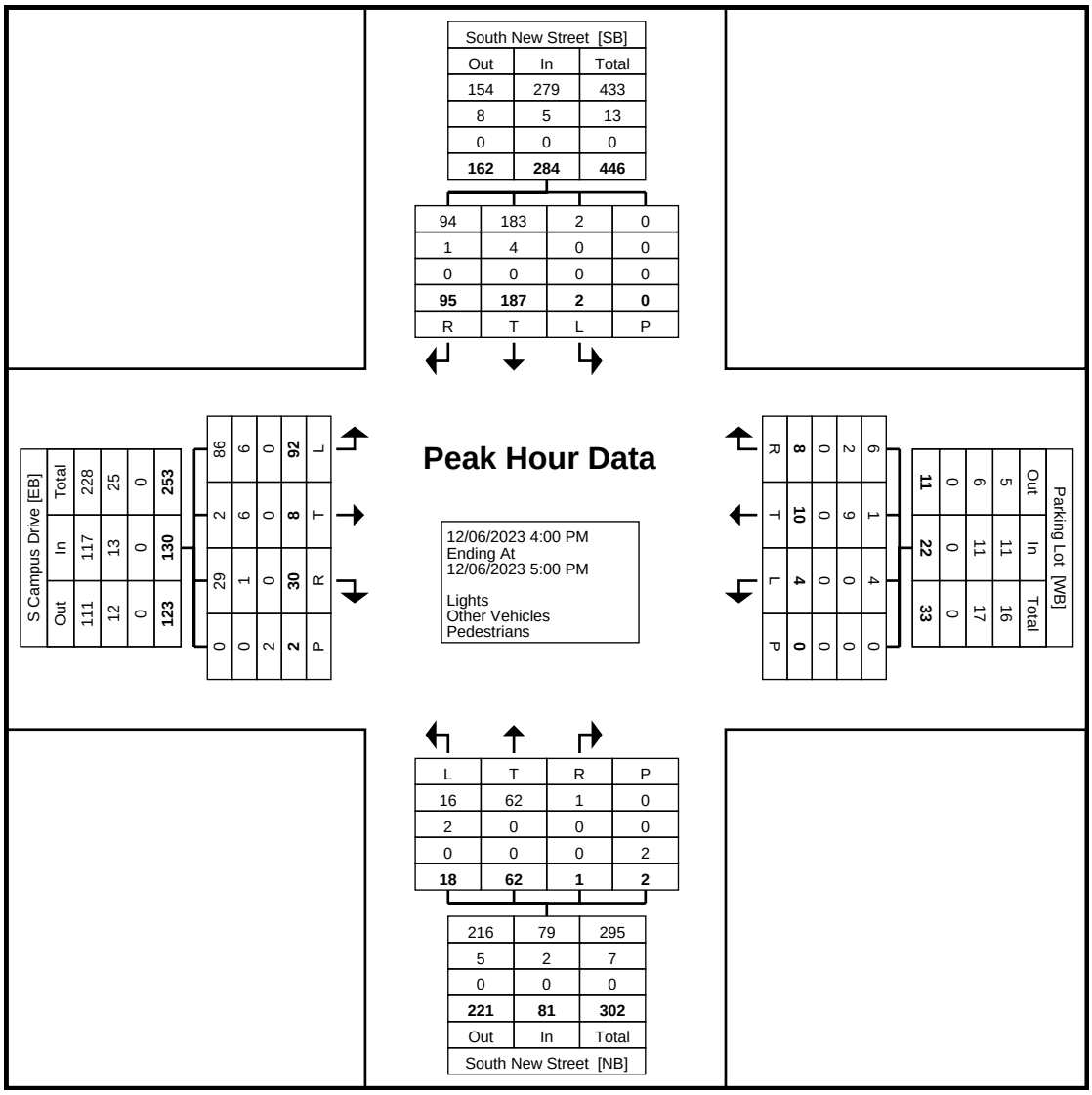
Counter: MIO:
Set up By JH::

Count Name: 21 South New Street & S Campus Drive
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (4:00 PM)

Counter: MIO:
Set up By JH::

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 22 South New Street & Tigue Road-Stadium Drive
Site Code:
Start Date: 12/06/2023
Page No: 1

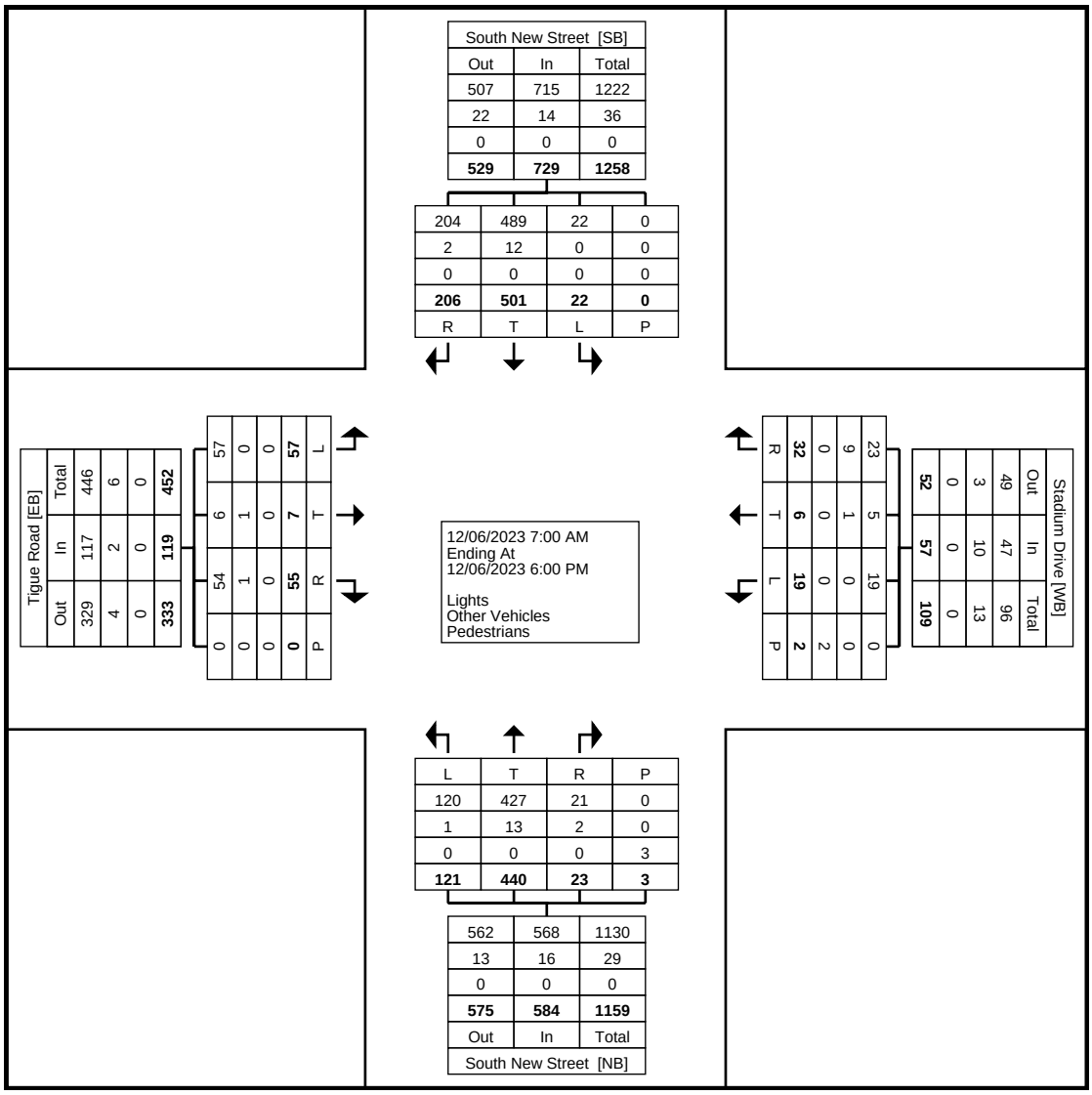
Turning Movement Data

Start Time	Tigue Road Eastbound					Stadium Drive Westbound					South New Street Northbound					South New Street Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	0	1	0	1	0	0	0	0	0	0	15	1	2	16	0	10	5	0	15	32
7:15 AM	1	0	3	0	4	0	0	0	0	0	1	9	1	0	11	0	16	4	0	20	35
7:30 AM	3	1	1	0	5	0	0	2	0	2	5	25	3	0	33	1	13	7	0	21	61
7:45 AM	2	0	3	0	5	2	0	1	0	3	5	46	2	0	53	1	18	5	0	24	85
Hourly Total	6	1	8	0	15	2	0	3	0	5	11	95	7	2	113	2	57	21	0	80	213
8:00 AM	6	0	0	0	6	1	1	1	0	3	2	31	2	0	35	2	17	3	0	22	66
8:15 AM	4	0	3	0	7	2	0	0	0	2	0	24	0	0	24	1	18	4	0	23	56
8:30 AM	2	0	2	0	4	0	0	3	0	3	3	21	1	0	25	4	12	4	0	20	52
8:45 AM	2	1	8	0	11	1	0	0	0	1	5	26	1	0	32	0	11	2	0	13	57
Hourly Total	14	1	13	0	28	4	1	4	0	9	10	102	4	0	116	7	58	13	0	78	231
9:00 AM	2	0	6	0	8	0	0	2	0	2	3	20	0	0	23	0	7	3	0	10	43
9:15 AM	2	0	1	0	3	0	0	1	1	1	1	11	0	0	12	2	14	2	0	18	34
9:30 AM	6	0	1	0	7	0	0	0	0	0	6	10	1	0	17	1	11	3	0	15	39
9:45 AM	2	0	2	0	4	1	0	1	0	2	3	12	1	0	16	2	13	1	0	16	38
Hourly Total	12	0	10	0	22	1	0	4	1	5	13	53	2	0	68	5	45	9	0	59	154
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	0	5	0	5	2	0	2	1	4	5	17	0	1	22	0	19	5	0	24	55
3:15 PM	2	0	1	0	3	1	1	1	0	3	5	13	1	0	19	1	29	7	0	37	62
3:30 PM	4	2	3	0	9	1	2	1	0	4	4	15	2	0	21	1	33	6	0	40	74
3:45 PM	5	1	0	0	6	1	0	1	0	2	3	20	3	0	26	0	22	9	0	31	65
Hourly Total	11	3	9	0	23	5	3	5	1	13	17	65	6	1	88	2	103	27	0	132	256
4:00 PM	2	1	0	0	3	1	0	2	0	3	17	10	0	0	27	1	32	21	0	54	87
4:15 PM	2	0	5	0	7	1	0	1	0	2	12	12	2	0	26	2	37	18	0	57	92
4:30 PM	1	1	3	0	5	3	1	3	0	7	13	30	0	0	43	0	37	21	0	58	113
4:45 PM	2	0	0	0	2	0	1	1	0	2	6	14	1	0	21	0	33	17	0	50	75
Hourly Total	7	2	8	0	17	5	2	7	0	14	48	66	3	0	117	3	139	77	0	219	367
5:00 PM	2	0	1	0	3	1	0	0	0	1	4	12	0	0	16	0	29	29	0	58	78
5:15 PM	3	0	3	0	6	0	0	6	0	6	4	23	1	0	28	1	23	12	0	36	76
5:30 PM	0	0	0	0	0	0	0	2	0	2	5	17	0	0	22	1	26	11	0	38	62
5:45 PM	2	0	3	0	5	1	0	1	0	2	9	7	0	0	16	1	21	7	0	29	52
Hourly Total	7	0	7	0	14	2	0	9	0	11	22	59	1	0	82	3	99	59	0	161	268
Grand Total	57	7	55	0	119	19	6	32	2	57	121	440	23	3	584	22	501	206	0	729	1489
Approach %	47.9	5.9	46.2	-	-	33.3	10.5	56.1	-	-	20.7	75.3	3.9	-	-	3.0	68.7	28.3	-	-	-
Total %	3.8	0.5	3.7	-	8.0	1.3	0.4	2.1	-	3.8	8.1	29.6	1.5	-	39.2	1.5	33.6	13.8	-	49.0	-
Lights	57	6	54	-	117	19	5	23	-	47	120	427	21	-	568	22	489	204	-	715	1447
% Lights	100.0	85.7	98.2	-	98.3	100.0	83.3	71.9	-	82.5	99.2	97.0	91.3	-	97.3	100.0	97.6	99.0	-	98.1	97.2
Other Vehicles	0	1	1	-	2	0	1	9	-	10	1	13	2	-	16	0	12	2	-	14	42
% Other Vehicles	0.0	14.3	1.8	-	1.7	0.0	16.7	28.1	-	17.5	0.8	3.0	8.7	-	2.7	0.0	2.4	1.0	-	1.9	2.8
Pedestrians	-	-	-	0	-	-	-	-	2	-	-	-	-	3	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 22 South New Street & Tigue Road-Stadium Drive
Site Code:
Start Date: 12/06/2023



Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 22 South New Street & Tigue Road-Stadium Drive
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Tigue Road Eastbound					Stadium Drive Westbound					South New Street Northbound					South New Street Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:30 AM	3	1	1	0	5	0	0	2	0	2	5	25	3	0	33	1	13	7	0	21	61
7:45 AM	2	0	3	0	5	2	0	1	0	3	5	46	2	0	53	1	18	5	0	24	85
8:00 AM	6	0	0	0	6	1	1	1	0	3	2	31	2	0	35	2	17	3	0	22	66
8:15 AM	4	0	3	0	7	2	0	0	0	2	0	24	0	0	24	1	18	4	0	23	56
Total	15	1	7	0	23	5	1	4	0	10	12	126	7	0	145	5	66	19	0	90	268
Approach %	65.2	4.3	30.4	-	-	50.0	10.0	40.0	-	-	8.3	86.9	4.8	-	-	5.6	73.3	21.1	-	-	-
Total %	5.6	0.4	2.6	-	8.6	1.9	0.4	1.5	-	3.7	4.5	47.0	2.6	-	54.1	1.9	24.6	7.1	-	33.6	-
PHF	0.625	0.250	0.583	-	0.821	0.625	0.250	0.500	-	0.833	0.600	0.685	0.583	-	0.684	0.625	0.917	0.679	-	0.938	0.788
Lights	15	1	7	-	23	5	0	2	-	7	12	121	6	-	139	5	62	19	-	86	255
% Lights	100.0	100.0	100.0	-	100.0	100.0	0.0	50.0	-	70.0	100.0	96.0	85.7	-	95.9	100.0	93.9	100.0	-	95.6	95.1
Other Vehicles	0	0	0	-	0	0	1	2	-	3	0	5	1	-	6	0	4	0	-	4	13
% Other Vehicles	0.0	0.0	0.0	-	0.0	0.0	100.0	50.0	-	30.0	0.0	4.0	14.3	-	4.1	0.0	6.1	0.0	-	4.4	4.9
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
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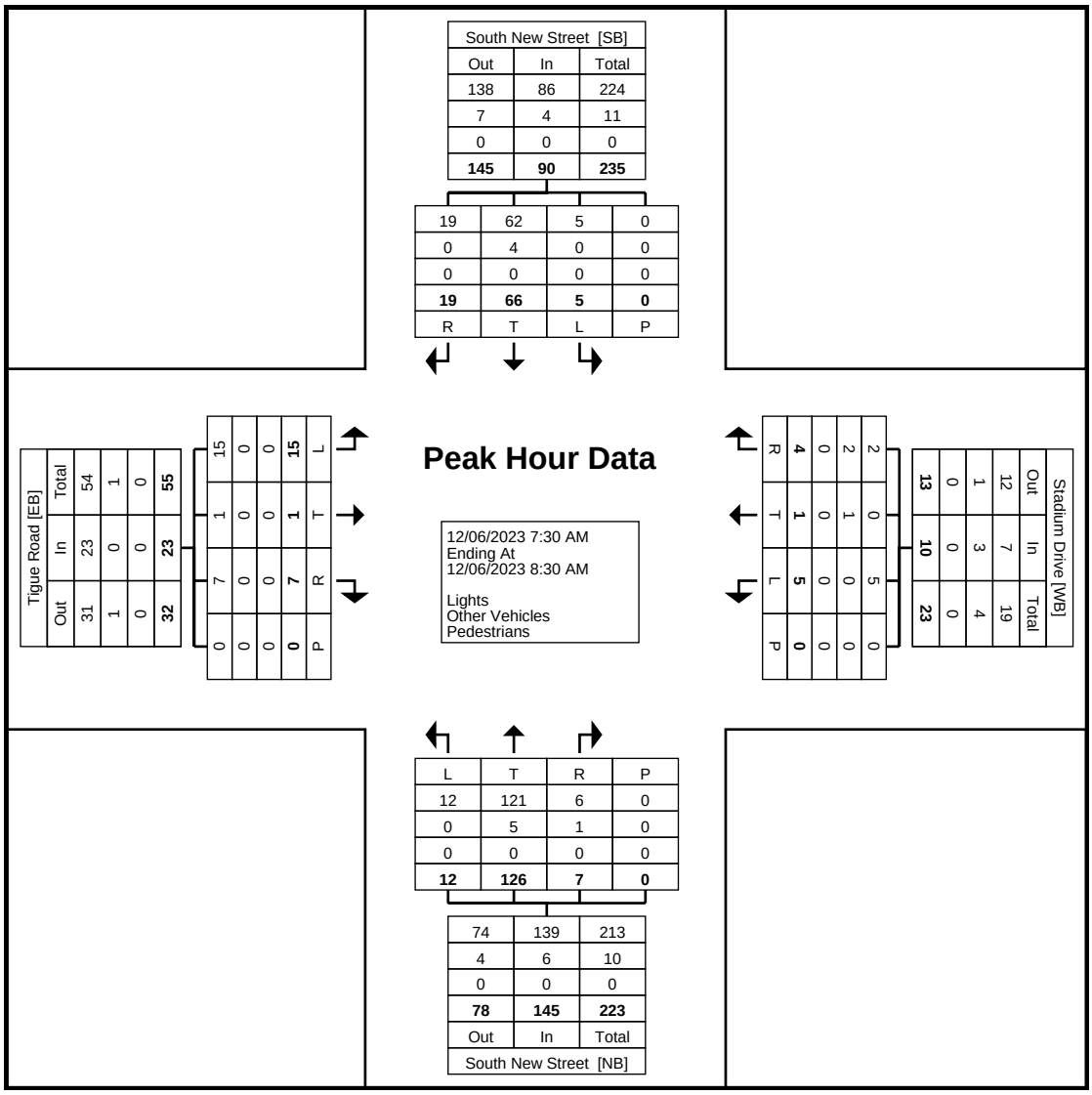
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 22 South New Street & Tigue Road-Stadium Drive
Site Code:
Start Date: 12/06/2023



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

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 22 South New Street & Tigue Road-Stadium Drive
Site Code:
Start Date: 12/06/2023

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Tigue Road Eastbound					Stadium Drive Westbound					South New Street Northbound					South New Street Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
4:00 PM	2	1	0	0	3	1	0	2	0	3	17	10	0	0	27	1	32	21	0	54	87
4:15 PM	2	0	5	0	7	1	0	1	0	2	12	12	2	0	26	2	37	18	0	57	92
4:30 PM	1	1	3	0	5	3	1	3	0	7	13	30	0	0	43	0	37	21	0	58	113
4:45 PM	2	0	0	0	2	0	1	1	0	2	6	14	1	0	21	0	33	17	0	50	75
Total	7	2	8	0	17	5	2	7	0	14	48	66	3	0	117	3	139	77	0	219	367
Approach %	41.2	11.8	47.1	-	-	35.7	14.3	50.0	-	-	41.0	56.4	2.6	-	-	1.4	63.5	35.2	-	-	-
Total %	1.9	0.5	2.2	-	4.6	1.4	0.5	1.9	-	3.8	13.1	18.0	0.8	-	31.9	0.8	37.9	21.0	-	59.7	-
PHF	0.875	0.500	0.400	-	0.607	0.417	0.500	0.583	-	0.500	0.706	0.550	0.375	-	0.680	0.375	0.939	0.917	-	0.944	0.812
Lights	7	2	8	-	17	5	2	6	-	13	47	65	3	-	115	3	137	77	-	217	362
% Lights	100.0	100.0	100.0	-	100.0	100.0	100.0	85.7	-	92.9	97.9	98.5	100.0	-	98.3	100.0	98.6	100.0	-	99.1	98.6
Other Vehicles	0	0	0	-	0	0	0	1	-	1	1	1	0	-	2	0	2	0	-	2	5
% Other Vehicles	0.0	0.0	0.0	-	0.0	0.0	0.0	14.3	-	7.1	2.1	1.5	0.0	-	1.7	0.0	1.4	0.0	-	0.9	1.4
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
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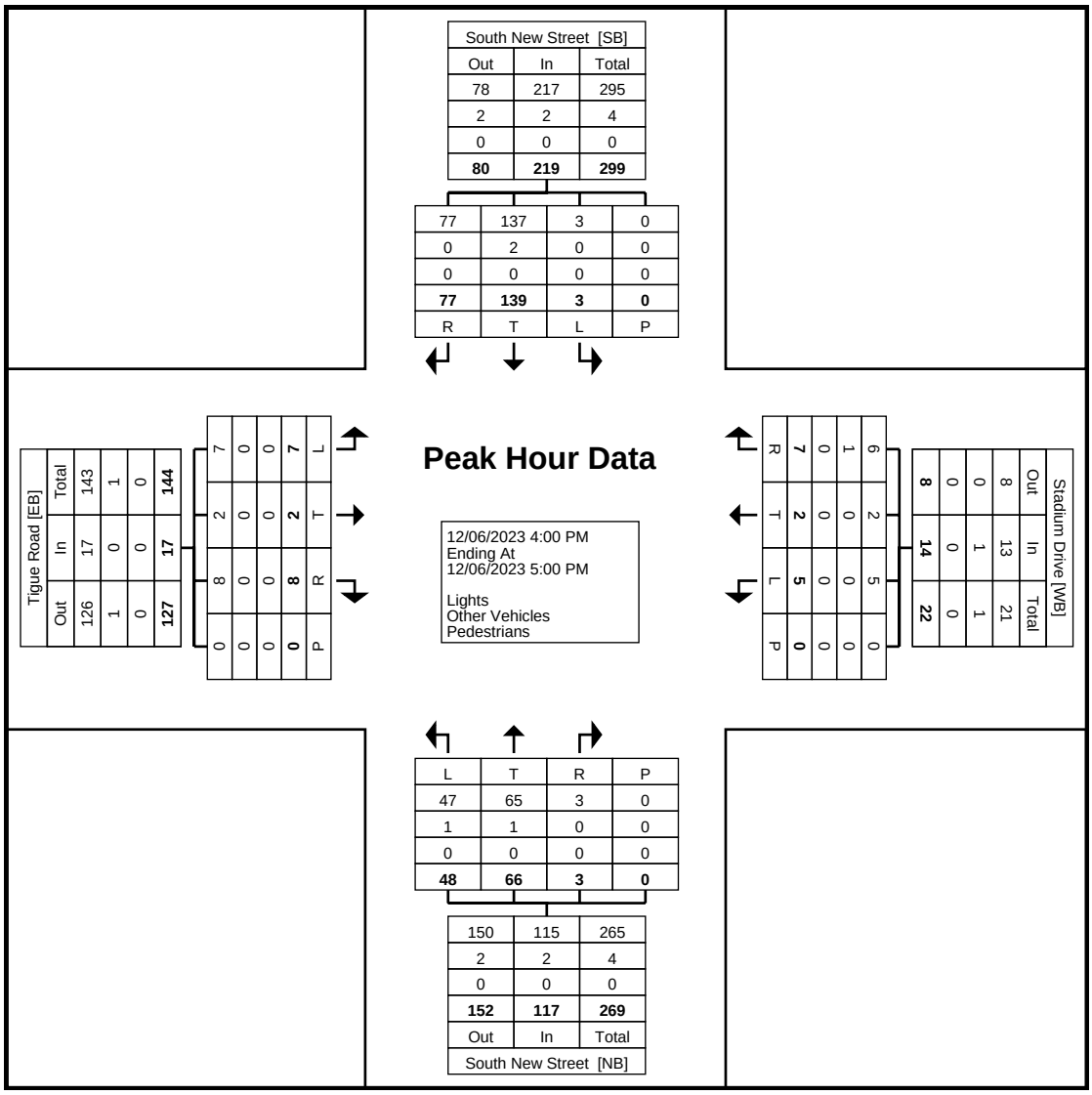
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 22 South New Street & Tigue Road-Stadium Drive
Site Code:
Start Date: 12/06/2023



Turning Movement Peak Hour Data Plot (4:00 PM)

Counter: MIO:
Set up By JH::

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 23 Matlack Street & Campus Drive (With Bikes)
Site Code:
Start Date: 04/25/2024
Page No: 1

Turning Movement Data

Start Time	Campus Drive Eastbound					Campus Drive Westbound					Matlack Street Northbound					Matlack Street Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	2	2	3	0	7	1	2	4	0	7	4	23	2	0	29	4	67	1	0	72	115
7:15 AM	11	0	5	0	16	0	1	8	0	9	11	53	1	0	65	0	83	3	0	86	176
7:30 AM	3	1	9	0	13	0	0	2	0	2	25	64	0	2	89	2	79	2	0	83	187
7:45 AM	5	3	6	0	14	0	2	4	0	6	27	56	0	0	83	3	81	4	1	88	191
Hourly Total	21	6	23	0	50	1	5	18	0	24	67	196	3	2	266	9	310	10	1	329	669
8:00 AM	3	2	5	0	10	0	1	2	0	3	20	52	0	0	72	2	112	4	0	118	203
8:15 AM	5	3	1	0	9	1	2	2	0	5	14	36	3	0	53	1	89	3	0	93	160
8:30 AM	1	1	5	1	7	0	0	3	1	3	26	60	0	1	86	6	83	3	0	92	188
8:45 AM	4	5	6	1	15	0	2	2	1	4	30	60	1	4	91	8	67	5	0	80	190
Hourly Total	13	11	17	2	41	1	5	9	2	15	90	208	4	5	302	17	351	15	0	383	741
9:00 AM	4	2	7	0	13	1	2	3	3	6	47	61	0	2	108	4	60	0	0	64	191
9:15 AM	6	1	15	0	22	0	5	8	2	13	41	60	1	4	102	5	58	5	0	68	205
9:30 AM	3	1	9	0	13	0	2	5	1	7	19	49	0	2	68	6	30	2	0	38	126
9:45 AM	0	2	3	0	5	0	3	2	0	5	23	59	0	2	82	4	39	1	0	44	136
Hourly Total	13	6	34	0	53	1	12	18	6	31	130	229	1	10	360	19	187	8	0	214	658
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	12	2	30	2	44	5	3	6	0	14	11	61	0	5	72	1	48	6	0	55	185
3:15 PM	22	0	23	0	45	0	0	2	0	2	14	79	0	2	93	0	47	3	0	50	190
3:30 PM	9	0	19	0	28	0	1	1	2	2	8	65	0	1	73	0	50	10	0	60	163
3:45 PM	8	0	17	0	25	1	0	1	0	2	14	99	1	2	114	0	45	5	0	50	191
Hourly Total	51	2	89	2	142	6	4	10	2	20	47	304	1	10	352	1	190	24	0	215	729
4:00 PM	14	0	16	2	30	1	0	0	0	1	23	94	0	0	117	0	51	2	0	53	201
4:15 PM	13	0	17	1	30	1	1	1	2	3	18	77	1	0	96	1	73	8	1	82	211
4:30 PM	3	0	15	1	18	0	1	3	1	4	13	98	0	0	111	1	63	3	1	67	200
4:45 PM	16	0	16	0	32	0	0	0	0	0	6	87	0	1	93	0	45	2	0	47	172
Hourly Total	46	0	64	4	110	2	2	4	3	8	60	356	1	1	417	2	232	15	2	249	784
5:00 PM	9	0	12	0	21	0	2	0	0	2	11	95	0	0	106	1	45	5	0	51	180
5:15 PM	7	1	16	0	24	1	0	0	0	1	7	71	0	0	78	0	66	6	0	72	175
5:30 PM	11	0	15	1	26	0	0	0	1	0	11	75	0	0	86	0	63	6	0	69	181
5:45 PM	12	0	14	0	26	4	0	0	0	4	15	70	1	0	86	0	59	3	0	62	178
Hourly Total	39	1	57	1	97	5	2	0	1	7	44	311	1	0	356	1	233	20	0	254	714
Grand Total	183	26	284	9	493	16	30	59	14	105	438	1604	11	28	2053	49	1503	92	3	1644	4295
Approach %	37.1	5.3	57.6	-	-	15.2	28.6	56.2	-	-	21.3	78.1	0.5	-	-	3.0	91.4	5.6	-	-	-
Total %	4.3	0.6	6.6	-	11.5	0.4	0.7	1.4	-	2.4	10.2	37.3	0.3	-	47.8	1.1	35.0	2.1	-	38.3	-
Lights	174	26	257	-	457	16	26	58	-	100	434	1547	10	-	1991	47	1449	92	-	1588	4136
% Lights	95.1	100.0	90.5	-	92.7	100.0	86.7	98.3	-	95.2	99.1	96.4	90.9	-	97.0	95.9	96.4	100.0	-	96.6	96.3
Other Vehicles	9	0	27	-	36	0	1	1	-	2	3	52	1	-	56	2	52	0	-	54	148
% Other Vehicles	4.9	0.0	9.5	-	7.3	0.0	3.3	1.7	-	1.9	0.7	3.2	9.1	-	2.7	4.1	3.5	0.0	-	3.3	3.4
Bicycles on Road	0	0	0	-	0	0	3	0	-	3	1	5	0	-	6	0	2	0	-	2	11
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	10.0	0.0	-	2.9	0.2	0.3	0.0	-	0.3	0.0	0.1	0.0	-	0.1	0.3
Bicycles on Crosswalk	-	-	-	1	-	-	-	-	0	-	-	-	-	2	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	11.1	-	-	-	-	0.0	-	-	-	-	7.1	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	8	-	-	-	-	14	-	-	-	-	26	-	-	-	-	3	-	-
% Pedestrians	-	-	-	88.9	-	-	-	-	100.0	-	-	-	-	92.9	-	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
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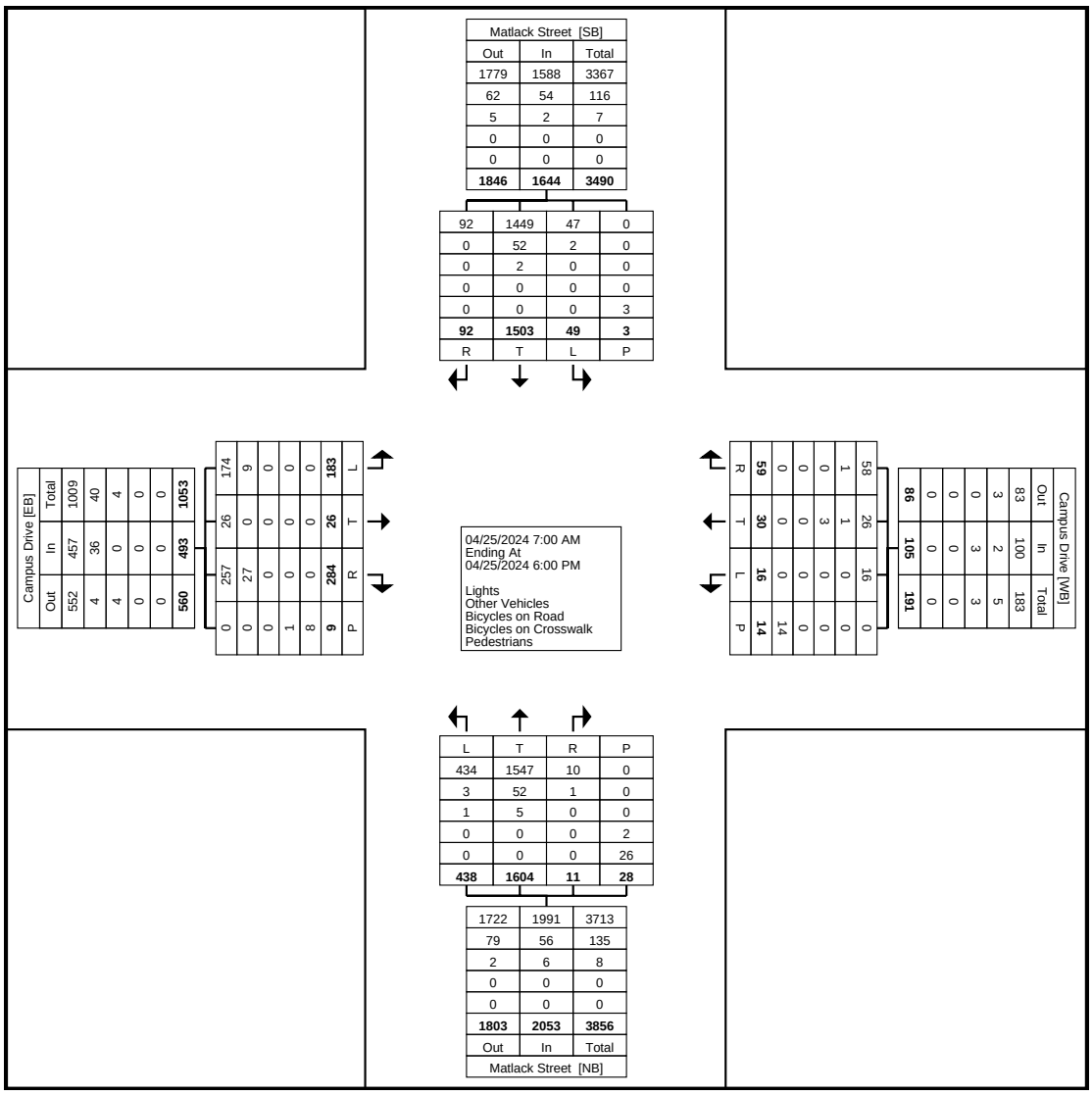
Counter: MIO:
Set up By JH::

Count Name: 23 Matlack Street & Campus Drive (With Bikes)
Site Code:
Start Date: 04/25/2024



Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 23 Matlack Street & Campus Drive (With Bikes)
Site Code:
Start Date: 04/25/2024

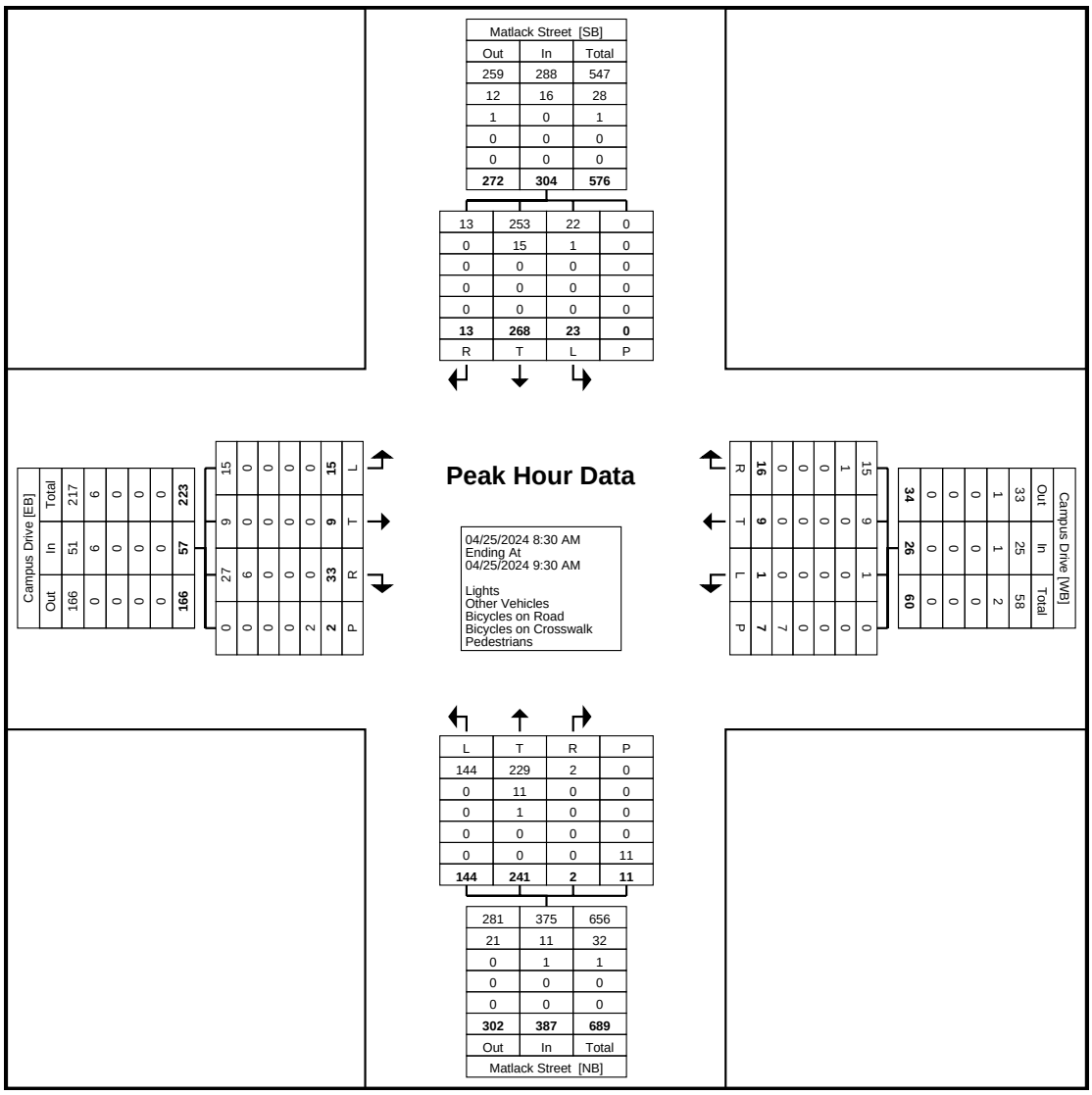
Turning Movement Peak Hour Data (8:30 AM)

Start Time	Campus Drive Eastbound					Campus Drive Westbound					Matlack Street Northbound					Matlack Street Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
8:30 AM	1	1	5	1	7	0	0	3	1	3	26	60	0	1	86	6	83	3	0	92	188
8:45 AM	4	5	6	1	15	0	2	2	1	4	30	60	1	4	91	8	67	5	0	80	190
9:00 AM	4	2	7	0	13	1	2	3	3	6	47	61	0	2	108	4	60	0	0	64	191
9:15 AM	6	1	15	0	22	0	5	8	2	13	41	60	1	4	102	5	58	5	0	68	205
Total	15	9	33	2	57	1	9	16	7	26	144	241	2	11	387	23	268	13	0	304	774
Approach %	26.3	15.8	57.9	-	-	3.8	34.6	61.5	-	-	37.2	62.3	0.5	-	-	7.6	88.2	4.3	-	-	-
Total %	1.9	1.2	4.3	-	7.4	0.1	1.2	2.1	-	3.4	18.6	31.1	0.3	-	50.0	3.0	34.6	1.7	-	39.3	-
PHF	0.625	0.450	0.550	-	0.648	0.250	0.450	0.500	-	0.500	0.766	0.988	0.500	-	0.896	0.719	0.807	0.650	-	0.826	0.944
Lights	15	9	27	-	51	1	9	15	-	25	144	229	2	-	375	22	253	13	-	288	739
% Lights	100.0	100.0	81.8	-	89.5	100.0	100.0	93.8	-	96.2	100.0	95.0	100.0	-	96.9	95.7	94.4	100.0	-	94.7	95.5
Other Vehicles	0	0	6	-	6	0	0	1	-	1	0	11	0	-	11	1	15	0	-	16	34
% Other Vehicles	0.0	0.0	18.2	-	10.5	0.0	0.0	6.3	-	3.8	0.0	4.6	0.0	-	2.8	4.3	5.6	0.0	-	5.3	4.4
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.4	0.0	-	0.3	0.0	0.0	0.0	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	-	-	-
Pedestrians	-	-	-	2	-	-	-	-	7	-	-	-	-	11	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 23 Matlack Street & Campus Drive (With Bikes)
Site Code:
Start Date: 04/25/2024



Turning Movement Peak Hour Data Plot (8:30 AM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 23 Matlack Street & Campus Drive (With Bikes)
Site Code:
Start Date: 04/25/2024

Turning Movement Peak Hour Data (3:45 PM)

Start Time	Campus Drive Eastbound					Campus Drive Westbound					Matlack Street Northbound					Matlack Street Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
3:45 PM	8	0	17	0	25	1	0	1	0	2	14	99	1	2	114	0	45	5	0	50	191
4:00 PM	14	0	16	2	30	1	0	0	0	1	23	94	0	0	117	0	51	2	0	53	201
4:15 PM	13	0	17	1	30	1	1	1	2	3	18	77	1	0	96	1	73	8	1	82	211
4:30 PM	3	0	15	1	18	0	1	3	1	4	13	98	0	0	111	1	63	3	1	67	200
Total	38	0	65	4	103	3	2	5	3	10	68	368	2	2	438	2	232	18	2	252	803
Approach %	36.9	0.0	63.1	-	-	30.0	20.0	50.0	-	-	15.5	84.0	0.5	-	-	0.8	92.1	7.1	-	-	-
Total %	4.7	0.0	8.1	-	12.8	0.4	0.2	0.6	-	1.2	8.5	45.8	0.2	-	54.5	0.2	28.9	2.2	-	31.4	-
PHF	0.679	0.000	0.956	-	0.858	0.750	0.500	0.417	-	0.625	0.739	0.929	0.500	-	0.936	0.500	0.795	0.563	-	0.768	0.951
Lights	38	0	59	-	97	3	2	5	-	10	67	361	2	-	430	2	224	18	-	244	781
% Lights	100.0	-	90.8	-	94.2	100.0	100.0	100.0	-	100.0	98.5	98.1	100.0	-	98.2	100.0	96.6	100.0	-	96.8	97.3
Other Vehicles	0	0	6	-	6	0	0	0	-	0	1	6	0	-	7	0	8	0	-	8	21
% Other Vehicles	0.0	-	9.2	-	5.8	0.0	0.0	0.0	-	0.0	1.5	1.6	0.0	-	1.6	0.0	3.4	0.0	-	3.2	2.6
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Bicycles on Road	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.3	0.0	-	0.2	0.0	0.0	0.0	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	4	-	-	-	-	3	-	-	-	-	2	-	-	-	-	2	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
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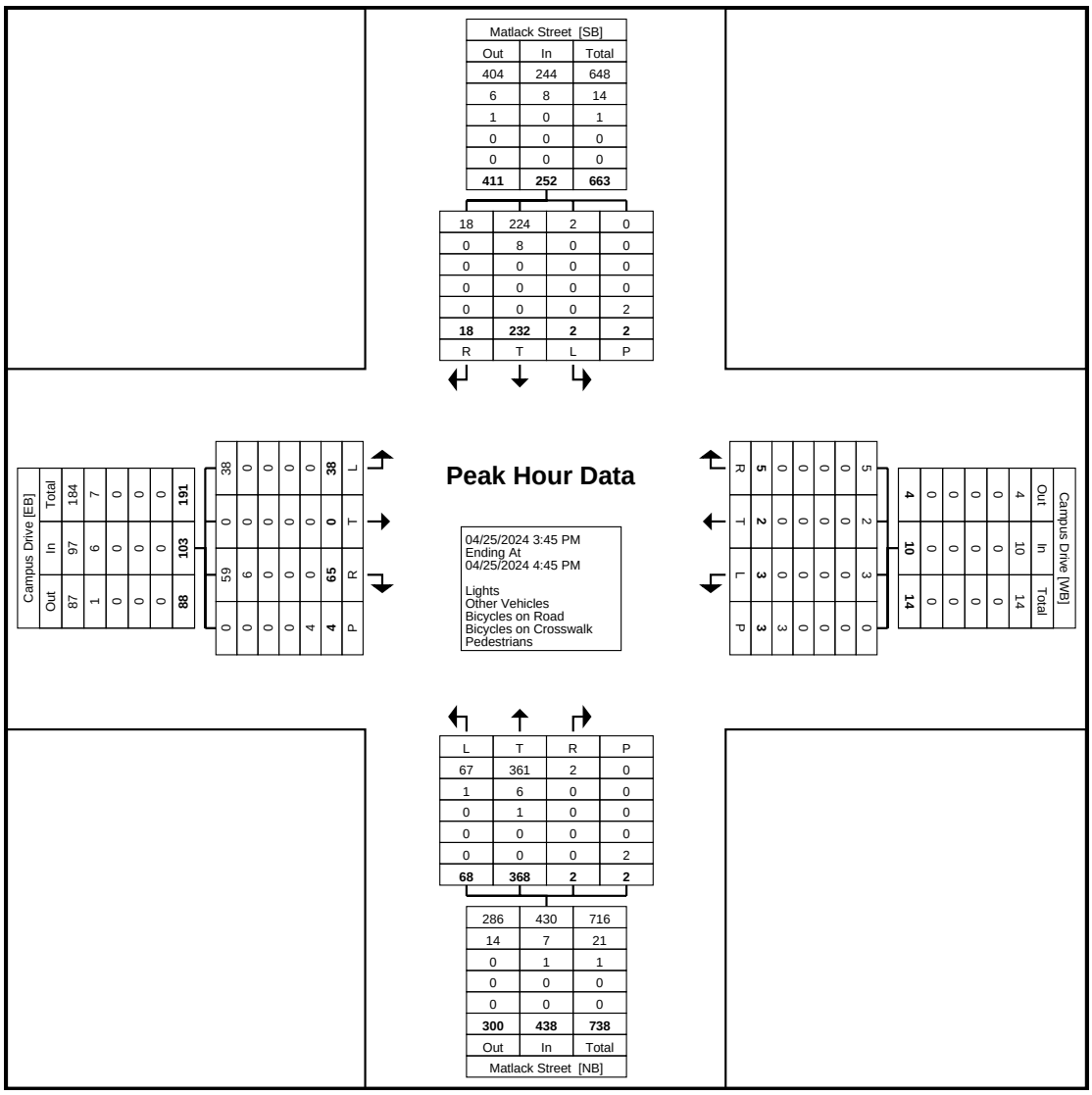
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 23 Matlack Street & Campus Drive (With Bikes)
Site Code:
Start Date: 04/25/2024



Turning Movement Peak Hour Data Plot (3:45 PM)

Counter: MIO:
Set up By JH::

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 24 Matlack Street & M1 Lot Southern Driveway (With Bikes)
Site Code:
Start Date: 04/25/2024
Page No: 1

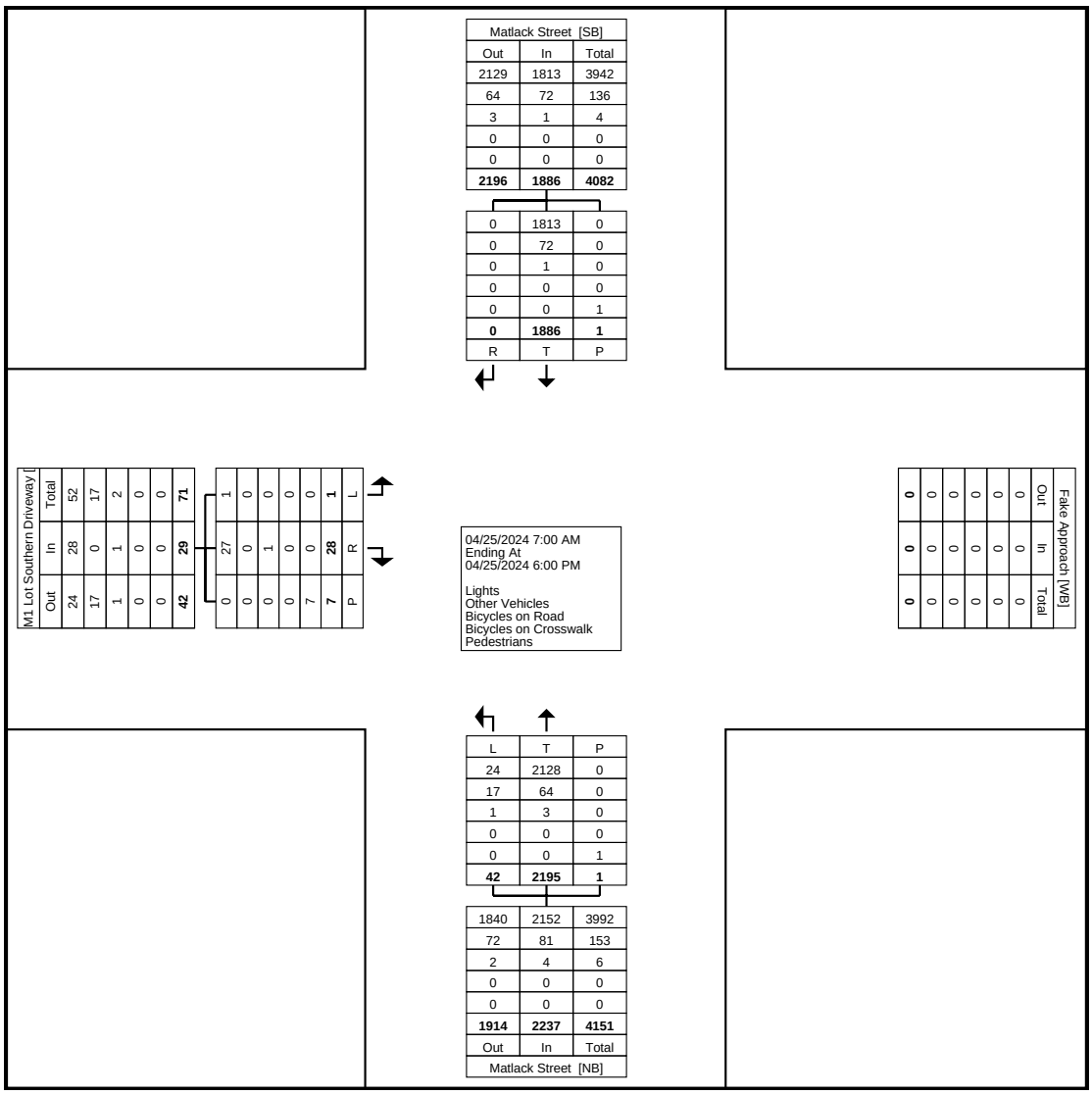
Turning Movement Data

Start Time	M1 Lot Southern Driveway Eastbound				Matlack Street Northbound				Matlack Street Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	1	36	0	37	66	0	0	66	103
7:15 AM	0	0	0	0	1	71	0	72	77	0	0	77	149
7:30 AM	0	0	0	0	2	93	0	95	88	0	0	88	183
7:45 AM	0	0	0	0	2	98	0	100	76	0	0	76	176
Hourly Total	0	0	0	0	6	298	0	304	307	0	0	307	611
8:00 AM	0	0	0	0	1	88	0	89	110	0	0	110	199
8:15 AM	0	1	0	1	4	60	0	64	85	0	0	85	150
8:30 AM	0	2	0	2	3	97	0	100	71	0	0	71	173
8:45 AM	0	1	0	1	1	104	0	105	63	0	0	63	169
Hourly Total	0	4	0	4	9	349	0	358	329	0	0	329	691
9:00 AM	0	1	0	1	7	131	0	138	66	0	0	66	205
9:15 AM	0	0	1	0	5	119	0	124	65	0	0	65	189
9:30 AM	0	0	0	0	3	81	0	84	50	0	0	50	134
9:45 AM	0	0	1	0	2	90	0	92	46	0	0	46	138
Hourly Total	0	1	2	1	17	421	0	438	227	0	0	227	666
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	1	4	0	5	2	71	0	73	95	0	0	95	173
3:15 PM	0	5	1	5	1	82	0	83	94	0	0	94	182
3:30 PM	0	3	0	3	1	71	0	72	77	0	0	77	152
3:45 PM	0	1	1	1	3	109	0	112	66	0	0	66	179
Hourly Total	1	13	2	14	7	333	0	340	332	0	0	332	686
4:00 PM	0	1	0	1	1	120	0	121	87	0	0	87	209
4:15 PM	0	2	0	2	1	97	0	98	105	0	0	105	205
4:30 PM	0	1	2	1	1	111	0	112	83	0	1	83	196
4:45 PM	0	1	1	1	0	95	1	95	72	0	0	72	168
Hourly Total	0	5	3	5	3	423	1	426	347	0	1	347	778
5:00 PM	0	3	0	3	0	109	0	109	73	0	0	73	185
5:15 PM	0	2	0	2	0	83	0	83	96	0	0	96	181
5:30 PM	0	0	0	0	0	94	0	94	93	0	0	93	187
5:45 PM	0	0	0	0	0	85	0	85	82	0	0	82	167
Hourly Total	0	5	0	5	0	371	0	371	344	0	0	344	720
Grand Total	1	28	7	29	42	2195	1	2237	1886	0	1	1886	4152
Approach %	3.4	96.6	-	-	1.9	98.1	-	-	100.0	0.0	-	-	-
Total %	0.0	0.7	-	0.7	1.0	52.9	-	53.9	45.4	0.0	-	45.4	-
Lights	1	27	-	28	24	2128	-	2152	1813	0	-	1813	3993
% Lights	100.0	96.4	-	96.6	57.1	96.9	-	96.2	96.1	-	-	96.1	96.2
Other Vehicles	0	0	-	0	17	64	-	81	72	0	-	72	153
% Other Vehicles	0.0	0.0	-	0.0	40.5	2.9	-	3.6	3.8	-	-	3.8	3.7
Bicycles on Road	0	1	-	1	1	3	-	4	1	0	-	1	6
% Bicycles on Road	0.0	3.6	-	3.4	2.4	0.1	-	0.2	0.1	-	-	0.1	0.1
Bicycles on Crosswalk	-	-	0	-	-	-	0	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	0.0	-	-	-	0.0	-	-	-	0.0	-	-
Pedestrians	-	-	7	-	-	-	1	-	-	-	1	-	-
% Pedestrians	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 24 Matlack Street & M1 Lot Southern Driveway (With Bikes)
Site Code:
Start Date: 04/25/2024



Turning Movement Data Plot

Counter: MIO:
Set up By JH::

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 24 Matlack Street & M1 Lot Southern Driveway (With Bikes)
Site Code:
Start Date: 04/25/2024

Turning Movement Peak Hour Data (8:30 AM)

Start Time	M1 Lot Southern Driveway Eastbound				Matlack Street Northbound				Matlack Street Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
8:30 AM	0	2	0	2	3	97	0	100	71	0	0	71	173
8:45 AM	0	1	0	1	1	104	0	105	63	0	0	63	169
9:00 AM	0	1	0	1	7	131	0	138	66	0	0	66	205
9:15 AM	0	0	1	0	5	119	0	124	65	0	0	65	189
Total	0	4	1	4	16	451	0	467	265	0	0	265	736
Approach %	0.0	100.0	-	-	3.4	96.6	-	-	100.0	0.0	-	-	-
Total %	0.0	0.5	-	0.5	2.2	61.3	-	63.5	36.0	0.0	-	36.0	-
PHF	0.000	0.500	-	0.500	0.571	0.861	-	0.846	0.933	0.000	-	0.933	0.898
Lights	0	4	-	4	13	439	-	452	248	0	-	248	704
% Lights	-	100.0	-	100.0	81.3	97.3	-	96.8	93.6	-	-	93.6	95.7
Other Vehicles	0	0	-	0	2	12	-	14	17	0	-	17	31
% Other Vehicles	-	0.0	-	0.0	12.5	2.7	-	3.0	6.4	-	-	6.4	4.2
Bicycles on Road	0	0	-	0	1	0	-	1	0	0	-	0	1
% Bicycles on Road	-	0.0	-	0.0	6.3	0.0	-	0.2	0.0	-	-	0.0	0.1
Bicycles on Crosswalk	-	-	0	-	-	-	0	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	0.0	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	1	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	100.0	-	-	-	-	-	-	-	-	-	-

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610.326.3100

Counter: MIO:
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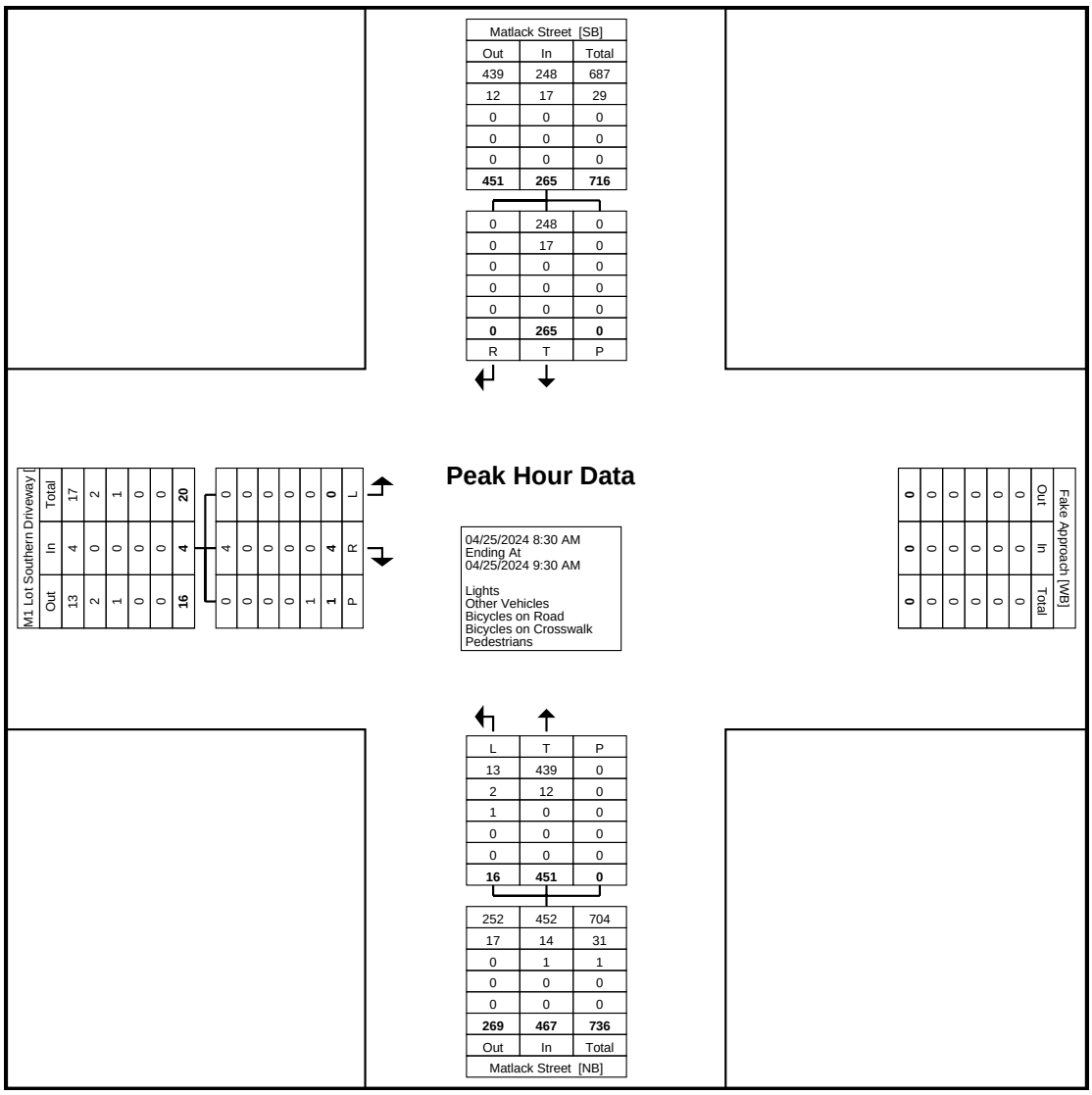
Count Name: 24 Matlack Street & M1 Lot Southern Driveway (With Bikes)
Site Code:
Start Date: 04/25/2024



Turning Movement Peak Hour Data Plot (8:30 AM)

Counter: MIO:
Set up By JH::

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 24 Matlack Street & M1 Lot Southern Driveway (With Bikes)
Site Code:
Start Date: 04/25/2024

Turning Movement Peak Hour Data (3:45 PM)

Start Time	M1 Lot Southern Driveway Eastbound				Matlack Street Northbound				Matlack Street Southbound				
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
3:45 PM	0	1	1	1	3	109	0	112	66	0	0	66	179
4:00 PM	0	1	0	1	1	120	0	121	87	0	0	87	209
4:15 PM	0	2	0	2	1	97	0	98	105	0	0	105	205
4:30 PM	0	1	2	1	1	111	0	112	83	0	1	83	196
Total	0	5	3	5	6	437	0	443	341	0	1	341	789
Approach %	0.0	100.0	-	-	1.4	98.6	-	-	100.0	0.0	-	-	-
Total %	0.0	0.6	-	0.6	0.8	55.4	-	56.1	43.2	0.0	-	43.2	-
PHF	0.000	0.625	-	0.625	0.500	0.910	-	0.915	0.812	0.000	-	0.812	0.944
Lights	0	5	-	5	2	425	-	427	326	0	-	326	758
% Lights	-	100.0	-	100.0	33.3	97.3	-	96.4	95.6	-	-	95.6	96.1
Other Vehicles	0	0	-	0	4	12	-	16	15	0	-	15	31
% Other Vehicles	-	0.0	-	0.0	66.7	2.7	-	3.6	4.4	-	-	4.4	3.9
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	0	-	-	-	0	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	0.0	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	3	-	-	-	0	-	-	-	1	-	-
% Pedestrians	-	-	100.0	-	-	-	-	-	-	-	100.0	-	-

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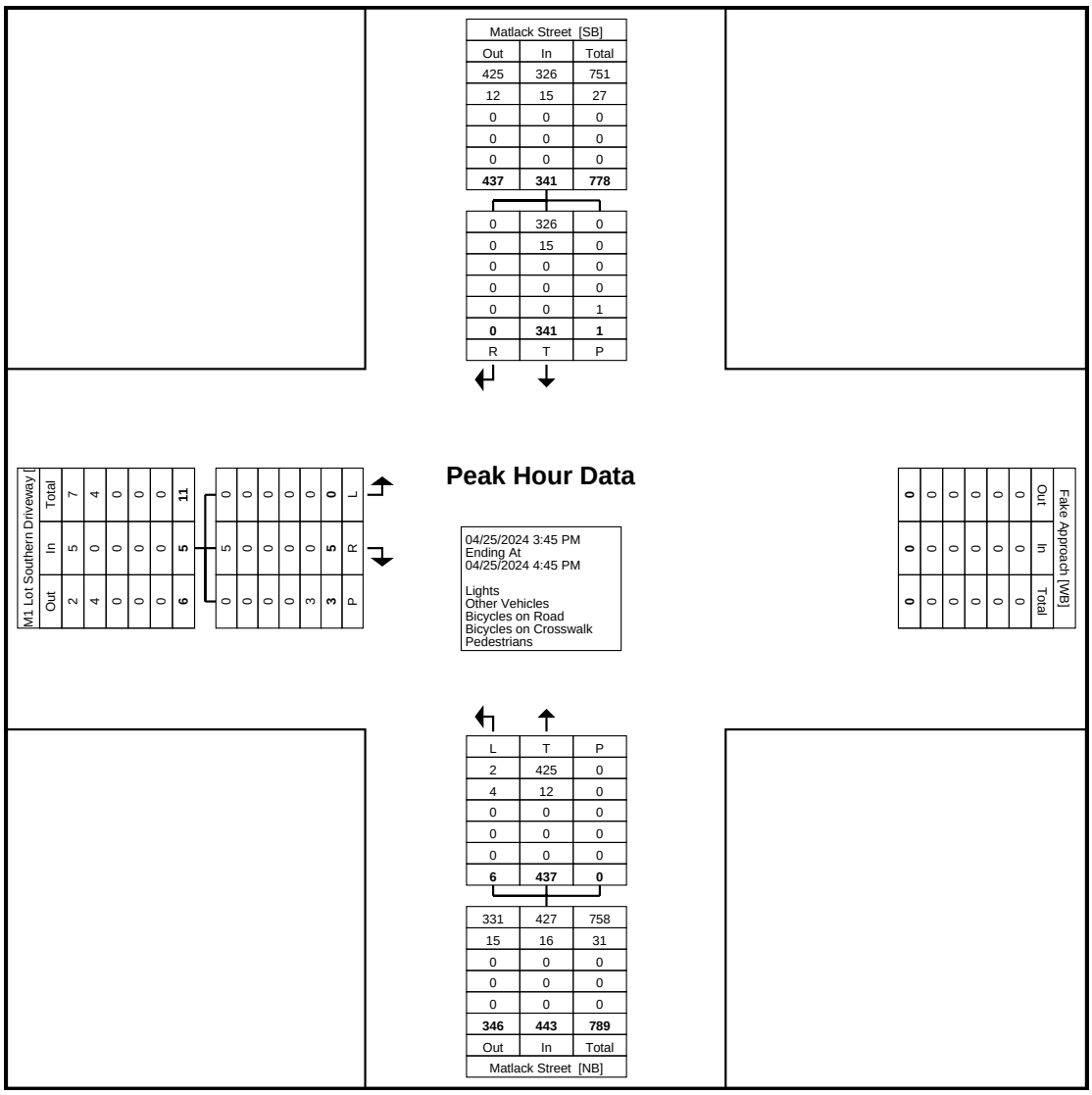
Count Name: 24 Matlack Street & M1 Lot Southern Driveway (With Bikes)
Site Code:
Start Date: 04/25/2024



Turning Movement Peak Hour Data Plot (3:45 PM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 25 High Street & Campus Drive (With Bikes)
Site Code:
Start Date: 04/25/2024
Page No: 1

Turning Movement Data

Start Time	Campus Drive Westbound				High Street Northbound				High Street Southbound				
	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
7:00 AM	2	4	1	6	75	5	0	80	3	129	0	132	218
7:15 AM	1	9	0	10	98	6	0	104	5	114	0	119	233
7:30 AM	2	16	0	18	114	11	0	125	9	148	0	157	300
7:45 AM	5	16	0	21	122	13	0	135	14	122	0	136	292
Hourly Total	10	45	1	55	409	35	0	444	31	513	0	544	1043
8:00 AM	4	12	0	16	123	8	0	131	7	121	0	128	275
8:15 AM	3	13	0	16	127	6	0	133	10	88	0	98	247
8:30 AM	3	6	0	9	124	14	0	138	12	96	0	108	255
8:45 AM	2	7	0	9	122	23	0	145	20	108	0	128	282
Hourly Total	12	38	0	50	496	51	0	547	49	413	0	462	1059
9:00 AM	5	7	1	12	133	27	0	160	37	97	0	134	306
9:15 AM	7	12	0	19	125	17	0	142	33	101	0	134	295
9:30 AM	4	6	1	10	92	6	0	98	19	91	0	110	218
9:45 AM	3	9	0	12	112	6	0	118	12	87	0	99	229
Hourly Total	19	34	2	53	462	56	0	518	101	376	0	477	1048
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	18	22	0	40	109	7	0	116	11	136	0	147	303
3:15 PM	22	31	1	53	125	8	0	133	6	195	0	201	387
3:30 PM	28	15	0	43	135	5	0	140	11	193	0	204	387
3:45 PM	11	21	1	32	143	9	0	152	9	134	0	143	327
Hourly Total	79	89	2	168	512	29	0	541	37	658	0	695	1404
4:00 PM	9	16	2	25	161	10	0	171	9	135	0	144	340
4:15 PM	13	27	0	40	140	20	1	160	14	142	0	156	356
4:30 PM	15	13	1	28	114	6	0	120	6	187	0	193	341
4:45 PM	7	16	1	23	141	15	0	156	14	167	0	181	360
Hourly Total	44	72	4	116	556	51	1	607	43	631	0	674	1397
5:00 PM	9	17	1	26	156	5	0	161	10	132	0	142	329
5:15 PM	17	12	0	29	136	5	0	141	13	122	0	135	305
5:30 PM	15	17	0	32	136	12	0	148	14	153	0	167	347
5:45 PM	6	17	0	23	121	8	2	129	10	150	0	160	312
Hourly Total	47	63	1	110	549	30	2	579	47	557	0	604	1293
Grand Total	211	341	10	552	2984	252	3	3236	308	3148	0	3456	7244
Approach %	38.2	61.8	-	-	92.2	7.8	-	-	8.9	91.1	-	-	-
Total %	2.9	4.7	-	7.6	41.2	3.5	-	44.7	4.3	43.5	-	47.7	-
Lights	210	318	-	528	2913	247	-	3160	305	3067	-	3372	7060
% Lights	99.5	93.3	-	95.7	97.6	98.0	-	97.7	99.0	97.4	-	97.6	97.5
Other Vehicles	0	22	-	22	67	3	-	70	3	77	-	80	172
% Other Vehicles	0.0	6.5	-	4.0	2.2	1.2	-	2.2	1.0	2.4	-	2.3	2.4
Bicycles on Road	1	1	-	2	4	2	-	6	0	4	-	4	12
% Bicycles on Road	0.5	0.3	-	0.4	0.1	0.8	-	0.2	0.0	0.1	-	0.1	0.2
Bicycles on Crosswalk	-	-	0	-	-	-	0	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	0.0	-	-	-	0.0	-	-	-	-	-	-
Pedestrians	-	-	10	-	-	-	3	-	-	-	0	-	-
% Pedestrians	-	-	100.0	-	-	-	100.0	-	-	-	-	-	-

Traffic Planning and Design, Inc
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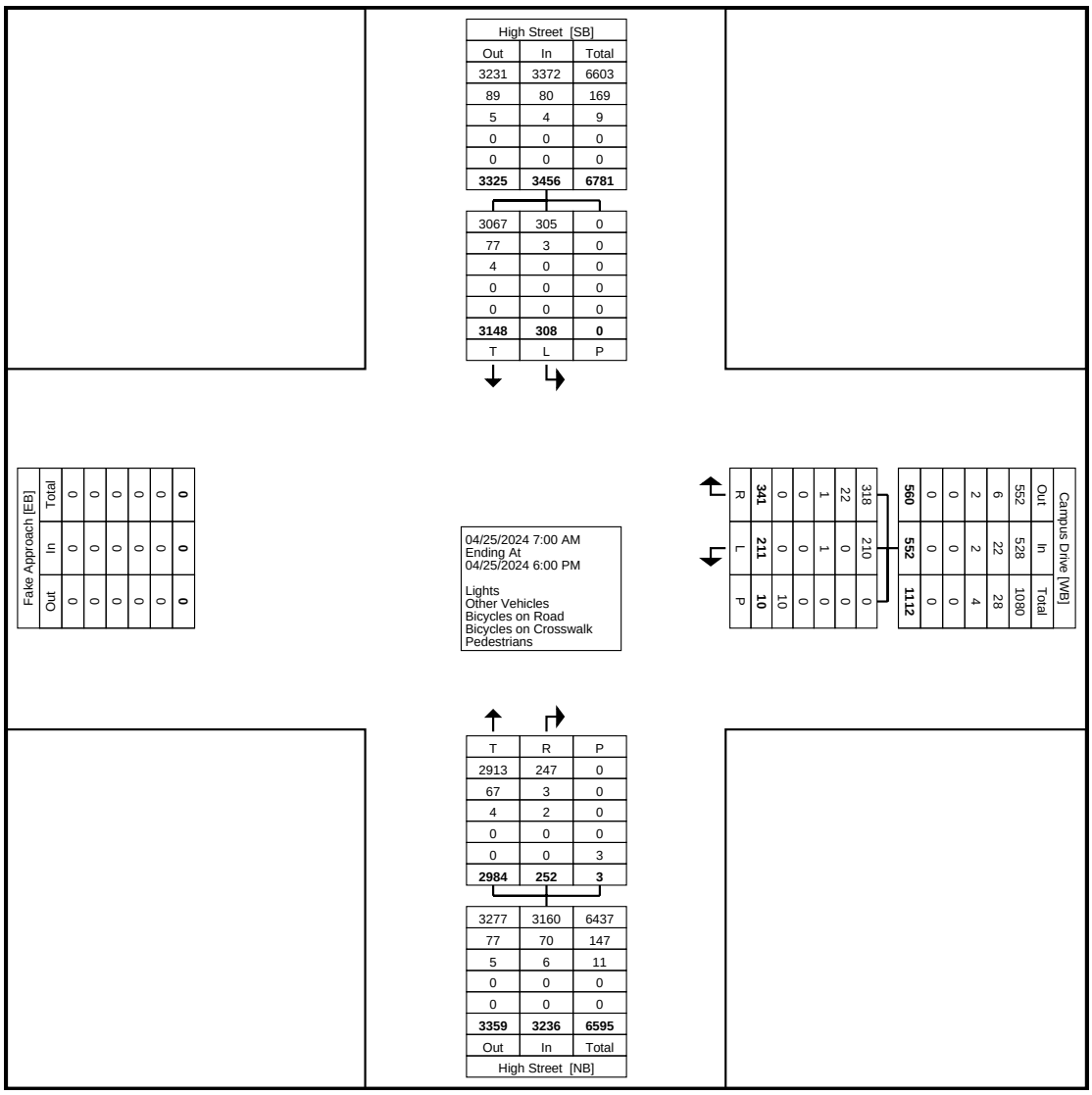
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 25 High Street & Campus Drive (With Bikes)
Site Code:
Start Date: 04/25/2024



Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 25 High Street & Campus Drive (With Bikes)
Site Code:
Start Date: 04/25/2024

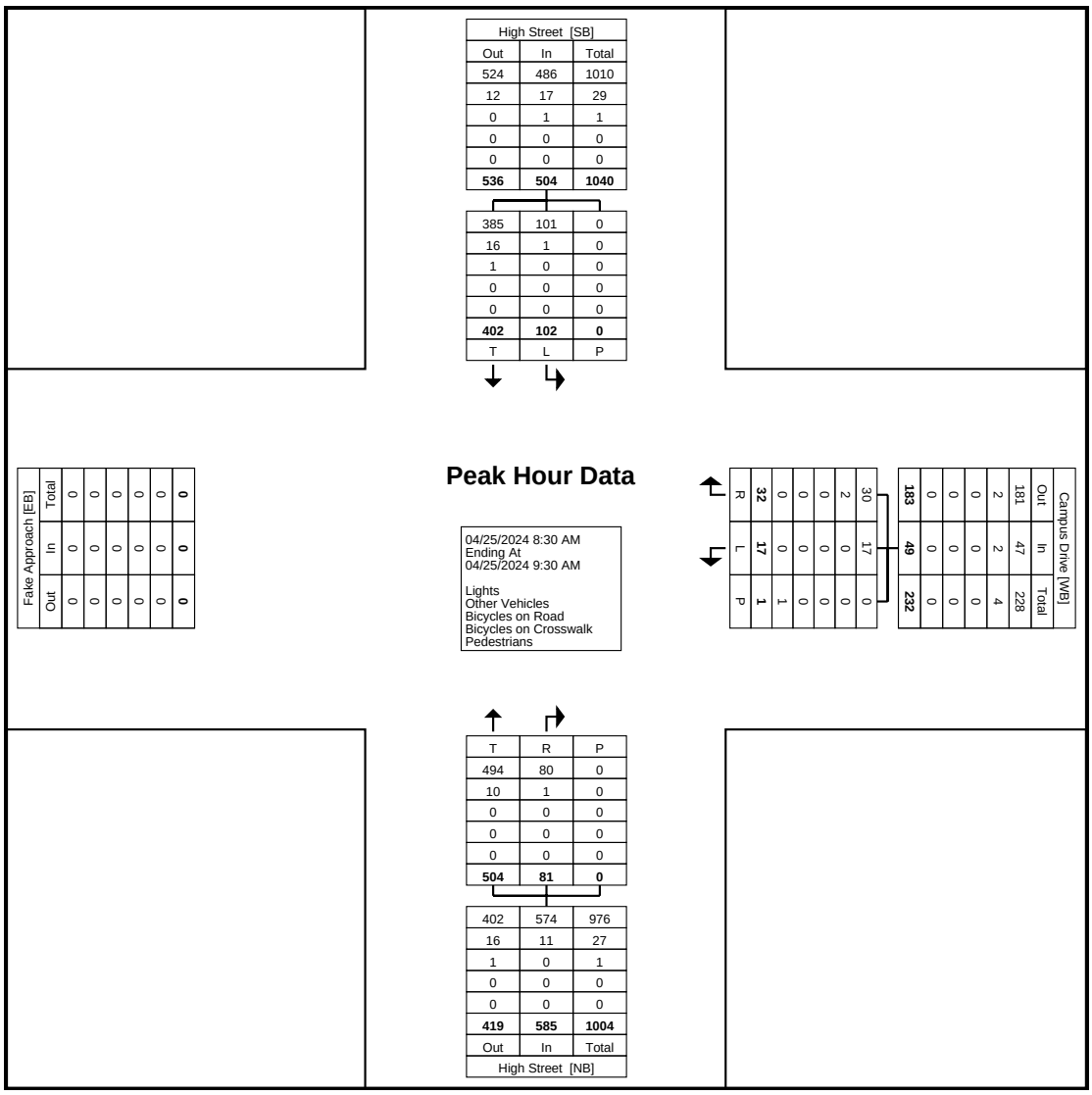
Turning Movement Peak Hour Data (8:30 AM)

Start Time	Campus Drive Westbound				High Street Northbound				High Street Southbound				
	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
8:30 AM	3	6	0	9	124	14	0	138	12	96	0	108	255
8:45 AM	2	7	0	9	122	23	0	145	20	108	0	128	282
9:00 AM	5	7	1	12	133	27	0	160	37	97	0	134	306
9:15 AM	7	12	0	19	125	17	0	142	33	101	0	134	295
Total	17	32	1	49	504	81	0	585	102	402	0	504	1138
Approach %	34.7	65.3	-	-	86.2	13.8	-	-	20.2	79.8	-	-	-
Total %	1.5	2.8	-	4.3	44.3	7.1	-	51.4	9.0	35.3	-	44.3	-
PHF	0.607	0.667	-	0.645	0.947	0.750	-	0.914	0.689	0.931	-	0.940	0.930
Lights	17	30	-	47	494	80	-	574	101	385	-	486	1107
% Lights	100.0	93.8	-	95.9	98.0	98.8	-	98.1	99.0	95.8	-	96.4	97.3
Other Vehicles	0	2	-	2	10	1	-	11	1	16	-	17	30
% Other Vehicles	0.0	6.3	-	4.1	2.0	1.2	-	1.9	1.0	4.0	-	3.4	2.6
Bicycles on Road	0	0	-	0	0	0	-	0	0	1	-	1	1
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.2	-	0.2	0.1
Bicycles on Crosswalk	-	-	0	-	-	-	0	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	0.0	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	1	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	100.0	-	-	-	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 25 High Street & Campus Drive (With Bikes)
Site Code:
Start Date: 04/25/2024



Turning Movement Peak Hour Data Plot (8:30 AM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 25 High Street & Campus Drive (With Bikes)
Site Code:
Start Date: 04/25/2024

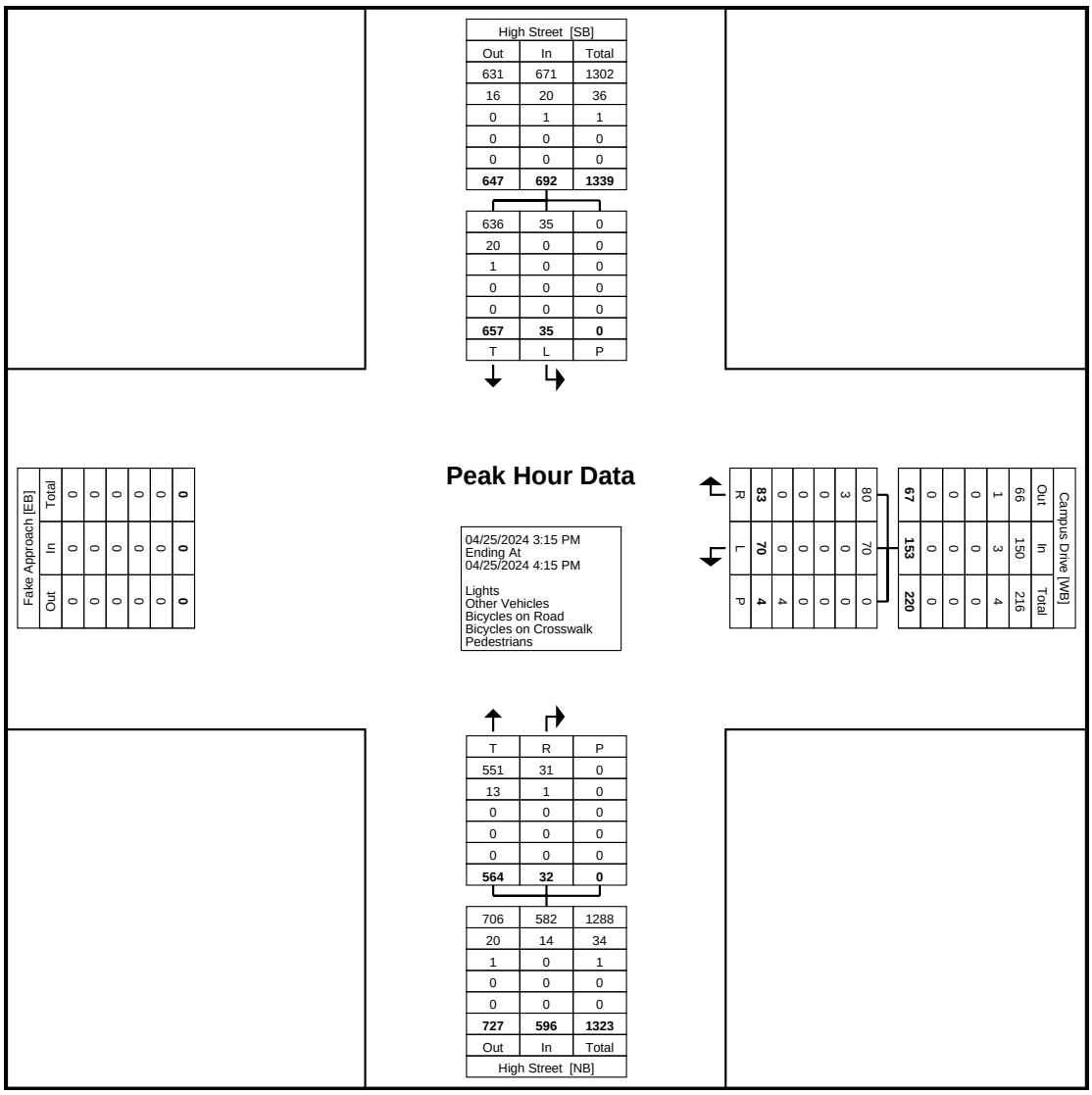
Turning Movement Peak Hour Data (3:15 PM)

Start Time	Campus Drive Westbound				High Street Northbound				High Street Southbound				
	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
3:15 PM	22	31	1	53	125	8	0	133	6	195	0	201	387
3:30 PM	28	15	0	43	135	5	0	140	11	193	0	204	387
3:45 PM	11	21	1	32	143	9	0	152	9	134	0	143	327
4:00 PM	9	16	2	25	161	10	0	171	9	135	0	144	340
Total	70	83	4	153	564	32	0	596	35	657	0	692	1441
Approach %	45.8	54.2	-	-	94.6	5.4	-	-	5.1	94.9	-	-	-
Total %	4.9	5.8	-	10.6	39.1	2.2	-	41.4	2.4	45.6	-	48.0	-
PHF	0.625	0.669	-	0.722	0.876	0.800	-	0.871	0.795	0.842	-	0.848	0.931
Lights	70	80	-	150	551	31	-	582	35	636	-	671	1403
% Lights	100.0	96.4	-	98.0	97.7	96.9	-	97.7	100.0	96.8	-	97.0	97.4
Other Vehicles	0	3	-	3	13	1	-	14	0	20	-	20	37
% Other Vehicles	0.0	3.6	-	2.0	2.3	3.1	-	2.3	0.0	3.0	-	2.9	2.6
Bicycles on Road	0	0	-	0	0	0	-	0	0	1	-	1	1
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.2	-	0.1	0.1
Bicycles on Crosswalk	-	-	0	-	-	-	0	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	0.0	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	4	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	100.0	-	-	-	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Counter: MIO:
Set up By JH::

Count Name: 25 High Street & Campus Drive (With Bikes)
Site Code:
Start Date: 04/25/2024



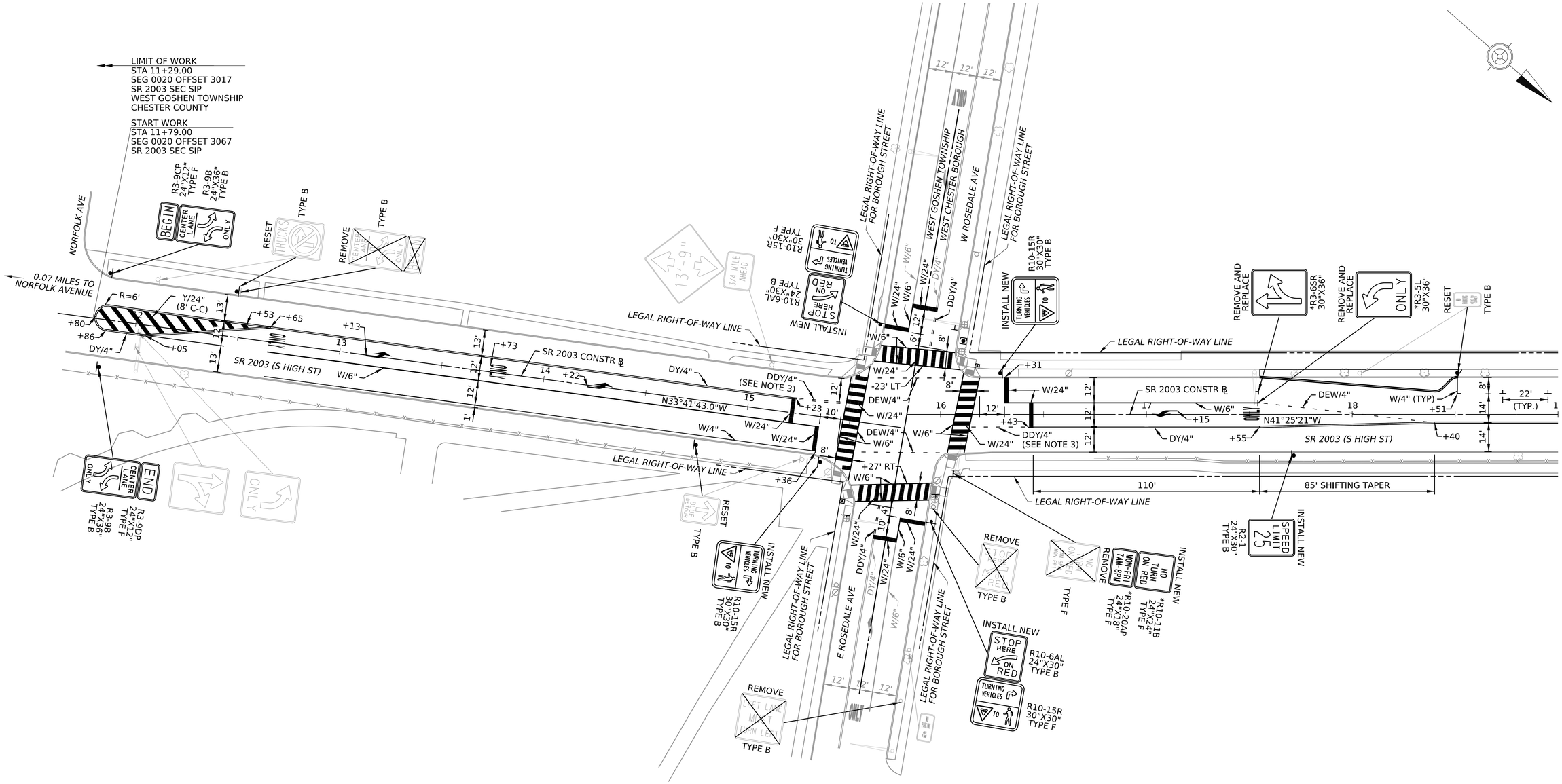
Turning Movement Peak Hour Data Plot (3:15 PM)

APPENDIX C:
Planned Improvement Plans

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	CHESTER	2003	SIP	9 OF 14

WEST CHESTER BOROUGH AND WEST GOSHEN TOWNSHIP

REV NO	REVISIONS	DATE	BY	APPD



NOTES:
1. ALL EXISTING SIGNS TO REMAIN UNLESS OTHERWISE INDICATED ON THE PLANS.
2. SIGNS MARKED WITH AN * ARE QUANTIFIED ON TRAFFIC SIGNAL PLANS.
3. TAPER DOTTED DOUBLE YELLOW EXTENSION MARKINGS TO ALIGN WITH EDGE OF APPROACHING LANE.
4. CONTRACTOR TO PERFORM SELECTIVE TREE TRIMMING TO ENSURE VISIBILITY OF TRAFFIC SIGNAL EQUIPMENT AND SIGNS. SEE CONSTRUCTION PLAN.

