TROWBRIDGE
WOLF
MICHAELS

TWLA
LANDSCAPE ARCHITECTS

Brent Cross
Village of Cayuga Heights
Marcham Hall
836 Hanshaw Road
Ithaca, NY 14850

August 8, 2016

Dear Brent, Members of the Planning Board and Members of the Zoning Board,

Enclosed please find updated materials for the Corners Community Center Medical Office Building project under consideration for site plan approval by the Village.

As discussed during the July Planning Board meeting, the traffic study was completed in May which prompted design response in June. As such, proposed square footage and parking counts, while within close proximity to each other, did not align precisely between the traffic study and the most current design. Enclosed please find an updated traffic study, in which the traffic analysis aligns with the current proposed design.

As further reviewed during the July meeting, the Planning Board requested a better understanding of the existing pedestrian amenities on site. The board specifically urged the developer to provide a more direct connection to the Pleasant Grove bus stop and to consider providing crosswalk and striping at the connection to the private apartment complex to the south (at the expense of parking). Sidewalk which connects the Pleasant Grove entrance to the pedestrian system on the interior of the site has been added to the proposed site improvements and one parking space has been removed (striped out) and crosswalk symbols added to the southern lot. Attached please find replacement sheets for the Illustrated Site Plan and Parking Diagram which reflect these changes. In response to the request for greater pedestrian route information, a Pedestrian Circulation Diagram, which identifies existing and proposed pedestrian routes, bicycle racks and bus stop locations, is also attached.

Typos in the original submission, which were noted at the meeting for folks who had printed copies, have been corrected. These corrections are incorporated into the attached updated narrative.

Thank you for your continued attention and review of this project. If you have any questions or require further information, please do not hesitate to call. The developer is putting together an open house to reach out to neighbors and the community. I have forwarded your traffic-related questions to SRF, and the traffic engineer will be in attendance at your August 22nd meeting to answer questions. At that meeting we are hoping to receive action on the following items: Public Hearing & SEQR Determination.

Sincerely,

Kimberly Michaels
Principal

Trowbridge Wolf Michaels Landscape Architects LLP
1001 West Seneca Street, Suite 101 Ithaca, New York 14850 ph: 607.277.1400
www.twm.la

TROWBRIDGE WOLF MICHAELS
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1001 W. Seneca St., Ste. 101 Ithaca, NY 14850
607-277-1450 Fax 607-277-6092

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Corners Community Center, Inc.

MEDICAL OFFICE BUILDING

Village of Cayuga Heights, New York

DATE:	08/08/2016
PROJECT:	15039
DRAWN BY:	CRH/ZDR
CHECKED:	KAM

ILLUSTRATED SITE PLAN

L100

TOTAL PROPOSED PARKING = 298 SPACES

TWLA
LANDSCAPE ARCHITECTS
1001 W. Seneca St., Ste. 101 Ithaca, NY 14850
607-277-1400 Fax 607-277-6092

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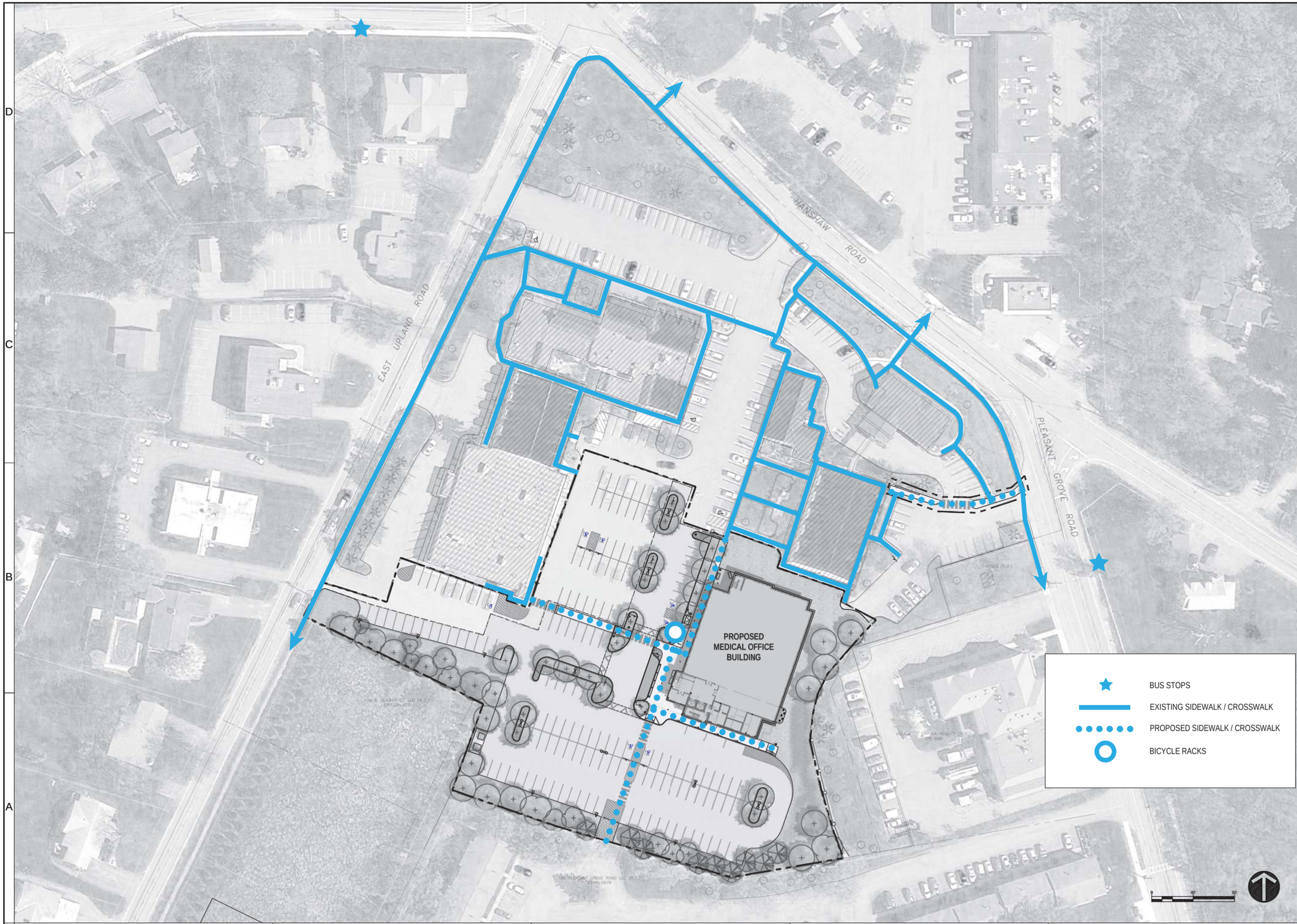
MEDICAL OFFICE BUILDING

Village of Cayuga Heights, New York

DATE:	08/08/2016
PROJECT:	15039
DRAWN BY:	CRH/ZDR
CHECKED:	KAM

PROPOSED PARKING DIAGRAM

G102



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Corners Community Center, Inc.

MEDICAL OFFICE BUILDING

Village of Cayuga Heights, New York

DATE:	08/08/2016
PROJECT:	15039
DRAWN BY:	CRH/ZDR
CHECKED:	KAM

PEDESTRIAN CIRCULATION

G103

8/8/2016 2:15:33 PM

HOLT ARCHITECTS

Architecture
Planning
Interior Design

217 North Aurora Street
Ithaca NY 14850
p 607.273.7600 f 607.273.0475

WARNING: It is a violation of New York State Law for any person, unless acting under the direction of a licensed Architect, to alter this document in any way. If a document bearing the seal of an Architect is altered, the altering Architect shall affix to such document his seal and the notation "altered by" followed by his signature, the date of such alteration, and a specific description of the alteration.

REVISION SCHEDULE	
REV. NAME	REV. DATE

NEW CONSTRUCTION

COMMUNITY CORNERS MEDICAL OFFICE BUILDING

CORNER'S COMMUNITY CENTER, INC.
903-909 HANSHAW ROAD, ITHACA NEW YORK 14850

DATE:	07/18/2016
PROJECT:	14048
OTHER:	
DRAWN BY:	Author

AXONOMETRIC VIEW

A1

PROJECT DESCRIPTION

BUILDING

Project Need and Goals

In 2014 Cayuga Medical Associates (CMA) started a process to identify possible sites on the northeast side of Tompkins County for a new medical office building to co-locate consolidated Outpatient Cardiology services and an expanded Internal Medicine practice. After evaluation of several location options, CMA came to agreement with Corners Community Center, Inc. to explore in depth the option of locating a new office building on the Corners Community property. The availability of a suitable site, proximity to major streets, Route 13 and public transportation makes this site very desirable for CMA. CMA's other selection criteria included the provision of convenient and adequate parking, complementary businesses nearby and a location close to current CMA patients. In addition, CMA's and Cayuga Medical Center's long relationship with Island Health and Fitness make this a desirable location.

Proposed Program

The proposed tenants include a primary care (internal medicine) practice (A102) on the second floor and a cardiology outpatient practice, including cardiac diagnostic services on the first. Cardiac diagnostics includes facilities for stress tests, EKGs and nuclear imaging (A101).

The building is designed primarily to accommodate outpatient medical practices, but could be utilized in the future for other types of professional services. Below is a summary of the proposed programs.

	Building Gross Area (SF)	Lease Area (SF)	# of Providers on site*	Total Staff incl. Providers	# of Exam and Treatment Rooms	# of Patients/ day
First Floor Total Cardiology and Cardiac Diagnostics	14,100	10,980	5	25	22*	150
Second Floor Total Internal Medicine Shared Staff Facilities	14,100	12,220	7 7 0	27 27 0	21 21 0	150
TOTAL (including stair to roof)	28,200	23,200	12	52	43	300

*Providers include Physicians, Physician Assistants and Nurse Practitioners. Providers may be on site part time, so the number of offices included in the project does not reflect the actual number of providers on site and seeing patients at any time.

There will be no unusual mechanical, electrical or plumbing systems. There will be no piped medical gases.

Building Design

The design team at HOLT Architects has approached this project as an extension of the current environment of Corners Community. The existing buildings are typically 1½ to 2 stories high with roof peaks up to 34' high. Various buildings have both sloped and flat roofs. Dormers are utilized on many structures. Covered walkways or porches are utilized at most of the store fronts. Buildings are typically white painted masonry and siding, asphalt shingle roofs, with some brick and stone veneer accents. The building footprint is designed to address the programmatic needs of CMA, utilizing a flexible structure, as well as addressing the exterior aesthetic criteria noted below (A101, A102).