SCALE
0 25 50 FEET

SIGNING AND PAVEMENT MARKING PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN J. POAD
ENGINEER
PE080985

SEE SHEET 10

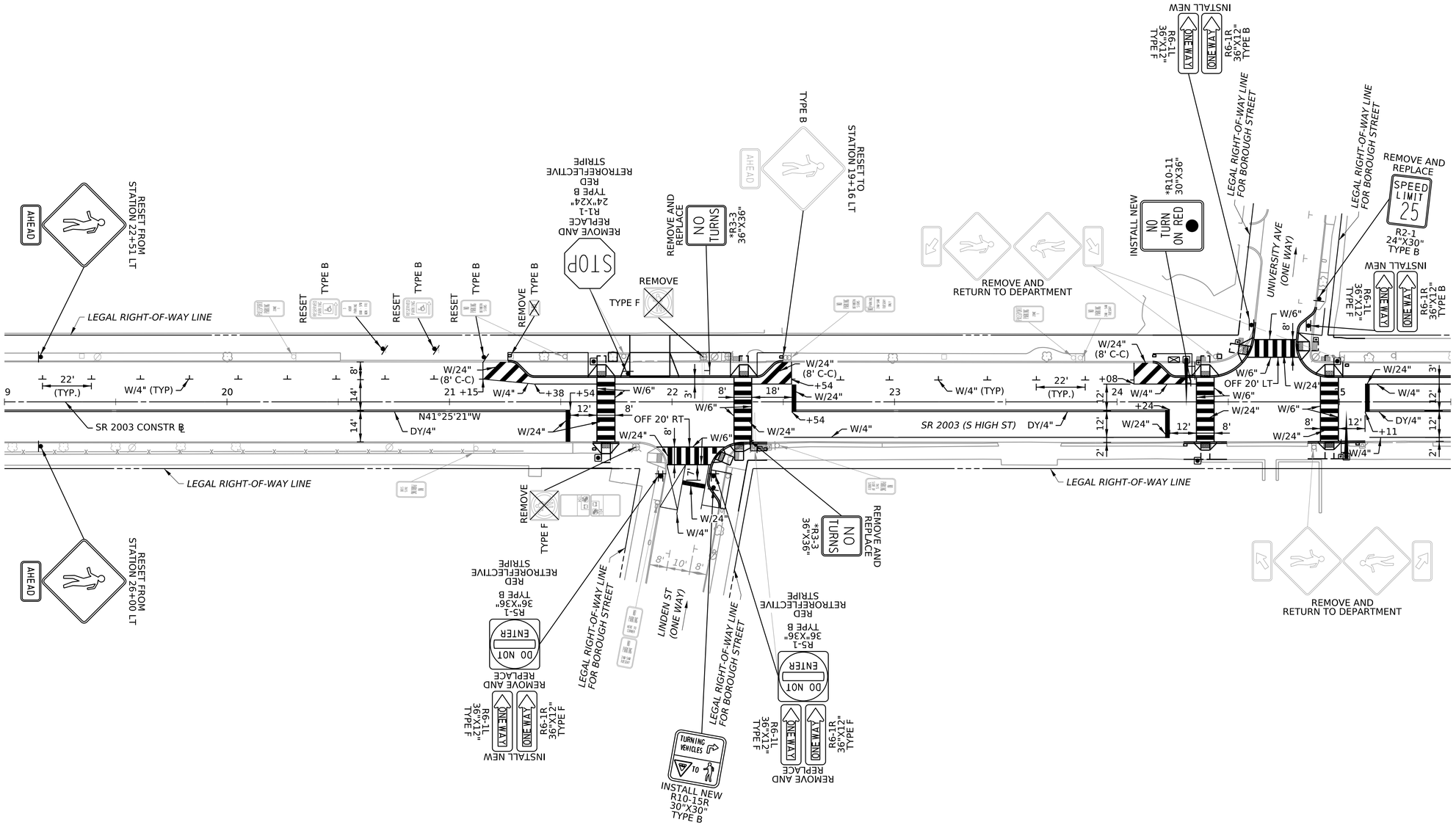
$$$$DATE$$$$
FILENAME: $$$DESIGNFILE$$

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	CHESTER	2003	SIP	10 OF 14
WEST CHESTER BOROUGH				

REV NO	REVISIONS	DATE	BY	APPD

SEE SHEET 9

SEE SHEET 11



NOTES:
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2. SIGNS MARKED WITH AN * ARE QUANTIFIED ON TRAFFIC SIGNAL PLANS.
3. TAPER DOTTED DOUBLE YELLOW EXTENSION MARKINGS TO ALIGN WITH EDGE OF APPROACHING LANE.
4. CONTRACTOR TO PERFORM SELECTIVE TREE TRIMMING TO ENSURE VISIBILITY OF TRAFFIC SIGNAL EQUIPMENT AND SIGNS. SEE CONSTRUCTION PLAN.

SCALE
0 25 50 FEET

SIGNING AND PAVEMENT MARKING PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN J. POAD
ENGINEER
PE080985

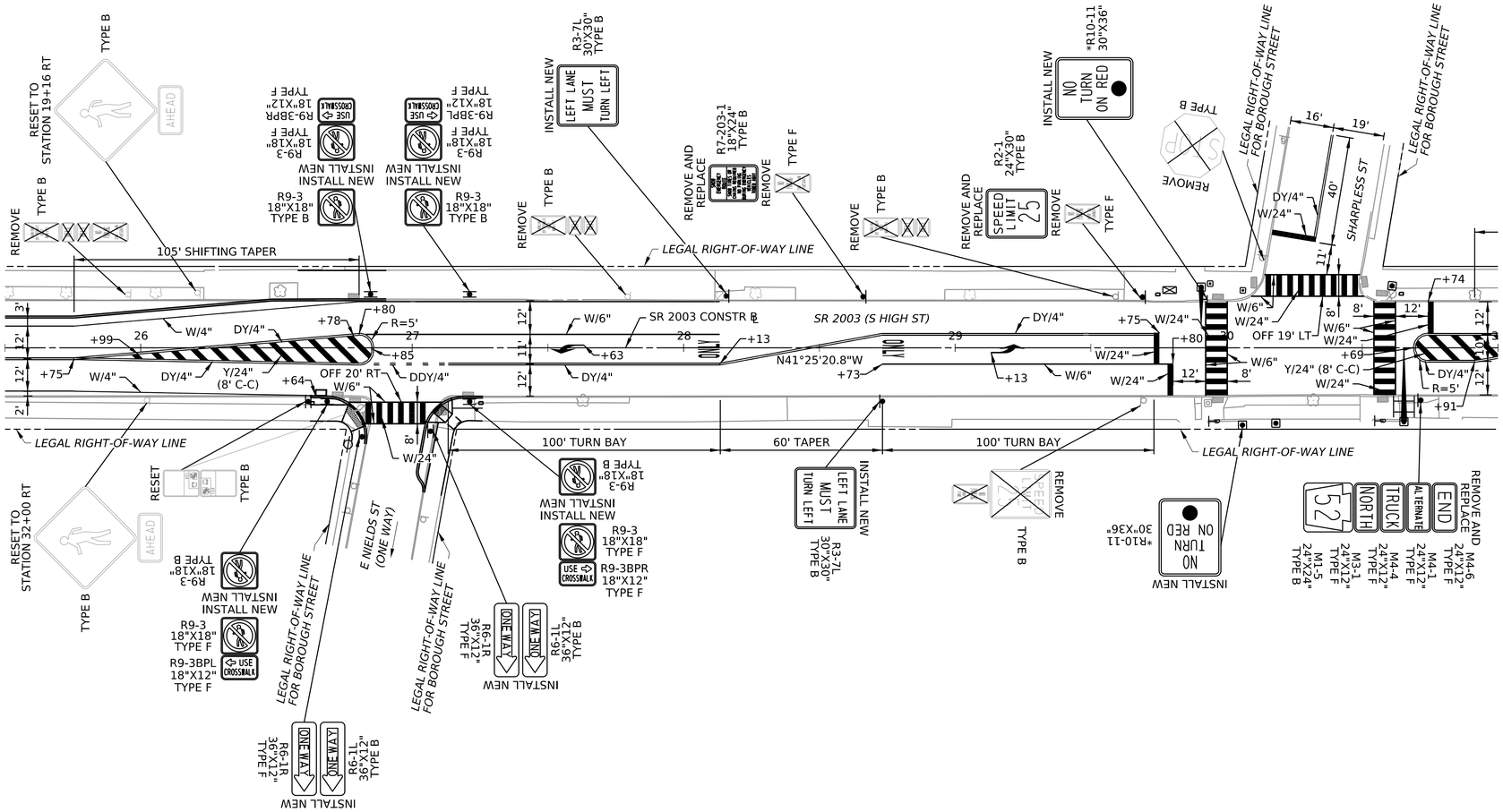
$$$$DATE$$$
FILENAME: $$DESIGNFILE$$

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	CHESTER	2003	SIP	11 OF 14
WEST CHESTER BOROUGH				

REV NO	REVISIONS	DATE	BY	APPD

SEE SHEET 10

SEE SHEET 12



NOTES:
1. ALL EXISTING SIGNS TO REMAIN UNLESS OTHERWISE INDICATED ON THE PLANS.
2. SIGNS MARKED WITH AN * ARE QUANTIFIED ON TRAFFIC SIGNAL PLANS.
3. TAPER DOTTED DOUBLE YELLOW EXTENSION MARKINGS TO ALIGN WITH EDGE OF APPROACHING LANE.
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SCALE
0 25 50 FEET

SIGNING AND PAVEMENT MARKING PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
KEVIN J. POAD
PE080985

$$$$DATE$$$
FILENAME: $$DESIGNFILE$$

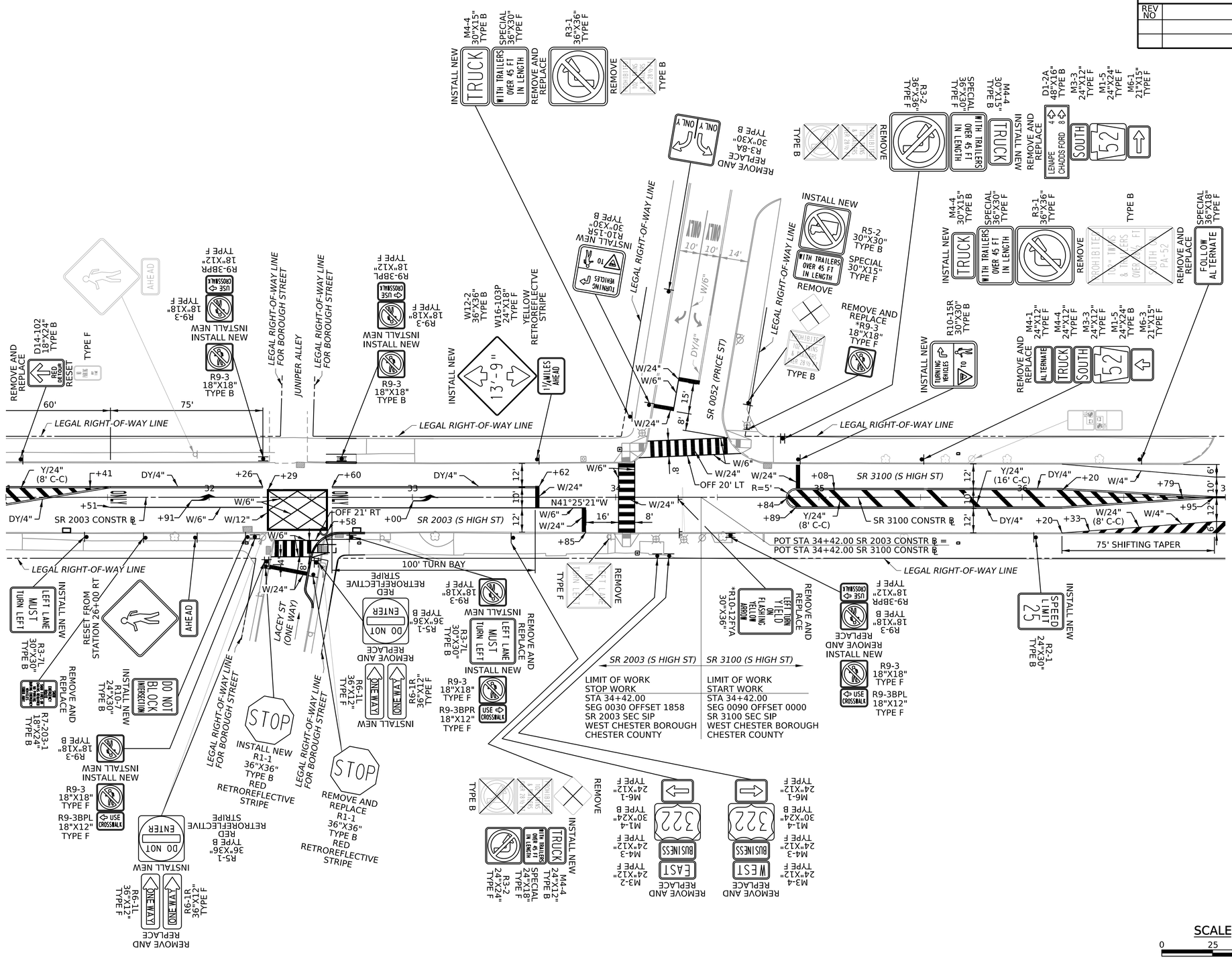
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	CHESTER	2003/3100	SIP	12 OF 14

WEST CHESTER BOROUGH

REV NO	REVISIONS	DATE	BY	APPD

SEE SHEET 11

SEE SHEET 13



NOTES:
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2. SIGNS MARKED WITH AN * ARE QUANTIFIED ON TRAFFIC SIGNAL PLANS.
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SIGNING AND PAVEMENT MARKING PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KEVIN J. POAD
ENGINEER
PE080985

$$$$DATE$$$
FILENAME: $$DESIGNFILE$$$

SIGN TABULATION*

PLAN SYMBOL	SERIES NUMBER	SIZE	REMARKS
A	R10-3E(R)	9"x15"	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (RIGHT)
B	R10-3E(L)	9"x15"	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (LEFT)
C	D3-4	96"x16"	UNIVERSITY AVE
F	R6-1L	36"x12"	HORIZONTAL LEFT ONE-WAY
H	R6-1R	36"x12"	HORIZONTAL RIGHT ONE-WAY
J	R10-11	24"x30"	NO TURN ON RED ●

* SEE SIGNING AND PAVEMENT MARKING PLAN FOR ADDITIONAL SIGNS NOT LABELLED ON THE SIGNAL PLANS.

MOVEMENT, SEQUENCE AND TIMING DIAGRAM

PHASE	2+6				4*				FLASH
INTERVAL / SIGNAL	1	2	3	4	5	6	7		
1,2	G	G	Y	R	R	R	R		Y
3,4	G	G	Y	R	R	R	R		Y
5,6	M	FH	H	H	M	FH	H		OFF
7,8*	H	H	H	H	M	FH	H		OFF
9,10*	H	H	H	H	M	FH	H		OFF

FIXED			3	2			2	
MINIMUM	13							
PASSAGE								
MAXIMUM	39							
PEDESTRIAN	7ⓓ	6			7	9		
MEMORY	MX				NL			

REFER TO SYSTEM PERMIT #I-0056, I-0057, I-0058 FOR PROGRAM TIMINGS AND WEEKLY PROGRAM CHART

OPERATION NOTES

ⓓ SIGNAL TO REMAIN MAN SYMBOL UNTIL ACTUATED BY PHASE 4.

* UPON PEDESTRIAN ACTUATION ONLY, OTHERWISE HAND SYMBOL AT ALL TIMES.

- PEDESTRIAN COUNTDOWN TIMER TO COUNT DOWN DURING FLASHING HAND INTERVAL.
- CONTROLLER TO DWELL IN PHASE 2+6 UNTIL ACTUATED BY PHASE 4.

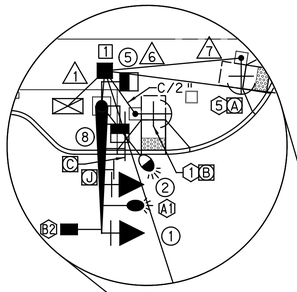
LEGEND

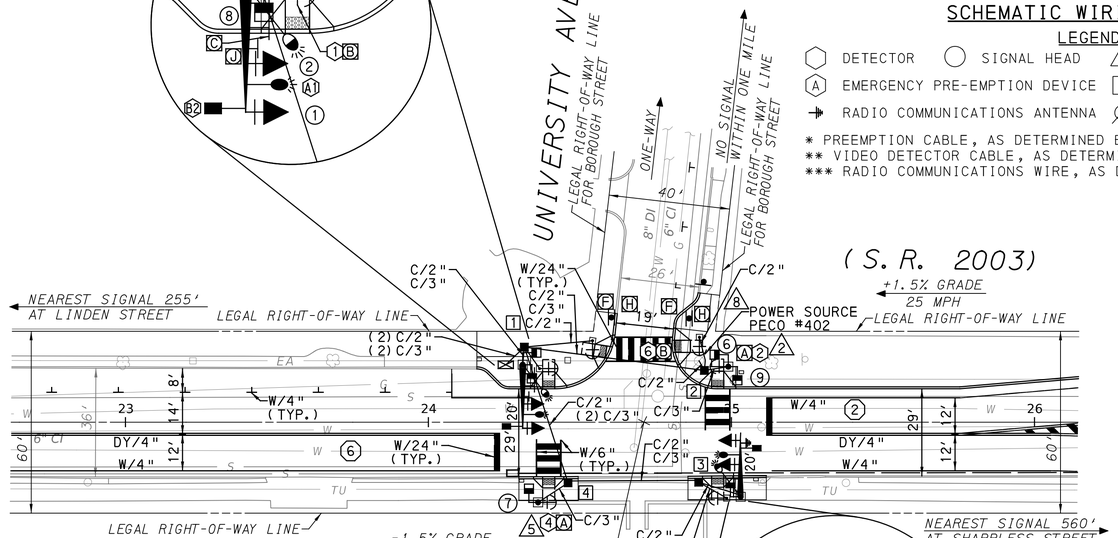
EXISTING	PROPOSED	DESCRIPTION
	②	PHASE NUMBER
		MAST ARM
		PEDESTAL/STUB POLE
		LUMINAIRE WITH ARM
		VEHICULAR SIGNAL HEAD WITH BACKPLATE AND TUNNEL VISORS
		PEDESTRIAN SIGNAL HEAD
		POST MOUNTED SIGN
		STRUCTURE MOUNTED SIGN
		PEDESTRIAN PUSH BUTTON/SIGN
		CONTROLLER ASSEMBLY
		JUNCTION BOX
		EMERGENCY PRE-EMPTION DETECTOR
		EMERGENCY PRE-EMPTION BEACON
		VIDEO DETECTOR
		VIDEO DETECTION ZONE
		COMMUNICATIONS ANTENNA
	—C/3"—	CONDUIT/SIZE
W/4"	W/4"	SOLID WHITE LINE/WIDTH
DY/4"	DY/4"	DOUBLE SOLID YELLOW LINE/WIDTH
DDY/4"	DDY/4"	DOTTED DOUBLE YELLOW LINE/WIDTH

CONSTRUCTION NOTES

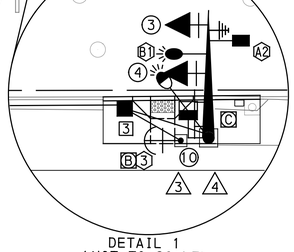
1. INSTALL PROPOSED SIGNAL EQUIPMENT AS DETAILED ON THE PLAN.

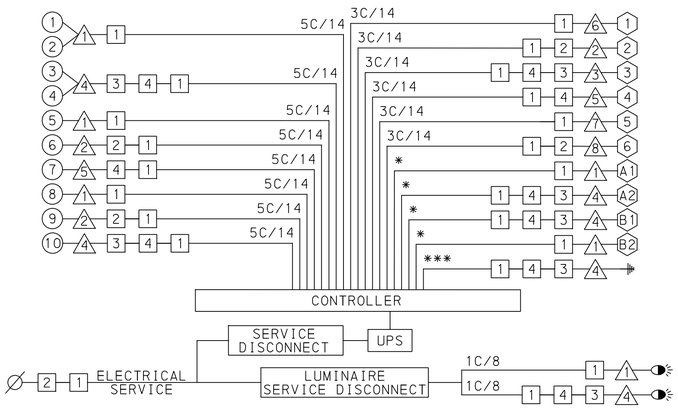
DETAIL 2
(NOT TO SCALE)





DETAIL 1
(NOT TO SCALE)





SCHEMATIC WIRING DIAGRAM

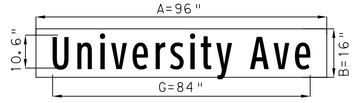
LEGEND

DETECTOR ○ SIGNAL HEAD △ SIGNAL SUPPORT LUMINAIRE
Ⓐ EMERGENCY PRE-EMPTION DEVICE □ JUNCTION BOX VIDEO DETECTOR
RADIO COMMUNICATIONS ANTENNA ⌀ UTILITY POLE

* PREEMPTION CABLE, AS DETERMINED BY MANUFACTURER
** VIDEO DETECTOR CABLE, AS DETERMINED BY MANUFACTURER
*** RADIO COMMUNICATIONS WIRE, AS DETERMINED BY MANUFACTURER

SIGN DETAILS

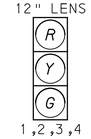
NOT TO SCALE



SIGN C

SERIES: D3-4
FONT: CLEARVIEW 1-W
10.6" UPPER CASE
8" LOWER CASE
LEGEND: WHITE (REFLECTORIZED)
BACKGROUND: GREEN (REFLECTORIZED)

SIGNAL INDICATIONS



SIGNALS EQUIPPED WITH TUNNEL VISORS _____

SCALE
0 25 50 FEET

PREPARED BY:
KMJ CONSULTING, INC.
120 E LANCASTER AVE, SUITE 105
ARDMORE, PA 19003

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MARTIN S. WILLIAMS
ENGINEER
PE085649

Martin S. Williams
Digitally signed by Martin S. Williams
DN: cn=Martin S. Williams, o=KMJ Consulting, Inc., ou=Martin S. Williams
Date: 2024.01.24 13:24:30-05'00'

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	CHESTER	2003	SIP	7 OF 21
WEST CHESTER BOROUGH				

REVISION NUMBER	REVISIONS	DATE	BY

GENERAL NOTES

DO NOT MODIFY INSTALLATION WITHOUT PRIOR WRITTEN APPROVAL BY THE DEPARTMENT.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ARE PART OF THE PERMIT. INSTALL AND MAINTAIN IN ACCORDANCE WITH PUBLICATION 212 AND PUBLICATION 236.

INSTALL POST MOUNTED SIGNALS WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF THE CURB OR EDGE OF THE SHOULDER. PROVIDE A MINIMUM HORIZONTAL CLEARANCE OF 2 FEET FOR ALL SUPPORT POLES FOR OVERHEAD SIGNALS.

ERECT THE BOTTOM OF SIGNAL HEADS AND SIGNS OVER THE ROADWAY NOT LESS THAN 16 FEET NOR MORE THAN 19 FEET ABOVE THE ROADWAY. ERECT THE BOTTOM OF POST MOUNTED SIGNAL HEADS NOT LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK OR PAVEMENT GRADE.

MAINTAIN A MINIMUM HORIZONTAL DISTANCE OF 8 FEET BETWEEN SIGNAL HEADS, MEASURED AT RIGHT ANGLES TO THE APPROACH.

DETERMINE THE EXACT LOCATION OF DETECTORS WITH A PENNDOT REPRESENTATIVE PRIOR TO INSTALLATION.

THE CONTRACTOR IS TO COMPLETE THE NECESSARY APPLICATION(S) IN ORDER TO OBTAIN ELECTRICAL SERVICE FROM THE LOCAL POWER COMPANY.

CONSULT WITH LOCAL OFFICIALS AND UTILITIES TO RESOLVE CONFLICTS PRIOR TO CONSTRUCTION.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE CONTRACTOR COMPLIES WITH THE PROVISIONS OF ACT 50, AS AMENDED, UNDERGROUND UTILITY PROTECTION ACT, DATED APRIL 28, 2018. PRIOR TO CONSTRUCTION, CONSULT WITH UTILITY COMPANIES TO RESOLVE ANY CONFLICTS.

THE PA ONE CALL NOTIFICATIONS PERFORMED DURING PROJECT DEVELOPMENT ARE AS FOLLOWS:

PRELIMINARY DESIGN SERIAL NUMBER. 20213541081
ISSUED ON 12/20/2022 FOR WEST CHESTER BOROUGH

FINAL DESIGN SERIAL NUMBER. _____
ISSUED ON FOR _____

KMJ CONSULTING, INC. HAS NOT MADE AN INDEPENDENT DETERMINATION WITH RESPECT TO THE ACCURACY OR COMPLETENESS OF SUCH INFORMATION AND SPECIFICALLY DISCLAIMS ANY WARRANTY OR REPRESENTATION AS TO THE ACCURACY OF SUCH INFORMATION. ALL LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND MUST BE FIELD VERIFIED PRIOR TO CONSTRUCTION.

CALL BEFORE YOU DIG !

PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
AND 10 WORKING DAYS IN DESIGN STAGE.

BEFORE YOU DIG, CALL
THE PA ONE CALL SYSTEM TELEPHONE NUMBER.

1-800-242-1776

PERMIT NO: 62-4055 FILE: 4055 SYSTEM PERMIT # I-0056

COUNTY: CHESTER
MUNICIPALITY: WEST CHESTER BOROUGH
INTERSECTION: SOUTH HIGH STREET (S.R. 2003)
AND UNIVERSITY AVENUE

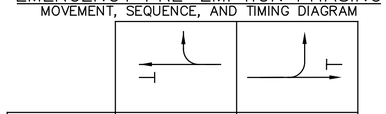
REVIEWED: _____ 1/25/2024
MUNICIPAL OFFICIAL DATE

RECOMMENDED: Margo Wolfgang Digitally signed by Margo Wolfgang Date: 2024.01.26 08:33:08 -05'00'
Kevin P. Lewis, P.E. Digitally signed by Kevin P. Lewis, P.E. Date: 2024.01.26 11:30:00 -05'00'
ADE - TRANSPORTATION OPERATIONS DATE

$$$$DATE$$$
FILENAME: $$DESIGNFILE$$

EMERGENCY PRE-EMPTION PHASING

MOVEMENT, SEQUENCE, AND TIMING DIAGRAM



PHASE		2				6		
INTERVAL / SIGNAL	SELECTIVE CLEARANCES	8	9	10	SELECTIVE CLEARANCES	11	12	13
1,2		G	Y①	R①		R	R	R
3,4		R	R	R		G	Y①	R①
5,6		H	H	H		H	H	H
7,8		H	H	H		H	H	H
9,10		H	H	H		H	H	H
FIXED		*	3	2		*	3	2

* FOR DURATION OF PRE-EMPTION

① G IF RETURNING TO NORMAL OPERATIONS

NOTE: IF PRE-EMPTION EQUIPMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO "00" FEATURE ON, TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PRE-EMPTION.

EMERGENCY PRE-EMPTION NOTES:

- CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION FOR THE NORTHBOUND AND SOUTHBOUND APPROACHES OF HIGH STREET (SR 2003) WITH A FAIL SAFE DEVICE FOR EACH DIRECTION OF OPERATION. THIS EMERGENCY BEACON SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND SHALL FLASH WHEN THE EMERGENCY VEHICLE HAS CONTROL OF THE INTERSECTION FOR THE APPROPRIATE APPROACH.

- THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLES, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS ACCORDINGLY. THEN THE GREEN INTERVAL FOR THE PRE-EMPTION PHASE SHALL FOLLOW. ONLY THOSE PHASES NOT POSING A YELLOW TRAP CONDITION MAY REMAIN GREEN (6) WHEN GOVERNED BY APPROACHING EMERGENCY VEHICLE.

- THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE SHALL TIME OUT ALL YELLOW AND RED INDICATIONS, FOLLOWED BY THE GREEN INTERVAL OF THE PRE-EMPTION PHASE GOVERNED BY THE APPROACHING EMERGENCY VEHICLE.

- IF THE SIGNAL HAS BEEN ACTUATED BY A PEDESTRIAN PUSHBUTTON AND THE SIGNAL IS PRE-EMPTED, THE PED "WALK" (MAN) INTERVAL SHALL TERMINATE IMMEDIATELY AND THE PED "CLEAR" (FLASHING HAND AND COUNTDOWN TIMER) INTERVAL SHALL TIME OUT, FOLLOWED BY THE APPROPRIATE SELECTIVE CLEARANCES BEFORE GOING INTO EMERGENCY PREEMPTION.

- IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, ARE FLASHING ALL SIGNALS SHALL REMAIN FLASHING.

- IF ADDITIONAL PRE-EMPTION PHASES ARE ACTIVATED WHILE IN PRE-EMPTION, THE ORIGINAL PRE-EMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PRE-EMPTION PHASE.

- UPON COMPLETION OF PRE-EMPTION PHASE 2 OR 6 IN RETURNING TO NORMAL OPERATION, PHASE 2+6 INTERVAL 1 SHALL FOLLOW.

- IN EMERGENCY PRE-EMPTION, NO PRIORITY SHALL BE ESTABLISHED, PRE-EMPTION SHALL BE A "FIRST COME, FIRST SERVE" OPERATION.

- LOCATION OF EMERGENCY VEHICLE DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

SIGNAL SHALL BE EQUIPPED WITH ACCESSIBLE PEDESTRIAN SIGNAL (APS) WITH THE FOLLOWING FEATURES:

1. ADA COMPLIANT PUSHBUTTON WITH LATCHING LED INDICATOR AND TONE.

2. A TACTILE DIRECTIONAL ARROW ALIGNED PARALLEL TO THE CROSSING AND WHICH VIBRATES DURING THE WALK INDICATION.

3. A PUSHBUTTON LOCATOR TONE. THE LOCATOR TONE SHALL HAVE A DURATION OF 0.15 SECONDS AND REPEAT AT 1 SECOND INTERVALS, SHALL BE INTENSITY RESPONSIVE TO AMBIENT SOUND, AND AUDIBLE FROM 6 TO 12 FEET FROM THE PUSHBUTTON.

4. ACTUATION OF THE PEDESTRIAN PUSHBUTTON SHALL BE ACCOMPANIED BY THE SPEECH MESSAGE "WAIT" WHEN THE WALK INTERVAL IS NOT TIMING.

5. AN AUDIBLE WALK INDICATION AS FOLLOWS:

   - THE WALK INDICATION SHALL BE AN AN AUDIBLE PERCUSSIVE TONE. THE AUDIBLE TONE SHALL CONSIST OF 8 TO 10 RAPID TICKS PER SECOND.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	CHESTER	2003	SIP	8 OF 21

WEST CHESTER BOROUGH

REVISION NUMBER	REVISIONS	DATE	BY

GENERAL NOTES

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ERECT THE BOTTOM OF SIGNAL HEADS AND SIGNS OVER THE ROADWAY NOT LESS THAN 16 FEET NOR MORE THAN 19 FEET ABOVE THE ROADWAY. ERECT THE BOTTOM OF POST MOUNTED SIGNAL HEADS NOT LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK OR PAVEMENT GRADE.

MAINTAIN A MINIMUM HORIZONTAL DISTANCE OF 8 FEET BETWEEN SIGNAL HEADS, MEASURED AT RIGHT ANGLES TO THE APPROACH.

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PRELIMINARY DESIGN SERIAL NUMBER. 20213541081
ISSUED ON 12/20/2022 FOR WEST CHESTER BOROUGH

FINAL DESIGN SERIAL NUMBER. _____
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CALL BEFORE YOU DIG !

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3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE
AND 10 WORKING DAYS IN DESIGN STAGE.

BEFORE YOU DIG, CALL
THE PA ONE CALL SYSTEM TELEPHONE NUMBER.

1-800-242-1776

PERMIT NO: 62-4055 FILE: 4055 SYSTEM PERMIT # I-0056

COUNTY: CHESTER

MUNICIPALITY: WEST CHESTER BOROUGH

INTERSECTION: SOUTH HIGH STREET (S.R. 2003) AND UNIVERSITY AVENUE

REVIEWED:

MUNICIPAL OFFICIAL — DATE 1/25/2024

RECOMMENDED: Margo Wolfgang — Digitally signed by Margo Wolfgang Date: 2024.01.26 08:33:42 -05'00'

Kevin P. Lewis, P.E. — Digitally signed by Kevin P. Lewis, P.E. Date: 2024.01.26 11:30:00 -05'00'

ADE - TRANSPORTATION OPERATIONS — DATE

PREPARED BY:
KMJ CONSULTING, INC.
120 E LANCASTER AVE, SUITE 105
ARDMORE, PA 19003

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — MARTIN S. WILLIAMS — ENGINEER PE085649

Martin S. Williams — Digitally signed by Martin S. Williams DN: cn=Martin S. Williams, o=KMJ Consulting, Inc., ou=Martin S. Williams Date: 2024.01.24 13:25:04-05'00'

$$$$DATE$$
FILENAME= $$DESIGNFILE$$

SIGN TABULATION*

PLAN SYMBOL	SERIES NUMBER	SIZE	REMARKS
A	R10-3E(R)	9"x15"	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (RIGHT)
B	R10-3E(L)	9"x15"	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (LEFT)
C	D3-4	84"x16"	SHARPLESS ST
D	R10-11	24"x30"	NO TURN ON RED ●
F	R3-7L	30"x30"	LEFT LANE MUST TURN LEFT

* SEE SIGNING AND PAVEMENT MARKING PLAN FOR ADDITIONAL SIGNS NOT LABELLED ON THE SIGNAL PLANS.

MOVEMENT, SEQUENCE AND TIMING DIAGRAM

PHASE	2+6				4					FLASH
INTERVAL / SIGNAL	1	2	3	4	5	6	7	8	9	
1,2	G	G	Y	R	R	R	R	R	R	Y
3,4	G	G	Y	R	R	R	R	R	R	Y
5,6	R	R	R	R	G①	G	G	Y	R	R
7,8	M	FH	H	H	H	H	H	H	H	OFF
9,10	H	H	H	H	M	M	FH	H	H	OFF
11,12	H	H	H	H	M	M	FH	H	H	OFF

FIXED			3	3				3	3
MINIMUM	18					3			
PASSAGE						3			
MAXIMUM	34					15			
PEDESTRIAN	7ⓠ	11			3*	4*	10*		
MEMORY	MX					NL			

REFER TO SYSTEM PERMIT #I-0056, I-0057, I-0058 FOR PROGRAM TIMINGS AND WEEKLY PROGRAM CHART

OPERATION NOTES

① R IF PEDESTRIAN ACTUATED.

ⓠ SIGNAL TO REMAIN MAN SYMBOL UNTIL ACTUATED BY PHASE 4.

* UPON PEDESTRIAN ACTUATION ONLY, OTHERWISE HAND SYMBOL AT ALL TIMES.

- PEDESTRIAN COUNTDOWN TIMER TO COUNT DOWN DURING FLASHING HAND INTERVAL.
- CONTROLLER TO DWELL IN PHASE 2+6 UNTIL ACTUATED BY PHASE 4.

LEGEND

EXISTING	PROPOSED	DESCRIPTION
	(2)	PHASE NUMBER
4	4	MAST ARM
4	4	PEDESTAL/STUB POLE
		LUMINAIRE WITH ARM
4	4	VEHICULAR SIGNAL HEAD WITH BACKPLATE AND TUNNEL VISORS
4	4	PEDESTRIAN SIGNAL HEAD
A	A	POST MOUNTED SIGN
A	A	STRUCTURE MOUNTED SIGN
A 4	A 4	PEDESTRIAN PUSH BUTTON/SIGN
		CONTROLLER ASSEMBLY
1	1	JUNCTION BOX
A	A	EMERGENCY PRE-EMPTION DETECTOR
		EMERGENCY PRE-EMPTION BEACON
		VIDEO DETECTOR
4	4	VIDEO DETECTION ZONE
		COMMUNICATIONS ANTENNA
	C/3"	CONDUIT/SIZE
W/4"	W/4"	SOLID WHITE LINE/WIDTH
DY/4"	DY/4"	DOUBLE SOLID YELLOW LINE/WIDTH
DDY/4"	DDY/4"	DOTTED DOUBLE YELLOW LINE/WIDTH

$$$DATE$$$
FILENAME= $$DESIGNFILE$$

CONSTRUCTION NOTES

1. INSTALL PROPOSED SIGNAL EQUIPMENT AS DETAILED ON THE PLAN.

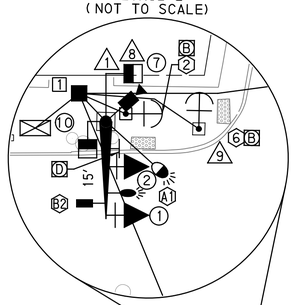
SIGN DETAILS

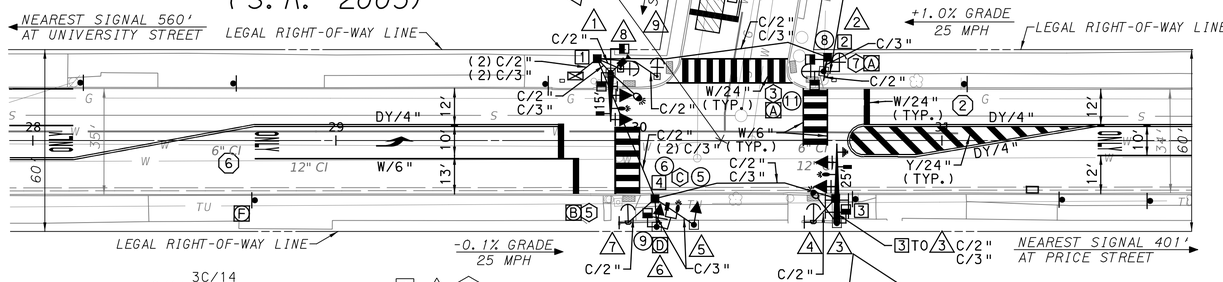
NOT TO SCALE

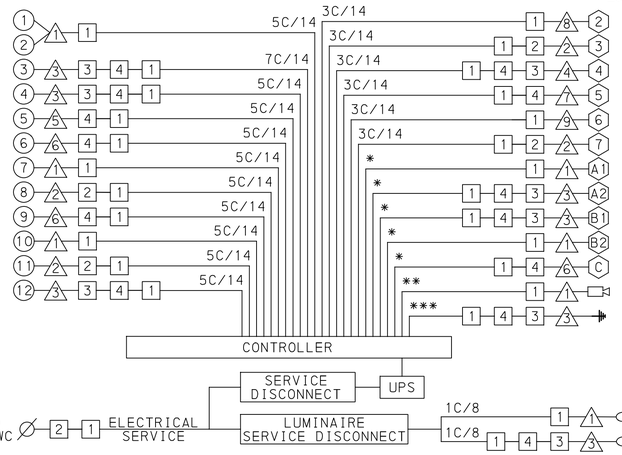
SIGN C

SERIES: D3-4
FONT: CLEARVIEW 1-W
10.6" UPPER CASE
8" LOWER CASE
LEGEND: WHITE (REFLECTORIZED)
BACKGROUND: GREEN (REFLECTORIZED)

DETAIL 2
(NOT TO SCALE)





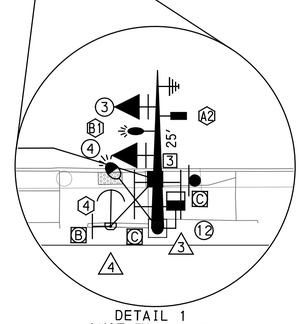


SCHEMATIC WIRING DIAGRAM

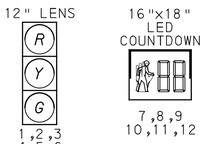
LEGEND

DETECTOR · SIGNAL HEAD · SIGNAL SUPPORT · LUMINAIRE
EMERGENCY PRE-EMPTION DEVICE · JUNCTION BOX · VIDEO DETECTOR
RADIO COMMUNICATIONS ANTENNA · UTILITY POLE

* PREEMPTION CABLE, AS DETERMINED BY MANUFACTURER
** VIDEO DETECTOR CABLE, AS DETERMINED BY MANUFACTURER
*** RADIO COMMUNICATIONS WIRE, AS DETERMINED BY MANUFACTURER



SIGNAL INDICATIONS



SIGNALS EQUIPPED WITH TUNNEL VISORS _____

SCALE

0 25 50 FEET

PREPARED BY:
KMJ CONSULTING, INC.
120 E LANCASTER AVE, SUITE 105
ARDMORE, PA 19003

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MARTIN S. WILLIAMS
ENGINEER
PE085649

Martin S. Williams
Digitally signed by Martin S. Williams
DN: C=US, E=mswilliams@kmjhc.com, O="KMJ Consulting, Inc.", CN=Martin S. Williams
Date: 2024.01.24 13:05:13-05'00'

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	CHESTER	2003	SIP	10 OF 21
WEST CHESTER BOROUGH				

REVISION NUMBER	REVISIONS	DATE	BY

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THE PA ONE CALL SYSTEM TELEPHONE NUMBER.

1-800-242-1776

PERMIT NO: 62-4054 FILE: 4054 SYSTEM PERMIT # I-0056

COUNTY: CHESTER

MUNICIPALITY: WEST CHESTER BOROUGH

INTERSECTION: SOUTH HIGH STREET (S.R. 2003)
AND SHARPLESS STREET

REVIEWED:

MUNICIPAL OFFICIAL 1/25/2024 DATE

RECOMMENDED: Margo Wolfgang Digitally signed by Margo Wolfgang Date: 2024.01.26 08:34:51 -05'00'

Kevin P. Lewis, P.E. Digitally signed by Kevin P. Lewis, P.E. Date: 2024.01.26 11:30:00 -05'00'

ADE - TRANSPORTATION OPERATIONS DATE

EMERGENCY PRE-EMPTION PHASING

MOVEMENT, SEQUENCE, AND TIMING DIAGRAM

PHASE	2				6				4		
INTERVAL / SIGNAL	SELECTIVE CLEARANCES	10	11	12	SELECTIVE CLEARANCES	13	14	15	SELECTIVE CLEARANCES	16	17	18
1,2		G	Y①	R①		R	R	R		R	R	R
3,4		R	R	R		G	Y①	R①		R	R	R
5,6		R	R	R		R	R	R		G	Y	R
7,8		H	H	H		H	H	H		H	H	H
9,10		H	H	H		H	H	H		H	H	H
11,12		H	H	H		H	H	H		H	H	H
FIXED		*	3	3		*	3	3		*	3	3

* FOR DURATION OF PRE-EMPTION

① G IF RETURNING TO NORMAL OPERATIONS

NOTE: IF PRE-EMPTION EQUIPMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO "00" FEATURE ON, TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PRE-EMPTION.

EMERGENCY PRE-EMPTION NOTES:

- CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION FOR THE NORTHBOUND AND SOUTHBOUND APPROACHES OF HIGH STREET (SR 2003) AND THE EASTBOUND APPROACH OF SHARPLESS STREET WITH A FAIL SAFE DEVICE FOR EACH DIRECTION OF OPERATION. THIS EMERGENCY BEACON SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND SHALL FLASH WHEN THE EMERGENCY VEHICLE HAS CONTROL OF THE INTERSECTION FOR THE APPROPRIATE APPROACH.
- THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS ACCORDINGLY. THEN THE GREEN INTERVAL FOR THE PRE-EMPTION PHASE SHALL FOLLOW. ONLY THOSE PHASES NOT POSING A YELLOW TRAP CONDITION MAY REMAIN GREEN (4, 6) WHEN GOVERNED BY APPROACHING EMERGENCY VEHICLE
- THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE SHALL TIME OUT ALL YELLOW AND RED INDICATIONS, FOLLOWED BY THE GREEN INTERVAL OF THE PRE-EMPTION PHASE GOVERNED BY THE APPROACHING EMERGENCY VEHICLE.
- IF THE SIGNAL HAS BEEN ACTUATED BY A PEDESTRIAN PUSHBUTTON AND THE SIGNAL IS PRE-EMPTED, THE PED "WALK" (MAN) INTERVAL SHALL TERMINATE IMMEDIATELY AND THE PED "CLEAR" (FLASHING HAND AND COUNTDOWN TIMER) INTERVAL SHALL TIME OUT, FOLLOWED BY THE APPROPRIATE SELECTIVE CLEARANCES BEFORE GOING INTO EMERGENCY PREEMPTION.
- IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, ARE FLASHING ALL SIGNALS SHALL REMAIN FLASHING.
- IF ADDITIONAL PRE-EMPTION PHASES ARE ACTIVATED WHILE IN PRE-EMPTION, THE ORIGINAL PRE-EMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PRE-EMPTION PHASE.
- UPON COMPLETION OF PRE-EMPTION PHASE 2,4 OR 6 IN RETURNING TO NORMAL OPERATION, PHASE 2+6 INTERVAL 1 SHALL FOLLOW.
- IN EMERGENCY PRE-EMPTION, NO PRIORITY SHALL BE ESTABLISHED, PRE-EMPTION SHALL BE A "FIRST COME, FIRST SERVE" OPERATION.
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4. ACTUATION OF THE PEDESTRIAN PUSHBUTTON SHALL BE ACCOMPANIED BY THE SPEECH MESSAGE "WAIT" WHEN THE WALK INTERVAL IS NOT TIMING.
5. AN AUDIBLE WALK INDICATION AS FOLLOWS:

   - THE WALK INDICATION SHALL BE THE SPEECH WALK MESSAGE:
   "HIGH STREET. WALK SIGN IS ON TO CROSS HIGH STREET."
   "SHARPLESS STREET. WALK SIGN IS ON TO CROSS SHARPLESS STREET."

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	CHESTER	2003	SIP	11 OF 21
WEST CHESTER BOROUGH				

REVISION NUMBER	REVISIONS	DATE	BY

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1-800-242-1776

PERMIT NO: 62-4054 FILE: 4054 SYSTEM PERMIT # I-0056

COUNTY: CHESTER

MUNICIPALITY: WEST CHESTER BOROUGH

INTERSECTION: SOUTH HIGH STREET (S.R. 2003) AND SHARPLESS STREET

REVIEWED:

1/25/2024
MUNICIPAL OFFICIAL DATE

RECOMMENDED: Margo Wolfgang Digitally signed by Margo Wolfgang Date: 2024.01.26 08:35:31 -05'00'

Kevin P. Lewis, P.E. Digitally signed by Kevin P. Lewis, P.E. Date: 2024.01.26 11:30:00 -05'00'

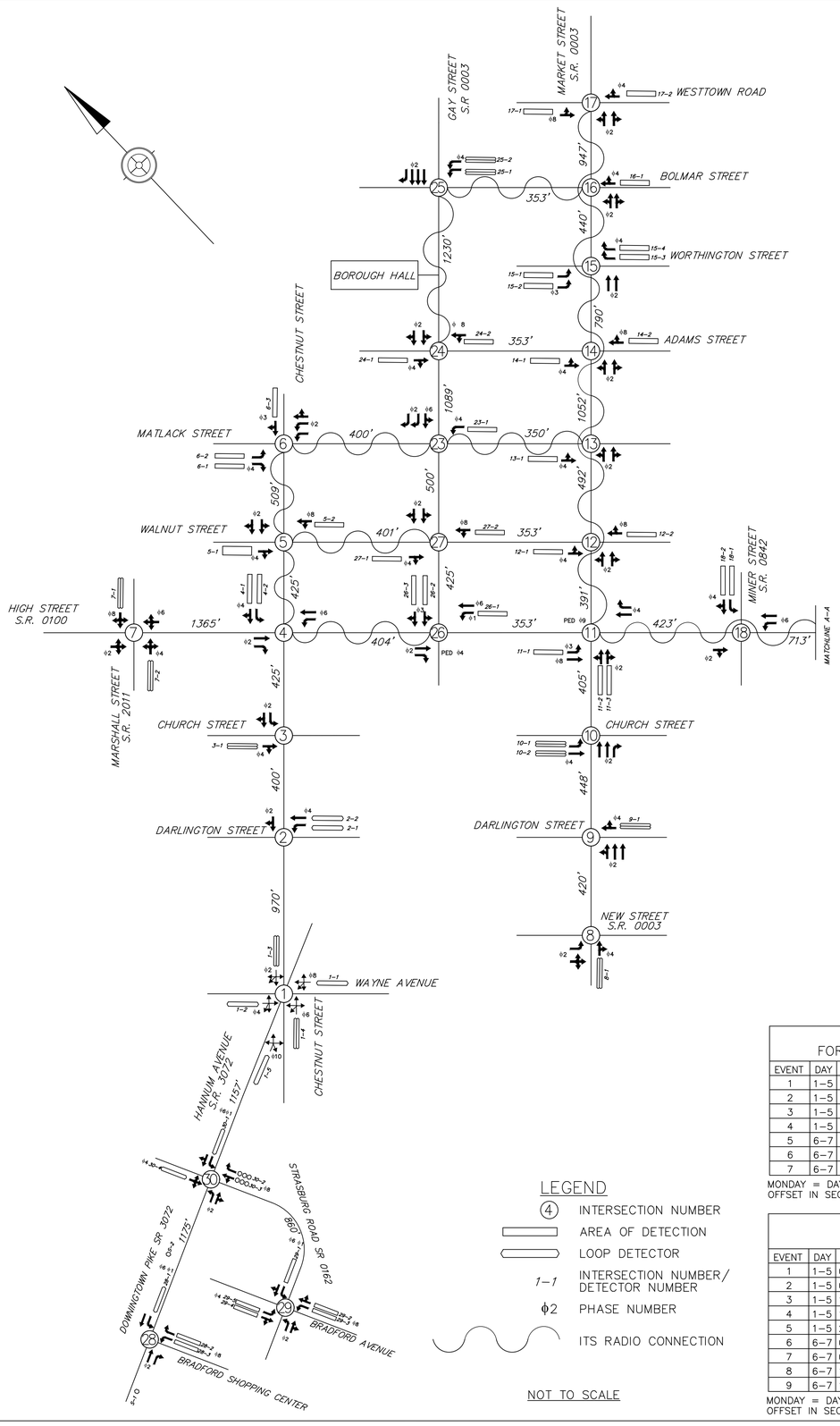
ADE - TRANSPORTATION OPERATIONS DATE

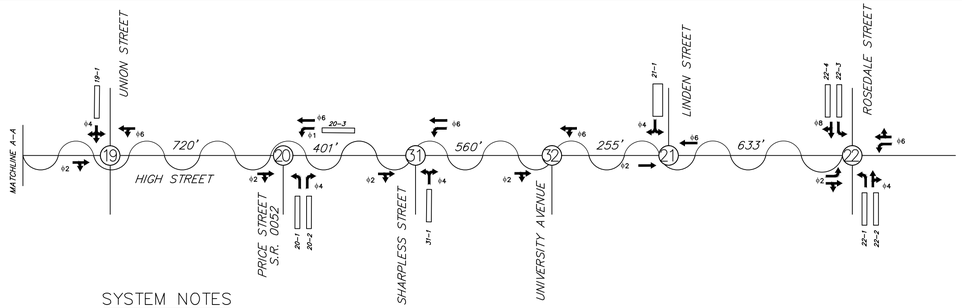
PREPARED BY:
KMJ CONSULTING, INC.
120 E LANCASTER AVE, SUITE 105
ARDMORE, PA 19003

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MARTIN S. WILLIAMS
ENGINEER
PE085649

Martin S. Williams Digitally signed by Martin S. Williams DN: C=US, E=mswilliams@kmjcon.com, O=KMJ Consulting, P.C., CN=Martin S. Williams Date: 2024.01.24 13:25:17-05'00'

$$$$DATE$$$
FILENAME= $$DESIGNFILE$$





SYSTEM NOTES

1. PROGRAM TO BE SELECTED BY PENNDOT UNIFIED COMMAND AND CONTROL SYSTEM (UCCS) OR TBC BACKUP.
2. OFFSETS ARE REFERENCED TO THE BEGINNING OF NEMA TS2 FIRST GREEN FOR INTERSECTIONS 2–27 AND 31–32. OFFSETS ARE REFERENCED TO BEGINNING OF GREEN FOR INTERSECTIONS 1 AND 28–30.
3. SYSTEM LIMITS:
   MARKET STREET (10 INTERSECTIONS) – NEW STREET TO WESTTOWN ROAD
   HIGH STREET (11 INTERSECTIONS) – ROSEDALE STREET TO MARSHALL STREET
   GAY STREET (5 INTERSECTIONS) – HIGH STREET TO BOLMAR STREET
   CHESTNUT STREET (6 INTERSECTIONS) – MATLACK STREET TO HANNUM AVENUE
   DOWNINGTOWN PIKE & STRASBURG ROAD(4 INTERSECTIONS)– WAYNE STREET TO BRADFORD AVE & BRADFORD SHOPPING CENTER
4. PRIMARY COORDINATION(SIGNALS 4, 5, 6, 11–27, 31, 32): UCCS VIA INTERSECTION ITS RADIOS/FIBER TO RT 0003/0202 CAMERA SPLICE.
   PRIMARY COORDINATION(SIGNALS 1, 28–30): GPS TIMECLOCK.
   SECONDARY COORDINATION: TBC (DEFAULT TO BACKUP TBC).
5. SYSTEM IS DESIGNED FOR PENNDOT UNIFIED COMMAND AND CONTROL (UCC) LOCATED AT PENNDOT. PENNDOT TO HAVE COMMUNICATION THROUGH UCC SYSTEM SOFTWARE AND BE REMOTELY ACCESSIBLE BY WEST CHESTER BOROUGH.
6. CYCLES, SPLITS & OFFSETS ARE IN SECONDS

Notes: – ALL SPLIT TIMES INCLUDE YELLOW AND RED TIMES FOR A GIVEN PHASE.
– REFER TO SIGNAL PERMIT PLAN FOR MAX 1, MAX 2, CLEARANCE AND PED TIMES.

CYCLE/SPLIT/OFFSET

Program 1 = AM PEAK				Phase								Cycle	Offsets
Intersections		File #	MASTER	1	2	3	4	5	6	7	8		1
30	HANNUM & STRASBURG	2746	4	20(LEAD)	40		30		60		30	90	38
29	STRASBURG & BRADFORD	2756	4	14(LEAD)	42		34		56		34	90	72
28	DOWNINGTOWN & SHOPPING CENTER	2739	4	14(LEAD)	46		30		60			90	35
27	GAY & WALNUT	1162	3		65		25				25	90	0
26	GAY & HIGH	1168	3	11(LEAD)	29	27	23(PED)		40			90	1
25	GAY & BOLMAR	1710	3		55		35					90	30
24	GAY & ADAMS	2084	3		58		32				32	90	42
23	GAY & MATLACK	1163	3	23	42		25		65			90	68
22	HIGH & ROSEDALE	1157	2		57		33		57		33	90	11
21	HIGH & LINDEN	1167	2		63		27		63			90	84
32	HIGH & UNIVERSITY	4055	2		63		27		63			90	79
31	HIGH & SHARPLESS	4054	2		63		27		63			90	44
20	HIGH & PRICE	1166	2	11(LEAD)	44		35		55			90	29
19	HIGH & UNION	2444	2		55		35		55			90	33
18	HIGH & MINER	1160	2		60		30		60			90	84
17	MARKET & WESTTOWN	0476	2		58		32		58		32	90	33
16	MARKET & BOLMAR	1452	2		55		35					90	16
15	MARKET & WORTHINGTON	1451	2		49	25(SPLIT)	16(SPLIT)		49		41	90	17
14	MARKET & ADAMS	2370	2		48		42		48		42	90	3
13	MARKET & MATLACK	0232	2		50		40					90	73
12	MARKET & WALNUT	0231	2		55		35		55		35	90	58
11	MARKET & HIGH	1161	2	23(PED)	28	11(LEAD)	28		51		39	90	0
10	MARKET & CHURCH	1165	2		55		35		55			90	33
9	MARKET & DARLINGTON	0293	2		50		40		50			90	25
8	MARKET & NEW	1881	2		50		40		50			90	14
7	HIGH & MARSHALL	1159	1		50		40		50		40	90	49
6	CHESTNUT & MATLACK	2011	1		41	29	20		41	25	24	90	16
5	CHESTNUT & WALNUT	1792	1		60		30				30	90	19
4	CHESTNUT & HIGH	1164	1		53		37		53			90	87
3	CHESTNUT & CHURCH	2010	1		60		30		60			90	40
2	CHESTNUT & DARLINGTON	2009	1		60		30		60			90	50
1	CHESTNUT & HANNUM/WAYNE	2008	1	35(SIDE)	30		26		30		26	90	11

WEEKLY PROGRAM CHART
FOR INTERSECTIONS 2–27 & 31–32

EVENT	DAY	TIME	CYCLE	OFFSET	PROGRAM	REMARKS
1	1–5	0615	90	1	1	AM PEAK
2	1–5	0930	90	1	2	MIDDAY PEAK
3	1–5	1430	90	1	3	PM PEAK
4	1–5	1830	80	1	4	PM OFF PEAK
5	6–7	0000	80	1	5	WEEKEND AM PEAK
6	6–7	0930	90	1	6	WEEKEND MIDDAY PEAK
7	6–7	1700	80	1	7	WEEKEND PM PEAK

MONDAY = DAY 1
OFFSET IN SECONDS
OFFSET REFERENCED TO START AT GREEN

WEEKLY PROGRAM CHART
FOR INTERSECTIONS 28–30

EVENT	DAY	TIME	CYCLE	OFFSET	PROGRAM	REMARKS
1	1–5	0615	90	1	1	AM PEAK
2	1–5	0930	90	1	2	MIDDAY PEAK
3	1–5	1430	90	1	3	PM PEAK
4	1–5	1830	80	1	4	PM OFF PEAK
5	1–5	2100	–	–	MAX 1	FREE
6	6–7	0730	80	1	5	WEEKEND AM PEAK
7	6–7	1700	80	1	7	WEEKEND PM PEAK
8	6–7	2100	–	–	MAX 1	FREE

MONDAY = DAY 1
OFFSET IN SECONDS
OFFSET REFERENCED TO START AT GREEN

WEEKLY PROGRAM CHART
FOR INTERSECTION 1

EVENT	DAY	TIME	CYCLE	OFFSET	PROGRAM	REMARKS
1	1–5	0615	90	1	1	AM PEAK
2	1–5	0930	90	1	2	MIDDAY PEAK
3	1–5	1430	90	1	3	PM PEAK
4	1–5	1830	80	1	4	PM OFF PEAK
5	1–5	2100	–	–	MAX 1	FREE
6	6–7	0730	80	1	5	WEEKEND AM PEAK
7	6–7	0930	90	1	6	WEEKEND MIDDAY PEAK
8	6–7	1700	80	1	7	WEEKEND PM PEAK
9	6–7	1900	–	–	MAX 1	FREE

MONDAY = DAY 1
OFFSET IN SECONDS
OFFSET REFERENCED TO START AT GREEN

LEGEND
④ INTERSECTION NUMBER
AREA OF DETECTION
LOOP DETECTOR
1–1 INTERSECTION NUMBER/ DETECTOR NUMBER
ϕ2 PHASE NUMBER
ITS RADIO CONNECTION

NOT TO SCALE

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	CHESTER		SIP	20 OF 21
WEST CHESTER BOROUGH				

REVISION NUMBER	REVISIONS	DATE	BY

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 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 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 AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITES, DATED DECEMBER 20, 1974.

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 TRAFFIC SIGNAL STANDARDS TC–8800 SERIES.

SYSTEM PERMIT # I-0056, I-0057, I-0058

COUNTY: CHESTER

MUNICIPALITY: WEST CHESTER BOROUGH

INTERSECTION: TRAFFIC SIGNAL SYSTEM

PREPARED BY:
KMJ CONSULTING, INC.
120 E LANCASTER AVE, SUITE 105
ARDMORE, PA 19003

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MARTIN S. WILLIAMS
ENGINEER
PE085649

Martin S. Williams
Digitally signed by Martin S. Williams
DN: C=US, E=mwilliams@kmjconsultants.com, O=KMJ CONSULTING, INC., CN=Martin S. Williams
Date: 2024.01.24 13:25:45-05'00'

REVIEWED:
MUNICIPAL OFFICIAL — DATE 1/25/2024

RECOMMENDED: Margo Wolfgang
Digitally signed by Margo Wolfgang
Date: 2024.01.26 08:41:12 -05'00'

Kevin P. Lewis, P.E.
Digitally signed by Kevin P. Lewis, P.E.
Date: 2024.01.26 11:30:00 -05'00'

ADE - TRANSPORTATION OPERATIONS — DATE

CYCLE/SPLIT/OFFSET

Program 2 = MIDDAY PEAK

	Intersections	File #	MASTER	Phase 1	2	3	4	5	6	7	8	Cycle	Offsets 1
30	HANNUM & STRASBURG	2746	4	15(LEAD)	43		32		58		32	90	34
29	STRASBURG & BRADFORD	2756	4	14(LEAD)	42		34		56		34	90	75
28	DOWNINGTOWN & SHOPPING CENTER	2739	4	15(LEAD)	45		30		60			90	35
27	GAY & WALNUT	1162	3		65		25				25	90	88
26	GAY & HIGH	1168	3	11(LEAD)	28	28	23(PED)		39			90	0
25	GAY & BOLMAR	1710	3		55		35					90	30
24	GAY & ADAMS	2084	3		58		32				32	90	43
23	GAY & MATLACK	1163	3	23	42		25		65			90	68
22	HIGH & ROSEDALE	1157	2		59		31		59		31	90	54
21	HIGH & LINDEN	1167	2		64		26		64			90	36
32	HIGH & UNIVERSITY	4055	2		64		26		64			90	0
31	HIGH & SHARPLESS	4054	2		64		26		64			90	51
20	HIGH & PRICE	1166	2	13(LEAD)	42		35		55			90	36
19	HIGH & UNION	2444	2		57		33		57			90	33
18	HIGH & MINER	1160	2		60		30		60			90	88
17	MARKET & WESTTOWN	0476	2		58		32		58		32	90	34
16	MARKET & BOLMAR	1452	2		55		35					90	22
15	MARKET & WORTHINGTON	1451	2		47	27(SPLIT)	16(SPLIT)		47		43	90	20
14	MARKET & ADAMS	2370	2		50		40		50		40	90	2
13	MARKET & MATLACK	0232	2		50		40					90	74
12	MARKET & WALNUT	0231	2		55		35		55		35	90	60
11	MARKET & HIGH	1161	2	23(PED)	27	11(LEAD)	29		50		40	90	0
10	MARKET & CHURCH	1165	2		55		35		55			90	30
9	MARKET & DARLINGTON	0293	2		50		40		50			90	22
8	MARKET & NEW	1881	2		53		37		53			90	20
7	HIGH & MARSHALL	1159	1		54		36		54		36	90	50
6	CHESTNUT & MATLACK	2011	1		38	32	20		38	25	27	90	24
5	CHESTNUT & WALNUT	1792	1		60		30				30	90	24
4	CHESTNUT & HIGH	1164	1		52		38		52			90	0
3	CHESTNUT & CHURCH	2010	1		60		30		60			90	43
2	CHESTNUT & DARLINGTON	2009	1		60		30		60			90	53
1	CHESTNUT & HANNUM/WAYNE	2008	1	30	33		27		33		27	90	7

CYCLE/SPLIT/OFFSET

Program 3 = PM PEAK

	Intersections	File #	MASTER	Phase 1	2	3	4	5	6	7	8	Cycle	Offsets 1
30	HANNUM & STRASBURG	2746	4	24(LEAD)	35		31		59		31	90	50
29	STRASBURG & BRADFORD	2756	4	14(LEAD)	38		38		52		38	90	83
28	DOWNINGTOWN & SHOPPING CENTER	2739	4	18(LEAD)	42		30		60			90	30
27	GAY & WALNUT	1162	3		59		31				31	90	23
26	GAY & HIGH	1168	3	11(LEAD)	28	28	23(PED)		39			90	89
25	GAY & BOLMAR	1710	3		55		35					90	48
24	GAY & ADAMS	2084	3		55		35				35	90	56
23	GAY & MATLACK	1163	3	23	42		25		65			90	74
22	HIGH & ROSEDALE	1157	2		60		30		60		30	90	54
21	HIGH & LINDEN	1167	2		60		30		60			90	40
32	HIGH & UNIVERSITY	4055	2		60		30		60			90	33
31	HIGH & SHARPLESS	4054	2		60		30		60			90	42
20	HIGH & PRICE	1166	2	16(LEAD)	44		30		60			90	36
19	HIGH & UNION	2444	2		52		38		52			90	33
18	HIGH & MINER	1160	2		58		32		58			90	79
17	MARKET & WESTTOWN	0476	2		58		32		58		32	90	31
16	MARKET & BOLMAR	1452	2		55		35					90	21
15	MARKET & WORTHINGTON	1451	2		48	26(SPLIT)	16(SPLIT)		48		42	90	18
14	MARKET & ADAMS	2370	2		45		45		45		45	90	3
13	MARKET & MATLACK	0232	2		50		40					90	74
12	MARKET & WALNUT	0231	2		55		35		55		35	90	59
11	MARKET & HIGH	1161	2	23(PED)	29	11(LEAD)	27		52		38	90	0
10	MARKET & CHURCH	1165	2		55		35		55			90	32
9	MARKET & DARLINGTON	0293	2		50		40		50			90	23
8	MARKET & NEW	1881	2		52		38		52			90	9
7	HIGH & MARSHALL	1159	1		53		37		53		37	90	44
6	CHESTNUT & MATLACK	2011	1		40	30	20		40	25	25	90	27
5	CHESTNUT & WALNUT	1792	1		60		30				30	90	32
4	CHESTNUT & HIGH	1164	1		43		47		43			90	3
3	CHESTNUT & CHURCH	2010	1		60		30		60			90	46
2	CHESTNUT & DARLINGTON	2009	1		60		30		60			90	56
1	CHESTNUT & HANNUM/WAYNE	2008	1	26	37		27		37		27	90	10

CYCLE/SPLIT/OFFSET

Program 4 = PM OFF PEAK

	Intersections	File #	MASTER	Phase 1	2	3	4	5	6	7	8	Cycle	Offsets 1
30	HANNUM & STRASBURG	2746	4	15(LEAD)	37		28		52		28	80	34
29	STRASBURG & BRADFORD	2756	4	12(LEAD)	37		31		49		31	80	65
28	DOWNINGTOWN & SHOPPING CENTER	2739	4	14(LEAD)	36		30		50			80	22
27	GAY & WALNUT	1162	3		55		25				25	80	76
26	GAY & HIGH	1168	3	11(LEAD)	23	23	23(PED)		34			80	3
25	GAY & BOLMAR	1710	3		48		32					80	18
24	GAY & ADAMS	2084	3		48		32				32	80	29
23	GAY & MATLACK	1163	3	23	32		25		55			80	52
22	HIGH & ROSEDALE	1157	2		52		28		52		28	80	36
21	HIGH & LINDEN	1167	2		50		30		50			80	50
32	HIGH & UNIVERSITY	4055	2		50		30		50			80	0
31	HIGH & SHARPLESS	4054	2		50		30		50			80	39
20	HIGH & PRICE	1166	2	13(LEAD)	37		30		50			80	39
19	HIGH & UNION	2444	2		50		30		50			80	31
18	HIGH & MINER	1160	2		50		30		50			80	78
17	MARKET & WESTTOWN	0476	2		49		31		49		31	80	42
16	MARKET & BOLMAR	1452	2		48		32					80	26
15	MARKET & WORTHINGTON	1451	2		40	24(SPLIT)	16(SPLIT)		40		40	80	25
14	MARKET & ADAMS	2370	2		42		38		42		38	80	8
13	MARKET & MATLACK	0232	2		45		35					80	69
12	MARKET & WALNUT	0231	2		45		35		45		35	80	59
11	MARKET & HIGH	1161	2	23(PED)	22	11(LEAD)	24		45		35	80	0
10	MARKET & CHURCH	1165	2		45		35		45			80	31
9	MARKET & DARLINGTON	0293	2		45		35		45			80	19
8	MARKET & NEW	1881	2		49		31		49			80	19
7	HIGH & MARSHALL	1159	1									FREE (MAX 1)	
6	CHESTNUT & MATLACK	2011	1		35	25	20		35	25	20	80	19
5	CHESTNUT & WALNUT	1792	1		50		30				30	80	33
4	CHESTNUT & HIGH	1164	1		44		36		44			80	4
3	CHESTNUT & CHURCH	2010	1		50		30		50			80	46
2	CHESTNUT & DARLINGTON	2009	1		50		30		50			80	55
1	CHESTNUT & HANNUM/WAYNE	2008	1	25	30		25		30		25	80	18

CYCLE/SPLIT/OFFSET

Program 5 = WEEKEND AM PEAK

	Intersections	File #	MASTER	Phase 1	2	3	4	5	6	7	8	Cycle	Offsets 1
30	HANNUM & STRASBURG	2746	4	15(LEAD)	37		28		52		28	80	34
29	STRASBURG & BRADFORD	2756	4	12(LEAD)	37		31		49		31	80	65
28	DOWNINGTOWN & SHOPPING CENTER	2739	4	14(LEAD)	36		30		50			80	22
27	GAY & WALNUT	1162	3		55		25				25	80	76
26	GAY & HIGH	1168	3	11(LEAD)	23	23	23(PED)		34			80	3
25	GAY & BOLMAR	1710	3		48		32					80	18
24	GAY & ADAMS	2084	3		48		32				32	80	29
23	GAY & MATLACK	1163	3	23	32		25		55			80	52
22	HIGH & ROSEDALE	1157	2		48		32		48		32	80	0
21	HIGH & LINDEN	1167	2		50		30		50			80	61
32	HIGH & UNIVERSITY	4055	2		50		30		50			80	0
31	HIGH & SHARPLESS	4054	2		50		30		50			80	42
20	HIGH & PRICE	1166	2	13(LEAD)	37		30		50			80	39
19	HIGH & UNION	2444	2		50		30		50			80	31
18	HIGH & MINER	1160	2		50		30		50			80	78
17	MARKET & WESTTOWN	0476	2		49		31		49		31	80	42
16	MARKET & BOLMAR	1452	2		48		32					80	26
15	MARKET & WORTHINGTON	1451	2		40	24(SPLIT)	16(SPLIT)		40		40	80	25
14	MARKET & ADAMS	2370	2		42		38		42		38	80	8
13	MARKET & MATLACK	0232	2		45		35					80	69
12	MARKET & WALNUT	0231	2		45		35		45		35	80	59
11	MARKET & HIGH	1161	2	23(PED)	24	11(LEAD)	22		47		33	80	0
10	MARKET & CHURCH	1165	2		45		35		45			80	31
9	MARKET & DARLINGTON	0293	2		45		35		45			80	19
8	MARKET & NEW	1881	2		47		33		47			80	19
7	HIGH & MARSHALL	1159	1									FREE (MAX 1)	
6	CHESTNUT & MATLACK	2011	1		35	25	20		35	25	20	80	19
5	CHESTNUT & WALNUT	1792	1		50		30				30	80	33
4	CHESTNUT & HIGH	1164	1		44		36		44			80	4
3	CHESTNUT & CHURCH	2010	1		50		30		50			80	46
2	CHESTNUT & DARLINGTON	2009	1		50		30		50			80	55
1	CHESTNUT & HANNUM/WAYNE	2008	1	25	30		25		30		25	80	18

CYCLE/SPLIT/OFFSET

Program 6 = WEEKEND MIDDAY PEAK

	Intersections	File #	MASTER	Phase 1	2	3	4	5	6	7	8	Cycle	Offsets 1
30	HANNUM & STRASBURG	2746	4	15(LEAD)	43		32		58		32	90	34
29	STRASBURG & BRADFORD	2756	4	14(LEAD)	41		35		55		35	90	75
28	DOWNINGTOWN & SHOPPING CENTER	2739	4	15(LEAD)	45		30		60			90	35
27	GAY & WALNUT	1162	3		65		25				25	90	88
26	GAY & HIGH	1168	3	11(LEAD)	28	28	23(PED)		39			90	0
25	GAY & BOLMAR	1710	3		55		35					90	30
24	GAY & ADAMS	2084	3		58		32				32	90	41
23	GAY & MATLACK	1163	3	23	42		25		65			90	62
22	HIGH & ROSEDALE	1157	2		62		28		62		28	90	49
21	HIGH & LINDEN	1167	2		60		30		60			90	40
32	HIGH & UNIVERSITY	4055	2		60		30		60			90	0
31	HIGH & SHARPLESS	4054	2		60		30		60			90	47
20	HIGH & PRICE	1166	2	13(LEAD)	47		30		60			90	29
19	HIGH & UNION	2444	2		57		33		57			90	33
18	HIGH & MINER	1160	2		60		30		60			90	88
17	MARKET & WESTTOWN	0476	2		58		32		58		32	90	35
16	MARKET & BOLMAR	1452	2		55		35					90	22
15	MARKET & WORTHINGTON	1451	2		48	26(SPLIT)	16(SPLIT)		48		42	90	20
14	MARKET & ADAMS	2370	2		45		45		45		45	90	7
13	MARKET & MATLACK	0232	2		50		40					90	74
12	MARKET & WALNUT	0231	2		55		35		55		35	90	60
11	MARKET & HIGH	1161	2	23(PED)	29	11(LEAD)	27		52		38	90	0
10	MARKET & CHURCH	1165	2		55		35		55			90	30
9	MARKET & DARLINGTON	0293	2		50		40		50			90	21
8	MARKET & NEW	1881	2		53		37		53			90	19
7	HIGH & MARSHALL	1159	1		54		36		54		36	90	50
6	CHESTNUT & MATLACK	2011	1		38	32	20		38	25	27	90	24
5	CHESTNUT & WALNUT	1792	1		60		30				30	90	24
4	CHESTNUT & HIGH	1164	1		52		38		52			90	0
3	CHESTNUT & CHURCH	2010	1		60		30		60			90	44
2	CHESTNUT & DARLINGTON	2009	1		60		30		60			90	53
1	CHESTNUT & HANNUM/WAYNE	2008	1	30	35		25		35		25	90	4

CYCLE/SPLIT/OFFSET

Program 7 = WEEKEND PM PEAK

	Intersections	File #	MASTER	Phase 1	2	3	4	5	6	7	8	Cycle	Offsets 1
30	HANNUM & STRASBURG	2746	4	15(LEAD)	37		28		52		28	80	34
29	STRASBURG & BRADFORD	2756	4	12(LEAD)	37		31		49		31	80	65
28	DOWNINGTOWN & SHOPPING CENTER	2739	4	14(LEAD)	36		30		50			80	22
27	GAY & WALNUT	1162	3		55		25				25	80	76
26	GAY & HIGH	1168	3	11(LEAD)	23	23	23(PED)		34			80	3
25	GAY & BOLMAR	1710	3		48		32					80	18
24	GAY & ADAMS	2084	3		48		32				32	80	29
23	GAY & MATLACK	1163	3	23	32		25		55			80	52
22	HIGH & ROSEDALE	1157	2		52		28		52		28	80	12
21	HIGH & LINDEN	1167	2		50		30		50			80	1
32	HIGH & UNIVERSITY	4055	2		50		30		50			80	0
31	HIGH & SHARPLESS	4054	2		50		30		50			80	47
20	HIGH & PRICE	1166	2	13(LEAD)	37		30		50			80	39
19	HIGH & UNION	2444	2		50		30		50			80	31
18	HIGH & MINER	1160	2		50		30		50			80	78
17	MARKET & WESTTOWN	0476	2		49		31		49		31	80	42
16	MARKET & BOLMAR	1452	2		48		32					80	26
15	MARKET & WORTHINGTON	1451	2		40	24(SPLIT)	16(SPLIT)		40		40	80	25
14	MARKET & ADAMS	2370	2		42		38		42		38	80	8
13	MARKET & MATLACK	0232	2		45		35					80	69
12	MARKET & WALNUT	0231	2		45		35		45		35	80	59
11	MARKET & HIGH	1161	2	23(PED)	24	11(LEAD)	22		47		33	80	0
10	MARKET & CHURCH	1165	2		45		35		45			80	31
9	MARKET & DARLINGTON	0293	2		45		35		45			80	19
8	MARKET & NEW	1881	2		47		33		47			80	19
7	HIGH & MARSHALL	1159	1									FREE (MAX 1)	
6	CHESTNUT & MATLACK	2011	1		35	25	20		35	25	20	80	19
5	CHESTNUT & WALNUT	1792	1		50		30				30	80	33
4	CHESTNUT & HIGH	1164	1		44		36		44			80	4
3	CHESTNUT & CHURCH	2010	1		50		30		50			80	46
2	CHESTNUT & DARLINGTON	2009	1		50		30		50			80	55
1	CHESTNUT & HANNUM/WAYNE	2008	1	25	30		25		30		25	80	18

Notes: – ALL SPLIT TIMES INCLUDE YELLOW AND RED TIMES FOR A GIVEN PHASE.
– REFER TO SIGNAL PERMIT PLAN FOR MAX 1, MAX 2, CLEARANCE AND PED TIMES.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	CHESTER		SIP	21 OF 21

WEST CHESTER BOROUGH

REVISION NUMBER	REVISIONS	DATE	BY

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 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 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 AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITES, DATED DECEMBER 20, 1974.

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 TRAFFIC SIGNAL STANDARDS TC-8800 SERIES.

SYSTEM PERMIT # I-0056, I-0057, I-0058

COUNTY: CHESTER

MUNICIPALITY: WEST CHESTER BOROUGH

INTERSECTION: TRAFFIC SIGNAL SYSTEM

REVIEWED:

1/25/2024

MUNICIPAL OFFICIAL — DATE

RECOMMENDED: Margo Wolfgang Digitally signed by Margo Wolfgang Date: 2024.01.26 08:41:57 -05'00'

Kevin P. Lewis, P.E. Digitally signed by Kevin P. Lewis, P.E. Date: 2024.01.26 11:30:00 -05'00'

ADE - TRANSPORTATION OPERATIONS — DATE

PREPARED BY:
KMJ CONSULTING, INC.
120 E LANCASTER AVE, SUITE 105
ARDMORE, PA 19003

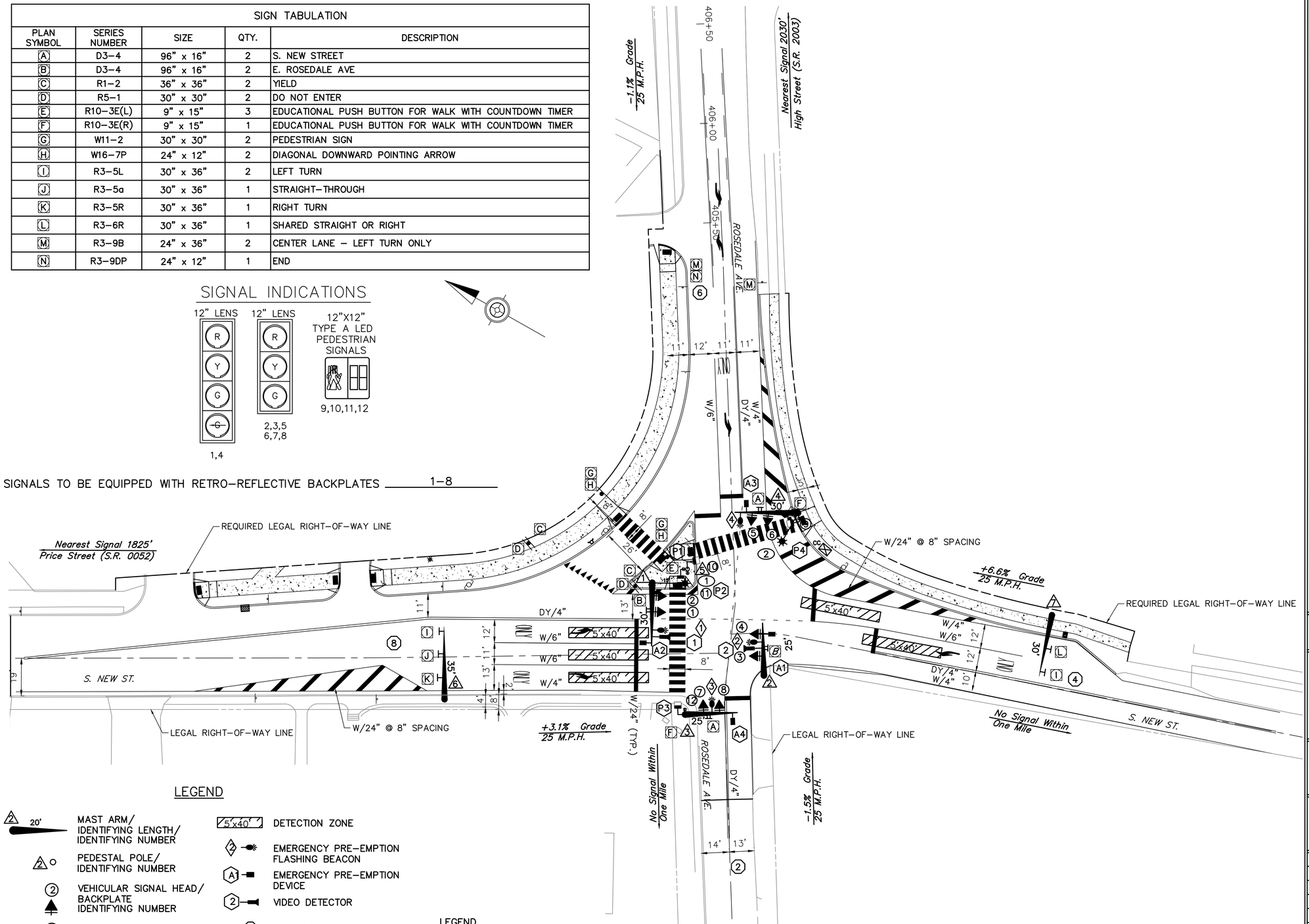
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MARTIN S. WILLIAMS
ENGINEER
PE085649

Martin S. Williams Digitally signed by Martin S. Williams DN: C=US, E=mswilliams@kmjcon.com, O=KMJ Consulting, Inc., CN=Martin S. Williams Date: 2024.01.24 15:28:04-05'00'

SIGN TABULATION				
PLAN SYMBOL	SERIES NUMBER	SIZE	QTY.	DESCRIPTION
A	D3–4	96" x 16"	2	S. NEW STREET
B	D3–4	96" x 16"	2	E. ROSEDALE AVE
C	R1–2	36" x 36"	2	YIELD
D	R5–1	30" x 30"	2	DO NOT ENTER
E	R10–3E(L)	9" x 15"	3	EDUCATIONAL PUSH BUTTON FOR WALK WITH COUNTDOWN TIMER
F	R10–3E(R)	9" x 15"	1	EDUCATIONAL PUSH BUTTON FOR WALK WITH COUNTDOWN TIMER
G	W11–2	30" x 30"	2	PEDESTRIAN SIGN
H	W16–7P	24" x 12"	2	DIAGONAL DOWNWARD POINTING ARROW
I	R3–5L	30" x 36"	2	LEFT TURN
J	R3–5a	30" x 36"	1	STRAIGHT–THROUGH
K	R3–5R	30" x 36"	1	RIGHT TURN
L	R3–6R	30" x 36"	1	SHARED STRAIGHT OR RIGHT
M	R3–9B	24" x 36"	2	CENTER LANE – LEFT TURN ONLY
N	R3–9DP	24" x 12"	1	END

SIGNAL INDICATIONS

SIGNALS TO BE EQUIPPED WITH RETRO–REFLECTIVE BACKPLATES 1–8



LEGEND

- MAST ARM/ IDENTIFYING LENGTH/ IDENTIFYING NUMBER
- PEDESTAL POLE/ IDENTIFYING NUMBER
- VEHICULAR SIGNAL HEAD/ BACKPLATE IDENTIFYING NUMBER
- PEDESTRIAN SIGNAL HEAD/ IDENTIFYING NUMBER
- PEDESTRIAN PUSHBUTTON/ SIGN/IDENTIFIER
- SIGNAL CABINET
- DETECTION ZONE
- EMERGENCY PRE–EMPTION FLASHING BEACON
- EMERGENCY PRE–EMPTION DEVICE
- VIDEO DETECTOR
- PHASE NUMBER
- SIGN/IDENTIFYING LETTER
- LUMINAIRE

LEGEND

W/4" – EXISTING SOLID WHITE LINE, WIDTH
DY/4" – EXISTING SOLID DOUBLE YELLOW LINE, WIDTH
W/4" – SOLID WHITE LINE, WIDTH
DY/4" – SOLID DOUBLE YELLOW LINE, WIDTH
EXISTING POST MOUNTED SIGN
PROPOSED POST MOUNTED SIGN

SCALE
25 FEET 0 25 FEET

SIGNAL PERMIT PLAN

GENERAL NOTES

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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 EDGE 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 MINIMUM VERTICAL CLEARANCE OF 16 FT. ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEWALK OR PAVEMENT.

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

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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 FORM 408.

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PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6–0

COUNTY: CHESTER
MUNICIPALITY: WEST CHESTER BOROUGH
INTERSECTION: SOUTH NEW STREET AND ROSEDALE AVENUE

REVIEWED:

DATE

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

Mark L. Kray 12–5–89
DATE

Douglas May 12–5–89
DISTRICT TRAFFIC ENGINEER DATE

NO.	REVISION	DES./ REVW.	DATE	REVW.	DATE	RECOM.	DATE
2	INCR–M/A Length & Reloc. Pole #8	NV	3/9/90	MK	3/9/90		
3	Added Sign (D) to NW + SW Corner	JJL	3/23/90	MK	3/27/90	DWM	3/27/90
4	Added Split Phase And Signs G & J & S/H #10	NV	9/21/90	MK	9/27/90	DWM	10/1/90
5	Added Pre–emption on Rosedale Avenue	NV	5/30/91	MK	5/30/91	DWM	5/30/91
6	Added Sign (E) N.T. OR N.E. & N.W. Corner	JJL	9/25/91	MK	9/25/91	DWM	9/30/91
7	Change Timing on New Street	JJL	3/12/92	MK	3/12/92	DWM	3/12/92
9	Added Emergency Pre–emtion to South Street New Drawing New	PAI	1/23/01	MK	3/14/01	LRB	3/15/01
10	Add Sign "H" to NE + SW Corner	WDF	1/13/09	PL	2/02/09	LRB	1/30/09
11	Traffic Signal Reconstruction	POH	11/17/23	---	TBD	LRB	TBD

SHEET 1 OF 2 | PERMIT # 62–2639 | FILE # 2639

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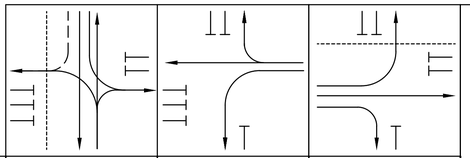
OPERATION NOTES:

- SIGNAL TO DWELL IN PHASE 2+6, UNTIL ACTUATED BY PHASE 4,8.

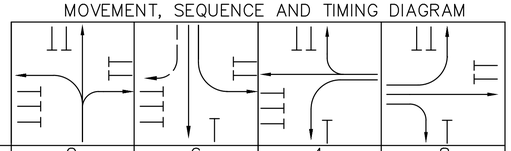
MOVEMENT, SEQUENCE AND TIMING DIAGRAM



PHASE	2+6				4				8				FLASHING
INTERVAL / SIGNALS	1	2	3	4	5	6	7	8	5	6	7	8	
1	R	R	R	R	G/-G	G/-G	Y	R	R	R	R	R	Y
2	R	R	R	R	G	G	Y	R	R	R	R	R	R
3	R	R	R	R	R	R	R	R	G	G	Y	R	R
4	R	R	R	R	R	R	R	R	G/-G	G/-G	Y	R	Y
5,6	G	G	Y	R	R	R	R	R	R	R	R	R	R
7,8	G	G	Y	R	R	R	R	R	R	R	R	R	R
9,10	H	H	H	H	H	H	H	H	M	FH	H	H	OFF
11,12	M	FH	H	H	H	H	H	H	H	H	H	H	OFF

EMERGENCY PRE-EMPTION PHASING

MOVEMENT, SEQUENCE AND TIMING DIAGRAM



PHASE	2				6				4				8			
INTERVAL / SIGNALS		13	14	15		16	17	18		19	20	21		22	23	24
1	SELECTIVE CLEARANCES	R	R	R	SELECTIVE CLEARANCES	R	R	R	SELECTIVE CLEARANCES	G/-G	Y ⓐ	R ⓐ	SELECTIVE CLEARANCES	R	R	R
2		R	R	R		R	R	R		G	Y ⓐ	R ⓐ		R	R	R
3		R	R	R		R	R	R		R	R	R		G	Y ⓐ	R ⓐ
4		R	R	R		R	R	R		R	R	R		G/-G	Y ⓐ	R ⓐ
5,6		G	Y ⓐ	R ⓐ		R	R	R		R	R	R		R	R	R
7,8		R	R	R		G	Y ⓐ	R ⓐ		R	R	R		R	R	R
9,10		H	H	H		H	H	H		H	H	H		H	H	H
11,12		H	H	H		H	H	H		H	H	H		H	H	H
FIXED TIME		*	3	3		*	3	3		*	3	3		*	3	3

* FOR DURATION OF PRE-EMPTION

NOTE: IF PRE-EMPTION EQUIPMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO "00" FEATURE ON TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PRE-EMPTION.

ⓐ SIGNAL TO INDICATE G WHEN RETURNING TO NORMAL OPERATION.

ⓑ SIGNAL TO INDICATE G/-A- WHEN RETURNING TO NORMAL OPERATION.

WEEKLY PROGRAM CHART						
EVENT	DAY	TIME	CYCLE	OFFSET	PROGRAM	REMARKS
1	1-5		85	-	1	AM PEAK
2	1-5		-	-	MAX 1	OFF PEAK
3	1-5		85	-	2	PM PEAK
4	1-7		-	-	MAX 1	OFF PEAK

* DAY 1 = MONDAY

FIXED			3	3		3	3			3	3	
MINIMUM	15				5				5			
PASSAGE					3				3			
MAX 1	40				15				15			
PROGRAM 1	41				21				32			
PROGRAM 2	40				24				33			
PEDESTRIAN	9*	12*							11*	15*		
MEMORY	MX				NL				NL			

* UPON PEDESTRIAN ACTUATION ONLY

EMERGENCY PRE-EMPTION NOTES:

- CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION FOR THE EASTBOUND & WESTBOUND APPROACHES OF ROSEDALE AVENUE, AND THE NORTHBOUND & SOUTHBOUND APPROACHES OF SOUTH NEW STREET, WITH A FLASHING FAIL SAFE DEVICE FOR EACH DIRECTION OF OPERATION.

  THIS FAIL SAFE DEVICE SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND SHALL BEGIN FLASHING WHEN THE PREEMPTION PHASE DISPLAYS PREEMPTION GREEN FOR THE EMERGENCY VEHICLE APPROACH.

- THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, SHALL TERMINATE ALL GREEN INDICATIONS EXCEPT THE GREEN INDICATIONS FOR THE PHASE GOVERNED BY THE APPROACHING EMERGENCY VEHICLE, FOLLOWED BY SELECTIVE CLEARANCES DEPENDENT UPON THE PHASE IN WHICH THE PRE-EMPTION OCCURS. THE GREEN INDICATIONS FOR THE PRE-EMPTED PHASE SHALL REMAIN GREEN FOR THE DURATION OF SIGNAL PRE-EMPTION WITH RED INDICATIONS DISPLAYED FOR ALL OTHER PHASES.

- THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, SHALL TIME OUT ALL YELLOW AND RED INDICATIONS FOLLOWED BY THE GREEN INTERVAL OF THE PRE-EMPTION PHASE GOVERNED BY THE ACTUATION OF THE APPROACHING EMERGENCY VEHICLE.

- IF THE SIGNALS ARE FLASHING WHEN ACTIVATED BY AN EMERGENCY VEHICLE ALL SIGNALS SHALL REMAIN FLASHING.

- UPON COMPLETION OF PRE-EMPTION PHASE 2, 4, 6, OR 8, IN RETURNING TO NORMAL OPERATION PHASE 2+6 INTERVAL 1 SHALL FOLLOW.

- IF ADDITIONAL PRE-EMPTION PHASES ARE ACTIVATED WHILE IN PRE-EMPTION, THE ORIGINAL PRE-EMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PRE-EMPTION PHASE.

- IN EMERGENCY PRE-EMPTION, NO PRIORITY SHALL BE ESTABLISHED, PRE-EMPTION SHALL BE A "FIRST COME, FIRST SERVE" OPERATION.

- THE FIELD LOCATIONS OF THE PRE-EMPTION DETECTORS MAY DIFFER FROM THE LOCATIONS DEPICTED ON THE CONDITION DIAGRAM, AS THE DETECTORS MAY NEED TO BE RELOCATED AND/OR ADJUSTED TO PROVIDE ACCEPTABLE OPERATION AS DEEMED APPROPRIATE BY DEPARTMENT PERSONNEL.

GENERAL NOTES

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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 EDGE 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 MINIMUM VERTICAL CLEARANCE OF 16 FT. ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEWALK OR PAVEMENT.

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

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PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: CHESTER

MUNICIPALITY: WEST CHESTER BOROUGH

INTERSECTION: SOUTH NEW STREET AND ROSEDALE AVENUE

REVIEWED:

DATE

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

Mark L. Kray 12-5-89
DATE

Douglas May 12-5-89
DISTRICT TRAFFIC ENGINEER DATE

NO.	REVISION	DES./ REVW.	DATE	REVW.	DATE	RECOM.	DATE
2	INCR-M/A Length & Reloc. Pole #8	NV	3/9/90	MK	3/9/90		
3	Added Sign (D) to NW + SW Corner	JJL	3/23/90	MK	3/27/90	DWM	3/27/90
4	Added Split Phase And Signs G & J & S/H #10	NV	9/21/90	MK	9/27/90	DWM	10/1/90
5	Added Pre-emption on Rosedale Avenue	NV	5/30/91	MK	5/30/91	DWM	5/30/91
6	Added Sign (E) N.T. OR N.E. & N.W. Corner	JJL	9/25/91	MK	9/25/91	DWM	9/30/91
7	Change Timing on New Street	JJL	3/12/92	MK	3/12/92	DWM	3/12/92
9	Added Emergency Pre-emtion to South Street New Drawing New	PAI	1/23/01	MK	3/14/01	LRB	3/15/01
10	Add Sign "H" to NE + SW Corner	WDF	1/13/09	PL	2/02/09	LRB	1/30/09
11	TBD	POH	11/17/23	---	TBD	LRB	TBD

SHEET 2 OF 2 | PERMIT # 62-2639 | FILE # 2639

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APPENDIX D:
Volume Development Worksheets

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**S New Street and Sharpless Street**									
Synchro Node:	**1**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**4**	**54**	**7**	**48**	**10**	**5**	**9**	**88**	**77**	**10**	**114**	**1**	**427**
Balancing													0
2024 Existing Volumes (Balanced)	**4**	**54**	**7**	**48**	**10**	**5**	**9**	**88**	**77**	**10**	**114**	**1**	**427**
RD - Church Street (North) Closure				1									
RD - University Ave Closure										8			8
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**10**
2026 Projected (Build) Volumes	**4**	**55**	**7**	**50**	**10**	**5**	**9**	**90**	**79**	**18**	**117**	**1**	**446**
Base growth (0.75% compounded for 17 yrs)	1	7	1	7	1	1	1	12	10	1	15	0	57
2040 Base (No-Build) Volumes	**5**	**61**	**8**	**55**	**11**	**6**	**10**	**100**	**87**	**11**	**129**	**1**	**484**
2040 Projected (Build) Volumes	**5**	**61**	**8**	**56**	**11**	**6**	**10**	**100**	**87**	**19**	**129**	**1**	**494**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**27**	**5**	**56**	**38**	**22**	**23**	**189**	**120**	**16**	**137**	**3**	**636**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**27**	**5**	**56**	**38**	**22**	**23**	**189**	**120**	**16**	**137**	**3**	**636**
RD - Church Street (North) Closure				5									
RD - University Ave Closure										14			14
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**14**	**0**	**0**	**19**
Base growth (0.75% compounded for 17 yrs)	0	4	1	8	5	3	3	26	16	2	19	0	87
2040 Base (No-Build) Volumes	**0**	**31**	**6**	**64**	**43**	**25**	**26**	**215**	**136**	**18**	**156**	**3**	**723**
2040 Projected (Build) Volumes	**0**	**31**	**6**	**69**	**43**	**25**	**26**	**215**	**136**	**32**	**156**	**3**	**742**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**Darlington Street and Sharpless Street**											
Synchro Node:	**2**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**		

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**3**	**135**	**0**	**0**	**58**	**12**	**0**	**0**	**0**	**5**	**0**	**2**	**215**
Balancing													0
2024 Existing Volumes (Balanced)	**3**	**135**	**0**	**0**	**58**	**12**	**0**	**0**	**0**	**5**	**0**	**2**	**215**
RD - Church Street (North) Closure					1								
RD - University Ave Closure				8									8
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**8**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**
2026 Projected (Build) Volumes	**3**	**138**	**0**	**8**	**60**	**12**	**0**	**0**	**0**	**5**	**0**	**2**	**229**
Base growth (0.75% compounded for 17 yrs)	0	18	0	0	8	2	0	0	0	1	0	0	29
2040 Base (No-Build) Volumes	**3**	**153**	**0**	**0**	**66**	**14**	**0**	**0**	**0**	**6**	**0**	**2**	**244**
2040 Projected (Build) Volumes	**3**	**153**	**0**	**8**	**67**	**14**	**0**	**0**	**0**	**6**	**0**	**2**	**254**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**14**	**151**	**0**	**2**	**112**	**26**	**0**	**0**	**0**	**12**	**0**	**6**	**323**
Balancing													0
2024 Existing Volumes (Balanced)	**14**	**151**	**0**	**2**	**112**	**26**	**0**	**0**	**0**	**12**	**0**	**6**	**323**
RD - Church Street (North) Closure					5								
RD - University Ave Closure				14									14
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**14**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**19**
Base growth (0.75% compounded for 17 yrs)	2	20	0	0	15	4	0	0	0	2	0	1	44
2040 Base (No-Build) Volumes	**16**	**171**	**0**	**2**	**127**	**30**	**0**	**0**	**0**	**14**	**0**	**7**	**367**
2040 Projected (Build) Volumes	**16**	**171**	**0**	**16**	**132**	**30**	**0**	**0**	**0**	**14**	**0**	**7**	**386**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**Sharpless Street and S Church Street**									
Synchro Node:	**3**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**92**	**26**	**21**	**58**	**0**	**0**	**0**	**0**	**26**	**25**	**10**	**258**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**92**	**26**	**21**	**58**	**0**	**0**	**0**	**0**	**26**	**25**	**10**	**258**
RD - Church Street (North) Closure		6	-6	-5					41	4	-5	1	
RD - University Ave Closure					8								8
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**6**	**-6**	**-5**	**8**	**0**	**0**	**0**	**41**	**4**	**-5**	**1**	**45**
2026 Projected (Build) Volumes	**0**	**100**	**21**	**16**	**67**	**0**	**0**	**0**	**41**	**31**	**21**	**11**	**309**
Base growth (0.75% compounded for 17 yrs)	0	12	4	3	8	0	0	0	0	4	3	1	35
2040 Base (No-Build) Volumes	**0**	**104**	**30**	**24**	**66**	**0**	**0**	**0**	**0**	**30**	**28**	**11**	**293**
2040 Projected (Build) Volumes	**0**	**110**	**24**	**19**	**74**	**0**	**0**	**0**	**41**	**34**	**23**	**12**	**338**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**113**	**45**	**29**	**115**	**0**	**0**	**0**	**0**	**29**	**46**	**27**	**404**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**113**	**45**	**29**	**115**	**0**	**0**	**0**	**0**	**29**	**46**	**27**	**404**
RD - Church Street (North) Closure		10	-10	-7					54	5	-10	5	
RD - University Ave Closure					14								14
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**10**	**-10**	**-7**	**14**	**0**	**0**	**0**	**54**	**5**	**-10**	**5**	**62**
Base growth (0.75% compounded for 17 yrs)	0	15	6	4	16	0	0	0	0	4	6	4	55
2040 Base (No-Build) Volumes	**0**	**128**	**51**	**33**	**131**	**0**	**0**	**0**	**0**	**33**	**52**	**31**	**459**
2040 Projected (Build) Volumes	**0**	**138**	**41**	**26**	**145**	**0**	**0**	**0**	**54**	**38**	**42**	**36**	**521**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**Sharpless Street and Reynolds Alley**									
Synchro Node:	**4**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**86**	**14**	**6**	**114**	**0**	**11**	**0**	**8**	**0**	**0**	**0**	**239**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**86**	**14**	**6**	**114**	**0**	**11**	**0**	**8**	**0**	**0**	**0**	**239**
RD - Church Street (North) Closure		51			-5								
RD - University Ave Closure					8								8
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**51**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**55**
2026 Projected (Build) Volumes	**0**	**139**	**14**	**6**	**121**	**0**	**11**	**0**	**8**	**0**	**0**	**0**	**299**
Base growth (0.75% compounded for 17 yrs)	0	12	2	1	15	0	1	0	1	0	0	0	32
2040 Base (No-Build) Volumes	**0**	**98**	**16**	**7**	**129**	**0**	**12**	**0**	**9**	**0**	**0**	**0**	**271**
2040 Projected (Build) Volumes	**0**	**149**	**16**	**7**	**133**	**0**	**12**	**0**	**9**	**0**	**0**	**0**	**326**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**1**	**140**	**7**	**8**	**134**	**0**	**13**	**0**	**32**	**0**	**0**	**0**	**335**
Balancing													0
2024 Existing Volumes (Balanced)	**1**	**140**	**7**	**8**	**134**	**0**	**13**	**0**	**32**	**0**	**0**	**0**	**335**
RD - Church Street (North) Closure		69			-7								
RD - University Ave Closure					14								14
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**69**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**77**
Base growth (0.75% compounded for 17 yrs)	0	19	1	1	18	0	2	0	4	0	0	0	45
2040 Base (No-Build) Volumes	**1**	**159**	**8**	**9**	**152**	**0**	**15**	**0**	**36**	**0**	**0**	**0**	**380**
2040 Projected (Build) Volumes	**1**	**228**	**8**	**9**	**160**	**0**	**15**	**0**	**36**	**0**	**0**	**0**	**457**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**Sharpless Street and S High Street**									
Synchro Node:	**5**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**24**	**0**	**71**	**0**	**0**	**0**	**47**	**312**	**0**	**0**	**502**	**73**	**1029**
Balancing													0
2024 Existing Volumes (Balanced)	**24**	**0**	**71**	**0**	**0**	**0**	**47**	**312**	**0**	**0**	**502**	**73**	**1029**
RD - Church Street (North) Closure			51								5	-5	
RD - University Ave Closure							1	8			-7	7	9
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**51**	**0**	**0**	**0**	**1**	**8**	**0**	**0**	**-3**	**3**	**60**
2026 Projected (Build) Volumes	**25**	**0**	**124**	**0**	**0**	**0**	**49**	**327**	**0**	**0**	**510**	**78**	**1113**
Base growth (0.75% compounded for 17 yrs)	3	0	10	0	0	0	6	42	0	0	68	10	139
2040 Base (No-Build) Volumes	**27**	**0**	**81**	**0**	**0**	**0**	**53**	**354**	**0**	**0**	**570**	**83**	**1168**
2040 Projected (Build) Volumes	**27**	**0**	**132**	**0**	**0**	**0**	**54**	**362**	**0**	**0**	**567**	**86**	**1228**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**35**	**0**	**134**	**0**	**0**	**0**	**73**	**464**	**0**	**0**	**515**	**67**	**1288**
Balancing													0
2024 Existing Volumes (Balanced)	**35**	**0**	**134**	**0**	**0**	**0**	**73**	**464**	**0**	**0**	**515**	**67**	**1288**
RD - Church Street (North) Closure			69								7	-7	
RD - University Ave Closure							2	11			-12	12	13
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**69**	**0**	**0**	**0**	**2**	**11**	**0**	**0**	**-6**	**6**	**82**
Base growth (0.75% compounded for 17 yrs)	5	0	18	0	0	0	10	63	0	0	70	9	175
2040 Base (No-Build) Volumes	**40**	**0**	**152**	**0**	**0**	**0**	**83**	**527**	**0**	**0**	**585**	**76**	**1463**
2040 Projected (Build) Volumes	**40**	**0**	**221**	**0**	**0**	**0**	**85**	**538**	**0**	**0**	**579**	**82**	**1545**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**S High Street and E Nields Street**									
Synchro Node:	**6**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**356**	**11**	**141**	**434**	**0**	**942**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**356**	**11**	**141**	**434**	**0**	**942**
RD - Church Street (North) Closure											56		
RD - University Ave Closure								9			-7		2
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**48**	**0**	**57**
2026 Projected (Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**373**	**11**	**144**	**492**	**0**	**1020**
Base growth (0.75% compounded for 17 yrs)	0	0	0	0	0	0	0	48	1	19	59	0	127
2040 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**404**	**12**	**160**	**493**	**0**	**1069**
2040 Projected (Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**413**	**12**	**160**	**541**	**0**	**1126**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**539**	**32**	**138**	**501**	**0**	**1210**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**539**	**32**	**138**	**501**	**0**	**1210**
RD - Church Street (North) Closure											76		
RD - University Ave Closure								13			-12		0
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**0**	**0**	**64**	**0**	**76**
Base growth (0.75% compounded for 17 yrs)	0	0	0	0	0	0	0	73	4	19	68	0	164
2040 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**612**	**36**	**157**	**569**	**0**	**1374**
2040 Projected (Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**625**	**36**	**157**	**633**	**0**	**1450**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**S High Street and University Avenue**									
Synchro Node:	**7**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**50**	**374**	**0**	**0**	**413**	**11**	**848**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**50**	**374**	**0**	**0**	**413**	**11**	**848**
RD - Church Street (North) Closure											56		
RD - University Ave Closure	9		10				-35					-7	-32
RD - Church Street (South) Closure													0
Total Re-Distribution	**9**	**0**	**10**	**0**	**0**	**0**	**-35**	**0**	**0**	**0**	**56**	**-7**	**33**
2026 Projected (Build) Volumes	**9**	**0**	**10**	**0**	**0**	**0**	**16**	**382**	**0**	**0**	**478**	**4**	**899**
Base growth (0.75% compounded for 17 yrs)	0	0	0	0	0	0	7	51	0	0	56	1	115
2040 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**57**	**425**	**0**	**0**	**469**	**12**	**963**
2040 Projected (Build) Volumes	**9**	**0**	**10**	**0**	**0**	**0**	**22**	**425**	**0**	**0**	**525**	**5**	**996**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**77**	**570**	**0**	**0**	**480**	**19**	**1146**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**77**	**570**	**0**	**0**	**480**	**19**	**1146**
RD - Church Street (North) Closure											76		
RD - University Ave Closure	13		13				-49					-12	-36
RD - Church Street (South) Closure													0
Total Re-Distribution	**13**	**0**	**13**	**0**	**0**	**0**	**-49**	**0**	**0**	**0**	**76**	**-12**	**40**
Base growth (0.75% compounded for 17 yrs)	0	0	0	0	0	0	10	77	0	0	65	3	155
2040 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**87**	**647**	**0**	**0**	**545**	**22**	**1301**
2040 Projected (Build) Volumes	**13**	**0**	**13**	**0**	**0**	**0**	**38**	**647**	**0**	**0**	**621**	**10**	**1341**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**Reynolds Alley and University Avenue**											
Synchro Node:	**8**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**		

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**0**	**0**	**0**	**38**	**26**	**0**	**0**	**0**	**0**	**0**	**4**	**68**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**38**	**26**	**0**	**0**	**0**	**0**	**0**	**4**	**68**
RD - Church Street (North) Closure													
RD - University Ave Closure		14			-42					5		-5	-28
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**14**	**0**	**0**	**-42**	**0**	**0**	**0**	**0**	**5**	**0**	**-5**	**-28**
2026 Projected (Build) Volumes	**0**	**14**	**0**	**0**	**-3**	**27**	**0**	**0**	**0**	**5**	**0**	**-1**	**42**
Base growth (0.75% compounded for 17 yrs)	0	0	0	0	5	4	0	0	0	0	0	1	10
2040 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**43**	**30**	**0**	**0**	**0**	**0**	**0**	**5**	**78**
2040 Projected (Build) Volumes	**0**	**14**	**0**	**0**	**1**	**30**	**0**	**0**	**0**	**5**	**0**	**0**	**50**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**0**	**0**	**0**	**78**	**12**	**0**	**0**	**0**	**0**	**0**	**4**	**94**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**78**	**12**	**0**	**0**	**0**	**0**	**0**	**4**	**94**
RD - Church Street (North) Closure													
RD - University Ave Closure		21			-62					5		-5	-41
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**21**	**0**	**0**	**-62**	**0**	**0**	**0**	**0**	**5**	**0**	**-5**	**-41**
Base growth (0.75% compounded for 17 yrs)	0	0	0	0	11	2	0	0	0	0	0	1	14
2040 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**89**	**14**	**0**	**0**	**0**	**0**	**0**	**5**	**108**
2040 Projected (Build) Volumes	**0**	**21**	**0**	**0**	**28**	**14**	**0**	**0**	**0**	**5**	**0**	**0**	**67**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**Church Street and University Avenue**									
Synchro Node:	**9**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**0**	**0**	**49**	**0**	**0**	**0**	**0**	**0**	**0**	**85**	**0**	**134**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**0**	**0**	**49**	**0**	**0**	**0**	**0**	**0**	**0**	**85**	**0**	**134**
RD - Church Street (North) Closure											-97		
RD - University Ave Closure				-56									-56
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**-56**	**0**	**0**	**0**	**0**	**0**	**0**	**-97**	**0**	**-153**
2026 Projected (Build) Volumes	**0**	**0**	**0**	**-6**	**0**	**0**	**0**	**0**	**0**	**0**	**-10**	**0**	**-16**
Base growth (0.75% compounded for 17 yrs)	0	0	0	7	0	0	0	0	0	0	12	0	19
2040 Base (No-Build) Volumes	**0**	**0**	**0**	**56**	**0**	**0**	**0**	**0**	**0**	**0**	**97**	**0**	**153**
2040 Projected (Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**0**	**0**	**72**	**0**	**0**	**0**	**0**	**0**	**0**	**119**	**0**	**191**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**0**	**0**	**72**	**0**	**0**	**0**	**0**	**0**	**0**	**119**	**0**	**191**
RD - Church Street (North) Closure											-135		
RD - University Ave Closure				-82									-82
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**-82**	**0**	**0**	**0**	**0**	**0**	**0**	**-135**	**0**	**-217**
Base growth (0.75% compounded for 17 yrs)	0	0	0	10	0	0	0	0	0	0	16	0	26
2040 Base (No-Build) Volumes	**0**	**0**	**0**	**82**	**0**	**0**	**0**	**0**	**0**	**0**	**135**	**0**	**217**
2040 Projected (Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**S High Street and Linden Street**									
Synchro Node:	**10**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**0**	**0**	**20**	**0**	**23**	**0**	**400**	**0**	**1**	**417**	**0**	**861**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**0**	**0**	**20**	**0**	**23**	**0**	**400**	**0**	**1**	**417**	**0**	**861**
RD - Church Street (North) Closure											56		
RD - University Ave Closure								-35			10		-25
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-35**	**0**	**0**	**66**	**0**	**31**
2026 Projected (Build) Volumes	**0**	**0**	**0**	**20**	**0**	**24**	**0**	**374**	**0**	**1**	**492**	**0**	**911**
Base growth (0.75% compounded for 17 yrs)	0	0	0	3	0	3	0	54	0	0	56	0	116
2040 Base (No-Build) Volumes	**0**	**0**	**0**	**23**	**0**	**26**	**0**	**454**	**0**	**1**	**473**	**0**	**977**
2040 Projected (Build) Volumes	**0**	**0**	**0**	**23**	**0**	**26**	**0**	**419**	**0**	**1**	**539**	**0**	**1008**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**0**	**0**	**50**	**0**	**62**	**0**	**589**	**0**	**0**	**483**	**0**	**1184**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**0**	**0**	**50**	**0**	**62**	**0**	**589**	**0**	**0**	**483**	**0**	**1184**
RD - Church Street (North) Closure											76		
RD - University Ave Closure								-49			13		-36
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-49**	**0**	**0**	**89**	**0**	**40**
Base growth (0.75% compounded for 17 yrs)	0	0	0	7	0	8	0	80	0	0	65	0	160
2040 Base (No-Build) Volumes	**0**	**0**	**0**	**57**	**0**	**70**	**0**	**669**	**0**	**0**	**548**	**0**	**1344**
2040 Projected (Build) Volumes	**0**	**0**	**0**	**57**	**0**	**70**	**0**	**620**	**0**	**0**	**637**	**0**	**1384**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**S High Street and Rosedale Avenue**									
Synchro Node:	**11**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**42**	**341**	**92**	**41**	**217**	**69**	**50**	**318**	**53**	**51**	**380**	**22**	**1676**
Balancing													0
2024 Existing Volumes (Balanced)	**42**	**341**	**92**	**41**	**217**	**69**	**50**	**318**	**53**	**51**	**380**	**22**	**1676**
RD - Church Street (North) Closure		-29	-8							29	8		
RD - University Ave Closure					6	-6	29	-29			10		10
RD - Church Street (South) Closure				(27)	(-27)						(3)	(-3)	0
Total Re-Distribution	**0**	**-29**	**-8**	**27**	**-21**	**-6**	**29**	**-29**	**0**	**29**	**21**	**-3**	**10**
2026 Projected (Build) Volumes	**43**	**320**	**86**	**69**	**201**	**65**	**80**	**296**	**54**	**81**	**410**	**19**	**1724**
Base growth (0.75% compounded for 17 yrs)	6	46	12	6	29	9	7	43	7	7	51	3	226
2040 Base (No-Build) Volumes	**48**	**387**	**104**	**47**	**246**	**78**	**57**	**361**	**60**	**58**	**431**	**25**	**1902**
2040 Projected (Build) Volumes	**48**	**358**	**96**	**74**	**225**	**72**	**86**	**332**	**60**	**87**	**452**	**22**	**1912**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**59**	**226**	**116**	**47**	**299**	**84**	**68**	**404**	**86**	**46**	**363**	**40**	**1838**
Balancing													0
2024 Existing Volumes (Balanced)	**59**	**226**	**116**	**47**	**299**	**84**	**68**	**404**	**86**	**46**	**363**	**40**	**1838**
RD - Church Street (North) Closure		-73	-38							73	38		
RD - University Ave Closure					8	-8	41	-41			13		13
RD - Church Street (South) Closure				(29)	(-29)						(4)	(-4)	0
Total Re-Distribution	**0**	**-73**	**-38**	**29**	**-21**	**-8**	**41**	**-41**	**0**	**73**	**55**	**-4**	**13**
Base growth (0.75% compounded for 17 yrs)	8	31	16	6	40	11	9	55	12	6	49	5	248
2040 Base (No-Build) Volumes	**67**	**257**	**132**	**53**	**339**	**95**	**77**	**459**	**98**	**52**	**412**	**45**	**2086**
2040 Projected (Build) Volumes	**67**	**184**	**94**	**82**	**318**	**87**	**118**	**418**	**98**	**125**	**467**	**41**	**2099**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**Matlack Street and Rosedale Avenue**									
Synchro Node:	**12**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**142**	**262**	**53**	**58**	**0**	**247**	**0**	**47**	**6**	**56**	**17**	**888**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**142**	**262**	**53**	**58**	**0**	**247**	**0**	**47**	**6**	**56**	**17**	**888**
RD - Church Street (North) Closure													
RD - University Ave Closure													0
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2026 Projected (Build) Volumes	**0**	**145**	**268**	**54**	**59**	**0**	**253**	**0**	**48**	**6**	**57**	**17**	**907**
Base growth (0.75% compounded for 17 yrs)	0	19	35	7	8	0	33	0	6	1	8	2	119
2040 Base (No-Build) Volumes	**0**	**161**	**297**	**60**	**66**	**0**	**280**	**0**	**53**	**7**	**64**	**19**	**1007**
2040 Projected (Build) Volumes	**0**	**161**	**297**	**60**	**66**	**0**	**280**	**0**	**53**	**7**	**64**	**19**	**1007**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**1**	**140**	**151**	**58**	**158**	**0**	**262**	**0**	**106**	**11**	**64**	**24**	**975**
Balancing													0
2024 Existing Volumes (Balanced)	**1**	**140**	**151**	**58**	**158**	**0**	**262**	**0**	**106**	**11**	**64**	**24**	**975**
RD - Church Street (North) Closure													
RD - University Ave Closure													0
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Base growth (0.75% compounded for 17 yrs)	0	19	20	8	21	0	35	0	14	1	9	3	130
2040 Base (No-Build) Volumes	**1**	**159**	**171**	**66**	**179**	**0**	**297**	**0**	**120**	**12**	**73**	**27**	**1105**
2040 Projected (Build) Volumes	**1**	**159**	**171**	**66**	**179**	**0**	**297**	**0**	**120**	**12**	**73**	**27**	**1105**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**Matlack Street and Carter Drive**											
Synchro Node:	**13**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**		

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**1**	**1**	**1**	**51**	**0**	**37**	**11**	**354**	**110**	**79**	**287**	**5**	**937**
Balancing													0
2024 Existing Volumes (Balanced)	**1**	**1**	**1**	**51**	**0**	**37**	**11**	**354**	**110**	**79**	**287**	**5**	**937**
RD - Church Street (North) Closure													
RD - University Ave Closure													0
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2026 Projected (Build) Volumes	**1**	**1**	**1**	**52**	**0**	**38**	**11**	**362**	**112**	**81**	**294**	**5**	**958**
Base growth (0.75% compounded for 17 yrs)	0	0	0	7	0	5	1	48	15	11	39	1	127
2040 Base (No-Build) Volumes	**1**	**1**	**1**	**58**	**0**	**42**	**12**	**402**	**125**	**90**	**326**	**6**	**1064**
2040 Projected (Build) Volumes	**1**	**1**	**1**	**58**	**0**	**42**	**12**	**402**	**125**	**90**	**326**	**6**	**1064**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**14**	**4**	**27**	**74**	**1**	**61**	**5**	**272**	**58**	**48**	**271**	**5**	**840**
Balancing													0
2024 Existing Volumes (Balanced)	**14**	**4**	**27**	**74**	**1**	**61**	**5**	**272**	**58**	**48**	**271**	**5**	**840**
RD - Church Street (North) Closure													
RD - University Ave Closure													0
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Base growth (0.75% compounded for 17 yrs)	2	1	4	10	0	8	1	37	8	7	37	1	116
2040 Base (No-Build) Volumes	**16**	**5**	**31**	**84**	**1**	**69**	**6**	**309**	**66**	**55**	**308**	**6**	**956**
2040 Projected (Build) Volumes	**16**	**5**	**31**	**84**	**1**	**69**	**6**	**309**	**66**	**55**	**308**	**6**	**956**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**Rosedale Avenue and Church Street**									
Synchro Node:	**14**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**431**	**11**	**26**	**229**	**0**	**0**	**0**	**0**	**33**	**5**	**31**	**766**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**431**	**11**	**26**	**229**	**0**	**0**	**0**	**0**	**33**	**5**	**31**	**766**
RD - Church Street (North) Closure										-37	-6	-35	
RD - University Ave Closure					35								35
RD - Church Street (South) Closure			(-12)	(-30)									-42
Total Re-Distribution	**0**	**0**	**-12**	**-30**	**35**	**0**	**0**	**0**	**0**	**-37**	**-6**	**-35**	**-85**
2026 Projected (Build) Volumes	**0**	**441**	**-1**	**-3**	**269**	**0**	**0**	**0**	**0**	**-3**	**-1**	**-3**	**699**
Base growth (0.75% compounded for 17 yrs)	0	58	1	4	31	0	0	0	0	4	1	4	103
2040 Base (No-Build) Volumes	**0**	**489**	**12**	**30**	**260**	**0**	**0**	**0**	**0**	**37**	**6**	**35**	**869**
2040 Projected (Build) Volumes	**0**	**489**	**0**	**0**	**295**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**784**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**307**	**16**	**29**	**370**	**0**	**0**	**0**	**0**	**98**	**2**	**55**	**877**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**307**	**16**	**29**	**370**	**0**	**0**	**0**	**0**	**98**	**2**	**55**	**877**
RD - Church Street (North) Closure										-111	-2	-62	
RD - University Ave Closure					49								49
RD - Church Street (South) Closure			(-18)	(-33)									-51
Total Re-Distribution	**0**	**0**	**-18**	**-33**	**49**	**0**	**0**	**0**	**0**	**-111**	**-2**	**-62**	**-177**
Base growth (0.75% compounded for 17 yrs)	0	42	2	4	50	0	0	0	0	13	0	7	118
2040 Base (No-Build) Volumes	**0**	**349**	**18**	**33**	**420**	**0**	**0**	**0**	**0**	**111**	**2**	**62**	**995**
2040 Projected (Build) Volumes	**0**	**349**	**0**	**0**	**469**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**818**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**Rosedale Avenue and Pedestrian Crossing**									
Synchro Node:	**15**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**432**	**0**	**0**	**260**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**692**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**432**	**0**	**0**	**260**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**692**
RD - Church Street (North) Closure					-35								
RD - University Ave Closure					35								35
RD - Church Street (South) Closure		(-12)											-12
Total Re-Distribution	**0**	**-12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-12**
2026 Projected (Build) Volumes	**0**	**430**	**0**	**0**	**266**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**696**
Base growth (0.75% compounded for 17 yrs)	0	59	0	0	35	0	0	0	0	0	0	0	94
2040 Base (No-Build) Volumes	**0**	**491**	**0**	**0**	**295**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**786**
2040 Projected (Build) Volumes	**0**	**479**	**0**	**0**	**295**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**774**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**310**	**0**	**0**	**434**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**744**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**310**	**0**	**0**	**434**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**744**
RD - Church Street (North) Closure					-62								
RD - University Ave Closure					49								49
RD - Church Street (South) Closure		(-18)											-18
Total Re-Distribution	**0**	**-18**	**0**	**0**	**-13**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-31**
Base growth (0.75% compounded for 17 yrs)	0	42	0	0	59	0	0	0	0	0	0	0	101
2040 Base (No-Build) Volumes	**0**	**352**	**0**	**0**	**493**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**845**
2040 Projected (Build) Volumes	**0**	**334**	**0**	**0**	**480**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**814**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**S New Street and Rosedale Avenue**									
Synchro Node:	**16**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**17**	**418**	**3**	**55**	**113**	**82**	**4**	**112**	**80**	**91**	**53**	**6**	**1034**
Balancing													0
2024 Existing Volumes (Balanced)	**17**	**418**	**3**	**55**	**113**	**82**	**4**	**112**	**80**	**91**	**53**	**6**	**1034**
RD - Church Street (North) Closure				-15	-20					6	15	20	
RD - University Ave Closure						35							35
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**-15**	**-20**	**35**	**0**	**0**	**0**	**6**	**15**	**20**	**41**
2026 Projected (Build) Volumes	**17**	**427**	**3**	**41**	**96**	**119**	**4**	**115**	**82**	**99**	**69**	**26**	**1098**
Base growth (0.75% compounded for 17 yrs)	2	57	0	7	15	11	1	15	11	12	7	1	139
2040 Base (No-Build) Volumes	**19**	**475**	**3**	**62**	**128**	**93**	**5**	**127**	**91**	**103**	**60**	**7**	**1173**
2040 Projected (Build) Volumes	**19**	**475**	**3**	**47**	**108**	**128**	**5**	**127**	**91**	**109**	**75**	**27**	**1214**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**14**	**157**	**12**	**86**	**266**	**143**	**11**	**120**	**140**	**123**	**104**	**12**	**1188**
Balancing													0
2024 Existing Volumes (Balanced)	**14**	**157**	**12**	**86**	**266**	**143**	**11**	**120**	**140**	**123**	**104**	**12**	**1188**
RD - Church Street (North) Closure				-22	-40					-3	22	40	
RD - University Ave Closure						49							49
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**-22**	**-40**	**49**	**0**	**0**	**0**	**-3**	**22**	**40**	**46**
Base growth (0.75% compounded for 17 yrs)	2	21	2	12	36	19	1	16	19	17	14	2	161
2040 Base (No-Build) Volumes	**16**	**178**	**14**	**98**	**302**	**162**	**12**	**136**	**159**	**140**	**118**	**14**	**1349**
2040 Projected (Build) Volumes	**16**	**178**	**14**	**76**	**262**	**211**	**12**	**136**	**159**	**137**	**140**	**54**	**1395**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**S New Street and Nields Street/Campus Drive**									
Synchro Node:	**17**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**10**	**10**	**32**	**10**	**0**	**12**	**27**	**150**	**61**	**41**	**116**	**8**	**477**
Balancing													0
2024 Existing Volumes (Balanced)	**10**	**10**	**32**	**10**	**0**	**12**	**27**	**150**	**61**	**41**	**116**	**8**	**477**
RD - Church Street (North) Closure				40							1		
RD - University Ave Closure									35				35
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**40**	**0**	**0**	**0**	**0**	**35**	**0**	**1**	**0**	**76**
2026 Projected (Build) Volumes	**10**	**10**	**33**	**50**	**0**	**12**	**28**	**153**	**97**	**42**	**120**	**8**	**563**
Base growth (0.75% compounded for 17 yrs)	1	1	4	1	0	2	4	20	8	6	16	1	64
2040 Base (No-Build) Volumes	**11**	**11**	**36**	**11**	**0**	**14**	**31**	**170**	**69**	**47**	**132**	**9**	**541**
2040 Projected (Build) Volumes	**11**	**11**	**36**	**51**	**0**	**14**	**31**	**170**	**104**	**47**	**133**	**9**	**617**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**7**	**4**	**35**	**47**	**9**	**67**	**28**	**261**	**33**	**31**	**149**	**13**	**684**
Balancing													0
2024 Existing Volumes (Balanced)	**7**	**4**	**35**	**47**	**9**	**67**	**28**	**261**	**33**	**31**	**149**	**13**	**684**
RD - Church Street (North) Closure				54							5		
RD - University Ave Closure									49				49
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**54**	**0**	**0**	**0**	**0**	**49**	**0**	**5**	**0**	**108**
Base growth (0.75% compounded for 17 yrs)	1	1	5	6	1	9	4	35	4	4	20	2	92
2040 Base (No-Build) Volumes	**8**	**5**	**40**	**53**	**10**	**76**	**32**	**296**	**37**	**35**	**169**	**15**	**776**
2040 Projected (Build) Volumes	**8**	**5**	**40**	**107**	**10**	**76**	**32**	**296**	**86**	**35**	**174**	**15**	**884**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**S New Street and Pomona Hill Drive**									
Synchro Node:	**18**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**7**	**0**	**1**	**0**	**0**	**0**	**2**	**216**	**0**	**0**	**143**	**8**	**377**
Balancing													0
2024 Existing Volumes (Balanced)	**7**	**0**	**1**	**0**	**0**	**0**	**2**	**216**	**0**	**0**	**143**	**8**	**377**
RD - Church Street (North) Closure													
RD - University Ave Closure													0
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2026 Projected (Build) Volumes	**7**	**0**	**1**	**0**	**0**	**0**	**2**	**221**	**0**	**0**	**146**	**8**	**385**
Base growth (0.75% compounded for 17 yrs)	1	0	0	0	0	0	0	29	0	0	19	1	50
2040 Base (No-Build) Volumes	**8**	**0**	**1**	**0**	**0**	**0**	**2**	**245**	**0**	**0**	**162**	**9**	**427**
2040 Projected (Build) Volumes	**8**	**0**	**1**	**0**	**0**	**0**	**2**	**245**	**0**	**0**	**162**	**9**	**427**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**2**	**0**	**7**	**0**	**0**	**0**	**4**	**229**	**0**	**0**	**302**	**7**	**551**
Balancing													0
2024 Existing Volumes (Balanced)	**2**	**0**	**7**	**0**	**0**	**0**	**4**	**229**	**0**	**0**	**302**	**7**	**551**
RD - Church Street (North) Closure													
RD - University Ave Closure													0
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Base growth (0.75% compounded for 17 yrs)	0	0	1	0	0	0	1	31	0	0	41	1	75
2040 Base (No-Build) Volumes	**2**	**0**	**8**	**0**	**0**	**0**	**5**	**260**	**0**	**0**	**343**	**8**	**626**
2040 Projected (Build) Volumes	**2**	**0**	**8**	**0**	**0**	**0**	**5**	**260**	**0**	**0**	**343**	**8**	**626**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**S New Street and Glen Echo Field Access**									
Synchro Node:	**19**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**220**	**0**	**0**	**139**	**0**	**361**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**220**	**0**	**0**	**139**	**0**	**361**
RD - Church Street (North) Closure													
RD - University Ave Closure													0
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2026 Projected (Build) Volumes	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**225**	**0**	**0**	**142**	**0**	**369**
Base growth (0.75% compounded for 17 yrs)	0	0	0	0	0	0	0	30	0	0	19	0	49
2040 Base (No-Build) Volumes	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**250**	**0**	**0**	**158**	**0**	**410**
2040 Projected (Build) Volumes	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**250**	**0**	**0**	**158**	**0**	**410**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**217**	**0**	**0**	**302**	**0**	**522**
Balancing													0
2024 Existing Volumes (Balanced)	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**217**	**0**	**0**	**302**	**0**	**522**
RD - Church Street (North) Closure													
RD - University Ave Closure													0
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Base growth (0.75% compounded for 17 yrs)	0	0	0	0	0	0	0	29	0	0	41	0	70
2040 Base (No-Build) Volumes	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**246**	**0**	**0**	**343**	**0**	**592**
2040 Projected (Build) Volumes	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**246**	**0**	**0**	**343**	**0**	**592**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**S New Street and 855 S New Street**									
Synchro Node:	**20**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**0**	**0**	**11**	**0**	**25**	**0**	**198**	**15**	**29**	**100**	**0**	**378**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**0**	**0**	**11**	**0**	**25**	**0**	**198**	**15**	**29**	**100**	**0**	**378**
RD - Church Street (North) Closure													
RD - University Ave Closure													0
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2026 Projected (Build) Volumes	**0**	**0**	**0**	**11**	**0**	**26**	**0**	**202**	**15**	**30**	**102**	**0**	**386**
Base growth (0.75% compounded for 17 yrs)	0	0	0	1	0	3	0	27	2	4	14	0	51
2040 Base (No-Build) Volumes	**0**	**0**	**0**	**12**	**0**	**28**	**0**	**225**	**17**	**33**	**114**	**0**	**429**
2040 Projected (Build) Volumes	**0**	**0**	**0**	**12**	**0**	**28**	**0**	**225**	**17**	**33**	**114**	**0**	**429**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**0**	**0**	**0**	**16**	**0**	**58**	**0**	**157**	**10**	**24**	**282**	**0**	**547**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**0**	**0**	**16**	**0**	**58**	**0**	**157**	**10**	**24**	**282**	**0**	**547**
RD - Church Street (North) Closure													
RD - University Ave Closure													0
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Base growth (0.75% compounded for 17 yrs)	0	0	0	2	0	8	0	21	1	3	38	0	73
2040 Base (No-Build) Volumes	**0**	**0**	**0**	**18**	**0**	**66**	**0**	**178**	**11**	**27**	**320**	**0**	**620**
2040 Projected (Build) Volumes	**0**	**0**	**0**	**18**	**0**	**66**	**0**	**178**	**11**	**27**	**320**	**0**	**620**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**S New Street and S Campus Drive/Parking Lot**									
Synchro Node:	**21**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**68**	**9**	**10**	**0**	**7**	**4**	**7**	**132**	**1**	**3**	**79**	**25**	**345**
Balancing													0
2024 Existing Volumes (Balanced)	**68**	**9**	**10**	**0**	**7**	**4**	**7**	**132**	**1**	**3**	**79**	**25**	**345**
RD - Church Street (North) Closure													
RD - University Ave Closure													0
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2026 Projected (Build) Volumes	**70**	**9**	**10**	**0**	**7**	**4**	**7**	**135**	**1**	**3**	**81**	**26**	**353**
Base growth (0.75% compounded for 17 yrs)	9	1	1	0	1	1	1	18	0	0	11	3	46
2040 Base (No-Build) Volumes	**77**	**10**	**11**	**0**	**8**	**5**	**8**	**150**	**1**	**3**	**90**	**28**	**391**
2040 Projected (Build) Volumes	**77**	**10**	**11**	**0**	**8**	**5**	**8**	**150**	**1**	**3**	**90**	**28**	**391**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**92**	**8**	**30**	**4**	**10**	**8**	**18**	**62**	**1**	**2**	**187**	**95**	**517**
Balancing													0
2024 Existing Volumes (Balanced)	**92**	**8**	**30**	**4**	**10**	**8**	**18**	**62**	**1**	**2**	**187**	**95**	**517**
RD - Church Street (North) Closure													
RD - University Ave Closure													0
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Base growth (0.75% compounded for 17 yrs)	12	1	4	1	1	1	2	8	0	0	25	13	68
2040 Base (No-Build) Volumes	**104**	**9**	**34**	**5**	**11**	**9**	**20**	**70**	**1**	**2**	**212**	**108**	**585**
2040 Projected (Build) Volumes	**104**	**9**	**34**	**5**	**11**	**9**	**20**	**70**	**1**	**2**	**212**	**108**	**585**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**S New Street and Tigue Road/Stadium Drive**									
Synchro Node:	**22**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**15**	**1**	**7**	**5**	**1**	**4**	**12**	**126**	**7**	**5**	**66**	**19**	**268**
Balancing													0
2024 Existing Volumes (Balanced)	**15**	**1**	**7**	**5**	**1**	**4**	**12**	**126**	**7**	**5**	**66**	**19**	**268**
RD - Church Street (North) Closure													
RD - University Ave Closure													0
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2026 Projected (Build) Volumes	**15**	**1**	**7**	**5**	**1**	**4**	**12**	**129**	**7**	**5**	**67**	**19**	**272**
Base growth (0.75% compounded for 17 yrs)	2	0	1	1	0	1	2	17	1	1	9	3	38
2040 Base (No-Build) Volumes	**17**	**1**	**8**	**6**	**1**	**5**	**14**	**143**	**8**	**6**	**75**	**22**	**306**
2040 Projected (Build) Volumes	**17**	**1**	**8**	**6**	**1**	**5**	**14**	**143**	**8**	**6**	**75**	**22**	**306**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2023 Existing Counts	**7**	**2**	**8**	**5**	**2**	**7**	**48**	**66**	**3**	**3**	**139**	**77**	**367**
Balancing													0
2024 Existing Volumes (Balanced)	**7**	**2**	**8**	**5**	**2**	**7**	**48**	**66**	**3**	**3**	**139**	**77**	**367**
RD - Church Street (North) Closure													
RD - University Ave Closure													0
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Base growth (0.75% compounded for 17 yrs)	1	0	1	1	0	1	7	9	0	0	19	10	49
2040 Base (No-Build) Volumes	**8**	**2**	**9**	**6**	**2**	**8**	**55**	**75**	**3**	**3**	**158**	**87**	**416**
2040 Projected (Build) Volumes	**8**	**2**	**9**	**6**	**2**	**8**	**55**	**75**	**3**	**3**	**158**	**87**	**416**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**Matlack Street and Campus Drive**									
Synchro Node:	**23**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2024 Existing Counts	**15**	**9**	**33**	**1**	**9**	**16**	**144**	**241**	**2**	**23**	**268**	**13**	**774**
Balancing													0
2024 Existing Volumes (Balanced)	**15**	**9**	**33**	**1**	**9**	**16**	**144**	**241**	**2**	**23**	**268**	**13**	**774**
RD - Church Street (North) Closure													
RD - University Ave Closure													0
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2026 Projected (Build) Volumes	**15**	**9**	**33**	**1**	**9**	**16**	**146**	**245**	**2**	**23**	**272**	**13**	**784**
Base growth (0.75% compounded for 16 yrs)	2	1	4	0	1	2	18	31	0	3	34	2	98
2040 Base (No-Build) Volumes	**17**	**10**	**37**	**1**	**10**	**18**	**162**	**272**	**2**	**26**	**302**	**15**	**872**
2040 Projected (Build) Volumes	**17**	**10**	**37**	**1**	**10**	**18**	**162**	**272**	**2**	**26**	**302**	**15**	**872**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2024 Existing Counts	**38**	**0**	**65**	**3**	**2**	**5**	**68**	**368**	**2**	**2**	**232**	**18**	**803**
Balancing													0
2024 Existing Volumes (Balanced)	**38**	**0**	**65**	**3**	**2**	**5**	**68**	**368**	**2**	**2**	**232**	**18**	**803**
RD - Church Street (North) Closure													
RD - University Ave Closure													0
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Base growth (0.75% compounded for 16 yrs)	5	0	8	0	0	1	9	47	0	0	29	2	101
2040 Base (No-Build) Volumes	**43**	**0**	**73**	**3**	**2**	**6**	**77**	**415**	**2**	**2**	**261**	**20**	**904**
2040 Projected (Build) Volumes	**43**	**0**	**73**	**3**	**2**	**6**	**77**	**415**	**2**	**2**	**261**	**20**	**904**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**Matlack Street and M Lot Southern Driveway**											
Synchro Node:	**24**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**		

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2024 Existing Counts	**0**	**0**	**4**	**0**	**0**	**0**	**16**	**451**	**0**	**0**	**265**	**0**	**736**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**0**	**4**	**0**	**0**	**0**	**16**	**451**	**0**	**0**	**265**	**0**	**736**
RD - Church Street (North) Closure													
RD - University Ave Closure													0
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2026 Projected (Build) Volumes	**0**	**0**	**4**	**0**	**0**	**0**	**16**	**458**	**0**	**0**	**269**	**0**	**747**
Base growth (0.75% compounded for 16 yrs)	0	0	1	0	0	0	2	57	0	0	34	0	94
2040 Base (No-Build) Volumes	**0**	**0**	**5**	**0**	**0**	**0**	**18**	**508**	**0**	**0**	**299**	**0**	**830**
2040 Projected (Build) Volumes	**0**	**0**	**5**	**0**	**0**	**0**	**18**	**508**	**0**	**0**	**299**	**0**	**830**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2024 Existing Counts	**0**	**0**	**5**	**0**	**0**	**0**	**6**	**437**	**0**	**0**	**341**	**0**	**789**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**0**	**5**	**0**	**0**	**0**	**6**	**437**	**0**	**0**	**341**	**0**	**789**
RD - Church Street (North) Closure													
RD - University Ave Closure													0
RD - Church Street (South) Closure													0
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Base growth (0.75% compounded for 16 yrs)	0	0	1	0	0	0	1	55	0	0	43	0	100
2040 Base (No-Build) Volumes	**0**	**0**	**6**	**0**	**0**	**0**	**7**	**492**	**0**	**0**	**384**	**0**	**889**
2040 Projected (Build) Volumes	**0**	**0**	**6**	**0**	**0**	**0**	**7**	**492**	**0**	**0**	**384**	**0**	**889**

TPD# WCU.04
1/31/2025
Traffic Volumes Worksheet

Intersection:	**S High Street and Campus Drive**											
Synchro Node:	**25**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**		

Time Period: Weekday A.M. Peak Hour

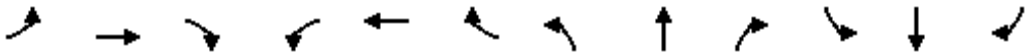
	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2024 Existing Counts	**0**	**0**	**0**	**17**	**0**	**32**	**0**	**504**	**81**	**102**	**402**	**0**	**1138**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**0**	**0**	**17**	**0**	**32**	**0**	**504**	**81**	**102**	**402**	**0**	**1138**
RD - Church Street (North) Closure								0			0		
RD - University Ave Closure								0			10		10
RD - Church Street (South) Closure								0			30		30
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**40**	**0**	**40**
2026 Projected (Build) Volumes	**0**	**0**	**0**	**17**	**0**	**32**	**0**	**512**	**82**	**104**	**448**	**0**	**1195**
Base growth (0.75% compounded for 16 yrs)	0	0	0	2	0	4	0	64	10	13	51	0	144
2040 Base (No-Build) Volumes	**0**	**0**	**0**	**19**	**0**	**36**	**0**	**568**	**91**	**115**	**453**	**0**	**1282**
2040 Projected (Build) Volumes	**0**	**0**	**0**	**19**	**0**	**36**	**0**	**568**	**91**	**115**	**493**	**0**	**1322**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2024 Existing Counts	**0**	**0**	**0**	**70**	**0**	**83**	**0**	**564**	**32**	**35**	**657**	**0**	**1441**
Balancing													0
2024 Existing Volumes (Balanced)	**0**	**0**	**0**	**70**	**0**	**83**	**0**	**564**	**32**	**35**	**657**	**0**	**1441**
RD - Church Street (North) Closure								0			0		
RD - University Ave Closure								0			13		13
RD - Church Street (South) Closure								0			33		33
Total Re-Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**46**	**0**	**46**
Base growth (0.75% compounded for 16 yrs)	0	0	0	9	0	11	0	72	4	4	83	0	183
2040 Base (No-Build) Volumes	**0**	**0**	**0**	**79**	**0**	**94**	**0**	**636**	**36**	**39**	**740**	**0**	**1624**
2040 Projected (Build) Volumes	**0**	**0**	**0**	**79**	**0**	**94**	**0**	**636**	**36**	**39**	**786**	**0**	**1670**

APPENDIX E:
Capacity Analyses

Existing Conditions



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	54	7	48	10	5	9	88	77	10	114	1
Future Volume (vph)	4	54	7	48	10	5	9	88	77	10	114	1
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.986			0.989			0.940			0.999	
Flt Protected		0.997			0.964			0.997			0.996	
Satd. Flow (prot)	0	1767	0	0	1811	0	0	1547	0	0	1833	0
Flt Permitted		0.997			0.964			0.997			0.996	
Satd. Flow (perm)	0	1767	0	0	1811	0	0	1547	0	0	1833	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

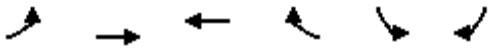
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	54	7	48	10	5	9	88	77	10	114	1
Future Vol, veh/h	4	54	7	48	10	5	9	88	77	10	114	1
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	50	4	0	0	0	0	11	9	20	0	4	0
Mvmt Flow	5	73	9	65	14	7	12	119	104	14	154	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.7	8.8	9.4	9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	6%	76%	8%
Vol Thru, %	51%	83%	16%	91%
Vol Right, %	44%	11%	8%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	174	65	63	125
LT Vol	9	4	48	10
Through Vol	88	54	10	114
RT Vol	77	7	5	1
Lane Flow Rate	235	88	85	169
Geometry Grp	1	1	1	1
Degree of Util (X)	0.294	0.14	0.12	0.218
Departure Headway (Hd)	4.5	5.74	5.063	4.649
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	797	622	704	770
Service Time	2.539	3.799	3.122	2.692
HCM Lane V/C Ratio	0.295	0.141	0.121	0.219
HCM Control Delay	9.4	9.7	8.8	9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.2	0.5	0.4	0.8



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	135	58	12	5	2
Future Volume (vph)	3	135	58	12	5	2
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.977		0.955	
Flt Protected		0.999			0.968	
Satd. Flow (prot)	0	1684	1826	0	1756	0
Flt Permitted		0.999			0.968	
Satd. Flow (perm)	0	1684	1826	0	1756	0
Sign Control		Free	Free		Stop	

Intersection Summary

Control Type: Unsignalized

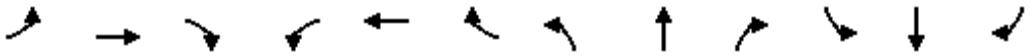
Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	135	58	12	5	2
Future Vol, veh/h	3	135	58	12	5	2
Conflicting Peds, #/hr	3	0	0	3	14	13
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	0	13	2	0	0	0
Mvmt Flow	4	171	73	15	6	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	91	0	-	0	277	97
Stage 1	-	-	-	-	84	-
Stage 2	-	-	-	-	193	-
Critical Hdwy	4.3	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	1118	-	-	-	821	1024
Stage 1	-	-	-	-	1095	-
Stage 2	-	-	-	-	973	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1115	-	-	-	813	1008
Mov Cap-2 Maneuver	-	-	-	-	813	-
Stage 1	-	-	-	-	1087	-
Stage 2	-	-	-	-	970	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1115	-	-	-	861
HCM Lane V/C Ratio	0.003	-	-	-	0.01
HCM Control Delay (s)	8.2	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	92	26	21	58	0	0	0	0	26	25	10
Future Volume (vph)	0	92	26	21	58	0	0	0	0	26	25	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.970									0.978	
Flt Protected					0.987						0.979	
Satd. Flow (prot)	0	1719	0	0	1733	0	0	0	0	0	1761	0
Flt Permitted					0.987						0.979	
Satd. Flow (perm)	0	1719	0	0	1733	0	0	0	0	0	1761	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	92	26	21	58	0	0	0	0	26	25	10
Future Vol, veh/h	0	92	26	21	58	0	0	0	0	26	25	10
Conflicting Peds, #/hr	12	0	26	26	0	12	33	0	26	26	0	33
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	-1	-	-	-1	-	-	-3	-
Peak Hour Factor	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	0	0	35	33	0	0	0	0	0	0	12	0
Mvmt Flow	0	119	34	27	75	0	0	0	0	34	32	13

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	179	0	0	291	308	108
Stage 1	-	-	-	-	-	-	129	129	-
Stage 2	-	-	-	-	-	-	162	179	-
Critical Hdwy	-	-	-	4.6	-	-	5.8	6.02	5.9
Critical Hdwy Stg 1	-	-	-	-	-	-	4.8	5.02	-
Critical Hdwy Stg 2	-	-	-	-	-	-	4.8	5.02	-
Follow-up Hdwy	-	-	-	3.3	-	-	3	4.108	3.1
Pot Cap-1 Maneuver	0	-	-	941	-	0	846	621	1019
Stage 1	0	-	-	-	-	0	1066	787	-
Stage 2	0	-	-	-	-	0	1034	755	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	941	-	-	821	0	987
Mov Cap-2 Maneuver	-	-	-	-	-	-	821	0	-
Stage 1	-	-	-	-	-	-	1066	0	-
Stage 2	-	-	-	-	-	-	1003	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	2.4	9.6
HCM LOS			A

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	941	-	861
HCM Lane V/C Ratio	-	-	0.029	-	0.092
HCM Control Delay (s)	-	-	8.9	0	9.6
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	-	0.3

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	86	14	6	114	11	8
Future Volume (vph)	86	14	6	114	11	8
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.981				0.944	
Flt Protected				0.997	0.972	
Satd. Flow (prot)	1848	0	0	1825	1743	0
Flt Permitted				0.997	0.972	
Satd. Flow (perm)	1848	0	0	1825	1743	0
Sign Control	Free			Free	Stop	

Intersection Summary

Control Type: Unsignalized

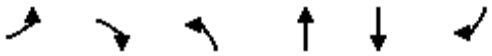
Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	86	14	6	114	11	8
Future Vol, veh/h	86	14	6	114	11	8
Conflicting Peds, #/hr	0	22	22	0	4	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	1	0	0	4	0	0
Mvmt Flow	109	18	8	144	14	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	149	0	304	142
Stage 1	-	-	-	-	140	-
Stage 2	-	-	-	-	164	-
Critical Hdwy	-	-	4.3	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	1068	-	791	966
Stage 1	-	-	-	-	1031	-
Stage 2	-	-	-	-	1004	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1046	-	765	944
Mov Cap-2 Maneuver	-	-	-	-	765	-
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	992	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	831	-	-	1046	-
HCM Lane V/C Ratio	0.029	-	-	0.007	-
HCM Control Delay (s)	9.5	-	-	8.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	24	71	47	312	502	73
Future Volume (vph)	24	71	47	312	502	73
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.899				0.983	
Flt Protected	0.988			0.993		
Satd. Flow (prot)	1675	0	0	1808	1845	0
Flt Permitted	0.988			0.993		
Satd. Flow (perm)	1675	0	0	1808	1845	0
Sign Control	Stop			Free	Free	

Intersection Summary

Control Type: Unsignalized

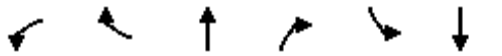
Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	24	71	47	312	502	73
Future Vol, veh/h	24	71	47	312	502	73
Conflicting Peds, #/hr	22	11	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	1	4	5	1	3
Mvmt Flow	29	86	57	376	605	88

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1171	670	703	0	-	0
Stage 1	659	-	-	-	-	-
Stage 2	512	-	-	-	-	-
Critical Hdwy	6.4	6.21	4.3	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	3	-	-	-
Pot Cap-1 Maneuver	234	481	685	-	-	-
Stage 1	580	-	-	-	-	-
Stage 2	684	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	205	471	678	-	-	-
Mov Cap-2 Maneuver	205	-	-	-	-	-
Stage 1	513	-	-	-	-	-
Stage 2	677	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.9	1.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	678	-	355	-	-
HCM Lane V/C Ratio	0.084	-	0.322	-	-
HCM Control Delay (s)	10.8	0	19.9	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0.3	-	1.4	-	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	356	11	141	434
Future Volume (vph)	0	0	356	11	141	434
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.996			
Flt Protected						0.988
Satd. Flow (prot)	1900	0	1817	0	0	1849
Flt Permitted						0.988
Satd. Flow (perm)	1900	0	1817	0	0	1849
Sign Control	Stop		Free			Free

Intersection Summary
Control Type: Unsignalized

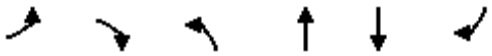
Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	356	11	141	434
Future Vol, veh/h	0	0	356	11	141	434
Conflicting Peds, #/hr	39	1	0	16	16	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	4	9	0	2
Mvmt Flow	0	0	424	13	168	517

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1339	448	0	0	453	0
Stage 1	447	-	-	-	-	-
Stage 2	892	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.3	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	184	647	-	-	839	-
Stage 1	735	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	125	637	-	-	826	-
Mov Cap-2 Maneuver	125	-	-	-	-	-
Stage 1	724	-	-	-	-	-
Stage 2	307	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	2.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	826	-
HCM Lane V/C Ratio	-	-	-	0.203	-
HCM Control Delay (s)	-	-	0	10.5	0
HCM Lane LOS	-	-	A	B	A
HCM 95th %tile Q(veh)	-	-	-	0.8	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	50	374	413	11
Future Volume (vph)	0	0	50	374	413	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.997	
Flt Protected				0.994		
Satd. Flow (prot)	1900	0	0	1797	1876	0
Flt Permitted				0.994		
Satd. Flow (perm)	1900	0	0	1797	1876	0
Sign Control	Stop			Free	Free	

Intersection Summary
Control Type: Unsignalized

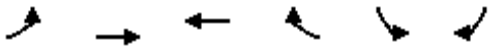
Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	50	374	413	11
Future Vol, veh/h	0	0	50	374	413	11
Conflicting Peds, #/hr	17	32	40	0	0	40
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	6	5	1	0
Mvmt Flow	0	0	56	416	459	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1050	537	511	0	-	0
Stage 1	505	-	-	-	-	-
Stage 2	545	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.4	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	3.1	-	-	-
Pot Cap-1 Maneuver	278	575	769	-	-	-
Stage 1	689	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	232	536	740	-	-	-
Mov Cap-2 Maneuver	232	-	-	-	-	-
Stage 1	598	-	-	-	-	-
Stage 2	634	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	1.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	740	-	-	-	-
HCM Lane V/C Ratio	0.075	-	-	-	-
HCM Control Delay (s)	10.3	0	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	38	26	0	4
Future Volume (vph)	0	0	38	26	0	4
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.945		0.865	
Flt Protected						
Satd. Flow (prot)	0	1900	1764	0	1308	0
Flt Permitted						
Satd. Flow (perm)	0	1900	1764	0	1308	0
Sign Control		Free	Free		Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	38	26	0	4
Future Vol, veh/h	0	0	38	26	0	4
Conflicting Peds, #/hr	44	0	0	44	7	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	1	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	3	0	0	25
Mvmt Flow	0	0	42	29	0	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	115	0	-	0	108	104
Stage 1	-	-	-	-	101	-
Stage 2	-	-	-	-	7	-
Critical Hdwy	4.3	-	-	-	6.6	6.55
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	3	-	-	-	3	3.3
Pot Cap-1 Maneuver	1097	-	-	-	1029	947
Stage 1	-	-	-	-	1069	-
Stage 2	-	-	-	-	1190	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1051	-	-	-	945	905
Mov Cap-2 Maneuver	-	-	-	-	945	-
Stage 1	-	-	-	-	1024	-
Stage 2	-	-	-	-	1140	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1051	-	-	-	905
HCM Lane V/C Ratio	-	-	-	-	0.005
HCM Control Delay (s)	0	-	-	-	9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	49	0	0	0	0	85
Future Volume (vph)	49	0	0	0	0	85
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1761	0	0	0	0	1377
Flt Permitted	0.950					
Satd. Flow (perm)	1761	0	0	0	0	1377
Sign Control	Stop		Free			Free

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	8.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	49	0	0	0	0	85
Future Vol, veh/h	49	0	0	0	0	85
Conflicting Peds, #/hr	211	317	0	384	384	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	0	-	-	0
Peak Hour Factor	62	62	62	62	62	62
Heavy Vehicles, %	2	0	0	0	0	38
Mvmt Flow	79	0	0	0	0	137

Major/Minor	Minor1		Major2	
Conflicting Flow All	732	-	384	0
Stage 1	384	-	-	-
Stage 2	348	-	-	-
Critical Hdwy	6.62	-	4.3	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.62	-	-	-
Follow-up Hdwy	3	-	3	-
Pot Cap-1 Maneuver	417	0	886	-
Stage 1	-	0	-	-
Stage 2	803	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	264	-	562	-
Mov Cap-2 Maneuver	264	-	-	-
Stage 1	-	-	-	-
Stage 2	803	-	-	-

Approach	WB	SB
HCM Control Delay, s	24.4	0
HCM LOS	C	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	264	562	-
HCM Lane V/C Ratio	0.299	-	-
HCM Control Delay (s)	24.4	0	-
HCM Lane LOS	C	A	-
HCM 95th %tile Q(veh)	1.2	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	20	23	400	0	0	417
Future Volume (vph)	20	23	400	0	0	417
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.90					
Frt	0.927					
Flt Protected	0.977					
Satd. Flow (prot)	1546	0	1838	0	0	1873
Flt Permitted	0.977					
Satd. Flow (perm)	1537	0	1838	0	0	1873
Satd. Flow (RTOR)	28					
Turn Type	Prot		NA			NA
Protected Phases	4		6			2
Permitted Phases						
Detector Phase	4		6			2
Switch Phase						
Minimum Initial (s)	3.0		49.0			49.0
Minimum Split (s)	19.0		54.0			54.0
Total Split (s)	29.0		55.0			55.0
Total Split (%)	34.5%		65.5%			65.5%
Yellow Time (s)	3.0		3.0			3.0
All-Red Time (s)	2.0		2.0			2.0
Lost Time Adjust (s)	-1.0		-1.0			-1.0
Total Lost Time (s)	4.0		4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Max			Max

Intersection Summary
Cycle Length: 84
Actuated Cycle Length: 69.6
Natural Cycle: 75
Control Type: Actuated-Uncoordinated

Splits and Phases: 10: S High Street & Linden Street

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	20	23	400	0	0	417
Future Volume (veh/h)	20	23	400	0	0	417
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.78		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1703	1790	1837	0	0	1837
Adj Flow Rate, veh/h	24	23	482	0	0	502
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	10	4	5	0	0	2
Cap, veh/h	84	80	1390	0	0	1390
Arrive On Green	0.12	0.12	0.76	0.00	0.00	0.76
Sat Flow, veh/h	670	642	1837	0	0	1837
Grp Volume(v), veh/h	48	0	482	0	0	502
Grp Sat Flow(s),veh/h/ln	1340	0	1837	0	0	1837
Q Serve(g_s), s	2.2	0.0	5.8	0.0	0.0	6.2
Cycle Q Clear(g_c), s	2.2	0.0	5.8	0.0	0.0	6.2
Prop In Lane	0.50	0.48		0.00	0.00	
Lane Grp Cap(c), veh/h	167	0	1390	0	0	1390
V/C Ratio(X)	0.29	0.00	0.35	0.00	0.00	0.36
Avail Cap(c_a), veh/h	497	0	1390	0	0	1390
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	26.8	0.0	2.7	0.0	0.0	2.7
Incr Delay (d2), s/veh	0.9	0.0	0.7	0.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.3	0.0	2.7	0.0	0.0	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.7	0.0	3.4	0.0	0.0	3.5
LnGrp LOS	C	A	A	A	A	A
Approach Vol, veh/h	48		482			502
Approach Delay, s/veh	27.7		3.4			3.5
Approach LOS	C		A			A

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		55.0		12.4		55.0
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		50.0		24.0		50.0
Max Q Clear Time (g_c+I1), s		0.0		4.7		0.0
Green Ext Time (p_c), s		0.0		0.1		0.0

Intersection Summary	
HCM 6th Ctrl Delay	4.6
HCM 6th LOS	A

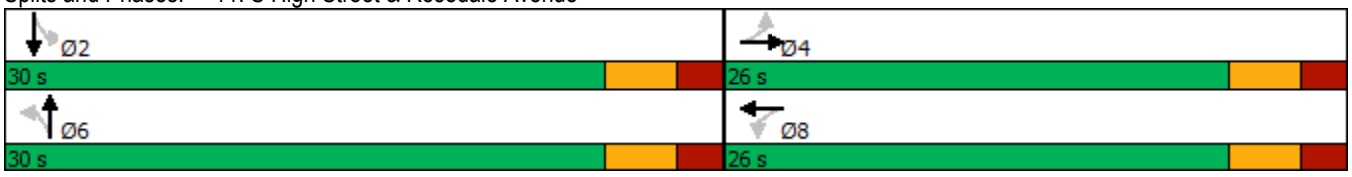
Notes

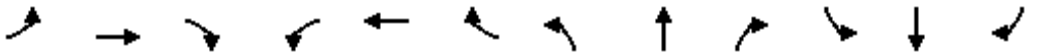
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	341	92	41	217	69	50	318	53	51	380	22
Future Volume (vph)	42	341	92	41	217	69	50	318	53	51	380	22
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.93	0.97		0.95	0.97		0.97	0.98		0.95	1.00	
Frt		0.968			0.964			0.979			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1590	1620	0	1582	1565	0	1483	1826	0	1645	1711	0
Flt Permitted	0.491			0.303			0.429			0.459		
Satd. Flow (perm)	765	1620	0	481	1565	0	646	1826	0	756	1711	0
Satd. Flow (RTOR)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			6			2	
Permitted Phases	4			8			6			2		
Detector Phase	4	4		8	8		6	6		2	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		23.0	23.0		23.0	23.0	
Total Split (s)	26.0	26.0		26.0	26.0		30.0	30.0		30.0	30.0	
Total Split (%)	46.4%	46.4%		46.4%	46.4%		53.6%	53.6%		53.6%	53.6%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	

Intersection Summary
Cycle Length: 56
Actuated Cycle Length: 53.3
Natural Cycle: 50
Control Type: Actuated-Uncoordinated

Splits and Phases: 11: S High Street & Rosedale Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	341	92	41	217	69	50	318	53	51	380	22
Future Volume (veh/h)	42	341	92	41	217	69	50	318	53	51	380	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.94		0.89	0.96		0.89	0.98		0.94	0.98		0.94
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	1696	1724	1780	1679	1693	1679	1666	1776	1791	1883	1883	1912
Adj Flow Rate, veh/h	44	359	96	43	228	65	53	335	55	54	400	22
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	7	5	1	7	6	7	6	3	2	2	2	0
Cap, veh/h	358	480	128	246	463	132	411	701	115	456	840	46
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	928	1274	341	809	1230	351	840	1471	242	977	1761	97
Grp Volume(v), veh/h	44	0	455	43	0	293	53	0	390	54	0	422
Grp Sat Flow(s),veh/h/ln	928	0	1614	809	0	1580	840	0	1713	977	0	1858
Q Serve(g_s), s	2.1	0.0	13.3	2.6	0.0	7.7	2.5	0.0	8.4	2.1	0.0	8.4
Cycle Q Clear(g_c), s	9.3	0.0	13.3	15.5	0.0	7.7	10.3	0.0	8.4	10.0	0.0	8.4
Prop In Lane	1.00		0.21	1.00		0.22	1.00		0.14	1.00		0.05
Lane Grp Cap(c), veh/h	358	0	608	246	0	595	411	0	817	456	0	886
V/C Ratio(X)	0.12	0.00	0.75	0.17	0.00	0.49	0.13	0.00	0.48	0.12	0.00	0.48
Avail Cap(c_a), veh/h	383	0	651	268	0	637	411	0	817	456	0	886
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.4	0.0	14.8	21.2	0.0	13.0	13.0	0.0	9.7	12.9	0.0	9.7
Incr Delay (d2), s/veh	0.2	0.0	4.5	0.3	0.0	0.6	0.6	0.0	2.0	0.5	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	0.0	8.7	0.9	0.0	4.6	0.9	0.0	5.6	0.9	0.0	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.5	0.0	19.2	21.6	0.0	13.6	13.6	0.0	11.7	13.4	0.0	11.5
LnGrp LOS	B	A	B	C	A	B	B	A	B	B	A	B
Approach Vol, veh/h		499			336			443			476	
Approach Delay, s/veh		19.0			14.7			11.9			11.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		24.5		30.0		24.5				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		25.0		21.0		25.0		21.0				
Max Q Clear Time (g_c+I1), s		0.0		15.3		0.0		18.0				
Green Ext Time (p_c), s		0.0		1.1		0.0		0.4				

Intersection Summary												
HCM 6th Ctrl Delay			14.4									
HCM 6th LOS			B									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	142	262	53	58	0	247	0	47	6	56	17
Future Volume (vph)	0	142	262	53	58	0	247	0	47	6	56	17
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.912							0.850		0.970	
Flt Protected					0.977		0.950				0.996	
Satd. Flow (prot)	0	1677	0	0	1661	0	1727	0	1474	0	1810	0
Flt Permitted					0.977		0.950				0.996	
Satd. Flow (perm)	0	1677	0	0	1661	0	1727	0	1474	0	1810	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

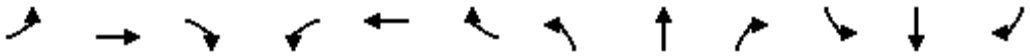
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	142	262	53	58	0	247	0	47	6	56	17
Future Vol, veh/h	0	142	262	53	58	0	247	0	47	6	56	17
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	4	3	6	16	0	4	0	9	0	2	0
Mvmt Flow	0	148	273	55	60	0	257	0	49	6	58	18
Number of Lanes	0	1	0	0	1	0	1	0	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	14.7	10.4	14.2	9.9
HCM LOS	B	B	B	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	48%	8%
Vol Thru, %	0%	0%	35%	52%	71%
Vol Right, %	0%	100%	65%	0%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	247	47	404	111	79
LT Vol	247	0	0	53	6
Through Vol	0	0	142	58	56
RT Vol	0	47	262	0	17
Lane Flow Rate	257	49	421	116	82
Geometry Grp	5	5	2	2	4a
Degree of Util (X)	0.474	0.075	0.581	0.191	0.136
Departure Headway (Hd)	6.636	5.505	4.974	5.952	5.932
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	543	650	724	601	602
Service Time	4.374	3.242	3.015	4.007	3.986
HCM Lane V/C Ratio	0.473	0.075	0.581	0.193	0.136
HCM Control Delay	15.2	8.7	14.7	10.4	9.9
HCM Lane LOS	C	A	B	B	A
HCM 95th-tile Q	2.5	0.2	3.8	0.7	0.5



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	1	51	0	37	11	354	110	79	287	5
Future Volume (vph)	1	1	1	51	0	37	11	354	110	79	287	5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.955			0.943			0.964			0.997	
Flt Protected		0.984			0.972		0.950			0.950		
Satd. Flow (prot)	0	1768	0	0	1686	0	1805	1778	0	1787	1823	0
Flt Permitted		0.984			0.972		0.950			0.950		
Satd. Flow (perm)	0	1768	0	0	1686	0	1805	1778	0	1787	1823	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	1	51	0	37	11	354	110	79	287	5
Future Vol, veh/h	1	1	1	51	0	37	11	354	110	79	287	5
Conflicting Peds, #/hr	4	0	1	1	0	4	6	0	0	0	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	25	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	2	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	2	0	5	0	3	3	1	4	0
Mvmt Flow	1	1	1	57	0	42	12	398	124	89	322	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1018	1055	332	989	996	464	334	0	0	522	0	0
Stage 1	509	509	-	484	484	-	-	-	-	-	-	-
Stage 2	509	546	-	505	512	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.9	6.4	7.12	6.5	6.25	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.5	5.9	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.9	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.1	3	4	3.1	3	-	-	3	-	-
Pot Cap-1 Maneuver	213	202	740	249	246	629	922	-	-	793	-	-
Stage 1	587	512	-	640	555	-	-	-	-	-	-	-
Stage 2	587	491	-	623	540	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	178	176	735	224	214	627	917	-	-	793	-	-
Mov Cap-2 Maneuver	178	176	-	224	214	-	-	-	-	-	-	-
Stage 1	576	452	-	632	548	-	-	-	-	-	-	-
Stage 2	539	485	-	550	477	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.4	22.2	0.2	2.2
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	917	-	-	237	307	793	-	-
HCM Lane V/C Ratio	0.013	-	-	0.014	0.322	0.112	-	-
HCM Control Delay (s)	9	-	-	20.4	22.2	10.1	-	-
HCM Lane LOS	A	-	-	C	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0	1.4	0.4	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	431	11	26	229	0	0	0	0	33	5	31
Future Volume (vph)	0	431	11	26	229	0	0	0	0	33	5	31
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.997									0.939	
Flt Protected					0.995						0.977	
Satd. Flow (prot)	0	1986	0	0	1743	0	0	0	0	0	1362	0
Flt Permitted					0.995						0.977	
Satd. Flow (perm)	0	1986	0	0	1743	0	0	0	0	0	1362	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	431	11	26	229	0	0	0	0	33	5	31
Future Vol, veh/h	0	431	11	26	229	0	0	0	0	33	5	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	3	0	4	7	0	0	0	0	33	0	42
Mvmt Flow	0	444	11	27	236	0	0	0	0	34	5	32
Number of Lanes	0	1	0	0	1	0	0	0	0	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	13	10.1	9.7
HCM LOS	B	B	A

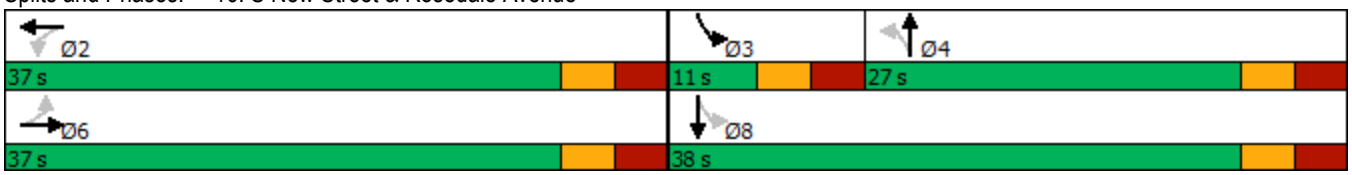
Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	10%	48%
Vol Thru, %	98%	90%	7%
Vol Right, %	2%	0%	45%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	442	255	69
LT Vol	0	26	33
Through Vol	431	229	5
RT Vol	11	0	31
Lane Flow Rate	456	263	71
Geometry Grp	1	1	1
Degree of Util (X)	0.561	0.341	0.116
Departure Headway (Hd)	4.436	4.675	5.862
Convergence, Y/N	Yes	Yes	Yes
Cap	811	768	609
Service Time	2.466	2.713	3.923
HCM Lane V/C Ratio	0.562	0.342	0.117
HCM Control Delay	13	10.1	9.7
HCM Lane LOS	B	B	A
HCM 95th-tile Q	3.5	1.5	0.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	380	9	42	105	108	3	134	90	73	73	12
Future Volume (vph)	12	380	9	42	105	108	3	134	90	73	73	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			0.98			0.97			0.99	
Frt		0.997			0.924			0.946			0.989	
Flt Protected		0.998		0.950				0.999			0.977	
Satd. Flow (prot)	0	1780	0	1243	1438	0	0	1422	0	0	1949	0
Flt Permitted		0.989		0.490				0.996			0.698	
Satd. Flow (perm)	0	1763	0	641	1438	0	0	1418	0	0	1372	0
Satd. Flow (RTOR)		2									7	
Lane Group Flow (vph)	0	456	0	48	242	0	0	257	0	0	180	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		6			2			4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	6	6		2	2		4	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	26.0	26.0		26.0	26.0		24.0	24.0		11.0	24.0	
Total Split (s)	37.0	37.0		37.0	37.0		27.0	27.0		11.0	38.0	
Total Split (%)	49.3%	49.3%		49.3%	49.3%		36.0%	36.0%		14.7%	50.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.0	3.0		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	
Total Lost Time (s)		5.0		5.0	5.0			5.0			5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Act Effct Green (s)		32.2		32.2	32.2			16.3			16.3	
Actuated g/C Ratio		0.55		0.55	0.55			0.28			0.28	
v/c Ratio		0.47		0.14	0.31			0.65			0.47	
Control Delay		10.9		9.1	9.5			26.8			20.7	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		10.9		9.1	9.5			26.8			20.7	
LOS		B		A	A			C			C	
Approach Delay		10.9			9.4			26.8			20.7	
Approach LOS		B			A			C			C	
Queue Length 50th (ft)		87		7	41			78			49	
Queue Length 95th (ft)		178		26	94			140			95	
Internal Link Dist (ft)		1256			617			791			984	
Turn Bay Length (ft)				90								
Base Capacity (vph)		970		352	791			536			781	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.47		0.14	0.31			0.48			0.23	

Intersection Summary
Cycle Length: 75

Actuated Cycle Length: 58.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 15.5	Intersection LOS: B
Intersection Capacity Utilization 67.9%	ICU Level of Service C
Analysis Period (min) 15	

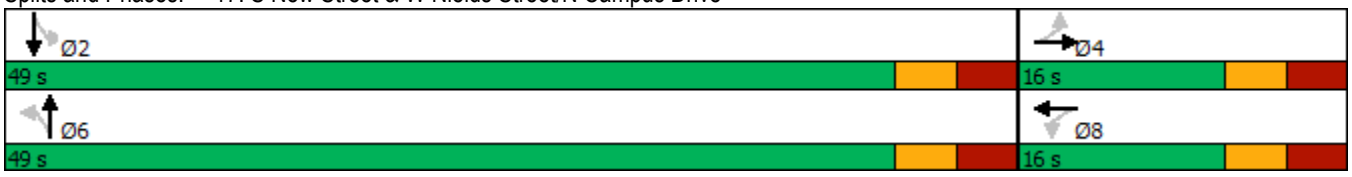
Splits and Phases: 16: S New Street & Rosedale Avenue

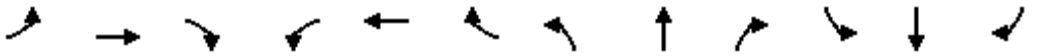


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	10	32	10	0	12	27	150	61	41	116	8
Future Volume (vph)	10	10	32	10	0	12	27	150	61	41	116	8
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.95			0.96		0.99	0.99			0.99	
Frt		0.917			0.926			0.957			0.993	
Flt Protected		0.991			0.978		0.950				0.988	
Satd. Flow (prot)	0	1608	0	0	1439	0	1645	1606	0	0	1979	0
Flt Permitted		0.926			0.862		0.622				0.881	
Satd. Flow (perm)	0	1501	0	0	1240	0	1071	1606	0	0	1755	0
Satd. Flow (RTOR)					50			70			9	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			6			2	
Permitted Phases	4			8			6			2		
Detector Phase	4	4		8	8		6	6		2	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		23.0	23.0		23.0	23.0	
Total Split (s)	16.0	16.0		16.0	16.0		49.0	49.0		49.0	49.0	
Total Split (%)	24.6%	24.6%		24.6%	24.6%		75.4%	75.4%		75.4%	75.4%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.0	3.0		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	
Total Lost Time (s)		5.0			5.0		5.0	5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	

Intersection Summary
Cycle Length: 65
Actuated Cycle Length: 68.9
Natural Cycle: 50
Control Type: Actuated-Uncoordinated