- The building is designed to reduce the visual mass of the two story structure utilizing sloped roofs and lowered eave lines.
- Sloped roof forms are the predominant feature of the building exterior, including gable ends facing north and south and at the main building entrance, similar to existing adjacent buildings. (A201) Flat (ie – low slope) roofs are utilized at the covered walkway roofs, dormers and limited locations at the north and south facades. The center of the building will have a flat roof providing a concealed location for mechanical equipment.
- Window dormers have been introduced at the second floor, complementary to adjacent buildings. (A3, A4)
- A covered walkway runs along the west face of the building, extending the existing system of covered sidewalks to the new building entrance. (A1, A201)

Building Description

The following materials are proposed for the building:

Exterior Building Materials:

1. Wall systems:
    a. Walls will be a combination of fiber cement siding (prefinished), metal panels and masonry (painted or natural finish) to relate to the existing painted masonry and siding.
2. Roof systems:
    a. Standing seam metal roofing on sloped roofs.
    b. Single-ply roofing at low slope roof areas

Building Structure:

1. Foundations: Soil conditions allow for concrete spread footings, concrete or masonry foundation walls. The building will have no basement and will be slab on grade.
2. Floor and Roof Systems: The building structure will have a structural steel frame. Light gauge steel or wood trusses will be utilized on sloped roof sections.

▪

SITEWORK

Sitework will include site grading, developing tree-lined sections of streets with planting beds along the main drive lanes, screening along the south edge of the project, enhanced pedestrian crossing through the parking lot, concrete sidewalks with granite curbs, extension of outdoor courtyards, stormwater management, improved parking lot circulation, enlarged parking stalls, drop off, and vehicular circulation large enough to accommodate fire truck, ambulance, garbage truck and semi-truck access. The project will result in a net addition of 14 parking spaces for Corners Community Center. See attached Illustrated Site Plan (L100).

Circulation/Access

Vehicular Circulation: Vehicles entering Corners Community Center currently have access to the site from a driveway along Hanshaw Road, three driveways along Upland Road and one driveway along Pleasant Grove Road. Although unauthorized, a connection between Corners Community Center and the Carriage House Apartments is used by vehicles to access the site.

From Hanshaw Road, vehicles can access the proposed medical office building by driving along Corners Community Center and may park, turn down parking aisles or loop around for drop off.

From the southern Upland Road driveway, vehicles can access the proposed medical office building by driving past Island Health & Fitness and may park, turn down parking aisles or drop-off at the main Medical Office Building Entrance.

Access from the Pleasant Grove Road driveway will be modified in the proposed plan. The existing perimeter road will terminate just north of the Fire House. Vehicles turning into Pleasant Grove will have access to parking spaces at the eastern end of Corners Community Center, but will not have access through to the rest of Corners Community Center. The existing "no left turn" sign on the property adjacent to the Chemung Canal Trust Company Drive-thru will be removed. Traffic volume will be reduced at the Pleasant Grove Road driveway.

The unauthorized driveway between Corners Community Center and the Carriage House Apartments will be closed to public traffic but made accessible for pedestrians and emergency vehicles. There are no deed or right of way conflicts with terminating this unauthorized connection.

Access for delivery trucks will not be changed in the proposed design. Proposed widths and radii for the main circulation drives are designed to allow 18-wheeler vehicle access to the site. All other turning radii & widths will be adequate to accommodate box trucks, emergency response vehicles, delivery vehicles & trash removal.

<u>Pedestrian & Bicycle Circulation</u>: Pedestrians currently access Corners Community Center via sidewalks on Hanshaw Road, Upland Road and Pleasant Grove Road. Cyclists access Corners Community Center via roadside bike lanes on Hanshaw Road and Pleasant Grove Road. There are two bus stops within a block of the project site (marked on map below). Both are connected to village sidewalks which provide a path of travel for pedestrians to the site.

Within Corners Community Center, pedestrians circulate along sidewalks and covered walkways adjacent to storefronts. Cyclists ride along vehicle driveways and dismount at walkways. The project will include an improved pedestrian crossing between Island Health & Fitness and the Medical Office Building, at the Pleasant Grove Road driveway and between the apartments and the site. The medical office building will include secure parking for ten bicycles. See attached Pedestrian Circulation Diagram (G103), Illustrated Site Plan (L100) and Site Layout Plan (L201) drawings.

Traffic

Traffic Engineers, SRF Associates has evaluated the proposed plans & program in concert with current traffic counts. Based upon their comprehensive analysis, the results indicate that the proposed development will not have significant adverse traffic or impacts to the existing roadway network or parking impacts to the existing and proposed conditions. The following conclusions and recommendations were made by SRF based upon the results of their analyses:

1. The proposed Medical Office Building at Corners Community Center is expected to generate approximately 53(14) vehicles entering the Corners Community Center during the AM(PM) peak hours respectively and 26(67) vehicles exiting the Corners Community Center during the AM(PM) peak hours.
2. The proposed development will not result in any potentially significant adverse traffic impacts to the study area intersections.
3. No mitigation is warranted or recommended at any of the study intersections as a result of the proposed Medical Office Building development.
4. The parking analysis indicates that the proposed parking spaces will be sufficient to accommodate parking needs during the majority of the time. During the peak month of December there may be times of the day when the parking lots reach 90% capacity.

Please see the full Traffic Study (enclosed) for more detail and an intersection by intersection analysis.

Parking

Corners Community Center currently contains 285 parking spaces and is not fully utilized. The traffic study identified that approximately 94 spaces are available on site, given the current use and program. The proposed project will utilize the excess site parking and add 13 spaces for a total of 298 spaces. Current arrangements with off-site businesses parking on the property and unauthorized uses (folks who are not patrons, but park and take the bus to cornell, for example) will be discontinued.

Additionally, existing spaces less than 8'-6" wide within the project area will be increased to 8'-6" wide and new spaces will be 9'-0" wide. Please see the attached Existing Parking Diagram (G101), Proposed Parking Diagram (G102) and the attached Traffic Study.

As per Village of Cayuga Heights Article IX Section 14. Garages and Parking Facilities, "Every non-residential structure, commercial, or otherwise, shall provide off-street garage or parking space sufficient to accommodate the cars of employees and the number of cars anticipated to be attracted by the facilities of such structure at any time."

Parking needs have been evaluated by SRF, Traffic Engineers, based on the existing to remain and proposed occupancy/uses on site. The parking analysis indicates that the proposed parking spaces will be sufficient to accommodate parking needs during the majority of the time. During the peak month of December there may be times of the day when the parking lots reach 90% capacity.

Please see the full Traffic Study (attached) for more detail.

Site Lighting

The Corners Community Center Medical Office Building project will include pedestrian scale lights and vehicular lights. Pedestrian lights will be between 12' and 14' in height and located at crosswalks, walkways and building entrances. Vehicular lights will be between 18'-22' in height and located within the parking lot to illuminate all driveways, parking aisles and parking stalls. Lighting will be designed to be dark sky compliant. See attached Illustrated Site Plan (L100) and Site Layout Plan (L201) drawings.

Snow Removal/Trash

Snow removal is provided along the entire southern edge of Corners Community Center. Trash will be collected and removed from a double bay dumpster pad located south west of the proposed Medical Office Building. See attached Illustrated Site Plan (L100) and Site Layout Plan (L201) drawings.

Hazardous Materials

Medical practices within the proposed project are not high generators of regulated waste. Small amounts of nuclear isotopes are utilized in nuclear imaging. These are handled in a specially designed room and disposed of in accordance with Nuclear Regulatory Commission regulations. Disposal of medical waste is tightly regulated by The NYS Department of Health and Department of Environmental Conservation and will be picked up, treated and disposed of by a licensed disposal company.

Landscaping

Drive lanes within the project will be landscaped with hardy deciduous shade trees, ornamental trees and shrub plantings. The south edge of the project will be screened with a mixture of deciduous and evergreen trees. Stormwater practices along the south edge will be landscaped with a low mow seed mix. Free-standing Greenscreen columns adorned with showy vines will be located east of the full height widows at the medical office building waiting room. Trees along the main drive adjacent to the medical office building will be planted in structural soil with flexible porous pavement at the surface, allowing the trees to thrive while providing full access to the adjacent sidewalk from parking stalls. Hardwood bark mulch in planting beds will discourage weeds and nourish soils in planting beds. See attached Planting Plan (L401) and Detail (L501-L502) drawings.

Site Materials

The Corners Community Center Medical Office building project will utilize high quality site materials to create safe and long lasting improvement to the Corners Community Center. A new heavy duty concrete walk will provide pedestrian access across the Corners Community Center parking lot between Island Health & Fitness and the Medical Office Building. The concrete walkway adjacent to the medical office building will provide pedestrian access to Corners Community Center. Flexible porous pavement will provide access between parking stalls and the walkway along the main drive. A heavy duty concrete pad will support the trash dumpsters. 6" granite curbs will protect pedestrians and define parking areas within the project area. Seating benches will provide respite at the main medical office building entrance and at the breakout space north west of the building. Unit pavers will create a unique ground surface at the breakout space north west of the medical office building. Heavy duty unit pavers will provide a safety-enhancing visual indicator at the main entrance to the medical office building. See attached Detail drawings (L501-L502).

STORMWATER MANAGEMENT

Existing Conditions

The existing site cover is predominantly impervious with 69% of the site consisting of buildings, pavements or walkways. The property contains two watersheds. The majority of the property is located in the northern watershed and will largely remain unchanged. Runoff from several buildings and parking lots sheet drains westward towards East Upland Road and is collected by an existing on-site storm sewer. Ultimately, all runoff from the northern watershed enters the Village's storm system on East Upland Road. The southern watershed consists mainly of parking and the former bank drive through and either sheet drains southward or is collected by an existing on-site storm sewer. Runoff from the southern watershed is collected by an off-site drainage swale and conveyed southwards.

Proposed Improvements

The proposed re-development of the site will maintain these drainage patterns and will increase impervious cover from 69% to 70%. The footprint of new impervious surfaces will increase by 0.09 acres. The project is a previously developed site in an urban area and meets the State's definition of a "Redevelopment Project". As such, water quality treatment is required for 25% of the existing, disturbed impervious area and 100% of the new impervious area.

To address the water quality volume requirements, a bioretention filter will be installed in the southwest corner of the site. The filter will receive runoff from some of the adjacent parking lot by means of sheet flow and a diversion structure will be installed to direct water quality storm events to the filter practice from larger portions of the parking lot while bypassing larger storm events to the Village's storm sewer on East Upland Road. To mitigate stormwater runoff rates, a linear detention basin will be constructed along the southern property line to capture runoff before it enters the off-site swale. Please refer to the attached drawing (C101).