Splits and Phases: 17: S New Street & W Nields Street/N Campus Drive





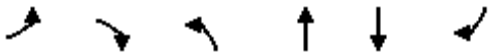
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	32	10	0	12	27	150	61	41	116	8
Future Volume (veh/h)	10	10	32	10	0	12	27	150	61	41	116	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.87		0.86	0.90		0.86	0.99		0.99	0.99		0.99
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	1988	1988	1944	1627	1912	1798	1794	1647	1793	2066	1992	2066
Adj Flow Rate, veh/h	13	13	42	13	0	8	36	197	67	54	153	11
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	0	0	3	20	0	8	0	15	5	0	5	0
Cap, veh/h	92	47	113	179	20	64	971	842	286	332	919	63
Arrive On Green	0.12	0.12	0.12	0.12	0.00	0.12	0.72	0.72	0.72	0.72	0.72	0.72
Sat Flow, veh/h	189	401	953	712	171	543	1163	1171	398	360	1279	87
Grp Volume(v), veh/h	68	0	0	21	0	0	36	0	264	218	0	0
Grp Sat Flow(s),veh/h/ln	1542	0	0	1426	0	0	1163	0	1570	1727	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.4	0.0	0.0	0.7	0.0	0.0	0.4	0.0	3.5	2.1	0.0	0.0
Prop In Lane	0.19		0.62	0.62		0.38	1.00		0.25	0.25		0.05
Lane Grp Cap(c), veh/h	253	0	0	264	0	0	971	0	1128	1314	0	0
V/C Ratio(X)	0.27	0.00	0.00	0.08	0.00	0.00	0.04	0.00	0.23	0.17	0.00	0.00
Avail Cap(c_a), veh/h	344	0	0	343	0	0	971	0	1128	1314	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.8	0.0	0.0	24.1	0.0	0.0	2.5	0.0	2.9	2.7	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.5	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	0.0	0.0	0.5	0.0	0.0	0.2	0.0	1.5	1.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.4	0.0	0.0	24.2	0.0	0.0	2.6	0.0	3.4	3.0	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		68			21			300			218	
Approach Delay, s/veh		25.4			24.2			3.3			3.0	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		49.0		12.2		49.0		12.2				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		43.0		10.0		43.0		10.0				
Max Q Clear Time (g_c+I1), s		0.0		4.4		0.0		2.7				
Green Ext Time (p_c), s		0.0		0.1		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			6.4									
HCM 6th LOS			A									

Notes

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



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	1	2	216	143	8
Future Volume (vph)	7	1	2	216	143	8
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.986				0.993	
Flt Protected	0.957			0.999		
Satd. Flow (prot)	1436	0	0	1784	1663	0
Flt Permitted	0.957			0.999		
Satd. Flow (perm)	1436	0	0	1784	1663	0
Sign Control	Stop			Stop	Stop	

Intersection Summary

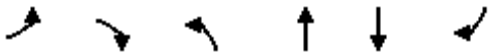
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	1	2	216	143	8
Future Vol, veh/h	7	1	2	216	143	8
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles, %	29	0	0	7	12	38
Mvmt Flow	9	1	3	284	188	11
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.6	9.1	8.7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	1%	88%	0%
Vol Thru, %	99%	0%	95%
Vol Right, %	0%	12%	5%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	218	8	151
LT Vol	2	7	0
Through Vol	216	0	143
RT Vol	0	1	8
Lane Flow Rate	287	11	199
Geometry Grp	1	1	1
Degree of Util (X)	0.324	0.016	0.238
Departure Headway (Hd)	4.068	5.543	4.304
Convergence, Y/N	Yes	Yes	Yes
Cap	875	650	827
Service Time	2.133	3.543	2.376
HCM Lane V/C Ratio	0.328	0.017	0.241
HCM Control Delay	9.1	8.6	8.7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.4	0	0.9



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	2	0	220	139	0
Future Volume (vph)	0	2	0	220	139	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected						
Satd. Flow (prot)	1635	0	0	1726	1698	0
Flt Permitted						
Satd. Flow (perm)	1635	0	0	1726	1698	0
Sign Control	Stop			Free	Free	

Intersection Summary
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	2	0	220	139	0
Future Vol, veh/h	0	2	0	220	139	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	2	-2	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	9	13	0
Mvmt Flow	0	3	0	278	176	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	454	176	176	0	-	0
Stage 1	176	-	-	-	-	-
Stage 2	278	-	-	-	-	-
Critical Hdwy	6.6	6.3	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	627	920	1046	-	-	-
Stage 1	981	-	-	-	-	-
Stage 2	872	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	627	920	1046	-	-	-
Mov Cap-2 Maneuver	627	-	-	-	-	-
Stage 1	981	-	-	-	-	-
Stage 2	872	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1046	-	920	-	-
HCM Lane V/C Ratio	-	-	0.003	-	-
HCM Control Delay (s)	0	-	8.9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	11	25	198	15	29	100
Future Volume (vph)	11	25	198	15	29	100
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.990			
Flt Protected	0.950					0.989
Satd. Flow (prot)	1038	1148	1697	0	0	1685
Flt Permitted	0.950					0.989
Satd. Flow (perm)	1038	1148	1697	0	0	1685
Sign Control	Stop		Free			Free

Intersection Summary

Control Type: Unsignalized

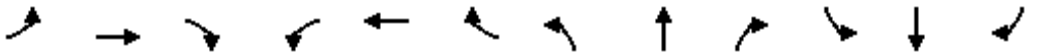
Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	25	198	15	29	100
Future Vol, veh/h	11	25	198	15	29	100
Conflicting Peds, #/hr	12	0	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	-3
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	73	40	5	80	24	10
Mvmt Flow	14	32	251	19	37	127

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	483	270	0	0	279	0
Stage 1	270	-	-	-	-	-
Stage 2	213	-	-	-	-	-
Critical Hdwy	7.33	6.7	-	-	4.5	-
Critical Hdwy Stg 1	6.33	-	-	-	-	-
Critical Hdwy Stg 2	6.33	-	-	-	-	-
Follow-up Hdwy	3.7	3.5	-	-	3.2	-
Pot Cap-1 Maneuver	462	708	-	-	896	-
Stage 1	693	-	-	-	-	-
Stage 2	745	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	432	702	-	-	888	-
Mov Cap-2 Maneuver	432	-	-	-	-	-
Stage 1	687	-	-	-	-	-
Stage 2	703	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.4	0	2.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	432	702	888	-
HCM Lane V/C Ratio	-	-	0.032	0.045	0.041	-
HCM Control Delay (s)	-	-	13.6	10.4	9.2	0
HCM Lane LOS	-	-	B	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	0.1	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	9	10	0	7	4	7	132	1	3	79	25
Future Volume (vph)	68	9	10	0	7	4	7	132	1	3	79	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.922			0.946			0.999			0.969	
Flt Protected	0.950							0.997			0.998	
Satd. Flow (prot)	1649	1191	0	1928	1335	0	0	1789	0	0	1633	0
Flt Permitted	0.950							0.997			0.998	
Satd. Flow (perm)	1649	1191	0	1928	1335	0	0	1789	0	0	1633	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Control Type: Unsignalized

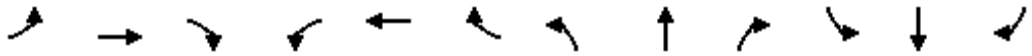
Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	68	9	10	0	7	4	7	132	1	3	79	25
Future Vol, veh/h	68	9	10	0	7	4	7	132	1	3	79	25
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	-3	-	-	1	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	10	100	0	0	57	0	29	4	0	33	3	40
Mvmt Flow	84	11	12	0	9	5	9	163	1	4	98	31

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	312	305	115	315	320	164	130	0	0	164	0	0
Stage 1	123	123	-	182	182	-	-	-	-	-	-	-
Stage 2	189	182	-	133	138	-	-	-	-	-	-	-
Critical Hdwy	7	7.3	6.1	6.5	6.47	5.9	4.6	-	-	4.6	-	-
Critical Hdwy Stg 1	6	6.3	-	5.5	5.47	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6	6.3	-	5.5	5.47	-	-	-	-	-	-	-
Follow-up Hdwy	3.1	4.9	3.1	3	4.513	3.1	3.3	-	-	3.3	-	-
Pot Cap-1 Maneuver	722	484	1004	773	545	952	980	-	-	953	-	-
Stage 1	997	643	-	979	677	-	-	-	-	-	-	-
Stage 2	918	603	-	1035	704	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	700	476	1003	741	536	952	979	-	-	953	-	-
Mov Cap-2 Maneuver	700	476	-	741	536	-	-	-	-	-	-	-
Stage 1	986	639	-	969	670	-	-	-	-	-	-	-
Stage 2	892	597	-	999	700	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.8	10.8	0.4	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	979	-	-	700	658	-	637	953	-	-
HCM Lane V/C Ratio	0.009	-	-	0.12	0.036	-	0.021	0.004	-	-
HCM Control Delay (s)	8.7	0	-	10.8	10.7	0	10.8	8.8	0	-
HCM Lane LOS	A	A	-	B	B	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.1	-	0.1	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	1	7	5	1	4	12	126	7	5	66	19
Future Volume (vph)	15	1	7	5	1	4	12	126	7	5	66	19
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.958			0.944			0.993			0.972	
Flt Protected		0.968			0.976			0.996			0.997	
Satd. Flow (prot)	0	1753	0	0	1348	0	0	1804	0	0	1763	0
Flt Permitted		0.968			0.976			0.996			0.997	
Satd. Flow (perm)	0	1753	0	0	1348	0	0	1804	0	0	1763	0
Sign Control		Stop			Stop			Stop			Stop	

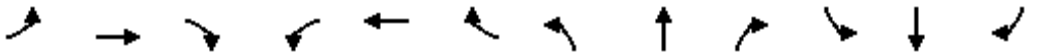
Intersection Summary
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	1	7	5	1	4	12	126	7	5	66	19
Future Vol, veh/h	15	1	7	5	1	4	12	126	7	5	66	19
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	0	0	0	0	100	50	0	4	14	0	6	0
Mvmt Flow	19	1	9	6	1	5	15	159	9	6	84	24
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.7	7.5	8.2	7.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	65%	50%	6%
Vol Thru, %	87%	4%	10%	73%
Vol Right, %	5%	30%	40%	21%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	145	23	10	90
LT Vol	12	15	5	5
Through Vol	126	1	1	66
RT Vol	7	7	4	19
Lane Flow Rate	184	29	13	114
Geometry Grp	1	1	1	1
Degree of Util (X)	0.206	0.036	0.016	0.126
Departure Headway (Hd)	4.046	4.495	4.427	3.995
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	881	801	813	887
Service Time	2.097	2.496	2.428	2.062
HCM Lane V/C Ratio	0.209	0.036	0.016	0.129
HCM Control Delay	8.2	7.7	7.5	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.8	0.1	0	0.4



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	9	33	1	9	16	144	241	2	23	268	13
Future Volume (vph)	15	9	33	1	9	16	144	241	2	23	268	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.918			0.999				0.850
Flt Protected		0.970			0.998		0.950			0.950		
Satd. Flow (prot)	0	1825	1355	0	1671	0	1814	1817	0	1727	1783	1607
Flt Permitted		0.970			0.998		0.950			0.950		
Satd. Flow (perm)	0	1825	1355	0	1671	0	1814	1817	0	1727	1783	1607
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Control Type: Unsignalized

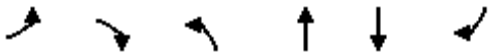
Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	9	33	1	9	16	144	241	2	23	268	13
Future Vol, veh/h	15	9	33	1	9	16	144	241	2	23	268	13
Conflicting Peds, #/hr	0	0	11	11	0	0	2	0	7	7	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	65	-	-	-	75	-	-	160	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	2	-	-	1	-	-	-1	-	-	1	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	18	0	0	6	0	5	0	4	6	0
Mvmt Flow	16	10	35	1	10	17	153	256	2	24	285	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	912	906	298	944	919	264	301	0	0	265	0	0
Stage 1	335	335	-	570	570	-	-	-	-	-	-	-
Stage 2	577	571	-	374	349	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.9	6.58	7.3	6.7	6.36	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.5	5.9	-	6.3	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.9	-	6.3	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.3	3	4	3.2	3	-	-	3	-	-
Pot Cap-1 Maneuver	256	251	723	256	260	792	947	-	-	975	-	-
Stage 1	751	622	-	556	493	-	-	-	-	-	-	-
Stage 2	533	477	-	726	625	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	208	203	714	198	211	787	945	-	-	969	-	-
Mov Cap-2 Maneuver	208	203	-	198	211	-	-	-	-	-	-	-
Stage 1	628	605	-	463	410	-	-	-	-	-	-	-
Stage 2	427	397	-	656	608	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.4	15.2	3.6	0.7
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	945	-	-	206	714	382	969	-	-
HCM Lane V/C Ratio	0.162	-	-	0.124	0.049	0.072	0.025	-	-
HCM Control Delay (s)	9.5	-	-	24.9	10.3	15.2	8.8	-	-
HCM Lane LOS	A	-	-	C	B	C	A	-	-
HCM 95th %tile Q(veh)	0.6	-	-	0.4	0.2	0.2	0.1	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	4	16	451	265	0
Future Volume (vph)	0	4	16	451	265	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.865					
Flt Protected			0.950			
Satd. Flow (prot)	1652	0	1605	1854	1792	0
Flt Permitted			0.950			
Satd. Flow (perm)	1652	0	1605	1854	1792	0
Sign Control	Stop			Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	4	16	451	265	0
Future Vol, veh/h	0	4	16	451	265	0
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	25	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-1	-	-	-1	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	13	3	6	0
Mvmt Flow	0	4	18	501	294	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	832	295	295	0	-	0
Stage 1	295	-	-	-	-	-
Stage 2	537	-	-	-	-	-
Critical Hdwy	6.2	6.1	4.4	-	-	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3	3.1	3.1	-	-	-
Pot Cap-1 Maneuver	397	798	917	-	-	-
Stage 1	884	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	388	797	916	-	-	-
Mov Cap-2 Maneuver	521	-	-	-	-	-
Stage 1	865	-	-	-	-	-
Stage 2	684	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.5	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	916	-	797	-	-
HCM Lane V/C Ratio	0.019	-	0.006	-	-
HCM Control Delay (s)	9	-	9.5	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	17	32	504	81	102	402
Future Volume (vph)	17	32	504	81	102	402
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1796	1516	1863	1599	1796	1836
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1796	1516	1863	1599	1796	1836
Sign Control	Stop		Free			Free

Intersection Summary

Control Type: Unsignalized

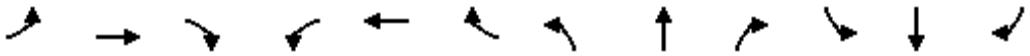
Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	32	504	81	102	402
Future Vol, veh/h	17	32	504	81	102	402
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	115	-	175	25	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	0	-	-	-1
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	6	2	1	1	4
Mvmt Flow	18	34	542	87	110	432

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1195	543	0	0	630	0
Stage 1	543	-	-	-	-	-
Stage 2	652	-	-	-	-	-
Critical Hdwy	6.6	6.36	-	-	4.3	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-	-
Follow-up Hdwy	3	3.2	-	-	3	-
Pot Cap-1 Maneuver	212	543	-	-	727	-
Stage 1	641	-	-	-	-	-
Stage 2	564	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	180	542	-	-	726	-
Mov Cap-2 Maneuver	329	-	-	-	-	-
Stage 1	640	-	-	-	-	-
Stage 2	478	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.7	0	2.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	329	542	726	-
HCM Lane V/C Ratio	-	-	0.056	0.063	0.151	-
HCM Control Delay (s)	-	-	16.6	12.1	10.8	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0.2	0.5	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	27	5	56	38	22	23	189	120	16	137	3
Future Volume (vph)	0	27	5	56	38	22	23	189	120	16	137	3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.980			0.974			0.951			0.998	
Flt Protected					0.976			0.997			0.995	
Satd. Flow (prot)	0	1712	0	0	1747	0	0	1701	0	0	1863	0
Flt Permitted					0.976			0.997			0.995	
Satd. Flow (perm)	0	1712	0	0	1747	0	0	1701	0	0	1863	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

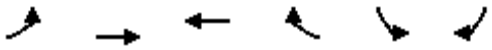
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	27	5	56	38	22	23	189	120	16	137	3
Future Vol, veh/h	0	27	5	56	38	22	23	189	120	16	137	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	4	40	5	0	5	4	1	11	0	2	0
Mvmt Flow	0	29	5	61	41	24	25	205	130	17	149	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	9.4	10.8	9.1
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	0%	48%	10%
Vol Thru, %	57%	84%	33%	88%
Vol Right, %	36%	16%	19%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	332	32	116	156
LT Vol	23	0	56	16
Through Vol	189	27	38	137
RT Vol	120	5	22	3
Lane Flow Rate	361	35	126	170
Geometry Grp	1	1	1	1
Degree of Util (X)	0.439	0.051	0.182	0.222
Departure Headway (Hd)	4.383	5.252	5.198	4.723
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	819	677	686	756
Service Time	2.424	3.323	3.259	2.773
HCM Lane V/C Ratio	0.441	0.052	0.184	0.225
HCM Control Delay	10.8	8.6	9.4	9.1
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	2.3	0.2	0.7	0.8



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	14	151	112	26	12	6
Future Volume (vph)	14	151	112	26	12	6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.975		0.955	
Flt Protected		0.996			0.968	
Satd. Flow (prot)	0	1748	1795	0	1756	0
Flt Permitted		0.996			0.968	
Satd. Flow (perm)	0	1748	1795	0	1756	0
Sign Control		Free	Free		Stop	

Intersection Summary

Control Type: Unsignalized

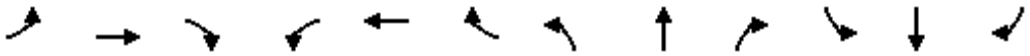
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	151	112	26	12	6
Future Vol, veh/h	14	151	112	26	12	6
Conflicting Peds, #/hr	4	0	0	4	19	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	0	9	3	4	0	0
Mvmt Flow	18	199	147	34	16	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	185	0	-	0	422	178
Stage 1	-	-	-	-	168	-
Stage 2	-	-	-	-	254	-
Critical Hdwy	4.3	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	1038	-	-	-	672	922
Stage 1	-	-	-	-	1000	-
Stage 2	-	-	-	-	910	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1034	-	-	-	653	910
Mov Cap-2 Maneuver	-	-	-	-	653	-
Stage 1	-	-	-	-	976	-
Stage 2	-	-	-	-	906	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1034	-	-	-	721
HCM Lane V/C Ratio	0.018	-	-	-	0.033
HCM Control Delay (s)	8.5	0	-	-	10.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	113	45	29	115	0	0	0	0	29	46	27
Future Volume (vph)	0	113	45	29	115	0	0	0	0	29	46	27
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.962									0.964	
Flt Protected					0.990						0.986	
Satd. Flow (prot)	0	1675	0	0	1810	0	0	0	0	0	1768	0
Flt Permitted					0.990						0.986	
Satd. Flow (perm)	0	1675	0	0	1810	0	0	0	0	0	1768	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	113	45	29	115	0	0	0	0	29	46	27
Future Vol, veh/h	0	113	45	29	115	0	0	0	0	29	46	27
Conflicting Peds, #/hr	14	0	82	82	0	14	59	0	83	83	0	59
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	-1	-	-	-1	-	-	-3	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	2	29	14	2	0	0	0	0	0	4	7
Mvmt Flow	0	136	54	35	139	0	0	0	0	35	55	33

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	272	0	0	455	481	198
Stage 1	-	-	-	-	-	-	209	209	-
Stage 2	-	-	-	-	-	-	246	272	-
Critical Hdwy	-	-	-	4.4	-	-	5.8	5.94	5.97
Critical Hdwy Stg 1	-	-	-	-	-	-	4.8	4.94	-
Critical Hdwy Stg 2	-	-	-	-	-	-	4.8	4.94	-
Follow-up Hdwy	-	-	-	3.1	-	-	3	4.036	3.2
Pot Cap-1 Maneuver	0	-	-	934	-	0	693	522	884
Stage 1	0	-	-	-	-	0	990	751	-
Stage 2	0	-	-	-	-	0	956	713	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	934	-	-	665	0	834
Mov Cap-2 Maneuver	-	-	-	-	-	-	665	0	-
Stage 1	-	-	-	-	-	-	990	0	-
Stage 2	-	-	-	-	-	-	917	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	1.8	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	934	-	737
HCM Lane V/C Ratio	-	-	0.037	-	0.167
HCM Control Delay (s)	-	-	9	0	10.9
HCM Lane LOS	-	-	A	A	B
HCM 95th %tile Q(veh)	-	-	0.1	-	0.6

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	140	7	8	134	13	32
Future Volume (vph)	140	7	8	134	13	32
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.993				0.904	
Flt Protected				0.997	0.986	
Satd. Flow (prot)	1869	0	0	1809	1694	0
Flt Permitted				0.997	0.986	
Satd. Flow (perm)	1869	0	0	1809	1694	0
Sign Control	Free			Free	Stop	

Intersection Summary

Control Type: Unsignalized

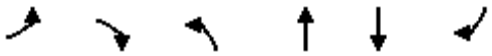
Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	140	7	8	134	13	32
Future Vol, veh/h	140	7	8	134	13	32
Conflicting Peds, #/hr	0	52	52	0	19	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	1	0	0	5	0	0
Mvmt Flow	151	8	9	144	14	34

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	211	0	388	212
Stage 1	-	-	-	-	207	-
Stage 2	-	-	-	-	181	-
Critical Hdwy	-	-	4.3	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	1017	-	705	882
Stage 1	-	-	-	-	958	-
Stage 2	-	-	-	-	985	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	967	-	651	834
Mov Cap-2 Maneuver	-	-	-	-	651	-
Stage 1	-	-	-	-	910	-
Stage 2	-	-	-	-	957	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	771	-	-	967	-
HCM Lane V/C Ratio	0.063	-	-	0.009	-
HCM Control Delay (s)	10	-	-	8.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	35	134	73	464	515	67
Future Volume (vph)	35	134	73	464	515	67
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.893				0.985	
Flt Protected	0.990			0.993		
Satd. Flow (prot)	1653	0	0	1834	1849	0
Flt Permitted	0.990			0.993		
Satd. Flow (perm)	1653	0	0	1834	1849	0
Sign Control	Stop			Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	35	134	73	464	515	67
Future Vol, veh/h	35	134	73	464	515	67
Conflicting Peds, #/hr	34	26	44	0	0	44
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	2	6	3	1	3
Mvmt Flow	37	143	78	494	548	71

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1312	654	663	0	-	0
Stage 1	628	-	-	-	-	-
Stage 2	684	-	-	-	-	-
Critical Hdwy	6.4	6.22	4.4	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	3.1	-	-	-
Pot Cap-1 Maneuver	192	491	678	-	-	-
Stage 1	601	-	-	-	-	-
Stage 2	564	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	147	459	650	-	-	-
Mov Cap-2 Maneuver	147	-	-	-	-	-
Stage 1	481	-	-	-	-	-
Stage 2	540	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29.9	1.5	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	650	-	319	-	-
HCM Lane V/C Ratio	0.119	-	0.564	-	-
HCM Control Delay (s)	11.3	0	29.9	-	-
HCM Lane LOS	B	A	D	-	-
HCM 95th %tile Q(veh)	0.4	-	3.3	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	539	32	138	501
Future Volume (vph)	0	0	539	32	138	501
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.993			
Flt Protected						0.989
Satd. Flow (prot)	1900	0	1832	0	0	1864
Flt Permitted						0.989
Satd. Flow (perm)	1900	0	1832	0	0	1864
Sign Control	Stop		Free			Free

Intersection Summary
Control Type: Unsignalized

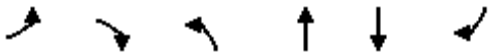
Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	539	32	138	501
Future Vol, veh/h	0	0	539	32	138	501
Conflicting Peds, #/hr	82	3	0	51	51	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	3	3	0	1
Mvmt Flow	0	0	580	34	148	539

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1565	651	0	0	665	0
Stage 1	648	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.3	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	133	494	-	-	706	-
Stage 1	588	-	-	-	-	-
Stage 2	434	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	80	469	-	-	672	-
Mov Cap-2 Maneuver	80	-	-	-	-	-
Stage 1	559	-	-	-	-	-
Stage 2	274	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	2.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	672	-
HCM Lane V/C Ratio	-	-	-	0.221	-
HCM Control Delay (s)	-	-	0	11.9	0
HCM Lane LOS	-	-	A	B	A
HCM 95th %tile Q(veh)	-	-	-	0.8	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	77	570	480	19
Future Volume (vph)	0	0	77	570	480	19
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.995	
Flt Protected				0.994		
Satd. Flow (prot)	1900	0	0	1834	1872	0
Flt Permitted				0.994		
Satd. Flow (perm)	1900	0	0	1834	1872	0
Sign Control	Stop			Free	Free	

Intersection Summary
Control Type: Unsignalized

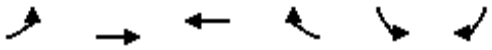
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	77	570	480	19
Future Vol, veh/h	0	0	77	570	480	19
Conflicting Peds, #/hr	46	54	133	0	0	133
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	3	3	1	0
Mvmt Flow	0	0	84	620	522	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1500	720	676	0	-	0
Stage 1	666	-	-	-	-	-
Stage 2	834	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.3	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	3	-	-	-
Pot Cap-1 Maneuver	146	451	700	-	-	-
Stage 1	576	-	-	-	-	-
Stage 2	477	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	88	374	611	-	-	-
Mov Cap-2 Maneuver	88	-	-	-	-	-
Stage 1	397	-	-	-	-	-
Stage 2	416	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	1.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	611	-	-	-	-
HCM Lane V/C Ratio	0.137	-	-	-	-
HCM Control Delay (s)	11.8	0	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	78	12	0	4
Future Volume (vph)	0	0	78	12	0	4
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.982		0.865	
Flt Protected						
Satd. Flow (prot)	0	1900	1818	0	1635	0
Flt Permitted						
Satd. Flow (perm)	0	1900	1818	0	1635	0
Sign Control		Free	Free		Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	78	12	0	4
Future Vol, veh/h	0	0	78	12	0	4
Conflicting Peds, #/hr	74	0	0	74	8	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	1	-
Peak Hour Factor	69	69	69	69	69	69
Heavy Vehicles, %	0	0	3	0	0	0
Mvmt Flow	0	0	113	17	0	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	204	0	-	0	204	199
Stage 1	-	-	-	-	196	-
Stage 2	-	-	-	-	8	-
Critical Hdwy	4.3	-	-	-	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	1023	-	-	-	898	892
Stage 1	-	-	-	-	959	-
Stage 2	-	-	-	-	1189	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	951	-	-	-	777	827
Mov Cap-2 Maneuver	-	-	-	-	777	-
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	1106	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	951	-	-	-	827
HCM Lane V/C Ratio	-	-	-	-	0.007
HCM Control Delay (s)	0	-	-	-	9.4
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	72	0	0	0	0	119
Future Volume (vph)	72	0	0	0	0	119
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1778	0	0	0	0	1624
Flt Permitted	0.950					
Satd. Flow (perm)	1778	0	0	0	0	1624
Sign Control	Stop		Free			Free

Intersection Summary
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	5.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	72	0	0	0	0	119
Future Vol, veh/h	72	0	0	0	0	119
Conflicting Peds, #/hr	166	177	0	192	192	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	1	0	0	0	0	17
Mvmt Flow	92	0	0	0	0	153

Major/Minor	Minor1		Major2	
Conflicting Flow All	511	-	192	0
Stage 1	192	-	-	-
Stage 2	319	-	-	-
Critical Hdwy	6.61	-	4.3	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.61	-	-	-
Follow-up Hdwy	3	-	3	-
Pot Cap-1 Maneuver	577	0	1032	-
Stage 1	-	0	-	-
Stage 2	831	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	471	-	843	-
Mov Cap-2 Maneuver	471	-	-	-
Stage 1	-	-	-	-
Stage 2	831	-	-	-

Approach	WB	SB
HCM Control Delay, s	14.5	0
HCM LOS	B	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	471	843	-
HCM Lane V/C Ratio	0.196	-	-
HCM Control Delay (s)	14.5	0	-
HCM Lane LOS	B	A	-
HCM 95th %tile Q(veh)	0.7	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	50	62	589	0	0	483
Future Volume (vph)	50	62	589	0	0	483
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.70					
Frt	0.925					
Flt Protected	0.978					
Satd. Flow (prot)	1301	0	1873	0	0	1891
Flt Permitted	0.978					
Satd. Flow (perm)	1282	0	1873	0	0	1891
Satd. Flow (RTOR)	67					
Turn Type	Prot		NA			NA
Protected Phases	4		6			2
Permitted Phases						
Detector Phase	4		6			2
Switch Phase						
Minimum Initial (s)	3.0		49.0			49.0
Minimum Split (s)	19.0		54.0			54.0
Total Split (s)	29.0		55.0			55.0
Total Split (%)	34.5%		65.5%			65.5%
Yellow Time (s)	3.0		3.0			3.0
All-Red Time (s)	2.0		2.0			2.0
Lost Time Adjust (s)	-1.0		-1.0			-1.0
Total Lost Time (s)	4.0		4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Max			Max

Intersection Summary
Cycle Length: 84
Actuated Cycle Length: 69.8
Natural Cycle: 75
Control Type: Actuated-Uncoordinated

Splits and Phases: 10: S High Street & Linden Street

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	50	62	589	0	0	483
Future Volume (veh/h)	50	62	589	0	0	483
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.53		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1849	1849	1866	0	0	1852
Adj Flow Rate, veh/h	54	59	633	0	0	519
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	3	0	0	1
Cap, veh/h	102	112	1300	0	0	1290
Arrive On Green	0.19	0.19	0.70	0.00	0.00	0.70
Sat Flow, veh/h	526	574	1866	0	0	1852
Grp Volume(v), veh/h	114	0	633	0	0	519
Grp Sat Flow(s),veh/h/ln	1109	0	1866	0	0	1852
Q Serve(g_s), s	6.8	0.0	11.4	0.0	0.0	8.7
Cycle Q Clear(g_c), s	6.8	0.0	11.4	0.0	0.0	8.7
Prop In Lane	0.47	0.52		0.00	0.00	
Lane Grp Cap(c), veh/h	215	0	1300	0	0	1290
V/C Ratio(X)	0.53	0.00	0.49	0.00	0.00	0.40
Avail Cap(c_a), veh/h	379	0	1300	0	0	1290
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	26.5	0.0	5.1	0.0	0.0	4.7
Incr Delay (d2), s/veh	2.0	0.0	1.3	0.0	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.4	0.0	6.9	0.0	0.0	5.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.5	0.0	6.4	0.0	0.0	5.6
LnGrp LOS	C	A	A	A	A	A
Approach Vol, veh/h	114		633			519
Approach Delay, s/veh	28.5		6.4			5.6
Approach LOS	C		A			A

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		55.0		18.2		55.0
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		50.0		24.0		50.0
Max Q Clear Time (g_c+I1), s		0.0		9.3		0.0
Green Ext Time (p_c), s		0.0		0.5		0.0

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

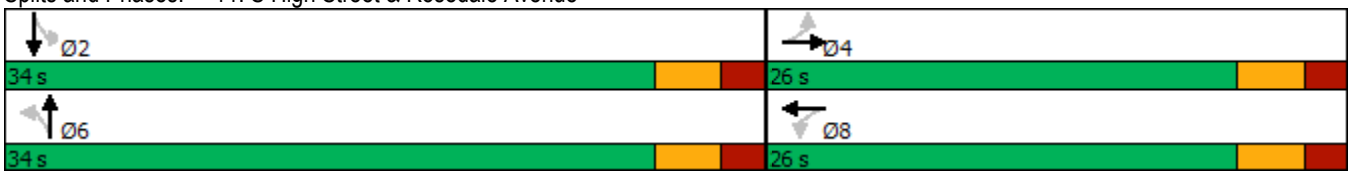
Notes

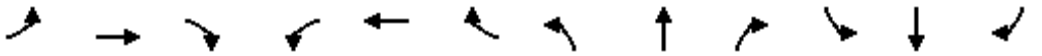
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	226	116	47	299	84	68	404	86	46	363	40
Future Volume (vph)	59	226	116	47	299	84	68	404	86	46	363	40
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.89	0.90		0.86	0.94		0.92	0.96		0.92	0.98	
Frt		0.949			0.967			0.974			0.985	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1620	1465	0	1660	1584	0	1572	1789	0	1645	1686	0
Flt Permitted	0.334			0.390			0.446			0.371		
Satd. Flow (perm)	505	1465	0	586	1584	0	677	1789	0	591	1686	0
Satd. Flow (RTOR)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			6			2	
Permitted Phases	4			8			6			2		
Detector Phase	4	4		8	8		6	6		2	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		23.0	23.0		23.0	23.0	
Total Split (s)	26.0	26.0		26.0	26.0		34.0	34.0		34.0	34.0	
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%		56.7%	56.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 56.9
Natural Cycle: 50
Control Type: Actuated-Uncoordinated

Splits and Phases: 11: S High Street & Rosedale Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	226	116	47	299	84	68	404	86	46	363	40
Future Volume (veh/h)	59	226	116	47	299	84	68	404	86	46	363	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.91		0.75	0.90		0.75	0.96		0.88	0.98		0.88
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	1724	1710	1752	1750	1750	1707	1750	1791	1791	1883	1898	1869
Adj Flow Rate, veh/h	61	235	119	49	311	85	71	421	82	48	378	38
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	6	3	2	2	5	0	2	2	2	1	3
Cap, veh/h	242	339	172	254	435	119	448	722	141	395	850	85
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	827	952	482	865	1224	335	871	1419	276	881	1672	168
Grp Volume(v), veh/h	61	0	354	49	0	396	71	0	503	48	0	416
Grp Sat Flow(s),veh/h/ln	827	0	1435	865	0	1559	871	0	1696	881	0	1840
Q Serve(g_s), s	4.0	0.0	12.4	3.0	0.0	12.9	3.3	0.0	12.2	2.3	0.0	8.5
Cycle Q Clear(g_c), s	16.5	0.0	12.4	14.9	0.0	12.9	11.2	0.0	12.2	14.1	0.0	8.5
Prop In Lane	1.00		0.34	1.00		0.21	1.00		0.16	1.00		0.09
Lane Grp Cap(c), veh/h	242	0	510	254	0	554	448	0	863	395	0	936
V/C Ratio(X)	0.25	0.00	0.69	0.19	0.00	0.71	0.16	0.00	0.58	0.12	0.00	0.44
Avail Cap(c_a), veh/h	256	0	535	270	0	581	448	0	863	395	0	936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.3	0.0	16.3	22.4	0.0	16.4	12.6	0.0	10.1	14.8	0.0	9.2
Incr Delay (d2), s/veh	0.5	0.0	3.7	0.4	0.0	3.9	0.8	0.0	2.9	0.6	0.0	1.5
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	1.4	0.0	7.6	1.1	0.0	8.4	1.2	0.0	8.0	0.9	0.0	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	0.0	19.9	22.8	0.0	20.4	13.3	0.0	13.0	15.5	0.0	10.7
LnGrp LOS	C	A	B	C	A	C	B	A	B	B	A	B
Approach Vol, veh/h		415			445			574			464	
Approach Delay, s/veh		20.5			20.6			13.0			11.2	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		34.0		25.0		34.0		25.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		29.0		21.0		29.0		21.0				
Max Q Clear Time (g_c+I1), s		0.0		19.0		0.0		17.4				
Green Ext Time (p_c), s		0.0		0.4		0.0		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			16.0									
HCM 6th LOS			B									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	140	151	58	158	0	262	0	106	11	64	24
Future Volume (vph)	1	140	151	58	158	0	262	0	106	11	64	24
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.930							0.850		0.967	
Flt Protected					0.987		0.950				0.994	
Satd. Flow (prot)	0	1708	0	0	1839	0	1761	0	1607	0	1803	0
Flt Permitted					0.987		0.950				0.994	
Satd. Flow (perm)	0	1708	0	0	1839	0	1761	0	1607	0	1803	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	13.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	140	151	58	158	0	262	0	106	11	64	24
Future Vol, veh/h	1	140	151	58	158	0	262	0	106	11	64	24
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	4	3	0	2	0	2	0	0	0	2	0
Mvmt Flow	1	149	161	62	168	0	279	0	113	12	68	26
Number of Lanes	0	1	0	0	1	0	1	0	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	13.3	12.6	14.6	10.6
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	27%	11%
Vol Thru, %	0%	0%	48%	73%	65%
Vol Right, %	0%	100%	52%	0%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	262	106	292	216	99
LT Vol	262	0	1	58	11
Through Vol	0	0	140	158	64
RT Vol	0	106	151	0	24
Lane Flow Rate	279	113	311	230	105
Geometry Grp	5	5	2	2	4a
Degree of Util (X)	0.522	0.172	0.471	0.379	0.181
Departure Headway (Hd)	6.746	5.492	5.455	5.938	6.172
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	532	650	655	602	577
Service Time	4.51	3.256	3.525	4.013	4.259
HCM Lane V/C Ratio	0.524	0.174	0.475	0.382	0.182
HCM Control Delay	16.7	9.4	13.3	12.6	10.6
HCM Lane LOS	C	A	B	B	B
HCM 95th-tile Q	3	0.6	2.5	1.8	0.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	4	27	74	1	61	5	272	58	48	271	5
Future Volume (vph)	14	4	27	74	1	61	5	272	58	48	271	5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.920			0.939			0.974			0.997	
Flt Protected		0.984			0.974		0.950			0.950		
Satd. Flow (prot)	0	1703	0	0	1713	0	1805	1814	0	1805	1858	0
Flt Permitted		0.984			0.974		0.950			0.950		
Satd. Flow (perm)	0	1703	0	0	1713	0	1805	1814	0	1805	1858	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Control Type: Unsignalized

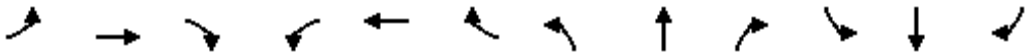
Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	4	27	74	1	61	5	272	58	48	271	5
Future Vol, veh/h	14	4	27	74	1	61	5	272	58	48	271	5
Conflicting Peds, #/hr	8	0	3	3	0	8	7	0	3	3	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	25	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	2	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	1	0	2	0	2	2	0	2	0
Mvmt Flow	15	4	28	77	1	64	5	283	60	50	282	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	756	748	295	730	720	324	294	0	0	346	0	0
Stage 1	392	392	-	326	326	-	-	-	-	-	-	-
Stage 2	364	356	-	404	394	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.9	6.4	7.11	6.5	6.22	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.5	5.9	-	6.11	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.9	-	6.11	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.1	3	4	3.1	3	-	-	3	-	-
Pot Cap-1 Maneuver	335	316	778	379	356	760	952	-	-	914	-	-
Stage 1	693	584	-	788	652	-	-	-	-	-	-	-
Stage 2	721	608	-	712	609	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	288	294	771	343	331	752	946	-	-	911	-	-
Mov Cap-2 Maneuver	288	294	-	343	331	-	-	-	-	-	-	-
Stage 1	685	548	-	782	647	-	-	-	-	-	-	-
Stage 2	651	603	-	642	571	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.6	16.5	0.1	1.4
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	946	-	-	463	454	911	-	-
HCM Lane V/C Ratio	0.006	-	-	0.101	0.312	0.055	-	-
HCM Control Delay (s)	8.8	-	-	13.6	16.5	9.2	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	1.3	0.2	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	307	16	29	370	0	0	0	0	98	2	55
Future Volume (vph)	0	307	16	29	370	0	0	0	0	98	2	55
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.993									0.952	
Flt Protected					0.996						0.969	
Satd. Flow (prot)	0	1998	0	0	1845	0	0	0	0	0	1601	0
Flt Permitted					0.996						0.969	
Satd. Flow (perm)	0	1998	0	0	1845	0	0	0	0	0	1601	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	307	16	29	370	0	0	0	0	98	2	55
Future Vol, veh/h	0	307	16	29	370	0	0	0	0	98	2	55
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	2	0	0	1	0	0	0	0	10	0	25
Mvmt Flow	0	323	17	31	389	0	0	0	0	103	2	58
Number of Lanes	0	1	0	0	1	0	0	0	0	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	12.1	13.8	10.9
HCM LOS	B	B	B

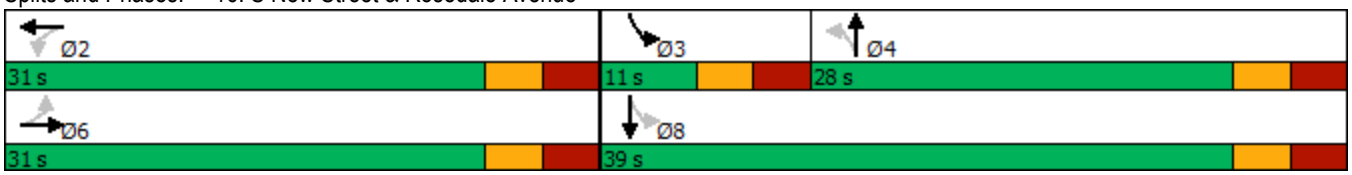
Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	7%	63%
Vol Thru, %	95%	93%	1%
Vol Right, %	5%	0%	35%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	323	399	155
LT Vol	0	29	98
Through Vol	307	370	2
RT Vol	16	0	55
Lane Flow Rate	340	420	163
Geometry Grp	1	1	1
Degree of Util (X)	0.459	0.558	0.263
Departure Headway (Hd)	4.859	4.781	5.796
Convergence, Y/N	Yes	Yes	Yes
Cap	731	748	623
Service Time	2.95	2.867	3.796
HCM Lane V/C Ratio	0.465	0.561	0.262
HCM Control Delay	12.1	13.8	10.9
HCM Lane LOS	B	B	B
HCM 95th-tile Q	2.4	3.5	1.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	189	11	85	257	155	8	136	101	108	125	21
Future Volume (vph)	20	189	11	85	257	155	8	136	101	108	125	21
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			0.98			0.97			0.99	
Frt		0.993			0.943			0.945			0.989	
Flt Protected		0.996		0.950				0.998			0.979	
Satd. Flow (prot)	0	1705	0	1315	1553	0	0	1418	0	0	2015	0
Flt Permitted		0.948		0.665				0.984			0.728	
Satd. Flow (perm)	0	1621	0	920	1553	0	0	1398	0	0	1483	0
Satd. Flow (RTOR)		4									9	
Lane Group Flow (vph)	0	234	0	90	438	0	0	261	0	0	270	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		6			2			4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	6	6		2	2		4	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	26.0	26.0		26.0	26.0		24.0	24.0		11.0	24.0	
Total Split (s)	31.0	31.0		31.0	31.0		28.0	28.0		11.0	39.0	
Total Split (%)	44.3%	44.3%		44.3%	44.3%		40.0%	40.0%		15.7%	55.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.0	3.0		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	
Total Lost Time (s)		5.0		5.0	5.0			5.0			5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Act Effct Green (s)		26.2		26.2	26.2			15.8			15.8	
Actuated g/C Ratio		0.50		0.50	0.50			0.30			0.30	
v/c Ratio		0.29		0.19	0.56			0.62			0.59	
Control Delay		9.9		10.2	13.8			22.1			20.3	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		9.9		10.2	13.8			22.1			20.3	
LOS		A		B	B			C			C	
Approach Delay		9.9			13.2			22.1			20.3	
Approach LOS		A			B			C			C	
Queue Length 50th (ft)		37		14	83			67			66	
Queue Length 95th (ft)		95		46	203			126			124	
Internal Link Dist (ft)		1256			617			791			984	
Turn Bay Length (ft)				90								
Base Capacity (vph)		817		463	781			623			978	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.29		0.19	0.56			0.42			0.28	

Intersection Summary
Cycle Length: 70

Actuated Cycle Length: 52.1	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 15.9	Intersection LOS: B
Intersection Capacity Utilization 73.4%	ICU Level of Service D
Analysis Period (min) 15	

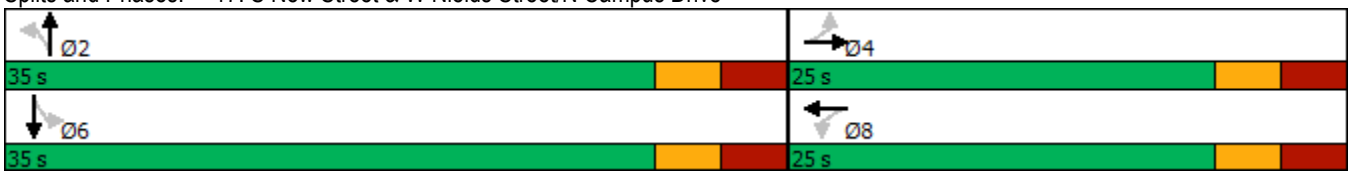
Splits and Phases: 16: S New Street & Rosedale Avenue

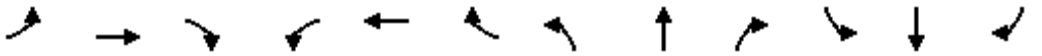


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	4	35	47	9	67	28	261	33	31	149	13
Future Volume (vph)	7	4	35	47	9	67	28	261	33	31	149	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.92			0.96		1.00	0.99			0.99	
Frt		0.898			0.926			0.983			0.991	
Flt Protected		0.993			0.981		0.950				0.992	
Satd. Flow (prot)	0	1556	0	0	1634	0	1645	1766	0	0	2001	0
Flt Permitted		0.943			0.852		0.621				0.921	
Satd. Flow (perm)	0	1476	0	0	1378	0	1074	1766	0	0	1851	0
Satd. Flow (RTOR)					76			15			9	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		23.0	23.0		23.0	23.0	
Total Split (s)	25.0	25.0		25.0	25.0		35.0	35.0		35.0	35.0	
Total Split (%)	41.7%	41.7%		41.7%	41.7%		58.3%	58.3%		58.3%	58.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.0	3.0		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	
Total Lost Time (s)		5.0			5.0		5.0	5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 52.8
Natural Cycle: 50
Control Type: Actuated-Uncoordinated

Splits and Phases: 17: S New Street & W Nields Street/N Campus Drive

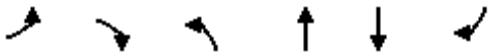




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	4	35	47	9	67	28	261	33	31	149	13
Future Volume (veh/h)	7	4	35	47	9	67	28	261	33	31	149	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.91		0.90	0.91		0.90	0.99		0.98	0.99		0.98
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	1988	1988	1988	1912	1912	1912	1794	1779	1822	2021	2036	1947
Adj Flow Rate, veh/h	8	5	38	53	10	43	32	297	38	35	169	7
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	3	3	2	8
Cap, veh/h	105	73	294	249	65	146	805	865	111	193	895	35
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.56	0.56	0.56	0.56	0.56	0.56
Sat Flow, veh/h	108	291	1166	589	259	579	1144	1541	197	203	1595	62
Grp Volume(v), veh/h	51	0	0	106	0	0	32	0	335	211	0	0
Grp Sat Flow(s),veh/h/ln	1565	0	0	1428	0	0	1144	0	1738	1860	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	5.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.3	0.0	0.0	2.8	0.0	0.0	0.5	0.0	5.6	2.7	0.0	0.0
Prop In Lane	0.16		0.75	0.50		0.41	1.00		0.11	0.17		0.03
Lane Grp Cap(c), veh/h	472	0	0	460	0	0	805	0	976	1122	0	0
V/C Ratio(X)	0.11	0.00	0.00	0.23	0.00	0.00	0.04	0.00	0.34	0.19	0.00	0.00
Avail Cap(c_a), veh/h	657	0	0	629	0	0	805	0	976	1122	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.5	0.0	0.0	16.0	0.0	0.0	5.2	0.0	6.4	5.7	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.3	0.0	0.0	0.1	0.0	1.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	0.0	0.0	1.8	0.0	0.0	0.3	0.0	3.4	1.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.6	0.0	0.0	16.2	0.0	0.0	5.3	0.0	7.3	6.1	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		51			106			367			211	
Approach Delay, s/veh		15.6			16.2			7.2			6.1	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		35.0		18.5		35.0		18.5				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		29.0		19.0		29.0		19.0				
Max Q Clear Time (g_c+I1), s		0.0		3.3		0.0		4.8				
Green Ext Time (p_c), s		0.0		0.1		0.0		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			8.8									
HCM 6th LOS			A									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	7	4	229	302	7
Future Volume (vph)	2	7	4	229	302	7
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.892				0.997	
Flt Protected	0.990			0.999		
Satd. Flow (prot)	1398	0	0	1753	1768	0
Flt Permitted	0.990			0.999		
Satd. Flow (perm)	1398	0	0	1753	1768	0
Sign Control	Stop			Stop	Stop	

Intersection Summary

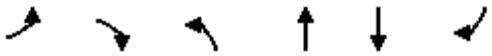
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	7	4	229	302	7
Future Vol, veh/h	2	7	4	229	302	7
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	50	14	0	9	7	14
Mvmt Flow	2	8	5	263	347	8
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.8	9.3	10.3
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	2%	22%	0%
Vol Thru, %	98%	0%	98%
Vol Right, %	0%	78%	2%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	233	9	309
LT Vol	4	2	0
Through Vol	229	0	302
RT Vol	0	7	7
Lane Flow Rate	268	10	355
Geometry Grp	1	1	1
Degree of Util (X)	0.319	0.016	0.417
Departure Headway (Hd)	4.285	5.666	4.222
Convergence, Y/N	Yes	Yes	Yes
Cap	844	634	842
Service Time	2.285	3.679	2.305
HCM Lane V/C Ratio	0.318	0.016	0.422
HCM Control Delay	9.3	8.8	10.3
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1.4	0	2.1



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	0	0	217	302	0
Future Volume (vph)	3	0	0	217	302	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1796	0	0	1742	1810	0
Flt Permitted	0.950					
Satd. Flow (perm)	1796	0	0	1742	1810	0
Sign Control	Stop			Free	Free	

Intersection Summary
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	0	0	217	302	0
Future Vol, veh/h	3	0	0	217	302	0
Conflicting Peds, #/hr	0	1	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	2	-2	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	8	6	0
Mvmt Flow	3	0	0	247	343	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	590	344	343	0	-	0
Stage 1	343	-	-	-	-	-
Stage 2	247	-	-	-	-	-
Critical Hdwy	6.6	6.3	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	515	735	916	-	-	-
Stage 1	809	-	-	-	-	-
Stage 2	904	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	515	734	916	-	-	-
Mov Cap-2 Maneuver	515	-	-	-	-	-
Stage 1	809	-	-	-	-	-
Stage 2	904	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	916	-	515	-	-
HCM Lane V/C Ratio	-	-	0.007	-	-
HCM Control Delay (s)	0	-	12	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	58	157	10	24	282
Future Volume (vph)	16	58	157	10	24	282
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.992			
Flt Protected	0.950					0.996
Satd. Flow (prot)	1509	1317	1723	0	0	1790
Flt Permitted	0.950					0.996
Satd. Flow (perm)	1509	1317	1723	0	0	1790
Sign Control	Stop		Free			Free

Intersection Summary

Control Type: Unsignalized

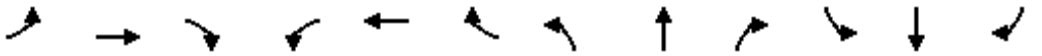
Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	58	157	10	24	282
Future Vol, veh/h	16	58	157	10	24	282
Conflicting Peds, #/hr	36	0	0	8	8	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	-3
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	19	22	5	70	46	4
Mvmt Flow	18	65	176	11	27	317

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	597	190	0	0	195	0
Stage 1	190	-	-	-	-	-
Stage 2	407	-	-	-	-	-
Critical Hdwy	6.79	6.52	-	-	4.8	-
Critical Hdwy Stg 1	5.79	-	-	-	-	-
Critical Hdwy Stg 2	5.79	-	-	-	-	-
Follow-up Hdwy	3.2	3.3	-	-	3.4	-
Pot Cap-1 Maneuver	470	843	-	-	894	-
Stage 1	901	-	-	-	-	-
Stage 2	697	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	434	837	-	-	887	-
Mov Cap-2 Maneuver	434	-	-	-	-	-
Stage 1	894	-	-	-	-	-
Stage 2	648	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	434	837	887	-
HCM Lane V/C Ratio	-	-	0.041	0.078	0.03	-
HCM Control Delay (s)	-	-	13.7	9.7	9.2	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.3	0.1	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	8	30	4	10	8	18	62	1	2	187	95
Future Volume (vph)	92	8	30	4	10	8	18	62	1	2	187	95
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.881			0.932			0.999			0.955	
Flt Protected	0.950			0.950				0.989				
Satd. Flow (prot)	1695	1425	0	1832	1118	0	0	1824	0	0	1785	0
Flt Permitted	0.950			0.950				0.989				
Satd. Flow (perm)	1695	1425	0	1832	1118	0	0	1824	0	0	1785	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Control Type: Unsignalized

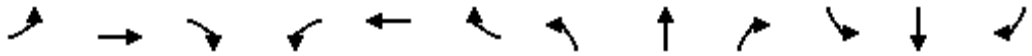
Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	92	8	30	4	10	8	18	62	1	2	187	95
Future Vol, veh/h	92	8	30	4	10	8	18	62	1	2	187	95
Conflicting Peds, #/hr	0	0	2	2	0	0	2	0	0	0	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	-3	-	-	1	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	7	75	3	0	90	25	11	0	0	0	2	1
Mvmt Flow	103	9	34	4	11	9	20	70	1	2	210	107

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	391	381	268	402	434	71	319	0	0	71	0	0
Stage 1	270	270	-	111	111	-	-	-	-	-	-	-
Stage 2	121	111	-	291	323	-	-	-	-	-	-	-
Critical Hdwy	6.97	7.05	6.13	6.5	6.8	6.15	4.4	-	-	4.3	-	-
Critical Hdwy Stg 1	5.97	6.05	-	5.5	5.8	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.97	6.05	-	5.5	5.8	-	-	-	-	-	-	-
Follow-up Hdwy	3.1	4.675	3.1	3	4.81	3.3	3.1	-	-	3	-	-
Pot Cap-1 Maneuver	642	463	824	683	434	998	899	-	-	1135	-	-
Stage 1	832	580	-	1060	673	-	-	-	-	-	-	-
Stage 2	1001	686	-	866	548	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	611	450	821	632	422	998	897	-	-	1135	-	-
Mov Cap-2 Maneuver	611	450	-	632	422	-	-	-	-	-	-	-
Stage 1	811	578	-	1036	658	-	-	-	-	-	-	-
Stage 2	953	670	-	814	546	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.6	11.4	2	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	897	-	-	611	700	632	568	1135	-	-
HCM Lane V/C Ratio	0.023	-	-	0.169	0.061	0.007	0.036	0.002	-	-
HCM Control Delay (s)	9.1	0	-	12.1	10.5	10.7	11.6	8.2	0	-
HCM Lane LOS	A	A	-	B	B	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	0.2	0	0.1	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	2	8	5	2	7	48	66	3	3	139	77
Future Volume (vph)	7	2	8	5	2	7	48	66	3	3	139	77
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.936			0.929			0.996			0.953	
Flt Protected		0.979			0.983			0.980			0.999	
Satd. Flow (prot)	0	1732	0	0	1607	0	0	1819	0	0	1797	0
Flt Permitted		0.979			0.983			0.980			0.999	
Satd. Flow (perm)	0	1732	0	0	1607	0	0	1819	0	0	1797	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	2	8	5	2	7	48	66	3	3	139	77
Future Vol, veh/h	7	2	8	5	2	7	48	66	3	3	139	77
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	0	0	0	0	0	14	2	2	0	0	1	0
Mvmt Flow	9	2	10	6	2	9	59	81	4	4	172	95
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.7	7.7	8.2	8.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	41%	41%	36%	1%
Vol Thru, %	56%	12%	14%	63%
Vol Right, %	3%	47%	50%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	117	17	14	219
LT Vol	48	7	5	3
Through Vol	66	2	2	139
RT Vol	3	8	7	77
Lane Flow Rate	144	21	17	270
Geometry Grp	1	1	1	1
Degree of Util (X)	0.171	0.027	0.022	0.29
Departure Headway (Hd)	4.271	4.59	4.567	3.866
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	831	785	788	919
Service Time	2.344	2.591	2.568	1.933
HCM Lane V/C Ratio	0.173	0.027	0.022	0.294
HCM Control Delay	8.2	7.7	7.7	8.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.1	0.1	1.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	0	65	3	2	5	68	368	2	2	232	18
Future Volume (vph)	38	0	65	3	2	5	68	368	2	2	232	18
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.932			0.999				0.850
Flt Protected		0.950			0.985		0.950			0.950		
Satd. Flow (prot)	0	1787	1467	0	1736	0	1778	1870	0	1796	1835	1607
Flt Permitted		0.950			0.985		0.950			0.950		
Satd. Flow (perm)	0	1787	1467	0	1736	0	1778	1870	0	1796	1835	1607
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Control Type: Unsignalized

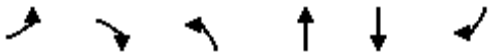
Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	0	65	3	2	5	68	368	2	2	232	18
Future Vol, veh/h	38	0	65	3	2	5	68	368	2	2	232	18
Conflicting Peds, #/hr	2	0	2	2	0	2	4	0	3	3	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	65	-	-	-	75	-	-	160	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	2	-	-	1	-	-	-1	-	-	1	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	9	0	0	0	2	2	0	0	3	0
Mvmt Flow	40	0	68	3	2	5	72	387	2	2	244	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	790	788	250	829	806	393	267	0	0	392	0	0
Stage 1	252	252	-	535	535	-	-	-	-	-	-	-
Stage 2	538	536	-	294	271	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.9	6.49	7.3	6.7	6.3	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.5	5.9	-	6.3	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.9	-	6.3	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.2	3	4	3.1	3	-	-	3	-	-
Pot Cap-1 Maneuver	316	298	799	309	304	688	973	-	-	881	-	-
Stage 1	844	683	-	583	512	-	-	-	-	-	-	-
Stage 2	564	496	-	809	679	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	292	274	794	265	279	685	969	-	-	878	-	-
Mov Cap-2 Maneuver	292	274	-	265	279	-	-	-	-	-	-	-
Stage 1	778	679	-	538	473	-	-	-	-	-	-	-
Stage 2	515	458	-	736	675	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.4	14.5	1.4	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	969	-	-	292	794	388	878	-	-
HCM Lane V/C Ratio	0.074	-	-	0.137	0.086	0.027	0.002	-	-
HCM Control Delay (s)	9	-	-	19.3	10	14.5	9.1	-	-
HCM Lane LOS	A	-	-	C	B	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.5	0.3	0.1	0	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	5	6	437	341	0
Future Volume (vph)	0	5	6	437	341	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.865					
Flt Protected			0.950			
Satd. Flow (prot)	1652	0	1086	1854	1827	0
Flt Permitted			0.950			
Satd. Flow (perm)	1652	0	1086	1854	1827	0
Sign Control	Stop			Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	5	6	437	341	0
Future Vol, veh/h	0	5	6	437	341	0
Conflicting Peds, #/hr	1	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	25	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-1	-	-	-1	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	67	3	4	0
Mvmt Flow	0	5	6	465	363	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	844	366	366	0	-	0
Stage 1	366	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Critical Hdwy	6.2	6.1	5	-	-	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3	3.1	3.6	-	-	-
Pot Cap-1 Maneuver	391	728	718	-	-	-
Stage 1	821	-	-	-	-	-
Stage 2	729	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	386	726	716	-	-	-
Mov Cap-2 Maneuver	525	-	-	-	-	-
Stage 1	812	-	-	-	-	-
Stage 2	727	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	716	-	726	-	-
HCM Lane V/C Ratio	0.009	-	0.007	-	-
HCM Control Delay (s)	10.1	-	10	-	-
HCM Lane LOS	B	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	70	83	564	32	35	657
Future Volume (vph)	70	83	564	32	35	657
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1796	1545	1863	1568	1814	1854
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1796	1545	1863	1568	1814	1854
Sign Control	Stop		Free			Free

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	2

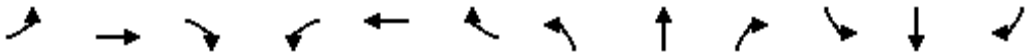
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	83	564	32	35	657
Future Vol, veh/h	70	83	564	32	35	657
Conflicting Peds, #/hr	0	0	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	115	-	175	25	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	0	-	-	-1
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	4	2	3	0	3
Mvmt Flow	75	89	606	34	38	706

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1392	610	0	0	644	0
Stage 1	610	-	-	-	-	-
Stage 2	782	-	-	-	-	-
Critical Hdwy	6.6	6.34	-	-	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	158	510	-	-	719	-
Stage 1	593	-	-	-	-	-
Stage 2	484	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	149	508	-	-	716	-
Mov Cap-2 Maneuver	302	-	-	-	-	-
Stage 1	591	-	-	-	-	-
Stage 2	458	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.9	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	302	508	716	-
HCM Lane V/C Ratio	-	-	0.249	0.176	0.053	-
HCM Control Delay (s)	-	-	20.8	13.6	10.3	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	1	0.6	0.2	-

2040 Future Conditions



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	61	8	56	11	6	10	100	87	19	129	1
Future Volume (vph)	5	61	8	56	11	6	10	100	87	19	129	1
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.985			0.989			0.940			0.999	
Flt Protected		0.997			0.963			0.997			0.994	
Satd. Flow (prot)	0	1756	0	0	1810	0	0	1547	0	0	1833	0
Flt Permitted		0.997			0.963			0.997			0.994	
Satd. Flow (perm)	0	1756	0	0	1810	0	0	1547	0	0	1833	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

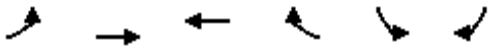
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	61	8	56	11	6	10	100	87	19	129	1
Future Vol, veh/h	5	61	8	56	11	6	10	100	87	19	129	1
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	50	4	0	0	0	0	11	9	20	0	4	0
Mvmt Flow	7	82	11	76	15	8	14	135	118	26	174	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.2	9.2	10.1	9.6
HCM LOS	B	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	7%	77%	13%
Vol Thru, %	51%	82%	15%	87%
Vol Right, %	44%	11%	8%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	197	74	73	149
LT Vol	10	5	56	19
Through Vol	100	61	11	129
RT Vol	87	8	6	1
Lane Flow Rate	266	100	99	201
Geometry Grp	1	1	1	1
Degree of Util (X)	0.342	0.165	0.144	0.268
Departure Headway (Hd)	4.629	5.929	5.251	4.788
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	772	600	677	745
Service Time	2.686	4.012	3.334	2.85
HCM Lane V/C Ratio	0.345	0.167	0.146	0.27
HCM Control Delay	10.1	10.2	9.2	9.6
HCM Lane LOS	B	B	A	A
HCM 95th-tile Q	1.5	0.6	0.5	1.1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	153	67	14	6	2
Future Volume (vph)	3	153	67	14	6	2
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.976		0.963	
Flt Protected		0.999			0.965	
Satd. Flow (prot)	0	1684	1824	0	1766	0
Flt Permitted		0.999			0.965	
Satd. Flow (perm)	0	1684	1824	0	1766	0
Sign Control		Free	Free		Stop	

Intersection Summary
Control Type: Unsignalized

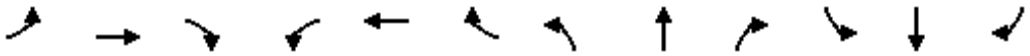
Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	153	67	14	6	2
Future Vol, veh/h	3	153	67	14	6	2
Conflicting Peds, #/hr	3	0	0	3	14	13
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	0	13	2	0	0	0
Mvmt Flow	4	194	85	18	8	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	106	0	-	0	313	110
Stage 1	-	-	-	-	97	-
Stage 2	-	-	-	-	216	-
Critical Hdwy	4.3	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	1105	-	-	-	782	1007
Stage 1	-	-	-	-	1080	-
Stage 2	-	-	-	-	948	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1102	-	-	-	774	992
Mov Cap-2 Maneuver	-	-	-	-	774	-
Stage 1	-	-	-	-	1072	-
Stage 2	-	-	-	-	945	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1102	-	-	-	819
HCM Lane V/C Ratio	0.003	-	-	-	0.012
HCM Control Delay (s)	8.3	0	-	-	9.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	110	24	19	74	0	0	0	41	34	23	12
Future Volume (vph)	0	110	24	19	74	0	0	0	41	34	23	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.976						0.865			0.976	
Flt Protected					0.990						0.976	
Satd. Flow (prot)	0	1754	0	0	1770	0	0	1652	0	0	1766	0
Flt Permitted					0.990						0.976	
Satd. Flow (perm)	0	1754	0	0	1770	0	0	1652	0	0	1766	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	110	24	19	74	0	0	0	41	34	23	12
Future Vol, veh/h	0	110	24	19	74	0	0	0	41	34	23	12
Conflicting Peds, #/hr	12	0	26	26	0	12	33	0	26	26	0	33
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	-1	-	-	-1	-	-	-3	-
Peak Hour Factor	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	0	0	35	33	0	0	0	0	0	0	12	0
Mvmt Flow	0	143	31	25	96	0	0	0	53	44	30	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	200	0	0	387	331	211	357	346	129
Stage 1	-	-	-	-	-	-	185	185	-	146	146	-
Stage 2	-	-	-	-	-	-	202	146	-	211	200	-
Critical Hdwy	-	-	-	4.6	-	-	6.9	6.3	6.1	6.5	6.02	5.9
Critical Hdwy Stg 1	-	-	-	-	-	-	5.9	5.3	-	5.5	5.02	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.9	5.3	-	5.5	5.02	-
Follow-up Hdwy	-	-	-	3.3	-	-	3.5	4	3.3	3	4.108	3.1
Pot Cap-1 Maneuver	0	-	-	925	-	0	588	603	839	728	595	993
Stage 1	0	-	-	-	-	0	830	758	-	1020	776	-
Stage 2	0	-	-	-	-	0	814	786	-	948	742	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	902	-	-	513	571	798	648	563	962
Mov Cap-2 Maneuver	-	-	-	-	-	-	513	571	-	648	563	-
Stage 1	-	-	-	-	-	-	830	739	-	1020	753	-
Stage 2	-	-	-	-	-	-	723	763	-	863	723	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.9	9.8	11.4
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	798	-	-	902	-	652
HCM Lane V/C Ratio	0.067	-	-	0.027	-	0.137
HCM Control Delay (s)	9.8	-	-	9.1	0	11.4
HCM Lane LOS	A	-	-	A	A	B
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-	0.5

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	149	16	7	133	12	9
Future Volume (vph)	149	16	7	133	12	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.987				0.943	
Flt Protected				0.997	0.972	
Satd. Flow (prot)	1858	0	0	1825	1742	0
Flt Permitted				0.997	0.972	
Satd. Flow (perm)	1858	0	0	1825	1742	0
Sign Control	Free			Free	Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	149	16	7	133	12	9
Future Vol, veh/h	149	16	7	133	12	9
Conflicting Peds, #/hr	0	22	22	0	4	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	1	0	0	4	0	0
Mvmt Flow	189	20	9	168	15	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	231	0	411	223
Stage 1	-	-	-	-	221	-
Stage 2	-	-	-	-	190	-
Critical Hdwy	-	-	4.3	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	1001	-	683	869
Stage 1	-	-	-	-	943	-
Stage 2	-	-	-	-	976	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	980	-	659	849
Mov Cap-2 Maneuver	-	-	-	-	659	-
Stage 1	-	-	-	-	923	-
Stage 2	-	-	-	-	962	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	10.1
HCM LOS			B

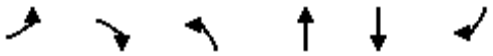
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	729	-	-	980	-
HCM Lane V/C Ratio	0.036	-	-	0.009	-
HCM Control Delay (s)	10.1	-	-	8.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	27	132	54	362	567	86
Future Volume (vph)	27	132	54	362	567	86
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95				0.99	
Frt	0.888				0.982	
Flt Protected	0.991		0.950			
Satd. Flow (prot)	1510	0	1652	1723	1735	0
Flt Permitted	0.991		0.313			
Satd. Flow (perm)	1496	0	544	1723	1735	0
Satd. Flow (RTOR)	159				17	
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Detector Phase	4		2	2	6	
Switch Phase						
Minimum Initial (s)	3.0		18.0	18.0	18.0	
Minimum Split (s)	24.0		24.0	24.0	24.0	
Total Split (s)	27.0		63.0	63.0	63.0	
Total Split (%)	30.0%		70.0%	70.0%	70.0%	
Yellow Time (s)	3.0		3.0	3.0	3.0	
All-Red Time (s)	3.0		3.0	3.0	3.0	
Lost Time Adjust (s)	-1.0		-1.0	-1.0	-1.0	
Total Lost Time (s)	5.0		5.0	5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		C-Max	C-Max	C-Max	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 44 (49%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 5: S High Street & Sharpless Street



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	27	132	54	362	567	86
Future Volume (veh/h)	27	132	54	362	567	86
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.94	1.00			0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1800	1885	1780	1766	1786	1856
Adj Flow Rate, veh/h	33	159	65	436	683	104
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	1	4	5	1	3
Cap, veh/h	45	215	395	1258	1077	164
Arrive On Green	0.18	0.18	1.00	1.00	0.71	0.71
Sat Flow, veh/h	252	1214	655	1766	1512	230
Grp Volume(v), veh/h	193	0	65	436	0	787
Grp Sat Flow(s),veh/h/ln	1474	0	655	1766	0	1743
Q Serve(g_s), s	11.2	0.0	3.4	0.0	0.0	21.3
Cycle Q Clear(g_c), s	11.2	0.0	24.2	0.0	0.0	21.3
Prop In Lane	0.17	0.82	1.00			0.13
Lane Grp Cap(c), veh/h	261	0	395	1258	0	1241
V/C Ratio(X)	0.74	0.00	0.16	0.35	0.00	0.63
Avail Cap(c_a), veh/h	360	0	395	1258	0	1241
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.1	0.0	3.9	0.0	0.0	6.8
Incr Delay (d2), s/veh	5.1	0.0	0.9	0.8	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.8	0.0	0.8	0.5	0.0	11.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.2	0.0	4.8	0.8	0.0	9.3
LnGrp LOS	D	A	A	A	A	A
Approach Vol, veh/h	193			501	787	
Approach Delay, s/veh	40.2			1.3	9.3	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		69.1		20.9		69.1
Change Period (Y+Rc), s		6.0		6.0		6.0
Max Green Setting (Gmax), s		57.0		21.0		57.0
Max Q Clear Time (g_c+I1), s		26.7		13.7		23.3
Green Ext Time (p_c), s		3.8		0.4		7.4

Intersection Summary	
HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	413	12	160	541
Future Volume (vph)	0	0	413	12	160	541
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.996			
Flt Protected					0.950	
Satd. Flow (prot)	1900	0	1817	0	1805	1863
Flt Permitted					0.950	
Satd. Flow (perm)	1900	0	1817	0	1805	1863
Sign Control	Stop		Free			Free

Intersection Summary
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	413	12	160	541
Future Vol, veh/h	0	0	413	12	160	541
Conflicting Peds, #/hr	39	1	0	16	16	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	4	9	0	2
Mvmt Flow	0	0	492	14	190	644

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1578	516	0	0	522	0
Stage 1	515	-	-	-	-	-
Stage 2	1063	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.3	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	86	728	-	-	776	-
Stage 1	765	-	-	-	-	-
Stage 2	367	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	61	716	-	-	764	-
Mov Cap-2 Maneuver	61	-	-	-	-	-
Stage 1	753	-	-	-	-	-
Stage 2	265	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	2.6
HCM LOS	A		

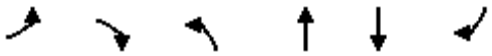
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	764	-
HCM Lane V/C Ratio	-	-	-	0.249	-
HCM Control Delay (s)	-	-	0	11.3	-
HCM Lane LOS	-	-	A	B	-
HCM 95th %tile Q(veh)	-	-	-	1	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	9	10	22	425	525	5
Future Volume (vph)	9	10	22	425	525	5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.93			1.00	1.00	
Frt	0.929				0.999	
Flt Protected	0.977			0.998		
Satd. Flow (prot)	1550	0	0	1710	1778	0
Flt Permitted	0.977			0.963		
Satd. Flow (perm)	1518	0	0	1648	1778	0
Satd. Flow (RTOR)	11				1	
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Detector Phase	4		2	2	6	
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	
Minimum Split (s)	24.0		24.0	24.0	24.0	
Total Split (s)	27.0		63.0	63.0	63.0	
Total Split (%)	30.0%		70.0%	70.0%	70.0%	
Yellow Time (s)	3.0		3.0	3.0	3.0	
All-Red Time (s)	3.0		3.0	3.0	3.0	
Lost Time Adjust (s)	-1.0			-1.0	-1.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		C-Min	C-Min	C-Min	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 79 (88%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 7: S High Street & University Avenue



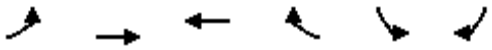
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	9	10	22	425	525	5
Future Volume (veh/h)	9	10	22	425	525	5
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.83	1.00			0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1800	1800	1716	1730	1786	1800
Adj Flow Rate, veh/h	10	11	24	472	583	6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	6	5	1	0
Cap, veh/h	62	68	76	1298	1403	14
Arrive On Green	0.09	0.09	0.80	0.80	0.80	0.80
Sat Flow, veh/h	663	729	43	1632	1764	18
Grp Volume(v), veh/h	22	0	496	0	0	589
Grp Sat Flow(s),veh/h/ln	1458	0	1675	0	0	1782
Q Serve(g_s), s	1.2	0.0	0.0	0.0	0.0	9.1
Cycle Q Clear(g_c), s	1.2	0.0	7.4	0.0	0.0	9.1
Prop In Lane	0.45	0.50	0.05			0.01
Lane Grp Cap(c), veh/h	137	0	1374	0	0	1417
V/C Ratio(X)	0.16	0.00	0.36	0.00	0.00	0.42
Avail Cap(c_a), veh/h	357	0	1374	0	0	1417
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.95	0.00	0.00	1.00
Uniform Delay (d), s/veh	37.5	0.0	2.6	0.0	0.0	2.8
Incr Delay (d2), s/veh	0.5	0.0	0.7	0.0	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	0.0	3.6	0.0	0.0	4.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.1	0.0	3.3	0.0	0.0	3.7
LnGrp LOS	D	A	A	A	A	A
Approach Vol, veh/h	22			496	589	
Approach Delay, s/veh	38.1			3.3	3.7	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		76.6		13.4		76.6
Change Period (Y+Rc), s		6.0		6.0		6.0
Max Green Setting (Gmax), s		57.0		21.0		57.0
Max Q Clear Time (g_c+I1), s		9.4		3.7		11.1
Green Ext Time (p_c), s		4.0		0.0		4.9

Intersection Summary	
HCM 6th Ctrl Delay	4.2
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	14	1	30	5	0
Future Volume (vph)	0	14	1	30	5	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.869			
Flt Protected					0.950	
Satd. Flow (prot)	0	1900	1650	0	1796	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1900	1650	0	1796	0
Sign Control		Free	Free		Stop	

Intersection Summary
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	14	1	30	5	0
Future Vol, veh/h	0	14	1	30	5	0
Conflicting Peds, #/hr	44	0	0	44	7	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	1	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	3	0	0	25
Mvmt Flow	0	16	1	33	6	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	78	0	-	0	85	65
Stage 1	-	-	-	-	62	-
Stage 2	-	-	-	-	23	-
Critical Hdwy	4.3	-	-	-	6.6	6.55
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	3	-	-	-	3	3.3
Pot Cap-1 Maneuver	1129	-	-	-	1064	998
Stage 1	-	-	-	-	1118	-
Stage 2	-	-	-	-	1169	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1082	-	-	-	977	953
Mov Cap-2 Maneuver	-	-	-	-	977	-
Stage 1	-	-	-	-	1071	-
Stage 2	-	-	-	-	1120	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1082	-	-	-	977
HCM Lane V/C Ratio	-	-	-	-	0.006
HCM Control Delay (s)	0	-	-	-	8.7
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1853	0	0	0	0	1377
Flt Permitted						
Satd. Flow (perm)	1853	0	0	0	0	1377
Sign Control	Stop		Free			Free

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	211	317	0	384	384	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	0	-	-	0
Peak Hour Factor	62	62	62	62	62	62
Heavy Vehicles, %	2	0	0	0	0	38
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major2	
Conflicting Flow All	597	-	384	0
Stage 1	384	-	-	-
Stage 2	213	-	-	-
Critical Hdwy	6.62	-	4.3	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.62	-	-	-
Follow-up Hdwy	3	-	3	-
Pot Cap-1 Maneuver	508	0	886	-
Stage 1	-	0	-	-
Stage 2	939	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	322	-	562	-
Mov Cap-2 Maneuver	322	-	-	-
Stage 1	-	-	-	-
Stage 2	939	-	-	-

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

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	-	562	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	0	-
HCM Lane LOS	A	A	-
HCM 95th %tile Q(veh)	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	23	26	419	0	1	539
Future Volume (vph)	23	26	419	0	1	539
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.90					1.00
Frt	0.929					
Flt Protected	0.977					
Satd. Flow (prot)	1552	0	1838	0	0	1873
Flt Permitted	0.977					
Satd. Flow (perm)	1543	0	1838	0	0	1873
Satd. Flow (RTOR)	31					
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		6			2
Permitted Phases					2	
Detector Phase	4		6		2	2
Switch Phase						
Minimum Initial (s)	3.0		49.0		49.0	49.0
Minimum Split (s)	19.0		54.0		54.0	54.0
Total Split (s)	29.0		55.0		55.0	55.0
Total Split (%)	34.5%		65.5%		65.5%	65.5%
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.0		2.0		2.0	2.0
Lost Time Adjust (s)	-1.0		-1.0			-1.0
Total Lost Time (s)	4.0		4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Max		Max	Max

Intersection Summary
Cycle Length: 84
Actuated Cycle Length: 69.7
Natural Cycle: 75
Control Type: Actuated-Uncoordinated

Splits and Phases: 10: S High Street & Linden Street

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	23	26	419	0	1	539
Future Volume (veh/h)	23	26	419	0	1	539
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.79		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1703	1790	1837	0	1866	1837
Adj Flow Rate, veh/h	28	26	505	0	1	649
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	10	4	5	0	0	2
Cap, veh/h	88	82	1384	0	54	1383
Arrive On Green	0.13	0.13	0.75	0.00	0.75	0.75
Sat Flow, veh/h	687	638	1837	0	0	1836
Grp Volume(v), veh/h	55	0	505	0	650	0
Grp Sat Flow(s),veh/h/ln	1349	0	1837	0	1837	0
Q Serve(g_s), s	2.5	0.0	6.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.5	0.0	6.3	0.0	9.1	0.0
Prop In Lane	0.51	0.47		0.00	0.00	
Lane Grp Cap(c), veh/h	173	0	1384	0	1437	0
V/C Ratio(X)	0.32	0.00	0.36	0.00	0.45	0.00
Avail Cap(c_a), veh/h	498	0	1384	0	1437	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	26.8	0.0	2.8	0.0	3.2	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.7	0.0	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	0.0	3.0	0.0	4.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.8	0.0	3.6	0.0	4.2	0.0
LnGrp LOS	C	A	A	A	A	A
Approach Vol, veh/h	55		505			650
Approach Delay, s/veh	27.8		3.6			4.2
Approach LOS	C		A			A

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		55.0		12.7		55.0
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		50.0		24.0		50.0
Max Q Clear Time (g_c+I1), s		0.0		5.0		0.0
Green Ext Time (p_c), s		0.0		0.1		0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.0
HCM 6th LOS	A

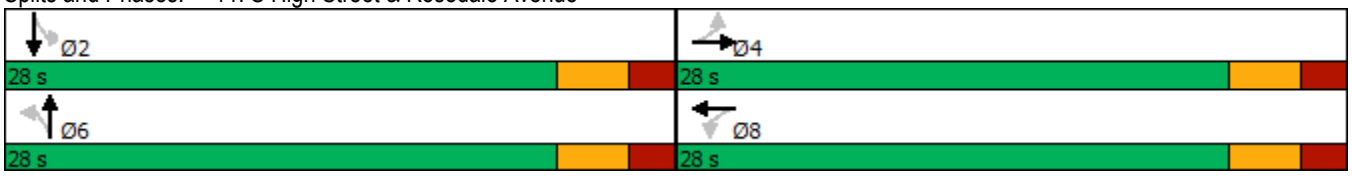
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	358	96	74	225	72	86	332	60	87	452	22
Future Volume (vph)	48	358	96	74	225	72	86	332	60	87	452	22
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.93	0.97		0.95	0.97		0.97	0.98		0.95	1.00	
Frt		0.968			0.964			0.977			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1590	1620	0	1582	1565	0	1483	1821	0	1645	1714	0
Flt Permitted	0.490			0.301			0.348			0.429		
Satd. Flow (perm)	764	1620	0	478	1565	0	528	1821	0	709	1714	0
Satd. Flow (RTOR)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			6			2	
Permitted Phases	4			8			6			2		
Detector Phase	4	4		8	8		6	6		2	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		23.0	23.0		23.0	23.0	
Total Split (s)	28.0	28.0		28.0	28.0		28.0	28.0		28.0	28.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	

Intersection Summary
Cycle Length: 56
Actuated Cycle Length: 52
Natural Cycle: 50
Control Type: Actuated-Uncoordinated

Splits and Phases: 11: S High Street & Rosedale Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	358	96	74	225	72	86	332	60	87	452	22
Future Volume (veh/h)	48	358	96	74	225	72	86	332	60	87	452	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.95		0.90	0.97		0.90	0.98		0.93	0.98		0.93
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	1696	1724	1780	1679	1693	1679	1666	1776	1791	1883	1883	1912
Adj Flow Rate, veh/h	51	377	100	78	237	68	91	349	62	92	476	22
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	7	5	1	7	6	7	6	3	2	2	2	0
Cap, veh/h	385	517	137	266	498	143	334	648	115	403	795	37
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	924	1279	339	798	1230	353	787	1450	258	959	1779	82
Grp Volume(v), veh/h	51	0	477	78	0	305	91	0	411	92	0	498
Grp Sat Flow(s),veh/h/ln	924	0	1619	798	0	1584	787	0	1707	959	0	1861
Q Serve(g_s), s	2.3	0.0	13.4	4.9	0.0	7.6	5.2	0.0	9.4	4.1	0.0	10.9
Cycle Q Clear(g_c), s	9.4	0.0	13.4	17.7	0.0	7.6	15.6	0.0	9.4	13.0	0.0	10.9
Prop In Lane	1.00		0.21	1.00		0.22	1.00		0.15	1.00		0.04
Lane Grp Cap(c), veh/h	385	0	655	266	0	640	334	0	763	403	0	831
V/C Ratio(X)	0.13	0.00	0.73	0.29	0.00	0.48	0.27	0.00	0.54	0.23	0.00	0.60
Avail Cap(c_a), veh/h	424	0	723	299	0	707	334	0	763	403	0	831
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.1	0.0	13.5	20.8	0.0	11.8	16.9	0.0	10.8	15.4	0.0	11.2
Incr Delay (d2), s/veh	0.2	0.0	3.4	0.6	0.0	0.6	2.0	0.0	2.7	1.3	0.0	3.2
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	0.8	0.0	8.4	1.6	0.0	4.4	1.9	0.0	6.5	1.7	0.0	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.2	0.0	16.9	21.4	0.0	12.4	18.9	0.0	13.6	16.7	0.0	14.4
LnGrp LOS	B	A	B	C	A	B	B	A	B	B	A	B
Approach Vol, veh/h		528			383			502			590	
Approach Delay, s/veh		16.7			14.2			14.5			14.8	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.0		25.7		28.0		25.7				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		23.0		23.0		23.0		23.0				
Max Q Clear Time (g_c+I1), s		0.0		15.4		0.0		20.2				
Green Ext Time (p_c), s		0.0		1.5		0.0		0.5				

Intersection Summary												
HCM 6th Ctrl Delay			15.1									
HCM 6th LOS			B									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	161	297	60	66	0	280	0	53	7	64	19
Future Volume (vph)	0	161	297	60	66	0	280	0	53	7	64	19
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.913							0.850		0.971	
Flt Protected					0.977		0.950				0.996	
Satd. Flow (prot)	0	1678	0	0	1661	0	1727	0	1474	0	1812	0
Flt Permitted					0.977		0.950				0.996	
Satd. Flow (perm)	0	1678	0	0	1661	0	1727	0	1474	0	1812	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	16.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	161	297	60	66	0	280	0	53	7	64	19
Future Vol, veh/h	0	161	297	60	66	0	280	0	53	7	64	19
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	4	3	6	16	0	4	0	9	0	2	0
Mvmt Flow	0	168	309	63	69	0	292	0	55	7	67	20
Number of Lanes	0	1	0	0	1	0	1	0	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	19.3	11.3	16.8	10.7
HCM LOS	C	B	C	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	48%	8%
Vol Thru, %	0%	0%	35%	52%	71%
Vol Right, %	0%	100%	65%	0%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	280	53	458	126	90
LT Vol	280	0	0	60	7
Through Vol	0	0	161	66	64
RT Vol	0	53	297	0	19
Lane Flow Rate	292	55	477	131	94
Geometry Grp	5	5	2	2	4a
Degree of Util (X)	0.561	0.089	0.692	0.23	0.165
Departure Headway (Hd)	6.926	5.792	5.22	6.312	6.339
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	519	616	687	564	562
Service Time	4.69	3.555	3.285	4.401	4.43
HCM Lane V/C Ratio	0.563	0.089	0.694	0.232	0.167
HCM Control Delay	18.3	9.1	19.3	11.3	10.7
HCM Lane LOS	C	A	C	B	B
HCM 95th-tile Q	3.4	0.3	5.6	0.9	0.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	1	58	0	42	12	402	125	90	326	6
Future Volume (vph)	1	1	1	58	0	42	12	402	125	90	326	6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.955			0.943			0.965			0.997	
Flt Protected		0.984			0.972		0.950			0.950		
Satd. Flow (prot)	0	1768	0	0	1687	0	1805	1780	0	1787	1823	0
Flt Permitted		0.984			0.972		0.950			0.950		
Satd. Flow (perm)	0	1768	0	0	1687	0	1805	1780	0	1787	1823	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑		↰	↑	
Traffic Vol, veh/h	1	1	1	58	0	42	12	402	125	90	326	6
Future Vol, veh/h	1	1	1	58	0	42	12	402	125	90	326	6
Conflicting Peds, #/hr	4	0	1	1	0	4	6	0	0	0	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	25	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	2	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	2	0	5	0	3	3	1	4	0
Mvmt Flow	1	1	1	65	0	47	13	452	140	101	366	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1154	1196	377	1122	1129	526	379	0	0	592	0	0
Stage 1	578	578	-	548	548	-	-	-	-	-	-	-
Stage 2	576	618	-	574	581	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.9	6.4	7.12	6.5	6.25	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.5	5.9	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.9	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.1	3	4	3.1	3	-	-	3	-	-
Pot Cap-1 Maneuver	169	164	696	201	206	579	890	-	-	750	-	-
Stage 1	533	473	-	589	520	-	-	-	-	-	-	-
Stage 2	534	452	-	569	503	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	136	139	691	177	174	577	885	-	-	750	-	-
Mov Cap-2 Maneuver	136	139	-	177	174	-	-	-	-	-	-	-
Stage 1	522	407	-	580	512	-	-	-	-	-	-	-
Stage 2	481	445	-	490	433	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	24.5	30.6	0.2	2.2
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	885	-	-	188	250	750	-	-
HCM Lane V/C Ratio	0.015	-	-	0.018	0.449	0.135	-	-
HCM Control Delay (s)	9.1	-	-	24.5	30.6	10.5	-	-
HCM Lane LOS	A	-	-	C	D	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	2.2	0.5	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	489	0	0	295	0	0	0	0	0	0	0
Future Volume (vph)	0	489	0	0	295	0	0	0	0	0	0	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt												
Flt Protected												
Satd. Flow (prot)	0	1990	0	0	1747	0	0	0	0	0	2000	0
Flt Permitted												
Satd. Flow (perm)	0	1990	0	0	1747	0	0	0	0	0	2000	0
Satd. Flow (RTOR)												
Lane Group Flow (vph)	0	504	0	0	304	0	0	0	0	0	0	0
Turn Type		NA			NA							
Protected Phases		2			6					4	4	
Permitted Phases				6								
Detector Phase		2		6	6					4	4	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		22.0		22.0	22.0					23.0	23.0	
Total Split (s)		31.0		31.0	31.0					23.0	23.0	
Total Split (%)		51.7%		51.7%	51.7%					38.3%	38.3%	
Yellow Time (s)		3.0		3.0	3.0					3.0	3.0	
All-Red Time (s)		2.0		2.0	2.0					2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0						-1.0	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag		Lag		Lag	Lag					Lag	Lag	
Lead-Lag Optimize?		Yes		Yes	Yes					Yes	Yes	
Recall Mode		Max		Max	Max					None	None	
Act Effct Green (s)		46.6			46.6							
Actuated g/C Ratio		0.92			0.92							
v/c Ratio		0.27			0.19							
Control Delay		2.7			2.5							
Queue Delay		0.0			0.0							
Total Delay		2.7			2.5							
LOS		A			A							
Approach Delay		2.7			2.5							
Approach LOS		A			A							
Queue Length 50th (ft)		0			0							
Queue Length 95th (ft)		155			91							
Internal Link Dist (ft)		456			695			194			757	
Turn Bay Length (ft)												
Base Capacity (vph)		1834			1610							
Starvation Cap Reductn		0			0							
Spillback Cap Reductn		0			0							
Storage Cap Reductn		0			0							
Reduced v/c Ratio		0.27			0.19							

Intersection Summary
Cycle Length: 60

Lane Group	Ø1	Ø3	Ø5
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Satd. Flow (RTOR)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	3	5
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	1.0	1.0	1.0
Minimum Split (s)	3.0	3.0	3.0
Total Split (s)	3.0	3.0	3.0
Total Split (%)	5%	5%	5%
Yellow Time (s)	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes
Recall Mode	None	None	None
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Actuated Cycle Length: 50.6	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.27	
Intersection Signal Delay: 2.7	Intersection LOS: A
Intersection Capacity Utilization 48.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Church Avenue/Church Street & Rosedale Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	475	3	47	108	128	5	127	91	109	75	27
Future Volume (vph)	19	475	3	47	108	128	5	127	91	109	75	27
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			0.97			0.97		0.95		
Frt		0.999			0.919			0.937				0.850
Flt Protected		0.998		0.950			0.950			0.950		
Satd. Flow (prot)	0	1842	0	1288	1523	0	1106	1469	0	1611	1609	1549
Flt Permitted		0.981		0.314			0.950			0.950		
Satd. Flow (perm)	0	1809	0	426	1523	0	1106	1469	0	1530	1609	1549
Satd. Flow (RTOR)					52			31				88
Turn Type	Perm	NA		Perm	NA		Split	NA		Split	NA	Perm
Protected Phases		2			6		4	4		8	8	
Permitted Phases	2			6								8
Detector Phase	2	2		6	6		4	4		8	8	8
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	27.0	27.0		27.0	27.0		11.0	11.0		32.0	32.0	32.0
Total Split (s)	35.0	35.0		35.0	35.0		35.0	35.0		42.0	42.0	42.0
Total Split (%)	31.3%	31.3%		31.3%	31.3%		31.3%	31.3%		37.5%	37.5%	37.5%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	3.0	3.0		3.0	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	-1.0	-1.0
Total Lost Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max		None	None		None	None	None

Intersection Summary
Cycle Length: 112
Actuated Cycle Length: 77.9
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 16: S New Street & Rosedale Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	475	3	47	108	128	5	127	91	109	75	27
Future Volume (veh/h)	19	475	3	47	108	128	5	127	91	109	75	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		1.00	1.00		0.93	1.00		0.91
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	1822	1896	1911	1425	1724	1780	897	1445	1557	1655	1626	1779
Adj Flow Rate, veh/h	22	540	0	53	123	0	6	144	102	124	85	26
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	6	1	0	29	8	4	50	11	3	4	6	0
Cap, veh/h	63	716	0	252	671		195	174	123	296	305	258
Arrive On Green	0.39	0.39	0.00	0.39	0.39	0.00	0.23	0.23	0.23	0.19	0.19	0.19
Sat Flow, veh/h	36	1841	0	659	1724	0	854	760	538	1576	1626	1375
Grp Volume(v), veh/h	562	0	0	53	123	0	6	0	246	124	85	26
Grp Sat Flow(s),veh/h/ln	1878	0	0	659	1724	0	854	0	1298	1576	1626	1375
Q Serve(g_s), s	5.0	0.0	0.0	0.0	3.6	0.0	0.4	0.0	13.9	5.3	3.5	1.2
Cycle Q Clear(g_c), s	20.0	0.0	0.0	11.0	3.6	0.0	0.4	0.0	13.9	5.3	3.5	1.2
Prop In Lane	0.04		0.00	1.00		0.00	1.00		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	779	0	0	252	671		195	0	297	296	305	258
V/C Ratio(X)	0.72	0.00	0.00	0.21	0.18		0.03	0.00	0.83	0.42	0.28	0.10
Avail Cap(c_a), veh/h	779	0	0	252	671		332	0	505	756	780	660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.5	0.0	0.0	17.7	15.5	0.0	23.1	0.0	28.3	27.6	26.8	25.9
Incr Delay (d2), s/veh	5.7	0.0	0.0	1.9	0.6	0.0	0.1	0.0	5.9	0.9	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.6	0.0	0.0	1.5	2.7	0.0	0.2	0.0	8.2	3.7	2.5	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	0.0	0.0	19.6	16.1	0.0	23.2	0.0	34.2	28.5	27.3	26.1
LnGrp LOS	C	A	A	B	B		C	A	C	C	C	C
Approach Vol, veh/h		562			176			252			235	
Approach Delay, s/veh		26.2			17.2			33.9			27.8	
Approach LOS		C			B			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		35.0		22.6		35.0		19.5				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		29.0		29.0		29.0		36.0				
Max Q Clear Time (g_c+I1), s		0.0		15.9		0.0		7.3				
Green Ext Time (p_c), s		0.0		0.8		0.0		0.7				

Intersection Summary		
HCM 6th Ctrl Delay	26.8	
HCM 6th LOS	C	

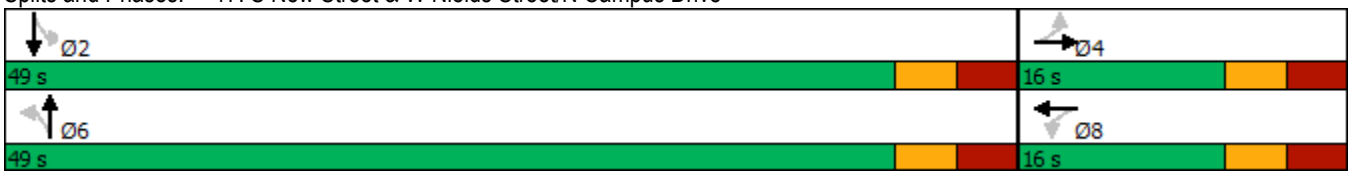
Notes

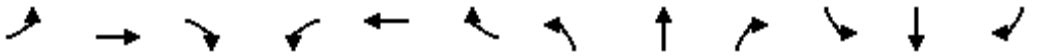
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	11	36	51	0	14	31	170	104	47	133	9
Future Volume (vph)	11	11	36	51	0	14	31	170	104	47	133	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.95			0.96		0.99	0.98			0.99	
Frt		0.915			0.971			0.943			0.993	
Flt Protected		0.991			0.962		0.950				0.988	
Satd. Flow (prot)	0	1603	0	0	1445	0	1645	1588	0	0	1979	0
Flt Permitted		0.927			0.809		0.605				0.855	
Satd. Flow (perm)	0	1498	0	0	1168	0	1042	1588	0	0	1704	0
Satd. Flow (RTOR)					50			105			9	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			6			2	
Permitted Phases	4			8			6			2		
Detector Phase	4	4		8	8		6	6		2	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		23.0	23.0		23.0	23.0	
Total Split (s)	16.0	16.0		16.0	16.0		49.0	49.0		49.0	49.0	
Total Split (%)	24.6%	24.6%		24.6%	24.6%		75.4%	75.4%		75.4%	75.4%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.0	3.0		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	
Total Lost Time (s)		5.0			5.0		5.0	5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	

Intersection Summary
Cycle Length: 65
Actuated Cycle Length: 68.8
Natural Cycle: 50
Control Type: Actuated-Uncoordinated

Splits and Phases: 17: S New Street & W Nields Street/N Campus Drive





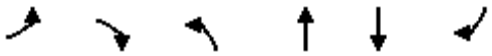
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	11	36	51	0	14	31	170	104	47	133	9
Future Volume (veh/h)	11	11	36	51	0	14	31	170	104	47	133	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.90		0.87	0.90		0.87	0.99		0.99	1.00		0.99
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	1988	1988	1944	1627	1912	1798	1794	1647	1793	2066	1992	2066
Adj Flow Rate, veh/h	14	14	47	67	0	10	41	224	124	62	175	12
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	0	0	3	20	0	8	0	15	5	0	5	0
Cap, veh/h	92	50	123	255	8	23	951	706	391	324	892	58
Arrive On Green	0.13	0.13	0.13	0.13	0.00	0.13	0.71	0.71	0.71	0.71	0.71	0.71
Sat Flow, veh/h	182	399	975	1160	61	182	1139	992	549	353	1253	81
Grp Volume(v), veh/h	75	0	0	77	0	0	41	0	348	249	0	0
Grp Sat Flow(s),veh/h/ln	1556	0	0	1404	0	0	1139	0	1541	1687	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.6	0.0	0.0	2.6	0.0	0.0	0.4	0.0	5.2	2.6	0.0	0.0
Prop In Lane	0.19		0.63	0.87		0.13	1.00		0.36	0.25		0.05
Lane Grp Cap(c), veh/h	265	0	0	286	0	0	951	0	1097	1274	0	0
V/C Ratio(X)	0.28	0.00	0.00	0.27	0.00	0.00	0.04	0.00	0.32	0.20	0.00	0.00
Avail Cap(c_a), veh/h	344	0	0	351	0	0	951	0	1097	1274	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.7	0.0	0.0	24.7	0.0	0.0	2.6	0.0	3.3	2.9	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.5	0.0	0.0	0.1	0.0	0.8	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	0.0	0.0	1.9	0.0	0.0	0.2	0.0	2.2	1.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.3	0.0	0.0	25.2	0.0	0.0	2.7	0.0	4.1	3.3	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		75			77			389			249	
Approach Delay, s/veh		25.3			25.2			3.9			3.3	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		49.0		12.8		49.0		12.8				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		43.0		10.0		43.0		10.0				
Max Q Clear Time (g_c+I1), s		0.0		4.6		0.0		4.6				
Green Ext Time (p_c), s		0.0		0.1		0.0		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			7.8									
HCM 6th LOS			A									

Notes

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



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	8	1	2	245	162	9
Future Volume (vph)	8	1	2	245	162	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.989				0.993	
Flt Protected	0.956					
Satd. Flow (prot)	1433	0	0	1786	1664	0
Flt Permitted	0.956					
Satd. Flow (perm)	1433	0	0	1786	1664	0
Sign Control	Stop			Stop	Stop	

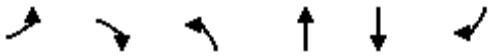
Intersection Summary
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	1	2	245	162	9
Future Vol, veh/h	8	1	2	245	162	9
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles, %	29	0	0	7	12	38
Mvmt Flow	11	1	3	322	213	12
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.8	9.6	9.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	1%	89%	0%
Vol Thru, %	99%	0%	95%
Vol Right, %	0%	11%	5%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	247	9	171
LT Vol	2	8	0
Through Vol	245	0	162
RT Vol	0	1	9
Lane Flow Rate	325	12	225
Geometry Grp	1	1	1
Degree of Util (X)	0.369	0.019	0.271
Departure Headway (Hd)	4.091	5.692	4.336
Convergence, Y/N	Yes	Yes	Yes
Cap	868	633	817
Service Time	2.167	3.692	2.421
HCM Lane V/C Ratio	0.374	0.019	0.275
HCM Control Delay	9.6	8.8	9.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.7	0.1	1.1



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	2	0	250	158	0
Future Volume (vph)	0	2	0	250	158	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected						
Satd. Flow (prot)	1635	0	0	1726	1698	0
Flt Permitted						
Satd. Flow (perm)	1635	0	0	1726	1698	0
Sign Control	Stop			Free	Free	

Intersection Summary
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	2	0	250	158	0
Future Vol, veh/h	0	2	0	250	158	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	2	-2	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	9	13	0
Mvmt Flow	0	3	0	316	200	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	516	200	200	0	-	0
Stage 1	200	-	-	-	-	-
Stage 2	316	-	-	-	-	-
Critical Hdwy	6.6	6.3	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	573	891	1026	-	-	-
Stage 1	954	-	-	-	-	-
Stage 2	835	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	573	891	1026	-	-	-
Mov Cap-2 Maneuver	573	-	-	-	-	-
Stage 1	954	-	-	-	-	-
Stage 2	835	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1026	-	891	-	-
HCM Lane V/C Ratio	-	-	0.003	-	-
HCM Control Delay (s)	0	-	9.1	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	28	225	17	33	114
Future Volume (vph)	12	28	225	17	33	114
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.990			
Flt Protected	0.950					0.989
Satd. Flow (prot)	1038	1148	1696	0	0	1685
Flt Permitted	0.950					0.989
Satd. Flow (perm)	1038	1148	1696	0	0	1685
Sign Control	Stop		Free			Free

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	28	225	17	33	114
Future Vol, veh/h	12	28	225	17	33	114
Conflicting Peds, #/hr	12	0	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	-3
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	73	40	5	80	24	10
Mvmt Flow	15	35	285	22	42	144

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	545	305	0	0	316	0
Stage 1	305	-	-	-	-	-
Stage 2	240	-	-	-	-	-
Critical Hdwy	7.33	6.7	-	-	4.5	-
Critical Hdwy Stg 1	6.33	-	-	-	-	-
Critical Hdwy Stg 2	6.33	-	-	-	-	-
Follow-up Hdwy	3.7	3.5	-	-	3.2	-
Pot Cap-1 Maneuver	419	674	-	-	869	-
Stage 1	663	-	-	-	-	-
Stage 2	720	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	389	668	-	-	862	-
Mov Cap-2 Maneuver	389	-	-	-	-	-
Stage 1	657	-	-	-	-	-
Stage 2	674	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.9	0	2.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	389	668	862	-
HCM Lane V/C Ratio	-	-	0.039	0.053	0.048	-
HCM Control Delay (s)	-	-	14.6	10.7	9.4	0
HCM Lane LOS	-	-	B	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.2	0.2	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	10	11	0	8	5	8	150	1	3	90	28
Future Volume (vph)	77	10	11	0	8	5	8	150	1	3	90	28
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.919			0.944			0.999			0.968	
Flt Protected	0.950							0.997			0.999	
Satd. Flow (prot)	1649	1201	0	1928	1342	0	0	1789	0	0	1634	0
Flt Permitted	0.950							0.997			0.999	
Satd. Flow (perm)	1649	1201	0	1928	1342	0	0	1789	0	0	1634	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Control Type: Unsignalized

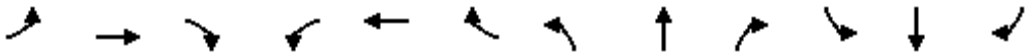
Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	77	10	11	0	8	5	8	150	1	3	90	28
Future Vol, veh/h	77	10	11	0	8	5	8	150	1	3	90	28
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	-3	-	-	1	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	10	100	0	0	57	0	29	4	0	33	3	40
Mvmt Flow	95	12	14	0	10	6	10	185	1	4	111	35

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	352	344	130	356	361	186	147	0	0	186	0	0
Stage 1	138	138	-	206	206	-	-	-	-	-	-	-
Stage 2	214	206	-	150	155	-	-	-	-	-	-	-
Critical Hdwy	7	7.3	6.1	6.5	6.47	5.9	4.6	-	-	4.6	-	-
Critical Hdwy Stg 1	6	6.3	-	5.5	5.47	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6	6.3	-	5.5	5.47	-	-	-	-	-	-	-
Follow-up Hdwy	3.1	4.9	3.1	3	4.513	3.1	3.3	-	-	3.3	-	-
Pot Cap-1 Maneuver	679	458	985	729	518	927	966	-	-	936	-	-
Stage 1	979	633	-	953	662	-	-	-	-	-	-	-
Stage 2	890	587	-	1015	694	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	655	450	984	695	509	927	965	-	-	936	-	-
Mov Cap-2 Maneuver	655	450	-	695	509	-	-	-	-	-	-	-
Stage 1	966	629	-	942	654	-	-	-	-	-	-	-
Stage 2	860	580	-	976	690	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.3	11	0.4	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	965	-	-	655	629	-	616	936	-	-
HCM Lane V/C Ratio	0.01	-	-	0.145	0.041	-	0.026	0.004	-	-
HCM Control Delay (s)	8.8	0	-	11.4	11	0	11	8.9	0	-
HCM Lane LOS	A	A	-	B	B	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.1	-	0.1	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	1	8	6	1	5	14	143	8	6	75	22
Future Volume (vph)	17	1	8	6	1	5	14	143	8	6	75	22
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.959			0.946			0.994			0.971	
Flt Protected		0.968			0.974			0.996			0.997	
Satd. Flow (prot)	0	1755	0	0	1375	0	0	1806	0	0	1763	0
Flt Permitted		0.968			0.974			0.996			0.997	
Satd. Flow (perm)	0	1755	0	0	1375	0	0	1806	0	0	1763	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	1	8	6	1	5	14	143	8	6	75	22
Future Vol, veh/h	17	1	8	6	1	5	14	143	8	6	75	22
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	0	0	0	0	100	50	0	4	14	0	6	0
Mvmt Flow	22	1	10	8	1	6	18	181	10	8	95	28
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.8	7.6	8.4	7.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	65%	50%	6%
Vol Thru, %	87%	4%	8%	73%
Vol Right, %	5%	31%	42%	21%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	165	26	12	103
LT Vol	14	17	6	6
Through Vol	143	1	1	75
RT Vol	8	8	5	22
Lane Flow Rate	209	33	15	130
Geometry Grp	1	1	1	1
Degree of Util (X)	0.236	0.042	0.019	0.146
Departure Headway (Hd)	4.071	4.589	4.516	4.026
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	875	785	797	879
Service Time	2.132	2.59	2.517	2.105
HCM Lane V/C Ratio	0.239	0.042	0.019	0.148
HCM Control Delay	8.4	7.8	7.6	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.9	0.1	0.1	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	10	37	1	10	18	162	272	2	26	302	15
Future Volume (vph)	17	10	37	1	10	18	162	272	2	26	302	15
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.917			0.999				0.850
Flt Protected		0.970			0.998		0.950			0.950		
Satd. Flow (prot)	0	1825	1355	0	1669	0	1814	1817	0	1727	1783	1607
Flt Permitted		0.970			0.998		0.950			0.950		
Satd. Flow (perm)	0	1825	1355	0	1669	0	1814	1817	0	1727	1783	1607
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Control Type: Unsignalized

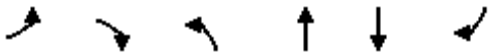
Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	10	37	1	10	18	162	272	2	26	302	15
Future Vol, veh/h	17	10	37	1	10	18	162	272	2	26	302	15
Conflicting Peds, #/hr	0	0	11	11	0	0	2	0	7	7	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	65	-	-	-	75	-	-	160	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	2	-	-	1	-	-	-1	-	-	1	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	18	0	0	6	0	5	0	4	6	0
Mvmt Flow	18	11	39	1	11	19	172	289	2	28	321	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1028	1021	334	1062	1036	297	339	0	0	298	0	0
Stage 1	379	379	-	641	641	-	-	-	-	-	-	-
Stage 2	649	642	-	421	395	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.9	6.58	7.3	6.7	6.36	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.5	5.9	-	6.3	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.9	-	6.3	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.3	3	4	3.2	3	-	-	3	-	-
Pot Cap-1 Maneuver	210	213	688	210	220	757	919	-	-	949	-	-
Stage 1	706	593	-	504	456	-	-	-	-	-	-	-
Stage 2	481	440	-	681	595	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	163	166	679	155	172	752	917	-	-	943	-	-
Mov Cap-2 Maneuver	163	166	-	155	172	-	-	-	-	-	-	-
Stage 1	573	574	-	407	368	-	-	-	-	-	-	-
Stage 2	370	355	-	605	576	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.5	17.1	3.7	0.7
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	917	-	-	164	679	328	943	-	-
HCM Lane V/C Ratio	0.188	-	-	0.175	0.058	0.094	0.029	-	-
HCM Control Delay (s)	9.8	-	-	31.6	10.6	17.1	8.9	-	-
HCM Lane LOS	A	-	-	D	B	C	A	-	-
HCM 95th %tile Q(veh)	0.7	-	-	0.6	0.2	0.3	0.1	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	5	18	508	299	0
Future Volume (vph)	0	5	18	508	299	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.865					
Flt Protected			0.950			
Satd. Flow (prot)	1652	0	1605	1854	1792	0
Flt Permitted			0.950			
Satd. Flow (perm)	1652	0	1605	1854	1792	0
Sign Control	Stop			Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	5	18	508	299	0
Future Vol, veh/h	0	5	18	508	299	0
Conflicting Peds, #/hr	0	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	25	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-1	-	-	-1	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	13	3	6	0
Mvmt Flow	0	6	20	564	332	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	937	333	333	0	-	0
Stage 1	333	-	-	-	-	-
Stage 2	604	-	-	-	-	-
Critical Hdwy	6.2	6.1	4.4	-	-	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3	3.1	3.1	-	-	-
Pot Cap-1 Maneuver	344	760	889	-	-	-
Stage 1	849	-	-	-	-	-
Stage 2	638	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	335	759	888	-	-	-
Mov Cap-2 Maneuver	477	-	-	-	-	-
Stage 1	829	-	-	-	-	-
Stage 2	637	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.8	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	888	-	759	-	-
HCM Lane V/C Ratio	0.023	-	0.007	-	-
HCM Control Delay (s)	9.1	-	9.8	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	19	36	568	91	115	493
Future Volume (vph)	19	36	568	91	115	493
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1796	1516	1863	1599	1796	1836
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1796	1516	1863	1599	1796	1836
Sign Control	Stop		Free			Free

Intersection Summary

Control Type: Unsignalized

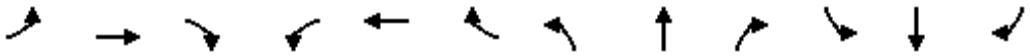
Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	36	568	91	115	493
Future Vol, veh/h	19	36	568	91	115	493
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	115	-	175	25	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	0	-	-	-1
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	6	2	1	1	4
Mvmt Flow	20	39	611	98	124	530

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1390	612	0	0	710	0
Stage 1	612	-	-	-	-	-
Stage 2	778	-	-	-	-	-
Critical Hdwy	6.6	6.36	-	-	4.3	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-	-
Follow-up Hdwy	3	3.2	-	-	3	-
Pot Cap-1 Maneuver	158	495	-	-	681	-
Stage 1	591	-	-	-	-	-
Stage 2	486	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	129	495	-	-	680	-
Mov Cap-2 Maneuver	273	-	-	-	-	-
Stage 1	590	-	-	-	-	-
Stage 2	398	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.1	0	2.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	273	495	680	-
HCM Lane V/C Ratio	-	-	0.075	0.078	0.182	-
HCM Control Delay (s)	-	-	19.3	12.9	11.5	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0.3	0.7	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	31	6	69	43	25	26	215	136	32	156	3
Future Volume (vph)	0	31	6	69	43	25	26	215	136	32	156	3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.977			0.976			0.951			0.998	
Flt Protected					0.975			0.997			0.992	
Satd. Flow (prot)	0	1694	0	0	1748	0	0	1702	0	0	1860	0
Flt Permitted					0.975			0.997			0.992	
Satd. Flow (perm)	0	1694	0	0	1748	0	0	1702	0	0	1860	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

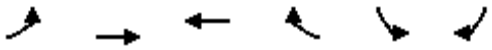
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	31	6	69	43	25	26	215	136	32	156	3
Future Vol, veh/h	0	31	6	69	43	25	26	215	136	32	156	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	4	40	5	0	5	4	1	11	0	2	0
Mvmt Flow	0	34	7	75	47	27	28	234	148	35	170	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9	10.1	12.4	9.9
HCM LOS	A	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	0%	50%	17%
Vol Thru, %	57%	84%	31%	82%
Vol Right, %	36%	16%	18%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	377	37	137	191
LT Vol	26	0	69	32
Through Vol	215	31	43	156
RT Vol	136	6	25	3
Lane Flow Rate	410	40	149	208
Geometry Grp	1	1	1	1
Degree of Util (X)	0.516	0.063	0.225	0.283
Departure Headway (Hd)	4.529	5.633	5.429	4.901
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	791	640	654	727
Service Time	2.594	3.633	3.526	2.981
HCM Lane V/C Ratio	0.518	0.063	0.228	0.286
HCM Control Delay	12.4	9	10.1	9.9
HCM Lane LOS	B	A	B	A
HCM 95th-tile Q	3	0.2	0.9	1.2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	16	171	132	30	14	7
Future Volume (vph)	16	171	132	30	14	7
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.975		0.955	
Flt Protected		0.996			0.968	
Satd. Flow (prot)	0	1748	1795	0	1756	0
Flt Permitted		0.996			0.968	
Satd. Flow (perm)	0	1748	1795	0	1756	0
Sign Control		Free	Free		Stop	

Intersection Summary

Control Type: Unsignalized

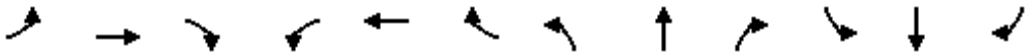
Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	171	132	30	14	7
Future Vol, veh/h	16	171	132	30	14	7
Conflicting Peds, #/hr	4	0	0	4	19	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	0	9	3	4	0	0
Mvmt Flow	21	225	174	39	18	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	217	0	-	0	484	208
Stage 1	-	-	-	-	198	-
Stage 2	-	-	-	-	286	-
Critical Hdwy	4.3	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	1012	-	-	-	617	887
Stage 1	-	-	-	-	967	-
Stage 2	-	-	-	-	878	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1008	-	-	-	597	875
Mov Cap-2 Maneuver	-	-	-	-	597	-
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	874	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1008	-	-	-	668
HCM Lane V/C Ratio	0.021	-	-	-	0.041
HCM Control Delay (s)	8.6	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	138	41	26	145	0	0	0	54	38	42	36
Future Volume (vph)	0	138	41	26	145	0	0	0	54	38	42	36
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.969						0.865			0.959	
Flt Protected					0.993						0.984	
Satd. Flow (prot)	0	1711	0	0	1827	0	0	1652	0	0	1756	0
Flt Permitted					0.993						0.984	
Satd. Flow (perm)	0	1711	0	0	1827	0	0	1652	0	0	1756	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	138	41	26	145	0	0	0	54	38	42	36
Future Vol, veh/h	0	138	41	26	145	0	0	0	54	38	42	36
Conflicting Peds, #/hr	14	0	82	82	0	14	59	0	83	83	0	59
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	-1	-	-	-1	-	-	-3	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	2	29	14	2	0	0	0	0	0	4	7
Mvmt Flow	0	166	49	31	175	0	0	0	65	46	51	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	297	0	0	616	510	356	543	534	234
Stage 1	-	-	-	-	-	-	273	273	-	237	237	-
Stage 2	-	-	-	-	-	-	343	237	-	306	297	-
Critical Hdwy	-	-	-	4.4	-	-	6.9	6.3	6.1	6.5	5.94	5.97
Critical Hdwy Stg 1	-	-	-	-	-	-	5.9	5.3	-	5.5	4.94	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.9	5.3	-	5.5	4.94	-
Follow-up Hdwy	-	-	-	3.1	-	-	3.5	4	3.3	3	4.036	3.2
Pot Cap-1 Maneuver	0	-	-	915	-	0	420	483	699	560	491	845
Stage 1	0	-	-	-	-	0	749	698	-	921	734	-
Stage 2	0	-	-	-	-	0	689	722	-	852	698	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	844	-	-	305	427	593	445	434	798
Mov Cap-2 Maneuver	-	-	-	-	-	-	305	427	-	445	434	-
Stage 1	-	-	-	-	-	-	749	644	-	921	704	-
Stage 2	-	-	-	-	-	-	547	692	-	699	644	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.4	11.8	14.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	593	-	-	844	-	510
HCM Lane V/C Ratio	0.11	-	-	0.037	-	0.274
HCM Control Delay (s)	11.8	-	-	9.4	0	14.7
HCM Lane LOS	B	-	-	A	A	B
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-	1.1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	228	8	9	160	15	36
Future Volume (vph)	228	8	9	160	15	36
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.995				0.904	
Flt Protected				0.997	0.986	
Satd. Flow (prot)	1872	0	0	1809	1694	0
Flt Permitted				0.997	0.986	
Satd. Flow (perm)	1872	0	0	1809	1694	0
Sign Control	Free			Free	Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	228	8	9	160	15	36
Future Vol, veh/h	228	8	9	160	15	36
Conflicting Peds, #/hr	0	52	52	0	19	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	1	0	0	5	0	0
Mvmt Flow	245	9	10	172	16	39

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	306	0	513	307
Stage 1	-	-	-	-	302	-
Stage 2	-	-	-	-	211	-
Critical Hdwy	-	-	4.3	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	943	-	592	779
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	954	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	896	-	546	737
Mov Cap-2 Maneuver	-	-	-	-	546	-
Stage 1	-	-	-	-	820	-
Stage 2	-	-	-	-	925	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	10.9
HCM LOS			B

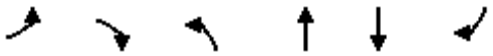
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	668	-	-	896	-
HCM Lane V/C Ratio	0.082	-	-	0.011	-
HCM Control Delay (s)	10.9	-	-	9.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	40	221	85	538	579	82
Future Volume (vph)	40	221	85	538	579	82
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.92		0.98		0.98	
Frt	0.886				0.983	
Flt Protected	0.992		0.950			
Satd. Flow (prot)	1446	0	1621	1756	1720	0
Flt Permitted	0.992		0.349			
Satd. Flow (perm)	1427	0	583	1756	1720	0
Satd. Flow (RTOR)	235				15	
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Detector Phase	4		2	2	6	
Switch Phase						
Minimum Initial (s)	3.0		18.0	18.0	18.0	
Minimum Split (s)	24.0		24.0	24.0	24.0	
Total Split (s)	30.0		60.0	60.0	60.0	
Total Split (%)	33.3%		66.7%	66.7%	66.7%	
Yellow Time (s)	3.0		3.0	3.0	3.0	
All-Red Time (s)	3.0		3.0	3.0	3.0	
Lost Time Adjust (s)	-1.0		-1.0	-1.0	-1.0	
Total Lost Time (s)	5.0		5.0	5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		C-Max	C-Max	C-Max	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 42 (47%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 5: S High Street & Sharpless Street



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	40	221	85	538	579	82
Future Volume (veh/h)	40	221	85	538	579	82
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.93	1.00			0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1800	1772	1752	1795	1786	1758
Adj Flow Rate, veh/h	43	235	90	572	616	87
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	2	6	3	1	3
Cap, veh/h	51	278	385	1187	1008	142
Arrive On Green	0.23	0.23	1.00	1.00	0.66	0.66
Sat Flow, veh/h	224	1223	697	1795	1523	215
Grp Volume(v), veh/h	279	0	90	572	0	703
Grp Sat Flow(s),veh/h/ln	1452	0	697	1795	0	1738
Q Serve(g_s), s	16.5	0.0	4.9	0.0	0.0	20.7
Cycle Q Clear(g_c), s	16.5	0.0	25.1	0.0	0.0	20.7
Prop In Lane	0.15	0.84	1.00			0.12
Lane Grp Cap(c), veh/h	330	0	385	1187	0	1150
V/C Ratio(X)	0.84	0.00	0.23	0.48	0.00	0.61
Avail Cap(c_a), veh/h	403	0	385	1187	0	1150
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.2	0.0	4.3	0.0	0.0	8.7
Incr Delay (d2), s/veh	12.9	0.0	1.4	1.4	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.3	0.0	1.2	0.8	0.0	12.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	46.2	0.0	5.7	1.4	0.0	11.1
LnGrp LOS	D	A	A	A	A	B
Approach Vol, veh/h	279			662	703	
Approach Delay, s/veh	46.2			2.0	11.1	
Approach LOS	D			A	B	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		64.5		25.5		64.5
Change Period (Y+Rc), s		6.0		6.0		6.0
Max Green Setting (Gmax), s		54.0		24.0		54.0
Max Q Clear Time (g_c+I1), s		27.6		19.0		22.7
Green Ext Time (p_c), s		5.2		0.5		6.1

Intersection Summary	
HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	625	36	157	633
Future Volume (vph)	0	0	625	36	157	633
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.993			
Flt Protected					0.950	
Satd. Flow (prot)	1900	0	1832	0	1805	1881
Flt Permitted					0.950	
Satd. Flow (perm)	1900	0	1832	0	1805	1881
Sign Control	Stop		Free			Free

Intersection Summary
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	625	36	157	633
Future Vol, veh/h	0	0	625	36	157	633
Conflicting Peds, #/hr	82	3	0	51	51	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	3	3	0	1
Mvmt Flow	0	0	672	39	169	681

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1844	746	0	0	762	0
Stage 1	743	-	-	-	-	-
Stage 2	1101	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.3	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	*69	*571	-	-	590	-
Stage 1	*590	-	-	-	-	-
Stage 2	*352	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*42	*542	-	-	562	-
Mov Cap-2 Maneuver	*42	-	-	-	-	-
Stage 1	*561	-	-	-	-	-
Stage 2	*227	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	2.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	562	-
HCM Lane V/C Ratio	-	-	-	0.3	-
HCM Control Delay (s)	-	-	0	14.1	-
HCM Lane LOS	-	-	A	B	-
HCM 95th %tile Q(veh)	-	-	-	1.3	-

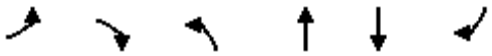
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	13	38	647	621	10
Future Volume (vph)	13	13	38	647	621	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.83				0.99	
Frt	0.932				0.998	
Flt Protected	0.976			0.997		
Satd. Flow (prot)	1471	0	0	1742	1765	0
Flt Permitted	0.976			0.943		
Satd. Flow (perm)	1354	0	0	1648	1765	0
Satd. Flow (RTOR)	14				2	
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Detector Phase	4		2	2	6	
Switch Phase						
Minimum Initial (s)	5.0		13.0	13.0	13.0	
Minimum Split (s)	24.0		24.0	24.0	24.0	
Total Split (s)	30.0		60.0	60.0	60.0	
Total Split (%)	33.3%		66.7%	66.7%	66.7%	
Yellow Time (s)	3.0		3.0	3.0	3.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0			-1.0	-1.0	
Total Lost Time (s)	4.0			4.0	4.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		C-Max	C-Max	C-Max	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 33 (37%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 7: S High Street & University Avenue



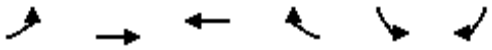
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	13	38	647	621	10
Future Volume (veh/h)	13	13	38	647	621	10
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.72	1.00			0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1800	1800	1758	1758	1786	1800
Adj Flow Rate, veh/h	14	14	41	703	675	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	3	3	1	0
Cap, veh/h	64	64	87	1319	1423	23
Arrive On Green	0.10	0.10	0.81	0.81	0.81	0.81
Sat Flow, veh/h	654	654	55	1621	1749	29
Grp Volume(v), veh/h	29	0	744	0	0	686
Grp Sat Flow(s),veh/h/ln	1354	0	1676	0	0	1778
Q Serve(g_s), s	1.8	0.0	0.0	0.0	0.0	10.5
Cycle Q Clear(g_c), s	1.8	0.0	12.3	0.0	0.0	10.5
Prop In Lane	0.48	0.48	0.06			0.02
Lane Grp Cap(c), veh/h	132	0	1406	0	0	1447
V/C Ratio(X)	0.22	0.00	0.53	0.00	0.00	0.47
Avail Cap(c_a), veh/h	391	0	1406	0	0	1447
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.89	0.00	0.00	1.00
Uniform Delay (d), s/veh	37.5	0.0	2.7	0.0	0.0	2.5
Incr Delay (d2), s/veh	0.8	0.0	1.3	0.0	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	0.0	5.5	0.0	0.0	4.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.3	0.0	4.0	0.0	0.0	3.7
LnGrp LOS	D	A	A	A	A	A
Approach Vol, veh/h	29			744	686	
Approach Delay, s/veh	38.3			4.0	3.7	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		77.2		12.8		77.2
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		55.0		25.0		55.0
Max Q Clear Time (g_c+I1), s		14.3		4.3		12.5
Green Ext Time (p_c), s		7.2		0.1		6.1

Intersection Summary	
HCM 6th Ctrl Delay	4.5
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	21	28	14	5	0
Future Volume (vph)	0	21	28	14	5	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.956			
Flt Protected					0.950	
Satd. Flow (prot)	0	1900	1780	0	1796	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1900	1780	0	1796	0
Sign Control		Free	Free		Stop	

Intersection Summary
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	21	28	14	5	0
Future Vol, veh/h	0	21	28	14	5	0
Conflicting Peds, #/hr	74	0	0	74	8	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	1	-
Peak Hour Factor	69	69	69	69	69	69
Heavy Vehicles, %	0	0	3	0	0	0
Mvmt Flow	0	30	41	20	7	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	135	0	-	0	163	128
Stage 1	-	-	-	-	125	-
Stage 2	-	-	-	-	38	-
Critical Hdwy	4.3	-	-	-	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	1080	-	-	-	952	980
Stage 1	-	-	-	-	1040	-
Stage 2	-	-	-	-	1149	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1004	-	-	-	823	908
Mov Cap-2 Maneuver	-	-	-	-	823	-
Stage 1	-	-	-	-	967	-
Stage 2	-	-	-	-	1069	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1004	-	-	-	823
HCM Lane V/C Ratio	-	-	-	-	0.009
HCM Control Delay (s)	0	-	-	-	9.4
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1872	0	0	0	0	1624
Flt Permitted						
Satd. Flow (perm)	1872	0	0	0	0	1624
Sign Control	Stop		Free			Free

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	166	177	0	192	192	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	1	0	0	0	0	17
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major2	
Conflicting Flow All	359	-	192	0
Stage 1	192	-	-	-
Stage 2	167	-	-	-
Critical Hdwy	6.61	-	4.3	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.61	-	-	-
Follow-up Hdwy	3	-	3	-
Pot Cap-1 Maneuver	718	0	1032	-
Stage 1	-	0	-	-
Stage 2	991	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	587	-	843	-
Mov Cap-2 Maneuver	587	-	-	-
Stage 1	-	-	-	-
Stage 2	991	-	-	-

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

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	-	843	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	0	-
HCM Lane LOS	A	A	-
HCM 95th %tile Q(veh)	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	57	70	620	0	0	637
Future Volume (vph)	57	70	620	0	0	637
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.70					
Frt	0.926					
Flt Protected	0.978					
Satd. Flow (prot)	1304	0	1873	0	0	1891
Flt Permitted	0.978					
Satd. Flow (perm)	1285	0	1873	0	0	1891
Satd. Flow (RTOR)	75					
Turn Type	Prot		NA			NA
Protected Phases	4		6			2
Permitted Phases						
Detector Phase	4		6			2
Switch Phase						
Minimum Initial (s)	3.0		49.0			49.0
Minimum Split (s)	19.0		54.0			54.0
Total Split (s)	29.0		55.0			55.0
Total Split (%)	34.5%		65.5%			65.5%
Yellow Time (s)	3.0		3.0			3.0
All-Red Time (s)	2.0		2.0			2.0
Lost Time Adjust (s)	-1.0		-1.0			-1.0
Total Lost Time (s)	4.0		4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Max			Max

Intersection Summary
Cycle Length: 84
Actuated Cycle Length: 70
Natural Cycle: 75
Control Type: Actuated-Uncoordinated

Splits and Phases: 10: S High Street & Linden Street

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	57	70	620	0	0	637
Future Volume (veh/h)	57	70	620	0	0	637
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.53		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1849	1849	1866	0	0	1852
Adj Flow Rate, veh/h	61	67	667	0	0	685
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	3	0	0	1
Cap, veh/h	103	114	1297	0	0	1286
Arrive On Green	0.20	0.20	0.69	0.00	0.00	0.69
Sat Flow, veh/h	527	579	1866	0	0	1852
Grp Volume(v), veh/h	129	0	667	0	0	685
Grp Sat Flow(s),veh/h/ln	1115	0	1866	0	0	1852
Q Serve(g_s), s	7.7	0.0	12.5	0.0	0.0	13.2
Cycle Q Clear(g_c), s	7.7	0.0	12.5	0.0	0.0	13.2
Prop In Lane	0.47	0.52		0.00	0.00	
Lane Grp Cap(c), veh/h	219	0	1297	0	0	1286
V/C Ratio(X)	0.59	0.00	0.51	0.00	0.00	0.53
Avail Cap(c_a), veh/h	380	0	1297	0	0	1286
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	26.8	0.0	5.3	0.0	0.0	5.4
Incr Delay (d2), s/veh	2.5	0.0	1.5	0.0	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.9	0.0	7.6	0.0	0.0	7.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.3	0.0	6.8	0.0	0.0	7.0
LnGrp LOS	C	A	A	A	A	A
Approach Vol, veh/h	129		667			685
Approach Delay, s/veh	29.3		6.8			7.0
Approach LOS	C		A			A

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		55.0		18.4		55.0
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		50.0		24.0		50.0
Max Q Clear Time (g_c+I1), s		0.0		10.2		0.0
Green Ext Time (p_c), s		0.0		0.5		0.0

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

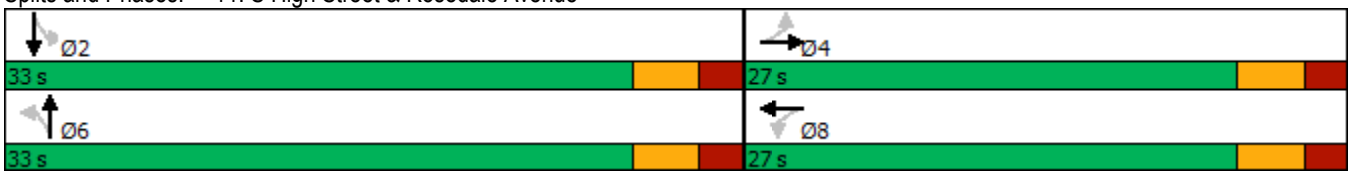
Notes

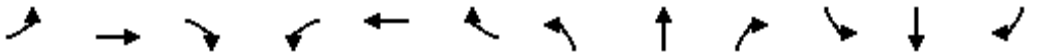
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	184	94	82	318	87	118	418	98	125	467	41
Future Volume (vph)	67	184	94	82	318	87	118	418	98	125	467	41
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.89	0.91		0.84	0.94		0.94	0.96		0.93	0.98	
Frt		0.949			0.968			0.972			0.988	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1620	1466	0	1660	1588	0	1572	1780	0	1645	1698	0
Flt Permitted	0.320			0.489			0.349			0.342		
Satd. Flow (perm)	486	1466	0	714	1588	0	541	1780	0	549	1698	0
Satd. Flow (RTOR)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			6			2	
Permitted Phases	4			8			6			2		
Detector Phase	4	4		8	8		6	6		2	2	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		23.0	23.0		23.0	23.0	
Total Split (s)	27.0	27.0		27.0	27.0		33.0	33.0		33.0	33.0	
Total Split (%)	45.0%	45.0%		45.0%	45.0%		55.0%	55.0%		55.0%	55.0%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 56.6
Natural Cycle: 55
Control Type: Actuated-Uncoordinated

Splits and Phases: 11: S High Street & Rosedale Avenue

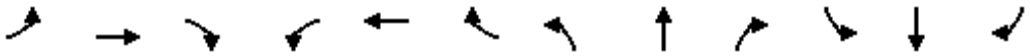




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	184	94	82	318	87	118	418	98	125	467	41
Future Volume (veh/h)	67	184	94	82	318	87	118	418	98	125	467	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.92		0.76	0.88		0.76	0.97		0.87	0.98		0.87
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	1724	1710	1752	1750	1750	1707	1750	1791	1791	1883	1898	1869
Adj Flow Rate, veh/h	70	192	96	85	331	88	123	435	94	130	486	39
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	6	3	2	2	5	0	2	2	2	1	3
Cap, veh/h	242	354	177	319	455	121	367	687	149	359	849	68
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	820	962	481	898	1238	329	800	1386	300	863	1712	137
Grp Volume(v), veh/h	70	0	288	85	0	419	123	0	529	130	0	525
Grp Sat Flow(s),veh/h/ln	820	0	1443	898	0	1567	800	0	1686	863	0	1850
Q Serve(g_s), s	4.7	0.0	9.2	4.8	0.0	13.5	7.4	0.0	13.5	7.5	0.0	11.7
Cycle Q Clear(g_c), s	17.7	0.0	9.2	13.5	0.0	13.5	18.6	0.0	13.5	20.5	0.0	11.7
Prop In Lane	1.00		0.33	1.00		0.21	1.00		0.18	1.00		0.07
Lane Grp Cap(c), veh/h	242	0	531	319	0	576	367	0	836	359	0	917
V/C Ratio(X)	0.29	0.00	0.54	0.27	0.00	0.73	0.34	0.00	0.63	0.36	0.00	0.57
Avail Cap(c_a), veh/h	263	0	568	342	0	616	367	0	836	359	0	917
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.4	0.0	14.6	19.7	0.0	16.0	16.7	0.0	10.8	18.2	0.0	10.4
Incr Delay (d2), s/veh	0.7	0.0	0.9	0.4	0.0	4.0	2.5	0.0	3.6	2.8	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	0.0	5.2	1.8	0.0	8.6	2.7	0.0	8.8	3.0	0.0	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.0	0.0	15.5	20.2	0.0	20.0	19.2	0.0	14.5	21.0	0.0	13.0
LnGrp LOS	C	A	B	C	A	B	B	A	B	C	A	B
Approach Vol, veh/h		358			504			652			655	
Approach Delay, s/veh		17.2			20.0			15.4			14.6	
Approach LOS		B			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		33.0		25.5		33.0		25.5				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		28.0		22.0		28.0		22.0				
Max Q Clear Time (g_c+I1), s		0.0		20.2		0.0		16.0				
Green Ext Time (p_c), s		0.0		0.3		0.0		1.3				

Intersection Summary												
HCM 6th Ctrl Delay			16.5									
HCM 6th LOS			B									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	159	171	66	179	0	297	0	120	12	73	27
Future Volume (vph)	1	159	171	66	179	0	297	0	120	12	73	27
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.930							0.850		0.967	
Flt Protected					0.987		0.950				0.995	
Satd. Flow (prot)	0	1708	0	0	1839	0	1761	0	1607	0	1805	0
Flt Permitted					0.987		0.950				0.995	
Satd. Flow (perm)	0	1708	0	0	1839	0	1761	0	1607	0	1805	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	16.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	159	171	66	179	0	297	0	120	12	73	27
Future Vol, veh/h	1	159	171	66	179	0	297	0	120	12	73	27
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	4	3	0	2	0	2	0	0	0	2	0
Mvmt Flow	1	169	182	70	190	0	316	0	128	13	78	29
Number of Lanes	0	1	0	0	1	0	1	0	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	16.7	15	18.2	11.8
HCM LOS	C	B	C	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	27%	11%
Vol Thru, %	0%	0%	48%	73%	65%
Vol Right, %	0%	100%	52%	0%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	297	120	331	245	112
LT Vol	297	0	1	66	12
Through Vol	0	0	159	179	73
RT Vol	0	120	171	0	27
Lane Flow Rate	316	128	352	261	119
Geometry Grp	5	5	2	2	4a
Degree of Util (X)	0.63	0.21	0.577	0.465	0.225
Departure Headway (Hd)	7.177	5.918	5.902	6.427	6.785
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	502	606	613	560	528
Service Time	4.916	3.657	3.941	4.47	4.84
HCM Lane V/C Ratio	0.629	0.211	0.574	0.466	0.225
HCM Control Delay	21.4	10.2	16.7	15	11.8
HCM Lane LOS	C	B	C	B	B
HCM 95th-tile Q	4.3	0.8	3.7	2.4	0.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	5	31	84	1	69	6	309	66	55	308	6
Future Volume (vph)	16	5	31	84	1	69	6	309	66	55	308	6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.920			0.940			0.974			0.997	
Flt Protected		0.985			0.973		0.950			0.950		
Satd. Flow (prot)	0	1705	0	0	1713	0	1805	1814	0	1805	1858	0
Flt Permitted		0.985			0.973		0.950			0.950		
Satd. Flow (perm)	0	1705	0	0	1713	0	1805	1814	0	1805	1858	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	5	31	84	1	69	6	309	66	55	308	6
Future Vol, veh/h	16	5	31	84	1	69	6	309	66	55	308	6
Conflicting Peds, #/hr	8	0	3	3	0	8	7	0	3	3	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	25	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	2	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	1	0	2	0	2	2	0	2	0
Mvmt Flow	17	5	32	88	1	72	6	322	69	57	321	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	858	851	334	832	820	368	334	0	0	394	0	0
Stage 1	445	445	-	372	372	-	-	-	-	-	-	-
Stage 2	413	406	-	460	448	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.9	6.4	7.11	6.5	6.22	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.5	5.9	-	6.11	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.9	-	6.11	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.1	3	4	3.1	3	-	-	3	-	-
Pot Cap-1 Maneuver	281	272	738	322	312	717	922	-	-	879	-	-
Stage 1	643	550	-	742	622	-	-	-	-	-	-	-
Stage 2	673	575	-	662	576	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	235	250	731	285	287	710	916	-	-	876	-	-
Mov Cap-2 Maneuver	235	250	-	285	287	-	-	-	-	-	-	-
Stage 1	635	510	-	735	616	-	-	-	-	-	-	-
Stage 2	595	569	-	584	535	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.5	20.6	0.1	1.4
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	916	-	-	398	389	876	-	-
HCM Lane V/C Ratio	0.007	-	-	0.136	0.412	0.065	-	-
HCM Control Delay (s)	9	-	-	15.5	20.6	9.4	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	2	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	349	0	0	469	0	0	0	0	0	0	0
Future Volume (vph)	0	349	0	0	469	0	0	0	0	0	0	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt												
Flt Protected												
Satd. Flow (prot)	0	2010	0	0	1851	0	0	0	0	0	2000	0
Flt Permitted												
Satd. Flow (perm)	0	2010	0	0	1851	0	0	0	0	0	2000	0
Satd. Flow (RTOR)												
Lane Group Flow (vph)	0	367	0	0	494	0	0	0	0	0	0	0
Turn Type		NA			NA							
Protected Phases		2			6					4	4	
Permitted Phases				6								
Detector Phase		2		6	6					4	4	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		22.0		22.0	22.0					21.0	21.0	
Total Split (s)		33.0		33.0	33.0					21.0	21.0	
Total Split (%)		55.0%		55.0%	55.0%					35.0%	35.0%	
Yellow Time (s)		3.0		3.0	3.0					3.0	3.0	
All-Red Time (s)		2.0		2.0	2.0					2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0						-1.0	
Total Lost Time (s)		4.0			4.0						4.0	
Lead/Lag		Lag		Lag	Lag					Lag	Lag	
Lead-Lag Optimize?		Yes		Yes	Yes					Yes	Yes	
Recall Mode		Max		Max	Max					None	None	
Act Effct Green (s)		48.6			48.6							
Actuated g/C Ratio		0.92			0.92							
v/c Ratio		0.20			0.29							
Control Delay		2.4			2.8							
Queue Delay		0.0			0.0							
Total Delay		2.4			2.8							
LOS		A			A							
Approach Delay		2.4			2.8							
Approach LOS		A			A							
Queue Length 50th (ft)		0			0							
Queue Length 95th (ft)		106			156							
Internal Link Dist (ft)		456			695			194			757	
Turn Bay Length (ft)												
Base Capacity (vph)		1857			1710							
Starvation Cap Reductn		0			0							
Spillback Cap Reductn		0			0							
Storage Cap Reductn		0			0							
Reduced v/c Ratio		0.20			0.29							

Intersection Summary
Cycle Length: 60

Lane Group	Ø1	Ø3	Ø5
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Satd. Flow (RTOR)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	3	5
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	1.0	1.0	1.0
Minimum Split (s)	3.0	3.0	3.0
Total Split (s)	3.0	3.0	3.0
Total Split (%)	5%	5%	5%
Yellow Time (s)	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes
Recall Mode	None	None	None
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Actuated Cycle Length: 52.6	
Natural Cycle: 50	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.29	
Intersection Signal Delay: 2.6	Intersection LOS: A
Intersection Capacity Utilization 47.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Church Avenue/Church Street & Rosedale Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	178	14	76	262	211	12	136	159	137	140	54
Future Volume (vph)	16	178	14	76	262	211	12	136	159	137	140	54
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					0.97			0.97		0.96		
Frt		0.991			0.933			0.919				0.850
Flt Protected		0.996		0.950			0.950			0.950		
Satd. Flow (prot)	0	1760	0	1362	1629	0	1522	1436	0	1659	1672	1549
Flt Permitted		0.875		0.580			0.950			0.950		
Satd. Flow (perm)	0	1546	0	831	1629	0	1522	1436	0	1598	1672	1549
Satd. Flow (RTOR)		3			33			54				85
Turn Type	Perm	NA		Perm	NA		Split	NA		Split	NA	Perm
Protected Phases		2			6		4	4		8	8	
Permitted Phases	2			6								8
Detector Phase	2	2		6	6		4	4		8	8	8
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	27.0	27.0		27.0	27.0		11.0	11.0		32.0	32.0	32.0
Total Split (s)	33.0	33.0		33.0	33.0		43.0	43.0		39.0	39.0	39.0
Total Split (%)	28.7%	28.7%		28.7%	28.7%		37.4%	37.4%		33.9%	33.9%	33.9%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	3.0	3.0		3.0	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	-1.0	-1.0
Total Lost Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max		None	None		None	None	None

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 80.3
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 16: S New Street & Rosedale Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	178	14	76	262	211	12	136	159	137	140	54
Future Volume (veh/h)	16	178	14	76	262	211	12	136	159	137	140	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		1.00	1.00		0.95	1.00		0.93
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	1807	1837	1911	1524	1823	1837	1473	1431	1529	1697	1683	1779
Adj Flow Rate, veh/h	17	189	15	81	279	0	13	145	158	146	149	53
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	5	0	22	1	0	9	12	5	1	2	0
Cap, veh/h	70	555	42	406	638		390	169	184	299	311	259
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.00	0.28	0.28	0.28	0.18	0.18	0.18
Sat Flow, veh/h	62	1586	120	947	1823	0	1403	609	664	1616	1683	1402
Grp Volume(v), veh/h	221	0	0	81	279	0	13	0	303	146	149	53
Grp Sat Flow(s),veh/h/ln	1767	0	0	947	1823	0	1403	0	1273	1616	1683	1402
Q Serve(g_s), s	0.0	0.0	0.0	0.0	9.4	0.0	0.5	0.0	18.1	6.5	6.3	2.6
Cycle Q Clear(g_c), s	7.2	0.0	0.0	6.0	9.4	0.0	0.5	0.0	18.1	6.5	6.3	2.6
Prop In Lane	0.08		0.07	1.00		0.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	667	0	0	406	638		390	0	353	299	311	259
V/C Ratio(X)	0.33	0.00	0.00	0.20	0.44		0.03	0.00	0.86	0.49	0.48	0.20
Avail Cap(c_a), veh/h	667	0	0	406	638		666	0	604	687	715	596
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.3	0.0	0.0	18.9	20.0	0.0	21.1	0.0	27.4	29.2	29.2	27.6
Incr Delay (d2), s/veh	1.3	0.0	0.0	1.1	2.2	0.0	0.0	0.0	6.1	1.2	1.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.8	0.0	0.0	2.1	7.7	0.0	0.3	0.0	9.9	4.7	4.7	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.6	0.0	0.0	20.0	22.1	0.0	21.1	0.0	33.5	30.5	30.3	28.0
LnGrp LOS	C	A	A	B	C		C	A	C	C	C	C
Approach Vol, veh/h		221			360			316			348	
Approach Delay, s/veh		20.6			21.6			33.0			30.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		33.0		27.2		33.0		19.8				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		27.0		37.0		27.0		33.0				
Max Q Clear Time (g_c+I1), s		0.0		20.1		0.0		8.5				
Green Ext Time (p_c), s		0.0		1.2		0.0		1.1				

Intersection Summary												
HCM 6th Ctrl Delay			26.7									
HCM 6th LOS			C									

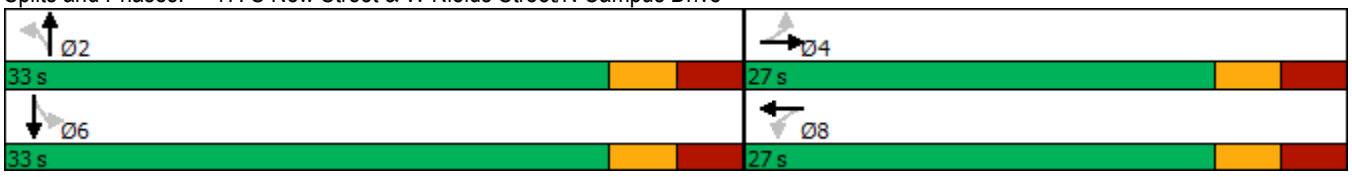
Notes

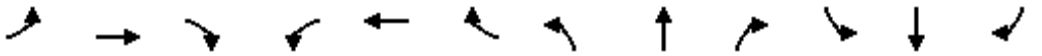
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	5	40	107	10	76	32	296	86	35	174	15
Future Volume (vph)	8	5	40	107	10	76	32	296	86	35	174	15
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.92			0.95		1.00	0.99			1.00	
Frt		0.899			0.947			0.966			0.991	
Flt Protected		0.993			0.973		0.950				0.992	
Satd. Flow (prot)	0	1558	0	0	1665	0	1645	1729	0	0	2001	0
Flt Permitted		0.935			0.794		0.651				0.902	
Satd. Flow (perm)	0	1466	0	0	1302	0	1126	1729	0	0	1815	0
Satd. Flow (RTOR)					61			33			8	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		23.0	23.0		23.0	23.0	
Total Split (s)	27.0	27.0		27.0	27.0		33.0	33.0		33.0	33.0	
Total Split (%)	45.0%	45.0%		45.0%	45.0%		55.0%	55.0%		55.0%	55.0%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.0	3.0		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	
Total Lost Time (s)		5.0			5.0		5.0	5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 53.9
Natural Cycle: 50
Control Type: Actuated-Uncoordinated

Splits and Phases: 17: S New Street & W Nields Street/N Campus Drive

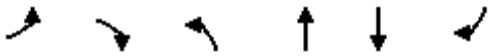




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	5	40	107	10	76	32	296	86	35	174	15
Future Volume (veh/h)	8	5	40	107	10	76	32	296	86	35	174	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.93		0.91	0.92		0.91	0.99		0.98	0.99		0.98
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	1988	1988	1988	1912	1912	1912	1794	1779	1822	2021	2036	1947
Adj Flow Rate, veh/h	9	6	43	122	11	53	36	336	98	40	198	9
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	6	3	3	2	8
Cap, veh/h	111	83	330	347	46	112	762	696	203	178	839	35
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	113	295	1172	830	163	396	1113	1316	384	187	1586	67
Grp Volume(v), veh/h	58	0	0	186	0	0	36	0	434	247	0	0
Grp Sat Flow(s),veh/h/ln	1580	0	0	1389	0	0	1113	0	1700	1840	0	0
Q Serve(g_s), s	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	8.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.4	0.0	0.0	5.6	0.0	0.0	0.5	0.0	8.5	3.5	0.0	0.0
Prop In Lane	0.16		0.74	0.66		0.28	1.00		0.23	0.16		0.04
Lane Grp Cap(c), veh/h	524	0	0	504	0	0	762	0	899	1053	0	0
V/C Ratio(X)	0.11	0.00	0.00	0.37	0.00	0.00	0.05	0.00	0.48	0.23	0.00	0.00
Avail Cap(c_a), veh/h	729	0	0	685	0	0	762	0	899	1053	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.1	0.0	0.0	15.5	0.0	0.0	6.0	0.0	7.9	6.7	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.4	0.0	0.0	0.1	0.0	1.9	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.0	0.0	3.1	0.0	0.0	0.3	0.0	5.3	2.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.2	0.0	0.0	16.0	0.0	0.0	6.1	0.0	9.7	7.2	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		58			186			470			247	
Approach Delay, s/veh		14.2			16.0			9.5			7.2	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		33.0		19.9		33.0		19.9				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		27.0		21.0		27.0		21.0				
Max Q Clear Time (g_c+I1), s		0.0		3.4		0.0		7.6				
Green Ext Time (p_c), s		0.0		0.1		0.0		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			10.4									
HCM 6th LOS			B									



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	8	5	260	343	8
Future Volume (vph)	2	8	5	260	343	8
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.890				0.997	
Flt Protected	0.991			0.999		
Satd. Flow (prot)	1404	0	0	1753	1768	0
Flt Permitted	0.991			0.999		
Satd. Flow (perm)	1404	0	0	1753	1768	0
Sign Control	Stop			Stop	Stop	

Intersection Summary

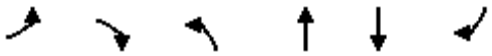
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	8	5	260	343	8
Future Vol, veh/h	2	8	5	260	343	8
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	50	14	0	9	7	14
Mvmt Flow	2	9	6	299	394	9
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9	9.9	11.4
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	2%	20%	0%
Vol Thru, %	98%	0%	98%
Vol Right, %	0%	80%	2%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	265	10	351
LT Vol	5	2	0
Through Vol	260	0	343
RT Vol	0	8	8
Lane Flow Rate	305	11	403
Geometry Grp	1	1	1
Degree of Util (X)	0.367	0.019	0.488
Departure Headway (Hd)	4.338	5.828	4.352
Convergence, Y/N	Yes	Yes	Yes
Cap	832	614	835
Service Time	2.351	3.863	2.352
HCM Lane V/C Ratio	0.367	0.018	0.483
HCM Control Delay	9.9	9	11.4
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1.7	0.1	2.7



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	0	0	246	343	0
Future Volume (vph)	3	0	0	246	343	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1796	0	0	1742	1810	0
Flt Permitted	0.950					
Satd. Flow (perm)	1796	0	0	1742	1810	0
Sign Control	Stop			Free	Free	

Intersection Summary
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	0	0	246	343	0
Future Vol, veh/h	3	0	0	246	343	0
Conflicting Peds, #/hr	0	1	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	2	-2	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	8	6	0
Mvmt Flow	3	0	0	280	390	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	670	391	390	0	-	0
Stage 1	390	-	-	-	-	-
Stage 2	280	-	-	-	-	-
Critical Hdwy	6.6	6.3	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	458	690	882	-	-	-
Stage 1	766	-	-	-	-	-
Stage 2	870	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	458	689	882	-	-	-
Mov Cap-2 Maneuver	458	-	-	-	-	-
Stage 1	766	-	-	-	-	-
Stage 2	870	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	882	-	458	-	-
HCM Lane V/C Ratio	-	-	0.007	-	-
HCM Control Delay (s)	0	-	12.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	18	66	178	11	27	320
Future Volume (vph)	18	66	178	11	27	320
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.992			
Flt Protected	0.950					0.996
Satd. Flow (prot)	1509	1317	1726	0	0	1791
Flt Permitted	0.950					0.996
Satd. Flow (perm)	1509	1317	1726	0	0	1791
Sign Control	Stop		Free			Free

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	66	178	11	27	320
Future Vol, veh/h	18	66	178	11	27	320
Conflicting Peds, #/hr	36	0	0	8	8	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	-3
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	19	22	5	70	46	4
Mvmt Flow	20	74	200	12	30	360

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	670	214	0	0	220	0
Stage 1	214	-	-	-	-	-
Stage 2	456	-	-	-	-	-
Critical Hdwy	6.79	6.52	-	-	4.8	-
Critical Hdwy Stg 1	5.79	-	-	-	-	-
Critical Hdwy Stg 2	5.79	-	-	-	-	-
Follow-up Hdwy	3.2	3.3	-	-	3.4	-
Pot Cap-1 Maneuver	422	815	-	-	875	-
Stage 1	876	-	-	-	-	-
Stage 2	657	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	387	809	-	-	868	-
Mov Cap-2 Maneuver	387	-	-	-	-	-
Stage 1	869	-	-	-	-	-
Stage 2	607	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	387	809	868	-
HCM Lane V/C Ratio	-	-	0.052	0.092	0.035	-
HCM Control Delay (s)	-	-	14.8	9.9	9.3	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.3	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	9	34	5	11	9	20	70	1	2	212	108
Future Volume (vph)	104	9	34	5	11	9	20	70	1	2	212	108
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.881			0.932			0.999			0.955	
Flt Protected	0.950			0.950				0.989				
Satd. Flow (prot)	1695	1426	0	1832	1120	0	0	1825	0	0	1785	0
Flt Permitted	0.950			0.950				0.989				
Satd. Flow (perm)	1695	1426	0	1832	1120	0	0	1825	0	0	1785	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Control Type: Unsignalized

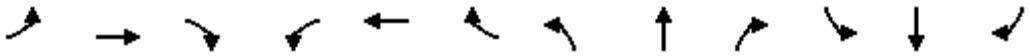
Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	104	9	34	5	11	9	20	70	1	2	212	108
Future Vol, veh/h	104	9	34	5	11	9	20	70	1	2	212	108
Conflicting Peds, #/hr	0	0	2	2	0	0	2	0	0	0	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	-3	-	-	1	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	7	75	3	0	90	25	11	0	0	0	2	1
Mvmt Flow	117	10	38	6	12	10	22	79	1	2	238	121

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	440	429	303	453	489	80	361	0	0	80	0	0
Stage 1	305	305	-	124	124	-	-	-	-	-	-	-
Stage 2	135	124	-	329	365	-	-	-	-	-	-	-
Critical Hdwy	6.97	7.05	6.13	6.5	6.8	6.15	4.4	-	-	4.3	-	-
Critical Hdwy Stg 1	5.97	6.05	-	5.5	5.8	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.97	6.05	-	5.5	5.8	-	-	-	-	-	-	-
Follow-up Hdwy	3.1	4.675	3.1	3	4.81	3.3	3.1	-	-	3	-	-
Pot Cap-1 Maneuver	595	434	788	636	405	987	869	-	-	1127	-	-
Stage 1	796	559	-	1045	665	-	-	-	-	-	-	-
Stage 2	983	677	-	830	525	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	561	421	785	580	392	987	867	-	-	1127	-	-
Mov Cap-2 Maneuver	561	421	-	580	392	-	-	-	-	-	-	-
Stage 1	773	557	-	1017	647	-	-	-	-	-	-	-
Stage 2	929	659	-	772	523	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.4	11.9	2	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	867	-	-	561	665	580	538	1127	-	-
HCM Lane V/C Ratio	0.026	-	-	0.208	0.073	0.01	0.042	0.002	-	-
HCM Control Delay (s)	9.3	0	-	13.1	10.8	11.3	12	8.2	0	-
HCM Lane LOS	A	A	-	B	B	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.8	0.2	0	0.1	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	2	9	6	2	8	55	75	3	3	158	87
Future Volume (vph)	8	2	9	6	2	8	55	75	3	3	158	87
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.935			0.929			0.997			0.953	
Flt Protected		0.979			0.982			0.980			0.999	
Satd. Flow (prot)	0	1730	0	0	1606	0	0	1821	0	0	1797	0
Flt Permitted		0.979			0.982			0.980			0.999	
Satd. Flow (perm)	0	1730	0	0	1606	0	0	1821	0	0	1797	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	2	9	6	2	8	55	75	3	3	158	87
Future Vol, veh/h	8	2	9	6	2	8	55	75	3	3	158	87
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	0	0	0	0	0	14	2	2	0	0	1	0
Mvmt Flow	10	2	11	7	2	10	68	93	4	4	195	107
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.9	7.8	8.5	8.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	41%	42%	38%	1%
Vol Thru, %	56%	11%	12%	64%
Vol Right, %	2%	47%	50%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	133	19	16	248
LT Vol	55	8	6	3
Through Vol	75	2	2	158
RT Vol	3	9	8	87
Lane Flow Rate	164	23	20	306
Geometry Grp	1	1	1	1
Degree of Util (X)	0.197	0.031	0.026	0.331
Departure Headway (Hd)	4.311	4.716	4.695	3.892
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	821	764	767	912
Service Time	2.399	2.717	2.698	1.972
HCM Lane V/C Ratio	0.2	0.03	0.026	0.336
HCM Control Delay	8.5	7.9	7.8	8.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.1	0.1	1.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	0	73	3	2	6	77	415	2	2	261	20
Future Volume (vph)	43	0	73	3	2	6	77	415	2	2	261	20
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.926			0.999				0.850
Flt Protected		0.950			0.987		0.950			0.950		
Satd. Flow (prot)	0	1787	1467	0	1728	0	1778	1870	0	1796	1835	1607
Flt Permitted		0.950			0.987		0.950			0.950		
Satd. Flow (perm)	0	1787	1467	0	1728	0	1778	1870	0	1796	1835	1607
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Control Type: Unsignalized

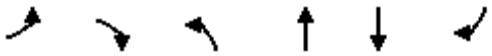
Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	43	0	73	3	2	6	77	415	2	2	261	20
Future Vol, veh/h	43	0	73	3	2	6	77	415	2	2	261	20
Conflicting Peds, #/hr	2	0	2	2	0	2	4	0	3	3	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	65	-	-	-	75	-	-	160	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	2	-	-	1	-	-	-1	-	-	1	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	9	0	0	0	2	2	0	0	3	0
Mvmt Flow	45	0	77	3	2	6	81	437	2	2	275	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	889	887	281	933	907	443	300	0	0	442	0	0
Stage 1	283	283	-	603	603	-	-	-	-	-	-	-
Stage 2	606	604	-	330	304	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.9	6.49	7.3	6.7	6.3	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.5	5.9	-	6.3	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.9	-	6.3	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.2	3	4	3.1	3	-	-	3	-	-
Pot Cap-1 Maneuver	267	259	766	260	264	643	948	-	-	846	-	-
Stage 1	808	660	-	531	475	-	-	-	-	-	-	-
Stage 2	512	459	-	770	655	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	244	235	762	217	239	640	944	-	-	844	-	-
Mov Cap-2 Maneuver	244	235	-	217	239	-	-	-	-	-	-	-
Stage 1	736	656	-	484	433	-	-	-	-	-	-	-
Stage 2	460	418	-	689	651	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15	15.7	1.4	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	944	-	-	244	762	348	844	-	-
HCM Lane V/C Ratio	0.086	-	-	0.186	0.101	0.033	0.002	-	-
HCM Control Delay (s)	9.2	-	-	23.1	10.3	15.7	9.3	-	-
HCM Lane LOS	A	-	-	C	B	C	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.7	0.3	0.1	0	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	6	7	492	384	0
Future Volume (vph)	0	6	7	492	384	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.865					
Flt Protected			0.950			
Satd. Flow (prot)	1652	0	1086	1854	1827	0
Flt Permitted			0.950			
Satd. Flow (perm)	1652	0	1086	1854	1827	0
Sign Control	Stop			Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	6	7	492	384	0
Future Vol, veh/h	0	6	7	492	384	0
Conflicting Peds, #/hr	1	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	25	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-1	-	-	-1	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	67	3	4	0
Mvmt Flow	0	6	7	523	409	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	950	412	412	0	-	0
Stage 1	412	-	-	-	-	-
Stage 2	538	-	-	-	-	-
Critical Hdwy	6.2	6.1	5	-	-	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3	3.1	3.6	-	-	-
Pot Cap-1 Maneuver	338	686	688	-	-	-
Stage 1	782	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	333	684	686	-	-	-
Mov Cap-2 Maneuver	482	-	-	-	-	-
Stage 1	772	-	-	-	-	-
Stage 2	683	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	686	-	684	-	-
HCM Lane V/C Ratio	0.011	-	0.009	-	-
HCM Control Delay (s)	10.3	-	10.3	-	-
HCM Lane LOS	B	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	79	94	636	36	39	786
Future Volume (vph)	79	94	636	36	39	786
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1796	1545	1863	1568	1814	1854
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1796	1545	1863	1568	1814	1854
Sign Control	Stop		Free			Free

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	79	94	636	36	39	786
Future Vol, veh/h	79	94	636	36	39	786
Conflicting Peds, #/hr	0	0	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	115	-	175	25	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	0	-	-	-1
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	4	2	3	0	3
Mvmt Flow	85	101	684	39	42	845

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1617	688	0	0	727	0
Stage 1	688	-	-	-	-	-
Stage 2	929	-	-	-	-	-
Critical Hdwy	6.6	6.34	-	-	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	113	458	-	-	671	-
Stage 1	541	-	-	-	-	-
Stage 2	406	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	105	456	-	-	668	-
Mov Cap-2 Maneuver	249	-	-	-	-	-
Stage 1	539	-	-	-	-	-
Stage 2	380	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.4	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	249	456	668	-
HCM Lane V/C Ratio	-	-	0.341	0.222	0.063	-
HCM Control Delay (s)	-	-	26.8	15.1	10.8	-
HCM Lane LOS	-	-	D	C	B	-
HCM 95th %tile Q(veh)	-	-	1.5	0.8	0.2	-

APPENDIX F:
Traffic Signal Plans

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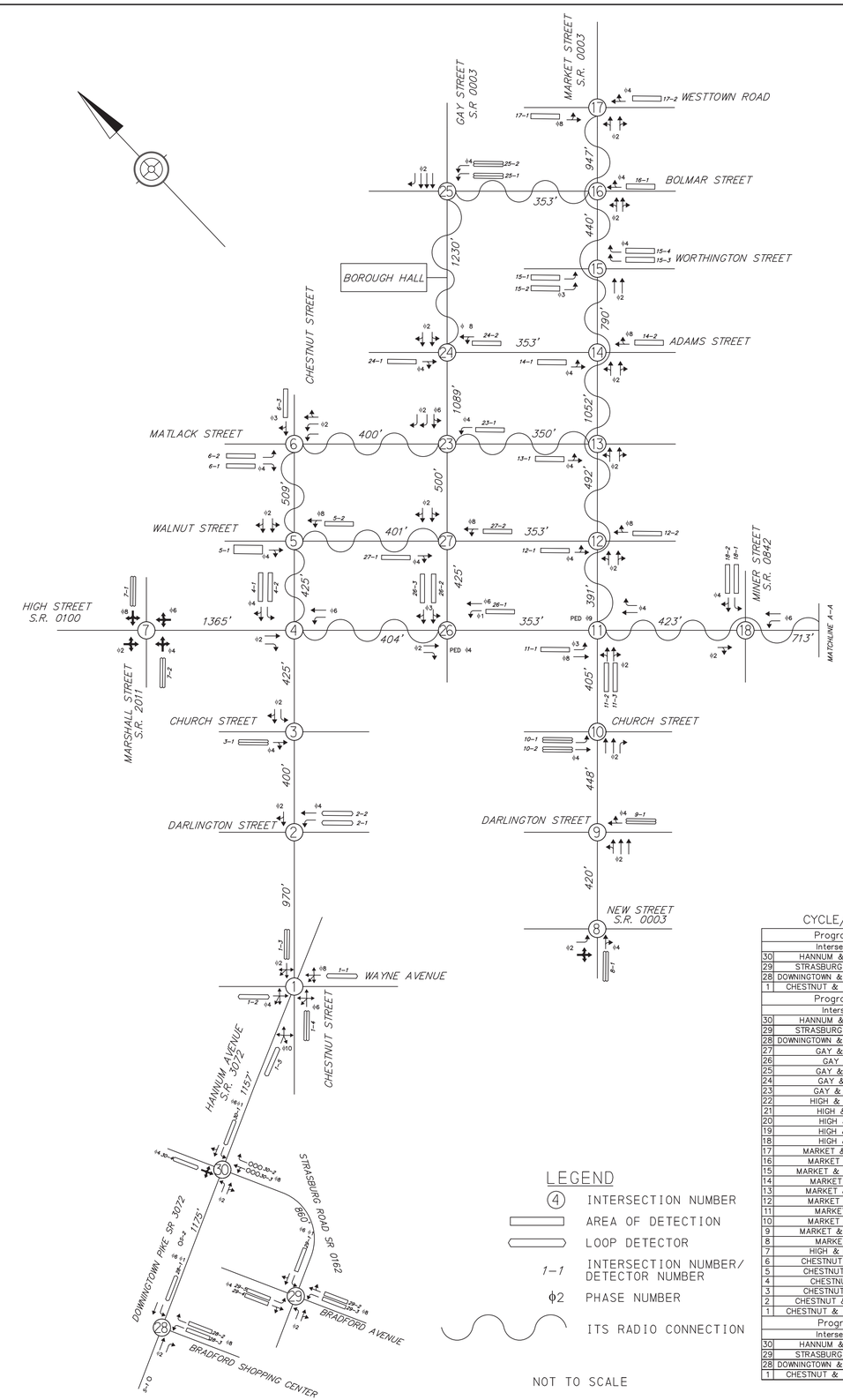

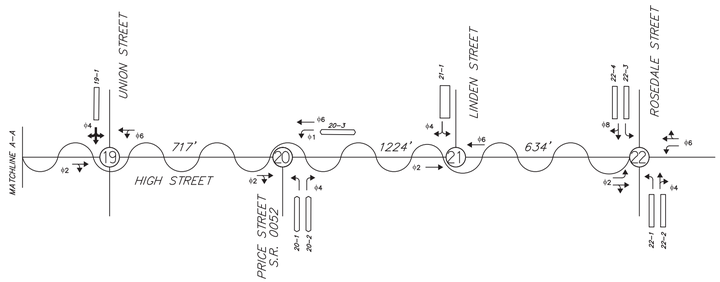

SYSTEM NOTES

1. PROGRAM TO BE SELECTED BY PENNDOT UNIFIED COMMAND AND CONTROL SYSTEM (UCCS) OR TBC BACKUP.
2. OFFSETS ARE REFERENCED TO THE BEGINNING OF NEMA TS2 FIRST GREEN.
3. SYSTEM LIMITS:
   MARKET STREET (10 INTERSECTIONS) - NEW STREET TO WESTTOWN ROAD
   HIGH STREET (9 INTERSECTIONS) - ROSEDALE STREET TO MARSHALL STREET
   GAY STREET (5 INTERSECTIONS) - HIGH STREET TO BOLMAR STREET
   CHESTNUT STREET (6 INTERSECTIONS) - MATLACK STREET TO HANNUM AVENUE
   DOWNINGTOWN PIKE & STRASBURG ROAD(4 INTERSECTIONS)- WAYNE STREET TO BRADFORD AVE & BRADFORD SHOPPING CENTER
4. PRIMARY COORDINATION(SIGNALS 4, 5, 6, 11-27): UCCS VIA INTERSECTION ITS RADIOS/FIBER TO RT 0003/0202 CAMERA SPLICE.
   PRIMARY COORDINATION(SIGNALS 1, 28-30): GPS TIMECLOCK.
   SECONDARY COORDINATION: TBC (DEFAULT TO BACKUP TBC).
5. SYSTEM IS DESIGNED FOR THE SYSTEM SOFTWARE: INTELIGHT MAXVIEW.
6. CYCLES, SPLITS & OFFSETS ARE IN SECONDS

WEEKLY PROGRAM CHART FOR INTERSECTIONS 2-27

EVENT	DAY	TIME	CYCLE	OFFSET	PROGRAM	REMARKS
1	1-5	0600	80	1	2	COORD.
2	1-7	0900	80	1	2	COORD.
3	1-5	1500	80	1	2	COORD.
4	1-7	1900	80	1	2	COORD.

MONDAY = DAY 1
OFFSET IN SECONDS
OFFSET REFERENCED TO START AT GREEN

WEEKLY PROGRAM CHART FOR INTERSECTIONS 1 & 28-30

EVENT	DAY	TIME	OFFSET	CYCLE	PROGRAM	REMARKS
1	1-7	0000	2	80	MAXIMUM 1	FREE
2	1-5	0600	2	80	1	AM PEAK
3	1-5	1000	2	80	MAXIMUM 1	FREE
4	1-5	1500	2	80	2	PM PEAK
5	1-7	1900	2	80	MAXIMUM 1	FREE
6	6-7	1000	2	80	3	WEEKEND

MONDAY = DAY 1
OFFSET IN SECONDS
OFFSET REFERENCED TO START AT GREEN

Notes: – ALL SPLIT TIMES INCLUDE YELLOW AND RED TIMES FOR A GIVEN PHASE.
– REFER TO SIGNAL PERMIT PLAN FOR MAX 1, MAX 2, CLEARANCE AND PED TIMES.

CYCLE/SPLIT/OFFSET

Program 1=		Phase										Cycle	Offsets		
Intersections	File #	1	2	3	4	5	6	7	8	9	10		1	2	3
30 HANNUM & STRASBURG	2746	13(LEAD)	41		26		54		26			80		0	
29 STRASBURG & BRADFORD	2756	14(LEAD)	41		25		55		25			80		9	
28 DOWNINGTOWN & SHOPPING CENTER	2739	10(LEAD)	53				63		17			80		47	
1 CHESTNUT & HANNUM/WAYNE	2008		24		24		24		24		32(Side)	80		18	
Program 2 =		Phase										Cycle	Offsets		
Intersections	File #	1	2	3	4	5	6	7	8	9	10		1	2	3
30 HANNUM & STRASBURG	2746	23(LEAD)	25		32		48		32			80		0	
29 STRASBURG & BRADFORD	2756	14(LEAD)	36		30		50		30			80		71	
28 DOWNINGTOWN & SHOPPING CENTER	2739	14(LEAD)	46				60		20			80		67	
27 GAY & WALNUT	1162		43		37				37			80	79		
26 GAY & HIGH	1168	11(Lead)	24	23	22(Ped)		35					80	46		
25 GAY & BOLMAR	1710		42		38							80	7		
24 GAY & ADAMS	2084		57		23				23			80	30		
23 GAY & MATLACK	1163		60		20		60					80	69		
22 HIGH & ROSEDALE	1157												Free		
21 HIGH & LINDEN	1167												Free		
20 HIGH & PRICE	1166	16(Lead)	36		28		52					80	28		
19 HIGH & UNION	2444		51		29		51					80	73		
18 HIGH & MINER	1160		54		26		54					80	69		
17 MARKET & WESTTOWN	0476		50		30				30			80	42		
16 MARKET & BOLMAR	1452		53		27							80	31		
15 MARKET & WORTHINGTON	1451		44	21(Split)	15(Split)							80	25		
14 MARKET & ADAMS	2370		42		38				38			80	9		
13 MARKET & MATLACK	0232		55		25							80	50		
12 MARKET & WALNUT	0231		45		35				35			80	50		
11 MARKET & HIGH	1161		23	11(Lead)	23				34	23(Ped)		80	0		
10 MARKET & CHURCH	1165		45		35							80	35		
9 MARKET & DARLINGTON	0293		38		42							80	30		
8 MARKET & NEW	1881		36		44							80	8		
7 HIGH & MARSHALL	1159												Free		
6 CHESTNUT & MATLACK	2011		30	25	25							80	10		
5 CHESTNUT & WALNUT	1792		34		46				46			80	2		
4 CHESTNUT & HIGH	1164		34		46		34					80	54		
3 CHESTNUT & CHURCH	2010		47		33							80	18		
2 CHESTNUT & DARLINGTON	2009		48		32							80	28		
1 CHESTNUT & HANNUM/WAYNE	2008		32		25		32		25		23(Side)	80	Uncoord.	14	
Program 3=		Phase										Cycle	Offsets		
Intersections	File #	1	2	3	4	5	6	7	8	9	10		1	2	3
30 HANNUM & STRASBURG	2746	20(LEAD)	33		27		53		27			80		0	
29 STRASBURG & BRADFORD	2756	14(LEAD)	36		30		50		30			80		53	
28 DOWNINGTOWN & SHOPPING CENTER	2739	16(LEAD)	39				55		25			80		52	
1 CHESTNUT & HANNUM/WAYNE	2008		31		24		31		24		25(Side)	80		44	

NOT TO SCALE

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 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 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 AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITES, DATED DECEMBER 20, 1974.

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 TRAFFIC SIGNAL STANDARDS TC-8800 SERIES.

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: CHESTER
MUNICIPALITY: WEST CHESTER BOROUGH
INTERSECTION: TRAFFIC SIGNAL SYSTEM

REVIEWED:

DocuSigned by: Michael A. Perrone, C.B.O. 5995F48A2902FACB...
DATE 2/3/2021
DATE

RECOMMENDED:

A.B. PATEL 5/20/03

L. R. BELMONTE 5/29/03
DISTRICT TRAFFIC ENGINEER DATE

NO.	REVISION	DES./ REVW.	DATE	REVW.	DATE	RECOM.	DATE
1	ADDED INTERSECTIONS 28, 29, & 30	TPD	7/3/10	LUTZ	7/2/10	LRB	7/7/10
2	REVISED PHASING INTERSECTION 23	H&K	5/9/13	LUTZ	8/27/13	ABP	8/27/13
3	MODIFY TIMINGS AT INTERSECTION #29	TPD	8/25/20	LUTZ	9/17/20	ABP	9/21/20
4	ADD INTERSECTIONS ALONG AND EAST OF HIGH ST (SOUTH OF MARSHALL) TO MAXVIEW	TPD	2/2/21	LUTZ	Signed by: 0CF2 2/3/2021	ABP	
5							
6							
7							
8							

SYSTEM PERMIT # I-0056, I-0057, I-0058

pw:\\PTG-PW-1S.ppd.trafficpd.com:TPDProjectwiseDocuments\Active\WCB\00008 - Boro Signal System\CADD\Signals\GLO Signals\System Permit #1-0057 Rev 3.dgn
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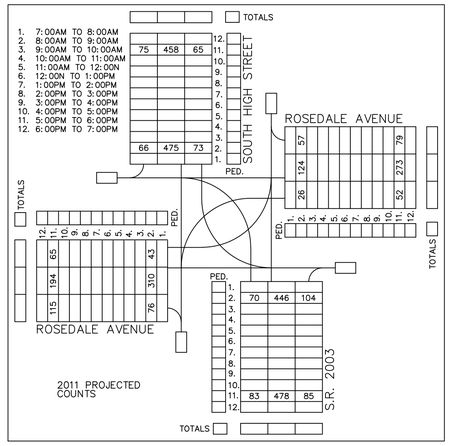


EMERGENCY PREEMPTION NOTES:

CONTROLLER TO BE EQUIPPED WITH EMERGENCY PREEMPTION FOR THE NORTHBOUND & SOUTHBOUND APPROACHES OF HIGH STREET AND THE EASTBOUND & WESTBOUND APPROACHES OF ROSEDALE AVENUE WITH A FAIL SAFE DEVICE FOR EACH DIRECTION OF OPERATION.