SITE UTILITIES

Utilities serving the site include municipal water and sanitary sewer, storm sewer, natural gas, electric and telephone. The existing 6" municipal water main will have to be re-routed around the south end of the proposed building. A new 6" combined service will provide domestic and fire supply to the building.

There are two existing sanitary sewers located on the site. This project will not utilize the line routed beneath the Becker-Wells Agency tenant space and the project will remove the line that currently connects to the former Tompkins Trust Company Bank drive through. A new lateral will be extended from the existing main on East Upland Road. A new manhole will be required at the connection point on East Upland Road, and an 8" main will be extended onto the property to facilitate future connections and will terminate at a new manhole located on the site. The new building lateral will be 6" in diameter and connect to the proposed on-site manhole.

Standard storm sewer improvements will consist of drain basins to support the site grading and will direct runoff towards the proposed bioretention filter, proposed linear detention basin, and existing storm sewer located on East Upland Road. Existing drainage patterns will be maintained.

Electric, gas and telephone will be extended to the new building from various locations on the site. An existing overhead utility pole will have to be relocated as a result of the parking lot reconfiguration and the surrounding building services will have to be re-feed from the new pole. Please refer to the attached drawing (C102).

ZONING VARIANCE REQUEST

Corners Community Center is seeking an area variance for lot coverage and a variance for the required separation of buildings:

Article Ix, Section 7. Building Coverage

Current zoning regulations allow up to 15% lot coverage for commercial districts. There is an existing variance for the Chemung Canal Trust branch allowing lot coverage for the existing conditions (approximately 17.18%). We request a variance to allow the lot coverage to increase to 20.64%. This increase is based on the demolition of two buildings in addition to the construction of the new building. The current lot coverage requirement is very limiting to the development of an underutilized area of the site. Lot coverage and the desired building gross and lease area have been balanced with parking requirements to result in the proposed building.

PROPOSED LOT COVERAGE SUMMARY

	Building Area in SF*	Lot Size in SF (7.19 Acres)	Lot Coverage
Existing Conditions – Total Site	53,797	313,197	17.18%
One Story Office to be Demolished	(3,099)		
One Story Bank to be Demolished	(1,577)		
Proposed Medical Office Bldg.**	15,500		
Proposed Total Site	**64,621**	**313,197**	**20.64%**

* Includes Eaves and Canopies greater than three ft.
**14,100 SF bldg. + 1,400 SF Canopy = 15,500 SF

Article Ix, Section 5. Height Of Buildings

The building has been redesigned to be two stories in height and will comply with the thirty foot building height limit. No variance is required for building height.

- The proposed building will have a floor to floor height of 13'-6" from first to second floor and 13'-6" from second floor to top of roof structure. Parapets at flat roof sections will be below thirty feet above first floor.
- The sloped roof design allows the eaves at second floor to be lower than 13'-6". The average height of the eave and peak of the roofs will be thirty feet above first floor. See the building elevations for more details about these heights. (A201)

Article Ix, Section 13. More Than One Building On A Lot

The project will not modify front yard setbacks for the Corners Community Center and exceeds requirements for side yard setbacks. However, the 21' space between the medical office building and the building immediately north will require a variance as per Article IX Section 13 More Than One Building On A Lot, "When there is more than one principal building on a lot in any district, the space between such buildings must be at least equal to the sum of the side yards required by such buildings or the sum of the rear and the front yards as the case may be." This would require a 60 ft. separation between the proposed new building and the existing 2 story building directly to the north. See attached Setback Diagram (G100).

Corners Community Center currently consists of two groupings of buildings on the east and west sides of the site. The groupings are separated by a distance exceeding the requirement. Within each grouping, none of the buildings are spaced in accordance with current requirements. The one story

building that will be demolished for this project is approximately 6' from the adjacent building. The proposed 21' spacing is in keeping with the character of the other structures on the site.

Cause of difficulty

While it may appear that the difficulties faced by this project were self-created, the program, design approach and building scope were developed with full understanding that the requirements of the existing Zoning Code would be exceeded. It has been the understanding of the owner and design team that revisions to the zoning requirements for the Commercial District, which would allow increased density and height consistent with the 2014 Comprehensive Plan, have been in the process of being drafted and reviewed by the Village. This work is not complete and the resulting modifications are not yet known.

The property owner is ready now to develop a portion of the site and has a substantial, respected tenant prepared to lease the proposed building. Without a revision to the Zoning Ordinance in place, the owner and design team are proposing variances that we believe are consistent with the intent of the comprehensive Plan, appropriate for the site and will hopefully be consistent with the future revisions to the Zoning Ordinances.

Character of the neighborhood or detriment to nearby properties

The proposed medical office building will be located in the middle of the site, with direct view from the street blocked at many points around the perimeter of the site. It will be a minimum of 220' from the nearest public street (Pleasant Grove Rd) and significantly exceeds the minimum setbacks: 47' from the Fire Station property line to the east and 125' from the property line of the Carriage House Apartments to the south and approximately 340' to the property line closest to the nearest single family residences, which are located on East Upland Rd. At its highest point, it will be more than 12' below the elevation of the roof of adjacent Fire Station on Pleasant Grove Road.

The proposed building will be placed at a location that will have a minimum effect on nearby properties. The major design components – sloped roofs, window dormers and the lower scale two-story building mass – help to maintain the scale and feel of the Corners Community Center. Refer the perspective views on A2, A3 and A4.

The proposed 21' spacing between the new building and the adjacent building to the north is similar in character the other buildings on the site.

A portion of the main north/south driveway leading from Hanshaw Road to the building site will be upgraded with sidewalks, islands and landscaping to create the feel of a "Main Street" on the site.

Alternative means of achieving project goals

The project goals for the Owner and Cayuga Medical Associates are:

- Provide adequate leasable area (approximately 23,200 SF) in a location close to CMA's patient population.
- Co-locate primary care and specialty services in a new environment designed to be responsive to the latest thinking on Patient Focused Care and new and changing regulatory requirements.
- Improve the environment of Corners Community Center.

Cayuga Medical Associates considered four sites in the northeast area and determined that Community Corners is the best location for its new facility.

Is requested variance substantial?
The requested variances do exceed the current requirements. We recommend that the requested variances are consistent with past development on the site and with the 2014 Comprehensive Plan.

Effect or impact of variance on the physical or environmental conditions in the neighborhood:
The physical upgrades to the property that will be completed as a part of this project will be an enhancement to the surrounding area.

Village of Cayuga Heights

MARCHAM HALL
836 HANSHAW ROAD
ITHACA, N.Y. 14850

Telephone
607-257-1238

Office Hours
9 A.M. - 4 P.M.

PERMIT APPLICATION FORM

PART A: PROJECT INFORMATION (TO BE FILLED OUT BY APPLICANT)

PROPERTY USE

- [ ] NEW ONE FAMILY #101
- [ ] NEW TWO FAMILY #103
- [ ] NEW MULTIPLE DWELLING #104
- [ ] EXISTING RESIDENTIAL #434
- [x] COMMERCIAL #437
- [ ] DEMOLITION #600

TYPE OF PERMIT REQUESTED

- [x] ZONING PERMIT #Z
- [x] BUILDING PERMIT #B
- [ ] ROW PERMIT #R
- [x] SITE PLAN REVIEW
- [ ] SUBDIVISION OF LAND
- [ ] OTHER

	NAME	ADDRESS	PHONE
PROJECT	Corners Community Center, Inc Medical Office Building	903 Hanshaw Road, Ithaca, NY	
APPLICANT	Kimberly Michaels, Trowbridge Wolf Michaels Landscape Architects, LLP	1001 West Seneca Street, Suite 201, Ithaca, NY	607 277 1400
OWNER	Tim Ciaschi	801 West Buffalo St.	607 272 2101
CONTRACTOR	TBD		

PROJECT DESCRIPTION:

The proposed project includes removal of two existing buildings, construction of a new 2-story building and associated sitework. The building will serve as a Medical Office and is designed to fulfill the programmatic needs of Cayuga Medical Associates while maintaining visual continuity with the surrounding architecture.

VALUE OF WORK: 5.6 Million

SIGNED BY: Kimberly Michaels, Trowbridge Wolf Michaels Landscape Architects

DATE: July 18, 2016

PART B: DETERMINATION (TO BE FILLED OUT BY CODE OFFICER)

APPLICABLE ZONING SECTION:

TAX PARCEL NO. _____

- [ ] 1. RESIDENCE DISTRICT
- [ ] 2. MULTIPLE HOUSING DISTRICT
- [ ] 3. COMMERICAL DISTRICT
- [ ] 4. OCCUPANCY
- [ ] 5. HEIGHT OF BUILDING
- [ ] 6. YARDS >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
- [ ] 7. BUILDING COVERAGE >>>>>>>>>>>>>>>>>>>>>>>>>>>>
- [ ] 8. PORCHES, DECKS, AND CARPORTS
- [ ] 9. FENCES AND WALLS
- [ ] 10. BUILDING FLOOR AREA
- [ ] 11.-16. OTHER _____
- [ ] 17. SIGNS

FRONT YARD =
SIDE YARDS =
REAR YARD =
BUILDING AREA =
LOT AREA =
COVERAGE =

APPLICABLE BUILDING CODE:

- [ ] RESIDENTIAL CODE OF NEW YORK STATE (see attached plan review form)
- [ ] BUILDING CODE OF NEW YORK STATE (see attached plan review form)
- [ ] PLUMBING CODE, MECHANICAL CODE, AND FUEL GAS CODE OF NEW YORK STATE
- [ ] FIRE CODE AND PROPERTY MAINTENANCE CODE OF NEW YORK STATE
- [ ] ENERGY CODE OF NEW YORK STATE (see attached REScheck form)

APPLICABLE ROW CONTROL:

- [ ] STREET OPENING (INCLUDING UTILITIES, DRIVEWAYS, ETC.)
- [ ] EASEMENT

DETERMINATION:	APPROVE OR DENIED BY:	FEE AND RECEIPT	DATE
[ ] ZONING PERMIT			
[ ] BUILDING PERMIT			
[ ] ROW PERMIT			
[ ] OTHER			

Village of Cayuga Heights
Zoning Board of Appeals
Application Form

ZBA Application Fee: $100

Check All That Apply:

X **Area Variance**

___ **Use Variance**

___ **Interpretation Request**

For Office Use Only

Date Received _____

Cash or Check _____

Zoning District _____

Applicable Section(s) of Village Code:

_____

_____

Property address: 903-909 Hanshaw Rd. Tax parcel: 10-4-1.2

Zoning Officer's determination: This property is in a Commercial District. Section 7. Building Coverage: Lot coverage exceeds 15 percent. ~~Section 13. More Than One building on a Lot: The space between t~~he proposed building and an existing building on the site is less than 60 feet (sum of 2 – 30' side yards)

Requested variance or interpretation: Lot coverage: There is an existing Variance for the Chemung Canal Trust branch increasing lot coverage to 17.18%. We are requesting an increase to 20.64%. Separation distance: We are requesting a reduction of building separation from 60 ft. to 21 ft.