THIS FAIL SAFE DEVICE SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND SHALL FLASH WHEN THE EMERGENCY VEHICLE HAS CONTROL OF THE INTERSECTION FOR THE APPROPRIATE APPROACH.

THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE, SHALL TERMINATE ALL GREEN INDICATIONS, EXCEPT THE GREEN INDICATIONS FOR THE PHASE GOVERNED BY THE APPROACHING EMERGENCY VEHICLE FOLLOWED BY SELECTIVE CLEARANCES DEPENDENT UPON THE PHASE IN WHICH THE PREEMPTION OCCURS. THE "GREEN" INDICATIONS FOR THE PREEMPTED PHASE SHALL REMAIN "GREEN" FOR THE DURATION OF SIGNAL PREEMPTION AND "RED" INDICATIONS DISPLAYED FOR ALL OTHER PHASES.

THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE SHALL TIME OUT ALL YELLOW AND RED INDICATIONS, FOLLOWED BY THE GREEN INTERVAL OF THE PREEMPTION PHASE GOVERNED BY THE APPROACHING EMERGENCY VEHICLE.

IF SIGNALS HAVE BEEN ACTUATED BY PEDESTRIAN PUSH BUTTON, AND THE SIGNAL IS PREEMPTED, DURING THE "MAN" PHASE, THE "MAN" PHASE SHALL TERMINATE IMMEDIATELY FOLLOWED BY THE "FLASHING HAND" INDICATION IN ITS ENTIRETY, FOLLOWED BY THE APPROPRIATE SELECTION CLEARANCES BEFORE PROCEEDING TO THE PRE-EMPTION PHASE.

IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, ARE FLASHING, ALL SIGNALS SHALL REMAIN FLASHING.

UPON COMPLETION OF PREEMPTION PHASE A,B,C, OR D IN RETURNING TO NORMAL OPERATION, PHASE 2+6 INTERVAL 1 SHALL FOLLOW.

IN EMERGENCY PREEMPTION, NO PRIORITY SHALL BE ESTABLISHED. PREEMPTION SHALL BE A "FIRST COME, FIRST SERVE" OPERATION.

CLOSED LOOP SIGNAL NOTES

1. PROGRAMS TO BE SELECTED BY CLOSED LOOP SYSTEM OR TBC BACKUP.
2. OFFSET REFERENCED TO THE BEGINNING OF YELLOW (PHASE 2+6, INTERVAL 3).
3. ACTUAL GREEN TIME DETERMINED BY CYCLE LENGTH.
4. SYSTEM:
   MARKET STREET(10 INTERSECTIONS)
   HIGH STREET(6 INTERSECTIONS)
   SYSTEM LIMITS:
   MARKET STREET-NEW STREET TO WESTTOWN ROAD
   HIGH STREET-ROASEDALE STREET TO MINER STREET

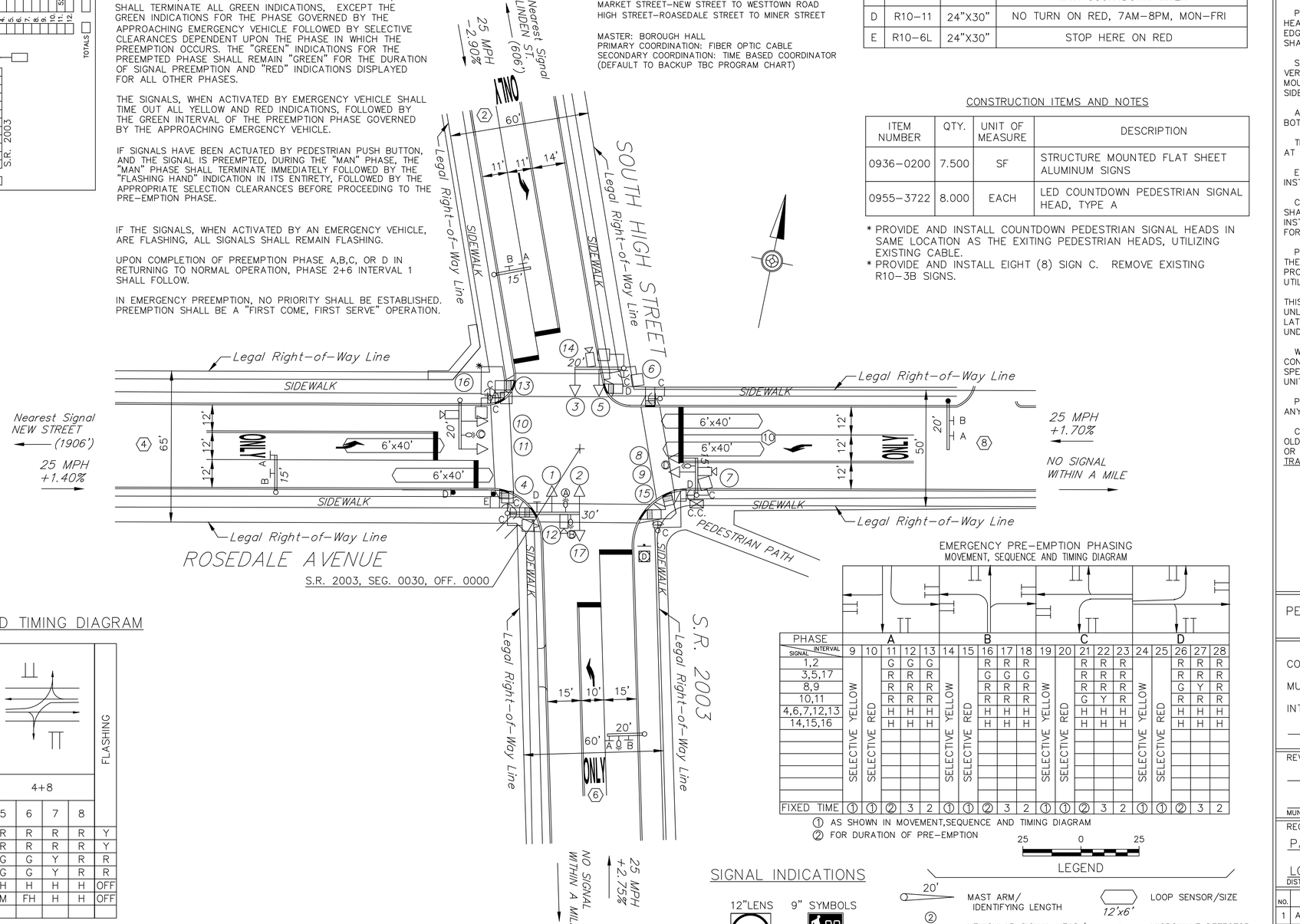
   MASTER: BOROUGH HALL
   PRIMARY COORDINATION: FIBER OPTIC CABLE
   SECONDARY COORDINATION: TIME BASED COORDINATOR
   (DEFAULT TO BACKUP TBC PROGRAM CHART)

Symbol	Series	Size	Remarks
A	R3-5L	30"X36"	LEFT TURN SIGN
B	R3-6SR	30"X36"	OPTIONAL RIGHT TURN SIGN
C	R10-3E	9"X15"	EDUC. PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER
D	R10-11	24"X30"	NO TURN ON RED, 7AM-8PM, MON-FRI
E	R10-6L	24"X30"	STOP HERE ON RED

CONSTRUCTION ITEMS AND NOTES

ITEM NUMBER	QTY.	UNIT OF MEASURE	DESCRIPTION
0936-0200	7.500	SF	STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS
0955-3722	8.000	EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A

* PROVIDE AND INSTALL COUNTDOWN PEDESTRIAN SIGNAL HEADS IN SAME LOCATION AS THE EXITING PEDESTRIAN HEADS, UTILIZING EXISTING CABLE.
* PROVIDE AND INSTALL EIGHT (8) SIGN C. REMOVE EXISTING R10-3B SIGNS.



MOVEMENT, SEQUENCE AND TIMING DIAGRAM

PHASE	2+6				4+8				FLASHING
INTERVAL / SIGNAL	1	2	3	4	5	6	7	8	
1,2	G	G	Y	R	R	R	R	R	Y
3,5,17	G	G	Y	R	R	R	R	R	Y
8,9	R	R	R	R	G	G	Y	R	R
10,11	R	R	R	R	G	G	Y	R	R
4,6,7,16	M	FH	H	H	H	H	H	H	OFF
12,13,14,15	H	H	H	H	M	FH	H	H	OFF

FIXED			3	2			3	2
MINIMUM					3			
PASSAGE					3			
MAXIMUM I	25				20			
MAXIMUM I	29				21			
PEDESTRIAN ①	7	11			7	13		
MEMORY	MX				NL			

OPERATION NOTES
① UPON PEDESTRIAN ACTUATION ONLY, OTHERWISE HAND SYMBOL AT ALL TIMES.

● MAX II TO OPERATE MONDAY TO FRIDAY, FROM 2-6 PM. MAX I TO OPERATE AT ALL OTHER TIMES.

EMERGENCY PRE-EMPTION PHASING MOVEMENT, SEQUENCE AND TIMING DIAGRAM

PHASE	A					B					C					D				
INTERVAL / SIGNAL	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1,2	SELECTIVE YELLOW	SELECTIVE RED	G	G	G	SELECTIVE YELLOW	SELECTIVE RED	R	R	R	SELECTIVE YELLOW	SELECTIVE RED	R	R	R	SELECTIVE YELLOW	SELECTIVE RED	R	R	R
3,5,17			R	R	R			G	G	G			R	R	R			R	R	R
8,9			R	R	R			R	R	R			R	R	R			G	Y	R
10,11			R	R	R			R	R	R			G	Y	R			R	R	R
4,6,7,12,13			H	H	H			H	H	H			H	H	H			H	H	H
14,15,16			H	H	H			H	H	H			H	H	H			H	H	H
FIXED TIME	①	①	②	3	2	①	①	②	3	2	①	①	②	3	2	①	①	②	3	2

① AS SHOWN IN MOVEMENT,SEQUENCE AND TIMING DIAGRAM
② FOR DURATION OF PRE-EMPTION

25 0 25

SIGNAL INDICATIONS

12"LENS: R, Y, G — 1,2,3,5 8,9,10,11

9" SYMBOLS: 4,6,7,12 13,14,15,16

LEGEND

- 20' — MAST ARM/ IDENTIFYING LENGTH
- ② — VEHICULAR SIGNAL HEAD/ BACKPLATE/VISORS/ DIRECTIONAL ARROW/ IDENTIFYING NUMBER
- ② — PEDESTRIAN SIGNAL HEAD/ IDENTIFYING NUMBER
- PEDESTRIAN PUSHBUTTON/ SIGN
- A — SIGN/IDENTIFYING LETTER
- 12'x6' — LOOP SENSOR/SIZE
- MICROWAVE DETECTOR
- EMERGENCY PREEMPTION DEVICE
- CURB CUT RAMP
- ⌀ — UTILITY POLE
- ② — PHASE NUMBER
- C.C. — CONTROLLER CABINET
- LPR CAMERA

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.

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 EDGE 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 MINIMUM VERTICAL CLEARANCE OF 16 FT. ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEWALK 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 FORM 408.

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 AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.

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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 SIGNAL STANDARDS TC-7800 SERIES.

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: CHESTER
MUNICIPALITY: WEST CHESTER BOROUGH
INTERSECTION: SOUTH HIGH STREET (S.R. 2003)
ROSEDALE AVENUE (T-641)

REVIEWED:

DATE

MUNICIPAL OFFICIAL DATE

RECOMMENDED:
PAUL LUTZ 3/26/03

LOUIS R. BELMONTE 3/26/03
DISTRICT TRAFFIC ENGINEER DATE

NO.	REVISION	DES./ REVW.	DATE	REVW.	DATE	RECOM.	DATE
1	ADDED SIGNS	WDF	1/14/09	LUTZ	3/9/09	LRB	3/10/09
2	SR 2020/SEC.CRC ADA UPDATE	MCM	7/8/09	LUTZ	7/8/09	LRB	7/8/09
3	REMOVE EXCLUSIVE PED. PHASE	MCM	9/7/10	LUTZ	9/14/10	LRB	9/16/10
4	ADDED 20" MAST ARM NE	JOO	6/14/11				
5	NEW PED SIGNAL HEADS	MCM	10/3/14	LUTZ	10/16/14	ABP	10/16/14
6	ADD LPR CAMERA	SRP	7/28/21				
7							
8							

SHEET 2 OF 2 | PERMIT # 62-1157 | FILE # 1157

MOVEMENT, SEQUENCE AND TIMING DIAGRAM

PHASE	2+6				8				4+8				FLASH
INTERVAL / SIGNALS	1	2	3	4	5	6	7		8	9	10	11	
1,2	G	G	Y	R	R	R	R		R	R	R	R	Y
3,4	G	G	Y	R	R	R	R		R	R	R	R	Y
5	R	R	R	R	R	R	R		G	G	Y	R	R
6	R	R	R	R	R	R	R		G	G	Y	R	R
7	R	R	R	R	G	Y ①	R ②		G	G	Y	R	R
8	R	R	R	R	G	Y	R		G	G	Y	R	R
9,10	M	FH	H	H	H	H	H		H	H	H	H	OFF
11,12	H	H	H	H	H	H	H		M	FH	H	H	OFF

FIXED			3	3		3	3				3	3
MINIMUM	15				5				5			
PASSAGE					3				3			
MAX 1	30				7				15			
PEDESTRIAN*	7	13							7	11		
MEMORY	MX				NL				NL			
PROGRAM 1	31		3	3	5	3	3		21		3	3
PROGRAM 2	25		3	3	5	3	3		22		3	3

* UPON PEDESTRIAN ACTUATION, OTHERWISE HAND SYMBOL AT ALL TIMES

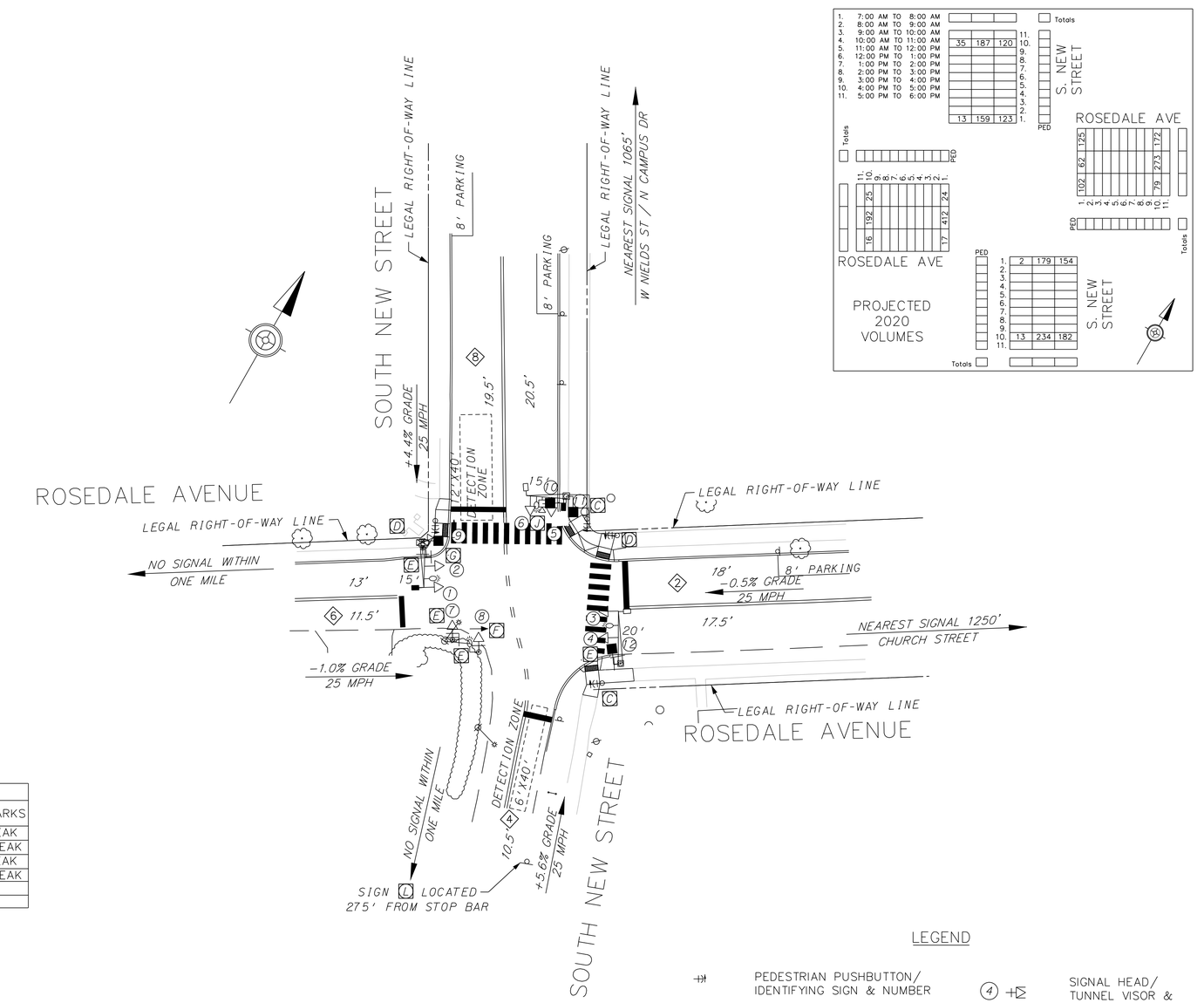
OPERATION NOTES

① ¼ IF FOLLOWED BY 4+8
② G IF FOLLOWED BY 4+8

● CONTROLLER TO DWELL IN PHASE 2+6 UNTIL ACTUATED BY PHASE 4 OR 4+8

WEEKLY PROGRAM CHART						
EVENT	DAY*	TIME	CYCLE	OFFSET	PROGRAM	REMARKS
1	1–5	0600	75	–	1	AM PEAK
2	1–5	0930	–	–	MAX 1	OFF PEAK
3	1–5	1500	70	–	2	PM PEAK
4	1–7	1900	–	–	MAX 1	OFF PEAK

* DAY 1 = MONDAY

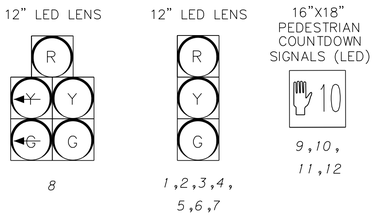


SIGN TABULATION

SYMBOL	SERIES	SIZE	DESCRIPTION
C	R10-3E(L)	9"X15"	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER ←
D	R10-3E(R)	9"X15"	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER →
E	R9-3	18"X18"	NO PEDESTRIAN CROSSING
F	R10-12	30"X36"	LEFT TURN YIELD ON GREEN ●
G	R10-11	30"X36"	NO TURN ON RED
J	R10-11	30"X36"	NO TURN ON RED ●
K	R10-6AL	24"X30"	STOP HERE ON RED
L	W3-3	36"X36"	SIGNAL AHEAD SIGN

0 25 50 FEET

SIGNAL INDICATIONS



LEGEND

- PEDESTRIAN PUSHBUTTON/ IDENTIFYING SIGN & NUMBER
- (4) SIGNAL HEAD/ MAN/HAND SYMBOL & IDENTIFYING NUMBER
- ◇4 PHASE NUMBER
- (4) SIGNAL HEAD/ & IDENTIFYING NUMBER
- (4) SIGNAL HEAD/ ARROW SECTION & IDENTIFYING NUMBER
- 20' MAST ARM/ IDENTIFYING LENGTH
- DETECTION ZONE PROPOSED DETECTION ZONE
- (4) SIGNAL HEAD/ TUNNEL VISOR & IDENTIFYING NUMBER
- (A) PROPOSED SIGN WITH IDENTIFYING LETTER
- CONTROLLER ASSEMBLY
- W/4" PROPOSED PAVEMENT MARKING, TYPE/WIDTH
- 10' LUMINAIRE/ IDENTIFYING ARM LENGTH
- VIDEO DETECTOR/ IDENTIFYING NUMBER
- FAIL-SAFE DEVICE\ PRE-EMPTION SENSOR
- PROPOSED PEDESTAL POLE

GENERAL NOTES

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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 EDGE 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 MINIMUM VERTICAL CLEARANCE OF 16 FT. ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEWALK 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.

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PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: CHESTER
MUNICIPALITY: WEST CHESTER BOROUGH
INTERSECTION: SOUTH NEW STREET AND WEST ROSEDALE AVENUE

REVIEWED:

DATE

MUNICIPAL OFFICIAL DATE

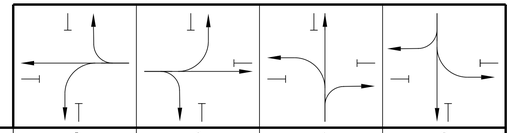
RECOMMENDED:

DISTRICT TRAFFIC ENGINEER DATE

NO.	REVISION	DES./ REVW.	DATE	REVW.	DATE	RECOM.	DATE

SHEET 2 OF 3 | PERMIT # 62-2639 | FILE # 2639

EMERGENCY PRE-EMPTION
MOVEMENT, SEQUENCE AND TIMING DIAGRAM



PHASE	2			6			4			8		
INTERVAL / SIGNALS	12	13	14	15	16	17	18	19	20	21	22	23
1,2	G	Y(G)	R(G)	R	R	R	R	R	R	R	R	R
3,4	R	R	R	G	Y(G)	R(G)	R	R	R	R	R	R
5	R	R	R	R	R	R	G	Y	R	R	R	R
6	R	R	R	R	R	R	G	Y	R	R	R	R
7	R	R	R	R	R	R	R	R	R	G	Y	R
8	R	R	R	R	R	R	R	R	R	◄S G	Y	R
9,10	H	H	H	H	H	H	H	H	H	H	H	H
11,12	H	H	H	H	H	H	H	H	H	H	H	H
FIXED	▲	3	3	▲	3	3	▲	3	3	▲	3	3

NOTE: IF PRE-EMPTION EQUIPEMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE "00" FEATURE ON, TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PRE-EMPTION.

(G) SIGNAL TO INDICATE G WHEN RETURNING TO NORMAL OPERATION

▲ FOR DURATION OF OPTICAL PRE-EMPTION

EMERGENCY PRE-EMPTION NOTES:

* CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION FOR THE NORTHBOUND AND SOUTHBOUND APPROACHES OF NEW STREET AND THE EASTBOUND AND WESTBOUND APPROACHES OF ROSEDALE AVENUE WITH A FAIL SAFE DEVICE FOR EACH DIRECTION OF OPERATION.

THIS EMERGENCY BEACON SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND SHALL FLASH WHEN THE EMERGENCY VEHICLE HAS CONTROL OF THE INTERSECTION FOR THE APPROPRIATE APPROACH. LOCATION OF THE EMERGENCY VEHICLE DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

* THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLES, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS, ACCORDINGLY. THEN THE GREEN INTERVAL FOR THE PRE-EMPTED PHASE SHALL FOLLOW.

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* ONLY THOSE PHASES NOT POSING A YELLOW TRAP CONDITION MAY REMAIN GREEN (2 AND 8) WHEN GOVERNED BY THE APPROACHING EMERGENCY VEHICLE.

* IF THE SIGNAL HAS BEEN ACTUATED BY A PEDESTRIAN PUSH BUTTON, AND THE SIGNAL IS PRE-EMPTED DURING THE "MAN" INTERVAL, THE MAN INTERVAL SHALL TERMINATE IMMEDIATELY FOLLOWED BY THE "FLASHING HAND" INDICATION IN ITS ENTIRETY, FOLLOWED BY THE APPROPRIATE SELECTIVE CLEARANCES BEFORE PROCEEDING TO THE PRE-EMPTION PHASE.

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* IF ADDITIONAL PRE-EMPTION, PHASES ARE ACTIVATED WHILE IN PRE-EMPTION, THE ORIGINAL PRE-EMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PRE-EMPTION PHASE.

* UPON COMPLETION OF PRE-EMPTION PHASES 2, 4, 6 OR 8 IN RETURNING TO NORMAL OPERATION, PHASE 2+6 INTERVAL 1 SHALL FOLLOW.

* IN EMERGENCY PRE-EMPTION, NO PRIORITY SHALL BE ESTABLISHED. PRE-EMPTION SHALL BE A "FIRST COME, FIRST SERVE" OPERATION.

0 25 50 FEET

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PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: CHESTER

MUNICIPALITY: WEST CHESTER BOROUGH

INTERSECTION: SOUTH NEW STREET AND WEST ROSEDALE AVENUE

REVIEWED:

DATE

MUNICIPAL OFFICIAL DATE

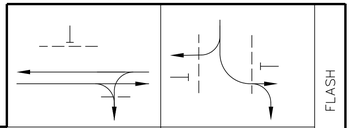
RECOMMENDED:

DISTRICT TRAFFIC ENGINEER DATE

NO.	REVISION	DES./ REVW.	DATE	REVW.	DATE	RECOM.	DATE
1							
2							
3							
4							
5							
6							
7							
8							

SHEET 3 OF 3 | PERMIT # 62-2639 | FILE # 2639

MOVEMENT, SEQUENCE AND TIMING DIAGRAM



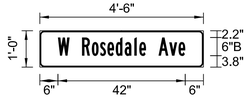
PHASE	2+6					4					FLASH
INTERVAL / SIGNALS	1	2	3	4	5	6	7	8	9	10	
1,2	R	G	G	Y	R	R	R	R	R	R	Y
3,4	R	G	G	Y	R	R	R	R	R	R	Y
5,6	R	R	R	R	R	R	G	G	Y	R	R
7,8	M	M	FH	H	H	H	H	H	H	H	OFF
9,10	H	H	H	H	H	M	M	FH	H	H	OFF
11,12	H	H	H	H	H	M	M	FH	H	H	OFF
13,14	M	M	FH	H	H	H	H	H	H	H	OFF

FIXED				3	2			3	2	
MINIMUM		15					5			
PASSAGE							3			
MAX 1		40					18			
PEDESTRIAN*	3	7	10			3	7	11		
MEMORY		MX					NL			
PROGRAM 1		29		3	2		21		3	2
PROGRAM 2		31		3	2		19		3	2

* UPON PEDESTRIAN ACTUATION, OTHERWISE HAND SYMBOL AT ALL TIMES

OPERATION NOTES

- CONTROLLER TO DWELL IN PHASE 2+6 UNTIL ACTUATED BY PHASE 4+8



DETAIL SIGN "A"
N.T.S.

D3-4

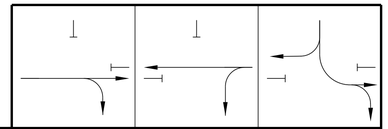
SERIES B LETTERING
6" UPPER CASE
4.4" LOWER CASE
REFLECTORIZED GREEN BACKGROUND
WHITE LEGEND

DETAIL SIGN "B"
N.T.S.

D3-4

SERIES B LETTERING
6" UPPER CASE
4.4" LOWER CASE
REFLECTORIZED GREEN BACKGROUND
WHITE LEGEND

EMERGENCY PRE-EMPTION MOVEMENT, SEQUENCE AND TIMING DIAGRAM

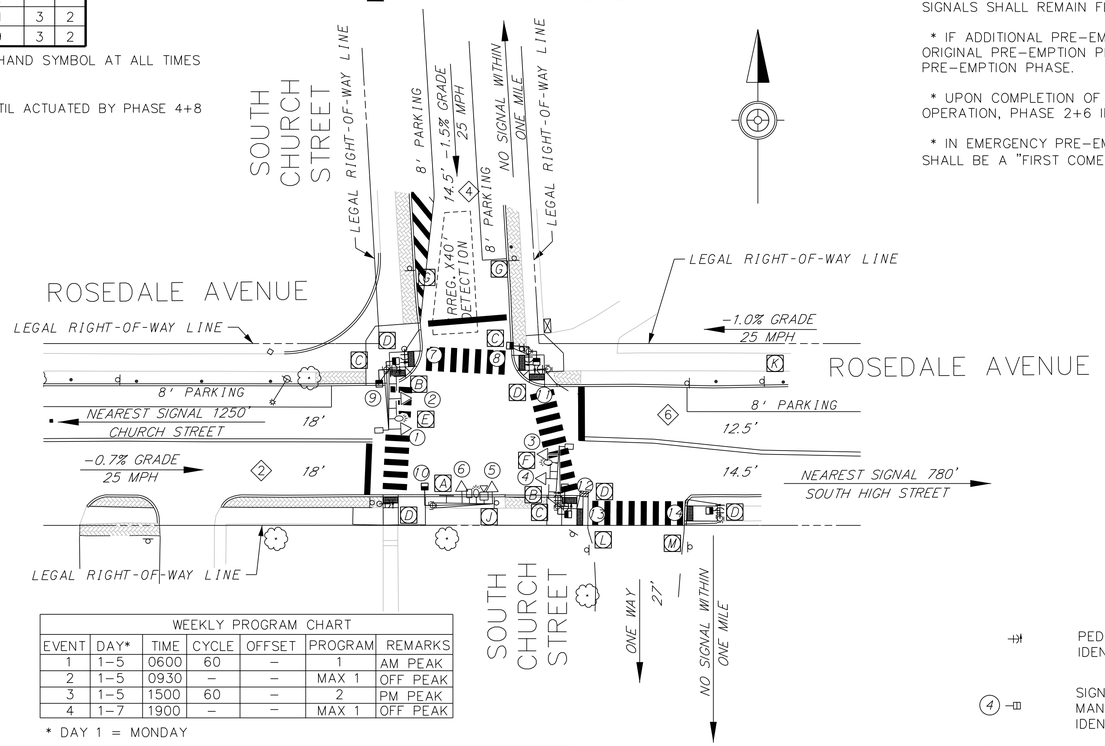


PHASE	2				6				4			
INTERVAL / SIGNALS	11	12	13		14	15	16		17	18	19	
1,2	R	R	R		G	Y	R (G)		R	R	R	
3,4	G	Y (G)	R (G)		R	R	R		R	R	R	
5,6	R	R	R		R	R	R		G	Y	R	
7,8	H	H	H		H	H	H		H	H	H	
9,10	H	H	H		H	H	H		H	H	H	
11,12	H	H	H		H	H	H		H	H	H	
13,14	H	H	H		H	H	H		H	H	H	
FIXED	▲	3	2		▲	3	2		▲	3	2	

NOTE: IF PRE-EMPTION EQUIPEMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE "00" FEATURE ON, TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PRE-EMPTION.

(G) SIGNAL TO INDICATE G WHEN RETURNING TO NORMAL OPERATION

▲ FOR DURATION OF OPTICAL PRE-EMPTION



WEEKLY PROGRAM CHART						
EVENT	DAY*	TIME	CYCLE	OFFSET	PROGRAM	REMARKS
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2	1-5	0930	–	–	MAX 1	OFF PEAK
3	1-5	1500	60	–	2	PM PEAK
4	1-7	1900	–	–	MAX 1	OFF PEAK

* DAY 1 = MONDAY

EMERGENCY PRE-EMPTION NOTES:

* CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION FOR THE EASTBOUND AND WESTBOUND APPROACHES OF ROSEDALE AVENUE AND THE SOUTHBOUND APPROACH OF SOUTH CHURCH STREET WITH A FAIL SAFE DEVICE FOR EACH DIRECTION OF OPERATION.

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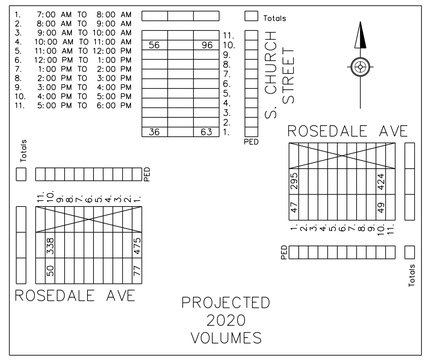
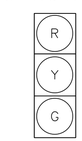


SIGNAL INDICATIONS

12" LED LENS



1,2,3, 4,5,6

16"X18" PEDESTRIAN COUNTDOWN SIGNALS (LED)

7,8,9, 10,11,12, 13,14

LEGEND

- PEDESTRIAN PUSHBUTTON/ IDENTIFYING SIGN & NUMBER
- (4) SIGNAL HEAD/ MAN/HAND SYMBOL & IDENTIFYING NUMBER
- (4) PHASE NUMBER
- (4) SIGNAL HEAD/ & IDENTIFYING NUMBER
- (4) SIGNAL HEAD/ ARROW SECTION & IDENTIFYING NUMBER
- 20' MAST ARM/ IDENTIFYING LENGTH
- DETECTION ZONE PROPOSED DETECTION ZONE
- (4) SIGNAL HEAD/ TUNNEL VISOR & IDENTIFYING NUMBER
- (A) PROPOSED SIGN WITH IDENTIFYING LETTER
- CONTROLLER ASSEMBLY
- W/4" PROPOSED PAVEMENT MARKING, TYPE/WIDTH
- 10' LUMINAIRE/ IDENTIFYING ARM LENGTH
- VIDEO DETECTOR/ IDENTIFYING NUMBER
- FAIL-SAFE DEVICE\ PRE-EMPTION SENSOR
- PROPOSED PEDESTAL POLE

SIGN TABULATION

SYMBOL	SERIES	SIZE	DESCRIPTION
(A)	D3-4	54"X12"	OVERHEAD STREET NAME SIGN "W Rosedale Ave"
(B)	D3-4	42"X12"	OVERHEAD STREET NAME SIGN "S Church St"
(C)	R10-3E(L)	9"X15"	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER ←
(D)	R10-3E(R)	9"X15"	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER →
(E)	R3-1	36"X36"	NO RIGHT TURN
(F)	R3-2	36"X36"	NO LEFT TURN
(G)	R5-1	30"X30"	DO NOT ENTER
(J)	SPECIAL	30"X36"	TRUCKS NO RIGHT TURN
(K)	SPECIAL	30"X36"	TRUCKS NO LEFT TURN
(L)	R6-1L	36"X12"	HORIZONTAL LEFT ONE-WAY
(M)	R6-1R	36"X12"	HORIZONTAL RIGHT ONE-WAY

0 25 50 FEET

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.

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 EDGE 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 MINIMUM VERTICAL CLEARANCE OF 16 FT. ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEWALK 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 FORM 408.

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 AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.

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 TRAFFIC SIGNAL STANDARDS TC-8800 SERIES.

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: CHESTER

MUNICIPALITY: WEST CHESTER BOROUGH

INTERSECTION: WEST ROSEDALE AVENUE
SOUTH CHURCH STREET

REVIEWED:

DATE

MUNICIPAL OFFICIAL DATE

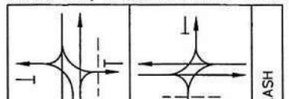
RECOMMENDED:

DISTRICT TRAFFIC ENGINEER DATE

NO.	REVISION	DES./ REVW.	DATE	REVW.	DATE	RECOM.	DATE

SHEET 2 OF 2 | PERMIT # XX-XXXX | FILE # XXXX

MOVEMENT, SEQUENCE AND TIMING DIAGRAM



PHASE	2+6				4+8				FLASH
INTERVAL / SIGNALS	1	2	3	4	5	6	7	8	
1,2	G	G	Y	R	R	R	R	R	Y
3,4	G	G	Y	R	R	R	R	R	Y
5,6	R	R	R	R	G	G	Y	R	R
7,8	R	R	R	R	G	G	Y	R	R
9,10	H	H	H	H	M	FH	H	H	OFF
11,12	M	FH	H	H	H	H	H	H	OFF

FIXED			3	3			3	3
MINIMUM					3			
PASSAGE					3			
MAX 1	35				10			
PEDESTRIAN*	7	10			7	12		
MEMORY	MX				NL			
PROGRAM 1	43		3	3	10		3	3
PROGRAM 2	29		3	3	19		3	3

* UPON PEDESTRIAN ACTUATION, OTHERWISE HAND SYMBOL AT ALL TIMES

OPERATION NOTES

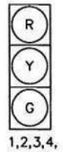
- CONTROLLER TO DWELL IN PHASE 2+6 UNTIL ACTUATED BY PHASE 4+8

WEEKLY PROGRAM CHART						
EVENT	DAY*	TIME	CYCLE	OFFSET	PROGRAM	REMARKS
1	1-5	0600	65	–	1	AM PEAK
2	1-5	0930	–	–	MAX 1	OFF PEAK
3	1-5	1500	60	–	2	PM PEAK
4	1-7	1900	–	–	MAX 1	OFF PEAK

* DAY 1 = MONDAY

SIGNAL INDICATIONS

12" LED LENS



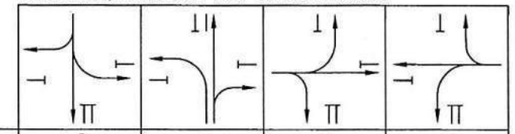
1,2,3,4, 5,6,7,8

16"X18" PEDESTRIAN COUNTDOWN SIGNALS (LED)

9,10, 11,12

SIGNAL HEADS 1–8 TO BE EQUIPPED WITH YELLOW BACKPLATES

EMERGENCY PRE-EMPTION MOVEMENT, SEQUENCE AND TIMING DIAGRAM



PHASE	2				6				4				8			
INTERVAL / SIGNALS	9	10	11		12	13	14		15	16	17		18	19	20	
1,2	R	R	R		G	Y(G)	R(G)		R	R	R		R	R	R	
3,4	G	Y(G)	R(G)		R	R	R		R	R	R		R	R	R	
5,6	R	R	R		R	R	R		G	Y	R		R	R	R	
7,8	R	R	R		R	R	R		R	R	R		G	Y	R	
9,10	H	H	H		H	H	H		H	H	H		H	H	H	
11,12	H	H	H		H	H	H		H	H	H		H	H	H	
FIXED	▲	3	3		▲	3	3		▲	3	3		▲	3	3	

NOTE: IF PRE-EMPTION EQUIPEMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE "00" FEATURE ON, TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PRE-EMPTION.

(G) SIGNAL TO INDICATE G WHEN RETURNING TO NORMAL OPERATION

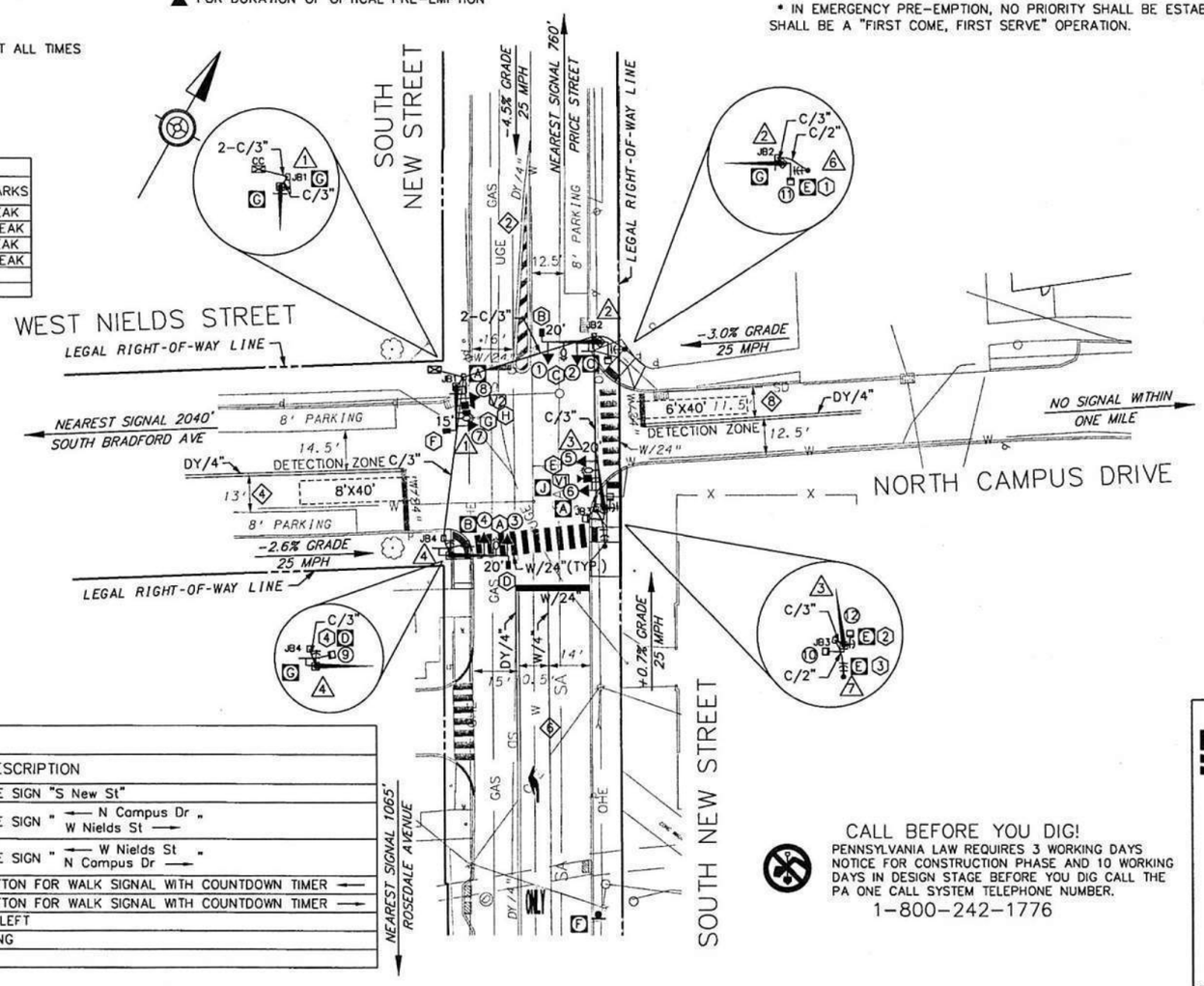
▲ FOR DURATION OF OPTICAL PRE-EMPTION

EMERGENCY PRE-EMPTION NOTES:

- CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION FOR THE NORTHBOUND AND SOUTHBOUND APPROACHES OF SOUTH NEW STREET, THE EASTBOUND APPROACH OF WEST NIELDS STREET, AND WESTBOUND APPROACH OF NORTH CAMPUS DRIVE WITH A FAIL SAFE DEVICE FOR EACH DIRECTION OF OPERATION.

THIS EMERGENCY BEACON SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND SHALL FLASH WHEN THE EMERGENCY VEHICLE HAS CONTROL OF THE INTERSECTION FOR THE APPROPRIATE APPROACH. LOCATION OF THE EMERGENCY VEHICLE DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

- THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLES, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS, ACCORDINGLY. THEN THE GREEN INTERVAL FOR THE PRE-EMPTED PHASE SHALL FOLLOW.
- THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE SHALL TIME OUT ALL YELLOW, HAND/MAN AND RED INDICATIONS, FOLLOWED BY THE GREEN INTERVAL OF THE PRE-EMPTION PHASE GOVERNED BY THE APPROACHING EMERGENCY VEHICLE.
- IF THE SIGNAL HAS BEEN ACTUATED BY A PEDESTRIAN PUSH BUTTON, AND THE SIGNAL IS PRE-EMPTED DURING THE "MAN" INTERVAL, THE MAN INTERVAL SHALL TERMINATE IMMEDIATELY FOLLOWED BY THE "FLASHING HAND" INDICATION IN ITS ENTIRETY, FOLLOWED BY THE APPROPRIATE SELECTIVE CLEARANCES BEFORE PROCEEDING TO THE PRE-EMPTION PHASE.
- IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE ARE FLASHING, ALL SIGNALS SHALL REMAIN FLASHING.
- IF ADDITIONAL PRE-EMPTION, PHASES ARE ACTIVATED WHILE IN PRE-EMPTION, THE ORIGINAL PRE-EMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PRE-EMPTION PHASE.
- UPON COMPLETION OF PRE-EMPTION PHASES 2, 4, 6 OR 8 IN RETURNING TO NORMAL OPERATION, PHASE 2+6 INTERVAL 1 SHALL FOLLOW.
- IN EMERGENCY PRE-EMPTION, NO PRIORITY SHALL BE ESTABLISHED. PRE-EMPTION SHALL BE A "FIRST COME, FIRST SERVE" OPERATION.



SIGN TABULATION

SYMBOL	SERIES	SIZE	DESCRIPTION
A	D3-4	36"X12"	OVERHEAD STREET NAME SIGN "S New St"
B	D3-5	54"X21"	OVERHEAD STREET NAME SIGN " ← N Campus Dr / W Nields St → "
C	D3-5	54"X21"	OVERHEAD STREET NAME SIGN " ← W Nields St / N Campus Dr → "
D	R10-3E(L)	9"X15"	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER ←
E	R10-3E(R)	9"X15"	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER →
F	R3-7L	30"X30"	LEFT LANE MUST TURN LEFT
G	R9-3	18"X18"	NO PEDESTRIAN CROSSING
J	R10-11	30"X36"	NO TURN ON RED ●

CALL BEFORE YOU DIG!
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1-800-242-1776

TRAFFIC SIGNAL PLAN

PREPARED BY:
McCORMICK TAYLOR
2001 Market Street, 10th Floor
Philadelphia, Pennsylvania 19103

COMMONWEALTH OF PENNSYLVANIA — CHRISTOPHER BENVIGHT — PROFESSIONAL ENGINEER — PE 84547

DATE: 12-13-17

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	CHESTER	----	---	1 OF 6
	WEST CHESTER BOROUGH			

REVISION NUMBER	REVISIONS	DATE	BY

TRAFFIC SIGNAL NOTES

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

DETERMINE, PRIOR TO INSTALLATION, THE EXACT LOCATION OF DETECTORS WITH A REPREPESENTATIVE OF PENNDOT.

ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FOLLOWING PENNDOT PUBLICATIONS:
- PUB 408 / 2016, SPECIFICATIONS
- PUB 148, TRAFFIC STANDARDS–SIGNALS, TC–8800 SERIES
- PUB 149, TRAFFIC SIGNAL DESIGN HANDBOOK
- PUB 236, HANDBOOK OF APPROVED SIGNS

THE TRAFFIC SIGNAL SUPPORTS SHALL BE LOCATED IN THE FIELD BY A PENNDOT RESIDENT ENGINEER

THE CONTRACTOR SHALL COMPLETE THE NECESSARY APPLICATION(S) IN ORDER TO OBTAIN ELECTRICAL SERVICE FROM THE LOCAL POWER COMPANY.

THE CONTRACTOR SHALL INSTALL ALL NEW TRAFFIC SIGNAL EQUIPMENT AND RELATED MATERIALS.

ALL EXISITNG TRAFFIC SIGNAL EQUIPMENT THAT IS REMOVED SHALL BECOME THE PROPERTY OF WEST CHESTER BOROUGH, UNLESS OTHERWISE DIRECTED BY THE TOWNSHIP ENGINEER.

PAVEMENT MARKINGS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY, REFER TO PAVEMENT MARKING PLAN FOR INSTALLATION DETAILS.

REFER TO THE ROADWAY CONSTRUCTION PLANS FOR THE LOCATION OF UTILITIES AND PROPERTY OWNER INFORMATION.

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EXISTING	PROPOSED	DESCRIPTION
		MAST ARM
		STRAIN POLE/PEDESTAL
②→	②→	VEHICULAR SIGNAL HEAD
⑦②→	①①→	PEDESTRIAN PUSH BUTTON/SIGN
③	③	PEDESTRIAN SIGNAL HEAD
B	B	POST MOUNTED SIGN
C	C	MAST ARM MOUNTED SIGN
1	1	JUNCTION BOX
◀②	◀②	RADAR DETECTOR
②②	②②	VIDEO DETECTOR
②	②	DETECTION ZONE
cc1	cc1	CONTROLLER CABINET
A	A	EMERGENCY PREEMPTION DETECTOR
B	B	EMERGENCY PREEMPTION CONFIRMATION BEACON
–C/2"–	–C/2"–	CONDUIT/SIZE
1	1	LUMINAIRE
W/4"	W/4"	SOLID WHITE LINE/WIDTH
BW/4"	BW/4"	BROKEN WHITE LINE/WIDTH
BY/4"	BY/4"	BROKEN YELLOW LINE/WIDTH
Y/4"	Y/4"	SOLID YELLOW LINE/WIDTH
DY/4"	DY/4"	DOUBLE YELLOW LINE/WIDTH
DW/4"	DW/4"	DOTTED WHITE LINE/WIDTH
		DETECTABLE WARNING SURFACE
(8)		PHASE NUMBER

COUNTY: CHESTER
MUNICIPALITY: WEST CHESTER BOROUGH
INTERSECTION: SOUTH NEW STREET AND WEST NIELDS ST / NORTH CAMPUS DR

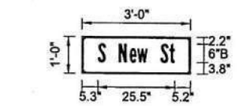
REVIEWED:
MUNICIPAL OFFICIAL — DATE 12/14/17

RECOMMENDED:
DISTRICT TRAFFIC ENGINEER — DATE 12/18/17, 1-3-18

FILE # 3941

CONTRACTORS NOTES:

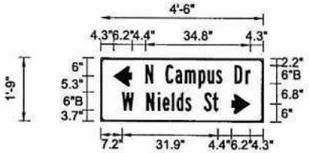
- ALL MATERIAL AND WORK TO CONFORM WITH WEST CHESTER BOROUGH SPECIFICATIONS FOR TRAFFIC SIGNAL EQUIPMENT, PENNDOT FORM 408, PENNDOT PUBLICATION 72M AND PENNDOT TC-8800 SERIES.
- JB #1 TO BE TYPE 17"X30".
- JB #2, #3, & #4 TO BE JB-27.
- WIRE SIGNAL HEAD #1 WITH 7C FOR POSSIBLE FUTURE PROTECTED LEFT TURN PHASE.
- INSTALL NEW TRAFFIC SIGNAL CONTROLLER: NAZTEC 900 SERIES, NEMA TS-2 TYPE 2 ATC (TYPE 1 MOUNTING), DOUBLE CONVERSION BATTERY BACKUP SYSTEM, EMERGENCY GENERATOR CONNECTION AND TOMAR OPTICAL PRE-EMPTION EQUIPMENT.
- INSTALL POLES, SIGNAL HEADS, VIDEO DETECTION CAMERAS, PUSH BUTTONS, EMERGENCY PRE-EMPTION EQUIPMENT AND SIGNS AS SHOWN.
- THE BATTERY BACK-UP SYSTEM IS TO BE CAPABLE OF 8 HOURS OF CONTINUOUS OPERATION DURING A POWER FAILURE AND BE EQUIPPED WITH CONFIRMATION LIGHTS MOUNTED (GREEN FOR NORMAL POWER, RED FOR BACK-UP POWER) MOUNTED ON THE OUTSIDE OF THE CONTROLLER CABINET.
- ALL RED, YELLOW, AND GREEN INDICATIONS INCLUDING ARROWS TO BE EQUIPPED WITH PENNDOT APPROVED LED LENSES. PEDESTRIAN SIGNAL HEADS SHALL BE LED AS WELL.
- THE LOCATION OF VIDEO DETECTION CAMERAS AND EMERGENCY PRE-EMPTION SHOULD BE REVIEWED AND APPROVED BY THE SUPPLIER PRIOR TO INSTALLATION.
- ALL PEDESTRIAN PUSH BUTTONS SHALL BE ADA COMPLIANT WITH LATCHING LED CONFIRMATION LIGHT AND TONE.
- TRAFFIC SIGNAL CONTRACTOR SHALL NOTIFY WEST CHESTER BOROUGH A MINIMUM OF 24 HOURS BEFORE ANY MEETINGS OR CONSTRUCTION BEGINS ON TRAFFIC SIGNAL.
- ALL SIGNAL HARDWARE AND SOFTWARE SHALL BE APPROVED BY WEST CHESTER BOROUGH PRIOR TO CONSTRUCTION.



DETAIL SIGN "A"
N.T.S.

D3-4

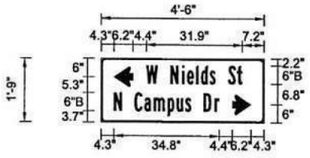
SERIES B LETTERING
6" UPPER CASE
4.4" LOWER CASE
REFLECTORIZED GREEN BACKGROUND
WHITE LEGEND AND BORDER



DETAIL SIGN "B"
N.T.S.

D3-5

SERIES B LETTERING
6" UPPER CASE
4.4" LOWER CASE
REFLECTORIZED GREEN BACKGROUND
WHITE LEGEND AND BORDER

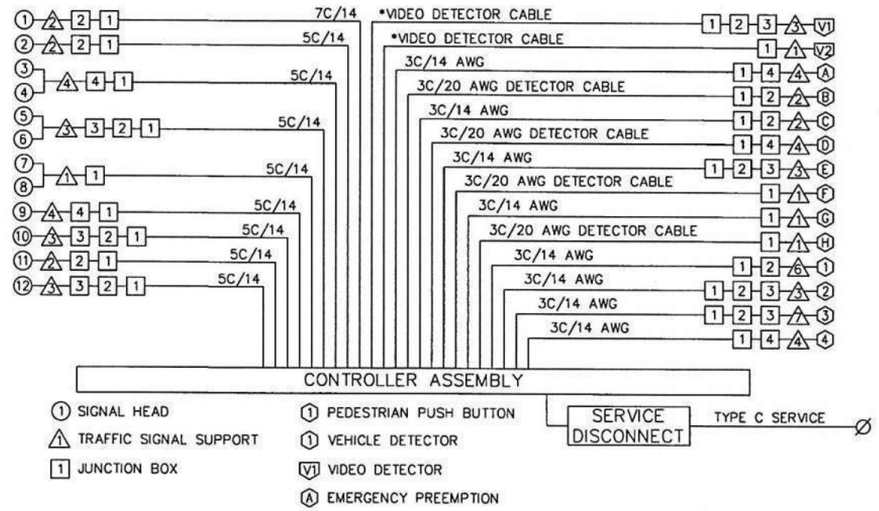


DETAIL SIGN "C"
N.T.S.

D3-5

SERIES B LETTERING
6" UPPER CASE
4.4" LOWER CASE
REFLECTORIZED GREEN BACKGROUND
WHITE LEGEND AND BORDER

WIRING DIAGRAM



5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG)
* CABLE AS REQUIRED BY MANUFACTURER

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0 25 50 FEET

TRAFFIC SIGNAL PLAN

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	CHESTER	----	---	2 OF 6
WEST CHESTER BOROUGH				

REVISION NUMBER	REVISIONS	DATE	BY

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EXISTING	PROPOSED	DESCRIPTION
		MAST ARM
		STRAIN POLE/PEDESTAL
		VEHICULAR SIGNAL HEAD
		PEDESTRIAN PUSH BUTTON/SIGN
		PEDESTRIAN SIGNAL HEAD
		POST MOUNTED SIGN
		MAST ARM MOUNTED SIGN
		JUNCTION BOX
		RADAR DETECTOR
		VIDEO DETECTOR
		DETECTION ZONE
		CONTROLLER CABINET
		EMERGENCY PREEMPTION DETECTOR
		EMERGENCY PREEMPTION CONFIRMATION BEACON
-C/2"-	-C/2"-	CONDUIT/SIZE
		LUMINAIRE
W/4"	W/4"	SOLID WHITE LINE/WIDTH
BW/4"	BW/4"	BROKEN WHITE LINE/WIDTH
BY/4"	BY/4"	BROKEN YELLOW LINE/WIDTH
Y/4"	Y/4"	SOLID YELLOW LINE/WIDTH
DY/4"	DY/4"	DOUBLE YELLOW LINE/WIDTH
DW/4"	DW/4"	DOTTED WHITE LINE/WIDTH
		DETECTABLE WARNING SURFACE
		PHASE NUMBER

COUNTY: CHESTER
MUNICIPALITY: WEST CHESTER BOROUGH
INTERSECTION: SOUTH NEW STREET AND WEST NIELDS ST / NORTH CAMPUS DR

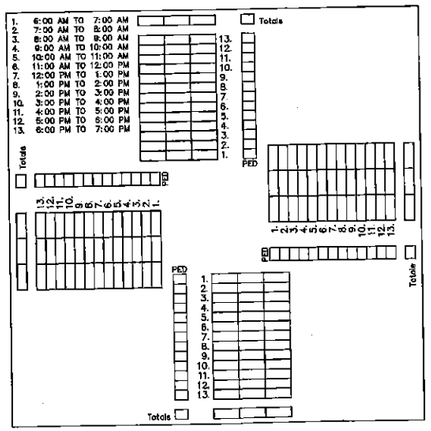
REVIEWED:
MUNICIPAL OFFICIAL — DATE 12/14/17

RECOMMENDED:
DISTRICT TRAFFIC ENGINEER — DATE 12/15/17, 1-3-18

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — ERIK C. SCHMIDT — ENGINEER PE084547

FILE # 3941

CHESTER CO. WESTCHESTER BOR. File No.



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MOVEMENT, SEQUENCE AND TIMING DIAGRAM

PHASE	A					C					B				
INTERVAL / SIGNAL	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
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3,4		SELECTIVE RED	G	Y③	R③		SELECTIVE RED	R	R	R		SELECTIVE RED	R	R	R
5			R	R	R			R	R	R			R	R	R
6,7			R	R	R			G	Y	R			R	R	R
8			R	R	R			R	R	R			R	R	R
FIXED TIME	①	①	②	3	2	①	①	②	3	2	①	①	②	3	2

① AS SHOWN IN MOVEMENT, SEQUENCE AND TIMING DIAGRAM
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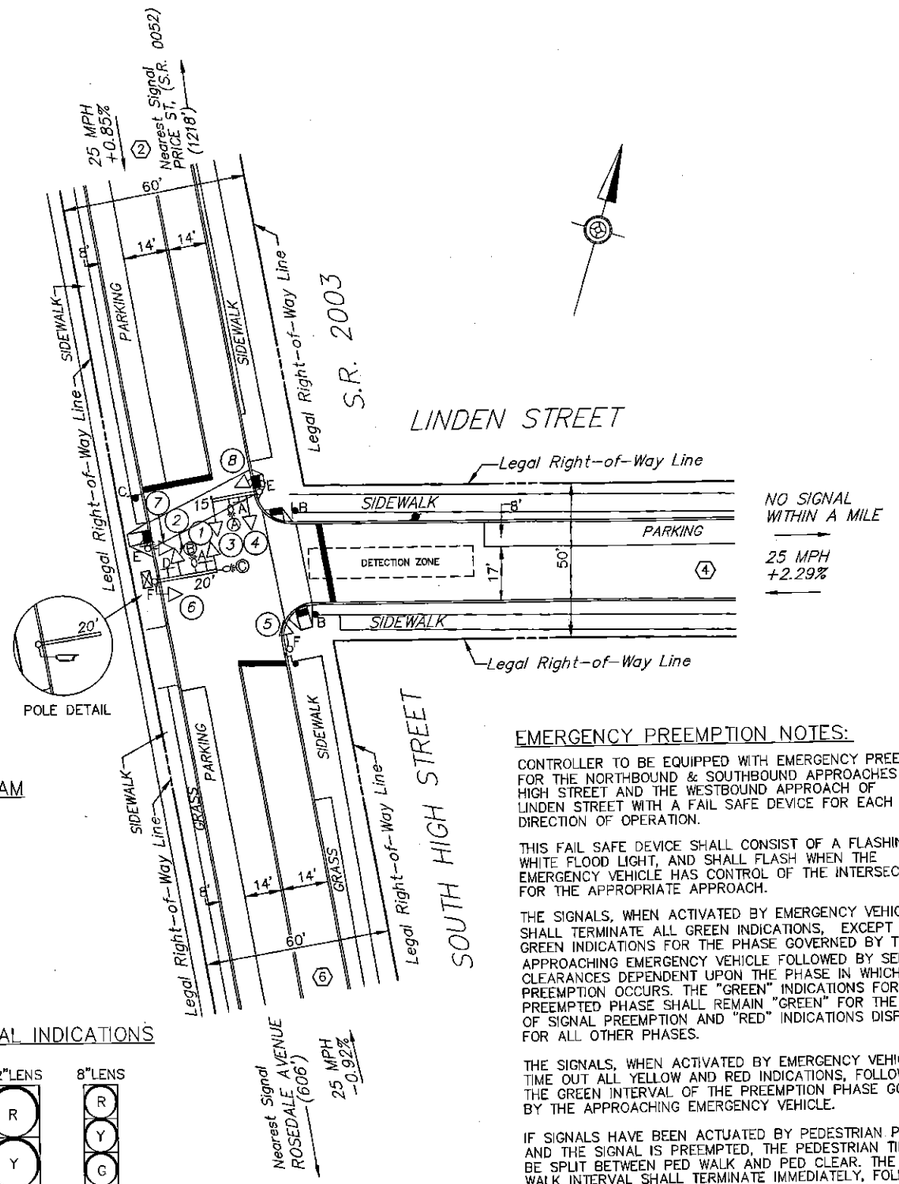

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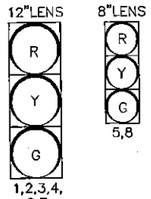
MOVEMENT, SEQUENCE AND TIMING DIAGRAM

PHASE	2+6			4			FLASHING
INTERVAL / SIGNAL	1	2	3	4	5	6	
1,2,3,4	G	Y	R	R	R	R	Y
5	G	Y	R	R	R	R	OFF
6,7	R	R	R	G	Y	R	R
8	R	R	R	G	Y	R	OFF

FIXED		3	2		3	2
MINIMUM	49			3		
PASSAGE				3		
MAXIMUM	50			24		
PEDESTRIAN *				14		
MEMORY	MR			NL		

* UPON PEDESTRIAN ACTUATION ONLY CONTROLLER TO DWELL IN PHASE 2+6 UNTIL ACTUATED BY PHASE 4

SIGNAL INDICATIONS



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25 0 25

LEGEND

- 20' — MAST ARM/IDENTIFYING LENGTH
- ② — VEHICULAR SIGNAL HEAD/BACKPLATE/VISORS/DIRECTIONAL ARROW/IDENTIFYING NUMBER
- ② — PEDESTRIAN SIGNAL HEAD/IDENTIFYING NUMBER
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- 12'x6' — LOOP SENSOR/SIZE
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- CURB CUT RAMP
- UTILITY POLE
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- DETECTION ZONE

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

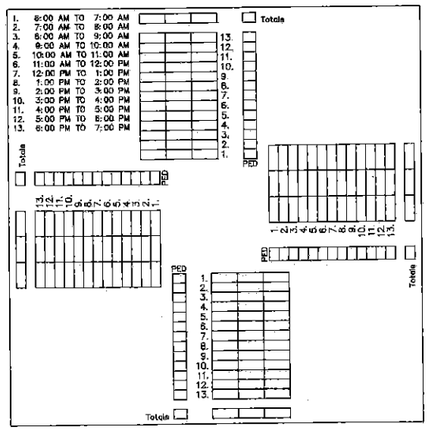
COUNTY: CHESTER
MUNICIPALITY: WEST CHESTER BOROUGH
INTERSECTION: SOUTH HIGH STREET(S.R. 2003) AND LINDEN STREET

REVIEWED:
DATE
MUNICIPAL OFFICIAL DATE

RECOMMENDED:
PAUL LUTZ 3/26/03
LOUIS R. BELMONTE 3/26/03
DISTRICT TRAFFIC ENGINEER DATE

NO.	REVISION	DES./REVW.	DATE	REVW.	DATE	RECOM.	DATE
1	ADD SIGN "A"	WDF	1/13/09	LUTZ	2/2/09	LRB	1/30/09
2	SR 2020/SEC.GRC ADA UPDATE REMOVE SOUTHERN PED CROSSING	MCM	7/8/09	LUTZ	7/8/09	LRB	7/8/09
3	ADDED VIDEO DETECTION			KW	7/9/13	[illegible]	[illegible]
4							
5							
6							
7							
8							

SHEET 2 OF 2 | PERMIT # 62-1167 | FILE # 1167



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PHASE	A					C					B				
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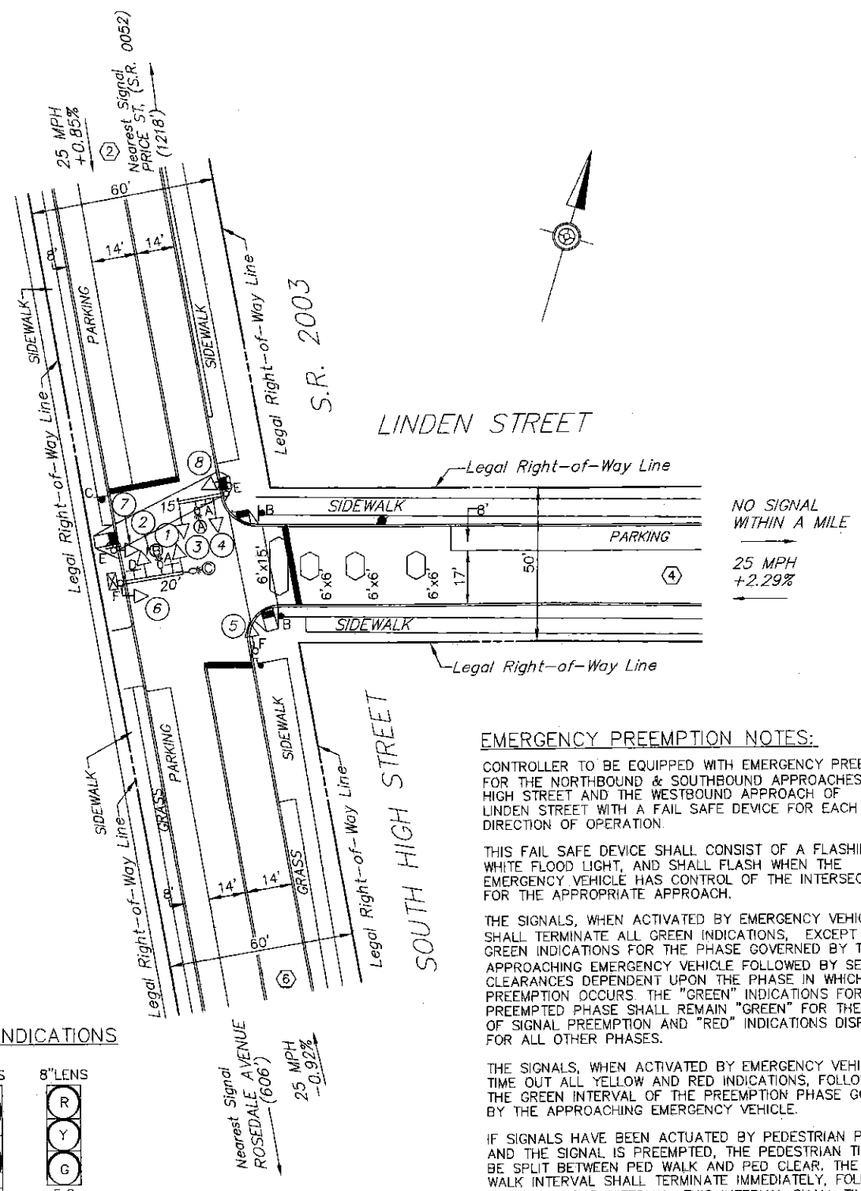

NO SIGNAL WITHIN A MILE

25 MPH +2.29%

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PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: CHESTER
MUNICIPALITY: WEST CHESTER BOROUGH
INTERSECTION: SOUTH HIGH STREET(S.R. 2003) AND LINDEN STREET

REVIEWED: _____ DATE _____
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RECOMMENDED:
PAUL LUTZ 3/26/03
LOUIS R. BELMONTE 3/26/03
DISTRICT TRAFFIC ENGINEER DATE

NO.	REVISION	DES./ REVW.	DATE	REVW.	DATE	RECOM.	DATE
1	ADD SIGN "A"	WDF	1/13/09	LUTZ	2/2/09	LRB	1/30/09
2	SR 2020/SEC.CRC ADA UPDATE REMOVE SOUTHERN PED. CROSSING	MCM	7/8/09	LUTZ	7/8/09	LRB	7/8/09
3							
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5							
6							
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8							

SHEET 2 OF 2 | PERMIT # 62-1167 | FILE # 1167

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Final Report

JANUARY 7, 2025 (REVISED)

Student Housing Study

West Chester University

Submitted by:

KASEY PRICE, ED.D.
DIRECTOR
4320 WEST KENNEDY BLVD, SUITE 200
TAMPA, FLORIDA 33609
888.302.0899
kprice@mgt.us

Appendix C

TABLE OF CONTENTS

EXECUTIVE SUMMARY 2

Current State of University Housing 2

Stakeholder Engagement 2

Demand Analysis 2

CURRENT STATE OF UNIVERSITY HOUSING 4

Total Number of Students Living On-Campus 4

Total Number of Residence Hall/Student Housing Beds Available On-Campus 4

Historical Enrollment Trends 5

Rental Registration Forms for Off-Campus Student Homes 5

STAKEHOLDER ENGAGEMENT 6

Current Living Situation 7

Rental Housing Among Single Student Renters 9

Interest in Housing by Type Among Single Student Renters 10

DEMAND ANALYSIS 13

Incremental Demand 13

LEGAL DISCLAIMER 14

APPENDIX 1: OFF-CAMPUS STUDENT HOUSING REGISTRATION 15

APPENDIX 2: STUDENT HOUSING SURVEY 55

EXECUTIVE SUMMARY

MGT Consulting (MGT) was engaged to conduct a student housing study for West Chester University. This project started in September 2024 with a kick-off call to discuss project parameters. The project was designed to identify demand for additional student housing on or near WCU's West Chester campus. The analysis includes a survey and analysis of student preferences and the development of a demand estimate for student housing.

Current State of University Housing

West Chester University is housing 5,289 students as of Fall 2024, with a total of 5,383 beds, resulting in an approximate 98% occupancy rate. This is an increase from Fall 2021, when 5,010 students lived in residence halls on campus. This represents a 2.5% increase in student housing. During this same timeframe, WCU experienced a slight enrollment decline from Fall 2020 to Fall 2024, losing 550 students, representing a 3.2% enrollment decline. The loss represents 286 graduate students and 264 undergraduate students.

Stakeholder Engagement

MGT designed a student survey with input from West Chester University. The purpose of the survey was to collect information on students' current housing situation and information on desired unit types at estimated rents. WCU distributed the survey to 17,171 students enrolled in Fall 2024, and 2,131 students accessed the survey. After removing students under age 18, those who do not take classes primarily on the West Chester Campus, and those that did not answer questions beyond the demographic items, **1,959 valid responses were recorded**. The electronic survey was posted on October 2, 2024, and closed on October 21st. As an incentive to respond to the survey, six gift card prizes totaling $250 were awarded to randomly selected survey respondents. With 1,959 valid responses from a distribution of 17,171, the survey had an overall **11.4% response rate**.[1]

Demand Analysis

MGT's demand methodology considers demand from students who live off campus. The methodology for calculating demand uses the responses to student survey questions asking if respondents would have lived in their preferred unit if it had been available at the start of the 2024–25 academic year.

The first step in calculating demand is to determine a capture rate for off-campus, full-time students using the following equation:

$$\text{Capture Rate} = \frac{\text{Number of Full-Time Off-Campus Respondents Definitely Interested in Housing}}{\text{Number of Full-time Off-campus Respondents}}$$

The capture rate reflects the percentage of respondents based on full-time enrollment status at two levels of interest (e.g., definitely interested, might be interested). A "closure" rate is

[1] MGT assumed that all students had equal access to the survey.

necessary to reflect that not all students who express interest in housing will sign a lease. For incremental demand, a 50% closure rate for those who indicated that they "definitely would have lived" in the housing and a 25% closure rate for those who indicated that they "might have lived" in the housing was used. The full-time enrollment is multiplied by the capture rate, and then the closure rate is applied to yield the demand range.[2] This demand is explicitly based on the description of the units that included the rental rates proposed for the housing. The West Chester survey analysis indicates demand for **2,386 additional beds**. See **Exhibit 13** for additional information.

[2] The level of response to the survey and the size of West Chester's off-campus, full-time enrollment results in a confidence interval in the results of plus or minus 6.0% at a 95% confidence level—the plus-or-minus figure seen in many survey or poll results, for example, if the confidence interval is 3.0% and 50% percent of the sample picks an answer; it is 95% certain that if the entire population had been asked the same question, between 47% (50%-3%) and 53% (50%+3%) would have picked that answer. MGT uses the midpoint of the range as an estimate of demand.

Current State of University Housing

Student housing is very popular at West Chester University. Many students who wish to live on campus are currently unable because of the lack of available spaces. At WCU, housing is prioritized for first year students. Returning students (sophomore, juniors and seniors) must participate in a housing lottery to attempt to secure a housing space on campus. WCU managed housing has used a lottery for the last two years, our campus partner and other housing provider, University Student Housing (USH), will use a lottery for Fall 2025 and is expected to continue the process into the future. Both housing providers open the returning student application process in late October for the following academic year. WCU also offers an Off-Campus Housing Fair in late October.

Total Number of Students Living On-Campus

West Chester University is housing 5,289 students as of Fall 2024, as shown in **Exhibit 1**. This is approximately a 98% occupancy rate and an increase from Fall 2021, when 5,010 students lived in residence halls on campus. Fall 2022 and Fall 2023 housed 71 and 70 students more, respectively, with 5,358 students living on campus in Fall 2022 and 5,359 students living on campus in Fall 2023.

Exhibit 1. Total Number of Students Living On WCU Campus

Residence Hall	Fall 2021	Fall 2022	Fall 2023	Fall 2024
Allegheny Hall	626	638	639	638
Brandywine Hall	612	624	625	626
College Arms*	77	92	92	33
Commonwealth Hall	642	659	660	654
East Village	264	264	264	263
Goshen Hall	468	539	545	536
Killinger Hall	285	304	296	304
Schmidt Hall	390	427	432	418
South Campus Apartments	416	478	476	487
The Village	518	524	524	522
Tyson Hall	449	544	542	543
University Hall	263	265	264	265
TOTALS	**5,010**	**5,358**	**5,359**	**5,289**

*College Arms bed off-line for renovation.

Total Number of Residence Hall/Student Housing Beds Available On-Campus

West Chester University maintains 5,383 beds as of Fall 2024, as noted in **Exhibit 2**. This is an increase of 130 beds from Fall 2021 and represents a 2.5% increase in student housing. The increase is a result of 10 or fewer beds added in College Arms, Goshen Hall, Killinger Hall, Schmidt Hall, South Campus Apartments, and Tyson Hall. Allegheny Hall, Brandywine Hall, and Commonwealth Hall all experienced a decrease of eight or fewer beds, while East Village, The Village, and University Hall did not have any change in beds. Small changes in bed spaces are due to a variety of factors including, accommodations spaces, permanently offline beds, emergency housing, or small facility renovations that alter the availability of bed spaces.

Exhibit 2. Designed Occupancy in WCU Housing

Residence Hall	Trendlines	Fall 2021	Fall 2022	Fall 2023	Fall 2024
Allegheny Hall		626	638	639	638
Brandywine Hall		612	624	625	626
College Arms		77	92	92	33
Commonwealth Hall		642	659	660	654
East Village		264	264	264	263
Goshen Hall		468	539	545	536
Killinger Hall		285	304	296	304
Schmidt Hall		390	427	432	418
South Campus Apartments		416	478	476	487
The Village		518	524	524	522
Tyson Hall		449	544	542	543
University Hall		263	265	264	265
TOTALS		**5010**	**5358**	**5359**	**5289**

Historical Enrollment Trends

WCU experienced a slight enrollment decline from Fall 2020 to Fall 2024, losing 550 students, representing 3.2% of the total enrollment. The loss represents 286 graduate students and 264 undergraduate students.

Exhibit 3. Historical Enrollment Trends

	Graduate	Undergraduate	Total
Fall 2019	3,054	14,637	17,691
Fall 2020	3,008	14,713	17,721
Fall 2021	3,143	14,471	17,614
Fall 2022	2,883	14,392	17,275
Fall 2023	2,732	14,344	17,076
Fall 2024	2,722	14,449	17,171

Rental Registration Forms for Off-Campus Student Homes

WCU maintains a list of rental properties for off-campus student housing. The list, located in Appendix 1, includes 736 rental listings totaling 1,223 rooming units and 1,803 dwelling units.

Stakeholder Engagement

MGT designed a student survey with input from West Chester University. The purpose of the survey was to collect information on students' current housing situation and information on desired unit types at estimated rents. WCU distributed the survey to 17,171 students enrolled in Fall 2024, and 2,131 students accessed the survey. After removing students under age 18, those who do not take classes primarily on the West Chester Campus, and those that did not answer questions beyond the demographic items, **1,959 valid responses were recorded**. The electronic survey was posted on October 2, 2024, and closed on October 21st. As an incentive to respond to the survey, six gift card prizes totaling $250 were awarded to randomly selected survey respondents. With 1,959 valid responses from a distribution of 17,171, the survey had an overall **11.4% response rate**.[3]

Survey responses were tabulated by living situation: students who live on campus and students who live off campus. The largest share of respondents were first-year students at WCU (37%), followed by sophomores (26%), juniors (21%) and seniors (10%). The overwhelming majority (97%) are currently enrolled full-time at WCU, as shown in **Exhibit 4.**

Exhibit 4. Survey Respondent Class Level and Status.

Level	Count	Percentage
Freshman	727	37%
Sophomore	501	26%
Junior	408	21%
Senior	202	10%
Graduate student	119	6%
Certificate-seeking student	2	0%
Status	**Count**	**Percentage**
Full-time (undergraduate 12 or more credits, graduate students 6 or more credits)	1,908	97%
Part-time	51	3%

The largest shares of students identify as female (74%), age 18-19 (57%), and reside in Pennsylvania (88%), as shown in **Exhibit 5.** Nearly three-quarters identify as White (73%) while 13% are Black/African American. Most are not responsible for housing a spouse/partner or children (95%).

[3] MGT assumed that all students had equal access to the survey.

Exhibit 5. Survey Respondent Demographics.

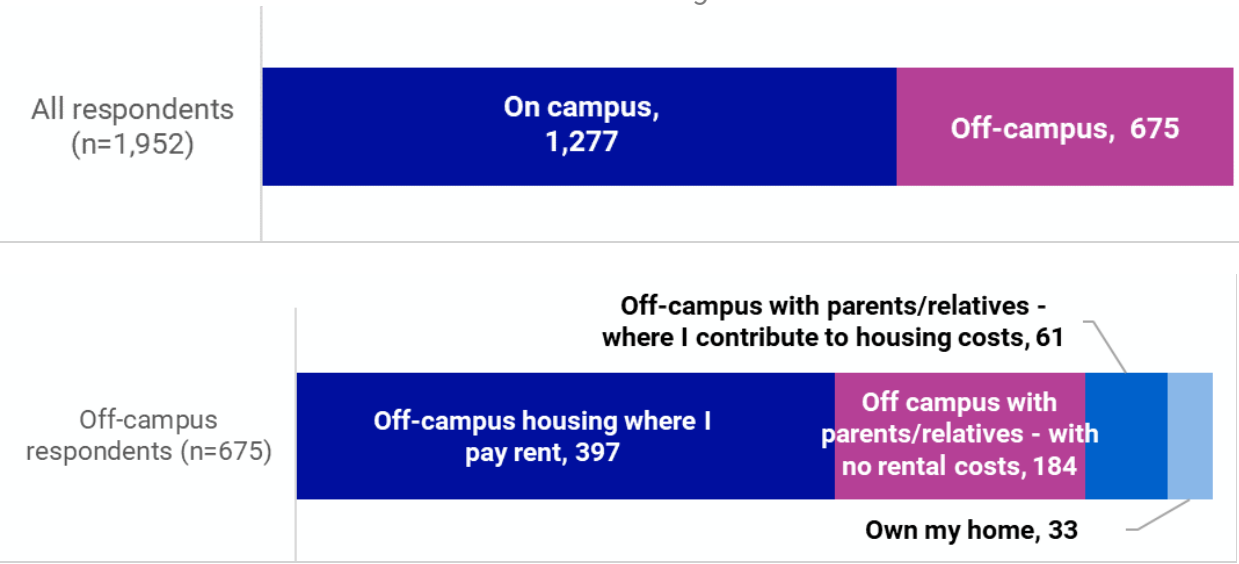
Gender identity	Count	Percentage
Female	1,441	74%
Male	456	23%
Non-binary	38	2%
Prefer not to answer	18	1%
Other	4	0%
Age	**Count**	**Percentage**
18-19	1,109	57%
20-22	683	35%
23-24	87	4%
25 or over	78	4%
Permanent address	**Count**	**Percentage**
Pennsylvania	1,715	88%
New Jersey	147	8%
Delaware	41	2%
Maryland	17	1%
Elsewhere in the United States	30	2%
Another Country	6	0%
Race/ethnicity	**Count**	**Percentage**
Asian or Pacific Islander	98	5%
Black/African-American	267	13%
Hispanic	144	7%
Native American or Alaska Native	13	1%
White/Caucasian	1,545	73%
Other	18	1%
Prefer not to answer	23	1%
Responsibility for housing dependents	**Count**	**Percentage**
Yes	95	5%
No	1,864	95%

The survey instrument is provided in **Appendix 2** and compete response tabulations may be found in the **Addendum** to this report.

Current Living Situation

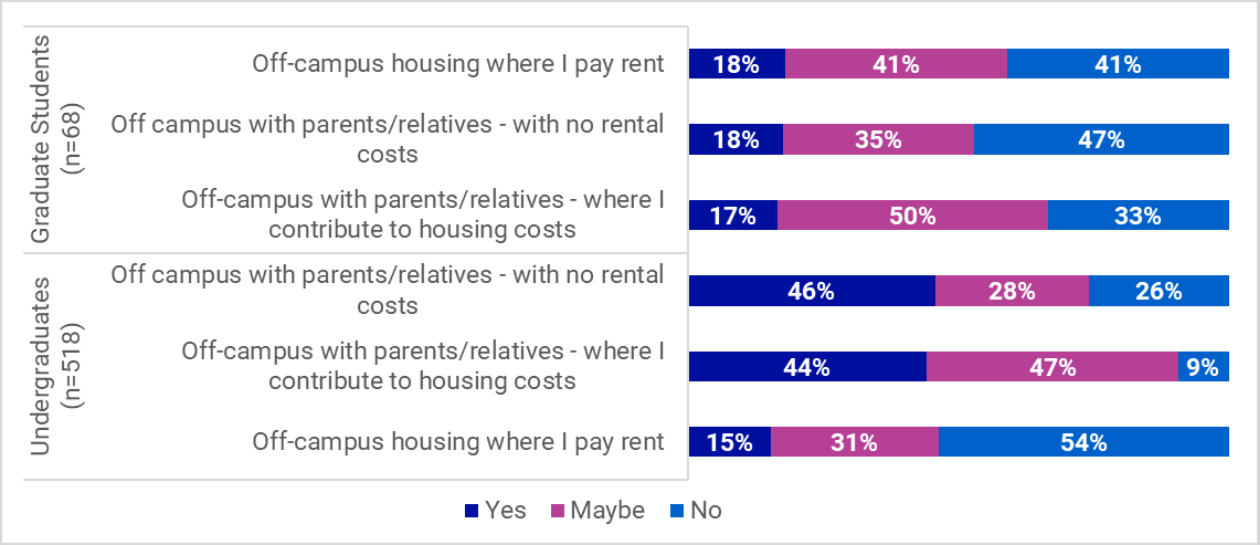
Nearly two-thirds of respondents (65%) report living on campus at the WCU, while 35% of respondents live off campus. Of those who live off campus, 59% live with live in off-campus rental housing, 27% live parents/relatives and have no rental costs, 9% live with parents/relatives and do contribute to housing costs, and while 8% own their own home. Breakdowns of all respondents and off campus students are shown in **Exhibit 6** with 'n' being the number of survey respondents for each category.

Exhibit 6. Current Living Situation.



The majority of full-time undergraduate student respondents (58%) and 59% of graduate students who indicate they live off-campus would consider living on campus in the future (among non-homeowners). The breakdown by living situation is shown below, with the strongest interest in campus housing coming from respondents who live with family and contribute to housing costs (91% of undergraduates and 67% of graduate students in this group indicate some level of interest), as shown in **Exhibit 7**.

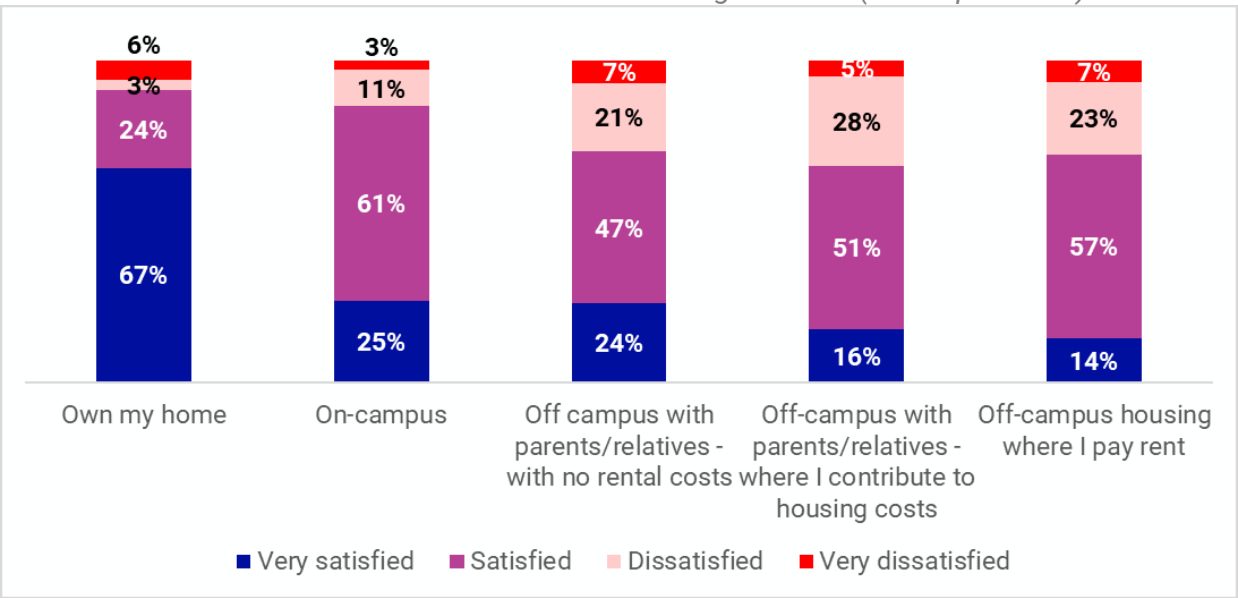
Exhibit 7. Would consider living on campus?