Reason(s) that the requested variance or interpretation should be granted:

▫ See attached page for the criteria that the ZBA must use. ▫ Use additional sheets if necessary.

See supporting narrative for a description of the reasons.

Please attach any additional information that will help the ZBA to evaluate your appeal, such as a narrative, survey map, photos, building plans, etc.

By filing this application, you grant permission for Village of Cayuga Heights ZBA Members and Village Staff to enter your property for inspections related to your appeal.

Owner/Applicant: Kimberly Michaels of TWMLA for Corners Community Center, Inc., Timothy J. Ciaschi

Signature: _____ Date: _____

Phone number(s): (607) 277-1400 / (607) 279-3039

Email address: kam@twm.la / tciaschi.ccc@live.com

Traffic Impact Study

for the proposed

Corners Community Center
Medical Office Building

Village of Cayuga Heights
Tompkins County, New York

Project No. 36019

May 2016
Revised August 2016

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EXECUTIVE SUMMARY

OVERVIEW

The purpose of this report is to identify the potential traffic impacts and parking needs associated with the proposed Medical Office Building at Corners Community Shopping Center in the Village of Cayuga Heights, Tompkins County, New York. For traffic impacts, the operating characteristics of the proposed access points and impacts to the adjacent roadway network are identified. An analysis of parking demand and supply for the proposed development is also provided.

In an effort to define traffic impact, this analysis establishes existing traffic conditions, projects background traffic flow including area growth, and determines the traffic operations that would result from the proposed development. Future traffic volumes and operating conditions are then evaluated.

The proposed Medical Office Building at Corners Community Center consists of one two-story building with approximately 28,200 gross square footage (SF). The proposed project entails demolishing an existing one-story 3,600 SF office building and a 1,700 SF one-story bank building. The existing shopping center has multiple points of ingress and egress: one on Hanshaw Road, one on Pleasant Grove Road, and three on Upland Road which will continue to be used as access to the shopping center and proposed Medical Office Building. Proposed site improvements with the construction of the Medical Office Building close the internal vehicular connection at the south end of the plaza that currently allows Carriage House apartment residents and any other through traffic from Pleasant Grove Road to enter or exit the plaza from this southern location as shown in the accompanying Figures; pedestrian and bicycle connections will remain.

Construction of the proposed development is expected to be completed in 2017. Village of Cayuga Heights officials were contacted to discuss projects within the study area that are under construction and/or approved. One project that was approved 10 years ago was identified but has not shown progress. This proposed subdivision is located on the vacant land to the south of Corners Community Center and is an 8-lot subdivision which is anticipated to have single family dwellings on all but two of the lots.

The ambient traffic growth rate was derived by comparing past NYSDOT counts to current estimated AADT. Current AADT was estimated based upon existing 2016 PM traffic counts and was compared to NYSDOT Counts at two similar locations in the project area. These comparisons show little to no annual growth over the last six years. A growth rate of 0.25% was used to account for background growth and the proposed subdivision and determine background conditions for the one-year-build-out period (2017).

The operating characteristics of the study intersections and impacts to the adjacent roadway network are identified and mitigating measures, if any, are provided to minimize any capacity or safety concerns.

CONCLUSIONS & RECOMMENDATIONS

This study evaluates the potential traffic and parking impacts resulting from the proposed Medical Office Building at Corners Community Center. Based upon our comprehensive analysis, the results indicate that the proposed development will not have significant adverse traffic or impacts to the existing roadway network or parking impacts to the existing and proposed conditions. The following sets forth conclusions and recommendations based upon the results of the analyses:

1. The proposed Medical Office Building at Corners Community Center is expected to generate approximately 53(14) vehicles entering the Corners Community Center during the AM(PM) peak hours respectively and 26(67) vehicles exiting the Corners Community Center during the AM(PM) peak hours.

2. The proposed development will not result in any potentially significant adverse traffic impacts to the study area intersections.

3. No mitigation is warranted or recommended at any of the study intersections as a result of the proposed Medical Office Building development.

4. The parking analysis indicates that the proposed parking spaces will be sufficient to accommodate parking needs during the majority of the time. During the peak month of December there may be times of the day when the parking lots reach 90% capacity.

I. INTRODUCTION

The purpose of this report is to identify the potential traffic impacts and parking needs associated with proposed Medical Office Building at Corners Community Center in the Village of Cayuga Heights, Tompkins County, New York. The operating characteristics of the proposed access point and impacts to the adjacent roadway network are identified. An analysis of parking demand and supply for the proposed development is also provided.

In an effort to define traffic impact, this analysis establishes existing traffic conditions, projects background traffic flow including area growth, and determines the traffic operations that would result from the proposed developments. Future traffic volumes and operating conditions are then evaluated.

II. LOCATION

The proposed Medical Office Building is located on the south end of the Corners Community Center in the Village of Cayuga Heights, Tompkins County, New York. The site location and study area are shown in **Figure 1** – Site Location and Study Area (all figures are included at the end of this report).

The proposed Medical Office Building is surrounded by adjacent commercial and retail sites in the Corners Community Center. The Shopping Center is surrounded primarily by residential development. The study area consists of the following intersections:

- Hanshaw Road/ North Triphammer Road;
- East Upland Road/Triphammer Road/Hanshaw Road;
- three shopping center entrances along East Upland Road identified as North, Middle and South;
- one shopping center entrance on Hanshaw Road;
- Pleasant Grove Road/Hanshaw Road;
- one shopping center entrance on Pleasant Grove Road; and
- a driveway connection from the Carriage House Apartment parking lot to the south end of the Corners Community Center parking lot, which also allows access to Pleasant Grove Road, that will be removed with the construction of the site improvements associated with the proposed Medical Office Building project.

The intersection of Pleasant Grove Road with the entrance to the Carriage House Apartments is not included in the project analysis but existing data was collected at that location in order to account for the relocation of trips generated by the southern interior Corners Community Center connection that will be closed by construction of the project.

III. EXISTING HIGHWAY SYSTEM

All roadways in the project area are functionally classified as local roadways, under the jurisdiction of the Village of Cayuga Heights. Within the study area, motorists travel north and south or east and west using one travel lane in each direction. According to New York State Department of Transportation (NYSDOT) data in 2014 and 2010, Annual

Average Daily Traffic (AADT) on North Triphammer Road, approximately 1,558 feet north of Hanshaw Road is 10,743 vehicles per day (vpd) and on Hanshaw Road approximately 150' west of Pleasant Grove Road is 8,606 vpd, respectively. Data collected by SRF & Associates (SRF) in April 2016 indicates that immediately north of Hanshaw Road on North Triphammer Road the average daily traffic is approximately 10,620 vpd and on Hanshaw Road west of Pleasant Grove Road is 8,860 vpd. The posted speed limits on the roadways surrounding Corners Community Center are 30 miles per hour (MPH).

Figure 2 illustrates the lane geometry at each of the study intersections with data included for the Carriage House apartments driveway and the internal connection that allows passage between the apartment complex/Pleasant Grove Road and Corners Community Center.

IV. EXISTING TRAFFIC CONDITIONS

A. Peak Intervals for Analysis

Given the functional characteristics of the land use proposed for the Medical Office Building, the peak hours selected for analysis are the weekday commuter AM and PM peaks. The combination of site traffic and adjacent through traffic produces the greatest demand during these time periods.

B. Existing Traffic Volume Data

Weekday AM (7:00-9:00AM) and PM (4:00-6:00PM) peak hour volumes were collected by SRF at the intersections in the project area on Thursday, April 14, 2016. The peak hour traffic periods generally occurred between 7:45-8:45AM and 4:30-5:30PM at the study intersections. The weekday AM and PM peak hour existing traffic volumes are reflected in **Figure 3**.

V. FUTURE AREA DEVELOPMENT AND LOCAL GROWTH

The proposed Medical Office Building is expected to be built-out in 2017. Village of Cayuga Heights officials were contacted to discuss projects within the study area that are under construction and/or approved. One project that was approved 10 years ago was identified but has not shown progress. This proposed subdivision is located on the vacant land to the south of Corners Community Center and is an 8-lot subdivision which is anticipated to have single family dwellings on all but two of the lots.

To account for normal increases in background traffic growth, including the approved subdivision that has not shown progress, a growth rate of 0.25% has been applied to the existing traffic volumes to determine the background conditions for the one-year-build-out period (2017).

The ambient traffic growth rate was derived by comparing past NYSDOT counts to current estimated AADT. Current AADT was estimated based upon existing 2016 PM traffic counts and was compared to NYSDOT Counts at two similar locations in the

project area. These comparisons show little to no annual growth over the last six years. A growth rate of 0.25% was used to account for background growth and the proposed subdivision and determine background conditions for the one-year-build-out period (2017). The background traffic volumes are depicted in **Figure 4.**

VI. PROPOSED DEVELOPMENT

A. Description

The proposed Medical Office Building at Corners Community Center consists of one two-story building with approximately 28,200 gross square footage (SF). The proposed project entails demolishing an existing one-story 3,600 SF office building and a 1,700 SF one-story bank building and includes site improvements that provide a total of 300 parking spaces for the site as well as reconfiguration of internal lane geometry that will no longer allow ingress/egress of vehicles directly to the Carriage House Apartments and the Pleasant Grove Road driveway for the apartments. Traffic from the south end of the shopping center will also be prohibited from exiting to Pleasant Grove Road via the Carriage House Apartments. Pedestrian and bicycle connections between Corners Community Center and Carriage House Apartments will remain. **Figure 5R** illustrates the proposed concept plan.

B. Site Traffic Generation

The next step in the evaluation is to determine the traffic attributable to the proposed development as defined, vehicle trips entering and exiting the site. The volume of traffic generated by a site is dependent on the intended land use and size of the development. Trip generation is an estimate of the number of trips generated by a specific building or land use. These trips represent the volume of traffic entering and exiting the development. Trip Generation, 9th Edition is used as a reference for this information. The trip rate for the peak hour of the generator may or may not coincide in time or volume with the trip rate for the peak hour of adjacent street traffic. Volumes generated during the peak hour of adjacent street traffic, in this case the weekday AM and PM commuter peaks, represent a more critical volume when analyzing the capacity of the system; those intervals will provide the basis of this analysis. **Table I** summarizes the volume of projected trips for the weekday AM and PM peak hours. All trip generation calculations are included in Appendix A2 of this report.

TABLE I
SITE GENERATED TRIPS

DESCRIPTION	UNITS	AM PEAK		PM PEAK	
		ENTER	EXIT	ENTER	EXIT
Medical Office Building	28,200 Sq. Feet Gross Floor Area	53	14	26	67

C. Site Traffic Distribution

The cumulative effect of site traffic on the transportation network is dependent on the origins and destinations of that traffic and the location of the access drives serving the site.

The proposed arrival/departure distribution of traffic to be generated at this site is considered a function of several parameters, including the following:

- Location of residential areas;
- Existing highway network;
- Existing traffic patterns; and
- Existing traffic conditions and controls

Figure 6R shows the anticipated trip distribution pattern percentages for full build-out of the proposed Medical Office Building at Corners Community Center. Given that access to the proposed Medical Office Building is not possible at a Pleasant Grove Entrance, vehicles coming from south of Corners Community Center were assumed to use East Upland Road instead of Pleasant Grove Road to access the proposed project site. **Figure 7R** shows the resulting total site generated traffic as assigned to the study area intersections for the weekday AM and PM peak hour periods under full build-out conditions.

VII. FULL DEVELOPMENT VOLUMES

The projected design hour traffic volumes were developed for the weekday AM and PM peak hours by combining the future background traffic conditions (Figure 4), and projected site generated volumes for full build-out of the proposed development (Figure 7R) to yield the total traffic conditions expected at full development. **Figure 8R** illustrates the total weekday AM and PM peak hour volumes anticipated for the proposed development under full build-out conditions.

VIII. CAPACITY ANALYSIS

Capacity analysis is a technique used for determining a measure of effectiveness for a section of roadway and/or intersection based on the number of vehicles during a specific time period. The measure of effectiveness used for the capacity analysis is referred to as a Level of Service (LOS). Levels of Service are calculated to provide an indication of the amount of delay that a motorist experiences while traveling along a roadway or through an intersection. Since the most amount of delay to motorists usually occurs at intersections, capacity analysis typically focuses on intersections, as opposed to highway segments.

Six Levels of Service are defined for analysis purposes. They are assigned letter designations, from "A" to "F", with LOS "A" representing the best conditions and LOS "F"

the worst. Suggested ranges of service capacity and an explanation of Levels of Service are included in the Appendix A3.

The standard procedure for capacity analysis of signalized and un-signalized intersections is outlined in the Highway Capacity Manual (HCM 2010) published by the Transportation Research Board. Traffic analysis software, Synchro 9.1, which is based on procedures and methodologies contained in the HCM 2010, was used to analyze operating conditions at study area intersections. The procedure yields a Level of Service (LOS) based on the HCM 2010 as an indicator of how well intersections operate.

Existing and background operating conditions during the peak study periods are evaluated to determine a basis for comparison with the projected future conditions. The future traffic conditions generated by the proposed development were analyzed to assess the operations of the intersections in the study area. Capacity results for existing, background, and full development conditions are listed in **Table II**. See Figure 2 for numbered movements that correspond to numbered movements in Table 11. The discussion following the table summarizes capacity conditions. All capacity analysis calculations are included in the Appendices.

TABLE II
CAPACITY ANALYSIS RESULTS

INTERSECTION	EXISTING CONDITIONS		BACKGROUND CONDITIONS		FULL DEVELOPMENT CONDITIONS	
	AM	PM	AM	PM	AM	PM
Hanshaw Road / North Triphammer (U)						
1 Eastbound Thru/Left – Hanshaw Road	A(9.6)	C(18.2)	A(9.6)	C(23.9)	A(7.9)	C(24.7)
2 Southbound Left – N. Triph Road	B(10.8)	B(14.6)	B(10.6)	C(19.1)	B(11.8)	B(11.8)
3 Southbound Right – N. Triph Road	A(3.0)	A(3.6)	A(2.9)	A(3.6)	A(2.7)	A(3.8)
East Upland Rd/ Triphammer Rd/ Hanshaw Road (U)						
4 Eastbound Left – Triphammer Road	B(18.0)	F(97.3)	C(23.1)	F(*)	B(19.9)	F(75.7)
5 Eastbound Thru/Right – Triph Road	B(11.7)	F(74.2)	B(11.9)	F(*)	B(14.5)	E(42.5)
6 Westbound L/T/R – Hanshaw Road	A(1.3)	A(1.5)	A(1.3)	A(1.6)	A(1.6)	A(1.6)
7 Northbound L/T/R – East Upland Road	C(22.4)	F(50.6)	C(22.2)	F(*)	B(13.9)	F(69.7)
8 Southbound L/T/R – Hanshaw Road	A(1.7)	A(1.5)	A(1.7)	A(1.8)	A(2.9)	A(1.5)
East Upland Rd/ East Upland North Entrance (U)						
9 Westbound L/R – EU North Entrance	A(8.8)	A(8.8)	A(8.8)	A(8.8)	A(8.8)	A(8.8)
10 Southbound Left – East Upland Road	A(7.3)	A(7.4)	A(7.3)	A(7.4)	A(7.4)	A(7.4)
East Upland Rd/ East Upland Middle Entrance (U)						
11 Westbound L – EU Middle Entrance	A(8.5)	A(8.6)	A(8.5)	A(8.6)	A(8.6)	A(8.6)
12 Southbound L/R – East Upland Road	A(7.3)	A(0)	A(7.3)	A(0)	A(7.3)	A(0)
East Upland Rd/ East Upland South Entrance (U)						
13 Westbound Left – EU South Entrance	A(8.8)	A(9.2)	A(8.9)	A(9.2)	A(9.2)	A(9.3)
14 Southbound L/R – East Upland Road	A(7.4)	A(7.3)	A(7.4)	A(7.3)	A(7.4)	A(7.4)
Hanshaw Entrance/ Hanshaw Road (U)						
15 Northbound L/R – Hanshaw Entrance	C(15.7)	C(18.9)	C(15.7)	C(19)	C(17.2)	C(24.1)
16 Westbound Left – Hanshaw Road	A(8.5)	A(8.3)	A(8.5)	A(8.3)	A(8.6)	A(8.3)
Pleasant Grove Road/ Hanshaw Road (U)						
17 Northbound Left – Pleasant Grove Rd	D(33.8)	E(40.2)	D(34)	E(40.5)	E(36.6)	E(44.2)
18 Northbound R – Pleasant Grove Rd	B(10)	B(10.9)	B(10)	B(10.9)	B(10.0)	B(11.0)
19 Westbound Left – Hanshaw Road	A(8.9)	A(8.3)	A(8.9)	A(8.3)	A(8.9)	A(8.3)
Pleasant Grove Road/ Pleasant Grove Entrance (U)						
20 Northbound L – Pleasant Grove Rd	A(8.8)	A(7.9)	A(8.8)	A(7.9)	A(8.8)	A(7.9)
21 Eastbound L/R – Pleasant Grove Ent	B(13.2)	B(11.4)	B(13.2)	B(11.4)	B(13.2)	B(11.1)

NOTES:

1. (U) = Unsignalized
2. A(9.8) = Level of Service (Delay in vehicles per second)
3. F(*) = F(>100)
4. See Figure 2 for numbered movements that correspond to numbered movements in Table 11.
5. This chart shows improvement in LOS operation or minor reductions in delay occurring for a lane when volumes are known to increase from existing to background and future conditions. This is due to the weighted averaging of independent vehicle movements in that lane performed by the simulated traffic program in SYNCHRO 9. When there is an increase in volume in the right or through traffic movements in a single lane, which independently have a better LOS (than left turns), the weighted average LOS of the overall lane could improve and the calculated delay decrease.

Hanshaw Road/ North Triphammer Road

The Hanshaw Road/ North Triphammer Road intersection currently operates at LOS "A" during the AM peak hour and LOS "C" during the PM peak hour on the eastbound Hanshaw Road approach. No changes in levels of service are anticipated on this approach.

The southbound North Triphammer Road approach currently operates at LOS "B" for the left turn lane and LOS "A" for the right turn lane during the AM/PM peak hours. Under background conditions, the AM peak remain the same at LOS "B" and LOS "A" for the left turn and right turn lanes respectively. During the PM peak the left turn movement decreases to an LOS "C" with an increase in delay of 4.5 seconds per vehicle. The right turn lane remains at LOS "A" with no change in delay. Under full development conditions both the right and left turn lane during AM and PM peaks are expected to operate with less delay than the existing conditions for reasons explained in Note 5 and shown in Table II above. At the Hanshaw Road/North Triphammer Road intersection there is no projected impact from proposed trips generated by the proposed Medical Office Building. Therefore, no mitigation is warranted or recommended at this intersection.

East Upland Road/ Triphammer Road/ Hanshaw Road

The East Upland Road/ Triphammer Road/ Hanshaw Road intersection currently operates at LOS "B" during the AM peak hour and LOS "F" during the PM peak hour on the eastbound Triphammer Road approach. Under background conditions, the eastbound left turn lane decreases from LOS "B" to LOS "C" with a corresponding increase in delay of 5.1 seconds per vehicle during the AM peak hour. The thru/right lane remains at LOS "F". For the full development conditions, the eastbound left turn lane operates at LOS "C" with an additional delay of 0.4 seconds per vehicle during the AM peak hour. The thru/right turn movements remain at LOS "F" and is calculated to operate with slightly less delay than the existing conditions for reasons explained in Note 5 and shown in Table II above.

The westbound Hanshaw Road approach currently operates at level of service "A" under existing, background and full development conditions during the AM and PM peak hours. Full development conditions are not anticipated to create any changes to the LOS on this approach as shown in Table II.

The northbound East Upland Road approach currently operates at LOS "C" for the AM peak hour and LOS "F" for the PM peak hour. Under background conditions, the AM peak hour level of service remains "C" with a slight projected decrease of 0.2 second delay per vehicle and the PM peak remains LOS "F" with projected delays on the order of 69.7 seconds per vehicle. Under the full development conditions, AM and PM peak hours are expected to operate at LOS "C" and LOS "F" respectively.

The southbound Hanshaw Road approach currently operates at LOS "A" under existing, background, and full development conditions during the AM and PM peak hours.