Respondents were asked about their satisfaction with their current housing situation. Of the 1,950 respondents to this question, 23% are very satisfied, 58% are satisfied, 15% are dissatisfied, and 4% are very dissatisfied. Those who own their own home typically express the greatest levels of satisfaction with their current living situation. Among non-homeowners, the highest shares of very satisfied respondents are those who live on campus (25%) or with family and have no rental costs (24%), followed by off-campus residents who live with family but contribute to housing costs (16%). The breakdown of satisfaction and current living situation is in **Exhibit 8**.

Those in campus housing are some of the most satisfied with their current living situation (86% very satisfied or satisfied).

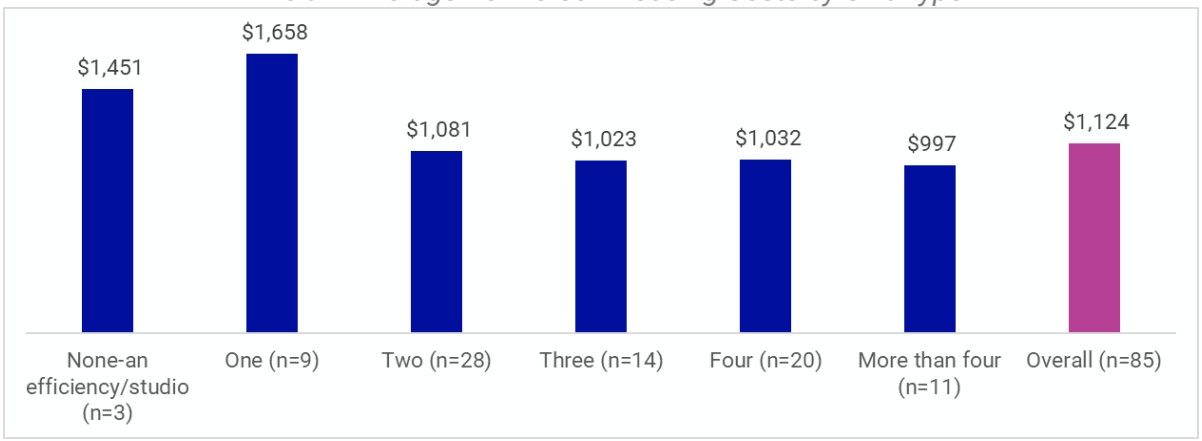
Exhibit 8. Satisfaction Based on Current Living Situation (All Respondents).



Rental Housing Among Single Student Renters

Single student renters who do not share a bedroom pay an average of $1,124 per month in personal housing costs. Average personal housing costs rental rates by number of bedrooms are shown in **Exhibit 9**. More than one-third (40%) indicate that utilities are included in their monthly rent.

Exhibit 9. Average Per Person Housing Costs by Unit Type.

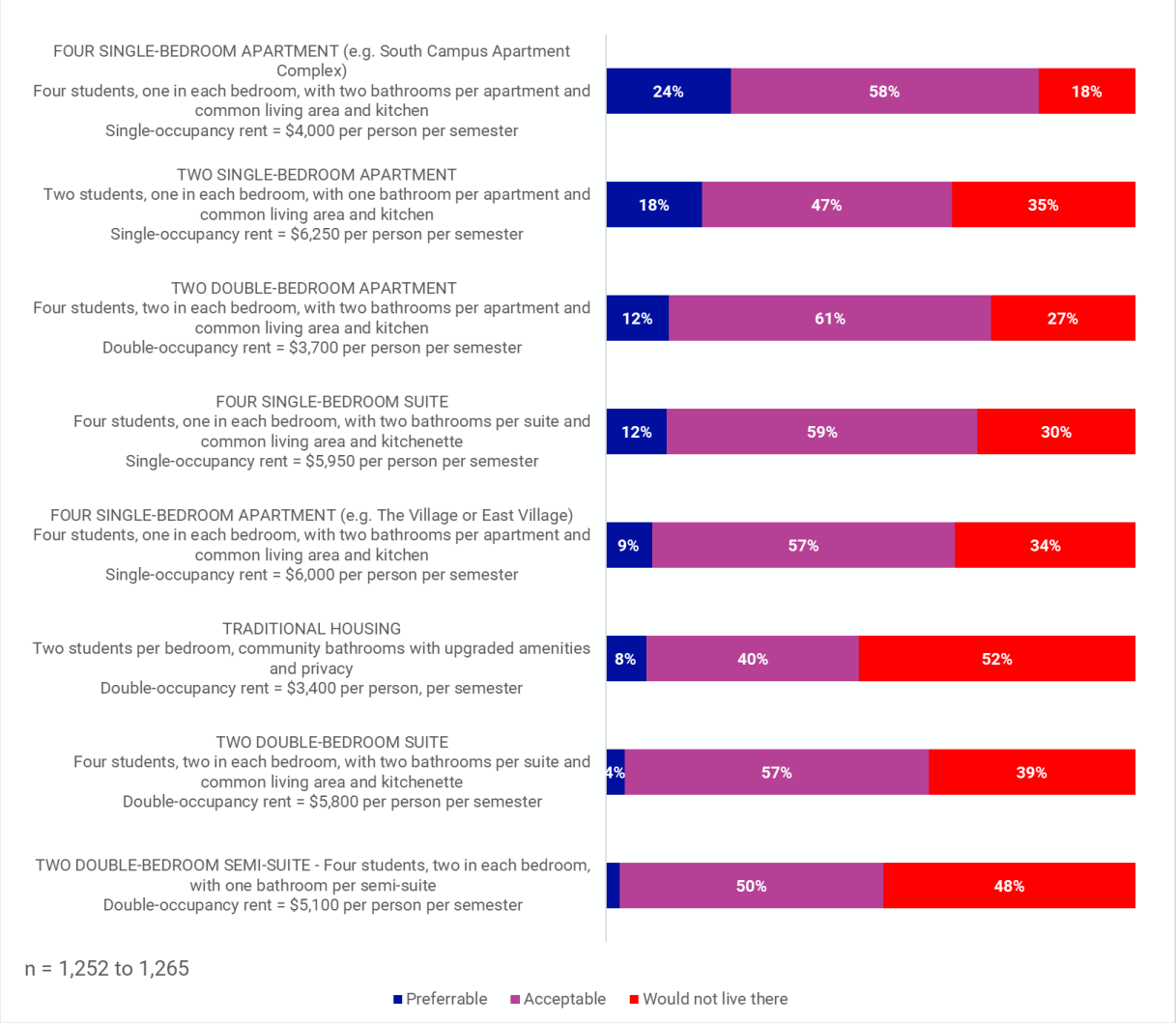


Of those that do pay separately for utilities, the cost of utilities for their unit averages $163 per month, including electricity, gas, basic cable, Internet, trash, and water/sewer).

Interest in Housing by Type Among Single Student Renters

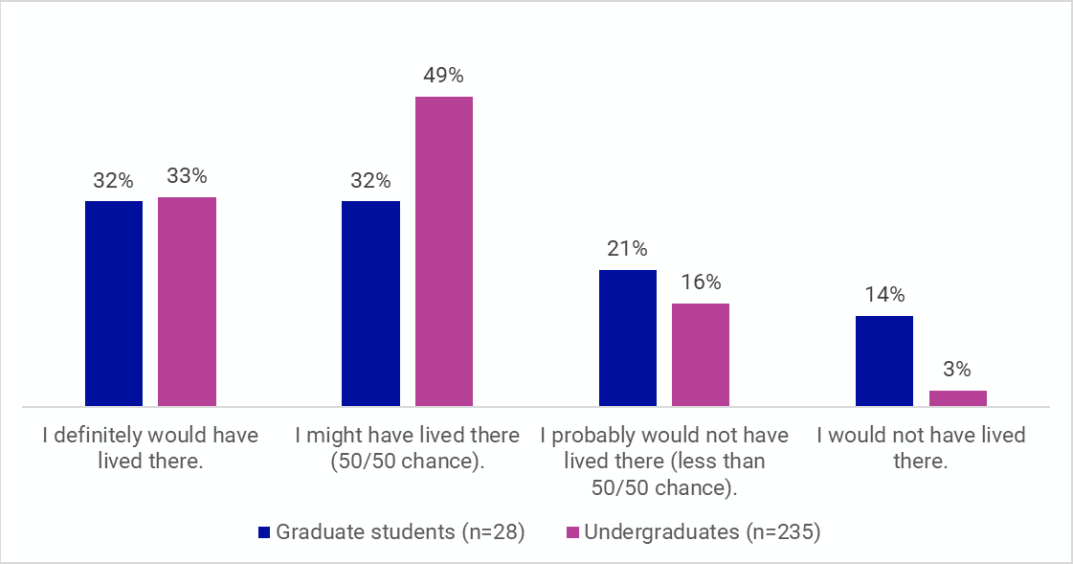
Single students were asked about their unit preferences to gauge relative interest in traditional, suite, and apartment units, and results are shown in **Exhibit 10**. The survey instructed respondents to select "Preferrable," to select "Acceptable" for any unit type they would live in if their preferred unit were not available, and to select "Would not live there" for units where they would not live. The most frequently preferred unit was the four-single-occupancy-bedroom apartment (South Campus Apartment Complex); 24% of respondents preferred this unit and 58% found it acceptable. The second most popular was the two-single-occupancy bedroom; 18% preferred this unit and 47% rated it acceptable.

Exhibit 10. Unit Preference, Single Student Respondents.



When off-campus respondents (non-homeowners, without dependents) were asked if they would have chosen to live on campus if their preferred unit had been available, 33% of undergraduates and 32% of graduate students responded they definitely would have lived there, while 49% and 32%, respectively, responded that they might have lived there. **Exhibit 11** illustrates the full breakout of responses.

Exhibit 11. Would you have chosen to live on campus if your preferred unit had been available.



Survey respondents who were extremely or somewhat interested in particular units were shown a list of rental rate ranges to assess their price sensitivity by unit type, and the results are shown in **Exhibit 12**. As shown, between half and two-thirds of respondents were willing to pay the lowest rate offered on the survey for any given unit. However, at least 20% were willing to pay more than the lowest rate offered for every unit option. Few students (between 8% and 21% found the rates presented to be unacceptable. The units with the largest shares of "not willing to pay these rates" responses were the double-occupancy suite (18%) and the single-occupancy studio (21%).

Exhibit 12. Willingness to Pay Per Month for Rent Among Single Students

	Unit type	Rental Rate	%
Double-occupancy	Double-occupancy room with a bathroom and living room shared between four residents	$400 to $450	**60%**
		$451 to $500	17%
		$501 to $550	5%
		I'm not willing to pay these rates.	18%
		n=	1,113
	Double-occupancy room in a two-bedroom one-bathroom apartment with a bathroom, living room, and kitchen shared between four residents	**$550 to $600**	**67%**
		$601 to $650	21%
		$651 to $700	4%
		I'm not willing to pay these rates.	8%
		n=	666
Single-occupancy	Single-occupancy room with a bathroom and living room shared between four residents	**$550 to $600**	**62%**
		$601 to $650	23%
		$651 to $700	4%
		I'm not willing to pay these rates.	10%
		n=	1,089
	Single-occupancy studio apartment with a bathroom, living room, and kitchen.	**$800 to $850**	**55%**
		$851 to $900	18%
		$901 to $950	6%
		I'm not willing to pay these rates.	21%
		n=	1,089
	Single-occupancy room in a two-bedroom one-bathroom apartment with a bathroom, living room, and kitchen shared between two residents	$700 to $750	**59%**
		$751 to $800	21%
		$801 to $850	6%
		I'm not willing to pay these rates.	15%
		n=	1,099
	Single-occupancy room in a four-bedroom two-bathroom apartment with a bathroom, living room, and kitchen shared between four residents	$600 to $650	**52%**
		$651 to $700	22%
		$701 to $750	4%
		I'm not willing to pay these rates.	10%
		n=	948

Demand Analysis

Incremental Demand

MGT's methodology for incremental demand centers on the off-campus population. The methodology for calculating demand uses the responses to the question on the survey asking where respondents "would have lived" had their preferred unit type been available for the current academic year. The first step in calculating demand is to determine a capture rate using the following equation:

$$\text{Capture Rate} = \frac{\text{Number of Full-Time Off-Campus Respondents Definitely Interested in Housing}}{\text{Number of Full-Time Off-Campus Respondents}}$$

The capture rate reflects the percentage of respondents' level of interest (e.g., definitely interested). A "closure" rate is necessary to reflect that not all students who express interest will sign a lease. MGT assumes a 50 percent closure rate for those who indicated that they "definitely would have lived" in the housing and a 25 percent closure rate for those who indicated that they "might have lived" in the housing (or 50 percent of those with a 50/50 interest). Enrollment is multiplied by the capture rate; then the closure rate is applied to yield the demand. This demand is explicitly based on the description of the units that included the rental rates proposed for the housing.[4]

Exhibit 13 shows the mid-point of incremental demand of all upper division students, based on respondents' choice of unit, and the pricing quoted. Demand would amount to **2,386 beds**, the midpoint of a range of 1,995 to 2,776 based on the sample size and the total population, if WCU had the sample housing type and capacity available for this academic year. This demand is from full-time student respondents.

Exhibit 13. Off-Campus Student Demand for On-Campus Housing.

Fall 2024	Full-Time Off-Campus Headcount Enrollment	Definitely Interested		Might Be Interested		Potential Incremental Demand	Range	Potential Demand 95% Confidence Interval		
		Capture Rate	*50% Closure*	*Capture Rate*	*25% Closure*					
Freshman	1,095	24.1%	*132*	*55.2%*	*151*	**283**	±49	**234**	**to**	**332**
Sophomore	1,880	41.5%	*390*	*50.0%*	*235*	**625**	±84	**541**	**to**	**709**
Junior	2,423	29.9%	*362*	*45.5%*	*275*	**637**	±108	**529**	**to**	**745**
Senior	2,351	27.7%	*325*	*46.8%*	*275*	**600**	±105	**495**	**to**	**705**
Graduate student	996	32.1%	*160*	*32.1%*	*80*	**240**	±44	**196**	**to**	**285**
Total	**8,745**		**1,369**		**1,017**	**2,386**	±390	**1,995**	**to**	**2,776**

[4] The level of response to the survey and the size of West Chester's enrollment result in a confidence interval in the results of plus or minus 6.0% at a 95% confidence level—the plus-or-minus figure seen in many survey or poll results, for example, if the confidence interval is 3.16% and 50% percent of the sample picks an answer; it is 95% certain that if the entire population had been asked the same question, between 47% (50%-3%) and 53% (50%+3%) would have picked that answer. MGT uses the midpoint of the range as an estimate of demand.

Legal Disclaimer

MGT's analysis of the feasibility of new housing at West Chester University relies on the accuracy of information provided by West Chester University and the local market as well as near-term and long-term assumptions influenced by factors outside of MGT's control and for which may adversely impact the West Chester University and/or its third-party development partners' expansion plans. Changes to West Chester University's financial health, construction materials, and costs, as well as state, local, and global economic conditions, may impact both the demand for the program, costs, and/or the project's financial feasibility. Additional risks to the expansion plans include but are not limited to changes to program demand, competitive programs, regulatory changes, as well as general acts of disaster.

Appendix 1: Off-Campus Student Housing Registration

Information provided by Borough of West Chester on August 28, 2024.

Rental Type	Address of Rental Property	Owner Name	Owner's Mailing Adress	Number of Rooming Units	Number of Dwelling Units	Total Number of Tenants	Total Number of Off-Street Parking Spaces?	Unit Number
EXISTING	225 East Washington Street, West Chester PA 19380	Samuel G Dayton IV	225 East Washington Street, West Chester PA 19380, APT #1	0	3	1	0	3
EXISTING	322 W Barnard Street	Rachel Langan	635 N Church Street	0	1	4	2	322
EXISTING	316 S Walnut St	Cleo Elkiinton	1234 West Chester Pike West Chester Pa 19382	3	1	5	3	2
EXISTING	225 S. Adams Street West Chester, PA 19382	Benson Daniel and Rachel Daniel	222 Oliver Dr Chester Springs, PA 19425	1	1	1	0	1
EXISTING	222 West Union St West Chester, PA 19382	Patrick Mahoney	108 W Hillcrest Ave havertown, 19083	0	2	4	2	2
EXISTING	223 W Miner St	Phil Carnuccio	1009 Squires Rd WC PA 19382	0	3	7	6	1
EXISTING	225 W Miner St	TM Realty	227 W Miner St	0	2	3	0	2 rear
EXISTING	317 Hannum Ave	John Rafferty	795 W. Strasburg Rd, West Chester, PA 19382	3	1	2	0	
NEW	402 W Miner St, West Chester, PA 19382	Amanda & Joe Nichols	343 Barn Hill Rd, West Chester PA 19382	1	1	2	1	1
EXISTING	219 West Miner Street	Jeremiah and Louise Kane	1035 Squires Drive WC 19382	0	4	4	0	1
EXISTING	140 Lacey St. West Chester PA 19382	Nicole Christie	166 Trimble Rd. Thornton PA 19373	1	1	4	2	
EXISTING	531 S Walnut St West Chester Pa 19382	Erna Schultz Trust	1729 Hoopersville rd Fishing creek Md 21634	NA	1	4	3	1
EXISTING	531 S Walnut St West Chester Pa 19382	Erna Schultz Trust	1729 Hoopersville rd Fishing creek Md 21634	NA	1	4	3	1
EXISTING	412 W Miner St	412 W Miner LLC	43 Paoli Plaza PO Box 772 PAOLI, PA 19301	0	3	6	3	1

EXISTING	25 East Washington Street	Nguyen Investment Property, LLC	PO BOX 1472 WEST CHESTER, PA 19380	0	5	5	0	1W
EXISTING	117 E. Washington St. West Chester, PA 19380	Vick D. Sutton & Christian A. Sutton	420 West Union St. West Chester, PA 19382	0	2	4	1	1
EXISTING	18 N New St	William Hicks	PO Box 3113 West Chester, PA 19381	0	2	5	2	1
EXISTING	21 S Walnut St	William	PO BOX 3113 WEST CHESTER, PA 19381	5	1	6	0	Apartment
EXISTING	28 N New St	William	PO Box 3113 West Chester, PA 19381	0	3	2	6	1st Floor Office
EXISTING	22 N New St	William	PO Box 3113 West Chester, PA 19381	0	1	2	1	N/A
EXISTING	26 N New St	William Hicks	PO Box 3113 West Chester, PA 19381	0	2	2	2	N/A
EXISTING	30 N New St	William	PO Box 3113 West Chester, PA 19381	0	3	3	3	Apt 1
EXISTING	31 N New St	William Hicks	PO Box 3113 West Chester, PA 19381	0	1	1	1	3rd Floor
EXISTING	33 S High St	William Hicks	PO Box 3113 West Chester, PA 19381	0	3	3	3	2nd Floor, Apt 1
EXISTING	502 Keystone Alley	Chad Laurence	1807 Masters Way Chadds Ford, PA 19317	1	1	1	2	502
EXISTING	200 W Marshall St	William Hicks	PO Box 3113 West Chester, PA 19381	0	1	3	1	N/A
EXISTING	115 S Walnut St West Chester	Core Realty, Property Manager for Landlord	3200 CONCORD RD STE 103 ASTON PA 19014	0	3	4	3	1
EXISTING	404 W Union Street	Rudi Property Mgt	636 N Speakman La'ne West Chester PA 19380	0	5	7	5	1
EXISTING	444 West Chestnut	Samuel E Flammini	1215 Rhode Island Lane, Downingtown, PA 19335	1	1	3	1	1
EXISTING	236 West Barnard St. West Chester, PA 19382	JOHNS BROTHERS PROPERTY MANAGMENT	10 W Lafayette St. West Chester, Pa 19380	0	TWO	6	0	ONE
EXISTING	327 W BARNARD ST	DAVID B.YARNALL & Gretchen C. Yarnall	510 s Wawaset rd WC 19382	0	2	4	2	1
EXISTING	227 W union st	DAVID B.YARNALL & Gretchen C. Yarnall	510 s wawaset rd wc 19382	0	2	5	1	1

EXISTING	237 W Union st	DAVID B.YARNALL & Gretchen C. Yarnall	510 s wawaset rd wc 19382	0	2	5	2	1
EXISTING	312 W Chestnut Street	William Hicks	PO Box 3113 West Chester, PA 19381	0	1	3	0	N/A
EXISTING	132 W Gay Street	Kelly Faggioli	1255 Lisle Ln, Chester Springs, PA 19425	0	4	4	4	2 Front
EXISTING	314 W Miner St	Carnuccio	1009 Squires Rd WC PA 19382	0	4	4	2	2B
EXISTING	121 Hemlock Aly	T Farnesi	301 E Marshall St	0	1	2	1	121 Hemlock
EXISTING	17 South Walnut Street	Nguyen Investment Property, LLC	P.O. BOX 1472 WEST CHESTER, PA 19380	0	4	4	0	UNIT A
EXISTING	37 Sturbridge Lane West Chester PA 19380	Alyssa Gordon	37 Sturbridge Lane West Chester, PA 19380	4	1	4	0	
EXISTING	21 West Barnard Street West Chester PA 19382	Alyssa Gordon	37 Sturbridge Lane West Chester PA 19380	4	1	4	0	
EXISTING	504 S High St	Jeffrey Bryant and Warren Bryant	986 E Penn Dr West Chester, PA 19380	0	2	7	6	1
EXISTING	120 W Miner St	Swan Real Estate Investments, LLC	937 Paoli Pike, # 1021	0	5	3	0	1
EXISTING	103 S Walnut Street West Chester, Pa 19382	S&S Zukin Investments LLC	PO Box 883 West Chester, Pa 19381	2	2	4	0	1
EXISTING	413 west union st	Frances Herron	339 west union st	5	3	4	2	2
EXISTING	339 W Miner St	David Rivell and Ash Swayne	P.O. Box 505 West Chester, PA 19381	0	4	5	4	1
EXISTING	218 W Union St	218 W Union LLC	43 Paoli Plaza PO Box 772 PAOLI, PA 19301	0	2	4	2	1
EXISTING	722 South Adams Street West Chester PA 19382	huifang zheng	3932 Powell Road Chester Springs PA 19425	1	1	2	3	1
EXISTING	119 E. Nields St., West Chester PA 19382	Stephen Spangler Jr.	978 Lieds Road, Coatesville PA 19320	4	1	4	0	1
EXISTING	712 South Adams Street	ATO Properties LLC	835 Lincoln Ave Unit A-1 West Chester, PA 19380	3	1	2	2	1
EXISTING	146 E Miner St.	BB Real Estate Investments, LLC	9 Fawn Fawn Ln. Chadds Ford PA 19317	0	2	5	2	1
EXISTING	224 S Matlack St., West Chester PA 19382	BB Real Estate Investments	9 Fawn Ln., Chadds Ford PA 19317	0	1	2	0	1
EXISTING	537 s Franklin st	Paul vile	1126 s 47th st Philadelphia pa 19143	0	1	3	0	537 s Franklin (1 unit home)

EXISTING	101 E. Rosedale Ave	WCOCH	327 S. High Street West Chester pa 19382	0	1	4	4	
EXISTING	105 E. Rose Ave WC PA 19382	WCOCH	327 S. High St. WC PA 19382	0	1	4	4	
EXISTING	537 s Franklin st	Paul vile	1126 s 47th st Philadelphia pa 19143	0	1	3	0	537 s Franklin (1 unit home)
EXISTING	329 S. High Street	WCOCH	327 S. High Street WC PA 19382	0	2	3	0	329-1
EXISTING	435 S. High Street WC PA 19382	WCOCH	327 S. High Street	0	1	4	4	
EXISTING	241 West Union Street	Teresa M & J Stephen Deleo	2160 Lincolnshire Rd	0	3	3	2	3
	316 S Walnut St	Cleo Elkinton	26959 Sunburst Path Millsboro De 19966	3	1	5	3	1
	635 S. Matlack Street	WCOCH	327 S. High Street	0	1	2	2	
EXISTING	241 West Union Street	Teresa M & J Stephen Deleo	2160 Lincolnshire Rd	0	3	4	2	3
EXISTING	114 N Wayne Street West Chester Pa, 19380	Stanford & Elsa Properties LLC	PO Box 883 West Chester, Pa 19381	1	1	4	2	1
EXISTING	127 E Gay Street West Chester, Pa 19380	Gay Street Development Company LLC	PO Box 883 West Chester, Pa 19381	3	3	4	5	1
EXISTING	132 E washington st west chester	Linda Springer	springer realty po box 2061 West Chester, Pa 19380	0	3	6	0	1
EXISTING	128 Linden Street	Daniel Hamm	1543 Pennsbury Drive West Chester Pa 19382	1	1	3	2	
EXISTING	322 W. Chestnut St., West Chester, PA 19380	Micaela Sunday	302 W. Lafayette St., West Chester, PA 19380	0	1	1	0	0
EXISTING	120 S Matlack Street	Mike Timmins	214 Vernon St, Media, PA 19063	0	1	2	0	
EXISTING	111 S Walnut Street West Chester PA 19382	Michael Louis	843 Plumtry Drive West Chester PA 19382	2	2	4	2	2
EXISTING	502 s walnut street west chester pa 19382	JJNJ properties LLC	1708 rosewood lane chadds ford pa 19317	0	2	6	1	502 s walnut
EXISTING	113 W Gay Street West Chester, Pa 19380	107-115 W Gay Street. LLC	PO Box 883 West Chester, Pa 19381	4	4	5	0	1
EXISTING	135 E Gay Street West Chester, Pa 19380	135 E Gay Street LLC	PO Box 883 West Chester, Pa 19381	2	2	3	3	1

EXISTING	155 W Gay Street West Chester, Pa 19380 (Lease Written: 101 N Darlington Street)	Gay Street Development Company LLC	PO Box 883 West Chester, Pa 19381	2	2	3	0	1
EXISTING	327 N High Street West Chester, Pa 19380	327 North High Street, LLC	PO Box 883 West Chester, Pa 19381	4	4	6	1	1
EXISTING	416 West Union Street West Chester PA 19382	H. Thomas Sutton	420 West Union Street West Chester PA 19382	0	5	6	0	1
EXISTING	247 W Barnard St	David Donahue	993 N Penn Dr West Chester, PA 19380	2	2	3	0	247
EXISTING	414 S Brandywine St West Chester PA 19382	501 Price 5 LLC	200 Three Tun Rd Malvern PA 19355	0	4	4	0	2N
EXISTING	227 W Chestnut St	Greg Morenko	1750 Teresa Court Downingtown, PA 19335	2	2	5	0	1
EXISTING	227 W Chestnut St	Greg Morenko	1750 Teresa Court Downingtown, PA 19335	2	2	5	0	1
EXISTING	341 Sharpless Street	Barbara McGinley	PO Box 72824, Thorndale, PA, 19.372	0	1	3	0	341
EXISTING	442 N High Street, Third Floor	John Saling	PO Box 72824, Thorndale, PA, 19372	0	1	2	0	442
EXISTING	119 E Miner Street	Carla Jepson	PO Box 72824, Thorndale, PA, 19372	0	1	2	0	119
EXISTING	131 East Union Street	John Houtmann	737 Yorklyn Road, Hockessin, DE 19707	1	1	2	0	131 E Union
EXISTING	201 Price St., West Chester PA 19382	West Chester Church of the Nazarene	424 S. Darlington St. West Chester, PA 19382	0	1	4	2	
EXISTING	220 Dean St. West Chester, PA 19382	West Chester Church of the Nazarene	424 S. Darlington St. West Chester PA 19382	0	1	2	1	
EXISTING	718 S. New Street West Chester, PA 19382	Calvary Lutheran Church	730 S. New Street West Chester, PA 19382	1	1	1	0	
EXISTING	230 South Walnut Street West Chester, PA 19380	Wayne C & Barbara A Megill Irrevocable Trust dated 1991	330 Kennett Pike, Suite 207, Chadds Ford, PA 19317	2	1	4	0	1
	400 Hannum	Jeff Harlan	P. O. Box 1171 Coatesville, PA 19320	3	4	7	0	3
EXISTING	423 Dean Street West Chester, PA 19380	Paul & Deborah Hettler	980 Jefferis Bridge Road West Chester, PA 19382	0	2	6	0	1

EXISTING	116 W Barnard Street, Unit A/2nd Floor West Chester, PA 19382	Michael T. Rody	14 S Church Street, 1st Floor West Chester, PA 19382	0	3	3	2	116 Barnard Street, 2nd Floor
EXISTING	561 West Marshall Street West Chester, PA 19380	Scott Ward	1830 Gary Road Stewartsville, NJ 08886	2	1	2	1	1
EXISTING	128 East Gay Street West Chester, PA 19380	Rebel Properties LLC	980 Jefferis Bridge Road West Chester, PA 19382	0	3	5	4	1
EXISTING	116 East Barnard Street, Unit A/2nd :Floor West Chester PA 19382	Michael T. Rody	14 South Church Street, 1st Floor, West Chester, PA 19382	0	3	3	3	Unit A/2nd Floor
EXISTING	100 Goshen Road Carriage House, West Chester PA 19380	Tait Norden	100 Goshen Road, West Chester Pa 19380	0	1	1	2	1
EXISTING	25 W Barnard Street	Nanci Austin	505 N. Walnut Street	2	2	2	1	1
EXISTING	505 N. Walnut Street	Nanci Austin	505 N. Walnut Street	1	1	1	2	
EXISTING	541 S Franklin Street West Chester, PA 19382	Avery Laurence	514 Cheltenham Court Lititz, PA 17543	4	1	4	0	1
EXISTING	125 W Union Street	Matthew Wise	950 N Hill Drive West Chester, PA 19380	1	1	2	2	1
EXISTING	700 S Adams Street	Joseph Scavitto	500 Hanley Lane, Downingtown, PA 19335	1	1	2	1	1
EXISTING	700 S Adams Street	Joseph Scavitto	500 Hanley Lane, Downingtown, PA 19335	1	1	2	1	1
EXISTING	719 S Adams St West Chester, PA 19380	Rita & Jay Schwartz	1223 West Chester Pike West Chester, PA 19382	2	1	2	2	1
EXISTING	118 E Miner St	Joel Smith	1011 Dunvegan Rd West Chester, PA 19382	0	2	4	4	1
EXISTING	305 S. Walnut St	Jaramillo Real Estate Holdings LLC, Gustavo Mesa	305 Joseph Dr. West Chester, PA 19380	0	6	8	7	1
EXISTING	309 S. Adams St	Bernard P. Schaffer, Elizabeth O. Schaffer	136 Grubb Rd. Malvern, PA 19355	0	1	2	0	309
EXISTING	125 Linden St	Bernard P. Schaffer, Elizabeth O. Schaffer	136 Grubb Rd. Malvern, PA 19355	0	1	2	0	125

EXISTING	301 S. Adams St	Bernard P. Schaffer, Elizabeth O. Schaffer	136 Grubb Rd. Malvern, PA 19355	0	1	3	0	301
EXISTING	126 N. Wayne St.	Willow Lake Ventures LLC	136 Grubb Rd. Malvern, PA 19355	0	1	3	2	126
EXISTING	120 N. Wayne St	Willow Lake Ventures LLC	136 Grubb Rd. Malvern, PA 19355	0	1	3	2	120
EXISTING	118 N. Wayne St.	Willow Lake Ventures LLC	136 Grubb Rd. Malvern, PA 19355	0	1	3	2	118
EXISTING	8 N. New St	Willow Lake Ventures LLC	136 Grubb Rd. Malvern, PA 19355	0	2	3	6	1
EXISTING	436 N Church St.	Grubb Road LLC	136 Grubb Rd. Malvern, PA 19355	0	6	8	0	1
EXISTING	124 W Union St	Dan Herman	731 Price St West Chester, PA 19382	1	1	2	2	1
EXISTING	605 W Market St. Unit 42 West Chester, PA 19382	Dan Herman	731 Price St West Chester, PA 19382	1	1	3	1	1
EXISTING	123 S Matlack St West Chester, PA 19382	Dan Herman	731 Price St West Chester, PA 19382	1	1	2	0	1
NEW	605 W Market St Unit #4 West Chester, PA 19382	Dan Herman	731 Price St. West Chester, PA 19382	1	1	2	1	1
EXISTING	136 W. Market Street	Katie Mackrides	361 N Central Blvd, Broomall, PA 19008	0	5	5	o	1 R
EXISTING	121 W Market Street	Vasiliki	4 Paxon Circle Broomall, PA 19008	0	4	4	1	1 E
EXISTING	125 E Barnard St	Romano	125 E Barnard St	0	2	1	2	1
EXISTING	516 S Walnut St	Kevin Alekna	516 s walnut st	4	1	4	3	2A
EXISTING	16 S Church Street	Katie Mackrides	361 N Central Blvd Broomall, PA 19008	0	2	3	2	1
EXISTING	117 MAGNOLIA ST WEST CHESTER PA 19382	DIANE H HAMMELL TRUST	9230 MARBLE STONE DR NAPLES, FL 34120	1	1	3	1	117
EXISTING	12 S Matlack St	Alison Maguire	526 S Franklin St West Chester PA 19382	1	1	4	1	
EXISTING	115 MAGNOLIA ST WEST CHESTER PA 19382	DIANE H HAMMELL TRUST	9230 MARBLE STONE DR NAPLES FL 34120	1	1	2	2	115
EXISTING	152 E Gay Street West Chester, Pa 19380	Stanford & Elsa Zukin Family Trust	PO Box 883 West Chester, Pa 19381	3	3	5	2	2
EXISTING	348 W Gay Street West Chester, Pa 19380	West Chester Market Street Development	PO Box 883 West Chester, Pa 19381	3	3	5	3	1A

		Company LLC						
EXISTING	7 N Matlack Street West Chester, Pa 19380	7-11 N Matlack Street, LLC	PO Box 883 West Chester, Pa 19381	3	3	5	0	1
EXISTING	401 W. Union St.	Gary Hewitt	401 W. Union St. West Chester, PA 19382	0	1	2	1	2
EXISTING	18-20 S Church Street	Katie Mackrides	361 N Central Blvd Broomall, PA 19008	0	5	6	5	Apt 1
EXISTING	109 S Walnut Street 2nd floor	Michael Louis	843 Plumtry Drive West Chester PA 19382	2	2	4	0	2
EXISTING	122 Justin Dr.	Maria Ramos	522 Raymond Dr., West Chester, PA, 19380	3	1	6	2	
EXISTING	140 Lacey St	Nicole Christie Skinner	166 Trimble Rd. Thornton PA 19373	1	1	4	2	
EXISTING	127 Union St.	Noel Hedgecock	602 Dean St.	1	1	3	0	1
	223 W Barnard St	Michael Kahler	1212 Hall Rd West Chester, PA 19380	0	2	3	2	Apt A (front)
EXISTING	307 West Chestnut St	Monica Scherer	321 2nd Ave	0	1	3	2	1
EXISTING	420 college ave	Michael and Kellie Keenan	904 Greystone drive West Chester, Pa 19380	1	1	2	2	420 college ave
EXISTING	117 N Darlington St	Ivan Kaplan	111 w market st west chester, pa 19382	0	2	2	0	1
EXISTING	116 E Barnard Street, Unit C West Chester, PA 19382	Michael T. Rody	14 S Church St, 1st Floor West Chester, PA 19382	0	3	1	1	116 Barnard Street, Unit C
EXISTING	401 S Matlack Street West Chester	Michael Louis	843 Plumtry Drive	1	1	2	0	1
EXISTING	400 N Church Street West Chester PA 19380	Eric Norquist	705 Dean Court West Chester PA 19382	5	5	6	2	1
EXISTING	253 Dean Street West Chester PA 19382	Eric Norquist	705 Dean Court West Chester PA 19382	2	2	3	2	1
EXISTING	401 S Matlack Street West Chester	Michael Louis	843 Plumtry Drive West Chester	1	1	2	401	1
EXISTING	225 S. Adams Street West Chester PA 19382	Benson Daniel and Rachel Daniel	222 Oliver Dr Chester Springs, PA 19425	1	1	1	0	
EXISTING	322 North High Street	Nancy Winther	1010 Farm Lane West Chester 19382	0	2	2	3	2
EXISTING	115 N darlington	Charlotte Fabian	123 Bradford Avenue	0	1	3	0	1

EXISTING	239 W Barnard St, Unit B AKA 238 Hemlock Aly West Chester, PA 19382	Margaret Westbrook	239 Dean St West Chester, PA 19382	1	1	2	0	1
NEW	413 N New Street, West Chester, PA 19380	Kaitlin Munnelly	521 E Union Street, West Chester, PA 19382	3	1	2	2	413 N New Street
EXISTING	121 Hemlock Aly	Farnesi Carlson	301 E Marshall St, Wc PA 19380	0	1	2	1	
EXISTING	425 West Barnard St., West Chester, PA 19382	Timothy Lutz	423 West Barnard St. West Chester, PA 19382	0	1	2	0	1
EXISTING	121 S. Walnut Street	Gary Hewitt	401 W. Union St. West Chester PA 19382	0	3	6	4	A
EXISTING	137 E Miner St. West Chester, PA	David Nicholson	1442 Pottstown Pk Suite 352 West Chester PA, 19380	4	4	4	4	1
EXISTING	117 S. Walnut	Sharon and Tony Murphy	973 Jefferies Bridge Road, West Chester PA 19382	0	3	5	3	Apt 1
	137 Leadline Lane, West Chester PA 19382	Lynn&Kevin Sherlock	137 Leadline Lane, West Chester PA 19382	1	1	2	0	1
NEW	306 W. BARNARD ST	Amedeo Cianci	1 WOODSIDE FARM DRIVE GERNET VALLEY, PA 19060	0	3	6	0	2
NEW	306 W. Barnard St West Chester, PA 19382	Amedeo Cianci	1 Woodside Farm Drive Garnet Valley, PA 19060	0	3	6	0	2
EXISTING	714 S Brandywine Street West Chester PA 19382	Florian and Laura Reuter	18 Hanover dr west Chester Pa 19382	1	1	2	2	1
EXISTING	127 West Barnard Street West Chester PA 19382	Lynn & Kevin Sherlock	137 Leadline Lane	1	1	2	0	127 West Barnard St
NEW	306 W. Barnard St West Chester, PA 19382	Amedeo Cianci	1 Woodside Farm Drive Garnet Valley, PA 19060	0	3	6	0	2
NEW	714 S Brabdywine Street	Florian Reuter	18 Hanover Dr West Chester PA	0	1	2	0	0
	714S Brandywine Street	Florian Reuter	18 Hanover Dr West Chester PA 19382	0	1	2	0	
	118 S Matlack St	Jonathan Cleck	495 Timberline Trl West Chester, PA 19382	2	1	2	0	118 S Matlack (No unit #)
NEW	714 S Brandywine St	Florian Reuter	18 Hanover Dr. West Chester, PA	4	1	2	1	714 S Brandywine St
EXISTING	130 W Union St	Gustavo & Rosemary Correa	135 W Union St	0	1	1	4	130
EXISTING	212 West Miner Street	Nader Afshar	1221 Parkerville Road	0	7	7	1	1

EXISTING	410 West Union Street	James W. MacFadden Jr.	410 West Union Street West Chester, PA 19382	0	2	2	0	2
EXISTING	206 S Walnut St WC PA 19382	Doug Nowak	514 Raymond Drive, WC PA 19380	0	1	3	2	
	410 West Union Street	James W. MacFadden Jr.	410 West Union Street West Chester, PA. 19382	0	3	4	0	1
EXISTING	116 E. Barnard Street, Unit B West Chester, PA 19382	Michael T. Rody	14 S Church Street West Chester, PA 19382	0	3	1	1	116 Barnard Street, Unit B
NEW	131 E Miner Street, WC, PA	Betsy Gallagher	110 Coppers Trail, Wilmimgton, PA 28411	4	1	4	4	1
EXISTING	602 sharpless st	Patricia belutty	1168 arrowhead drive West Chester pa 19382	0	1	1	1	
EXISTING	396 est nield	Martha b Coyle	1113 butternut rd. Glen mills Pa 19342	0	1	3	4	396
EXISTING	118 e nield	Martha b coyle	1113 butternut rd Glen mills Pa 19342	0	1	1	2	118
EXISTING	712 s franklin	Martha b coyle	1113 butternut rd glen mills Pa 19342	0	2	3	4	A
EXISTING	125 e nield	Martha b coyle	1113 butternut rd. Glen mills. Pa 19342	5	6	6	1	1 and 2
EXISTING	102 north Church St	Jay S Shur	238 East Chestnut St	0	4	6	0	4
	103 West Gay St	Jay S Shur	238 East Chestnut ST	0	3	3	0	1
EXISTING	110 Price Street	Donna Wilusz	17 Huntingdon Way Sewell, NJ 08080	0	2	5	0	1
EXISTING	225 W Miner Street 3rd floor unit, West Chester, PA 19382	TM Realty	227 W Miner St, WC PA 19382	0	2	3	0	2 rear
EXISTING	227 West Chestnut ST. West Chester PA 19380	Greg Morenko	1750 Teresa Court Downingtown, PA 19335	0	2	5	1	2
EXISTING	225 W Chestnut St West Chester PA 19380	Morenko Properties, LLC	1750 Teresa Court Dowingtown PA 19335	0	2	5	6	2
EXISTING	730 N. New Street	Robert Hall	P.O.Box 1232 West Chester PA 19380	2	1	2	4	
EXISTING	206 S Walnut St, Unit 2	Doug Nowak	514 Raymond Drive, WC PA 19380	0	1	3	2	2
EXISTING	121 W Barnard St., West Chester PA	Edward (Ted) Worrell	842 Topaz Dr., West Chester PA 19382	0	2	3	0	1
NEW	401 East Gay St	Sean Metrick	401 East Gay St	0	2	4	32	1
EXISTING	21 West Barnard Street West Chester PA 19382	Alyssa Gordon	37 Sturbridge Lane West Chester PA 19380	4	1	4	0	21 West Barnard Street
EXISTING	125 West Chestnut Street	Michael Earyes	1199 Muirfield Drive; West Chester, PA 19382	3	3	3	2	Apt A

EXISTING	222 N. Darlington Street West Chester PA 19380	Sarah & Ray Bieg	1165 Skelp Level Road Downingtown PA 19335	0	1	1	0	Twin (1 unit)
EXISTING	228 West Miner Street	Butler House LLC/ Tilmann Stahl	228 W Miner St, Apt. 1 West Chester, PA 19382	0	5	5	5	2E
EXISTING	317 S Walnut Street West Chester, Pa 19382	315 and 317 South Walnut Street LLC	PO Box 883 West Chester, Pa 19381	3	3	6	4	1
EXISTING	111 Dean Street West Chester, Pa 19382	S&S Zukin Investments LLC	PO Box 883 West Chester, Pa 19381	1	1	4	4	1
	544 Raymond Drive	Mohammad W. AL-Sabbagh	35765 Nightshade Lane Solon, OH 44139	0	1	3	0	1
EXISTING	118 W. Union st. West Chester, PA 18382	David and Helen Trajtenberg	140 E. Marshall St. West Chester, PA 19380	3	1	2	2	1
EXISTING	11 East Miner Street	Hugo Hur	8 Fox Run Lane, Newtown Square, PA 19073	3	2	3	2	11
EXISTING	26 west miner street, WC. 19382	Patricia Doran	332 Box Elder Drive, West Chester, PA, 19380	1	1	3	0	26 W. MINER St
EXISTING	420 N Everhart Street, Apt. 223 West Chester, PA, 19380	Arnold /Jinni Kapp	4747 Macgregor Dr. Schwenksville, PA 19473	2	2	2	2	223
EXISTING	719 S Penn St	Delancy Ct LLC	15 Delancy Ct. Phoenixville, PA 19460	1	1	2	2	719 S Penn St
	146 E Miner St., West Chester PA 19382	BB Real Estate	842 Topaz Dr., West Chester PA 19382	0	2	4	1	2
EXISTING	133 west biddle st	vince mackay	224 green tree dr.west chester pa 19382	1	1	1	1	133 west biddle st.
EXISTING	125 Hemlock Aly, WC PA 19382	Tom Farnesi	301 E Marshall St WC PA 19380	0	1	2	1	125 Hemlock
EXISTING	31 S Walnut St WC PA 19382	Lawrence Carnuccio	19 Upper Crest Dr, W Mildford, NJ 07480	0	1	1	0	C
EXISTING	103 Dean Street, West Chester, PA 19382	Dennis & Melissa Messinger	103 Dean Street, West Chester, PA 19382	4	5	4	2	
EXISTING	219 West Miner Street, WC, PA 19382	Jeremiah and Louise Kane	1035 Squires Drive, WC, PA 19382	0	4	5	0	1
EXISTING	20 West Virginia Ave West Chester PA	Joanne Smith/Robert Whetstone	539 N Church Street West Chester PA	0	1	0	1	
EXISTING	301 W Chestnut Street West Chester PA 19380	Wilfredo Soto	507 Hansen Drive West Chester PA 19380	1	1	1	1	1
EXISTING	303 W Chestnut Street West Chester PA 19380	Wilfredo Soto	507 Hansen Drive West Chester PA 19380	1	1	4	0	1

EXISTING	207 DiBaptiste Lane West Chester 19382	Curt DeWolf	1261 Surrey Road West Chester 19382	1	1	2	2	1
EXISTING	313 W Union Street	Timothy	1046 W Niels Lane	1	1	2	2	1
EXISTING	339 West Union Street	Francis Noel Herron	339 West Union st Unit 1 West Chester Pa 19382	2	3	2	3	2
NEW	413 West Union st	Frank Herron	339 West Union st West Chester Pa 19382	6	3	6	3	1
EXISTING	220 N Franklin St West Chester, PA	Megill Homes, LLC	330 Kennett Pike, Suite 207, Chadds Ford, PA 19317	1	1	2	0	
EXISTING	212 Price St. 1st floor. West Chester, Pa	KENDRA LYNN BOYER	212 Price St. 2nd Fl. West Chester Pa	0	2	1	1	1
EXISTING	230 S Walnut Street	Wayne C Megill & Barbara A Megill Irrevocable Trust	330 Kennett Pike, Suite 207, Chadds Ford, PA 19317	2	1	2	4	1
EXISTING	312 n church st	Toni pollick	1630 whitetail run Chester springs, pa 19425	1	1	0	0	312 n church st
EXISTING	17 Price St. West Chester, Pa. 19382	Jerry Schauer	102 Crosspointe Dr. West Chester, Pa. 19380	1	1	2	2	1
EXISTING	506 E. Nields St. West Chester, Pa. 19382	Jerry Schauer	102 Crosspointe Dr. West Chester, Pa. 19380	1	1	2	2	1
EXISTING	506 E. Nields St. West Chester, Pa.19380	Jerry Schauer	102 Crosspointe Dr. West Chester, Pa. 19382	1	1	2	3	1
EXISTING	14 east market st west Chester pa 19382	Nicolae tupan	14 east market st west Chester pa	3	1	0	0	
EXISTING	331 W Gay Street	Timothy J Nanni	494 Clarks Ln West Chester, PA 19382	2	2	3	0	1
	115 S Worthington St	Nicholas A Dwyer and zkatharine W Dwyer	222 E Linden St Kennett Square PA 19348	0	1	4	0	1
EXISTING	420 N. Everhart St. Unit 114, West Chester, Pa. 19380	Joyce Ann Hamid	224 Sills Lane, Downingtown, Pa.19335	0	1	2	0	114
EXISTING	713 S. Matlack St	Spencer & Pamela Ring	849 Conner Rd West Chester, PA 19380	0	1	1	3	1
EXISTING	715 S. Matlack St West Chester, PA 19382	Spencer Ring Jr	849 Conner Rd West Chester, PA 19380	0	1	4	4	1
EXISTING	394 E Nields	JMB Real Estate Holdings LLC	P.O. Box 63 west chester Pa 19381	1	1	4	4	1
EXISTING	629 S Walnut St, West Chester, PA	Diane E Sagnella	415 Price St, West Chester, PA	1	1	2	1	1

EXISTING	101 S Walnut Street West Chester, Pa 19382	101 South Walnut Street, LLC	PO Box 883 West Chester, Pa 19381	2	2	4	2	1
EXISTING	423 W Rosedale Ave	Troy Cummings	10 W Rosedale Ave West Chester , Pa 19382	1	1	4-Feb	0	2023423
EXISTING	122 East Chestnut St.	Joseph Messina	44 Ashton Way	0	2	5	3	1
	239 Dean Street West Chester, PA 19380	Jeffery Budden	Chris Harmer, Manager 20 W. Chestnut St Ste 1 West Chester, PA 19380	0	1	2	1	1
EXISTING	2 SHERMAN ALY WEST CHESTER PA 19382	MICHAEL	724 PEACH TREE DRIVE WEST CHESTER PA 19380	0	1	3	0	2 SHERMAN ALY
	205 WOLLERTON ST	RICHARD PILOTTI	922 PAOLI PIKE WEST CHESTER PA 19380	1	1	2	0	1
EXISTING	310 E Barnard St	Marcus & Sandra Boeber	PO Box 863 west Chester pa 19381	1	1	5	0	
EXISTING	219 West Miner St., West Chester, PA 19382	Jeremiah and Louise Kane	1035 Squires Dr., Westchester, PA 19382	Zero	Four	5	0	One
EXISTING	326 W. Barnard St.	Sarah Hudgings	519 Sharpless Street West Chester	One house	1	3	2	326 W Barnard
EXISTING	318 Michaels Aly	Jared Ogden	300 River Station Blvd, Apt 362	1	1	2	3	
EXISTING	39 S. High Street west chester pa 19382	Chris Knight	166 Dilworthtown Rd West chester pa 19382	1	5	5	0	1
EXISTING	408 West Miner Street	Patricia Graf	408 West Miner Street West Chester, PA 19382	2	2	4	0	408 W. Miner St FL 1
EXISTING	311 S. Brandywine St. West Chester, PA 19382	H. Thomas & Vicki D. Sutton	420 West Union St. West Chester, PA 19382	0	1	1	0	1
EXISTING	731 north Walnut St.	Linda Hickman	PO Box 256 West Chester PA 19381	0	1	1	2	1
EXISTING	715 S Wayne Street	Katherine Wiggins	5951 NE 22nd Terr Fort Lauderdale FL 33308	0	1	2	1	715 S Wayne Street
EXISTING	715 S Wayne Street West Chester PA 19382	katherine wiggins	5951 NE 22nd Terr Fort Lauderdale FL 33308	0	1	2	2	715 S Wayne St
EXISTING	128 West Chestnut Street	Tyler Kuhn	1223 Indian Trail Drive, Downingtown PA 19335	4	1	4	4	1
EXISTING	26 West Union Street	Whomestead LLC	26 West Union Street	0	5	2	2	2

EXISTING	213 South New Streeet	William F Lynch	526 North Church Street West Chester PA	1	1	1	0	213 S New St
EXISTING	120 Lacey St	Anthony DeRemer	120 Lacey St. West Chester, Pa 19382	1	1	2	0	1
EXISTING	212 W Miner Street, West Chester, PA 19382	Nader Afshar	1221 Parkerville Road, Kennett Square, PA 19348	0	7	7	1	5
	418 W. Miner Street West Chester, PA 19382	Will Rutledge	340 Goldco Circle Golden, Co 80403	0	2	3	0	1
EXISTING	207 DiBaptiste Lane West Chester 19382	Curt DeWolf	1261 Surrey Road West Chester 19382	1	1	2	2	1
NEW	725 South Penn Street	Matthew Tweedie	725 S Penn Street	2	1	1	0	1
EXISTING	325 W Washington Street	Chris Gagnier	1520 Montvale Circle West Chester, Pa 19380	1	1	3	1	1
EXISTING	249-251 E Chestnut St	Thomas Acchione	610A Reservoir Rd West Chester, PA 19380	0	3	5	0	249
EXISTING	125 South Darlington Street	Mary C Lister	560 Grand St, 4R, Brooklyn NY 11211	1	1	2	0	N/A
EXISTING	125 East Market Street	Peter & Anne Seelaus	510 Timberline Trail West Chester Pa 19382 or PO Box 1009 Media Pa 19063	2	2	4	4-Feb	1
EXISTING	133 East Market Street	Peter & Anne Seelaus	510 Timberline Trail West Chester PA 19382	4	4	4	4	1
EXISTING	322 Dean Street West Chester 19382	Konstantinos Botos	7 Paxon Circle Broomall PA 19008	2	1	4	4	A
NEW	24 W Miner Street, West Chester, PA, 19382	Ben & Kelli McIntosh	1012 Laurel Drive, West Chester, PA, 19380	4	1	3	0	
EXISTING	107 N.Bradford ave	Chris Latyak	203 Afton Way West Chester PA 19380	1	1	2	1	
EXISTING	231 S Adams St	Rachel Coyle-Repischak	1411 Stallion Lane West Chester, PA 19380	1	1	1	2	231 S Adams St
EXISTING	620 N Matlack St	woodrow	620 n matlack st	0	1	1	10	1
EXISTING	202-204 East Market St	CareLink Community Support Services of PA Inc	106 Chesley Dr, Media PA 19063	0	4	3	5	1
EXISTING	320 W Gay St	Jim Hudgings	409 W. Union St West Chester, PA 19382	0	5	8	0	1A
EXISTING	126 West Chestnut St	Christine Morales	301 Oak Lane West	1	1	2	0	126
EXISTING	7 s new st	Catherine Miller	102 shinnecock hill avondale pa 19311	2	1	2	0	7 s new st

EXISTING	701 E Barnard St, West Chester, PA 19382	Kevin Tyndall	1501 Cardiff Ter, West Chester, PA 19380	0	1	1	1	701 E Barnard St
EXISTING	429 s church st	brian hutchinson	1203 farmington lane	0	2	4	0	1
EXISTING	422 West Barnard St	Robert and Delores Court	422 West Barnard St	0	2	1	0	2
EXISTING	425 W Barnard St.	Timothy Lutz	423 W Barnard St. West Chester PA 19382	0	1	2	0	1
EXISTING	118 W. Union St. West Chester, PA 19382	David Trajtenberg	140 E. Marshall St. West Chester, PA 19380	1	1	2	0	1
EXISTING	211 E. Market St. - Residential	Chester Springs Property Associates LLC	1326 Yellow Springs Rd	2	2	4	4	211 - 2nd floor Residential
EXISTING	320 S Walnut Street #1 West Chester, PA 19382	Chris Smith	320 S Walnut Street #2 West Chester, PA 19382	1	1	2	1	1
EXISTING	406 Dean Street Unit 1	Dustin + Jaclyn Kasper	912 N New Street West Chester, PA 19380	1	1	2	2	1
EXISTING	2 West Gay street	Mayfield Investments LLC	1229 Valley Road Glen Mills pa 19342	0	4	8	0	Apartment 1
EXISTING	329 W Miner Street	Chesco Rentals LLC (Christine Malinowski)	PO Box 72212 Thorndale, PA 19372	0	5	6	0	CH
EXISTING	542 S. Adams St	Kathleen Singleton	582 Clearview Rd	3	1	1	0	542 S Adams St Rm #1
EXISTING	113 S Adams St	Anthony Saletta	402 W Gay St	1	1	1	2	N/A
EXISTING	230 Wollerton Sr	T&M Realty	227 W Miner St	0	2	3	0	1
EXISTING	427 west barnard street	Helene clair	907 copes lane, west chester, PA 19380	0	1	1	0	
EXISTING	321 South Matlack Street	Ronald Carson	135 E Union Street West Chester	1	1	2	2	321
EXISTING	322 South Matlack Street West Chester	Ronald Carson	135 E Union Street West Chester Pa 19382	1	1	4	0	322 South Matlack
EXISTING	136 west gay street	ilysa biles	1033 welsh ayers way downingtown pa 19335	1	1	2	1	1
EXISTING	433 West Miner Street	Brandon Oâ€™Neill	433 W Miner Street	0	2	2	4	A
EXISTING	123 S Church Street	Brandon O'Neill	433 W Miner Street	0	3	3	0	1st Floor
EXISTING	132 E Miner Street	Roger Brown, Estate of	126 Chichester Road	0	1	1	0	132 E Miner St

		Josephine Burke	Monroe Township, NJ 08831					
EXISTING	235 E CHESTNUT ST	Roger Brown, Estate of Josephine Burke	126 Chichester Road Monroe Township, NJ 08831	0	1	1	0	235 E Chestnut St
EXISTING	336 E Miner St West Chester, PA 19382	Bethel Ame Church Of West Chester	334 E Miner St West Chester, PA 19382	0	1	2	0	336 E Miner St
EXISTING	24 South New St	Deborah Deaver	504 E. 63Rd St Apt 23-P New York, NY 10065	0	1	1	0	Upstairs Residential
EXISTING	131 SHARPLESS ST	Deborah Deaver	504 E. 63Rd St Apt 23-P New York, NY 10065	0	1	2	1	131 Sharpless St
EXISTING	113 DEAN ST	Gary Deaver	1353 Mark Drive West Chester, PA 19380	0	2	4	2	UNIT 1
EXISTING	113 Dean Street -- please void last submitted one where I didn't include unit 2 info	Gary Deaver	1353 Mark Drive West Chester, PA 19380	0	2	4	2	UNIT 1
EXISTING	325 North Darlington Street	Alyssa Yori	800 E Swedesford Road Exton Pa 19341	1	1	2	2	1
EXISTING	439 Sharpless Street	Keith Renaldo	218 North Church Street, Suite 218 E	1	1	2	2	1
EXISTING	515 West Marshall Street	Derek Brogan	219 Wencin Way West Chester PA 19382	1	1	2	4	Steven Karaszkiewiez, Anna Marie Georgina Waller
EXISTING	516 South Matlack Street West Chester, Pa 19382	Brett Terry & David Chu	803 General Howe Drive West Chester, Pa 19382	1	1	4	3	Marissa Kelly
EXISTING	514 S Church Street	Robert Coldwell	389 W Turnberry Ct West Chester Pa 19382	0	1	4	2	Jeffrey Beatty
	227 N. Walnut St.	David Swintek	120 W. Market St. West Chester, PA 19382	0	4	5	0	Shelby Senior
	520 S, Church Street	Albert and Margaret Congleton	965 W. miner Street West Chester, Pa	1	1	4	4	520 S church
EXISTING	141 sharpless st	Ross Fisher	141 sharpless street	1	1	3	2	2
EXISTING	741 S Matlack St	Adam and Emily Bagelman	110 Berwick Drive, WC PA 19382	0	2	5	2	2
EXISTING	22 N Darlington St	Elizabeth Campbell	208 N Benjamin Dr. West Chester PA, 19382	1	1	2	0	1
	221 east nields street	Orazio Nastase	549 South Matlack St	0	2	8	4	221-1
EXISTING	25 Price St.	Anthony Bisazza	1004 Woodtone Rd.	2	2	5	0	2

EXISTING	230 Price Street	HNR Associates	620 S. Franklin Street, Office B-18 West Chester, PA 19382	6	0	7	0	230P-1 SUBLET
EXISTING	301 S. New St. West Chester, PA 19382	Stephen Smith	315 Lafayette Rd Coatesville,PA 19320	0	2	6	0	1
	315 Lafayette Road Apt 2 West Chester, PA 19382	Stephen Smith	315 Lafayette Rd Coatesville, PA 19620	0	2	4	0	2
EXISTING	620 S Franklin St, B-15	Prith Ruprai	6209 Connie Lane Colleyville, TX 76034	0	1	3	1	B-15
EXISTING	610 S. Walnut St West Chester, PA 19382	Stephen Smith	315 Lafayette Rd Coatesville,PA 19320	0	1	4	2	
	305 S. New St West Chester, PA 19382	Stephen Smith	315 Lafayette Rd Coatesville, PA 19382	0	1	4	2	
EXISTING	305 S. New St West Chester, PA 19382	Stephen Smith	315 Lafayette Rd Coatesville, PA 19320	0	1	4	2	
EXISTING	520 south darlington	Mike Lockwood	955 conner rd 19380	1	1	4	4	1
EXISTING	34 N New St	William Hicks	PO Box 3113 West Chester, PA 19381	0	1	4	3	N/A
NEW	115 S Walnut St #3 West Chester	Core Realty, Property Manager for Landlord	3200 Concord Rd STE 103 Aston PA 19014	0	1	1	1	3
EXISTING	227 W Miner Street	TM Realty	227 W Miner St	0	2	2	0	2 Front
EXISTING	301 S. New St Apartment 2 West Chester, PA 19382	Stephen Smith	315 Lafayette Rd Coatesville,PA 19320	0	1	4	0	2
EXISTING	301 S. New St Apartment 1 West Chester, PA 19382	Stephen Smith	315 Lafayette Road Coatesville,PA 19320	0	1	2	0	1
EXISTING	329 W BARNARD ST	DAVID B.YARNALL & Gretchen C. Yarnall	510 s Wawaset rd WC pa 19382	0	2	6	0	1
EXISTING	329 W BARNARD ST	DAVID B.YARNALL & Gretchen C. Yarnall	510 s wawaset rd wc 19382	0	2	6	0	1
EXISTING	329 W BARNARD ST	DAVID B.YARNALL & Gretchen C. Yarnall	510 s wawset rd wc 19382	0	2	6	0	2
EXISTING	232 Price st	DAVID B.YARNALL & Gretchen C. Yarnall	510 s wawaset rd wc pa 19382	0	6	11	6	1
EXISTING	232 Price st	DAVID B.YARNALL &	510 s wawaset rd wc 19382	0	6	11	6	2

		Gretchen C. Yarnall						
EXISTING	232 Price	DAVID B.YARNALL & Gretchen C. Yarnall	510 s wawset rd wc 19382	0	6	11	6	6
EXISTING	112 E Nields st	DAVID B.YARNALL & Gretchen C. Yarnall	510 s wawaet rd wc 19382	0	1	4	4	1
EXISTING	605 s Matlack St	DAVID B.YARNALL & Gretchen C. Yarnall	510 s wawaset rd wc 19382	0	1	4	4	1
EXISTING	134 Lacey st	DAVID B.YARNALL & Gretchen C. Yarnall	510 s wawaset rd wc 19382	0	2	6	0	1
EXISTING	134 Lacey st	DAVID B.YARNALL & Gretchen C. Yarnall	510 s wawaset rd wc 19382	0	2	6	0	2
EXISTING	432 S WALNUT ST	DAVID B.YARNALL & Gretchen C. Yarnall	510 s wawset rd	0	2	6	4	1
EXISTING	432 s Walnut st	DAVID B.YARNALL & Gretchen C. Yarnall	510 s wawaset rd wc 19323	0	2	6	4	2
EXISTING	227 W union st	DAVID B.YARNALL & Gretchen C. Yarnall	510 s wawaset rd	0	2	5	1	2
EXISTING	237 W Union st	DAVID B.YARNALL & Gretchen C. Yarnall	510 s wawaset rd wc 19382	0	2	5	2	2
EXISTING	521 S Matlack st	DAVID B.YARNALL & Gretchen C. Yarnall	510 s wawaet rd wc 19382	0	1	4	4	1
EXISTING	21 s Church st	DAVID B.YARNALL & Gretchen C. Yarnall	510 s wawaset rd wc 19382	0	1	2	1	1
EXISTING	305 S. New St West Chester, PA 19382	Stephen Smith	315 Lafayette Road Coatesville, PA 19320	0	1	4	2	1
EXISTING	305 S. New St West Chester, PA 19382	Stephen Smith	315 Lafayette Road Coatesville, PA 19320	0	1	4	2	1
EXISTING	9 S. New Street	HNR Associates	620 S. Franklin Street, Office B-18 West Chester, PA 19382	0	1	4	0	9SN
EXISTING	726 S Adams St	Jeffrey Bryant and John Becker	986 E Penn Dr West Chester, PA 19380	0	1	3	1	1

EXISTING	137 Price Street	Fred Walbuesser	512 Washington Ave. Downingtown, PA 19335	1	3	3	1	1
EXISTING	610 S. Walnut St West Chester, PA 19382	Stephen Smith	315 Lafayette Road Coatesville, PA 19320	0	1	4	2	
EXISTING	122 Lacey Street	Nguyen Investment Property	P.O. BOX 1472 WEST CHESTER, PA 19380	0	1	4	0	1
EXISTING	21 price st west chester pa	Daniel Hamm	1543 pennsbury dr west chester pa 19382	1	1	4	1	
EXISTING	529 South Walnut Street, unit 1	Steven Kotroba	13 Timber La. Thornton, pa 19373	0	2	8	0	1
EXISTING	529 South Walnut Street unit 2	Steven Kotroba	13 Timber La. Thornton, Pa 19373	0	2	4	0	2
EXISTING	141 E. Neilds St	141 Associates, LLC	c/o Mike Santoleri 17 Campus Blvd, Ste 155 Newtown Square, PA 19073	1	1	3	0	1
NEW	538 South Matlack St.	E Spencer Ring Jr/Pamela Ring	849 Conner Road West Chester PA 19380	1	1	4	2	538 South Matlock St.
EXISTING	121 E Nield	Martha B. Coyle	1113 Butternut Road Glen Mills PA 19342	3	4	6	0	First Fl.
EXISTING	303 S New Street West Chester, PA 19382	Rudi Property Mgt	636 N Speakman Lane West Chester, PA 19380	0	2	6	1	A
EXISTING	610 S. Walnut St West Chester, PA 19382	Stephen Smith	315 Lafayette Road Coatesville,PA 19320	0	1	4	2	
EXISTING	327 South High Street	WCOCH	327 S. High St.	0	1	4	2	327-2
EXISTING	301 S. New St Apartment 2 West Chester, PA 19382	Stephen Smith	315 Lafayette Road Coatesville, PA 19320	0	1	4	0	
EXISTING	135 E Barnard St, West Chester PA 19382	Chris Harmer	1313 Stonegate Drive, Downingtown PA 19335	0	1	3	0	1
	411 S Matlack St. West Chester PA 19380	Chris Harmer	1313 Stonegate Drive Downingtown PA 19335	0	1	4	4	1
	22 S New St West Chester PA 19380	Chris Harmer	1313 Stonegate Drive Downingtown PA 19335	0	2	5	3	1
EXISTING	539 S Franklin St. West Chester. PA. 19382	Robert Knowlton	5232 Oleander Rd. Drexel Hill. PA. 19026	4	4	4	4	539
EXISTING	620 S Franklin St. Apt B16. West Chester. PA. 19382	Robert Knowlton	5232 Oleander Rd. Drexel Hill. PA. 19026	2	2	3	3	B16

EXISTING	701 S Walnut St West chester Pa	Cleo Elkinton	26959 Sunburst Path Millsboro De 19966	4	1	4	0	1
EXISTING	643 S. Matlack Street	WCOCH	327 S. High Street	0	1	4	2	
EXISTING	509 S Matlack Street	Adam and Emily Bagelman	110 Berwick Dr, WC PA 19382	0	1	4	2	
EXISTING	612 S Matlack Street	Adam and Emily Bagelman	110 Berwick Dr, WC PA 19382	0	1	4	4	
EXISTING	227 Wollerton St	Tom Mohr	1401 Highland Rd, Downingtown, PA 19335	0	1	4	0	
EXISTING	723 S. Walnut Street	WCOCH	327 S. High Street	0	1	4	2	
EXISTING	725 S. Walnut Street	WCOCH	327 S. High Street	0	1	4	2	
EXISTING	750 S. Franklin Street	WCOCH	327 S. High Street	0	1	4	2	
EXISTING	143 e nields st	Jay McIntyre	821 S New St West Chester, PA 19382	821 S New St	1	4	0	1
EXISTING	435 East Nields St	Jay McIntyre	821 S New St West Chester PA 19382	1	1	4	0	1
	710 S Franklin St	Jay McIntyre	821 S New St West Chester, PA 19382	1	1	4	4	1
EXISTING	128 W Gay Street West Chester, Pa 19380	Gay Street Development Company LLC	PO Box 883 West Chester, Pa 19381	3	3	9	3	1
EXISTING	201 S High Street West Chester, Pa 19382	South West Chester Development Company, LLC	PO Box 883 West Chester, Pa 19381	3	3	9	2	1
EXISTING	740 South Matlack Street	Ed Woods	1264 Cardinal Ave West Chester, PA 19380	0	2	8	8	1
EXISTING	226 S Walnut Street West Chester, Pa 19382	Zukin Investment LP	PO Box 83 West Chester, Pa 19381	2	2	8	2	1
EXISTING	131 W Market Street West Chester, Pa 19380	West Chester Market Street Development Company LLC	PO Box 883 West Chester, Pa 19381	1	1	4	0	1
EXISTING	123-129 W Market Street West Chester, Pa 19380	Mid-Atlantic Society Hill, LLC	PO Box 883 West Chester, Pa 19381	3	3	12	2	WM123

EXISTING	151 W Gay Street West Chester, Pa 19380 (Lease Address 111 N Darlington Street West Chester, Pa 19380)	Gay Street Development Company LLC	PO Box 883 West Chester, Pa 19381	3	3	12	0	1
EXISTING	401 W Miner Street West Chester, Pa 19382	Zukin Development Corporation	PO Box 883 West Chester, Pa 19381	4	4	13	0	1
EXISTING	147 W Gay Street West Chester, Pa 19380	Gay Street Development Company LLC	PO Box 883 West Chester, Pa 19381	3	3	8	0	1
	221 N Church Street West Chester, Pa 19380	221-227 N. Church Street, LLC	PO Box 883 West Chester, Pa 19381	2	2	5	2	1
EXISTING	136 E Gay Street West Chester, Pa 19380	Mid-Atlantic Society Hill, LLC	PO Box 883 West Chester, Pa 19381	1	1	3	0	1
EXISTING	313 north high st west chester, pa 19380	KIMBERLY PHELPS	313 N High St Apt 1 West Chester, pa 19380	0	1	4	4	2
EXISTING	9 N Matlack Street West Chester, Pa 19380	7-11 N Matlack Street, LLC	PO Box 883 West Chester, Pa 19381	3	3	8	2	1
EXISTING	142 W Gay Street West Chester, Pa 19380	Gay Street Development Company LLC	PO Box 883 West Chester, Pa 19381	2	2	6	4	1
EXISTING	129-131 E Gay Street West Chester, Pa 19380	Gay Street Development Company LLC	PO Box 883 West Chester, Pa 19381	2	2	6	0	1
EXISTING	311 S New Street West Chester Pa 19380	JJNJ properties LLC	1708 Rosewood Lane Chadds Ford Pa 19317	0	1	4	4	311 s new
	311 S New Street West Chester Pa 19380	JJNJ properties LLC	1708 Rosewood Lane Chadds Ford Pa 19317	0	1	4	4	311 s new
EXISTING	27 Price St	N&N Ventures, LLC	31 New Whitehorse Way Malvern, PA 19355	0	1	4	0	1
EXISTING	126 E. Nields St.	Timothy C. Graham	117 Linden St. West Chester, PA 193821	0	1	4	2	1
EXISTING	25 E Barnard St.	Marianne Storm	1121 Park West Blvd. Ste B154 Mount Pleasant, SC 29466	8	2	8	0	1
EXISTING	703 S Walnut Street	James Hay	201 N Deerwood Drive	4	1	4	4	
EXISTING	406 Dean Street Unit 2	Dustin + Jaclyn Kasper	912 N New Street West Chester, PA 19380	4	1	4	0	2

EXISTING	703 S Walnut Street	James Hay	201 N Deerwood Avenue West Chester, PA 19380	1	4	4	4	
EXISTING	537 S. Matlack	N&N Ventures, LLC	31 New Whitehorse Way Malvern, PA	0	1	4	1	1
EXISTING	137 Lacey West Chester Pa	Carroll Properties LLC	128 Bantery Rd West Chester Pa 19380	4	1	4	0	1
EXISTING	221 Sharpless St West Chester pa	Carroll Properties LLC	128 Bantery Rd West Chester PA 19380	4	1	4	2	1
EXISTING	307 S New St West Chester pa	Carroll Properties LLC	128 Bantery Rd West Chester Pa 19380	4	1	4	2	1
EXISTING	139 Lacey St West Chester Pa 19382	Carroll Properties LLC	128 Bantery Rd West Chester Pa 19380	4	1	4	0	1
EXISTING	207 S. .Walnut	207 S. Walnut LP	31 New Whitehorse Way Malvern, PA 19355	0	3	9	6	1
EXISTING	518 S. Church St	N&N Ventures	31 New Whitehorse Way Malvern, PA 19355	0	1	4	1	1
EXISTING	133 Dean St	N&N Ventures, LLC	31 New Whitehorse Way Malvern, PA	5	1	12	4	1
EXISTING	300 w barnard st	jc housing llc	225 s church st suite 206	0	1	4	0	
EXISTING	204 Price Street	SEA Bagelman LLC	PO Box 3381 West Chester, PA 19381	0	3	12	6	1
EXISTING	201 S. Walnut Street	Kathleen DiPeso	854 Brandywine Rd West Chester, PA 19380	3	11	12	4	First Floor
EXISTING	201 S. Walnut Street	Kathleen DiPeso	854 Brandywine Road West Chester, PA 19380	3	11	12	4	3rd Floor
	201 S. Walnut Street	Kathleen DiPeso	854 Brandywine Road West Chester, PA 19380	3	11	12	4	2nd Floor
EXISTING	31 Dean Street	Kathleen DiPeso	854 Brandywine Road West Chester, PA 19380	3	11	12	4	Rear Apt.
EXISTING	309 s new street west chester pa 19382	JJNJ properties LLC	1708 rosewood lane chadds ford pa 19317	0	1	4	0	309 s new
EXISTING	31 Dean Street	Kathleen DiPeso	854 Brandywine Rd West Chester, PA 19380	0	2	7	2	Rear Apt.
EXISTING	31 Dean Street	Kathleen DiPeso	854 Brandywine Rdla West Chester, PA 19380	0	2	7	2	Front Apt

EXISTING	29 Price Street, West Chester, PA 19382	Michael T. Rody	14 S. Church Street 1st Floor West Chester, PA 19382	0	1	4	29	29 Price Street
EXISTING	29 Price Street, West Chester, PA 19382	Michael T. Rody	14 S Church St, 1st FL West Chester, PA 19382	0	1	4	29	29 Price Street
EXISTING	227 South Darlington Street	Bruce Herald	727 Mercers Mill Ln West Chester PA 19382	0	1	4	0	1
EXISTING	132 Lacey Street	Robert Tresca	PO Box 72824, Thorndale, PA, 19372	0	1	4	0	132
EXISTING	21 S New Street	Eaton Hopkins	PO Box 72824, Thorndale, PA, 19372	0	3	6	0	21 S New
EXISTING	123 Linden Street	Gregory A Hill	515 Southern Dr West Chester PA 19380	0	1	4	0	123 Linden Street
EXISTING	607 South Walnut Street	Nguyen Investment Property	PO BOX 1472 WEST CHESTER, PA 19380	0	2	6	0	2
EXISTING	121 Linden St West Chester PA 19382	Gregory A Hill	515 Southern Dr West Chester PA 19380	0	1	4	0	121 Linden St
EXISTING	119 Lacey St West Chester PA 19382	Gregory A Hill	515 Southern Dr West Chester PA 19380	0	1	4	0	119 Lacey St
EXISTING	133 Magnolia Street West Chester PA 19382	Gregory A Hill	515 Southern Dr West Chester PA 19380	0	1	4	4	133 Magnolia St
EXISTING	135 Magnolia St West Chester PA 19382	Gregory A Hill	515 Southern Dr West Chester PA 19380	0	1	4	4	135 Magnolia St
EXISTING	22 Price Street West Chester PA 19382	Gregory A Hill	515 Southern Dr West Chester PA 19380	0	1	4	4	22 Price St
EXISTING	501 S Matlack Street	SEA Bagelman LLC	PO Box 3381 West Chester, PA 19381	0	2	8	6	1
	211 S Walnut	200 Walnut LLC	PO Box 3381 West Chester, PA 19381	0	3	11	2	1
NEW	423 South Church St	Jon and Kim Ruggeri	423 South Church	4	1	4	0	0
EXISTING	423 South Church St	Jon and Kim Ruggeri	602 Scott Ave North Cape May, NJ 08204	4	1	4	0	0
EXISTING	315 S Walnut Street West Chester, Pa 19382	315 and 317 S Walnut Street LLC	PO Box 883 West Chester, Pa 19381	5	5	9	4	4
EXISTING	35 S Darlington Street	Martin Bryce	PO Box 72824, Thorndale, PA, 19372	0	1	4	0	35
EXISTING	509 S High Street	509 S High Lp	PO box 3381 West Chester, PA 19381	0	3	9	6	1

EXISTING	10 e barnard st	jason chen	304 berkley ln west chester pa 19380	0	1	4	304	
EXISTING	130 E. Union St	J. Brian Seidel	3750 Main St Apt 210 Philadelphia, PA 19127	4	1	4	0	130 E Union
EXISTING	311 s new street west chester pa 19382	JJNJ properties LLC	1708 Rosewood Lane Chadds ford pa 19317	0	1	4	0	311 s new
	211 w barnard street wc pa 19382	jeffrey gressel	180 thornton road thornton pa 19373	1	1	4	3	1
EXISTING	111 E Miner St	111 AH LLC	908 Old Fern Hill Rd West Chester, PA 19380	1	1	4	0	1
EXISTING	633 South Walnut street	Christos Tagalidis	103 Davis ave Broomall pa 19008	0	3	7	0	1
EXISTING	514 S Walnut St	Sam Heinz	833 Church Ave W.C. PA 19382	1	1	4	4	1
EXISTING	510 S High Street	Brian Nelson	905 Pine Valley Cir West Chester Pa 19382	0	1	4	4	510
NEW	118A Price Street West Chester, PA 19382	Doug Bonaduce	1250 Parkersville Road Kennett Square, PA 19348	0	1	3	0	A
EXISTING	118B Price Street West Chester, PA 19382	Doug Bonaduce	1250 Parkersville Road Kennett Square, PA 19348	0	1	4	0	B
EXISTING	13 w barnard st	jason chen	304 berkley ln west chester	0	1	4	0	
	509 S High	509 S High Lp	PO Box 3381 West Chester, PA 19381	0	3	9	6	1
EXISTING	215 S Walnut	200 Walnut LLC	PO Box 3381 West Chester, PA 19381	0	3	11	4	1
EXISTING	217 S Walnut	200 Walnut LLC	PO Box 3381 West Chester, PA 19381	0	4	8	2	1
NEW	123 E Market Street	Denise Wroten	138 E Market Street	0	1	4	0	2
EXISTING	525 S Matlack	Thomas Wroten	138 E Market Street	0	2	4	0	1
NEW	435 S Walnut	Tom and Denise Wroten	138 e market street	0	3	7	0	1
EXISTING	124 Linden Street West Chester PA 19381	Greg Harkins	1115 Talleyrand Road West Chester PA 19381	0	2	7	4	1
EXISTING	128 Magnolia Street	Greg Harkins	1115 Talleyrand Road	0	2	4	4	1

	West Chester PA 19381		West Chester PA19381					
EXISTING	621 S. Walnut St.	Richard Herring JR	631 S. Walnut St. West Chester, Pa. 19382	0	6	23	12	1F
EXISTING	536 South Matlack Street	Orazio Nastase	549 South Matlack St West Chester pa 19382	0	1	3	549	536
EXISTING	543 South Matlack St	Orazio Nastase	549 South Matlack St West Chester Pa 19382	0	1	4	2	543
EXISTING	545 S Matlack St	Orazio Nastase	549 s Matlack st west Chester pa 19382	0	1	4	2	545
EXISTING	215 E Nields st	Orazio Nastase	549 South Matlack St	0	1	4	2	215
EXISTING	217 e nields St	Orazio Nastase	549 S Matlack St	0	1	4	2	217
EXISTING	222 E nields St	Orazio Nastase	549 S matlack ST	0	1	4	2	222
EXISTING	224 E nields St	Orazio Nastase	549 s matlack st	0	1	4	0	224
EXISTING	226 E nields st	Orazio Nastase	549 S Matlack st	0	1	4	2	226
EXISTING	703 S Walnut St	James D Hay	201 N Deerwood Dr. West Chester, Pa. 19382	4	1	4	0	
EXISTING	13 w barnard st	xing chen	304 berkley ln west chester pa	0	1	4	0	
EXISTING	411 South Walnut Street	Nguyen Investment Property LLC	P.O. BOX 1472 WEST CHESTER, PA 19380	0	4	16	0	1
EXISTING	427 S. Church St.	Timothy C. Graham	120 W. Market St. West Chester, PA 19382	0	3	5	0	3
EXISTING	427 S. Church St.	Timothy C. Graham	120 W. Market St. West Chester, PA 19382	0	3	5	0	1
EXISTING	200 Brandywine Rd Collegeville, PA 19426	BRIAN AND LINDA HAMM	200 Brandywine Rd Collegeville, PA 19426	1	1	3	1	B21
EXISTING	532 S. Walnut St. West Chester Pa 19382	Judith L Walker	343 Sharpless St. West Chester Pa 19382	0	1	4	2	1
EXISTING	614 S Walnut St, West Chester PA, 19382	Penn Tau Alumni and Volunteer Corporation	614 S Walnut St, West Chester PA, 19382	5	1	10	TBD	N/A
EXISTING	518 South Franklin Street West Chester PA 19382	Anthony Volk	P.O. Box 2570 West Chester PA 19380	4	1	4	4	1
EXISTING	137 E Barnard St	137 AH LLC	908 Old Fern Hill Rd	1	1	4	0	1

EXISTING	222 E Gay St	222 AH LLC	908 Old Fern Hill Rd	1	1	4	2	1
EXISTING	203 W Union St	Alison Maguire	526 S Franklin St, West Chester PA 19382	1	1	4	0	
EXISTING	105 N Darlington Street West Chester, Pa 19380	105 N Darlington Streeet LLC	PO Box 883 West Chester, Pa 19381	1	1	4	0	105
EXISTING	11 N Matlack Street West Chester, Pa 19380	7-11 N Matlack Street, LLC	PO Box 883 West Chester, Pa 19381	2	2	7	3	1
EXISTING	128 W Gay Street West Chester, Pa 19380	Gay Street Development Company LLC	PO Box 883 West Chester, Pa 19381	3	3	10	3	1
EXISTING	129-131 E Gay Street West Chester, Pa 19380	Gay Street Development Company LLC	PO Box 883 West Chester, Pa 19381	2	2	6	0	1
EXISTING	223 Sharpless Street	Alison Maguire	526 S Franklin St, WEst Chester PA 19382	1	1	4	2	
EXISTING	137 E Gay Street West Chester, Pa 19380	Zukin Development Corporation	PO Box 883 West Chester, Pa 19381	3	3	7	4	1
EXISTING	151 W Gay Street West Chester, Pa 19380 (Lease Address 111 N Darlington Street West Chester, Pa 19380)	Gay Street Development Company LLC	PO Box 883 West Chester, Pa 19381	3	3	12	0	1
EXISTING	223 N Church Street West Chester, Pa 19380	221-227 N. Church Street, LLC	PO Box 883 West Chester, Pa 19381	2	2	6	2	1
EXISTING	234 W Gay Street West Chester, Pa 19380	Zukin Investment LP	PO Box 883 West Chester, Pa 19381	1	1	4	2	1
EXISTING	9 N Walnut Street West Chester, Pa 19382	Historic West Chester Development Company LLC	PO Box 883 West Chester, Pa 19381	3	3	12	0	1
EXISTING	20 N Darlington St, Unit 2	Westbrook Brown Realty LLC	239 Dean St West Chester, PA 19382	0	1	2	0	2
EXISTING	522 S Matlack St	522 AH, LLC	908 Old Fern Hill Rd	1	1	4	4	1
EXISTING	524 S Matlack St	524 AH, LLC	908 Old Fern Hill Rd	1	1	4	4	1
EXISTING	526 S Matlack St	526 AH, LLC	908 Old Fern Hill Rd	1	1	4	4	1
EXISTING	604 S High St	604 AH, LLC	908 Old Fern Hill Rd	1	1	4	4	1
EXISTING	606 S High St	606 AH, LLC	908 Old Fern Hill Rd	1	1	4	4	1

EXISTING	518 South Franklin Street West Chester PA 19382	Anthony Volk	P.O. Box 2570 West Chester PA 19380	0	1	4	0	518 S Franklin St. WC 19382
EXISTING	749 S. Franklin Street	Jim Quinn	1 Watersmeet Circle Glen Mills, PA 19342	3	1	3	0	1
EXISTING	201 W. Union Street	Jim Quinn	1 Watersmeet Circle Glen Mills, PA 19342	4	1	4	0	1
EXISTING	136 Lacey Street	matthew herkins	PO Box 801 Unionville Pa 19375	0	1	4	0	136 Lacey
	133 Lacey Street Unit A	matthew herkins	PO Box 801 Unionville Pa 19375	0	2	4	4	133 Lacey Street A
	133 Lacey Street B	matthew herkins	PO Box 801 Unionville,Pa 19375	0	2	1	4	133 Lacey Street B
EXISTING	437 E. Nields Street	Jeff Heim/ Tim Off	832 Kenmara Drive West Chester PA 19380	1	1	4	0	437 E. Nields Street
EXISTING	117 Price Street	Martin Bryce	PO Box 72824 Thorndale, PA, 19372	0	1	4	2	
EXISTING	305 East Rosedale Ave	Paramjit Jittla	306 N Kent Road	4	1	4	4	1
EXISTING	529 S Matlack Street	Paramjit Jittla	306 N Kent Road Broomall, PA 19008	4	1	4	2	1
EXISTING	615 S Matlack Street	Amit Deka	30 Country Village Way Media PA 19063	4	1	4	2	1
	610 South High Street	Emidio F Barbati	610 south high street	4	1	4	0	2
EXISTING	522 S. Walnut Street	Kevin Treiber / Jasmine Scavo-Treiber	522 S. Walnut St	4	1	2	0	A
	Unit B21 620 S Franklin St West Chester, PA 19382	BRIAN AND LINDA HAMM	200 Brandywine Rd Collegeville, PA 19426	1	1	2	1	B21
EXISTING	532 S WALNUT ST WEST CHESTER PA 19382	JUDITH L WALKER	343 SHARPLESS ST WEST CHESTER PA 19382	0	1	4	2	1
	519 South Matlack Street	matthew herkins	PO Box 801 Unionville Pa 19375	0	1	4	4	519 South Matlack
EXISTING	613 S. Matlack St.	Thomas Madonna	706 Valley Green Court, Philadelphia, PA 19128	0	1	3	2	1
EXISTING	112 Linden St. West Chester PA 19382	Edwin and Joan Baldwin	927 Marie Rochelle Dr. West Chester PA 19382	0	1	4	0	2
EXISTING	144 West Union Stree	Nguyen Investment Property LLC	P.O. BOX 1472 WEST CHESTER, PA 19380	0	4	14	0	1
EXISTING	11 S New St, West Chester pa	Windle Properties	1833 W Strasburg Rd, Coatesville Pa 19320	4	1	4	0	1