The proposed Medical Building at Corners Community Center does not degrade the projected LOS for any approach at the East Upland Road/Triphammer Road/Hanshaw

Road intersection. A minor change of no more than 0.4 seconds per vehicle in delay over the background condition is shown in Table II for two of the approaches. Given that this development is projected to add less than approximately one vehicle every six (6) minutes to any of the currently failing movements, no improvements are the responsibility of this development.

East Upland Road/ East Upland North Entrance

All approaches at the East Upland Road/ East Upland North Entrance intersection operate at level of service "A" under existing, background and full development conditions during the AM and PM peak hours. Minor changes are anticipated as a result of the proposed development as shown in the table above however all approaches will remain level of service "A". Therefore, no mitigation is warranted or recommended at this intersection.

East Upland Road/ East Upland Middle Entrance

All approaches at the East Upland Road/ East Upland Middle Entrance intersection operate at level of service "A" under existing, background and full development conditions during the AM and PM peak hours. Minor changes are anticipated as a result of the proposed development as shown in the table above but all approaches will remain level of service "A". Therefore, no mitigation is warranted or recommended at this intersection.

East Upland Road/ East Upland South Entrance

All approaches at the East Upland Road/ East Upland South Entrance intersection operate at level of service "A" under existing, background and full development conditions during the AM and PM peak hours. Minor changes are anticipated as a result of the proposed development as shown in the table above but all approaches will remain level of service "A". Therefore, no mitigation is warranted or recommended at this intersection.

Hanshaw Road Entrance/ Hanshaw Road

All intersection approaches currently operate at LOS "C" or better during the AM and PM peak hour. No changes in LOS are anticipated under background or full development conditions. Therefore, no mitigation is warranted or recommended at this intersection.

Pleasant Grove Road/ Hanshaw Road

The Pleasant Grove Road/ Hanshaw Road intersection currently operates at LOS "D" during the AM peak hour and LOS "E" during the PM peak hour for the northbound approach from Pleasant Grove Road turning left onto Hanshaw Road. The northbound approach turning right onto Hanshaw Road currently operates at LOS "B" for both the AM and PM peak hours. Under background conditions, the approaches all remain at LOS "D", LOS "E" and LOS "B" respectively for AM/PM peak hour. Under full development conditions, the Pleasant Grove Road northbound left turn movement decreases from LOS "D" to LOS "E" during the AM peak hour with a corresponding increase in delay of 2.6 seconds per vehicle over projected background conditions. This change in LOS is the result of a borderline conditions as the threshold between LOS "D" and "E" is a delay of 35.0 seconds per vehicle. During the PM peak hour, the intersection remains at LOS "E" projected to operate with an increased delay of 3.7 seconds per vehicle. No mitigation is warranted or recommended at this intersection as a result of the proposed development.

Pleasant Grove Road/ Pleasant Grove Entrance

All approaches at the Pleasant Grove Road/ Pleasant Grove Entrance intersection operate at level of service "B" or better under existing, background and full development conditions during the AM and PM peak hours with no projected increase in delay per vehicle as shown in Table II above. Therefore, no mitigation is warranted or recommended at this intersection.

IX. SHARED PARKING ANALYSIS

At present, the total number of off-street parking spaces being proposed on the current site plan, Figure 5, equals 298 parking spaces. The existing center currently provides 285 parking spaces. Urban Land Institute (ULI) Methodology for shared parking, a national standard, was used to estimate the number of parking spaces required for the existing conditions (for comparison purposes) and the proposed development. This methodology is utilized by traffic engineers and planners when evaluating the parking demand for a mixed-use project.

Shared parking synergies exist when (a) there are different uses that have peak operating times at different times of the day, and (b) when there are related or complementary uses where patrons of one use also access the complementary use. The ULI study also identifies monthly variations in parking demand by use for each month of the year.

Mixed-use projects such as the one proposed, will experience parking synergy as described in the preceding paragraph. The parking efficiencies that will result reduce the excess supply of parking and associated loss of green space, storm drainage impacts and maintenance expenses. Additionally, it's important that sufficient parking is provided to prevent intrusion of parking into neighborhoods or adjoining properties, excessive vehicle circulation, and dissatisfied tenants and customers.

Given the proximity of this site to adjacent residences and business that are located within a five-minute walk (see the radius shown on the figure to the right), it is likely that the parking demand is overestimated since it is based upon all patrons driving to the site. In addition, there are Tompkins Consolidated Area Transit (TCAT) bus stops/shelters located on Pleasant Grove Road at the Carriage House Apartments and on Triphammer Road just west of Hanshaw Road.

Factors such as carsharing, income, housing tenure, walkability, transit accessibility, and demographics can impact the total supply of parking needed for a mixed-use development.

A walkable environment reduces parking needs between 5-15% of the total parking demand. Providing safe and accessible bicycle parking facilities may further reduce the parking demand. For a conservative worst case scenario, a 5% reduction factor is applied in the parking analysis to account for mode share (i.e. walking, bicycling, and transit usage to access the site. In addition, a conservative 5% reduction is applied to account for trips internal to the site (i.e. employees or patrons of the businesses on the site will park once and walk to other businesses on the site such as restaurants, drycleaners, banks, etc.).

Land use data proposed for the Corners Community Center development was entered in the Shared Parking Model; a spreadsheet that estimates the shared parking demand in mixed-use projects. The ULI spreadsheet for the proposed development, which shows the input values and stand-alone parking calculations from the ULI Shared Parking Model, is included in the Appendices.

Included in the appendices are tables depicting the monthly variation in parking that is required for weekdays. Based on this information, the peak month at the proposed development site occurs in December. In addition, there is a table that shows the hourly variation in parking on the site during the peak month of December for weekdays. The resulting weekday peak hour parking demand is presented in a tabular and graphical format. The total weekday parking demand is summarized in **Table III** and shown in the ULI Shared Parking Model calculations in the appendices. As previously stated, the total on-site parking supply included in the proposed site plan is 298 parking spaces.

TABLE III
WEEKDAY SHARED PEAK PARKING DEMAND, SUPPLY, & UTILIZATION FOR CORNERS COMMUNITY CENTER

	AVERAGE MONTHLY PARKING DEMAND	*AVERAGE MONTHLY PARKING UTILIZATION*	*PEAK HOUR PARKING DEMAND (DECEMBER)*	*PEAK HOUR PARKING UTILIZATION*
Existing Conditions 285 spaces	171/285	60%	189	66%
Proposed Conditions 298 spaces	260/298	87%	277	93%

For comparison purposes, parking needs of the proposed medical office building were projected as if it were located on its own, self-contained, site. Including the mode share reduction of 5%, the parking requirement would be 100 spaces.

The second edition of the ITE's "Shared Parking" manual and the Parking Consultants Council suggests using the 85th percentile of peak hour parking demand as a target parking

ratio. This level produces an adequate supply cushion that minimizes motorists roaming for a parking space. The hourly variation table in the appendices shows the hourly parking requirements during the peak month of December according to the ULI Shared Parking Model overlap on the parking demand with the shaded area in reflecting the time periods when this roaming may likely occur. The graph indicates that there is sufficient parking provided for the majority of the day, even during the peak month of December. There may be up to seven hours during the day when the parking utilization will be above 85% of the capacity and two hours when the parking utilization exceeds 90% of the capacity. Therefore 298 parking spaces is adequate for the proposed development.

It is important to note that under existing conditions, there are vehicles parking on the site that are not patrons or employees of the businesses on the site (i.e. informal park and ride, nearby businesses, etc.). This results in greater parking usage than would occur for only the on-site businesses and a perceived parking deficiency. Use of the proposed parking spaces by motorists that are not employees or patrons of the site may need to be prohibited and monitored if there appear to be parking deficiencies in the future.

X. MULTI-MODAL CONSIDERATIONS

Bicycle storage should be provided on-site in safe, convenient, well-lit areas through a combination of short/medium/long-term facilities to encourage employees and visitors to use alternative modes of transportation.

The proposed site is proposing pedestrian access between the proposed building and other buildings on the site. Pedestrian accommodations will be provided on-site via sidewalks, marked crossing locations and signage, where appropriate. All crossing locations shall be ADA compliant.

The site is currently serviced - and will be continue to be serviced – by TCAT routes 30, 31, 32, 37, and 41. These routes pass nearby the site on either Triphammer Road, where there is a bus shelter located just west of Hanshaw Road, or Pleasant Grove Road, where there is a bus shelter located in front of the Carriage House Apartments.

An important benefit of encouraging alternate modes of transportation is to decrease the total site generated vehicle trips, thereby potentially reducing both the need for on-site parking and the impact of the proposed site on the study area intersections.

XI. CONCLUSIONS & RECOMMENDATIONS

This study evaluates the potential traffic and parking impacts resulting from the proposed Medical Office Building at Corners Community Center. Based upon our comprehensive analysis, the results indicate that the proposed development will not have significant adverse traffic or impacts to the existing roadway network or parking impacts to the existing and proposed conditions. The following sets forth conclusions and recommendations based upon the results of the analyses:

1. The proposed Medical Office Building at Corners Community Center is expected to generate approximately 53(14) vehicles entering the Corners Community Center during the AM(PM) peak hours respectively and 26(67) vehicles exiting the Corners Community Center during the AM(PM) peak hours.

2. The proposed development will not result in any potentially significant adverse traffic impacts to the study area intersections.

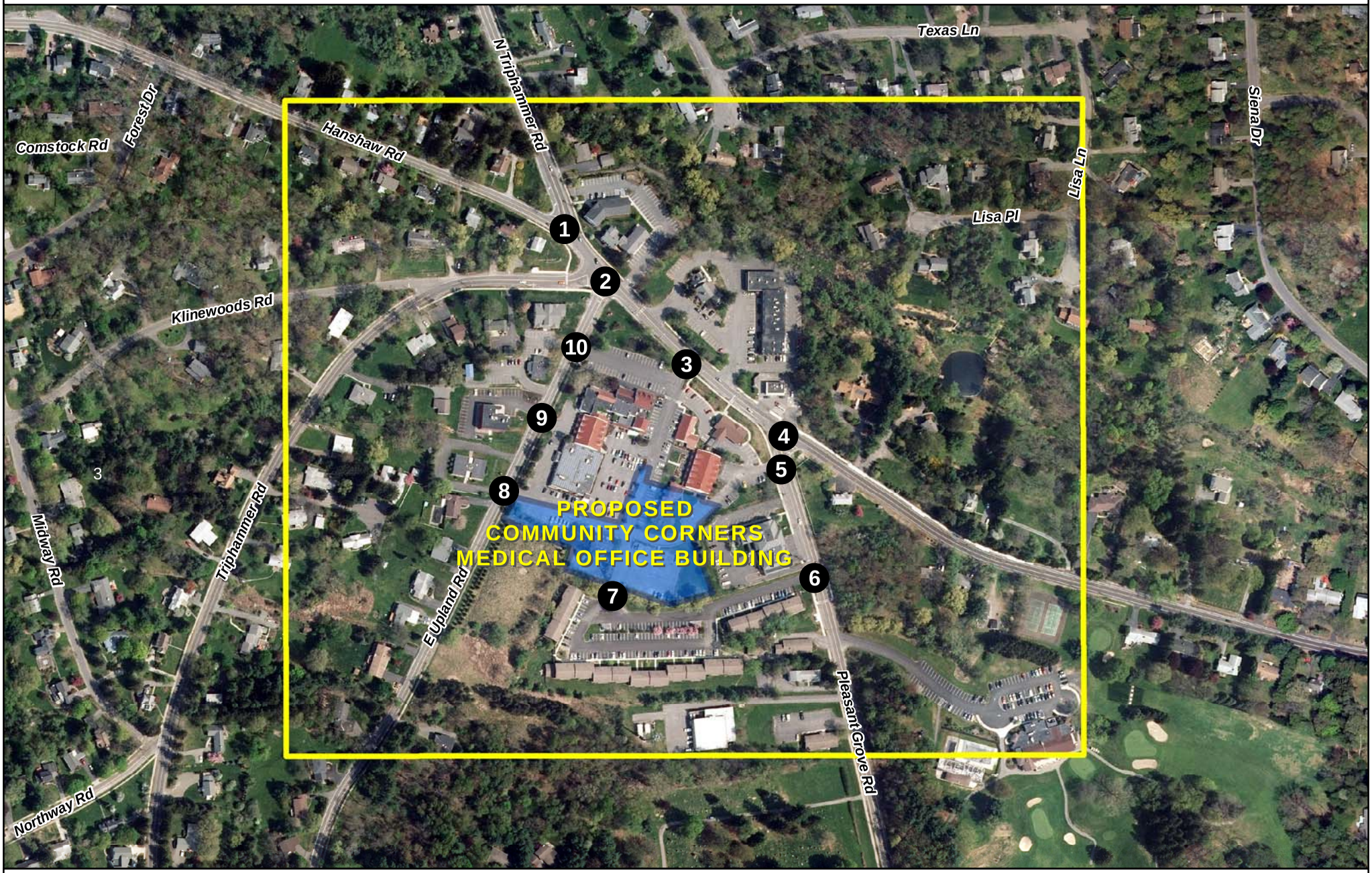
3. No mitigation is warranted or recommended at any of the study intersections as a result of the proposed Medical Office Building development.

4. The parking analysis indicates that the proposed parking spaces will be sufficient to accommodate parking needs during the majority of the time. During the peak month of December there may be times of the day when the parking lots reach 90% capacity.

XI. FIGURES

Figures 1 through 8 are included on the following pages.

FIGURE 1 - SITE LOCATION AND STUDY AREA



Legend

- Study Intersection
- Site Location
- Study Area

PROPOSED COMMUNITY CORNERS MEDICAL OFFICE BUILDING

CORNERS COMMUNITY CENTER, VILLAGE OF CAYUGA HEIGHTS, NY

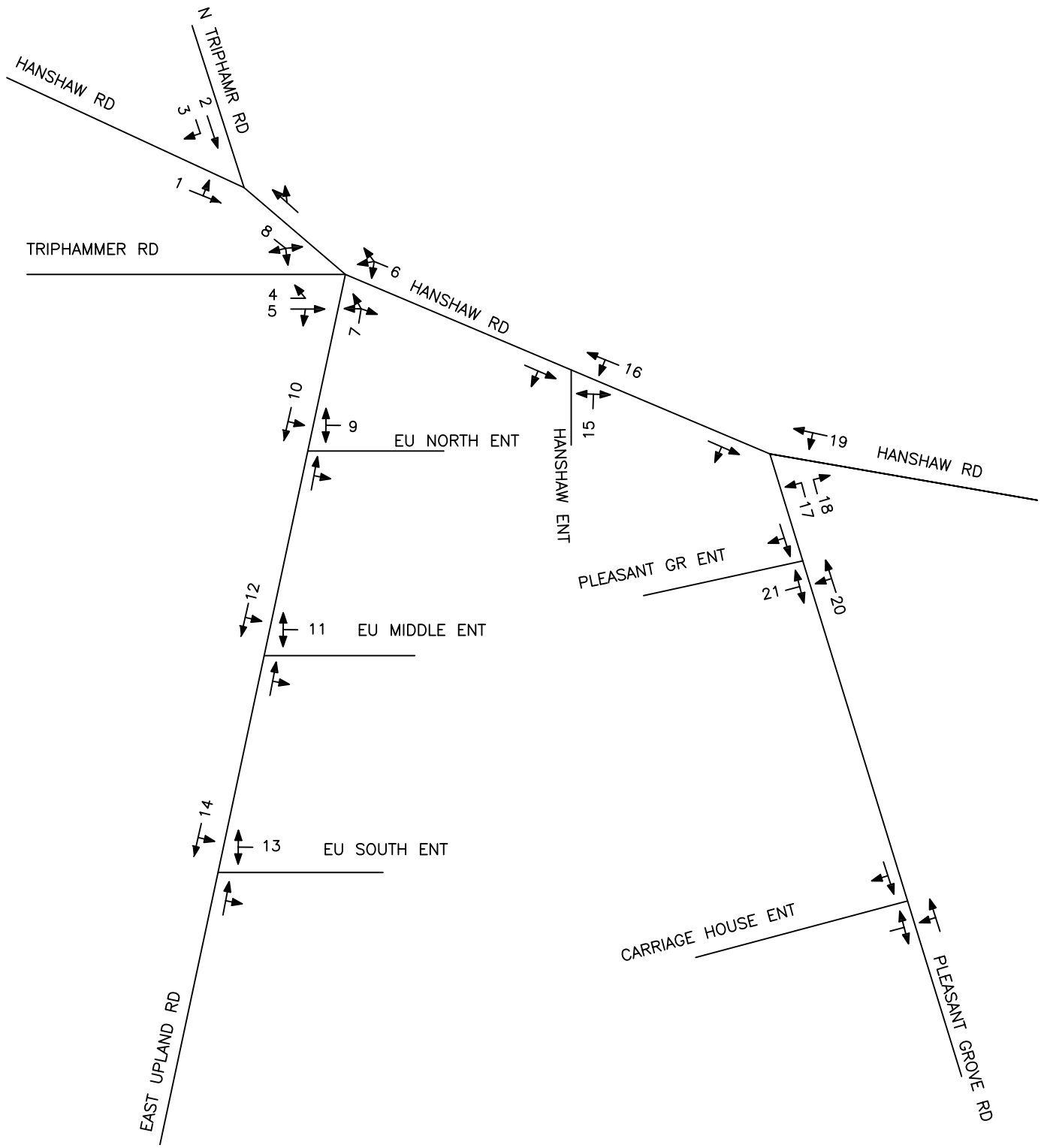
N

Feet

0 200 400 800

SRF ASSOCIATES
WWW.SRFA.NET
Transportation Engineering & Planning Consultants

Note: All counts by New York State Dept of Transportation
V.P.D. = Vehicles Per Day



PROJECT NO: 36019

KEY

N

NOT TO SCALE

00(00) = AM(PM)

FIGURE 2

LANE GEOMETRY &
AVERAGE DAILY TRAFFIC

PROPOSED MEDICAL OFFICE BLDG
AT CORNERS COMMUNITY CENTER
VILLAGE OF CAYUGA HEIGHTS, NY

SRF ASSOCIATES
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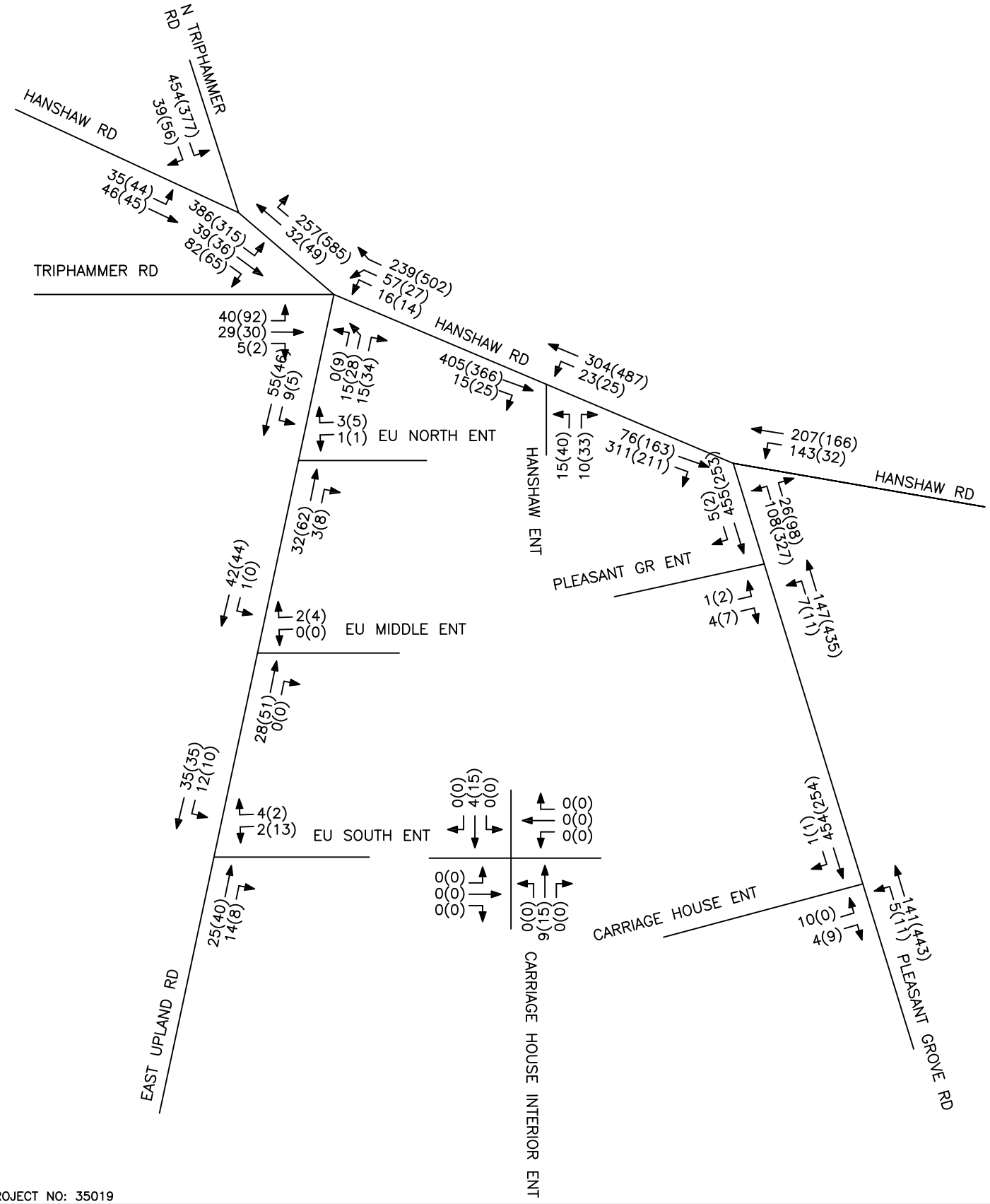