EXISTING	620 S. Franklin Street, Unit A-02 West Chester, PA 19382	Michael DeWald	216 Claude Street Annapolis, MD 21401	0	1	3	0	A-02
	133 Lacey street	matthew herkins	PO Box 801 Unionville pa 19375	0	2	4	4	133 Lacey Street A
EXISTING	133 Lacey Street B	matthew herkins	PO Box 801 Unionville Pa 19375	0	2	1	1	133 Lacey Street B
EXISTING	123 West Barnard Street	Nguyen Investment Property LLC	P.O. BOX 1472 WEST CHESTER, PA 19380	0	3	5	O	3
EXISTING	601 S Walnut St, West Chester, PA 19382	David Nicholson	1442 Pottstown Pk Suite 352 West Chester PA, 19380	2	2	6	0	Unit 1
EXISTING	403 S. Church Street, West Chester PA 19382	Tom and Danae Hudzina	1233 Palomino Drive, West Chester PA 19380	6	1	10	4	2A
EXISTING	330 North High Street	Andrew P. Motel	330 North High Street	0	3	3	0	1
EXISTING	306 W Barnard st West Chester, PA 19382	Amedeo Cianci	1 Woodside Farm Drive Garnet Valley, PA 19060	0	3	6	0	1
EXISTING	137 East Nields Street	Brett Terry	803 General Howe Drive	1	1	4	1	1
EXISTING	708 South Franklin Street	Brett Terry	803 General Howe Drive	1	1	4	1	1
EXISTING	532 South Matlack Street	Brett Terry	803 General Howe Drive	1	1	4	2	1
NEW	306 W. Barnard St West Chester, PA 19382	Amedeo Cianci	1 Woodside Farm Drive Garnet Valley, PA 19060	0	3	6	0	1
EXISTING	721 S Penn St West Chester, PA 19382	Dale M Bradish	700 University Bay Dr # 302 Madison, WI 53705	1	1	2	2	721 S Penn St
EXISTING	518 S Matlack Street	SEA Bagelman LLC	PO Box 3381 West Chester, PA 19381	0	1	4	4	
NEW	31 Price St., West Chester, PA 19382	E Two, LLC	1106 Lafayette Rd., Wayne, PA, 19087	4	1	4	4	1
EXISTING	31 Price St., West Chester, PA	E Two, LLC	1106 Lafayette Rd., Wayne, PA, 19087	4	1	4	4	1
EXISTING	124 e nield	Martha b coyle	1113 Butternut Rd., Glenn Mills PA 19342	0	1	4	4	124
EXISTING	702 S Franklin	Martha B Coyle	1113 Butternut Rd., Glen Mills PA 193422	0	1	4	4	702
EXISTING	700 S Franklin	Martha B Coyle	1113 Butternut Rd., Glen Mills PA 19342	0	1	4	4	709
EXISTING	26 S. Walnut St West Chester PA 19382	Hur and Morenko, LLC	1750 Teresa Court Downingtown PA 19335	0	2	5	6	2
EXISTING	435 E Nields St	Jay McIntyre	821 S New St. West Chester, PA 19382	821 S New St	1	4	0	1

EXISTING	143 E Nields St	Jay McIntyre	821 S New St West Chester, PA 19382	0	1	4	0	1
EXISTING	143 E Nields St	Jay McIntyre	821 S New St West Chester, PA 19382	0	1	4	0	1
EXISTING	710 S Franklin St	Jay McIntyre	821 S New St West Chester, PA 19382	821 S New St	1	4	0	1
EXISTING	403 S. Church Street	Tom Hudzina	1233 Palomino Drive, West Chester, PA 19380	4	1	10	4	2A
EXISTING	620 S. Franklin Street, Unit A-07	Robert & Peggy Leu	485 Freedom View Lane Phoenixville, PA 19460	0	1	3	0	RG A-07
EXISTING	33 price st, w chester, pa	E Two, llc	1106 Lafayette rd, wayne, pa, 19087	4	1	4	4	1
EXISTING	11 N Matlack Street West Chester, Pa 19380	7-11 N Matlack Street, LLC	PO Box 883 West Chester, Pa 19381	2	2	6	6	1
EXISTING	137 E Gay Street West Chester, Pa 19380	Zukin Development Corporation	PO Box 883 West Chester, Pa 19381	3	3	7	6	1
EXISTING	147 W Gay Street West Chester, Pa 19380	Gay Street Development Company LLC	PO Box 883 West Chester, Pa 19381	3	3	9	3	1
EXISTING	147 W Gay Street West Chester, Pa 19380	Gay Street Development Company LLC	PO Box 883 West Chester, Pa 19381	3	3	9	3	1
EXISTING	151 W Gay Street West Chester, Pa 19380 (Lease Address 111 N Darlington Street)	Gay Street Development Company LLC	PO Box 883 West Chester, Pa 19381	3	3	12	3	1
EXISTING	401 W Miner Street West Chester, Pa 19382	Zukin Development Corporation	PO Box 883 West Chester, Pa 19381	4	4	13	0	1
EXISTING	9 N Matlack Street West Chester, Pa 19380	7-11 N Matlack7-11 N Matlack Street, LLC Street, LLC	PO Box 883 West Chester, Pa 19381	3	3	8	0	1
EXISTING	223 N Church Street West Chester, Pa 19380	221-227 N. Church Street, LLC	PO Box 883 West Chester, Pa 19381	2	2	5	2	1
EXISTING	425 S Matlack St. West Chester PA 19382	Edwin(Ted) and Joan Baldwin	927 Marie Rochelle Dr West Chester ,PA 19382	4	1	4	2	1
	321 W Union St	Pam McGillian	1007 Windy Knoll Rd West Chester, PA 19382	1	1	4	2	1
EXISTING	Ramsgate Court Townhomes 620 S. Franklin Street	Grant Nelson, HNR Associates	620 S. Franklin St, Office B-18 West Chester, PA 19382	0	14	46	0	see attached

	West Chester, PA 19382							
EXISTING	31 E. Miner Street West Chester, PA 19382	Grant Nelson, HNR Associates	620 S. Franklin St, Office B-18 West Chester, PA 19382	0	1	4	0	31EM
EXISTING	8 South Everhart Ave West Chester, Pa. 19382	Joe and Nancy Domsohn	8 Williams Way Downingtown, Pa. 19335	0	1	4	0	8 South Averhart Ave. West Chester, Pa. 19382
	321 W Union st	Pam McGillian	1007 Windy Knoll Rd West Chester, PA 19382	1	1	4	2	1
EXISTING	305 East Rosedale Ave	Paramjit Jittla	306 N Kent Road Broomall PA 19008	4	1	4	0	1
	407 S Matlack	SEA Bagelman LLC	PO Box 3381 West Chester, PA 19381	-	1	4	0	
EXISTING	22 N Darlington St	Elizabeth Campbell	208 N Benjamin Dr. West Chester, PA 19382	1	1	2	0	2nd Floor
EXISTING	143 E. Miner St	Joseph Wonder LTD	520 William Ebbs Lane	4	1	4	1	1
EXISTING	122 Lacey Street	Nguyen Investment Property, LLC	P.O. BOX 1472 WEST CHESTER, PA 19380	0	1	4	0	1
EXISTING	620 S. Franklin Street, Unit C-30 West Chester, PA 19382	Donna Day	c/o HNR Associates 620 S. Franklin St, Office B-18 West Chester, PA 19382	0	1	3	0	RG C-30
EXISTING	620 S. Franklin Street, Unit A-14 West Chester, PA 19382	Donna Day	c/o HNR Associates 620 S. Franklin St, Office B-18 West Chester, PA 19382	0	1	3	0	RG A-14
EXISTING	620 S. Franklin Street, Unit C-30 West Chester, PA 19382	Donna Day	c/o HNR Associates 620 S. Franklin St, Office B-18 West Chester, PA 19382	0	1	3	0	RG C-30
EXISTING	620 S. Franklin Street, Unit E-51 West Chester, PA 19382	Michael Day	c/o HNR Associates 620 S. Franklin St, Office B-18 West Chester, PA 19382	0	1	3	0	RG E-51
EXISTING	620 S Franklin D-43	DON YAO & ELLEN LEE	1365 STEEPLE CHASE RD, DOWNINGTOWN, PA	1	1	2	2	D43
EXISTING	616 South Matlack Street West Chester, Pa 19382	Brett Terry	803 General Howe Drive West Chester, Pa 19382	1	1	4	2	1
EXISTING	23 Price Street West Chester PA 19382	James & Carrie Cavanaugh	9082 Barrister Court Jacksonville FL 32257	1	1	4	0	1

	208 w union	Michael OReilly	353 hill road honey brook pa 19344	1	1	2	0	1
EXISTING	218 Linden St	Spencer Ring Jr	849 Conner Rd	0	1	4	4	1
EXISTING	620 S. Franklin Street, Unit A-05	Kenneth Marsalis, East PA Properties LLC	c/o HNR Associates 620 S. Franklin Street, Office B-18 West Chester, PA 19382	0	1	3	0	RG A-05
EXISTING	620 S. Franklin Street, Unit #F-49	Kenneth Marsalis, East PA Properties LLC	c/o HNR Associates 620 S. Franklin St, Office B-18 West Chester, PA 19382	0	1	4	0	RG F-49
EXISTING	530 s matlack st	jc housing llc	304 berkley ln	0	1	4	4-Feb	
EXISTING	620 S Franklin Street, Unit C24 West Chester, PA 19382	Josh Davis	440 Gelsinger Road Sinking Spring, PA 19608	1	1	2	1	C24
NEW	33 price St, w. Chester, pa	E Two llc	1106 lafayette rd, wayne, pa, 19087	4	1	4	0	1
EXISTING	202 PRICE STREET	PHOEBE TURNER WOODSIDE PROPERTIES	360 MARLBORO ROAD KENNETT SQ PA 19348	0	3	6	0	1
EXISTING	434 S Walnut	Denise Wroten	138 e market street	0	3	8	0	1
EXISTING	223 N Church Street West Chester, Pa 19380	221-227 N. Church Street, LLC	PO Box 883 West Chester, Pa 19381	2	2	5	2	1
EXISTING	100 Price Street West Chester, PA 19382	Michael T. Rody	14 S Church Street West Chester, PA 19382	0	2	5	1	100 Price 1st FL
EXISTING	201 N. Adams St.	Alan Herring	P. O. Box 160	2	2	3	0	1
EXISTING	201 N. Adams St.	Alan Herring	P. O. Box 160 West Chester, PA 19381	2	2	3	0	1
	137 East Market Street	Peter & Anne Seelaus	510 Timberline Trail West Chester PA 19382 or PO Box 1009 Media PA 19063	2	2	5	4	1
EXISTING	307 S New St West Chester Pa, 19380	Carroll Propertiers LLC	128 Bantery Rd West Chester Pa 19380	4	1	4	1	1
EXISTING	131 Magnolia Street, west Chester, Pa 19382	Ronald and Roberta Dell	1410 Ponds Edge Road, West Chester, PA 19382	4?	1	4	4	
EXISTING	29 Price Street West Chester, PA 19382	Michael T Rody	14 S Church, 1st FL West Chester, PA 19382	0	1	5	5	29 Price
EXISTING	112 E NIELDS ST	DAVID B & GRETCHEN C YARNALL	510 S WAWASET RD	0	1	4	2	1

EXISTING	620 S. Franklin Street, Unit B-17	Loki Associates	Loki Associates c/o HNR Associates 620 S. Franklin St, Office B-18 West Chester, PA 19382	0	1	3	0	RG B-17
EXISTING	112 E NIELDS ST	DAVID B.YARNALL & Gretchen C. Yarnall	510 S WAWASET RD	0	1	4	2	1
EXISTING	302 w barnard st	jc housing llc	304 berkley ln	0	1	4	0	
EXISTING	230 Price Street	HNR Associates	620 S. Franklin Street, Office B-18 West Chester, PA 19382	6	7	7	0	230P-1
EXISTING	620 S. Franklin Street, Unit B-20	Louis Ma	c/o HNR Associates 620 S. Franklin Street, Office B-18 West Chester, PA 19382	0	1	3	0	B-20
EXISTING	620 S. Franklin Street, Unit B-21	Brian Hamm	200 Brandywine Rd Collegeville, PA 19426	0	1	2	0	B-21
EXISTING	620 S. Franklin St, Unit C-25	Celeste A. Dragwa	c/o HNR Associates 620 S. Franklin Street, Office B-18 West Chester, PA 19382	0	1	4	0	RG C-25
	203 Sharpless St.	Timothy C. Graham	117 Linden St. West Chester, PA 19382	0	1	4	0	1
	205 SHARPLESS ST	Timothy C. Graham	117 Linden St. West Chester, PA 19382	0	1	4	0	1
EXISTING	705 S Walnut St, West Chester PA 19382	Corey Lonberger	PO Box 526, Wayne PA 19382	5	1	7	0	705
EXISTING	620 S Franklin Street F50, West Chester, PA 19082	Corey Lonberger	PO Box 526, Waye PA 19087	2	1	3	1	620
EXISTING	144 W Union Street, Unit 2	Nguyen Investment Property LLC	PO Box 1472 West Chester, PA 19380	0	4	4	0	2
EXISTING	525 S High Street, Unit 1 West Chester, PA 19380	Nguyen Investment Property LLC	PO Box 1472 West Chester, PA 19380	0	4	4	0	1
EXISTING	123 W Barnard Street West Chester, PA 19380	Nguyen Investment Property LLC	PO Box 1472 West Chester, PA 19380	0	2	2	0	1
EXISTING	620 S Franklin Ave. west Chester Pa 19382	Astro Group	PO Box 228 Newtown Square, Pa 19073	1	1	4	4	C35
EXISTING	534 S matlack	Keith Klaus	984 meadowview lane	4	0	4	4	1
EXISTING	612 South Matlack St	Emily Bagelman	110 Berwick Dr WC PA 19382	0	1	4	2	

EXISTING	610 South Matlack Street West Chester, Pa 19382	Brett Terry	803 General Howe Drive West Chester, Pa 19382	1	1	4	3	1
EXISTING	413 South Matlack Street West Chester, Pa 19382	Brett Terry	803 General Howe Drive West Chester, Pa 19382	1	1	4	3	1
EXISTING	610 south high st west chester pa 19382	Emidio Barbati	610 south high st west chester pa 19382	Four	Two	Fou	Zer	2nd floor
EXISTING	25 E Washington St - Unit 2 Rear	Nguyen Investment Property	PO Box 1472 West Chester, PA 19380	0	3	3	0	Joaquin Hernandez Castaneda
EXISTING	125 E Nield	Martha B Coyle	1113 Butternut Rd. Glen Mills PA 19342	5	6	6	1	Devon Kennedy
EXISTING	16 Price St	Dan McCullough	Po Box 80722, Valley Forge, PA 19484	0	1	4	2	Charlotte Thamm
EXISTING	602 S High	SEA Bagelman LLC	PO Box 3381 West Chester, PA 19381	0	2	8	4	Evan Donovan, markis De'Von Rogers, John Ferguson, Ryan D'Aversa
EXISTING	400 East Nields Street West Chester, Pa 19382	Brett Terry	803 General Howe Drive West Chester, Pa 19382	1	1	4	4	Bryce Daly
	17 W Barnard Street	Richard Haly	609 Sugartown Road Malvern Pa 19355	4	1	4	0	Karlee Duda
EXISTING	140 East Nields st West Chester Pa 19382	Sandra & Robert Marron	339 Penwyllt Ct Exton Pa 19341	4	1	4	2	Mason Kline
EXISTING	142 East Nields St West Chester PA 19382	Sandra & Robert Marron	339 Penwyllt ct Exton Pa 19341	4	1	4	2	Ian Chowder
EXISTING	605 S Walnut St, West Chester PA 19382	Nguyen Investment Property	PO Box 1472 West Chester, PA 19380	0	4	4	0	Louis Barreto
EXISTING	204 W Gay Street, Unit 2	Nguyen Investment Property	PO Box 1472 West Chester, PA 19380	0	2	2	0	Tanner Treadway
EXISTING	117 Linden St.	Timothy C. Graham	117 Linden St. West Chester, PA 19382	4	0	7	0	Kaleigh O'brien
	111 Linden St.	Timothy C. Graham	117 Linden St. West Chester, PA 19382	0	1	4	0	Alyssa Bendekovits
	126 E. Nields St.	Timothy C. Graham	117 Linden St. West Chester, PA 19382	0	1	4	0	Claire Andrews
NEW	335 Hannum Ave West Chester, PA 19380	Matthew Barbella	319 W Washington St West Chester, PA 19380	1	1	2	2	
EXISTING	100 S. Darlington Street	TAHC LLC	327 S. High St West Chester PA 19382	0	5	8	8	

EXISTING	116 Dean Street West Chester Pa 19382	WCOCH	327 S. High Street West Chester PA 19382	0	7	26	14	
EXISTING	116 Dean Street West Chester Pa 19382	WCOCH	327 S. High Street West Chester PA 19382	0	7	26	14	
EXISTING	118 Linden Street West Chester PA 19382	WCOCH	327 S. High Street West Chester PA 19382	4	1	10	5	
EXISTING	120 Linden Street WC PA 19382	WCOCH	327 S. High Street WC PA 19382	0	2	8	5	
EXISTING	301 S. High Street WC PA 19382	TAHC LLC	327 S. High Street WC PA 19382	0	2	6	0	
EXISTING	309 Dean St	WCOCH	327 S. High Street	0	2	8	4	
EXISTING	419-25 S. Walnut Street WC PA 19382	wcoch	327 S. High Street	37	1	60	20	
EXISTING	420 S. Walnut Street WC PA 19382	WCOCH	327 S. High Street	0	12	25	0	
EXISTING	437 S. High Street WC PA 19382	WCOCH	327 S. HIGH STREET	2	3	14	6	
EXISTING	439 S. High St WC PA 19382	wcoch	327 S. High St. WC PA 19283	0	3	10	4	
EXISTING	500 S. High Street	WCOCH	327 S. High Street	0	3	10	6	
EXISTING	500 S. Walnut Street	WCOCH	327 S. High Street	7	0	13	9	
EXISTING	502 S. High Street	WCOCH	327 S. High Street	8	0	13	9	
EXISTING	511 S. Walnut Street	WCOCH	327 S. High Street	7	0	13	6	
EXISTING	519 S. High Street	WCOCH	327 S. High Street	0	2	8	4	
EXISTING	521 S. High Street	WCOCH	327 S. High Street	0	2	6	6	
EXISTING	535 S. Walnut Street	WCOCH	327 S. High Street	0	4	16	8	
EXISTING	604 S. Walnut Street	WCOCH	327 S. High Street	0	3	10	6	
EXISTING	615 Mechanic Alley	WCOCH	327 S. High Street	0	14	56	28	
EXISTING	622 S. Walnut Street	WCOCH	327 S. High Street	1	3	8	2	
	623 S. Walnut Street	WCOCH	327 S. High Street	0	2	8	4	
EXISTING	625 S. Walnut Street	WCOCH	327 S. High Street	0	2	8	4	
EXISTING	628 S. Walnut Street	WCOCH	327 S. High St	8	0	15	7	
EXISTING	630 S. Walnut Street	WCOCH	327 S. High Street	0	5	20	10	
EXISTING	641 S. Matlack Street	WCOCH	327 S. High Street	0	2	8	4	
EXISTING	703 S Matlack Street	Wes Gerstekorn	220 Durley Dr, Broomall PA 19008	0	2	6	0	
EXISTING	741 S Matlack St	Adam and Emily Bagelman	110 Berwick Dr WC PA 19382	0	2	5	2	
EXISTING	509 S Church St WC PA 19382	Kevin Patrick	4434 Aberdale Rd, Phila, PA 19136	6	0	6	3	
EXISTING	121 Magnolia Street	Jeanette Kramer	6 W Rhoades Ave WC PA 19382	0	2	6	0	

EXISTING	136 Magnolia St	Myrta Warner	PO Boc 90 Lane, SC 29564	0	2	6	0	
EXISTING	18 Price St WC PA 19382	Dan McCullough	PO Box 80722 Valley Forge, PA 19484	0	2	6	3	
EXISTING	122 W Chestnut St	Phil Carnuccio	1009 Squires Rd WC PA 19382	0	2	6	0	
EXISTING	709 S. Walnut Street	WCOCH	327 S. High Street	11	0	15	7	
EXISTING	733 S. Walnut Street	WCOCH	327 S. High Street	0	18	54	36	
EXISTING	735 S. Walnut St	WCOCH	327 S. High Street	0	3	8	6	
EXISTING	737 S. Walnut Street	WCOCH	327 S. High Street	0	3	8	6	
EXISTING	741 S. Walnut Street	WCOCH	327 S. High Street	0	24	96	48	
EXISTING	746 S. Franklin Street	WCOCH	327 S. High Street	0	12	48	24	
EXISTING	203 S Walnut Street West Chester, Pa 19382	South West Chester Development Company, LLC	PO Box 883 West Chester, Pa 19381	5	5	8	2	
EXISTING	116-118 E Gay Street West Chester, Pa 19380	Gay Street Development LLC	PO Box 883 West Chester, Pa 19381	11	11	25	3	
EXISTING	119 E Gay Street West Chester, Pa 19380	Gay Street Development Company LLC.	PO Box 883 West Chester, Pa 19381	6	6	14	0	
EXISTING	200 E Gay Street West Chester, Pa 19380	Historic West Chester Development Company LLC	PO Box 883 West Chester, Pa 19381	6	6	14	3	
EXISTING	13 S Church Street West Chester, Pa 19382	Historic West Chester Development Company LLC	PO Box 883 West Chester, Pa 19381	5	5	10	0	
EXISTING	121 E Gay Street West Chester, Pa 19380	Gay Street Development Company LLC	PO Box 883 West Chester, Pa 19381	15	15	24	4	
EXISTING	106-108 W Market Street West Chester, Pa 19382	West Chester Market Street Development Company LLC	PO Box 883 West Chester, Pa 19381	5	5	16	1	
EXISTING	33-39 W Market Street West Chester, Pa 19380	33, 35, 37, 39 West Market Street, LLC	PO Box 883 West Chester, Pa 19381	5	5	14	0	
EXISTING	100-104 N New Street West Chester, Pa 19380	Stanford & Elsa Zukin Properties LLC	PO Box 883 West Chester, Pa 19381	6	6	12	0	
EXISTING	122 E Gay Street West Chester, Pa 19380	Gay Street Restaurant Development LLC	PO Box 883 West Chester, Pa 19381	5	5	11	3	

EXISTING	109 W Gay Street West Chester, Pa 19380	107-115 W Gay Street, LLC	PO Box 883 West Chester, Pa 19381	6	6	9	3	
EXISTING	40 E Market Street West Chester, Pa 19382	WC Restaurant Development LLC	PO Box 883 West Chester, Pa 19381	10	10	29	4	
EXISTING	130-134 E Gay Street West Chester, Pa	Mid-Atlantic Society Hill, LLc	PO Box 883 West Chester, Pa 19381	8	8	17	0	
EXISTING	17/19 North Walnut Street	Christine Smith	507 W Pleasant Grove Rd West Chester PA 19382	4	1	4	0	
EXISTING	209/11 S High Street	Christine Smith	507 W Pleasant Grove Rd West Chester PA 19382	2	6	8	4	
EXISTING	216 E Gay Street	Christine Smith	507 W Pleasant Grove Rd West Chester PA 19382	2	6	6	0	
EXISTING	322 S Walnut Street	Christine Smith	507 W Pleasant Grove Rd West Chester PA 19382	3	5	10	3	
EXISTING	427 S Walnut Street	Christine Smith	507 W Pleasant Grove Rd West Chester PA 19382	3	4	8	1	
EXISTING	429 S Walnut Street	Christine Smith	507 W Pleasant Grove Rd West Chester PA 19382	4	7	10	4	
EXISTING	522 S Darlington Street	Christine Smith	507 W Pleasant Grove Rd West Chester PA 19382	3	4	6	0	
EXISTING	315 S Walnut Street West Chester, Pa 19382	315 and 317 S Walnut Street LLC	PO Box 883 West Chester, Pa 19381	5	5	9	4	
EXISTING	231 Sharpless Street West Chester, Pa 19382	231 Sharpless Street LLC	PO Box 883 West Chester, Pa 19381	17	17	22	17	
EXISTING	344 W Gay Street West Chester, Pa 19380	340-344 W Gay Street, LLC	PO Box 883 West Chester, Pa 19381	10	10	17	10	
EXISTING	2-4 S Brandywine Street West Chester, Pa 19382	S&S Zukin Investments LLC	PO Box 883 West Chester, Pa 19381	16	16	25	28	
EXISTING	525 S Walnut Street	High Expectations	PO Box 72824, Thorndale, PA, 19372	0	6	14	0	
EXISTING	333 W Barnard Street	Martin Bryce	PO Box 72824, Thorndale, PA, 19372	0	2	4	2	
EXISTING	547 South Matlack St	Orazio Nastase	549 South Matlack St West Chester pa 19382	0	2	6	3	

EXISTING	549 South Matlack Street	Orazio Nastase	549 South Matlack St	0	1	4	2	
EXISTING	201-2 East nields Street	Orazio Nastase	549 S Matlack st	0	1	4	2	
	201-1 East Nields St	Orazio Nastase	549 S matlack St	0	1	2	1	
EXISTING	601 South Matlack St	Orazio Nastase	549 South Matlack st	0	2	6	3	
EXISTING	603 South Matlack St	Orazio Nastase	549 South Matlack St	0	2	6	3	
EXISTING	211 East Nields st	Orazio Nastase	549 S matlack St	0	3	8	4	
EXISTING	221 E Nields Street	Orazio Nastase	549 S Matlack st	0	2	8	549	
EXISTING	329 Dean St	Orazio Nastase	549 S Matlack St	0	2	8	2	
EXISTING	232 E Gay St	232 AH LLC	908 Old Fern Hill Rd	3	1	12	7	
EXISTING	314 S Walnut St	314 AHB LLC	908 Old Fern Hill Rd	3	1	6	5	
EXISTING	503 S Walnut St	503 AH LLC	908 Old Fern Hill Rd	6	1	6	0	
EXISTING	513 S High St	513 AH LLC	908 Old Fern Hill Rd	2	1	6	6	
EXISTING	100-104 N New Street West Chester, Pa 19380	Stanford & Elsa Zukin Properties LLC	PO Box 883 West Chester, Pa 19381	6	6	14	0	
EXISTING	13 S Church Street West Chester, Pa 19382	Historic West Chester Development Company LLC	PO Box 883 West Chester, Pa 19381	5	5	10	0	
EXISTING	130-134 E Gay Street West Chester, Pa 19380	Mid-Atlantic Society Hill, LLC	PO Box 883 West Chester, Pa 19381	8	8	15	0	
EXISTING	221 S Walnut Street West Chester, Pa 19382	South West Chester Development Company LLC	PO Box 883 West Chester, Pa 19381	5	5	5	3	
EXISTING	231 Sharpless Street West Chester, Pa 19382	231 Sharpless Street LLC	PO Box 883 West Chester, Pa 19381	17	17	21	17	
EXISTING	234-236 W Market Street West Chester, Pa 19382	234-236 West Market Street, LLC	PO Box 883 West Chester, Pa 19381	5	5	13	0	
EXISTING	308 S Church Street West Chester, Pa 19382	Zukin Investments LP	PO Box 883 West Chester, Pa 19381	13	13	29	7	
EXISTING	33-39 W Market Street West Chester, Pa 19380	33, 35, 37, 39 West Market Street, LLC	PO Box 883 West Chester, Pa 19381	5	5	13	0	
EXISTING	345 W Chestnut Street West Chester, Pa 19382	Stanford & Elsa Zukin Family Trust	PO Box 883 West Chester, Pa 19381	7	7	12	10	
EXISTING	2-4 S Brandywine Street West Chester, Pa 19382	S&S Zukin Investments LLC	PO Box 883 West Chester, Pa 19381	16	16	30	18	
EXISTING	600 S Walnut St	600 AH, LLC	908 Old Fern Hill Rd	7	1	9	9	

EXISTING	400 N Church Street West Chester PA 19380	Eric Norquist	705 Dean Court West Chester PA 19382	5	5	6	2	
EXISTING	1 N. Matlack Street	Livingston McDaniel LP	119 Glenloch Drive Landenberg, PA 19350	8	1	8	0	
EXISTING	620 S. Franklin Street West Chester, PA 19382	Kenneth Marsalis	East Pennsylvania Properties, LLC 1883 W. Royal Hunte Drive, Ste 200A Cedar City, Utah 84720	0	11	38	0	see attached
EXISTING	109 W Gay Street West Chester, Pa 19380	107-115 W Gay Street, LLC	PO Box 883 West Chester, Pa 19381	6	6	7	6	
EXISTING	100-104 N New Street West Chester, Pa 19380	Stanford & Elsa Zukin Properties LLC	PO Box 883 West Chester, Pa 19381	6	6	14	0	
EXISTING	116-118 E Gay Street West Chester, Pa 19380	Gay Street Restaurant Development LLC	PO Box 883 West Chester, Pa 19381	11	11	25	4	
EXISTING	119 E Market Street West Chester, Pa 19380	Zukin Properties Trusts	PO Box 883 West Chester, Pa 19381	5	5	6	2	
EXISTING	121 E Gay Street West Chester, Pa 19380	Owner Name Gay Street Development Company LLC	PO Box 883 West Chester, Pa 19380	15	15	28	10	
EXISTING	130-134 E Gay Street West Chester, Pa 19380	Mid-Atlantic Society Hill, LLC	PO Box 883 West Chester, Pa 19380	8	8	14	0	
EXISTING	200 E Gay Street West Chester, Pa 19380	Historic West Chester Development Company LLC	PO Box 883 West Chester, Pa 19381	6	6	15	6	
EXISTING	308 S Church Street West Chester, Pa 19382	Zukin Investment LP	PO Box 883 West Chester, Pa 19381	13	13	27	8	
EXISTING	29 E Gay Street West Chester, Pa 19380	Stanford & Elsa Zukin Family Trust	PO Box 883 West Chester, Pa 19381	11	11	14	0	
EXISTING	221 S Walnut Street West Chester, Pa 19382	South West Chester Development Company, LLC	PO Box 883 West Chester, Pa 19381	5	5	6	3	
EXISTING	209 W Chestnut Street West Chester, Pa 19380	Zukin Investment LP	PO Box 883 West Chester, Pa 19381	5	5	6	3	
EXISTING	344 W Gay Street West Chester, Pa 19380	340-344 West Gay Street, LLC	PO Box 883 West Chester, Pa 19381	10	10	17	15	
EXISTING	2-4 S Brandywine Street West Chester, Pa 19382	S&S Zukin Investments LLC	PO Box 883 West Chester, Pa 19381	16	16	34	19	

EXISTING	130 W. Barnard Street, West Chester, PA 19382	Diana Seip	405 Wrigley Blvd, Cochranville, PA 19330	House	House	2	2	
EXISTING	312 S Walnut St	Cleo Elkiinton	26959 Sunburst Path Millsboro DE19966	4	1	4	3	2
EXISTING	27 S Church Street, West Chester, PA 19382	Megill Homes, LLC	330 Kennett Pike, Suite 207, Chadds Ford, PA 19317	3	1	2	3	1
EXISTING	221 N Church Street West Chester, Pa 19380	221-227 N. Church Street, LLC	PO Box 883 West Chester, Pa 19381	2	2	5	2	1
	515 s matlack street	Lydia &Eliazar serrano	513 s matlack street	1	1	3	3	
EXISTING	359 E. Biddle Street West Chester, PA 19380	Steven & Lynn Ayers	1107 Queens Way West Chester, PA 19382	0	1	2	1	
EXISTING	515 s matlack street	Lydia &Eliazar serrano	513 s matlack street	1	1	3	3	
EXISTING	419-25 S. Walnut Street	WCOCH	327 S. High Street	37	1	64	20	
EXISTING	712 S New St. West Chester, Pa 19382	TD III Properties	1074 Edgewood Chase Dr. Glen Mills, Pa 19342	1	1	4	4	
EXISTING	209 E Market St.	Chester Springs Property Associates LLC	117 W GAY ST, SUITE 324	1	1	1	2	209
EXISTING	630 S WALNUT STREET	WCOCH	327 S. HIGH ST	0	5	19	0	
EXISTING	440 N High, West Chester PA	Chesco Rentals (440 N High) LLC Attn: Christine Malinowski	PO Box 72212 Thorndale, PA 19372	0	6	7	0	
EXISTING	308 S Church Street West Chester, Pa 19382	Zukin Investments LP	PO Box 883 West Chester, Pa 19381	13	13	27	7	
EXISTING	400 W Gay St	T Saletta properties LLC	402 W Gay St	0	2	1	0	A
EXISTING	22 S Church St	NUCC enterprises	19 Upper Crest Dr, W Milford, NJ 07480	0	2	8	3	
EXISTING	24 S Church Street	NUCC enterprises	19 Upper Crest Dr., West Milford, NJ 07480	0	3	10	3	
EXISTING	119 Wollerton West Chester, PA 19382	John Keitch	119 W. Miner St West Chester, PA 19382	1	1	1	1	
EXISTING	121 Magnolia St	Jeanette Kramer	6 W Rhoades Ave, WC PA 19382	0	2	6	0	
EXISTING	301 S Church Street	Eaton Hopkins	PO Box 72824 Thorndale, PA, 19372	0	2	7	0	

EXISTING	126-132 Dean Street	High Expectations	PO Box 72824, Thorndale, PA, 19372	0	10	22	10	
EXISTING	326 N. Walnut Street West Chester Pa. 19380	Marquell Tate	326 N. Walnut Street West Chester PA. 19380	60	60	54	N/A	
EXISTING	501 S Walnut	Martin Bryce	PO Box 72824, Thorndale, PA, 19372	1	1	4	0	
EXISTING	201 W. Miner Street West Chester, PA 19382	Paula M. Coulter	10745 Cervone Drive Meadville, PA 16335	0	4	4	4	Dorothy Swisher
EXISTING	408 West Miner Street	Patricia Graf	808 Edna Jane Lane West Grove, PA 19390	2	2	4	0	Austin Graf
EXISTING	408 N. Church St.	Kristine DellaVecchia	410 N. Church St.	3	3	3	0	Frank Olszewski
EXISTING	319 West Gay Street West Gay Street	Chad Weldon	319 West Gay Street West Chester, PA 19380	3	3	3	0	Merisa Ginel & Ehtan Bridghouse
EXISTING	303 W. Union St.	Edward Bardzik	P.O. Box 17931 Boulder, CO 80308	0	1	2	2	Lisa Lee
EXISTING	305 W. Union St.	Edward Bardzik	P.O. Box 17931 Boulder, CO 80308	0	1	3	1	Terri Nappi
EXISTING	515 s matlack street	Lydia &Eliazar Serrano	513 s matlack street	1	1	3	0	Mario todaro
EXISTING	116 E Barnard Street, Unit C West Chester, PA 19382	Michael T. Rody	14 S Church St, 1st Floor West Chester, PA 19382	0	1	1	1	Sam Wilden

Appendix 2: Student Housing Survey

SURVEY AGREEMENT

Purpose: To determine plans for students' preferences in the design of new residence hall on the West Chester campus.

Confidentiality: The information you provide is anonymous. Your personal identification information (e.g., name, email address) will not be connected to your survey responses. Your personal identification information will never be shared in reports.

Security: Data from this survey will be stored on equipment and software programs purchased by the university and a company called MGT Consultants, that has been hired by WCU. Access to individual's responses will be limited to MGT Consultants and will be stored with password protection.

Use of Results: This is not a research study. Students' responses will be aggregated and shared with groups within and outside WCU to support the design and construction of the new residence hall.

Voluntary Participation: Your participation is entirely voluntary. There is no penalty for not participating in the survey or for withdrawing from the survey. Your decision to participate/not participate in the survey will not affect your relationship with the university.

Risks: There is always some level of risk when submitting information online. To minimize this risk, please clear your internet history and close your browser after submitting the survey.

Benefits: There are no direct benefits for participating in the survey.

Timeline: This survey will close on October 18, 2024.

We encourage you to take the time to complete the survey, even if you are not interested in campus housing at this time. As an incentive, Amazon gift cards, in the amounts shown below will be awarded to six randomly selected students who complete the survey by October 18, 2024.

First Prize: $100
Second Prize: $50
Four additional prizes: $25 each

To be eligible, you must supply contact information on the form that will pop up after you have successfully submitted your survey. You may only enter once.

Contact: For questions about this survey, please contact, please contact Diana Goldstein at dgoldstein@mgt.us.

1. I am at least 18 years old and I consent to participate in this survey.
    - Yes
    - No

2. On which campus do you primarily attend classes?
    - West Chester
    - Philadelphia
    - Exton
    - I attend online classes only

Skip To: End of Survey If I am at least 18 years old and I consent to participate in this survey. = No

3. What is your class standing?
    - Freshman
    - Sophomore
    - Junior
    - Senior
    - Graduate student
    - Certificate-seeking student

4. Are you enrolled full- or part-time?
    Full-time (undergraduate 12 or more credits, graduate students 6 or more credits)
    Part-time

5. Are you enrolled in in-person or online classes?
    - Entirely in-person
    - Hybrid - some in-person and some online classes
    - Entirely online

6. Are you a first-generation college student?
    - Yes
    - No
    - I don't know

7. Where is your permanent residence?
    - Pennsylvania
    - Delaware
    - Maryland
    - New Jersey
    - Elsewhere in the United States
    - Another country

8. What is your age?
    - Under 18
    - 18-19
    - 20-22
    - 23-24
    - 25 or over

9. What is your gender?
    - Female
    - Male
    - Non-binary
    - Prefer not to answer

10. What is your race/ethnicity? (Select all that apply.)
    - Asian or Pacific Islander
    - Black/African-American
    - Hispanic
    - Native American or Alaska Native
    - White/Caucasian
    - Other (please specify): _____
    - Prefer not to answer

11. Where do you live?
    - On-campus
    - Off-campus

Display This Question:
If Where do you live? = On-campus

12. Where do you live on campus?
    - Allegheny Hall
    - Brandywine Hall
    - College Arms Apartments
    - Commonwealth Hall
    - East Village Apartments
    - Goshen Hall
    - Killinger Hall
    - Schmidt Hall
    - South Campus Apartment Complex
    - Tyson Hall
    - University Hall
    - Village Apartments

Display This Question:
If Where do you live? = Off-campus

13. Where do you live off campus?
    - Off-campus housing where I pay rent
    - Off campus with parents/relatives - with no rental costs
    - Off-campus with parents/relatives - where I contribute to housing costs
    - Own my home

14. How satisfied or dissatisfied are you with your current housing situation?
    - Very satisfied
    - Satisfied
    - Dissatisfied
    - Very dissatisfied

15. Do you live with a spouse/partner or dependent children?
    - Yes
    - No
    -

Display This Question:
If Where do you live? = Off-campus

16. Would you ever consider living in campus housing in the future?
    - Yes
    - Maybe
    - No

Skip To: Q47 If Would you ever consider living in campus housing in the future? = No
Display This Question:
If Where do you live off campus? = Off-campus housing where I pay rent

Tell Us about the Off-Campus Housing You Rent

Display This Question:
If Where do you live off campus? = Off-campus housing where I pay rent

17. Including yourself, how many people live in the housing unit where you live?
- I live by myself; I am the only one who lives in my housing unit
- Two (myself and one other person)
- Three (myself and two other people)
- Four (myself and three other people)
- More than four (myself and four or more other people)

Display This Question:
If Where do you live off campus? = Off-campus housing where I pay rent

18. How many bedrooms are in your apartment/rental unit?
- None—an efficiency/studio
- One
- Two
- Three
- Four
- More than four

Display This Question:
If Where do you live off campus? = Off-campus housing where I pay rent

19. How many bathrooms are in your apartment/rental unit? (A half bath is a bathroom with no shower or tub.)
- One
- One and a half
- Two
- Two and a half
- Three
- More than three

Display This Question:
If Where do you live off campus? = Off-campus housing where I pay rent

20. Do you share a bedroom?
- No
- Yes

Display This Question:
If Where do you live off campus? = Off-campus housing where I pay rent

21. What is your lease term?
- Twelve months
- Academic year (9 or 10 months)
- Six months
- Semester
- Month-to-month since the beginning of my lease
- Month-to-month starting at the end of my original lease term
- Other (please specify): _____

Display This Question:
If Where do you live off campus? = Off-campus housing where I pay rent

22. How do you rent your unit?

- Furnished
- Partially furnished
- Unfurnished

Display This Question:
If Where do you live off campus? = Off-campus housing where I pay rent

23. What is **your share** of monthly housing costs?

Your share of rent: _____
Your share of utilities (electricity, gas, water/sewer, trash): _____
Your share of other housing costs (basic cable, Internet, landline): _____
Total: _____

Display This Question:
If Where do you live off campus? = Off-campus housing where I pay rent

24. Does your rent include any utilities?

- Yes
- No

Display This Question:
If Does your rent include any utilities? = Yes

25. Which utilities are included in your rent? (Select all that apply.)
- Electricity
- Gas
- Heat
- Water/sewer
- Trash

Display This Question:
If Where do you live off campus? = Off-campus housing where I pay rent

26. What other features or services are included in your rent? (Select all that apply.)
- Internet
- Cable TV
- Local telephone
- Parking
- Garage

Display This Question:
If Where do you live off campus? = Off-campus housing where I pay rent

27. Have you ever lived on campus at WCU and then decided to move off campus?
- Yes
- No

Display This Question:
If Have you ever lived on campus at WCU and then decided to move off campus? = Yes

28. What are the reason(s) you decided to move off campus? (Select all that apply.)
- Community bathrooms
- Cooking facilities
- Cost
- Meal plan options and flexibility
- My friends were moving off campus
- Preference for more space
- Private bedroom
- Rules, regulations, and policies in general
- Wanted a more independent lifestyle
- Some other reason (Please specify.) _____

Carry Forward Selected Choices from "What are the reason(s) you decided to move off

29. What are the most important factors you considered in your decision of where to live this academic year? Please choose the top five.
- Community bathrooms
- Cooking facilities
- Cost
- Meal plan options and flexibility
- My friends were moving off campus
- Preference for more space
- Private bedroom
- Rules, regulations, and policies in general
- Wanted a more independent lifestyle
- Some other reason (Please specify.) _____

Carry Forward Selected Choices from "What are the most important factors you considered in your decision of where to live this academic year? Please choose the top five."

30. Please rank order the factors you chose in the previous questions by their importance in your decision of where to live this academic year.

_____ Community bathrooms
_____ Cooking facilities
_____ Cost
_____ Meal plan options and flexibility
_____ My friends were moving off campus
_____ Preference for more space
_____ Private bedroom
_____ Rules, regulations, and policies in general
_____ Wanted a more independent lifestyle
_____ Some other reason (Please specify.)

31. Descriptions and floorplans of several potential new housing options are provided below. Following the detailed descriptions, you will be asked to identify your preferred housing option, and any that you would find acceptable. Assume that the estimated rents include furnishings, utilities, basic cable TV, and Internet, and are based on an academic year lease. Rates **do not** include cost of a meal plan. Please select only one as **preferred**. Mark

as **acceptable** any unit plan you would live in if your preferred choice were not available. Mark all others as **would not live there**.

NOTE: Floor plans are samples only - to show concepts - and are not to scale. Mark all others as **would not live there**. NOTE: Floor plans are samples only - to show concepts - and are not to scale.

Please select only one as **preferred**. Mark as **acceptable** any unit plan you would live in if your preferred choice were not available. Mark all others as **would not live there**.

	Preferrable	Acceptable	Would not live there
TRADITIONAL HOUSING Two students per bedroom, community bathrooms with upgraded amenities and privacy Double-occupancy rent = $3,400 per person, per semester			
TWO DOUBLE-BEDROOM SEMI-SUITE Four students, two in each bedroom, with one bathroom per semi-suite Double-occupancy rent = $5,100 per person per semester			
TWO DOUBLE-BEDROOM SUITE Four students, two in each bedroom, with two bathrooms per suite and common living area and kitchenette Double-occupancy rent = $5,800 per person per semester			
FOUR SINGLE-BEDROOM SUITE Four students, one in each bedroom, with two bathrooms per suite and common living area and kitchenette Single-occupancy rent = $5,950 per person per semester			
TWO DOUBLE-BEDROOM APARTMENT Four students, two in each bedroom, with two bathrooms per apartment and common living area and kitchen Double-occupancy rent = $3,700 per person per semester			
FOUR SINGLE-BEDROOM APARTMENT (e.g. South Campus Apartment Complex) Four students, one in each bedroom, with two bathrooms per apartment and common living area and kitchen Single-occupancy rent = $4,000 per person per semester			
FOUR SINGLE-BEDROOM APARTMENT (e.g. The Village or East Village) Four students, one in each bedroom, with two bathrooms per apartment and common living area and kitchen Single-occupancy rent = $6,000 per person per semester			
TWO SINGLE-BEDROOM APARTMENT Two students, one in each bedroom, with one bathroom per apartment and common living area and kitchen Single-occupancy rent = $6,250 per person per semester			

32. Please think back to when you were selecting the housing you live in now. If your preferred unit had been available on campus for the current academic year at the estimated rent and with your preferred features, would you have lived in the proposed housing?

- I definitely would have lived there.
- I might have lived there (50/50 chance).
- I probably would not have lived there (less than 50/50 chance).
- I would not have lived there.

33. Why would you not have been interested in living in the proposed housing?
- I prefer existing WCU housing
- I already own a home
- I am concerned about the level of rules and regulations
- I do not want to move
- I live with my parents/guardians
- The housing is too expensive
- Cost of required meal plan is too high
- I have a pet
- Some other reason (Please specify.) _____

34. If you would not have considered living in the proposed housing because the rent is too high for your housing budget, what would be your level of interest in the same units at lower rates, as follows?

	Occupancy	Per Person, Per Semester
TRADITIONAL HOUSING	Double	$2,825
TWO DOUBLE-BEDROOM SEMI-SUITE	Double	$4,725
TWO DOUBLE-BEDROOM SUITE	Double	$5,300
FOUR SINGLE-BEDROOM SUITE	Single	$4,800
TWO DOUBLE-BEDROOM APARTMENT	Double	$3,075
FOUR SINGLE-BEDROOM APARTMENT (e.g. South Campus Apartment Complex)	Single	$3,350
FOUR SINGLE-BEDROOM APARTMENT (e.g. The Village or East Village)	Single	$5,350
TWO SINGLE-BEDROOM APARTMENT	Single	$5,500

- I definitely would have lived there.
- I might have lived there (50/50 chance).
- I probably would not have lived there (less than 50/50 chance).
- I would not have lived there

Display This Question:
If If you would not have considered living in the proposed housing because the rent is too high for... != I definitely would have lived there.

35. Still too expensive? What would be your level of interest at the following rates?

	Occupancy	Per Person, Per Semester
TRADITIONAL HOUSING	Double	$2,750
TWO DOUBLE-BEDROOM SEMI-SUITE	Double	$4,620
TWO DOUBLE-BEDROOM SUITE	Double	$5,100
FOUR SINGLE-BEDROOM SUITE	Single	$4,700
TWO DOUBLE-BEDROOM APARTMENT	Double	$3,025
FOUR SINGLE-BEDROOM APARTMENT	Single	$3,100
FOUR SINGLE-BEDROOM APARTMENT	Single	$5,000
TWO SINGLE-BEDROOM APARTMENT	Single	$5,250

- I definitely would have lived there.
- I might have lived there (50/50 chance).
- I probably would not have lived there (less than 50/50 chance).
- I would not have lived there

36. Please add any additional comments you wish to make here. Also, check to make sure that you did not accidentally miss a question.

Thanks for taking the West Chester University Housing Survey!

You may enter your name and email address through the link below to be entered into the drawing for incentive prizes. Note that your contact information will not be associated with your survey response.

Click here to enter the drawing!

WCU
WEST CHESTER
UNIVERSITY

West Chester University's Office of Institutional Research

ENROLLMENT REPORT
AND PROJECTION ANALYSIS

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EXHIBIT
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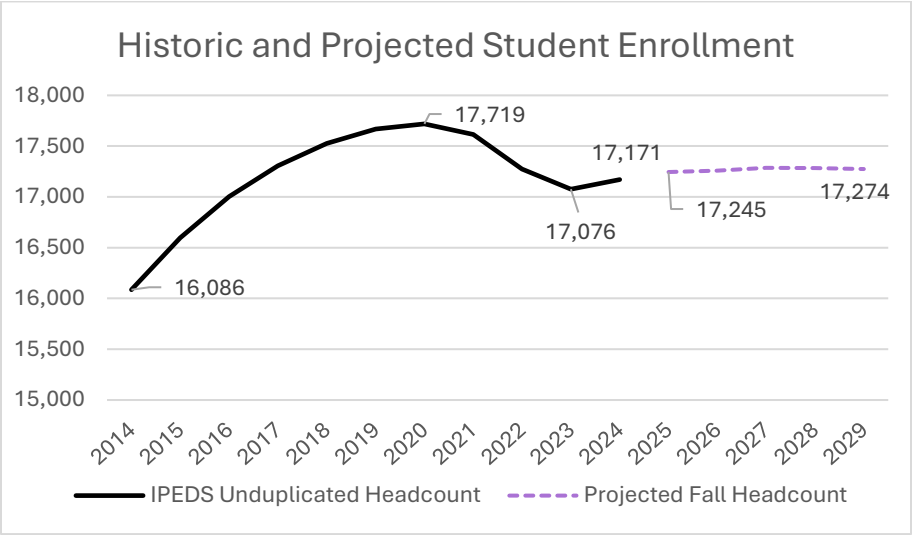
App. A

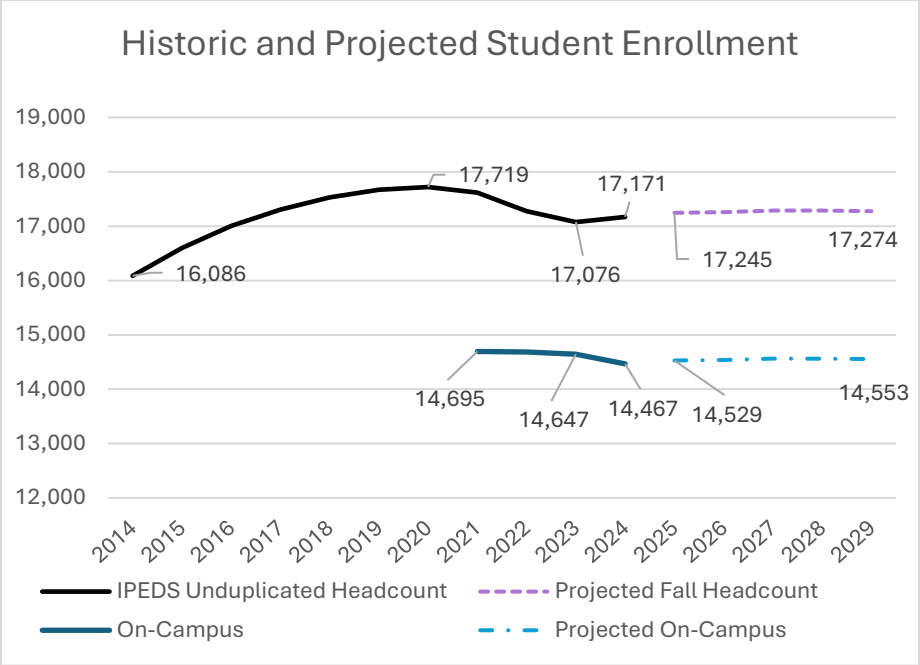
Executive Summary

Student Enrollment

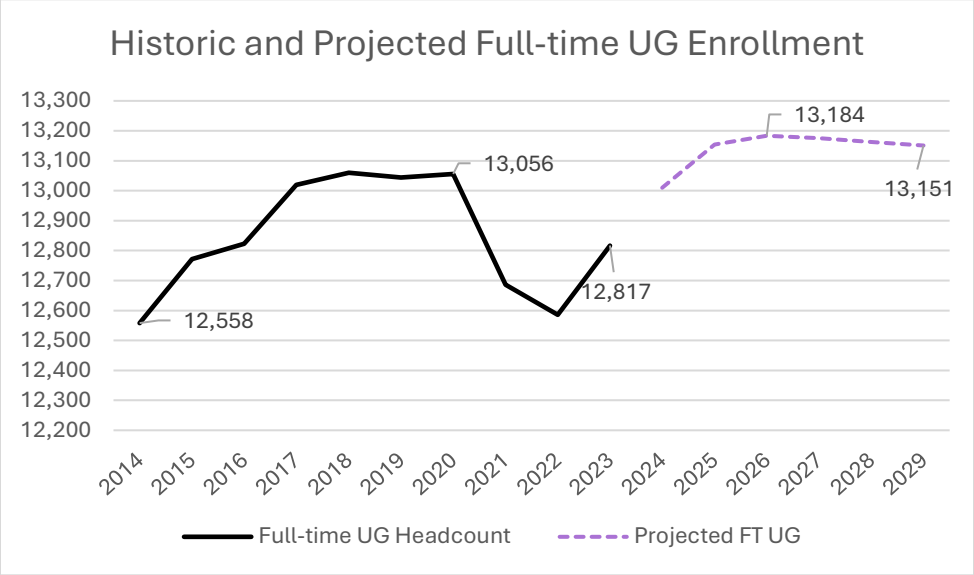
West Chester University reached its peak enrollment in the fall of 2020 with 17,719 students—14,713 undergraduate and 3,008 graduate students. From fall 2021 through fall 2023, enrollments declined to a low of 17,076 (14,344 UG; 2,742 GR). This fall WCU's student enrollment increased by fewer than 100 students—a 0.56% growth over prior year. WCU anticipates that fall enrollment growth over the next five years will remain low with total enrollment growing from 17,245 to 17,285 in fall 2028 before starting to decline again until a steady-state of around 17,260 is reached 6 years and further out.



Over the last four years, about 85% of WCU's total enrollment has been on-campus. Here "on-campus" is defined as having enrolled in at least one course on WCU's main campus. The other 15% of students were taking 100% of their courses online or off-campus—this includes students enrolled at Philadelphia, DCCC Marple, Exton, or Graduate Center, and students completing student teaching, internships, clinicals, practicum, or field courses where no courses were completed at the main campus.

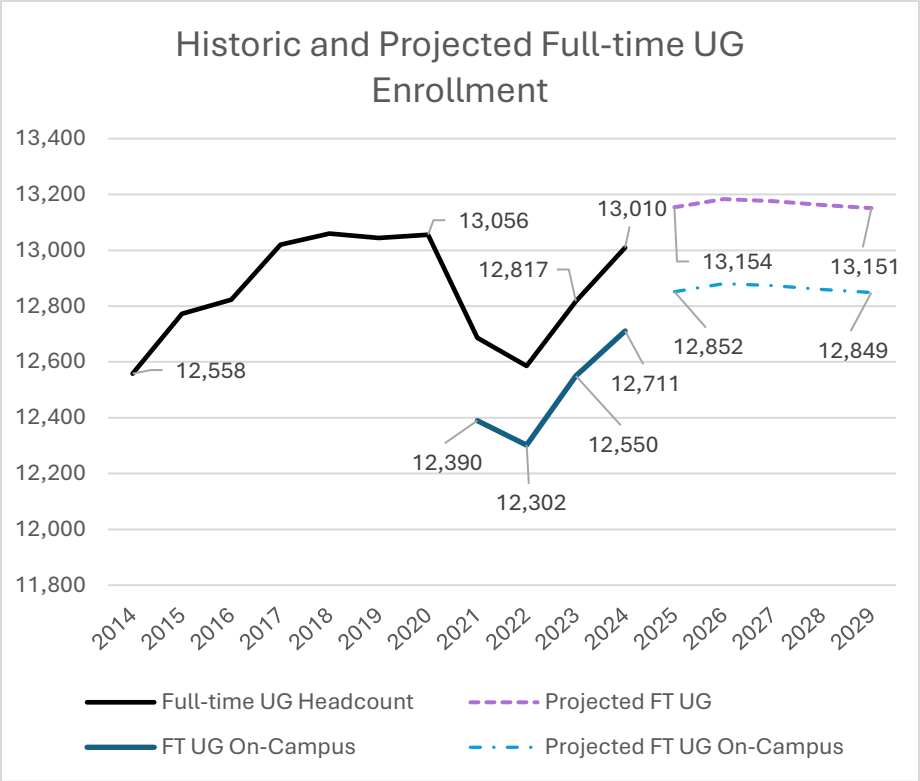


From 2014 through 2024, West Chester University hit a peak **full-time undergraduate** student enrollment of 13,056 in fall of 2020. Full-time undergraduate student declined from fall 2021 through fall 2023. In fall 24, WCU reached 12,817 full-time UG students. Projections for the next five years anticipate a high of 13,184 full-time UG students in fall 2026 (due to increased new FY targets) followed by another decline.



For fall terms, online and off-campus enrollments are primarily occurring in the graduate population. From fall 2021 through fall 2024, about 98% of the full-time undergraduate population was attending at least one course on main campus. About 300 full-time undergraduates attend 100% online or at off-campus locations. As full-time

undergraduate total enrollments climb over the next few years, WCU anticipates that the on-campus full-time UG population will reach a peak of about 12,850.



Additional information on student enrollment can be found in detailed charts on the pages that follow.
All student enrollment data are IPEDS unduplicated headcounts at the time of the fall census 15th day of classes—the high-point of student enrollment during any given year.

Enrollment projections are completed and updated after the census date each fall and spring term. Targets are set for new degree-seeking students, including new first-year and transfer students and new graduate Master's and doctoral students. A statistical model is used to project the retention of students in 104 different 'buckets' from fall to spring and spring to fall. Targets for new populations are added to the anticipated returning population to project fall and spring term total enrollments out 5 years. Projections are not done at the major, campus, or instruction mode level. Projections for "on-campus" students assumed that future proportions of on- and off-campus would be similar to current rates.

Faculty and Staff

The faculty and staff fall IPEDS census occurs at the end of October each year. In fall 2024, WCU had a total of 1,925 employees—995 faculty (641 tenured or tenure track and 354 adjuncts) and 930 staff. As requested, full-time and part-time breakouts are below. [Note: Not all full-time faculty are T/TT; not all part-time faculty are adjuncts.]

	Full-time	Part-time	Total
Faculty	707	288	995
Non-faculty employees	864	66	930
Total employees	1571	354	1,925

Student Enrollment Data

CLASS	TOTAL ENROLLMENT - FALL														
	FULL-TIME					PART-TIME					TOTAL				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
UNDERGRADUATE															
Freshmen**	3,517	3,438	3,868	4,093	4,105	83	86	108	118	100	3,600	3,524	3,976	4,211	4,205
Sophomores	3,153	2,965	2,798	3,132	3,256	160	165	171	156	142	3,313	3,130	2,969	3,288	3,398
Juniors	3,179	3,120	2,888	2,826	2,998	285	365	307	266	269	3,464	3,485	3,195	3,092	3,267
Seniors	3,196	3,146	3,019	2,751	2,641	868	873	862	731	658	4,064	4,019	3,881	3,482	3,299
Irregular/Transients	12	17	13	15	10	260	296	358	256	270	272	313	371	271	280
Indep/Distance Learning											0	0	0	0	0
Subtotal	13,057	12,686	12,586	12,817	13,010	1,656	1,785	1,806	1,527	1,439	14,713	14,471	14,392	14,344	14,449
GRADUATE															
Graduate	971	1,032	940	954	982	1,807	1,857	1,694	1,503	1,445	2,778	2,889	2,634	2,457	2,427
Professional/Doctoral	56	42	53	47	42	174	212	196	228	253	230	254	249	275	295
Subtotal	1,027	1,074	993	1,001	1,024	1,981	2,069	1,890	1,731	1,698	3,008	3,143	2,883	2,732	2,722
TOTAL	14,084	13,760	13,579	13,818	14,034	3,637	3,854	3,696	3,258	3,137	17,721	17,614	17,275	17,076	17,171

On-campus Student Enrollment

CLASS	TOTAL ON-CAMPUS ENROLLMENT - FALL														
	FULL-TIME					PART-TIME					TOTAL				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
UNDERGRADUATE															
Freshmen**		3,433	3,862	4,087	4,097		77	96	103	74		3,510	3,958	4,190	4,171
Sophomores		2,948	2,778	3,116	3,233		115	120	118	102		3,063	2,898	3,234	3,335
Juniors		3,064	2,844	2,773	2,927		238	199	167	161		3,302	3,043	2,940	3,088
Seniors		2,936	2,805	2,559	2,444		538	568	445	363		3,474	3,373	3,004	2,807
Irregular/Transients		9	13	15	10		132	287	228	100		141	300	243	110
Indep/Distance Learning															
Subtotal		12,390	12,302	12,550	12,711		1,100	1,270	1,061	800		13,490	13,572	13,611	13,511
GRADUATE															
Graduate		622	550	546	528		534	512	443	388		1,156	1,062	989	916
Professional/Doctoral		26	33	27	32		23	17	20	8		49	50	47	40
Subtotal		648	583	573	560		557	529	463	396		1,156	1,062	989	916
TOTAL		13,038	12,885	13,123	13,271		1,657	1,799	1,524	1,196		14,646	14,634	14,600	14,427

For the purpose of these counts, "on-campus" includes any student with at least one course taken on WCU's main campus.
In fall 2020, WCU was 100% remote due to COVID. Data are not available to calculate the exact number (very small) of students who had in-person classes on WCU's main campus.

FALL UNDERGRADUATE ENROLLMENT BY GENDER					
	2020	2021	2022	2023	2024
Males	5,879	5,788	5,854	5,887	6,060
Females	8,834	8,681	8,532	8,453	8,385
Not Reported		2	6	4	4
TOTAL	14,713	14,471	14,392	14,344	14,449

FALL UNDERGRADUATE ENROLLMENT BY ORIGIN					
	2020	2021	2022	2023	2024
In-State	13,312	13,138	13,027	12,872	12,937
Out-of-State	1,368	1,300	1,326	1,439	1,473
International	33	33	39	33	39
TOTAL	14,713	14,471	14,392	14,344	14,449

FALL UNDERGRADUATE ENROLLMENT BY AGE					
	2020	2021	2022	2023	2024
17 or under	173	208	263	169	194
18-19	5,138	4,950	5,080	5,545	5,554
20-21	5,660	5,656	5,581	5,473	5,540
22-23	2,011	2,015	1,952	1,856	1,887
24-25	605	566	500	451	483
26-29	496	467	424	350	301
30 and over	630	609	592	500	490
TOTAL	14,713	14,471	14,392	14,344	14,449

**Class-standing is determined here by cumulative credits earned.
This number includes new FY and new TR with less than 30 TR credits

Projected Enrollment Changes					
	2025	2026	2027	2028	2029

CLASS	ENROLLMENT PROJECTIONS - FALL														
	FULL-TIME					PART-TIME					TOTAL				
	2025	2026	2027	2028	2029	2025	2026	2027	2028	2029	2025	2026	2027	2028	2029
UNDERGRADUATE															
Freshmen	4,040	4,043	3,907	3,903	3,900	98	98	95	95	95	4,138	4,141	4,002	3,998	3,995
Sophomores	3,418	3,430	3,424	3,421	3,416	149	140	149	149	149	3,567	3,570	3,573	3,570	3,566
Juniors	3,019	3,174	3,167	3,164	3,163	263	253	263	263	260	3,282	3,427	3,430	3,427	3,423
Seniors	2,667	2,527	2,668	2,665	2,662	615	615	619	619	619	3,282	3,142	3,287	3,284	3,281
Irregular/Transients	10	10	10	10	10	270	270	270	270	270	280	280	280	280	280
Indep/Distance Learning															
Subtotal	13,154	13,184	13,176	13,163	13,151	1,395	1,376	1,396	1,396	1,393	14,549	14,560	14,572	14,559	14,545
GRADUATE															
Graduate	1,006	1,017	1,028	1,034	1,035	1,395	1,386	1,392	1,398	1,399	2,401	2,403	2,419	2,432	2,434
Professional/Doctoral	42	42	42	42	42	253	253	253	253	253	295	295	295	295	295
Subtotal	1,048	1,059	1,070	1,076	1,077	1,648	1,639	1,645	1,651	1,652	2,696	2,698	2,714	2,727	2,729
TOTAL	14,203	14,243	14,245	14,238	14,228	3,043	3,015	3,041	3,047	3,046	17,245	17,257	17,286	17,285	17,274

On-campus Student Enrollment Projections

ON-CAMPUS ENROLLMENT PROJECTIONS - FALL															
	FULL-TIME					PART-TIME					TOTAL				
CLASS	2025	2026	2027	2028	2029	2025	2026	2027	2028	2029	2025	2026	2027	2028	2029
UNDERGRADUATE															
Freshmen	4,032	4,035	3,899	3,895	3,892	73	73	70	70	70	4,105	4,108	3,970	3,966	3,963
Sophomores	3,394	3,406	3,400	3,397	3,392	107	101	107	107	107	3,501	3,506	3,507	3,504	3,499
Juniors	2,948	3,099	3,092	3,089	3,088	157	151	157	157	156	3,105	3,250	3,249	3,246	3,244
Seniors	2,468	2,339	2,469	2,466	2,463	339	339	341	341	341	2,807	2,678	2,810	2,808	2,805
Irregular/Transients	10	10	10	10	10	100	100	100	100	100	110	110	110	110	110
Indep/Distance Learning															
Subtotal	12,852	12,888	12,870	12,858	12,846	776	764	776	776	774	13,628	13,652	13,646	13,634	13,620
GRADUATE															
Graduate	541	547	553	556	556	375	372	374	375	376	916	919	926	931	932
Professional/Doctoral	32	32	32	32	32	8	8	8	8	8	40	40	40	40	40
Subtotal	573	579	585	588	588	383	380	382	383	384	956	959	966	971	972
TOTAL	13,425	13,467	13,455	13,445	13,434	1,159	1,144	1,158	1,160	1,158	14,583	14,611	14,613	14,605	14,592

Housing Occupancy - Fall 2024*		
	Affiliated Housing	WCU Residence Halls
Freshman	1619	1528
Sophomores	788	432
Juniors	334	233
Seniors	197	88
All Graduate	33	
TOTAL		

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March 27, 2025

Michelle Ginsburg
West Chester University
700 S. High Street
West Chester, PA 19383

RE: West Chester University Parking Study
West Chester University Master Plan
West Chester Borough, West Goshen Township, and East Bradford Township, Chester County PA
TPD No. WCU.00004

Dear Michelle:

Traffic Planning and Design, Inc. (TPD) has completed this parking study in conjunction with the West Chester University (WCU) Master Plan study. The WCU campus is generally divided into the "north campus" which is situated within West Chester Borough and West Goshen Township, and the "south campus", which is situated in West Goshen Township and East Bradford Township.

The Master Plan includes providing connectivity between the north and south campus, enhancements to the residential and learning experiences by adding and renovating beds and educational space, in addition to other campus improvements. Based on the Enrollment Projected Report data, an estimated 198 students are anticipated to be enrolled in the Fall of 2029 compared to the Fall of 2023 (i.e. parking counts below performed in the 2023-24 school year). It is TPD's understanding that the changes in enrollment will result in no discernable changes to the current personnel/staffing for WCU, which is a total of 1,928 Full Time Equivalent staff (as of the Fall 2023).

In addition, the Master Plan includes adding an estimated 819 new beds on campus. Enrollment is not anticipated to increase in line with the additional beds, but rather the additional beds are anticipated to accommodate existing students who currently commute to campus and/or currently live off-campus. Furthermore, the following roadway segments within West Chester Borough are proposed to be closed to vehicular traffic and open for pedestrian traffic only in order to enhance pedestrian mobility, subject to the Borough's review and approval:

- Church Street from North Campus Drive (Parking Garage Access) to University Avenue.
- University Avenue from approximately 120' west of Reynolds Alley to Church Street.
- The southern leg of Church Avenue at Rosedale Avenue.

In conjunction with the above road closures on Church Street and University Avenue, a portion of on-street parking is anticipated to be eliminated.

This report has been prepared in accordance with the following ordinances:

- West Chester Borough Section 112-314.H *Planned University Campus District, University Campus Parking Study.*
- West Goshen Township Section 84-141, *Planned University Main Campus Overlay District, University Main Campus Parking Study.*

Appendix E

Data Collection

In accordance with the West Chester Borough and West Goshen Township ordinances, parking occupancy counts were completed during the weekday afternoon (11:00 A.M.-1:00 P.M.) and the weekday evening (5:00-7:00 P.M.) peak time periods at the parking areas in both the University's North Campus and South Campus. The surface lot counts were performed using drone imaging, and the parking garage counts were performed manually by a technician. These counts were completed on Thursday, April 25, 2024, when classes were in session. The University's parking areas are illustrated on the **attached** Parking Plans prepared by CVE, dated 1/27/25.

Existing Parking

Results of the parking counts are summarized in **Table 1** below. A detailed inventory of parking areas at the time the parking counts were completed is **attached**.

TABLE 1
EXISTING PARKING COUNT SUMMARY

Campus	Type	Total Spaces	Midday Peak		Evening Peak	
			Occupied	Unoccupied	Occupied	Unoccupied
North Campus	Off-Street	3471[1]	2809	657	1653	1818
	On-Street	275	180	95	118	157
	Subtotal	***3746[1]***	***2899***	***752***	***1771***	***1975***
South Campus	Off-Street	2190	1055	1135	881	1309
	On-Street	0	0	0	0	0
	Subtotal	***2190***	***1055***	***1135***	***881***	***1309***
Total	Off-Street	5661[1]	3864	1792	2534	3127
	On-Street	275	180	95	118	157
	Total	***5936[1]***	***4044***	***1887***	***2652***	***3284***

1. *The 204 Carter Drive Lot with 46 parking spaces was added in January 2025, and is not included in this total, as it was not open at the time the parking occupancy counts were completed.*

As shown in **Table 1**, the existing parking demand of the WCU campus is 4,044 spaces for both the north and south campus. The peak parking demand for the north campus is 2,899 spaces. The peak parking demand for the south campus is 1,055 spaces.

Future Parking

As part of the master plan project, road closures are proposed to enhance pedestrian mobility on the campus, and would eliminate a portion of on-street parking on Church Street and University Avenue. It is estimated that ±52 on-street parking spaces would be eliminated with the closure of Church Street to vehicular traffic, and ±24 on-street parking spaces would be eliminated with the closure of University Avenue to vehicular traffic. Additionally, the off-street Lot M1 will temporarily be utilized for modular housing which will temporarily reduce the parking spaces in this lot by 135 spaces, leaving 68 spaces in lot M1. The future parking space inventory is summarized in **Table 2**.

TABLE 2
FUTURE PARKING COUNT SUMMARY

Campus	Type	Total Future Spaces
North Campus	Off-Street	3343[1]
	On-Street	199
	Subtotal	***3542[1]***
South Campus	Off-Street	2190
	On-Street	0
	Subtotal	***2190***
Total	Off-Street	5533[1]
	On-Street	199
	Total	***5732[1]***

1. *The 204 Carter Drive Lot with 46 parking spaces was added in January 2025, and is not included in this total, as it was not open at the time the parking occupancy counts were completed.*

Parking Analysis

To determine if the proposed parking is sufficient to support the future anticipated enrollment of WCU based on the Master Plan projections, the peak parking demand was evaluated based on the Institute of Transportation Engineers' (ITE) Parking Generation Manual, 6th Edition, 2023. For the WCU Master plan, Land Use Code #550 (University/College), was used to calculate the peak parking demand during a typical weekday based on the 2029 projected student enrollment.

As noted, the student enrollment projection analysis indicates an estimated additional 198 students will be enrolled in the Fall of 2029 when compared to the 2023-24 school year when the parking counts were conducted. The parking demand for the estimated additional 198 students was calculated based on ITE data and added to the existing parking demand based on parking counts to determine the future parking demand.

Table 3 shows the ITE parking generation data and the associated calculations for the weekday (Monday-Friday) average peak parking demand for the estimated additional 198 students projected to be enrolled in 2029. Please note, while the ITE peak parking demand calculation is based on using students as the variable, the resultant peak parking demand encompass all parking users (i.e. students, staff, visitors, etc.). In addition, the calculated peak paring demand rate based on the existing peak parking demand (**Table 1**) and the existing enrollment is approximately 75% of the ITE peak parking demand rate below. As such, the use of the ITE represents a conservative evaluation.

TABLE 3
ITE PARKING DEMAND: WEEKDAY (MONDAY-FRIDAY)

Land Use	ITE #	X	Average Rate (Weekday)	Peak Parking Demand
University/College	550	198 students[1]	P = 0.32*(X)	64 spaces

P = Peak Parking Demand; X = independent variable (total increase in student enrollment)
1 = Based on student enrollment data, includes full-time and part-time undergraduate and graduate students.

As shown in **Table 3**, based on the ITE data, the 2029 projected student enrollment increase is anticipated to have a peak parking demand of 64 spaces. As summarized in **Table 1**, during the peak parking period, 657 off-street parking spaces are unoccupied on the North Campus. Accounting for the temporary loss of 135 off-street spaces due to the modular housing in Lot M1, 522 off-street parking spaces would be unoccupied. According to the West Chester Borough University Campus District Ordinance, "85% of existing, unused areas allocated for off-street parking…may be credited towards the satisfaction of the university campus plan's projected parking requirements." The West Goshen Township Ordinance has similar language regarding an unused off-street parking credit, with credit being 95%. In order to provide a conservative evaluation, the lower 85% credit was applied to the North Campus unused off-street parking. As such, the additional demand of 64 spaces will be sufficiently accommodated by the currently unused 443 (85% of 522 spaces) off-street parking spaces located on the North Campus. In addition, as noted in **Tables 1 and 2**, the off-street parking totals do not include the 204 Carter Drive Lot (46 additional parking spaces) that was added in January 2025. Also, as noted in **Table 1**, the South Campus has in excess of 1,100 available off-street parking spaces during the midday and evening peak time periods.

In addition, as noted previously, the additional peak parking demand includes all parking users (i.e. students, staff, visitors, etc.). As such, the additional peak parking demand of 64 will be dispersed over the various WCU parking lots, and are not anticipated to be concentrated in one given parking area. Given the substantial number of available parking spaces and the relatively limited number of additional parking required based on the Master Plan enrollment projections, the anticipated change in parking demand relative to current conditions is anticipated be limited. However, it is recommended that the parking be monitored in the future with specific WCU land development applications.

WCU currently implements a number of Transportation Demand Management (TDM) measures in order to reduce parking in the area consistent with the West Chester Borough Parking Guide, including the following:

- Shuttle system to both on-campus and off-campus locations
- Discounted transit fare program
- Carpool preferential parking
- On-site car-sharing vehicles
- Commuter information center
- Flexible or alternative work hours for workers
- TDM education programs directed at the students and employees

Furthermore, WCU currently has parking procedures in place during football games, which are planned to be remain. These procedures include temporarily restricting parking in lots by the Stadium as games approach, temporarily moving this parking to North Campus lots (M, M-1, M-2, and Matlack Garage), and utilization of the WCU shuttle service by students and fans.

Recommendations

TPD has made the following recommendations in relation to Parking for the proposed WCU Master Plan:

- As specific Land Development applications are pursued for projects contemplated under the WCU Master Plan, monitor and evaluate parking in the immediate area the given application.
- Continue to monitor and provide convenient shuttle service to facilitate parking in lots that may be more remote to a desired building/destination on campus.
- In conjunction with specific Land Development applications, provide pedestrian paths/walkways to facilitate pedestrian connections to the specific application.

Sincerely,

TPD

Guido W. DiMartino, P.E.
Regional Leader – Transportation Planning

Attachments

NORTH PARKING SPACES

NO	DATE	REVISION

PARKING PLAN
FOR
WEST CHESTER UNIVERSITY
WEST GOSHEN TOWNSHIP, EAST BRADFORD TOWNSHIP, WEST CHESTER BOROUGH - CHESTER COUNTY - PENNSYLVANIA

ChesterValley ENGINEERS, INC.
112 Moores Road, Suite 200, Malvern, PA 19355
610-644-4623
www.chestervalley.com

PROJECT NO. 22002
F.B.

SCALE	DATE	DRAWN BY	CHECKED BY	DRAWING
1"=120'	01/27/2025	ND	NC	

Scale in Feet
0 24 48 72 96 120 240 360 480
1" = 120'

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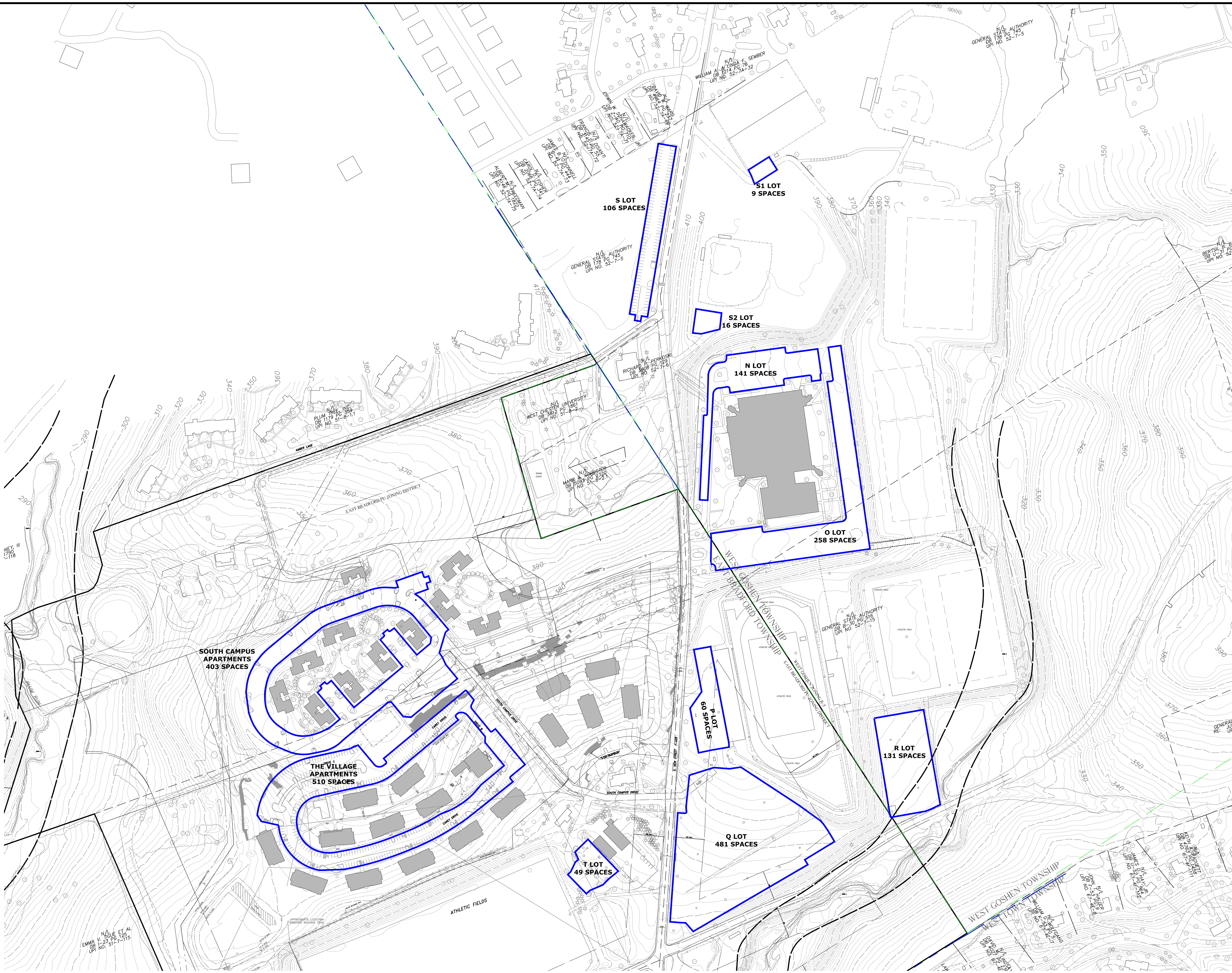
(1) CONSTRUCTION INDUSTRY STANDARDS AND INTERPRETATIONS (OSHA 2207) SUBPART "P", PART 1926/1910 - "EXCAVATIONS, TRENCHING AND SHORING"

(2) "EXCAVATIONS AND TRENCHING OPERATIONS" (OSHA 2226) DATED 1985 (REVISED).

SEE SHEET ___ FOR FACILITY OWNER'S DESIGNATED OFFICE ADDRESS AND TELEPHONE NUMBER.

PENNSYLVANIA ONE CALL SYSTEM, INC
CALL 3 WORKING DAYS BEFORE YOU DIG
1-800-242-1776
POCS SERIAL NUMBER: ____

J:\CV_CAD\00-2000\West Chester University\dwg\Sheets\SHT 01 PARKING-NORTH AND SOUTH.dwg, 1/29/2025 9:08:03 AM,



KEY MAP
SCALE 1"= 2500'

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UNIFORM PARCEL IDENTIFIER:

PENNSYLVANIA ACT 187 REQUIREMENTS
UNDERGROUND UTILITIES SERIAL NOs.________
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Scale in Feet
0 24 48 72 96 120 240 360 480
1" = 120'

SOUTH PARKING SPACES

NO.	DATE	REVISION

PARKING PLAN
FOR
WEST CHESTER UNIVERSITY
WEST GOSHEN TOWNSHIP, EAST BRADFORD TOWNSHIP, WEST CHESTER BOROUGH - CHESTER COUNTY - PENNSYLVANIA

ChesterValley ENGINEERS, INC.
112 Moores Road, Suite 200, Malvern, PA 19355
610-644-4623
www.chesterv.com

PROJECT NO. 22002
F.B.

SCALE	DATE	DRAWN BY	CHECKED BY	DRAWING
1"=120'	01/27/2025	ND	NC	

J:\CVE-22000\22002 West Chester University\dwg\Sheets\SHT 01 PARKING-NORTH AND SOUTH.dwg, 1/29/2025 8:37:10 AM, .

WCU - North Campus - Preliminary Parking Data

Lot Letter	Name	Location	Total Available Spaces	Thursday 4/25/2024					
				Midday			Evening		
				Occupied	Unoccupied	% Occupied	Occupied	Unoccupied	% Occupied
	New St Garage	New Street/Nields Street	448	406	42	91%	289	159	65%
	Student Recreation Center Garage	New Street/Sharpless Street	79	41	38	52%	26	53	33%
	The Commons Garage	Church Street/N Campus Drive	458	408	50	89%	263	195	57%
	Sharpless Parking Garage	Sharpless Steet/Church Street	379	286	93	75%	175	204	46%
A	A Lot	Sharpless Garage Surface Lot	22	21	1	95%	3	19	14%
B	B Lot	Reynolds Alley	57	45	7	79%	24	33	42%
G	G Lot	High Street/Linden Street	40	29	11	73%	29	11	73%
	Matlack Parking Garage	East Campus Drive/Matlack St	417	290	127	70%	110	307	26%
On-Street	S. New St, Street Parking	Sharpless to Rosedale	63	23	40	37%	14	49	22%
On-Street	S. Church St, Street Parking	Sharpless to Rosedale	73	57	16	78%	39	34	53%
On-Street	Sharpless Street Parking	New St to Church St	99	64	35	65%	32	67	32%
On-Street	University Avenue Street Parking	High Street to Church Street	40	36	4	90%	33	7	83%
E	Lot E	Lawrence Hall	17	16	1	94%	9	8	53%
	Schmidt Hall	New St/Rosedale Ave	13	6	7	46%	1	12	8%
L	Lot L	Basketball Courts	124	123	1	99%	21	103	17%
	114 Rosedale		12	11	1	92%	1	11	8%
K	Lot K	Sykes Hall (south side)	302	292	10	97%	239	63	79%
J	J-Lot (Messikomer Hall)	Rosedale Ave/Church St	13	12	1	92%	3	10	23%
I	I-Lot (30 Rosedale Ave)	28 W Rosedale Ave	15	14	1	93%	3	12	20%
M	Lot M	High St/E Campus Drive	437	404	33	92%	260	177	59%
M1	Lot M1	Matlack Surface Lot	203	148	55	73%	53	150	26%
M2	M2	Matlack Fields surface lot	40	8	32	20%	5	35	13%
Z/Z1	Lot Z/Z1	220 E Rosedale Ave	14	14	0	100%	2	12	14%
W	Lot W		4	3	1	75%	0	4	0%
W1	Lot W1		12	11	1	92%	2	10	17%
V	Lot V		84	75	9	89%	16	68	19%
U	Lot U		70	30	40	43%	20	50	29%
H	H-Lot	Between SSC & Killinger	14	14	0	100%	9	5	64%
	624 S. High Street		6	3	3	50%	1	5	17%
	Sharon Alley	701-703 S High Street	11	4	7	36%	4	7	36%
	809 Roslyn Avenue		5	3	2	60%	4	1	80%
	811 Roslyn Avenue		3	2	1	67%	0	3	0%
M4	M4-Lot (887 S Matlack Street)		38	6	32	16%	3	35	8%
	Business Pubic Affairs Building	Sharpless St/Reynolds Alley	2	0	2	0%	1	1	50%
	College Arms Apartments	S. High Street/Rosedale Ave	57	33	24	58%	29	28	51%
	FHG Library (S)		11	4	7	36%	4	7	36%
	FHG Library (West) - Old		7	5	2	71%	5	2	71%
	Filano Hall	High Street/University Ave	5	3	2	60%	1	4	20%
	Main Hall Loading Dock		2	0	2	0%	1	1	50%
	Mitchell Hall (Rear)	Church Street	3	1	2	33%	0	3	0%
	Phillips Memorial Building	University Ave/High St	3	1	2	33%	2	1	67%
	Wayne Hall	Rosedale Ave/Roslyn Ave	14	13	1	93%	10	4	71%
	Brandywine Hall		18	18	0	100%	18	0	100%
	Church Street (People/Ehinger)	North side of People's Bldg	7	1	6	14%	2	5	29%
	823 S. High Street		5	5	0	100%	5	0	100%
Total			3746	2989	752	80%	1771	1975	47%

Estimated number of spaces: 1 street parking space = 20 ft

Estimated number based on tree cover blocking some spaces from drone image.

Not counted. Assumed to be fully occupied.

WCU - South Campus - Preliminary Parking Data

Lot Letter	Name	Location	Total Available Spaces	Drone Image Thursday 4/25/26					
				Midday			Evening		
				Occupied	Unoccupied	% Occupied	Occupied	Unoccupied	% Occupied
Q	Q-Lot (Farrel Stadium Lot South)	Stadium Rd/New St	481	200	281	42%	167	314	35%
P	Farrel Stadium Front (P Lot)	New St, east side	60	7	53	12%	5	55	8%
R	R-Lot (Stadium Lot Southeast)	Stadium Rd	131	65	66	50%	57	74	44%
N	N-Lot	North of O-Lot	141	25	116	18%	4	137	3%
O	O-Lot (Sturzebecker/Natatorium Lot/O-Lot)	New Street, east site	258	125	133	48%	85	173	33%
S	S Lot	New Street, west side	106	16	90	15%	8	98	8%
	Village Apartments	S Campus Drive/New St	510	379	131	74%	389	121	76%
	South Campus Apartments	S. Campus Drive	403	216	187	54%	157	246	39%
S1	S1-Lot (Tennis Courts)		9	3	6	33%	9	0	100%
S2	S2-Lot (Softball Fields)		15	1	14	7%	0	15	0%
	850 S. New Street		8	6	2	75%	0	8	0%
S3	S3-Lot (Serpico Lot)	Baseball Field	10	3	7	30%	0	10	0%
T	T-Lot (Hockey Fields)	S. New Street/S Campus Dr	49	9	40	18%	0	49	0%
T1	McCoy Farmhouse Grounds	S. Campus Dr, north side	9	0	9	0%	0	9	0%
Total			2190	1055	1135	48%	881	1309	40%

Estimated number based on tree cover blocking some spaces from drone image.