PROJECT NO: 35019

KEY

N

NOT TO SCALE

00(00) = AM(PM)

FIGURE 3

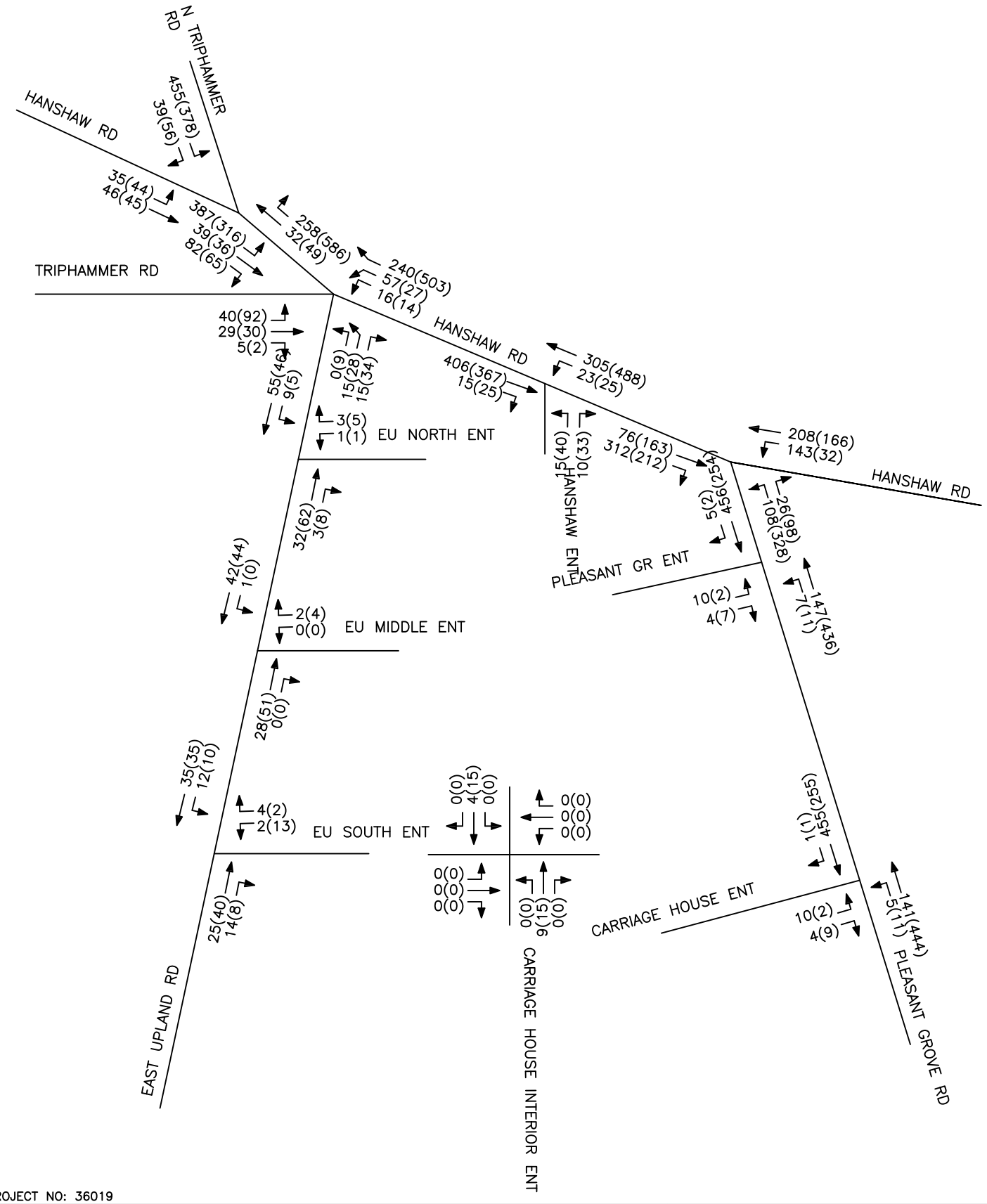
PEAK HOUR VOLUMES
2016 EXISTING TRAFFIC

PROPOSED MEDICAL OFFICE BLDG
AT CORNERS COMMUNITY CENTER
VILLAGE OF CAYUGA HEIGHTS, NY

SRF ASSOCIATES

WWW.SRFA.NET

Transportation Engineering & Planning Consultants



PROJECT NO: 36019

KEY

N

NOT TO SCALE

00(00) = AM(PM)

FIGURE 4

PEAK HOUR VOLUMES
2017 BACKGROUND CONDITIONS

PROPOSED MEDICAL OFFICE BLDG
AT CORNERS COMMUNITY CENTER
VILLAGE OF CAYUGA HEIGHTS, NY

SRF ASSOCIATES

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Transportation Engineering & Planning Consultants

FIGURE 5 - SITE PLAN

TROWBRIDGE WOLF MICHAELS
TWLA
LANDSCAPE ARCHITECTS
1001 W. Seneca St., Ste. 101 Ithaca, NY 14850
607-277-1400 Fax 607-277-6092

NOTICE:
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED LANDSCAPE ARCHITECT TO ALTER ANY ITEM ON THIS DOCUMENT WHO ALTERS THIS DOCUMENT IS REQUIRED BY LAW TO AFFIX HIS OR HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS OR HER SIGNATURE AND A SPECIFIC DESCRIPTION OF ALTERATIONS.

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TROWBRIDGE WOLF MICHAELS LANDSCAPE ARCHITECTS, LLP

Corners Community Center, Inc.

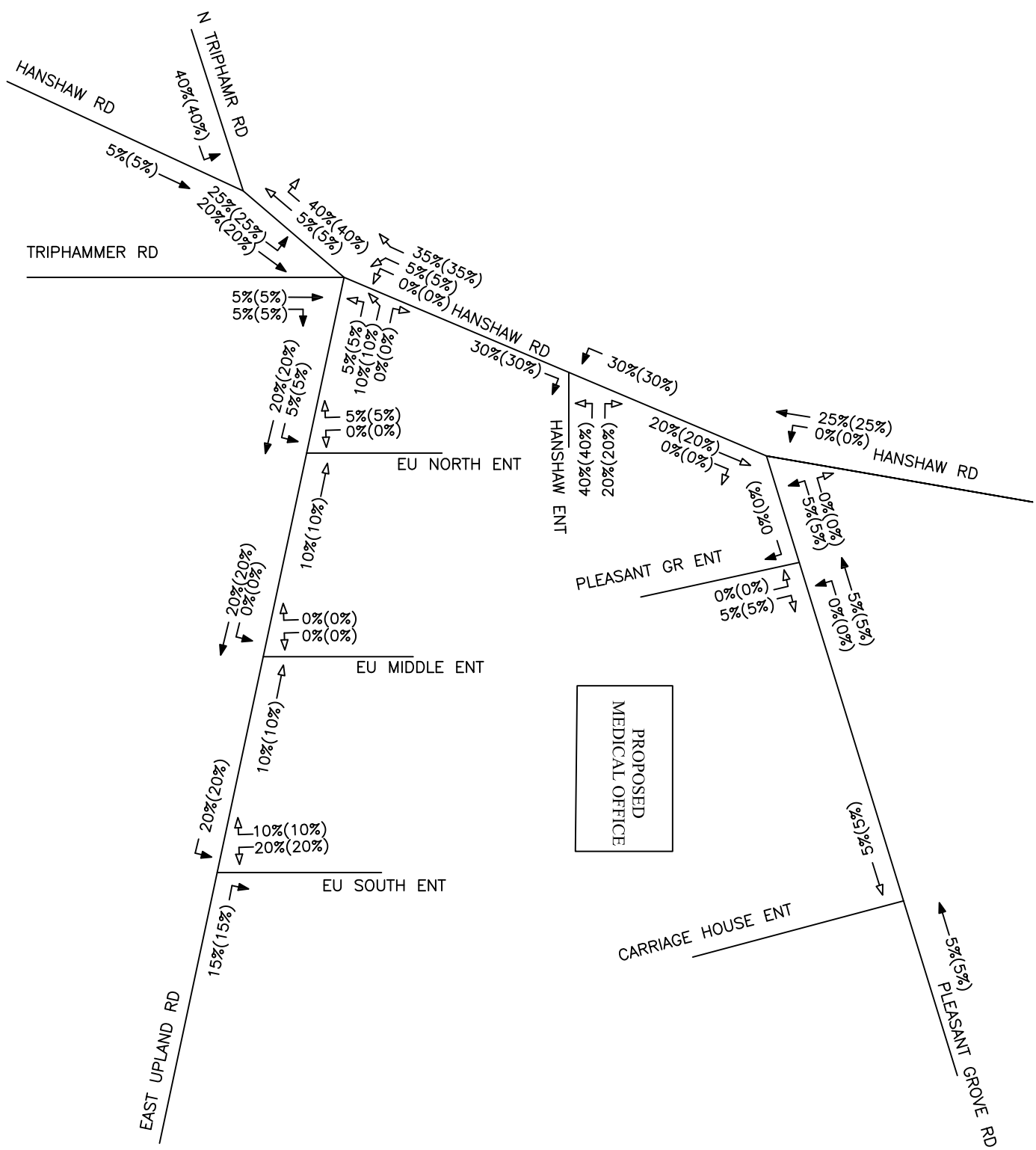
MEDICAL OFFICE BUILDING

Village of Cayuga Heights, New York

DATE:	07/18/2016
PROJECT:	15039
DRAWN BY:	CRH/ZDR
CHECKED:	KAM

ILLUSTRATED SITE PLAN

L100



PROJECT NO: 36019

KEY

NOT TO SCALE

N

→ = ENTERING TRIPS

→ = EXITING TRIPS

FIGURE 6R

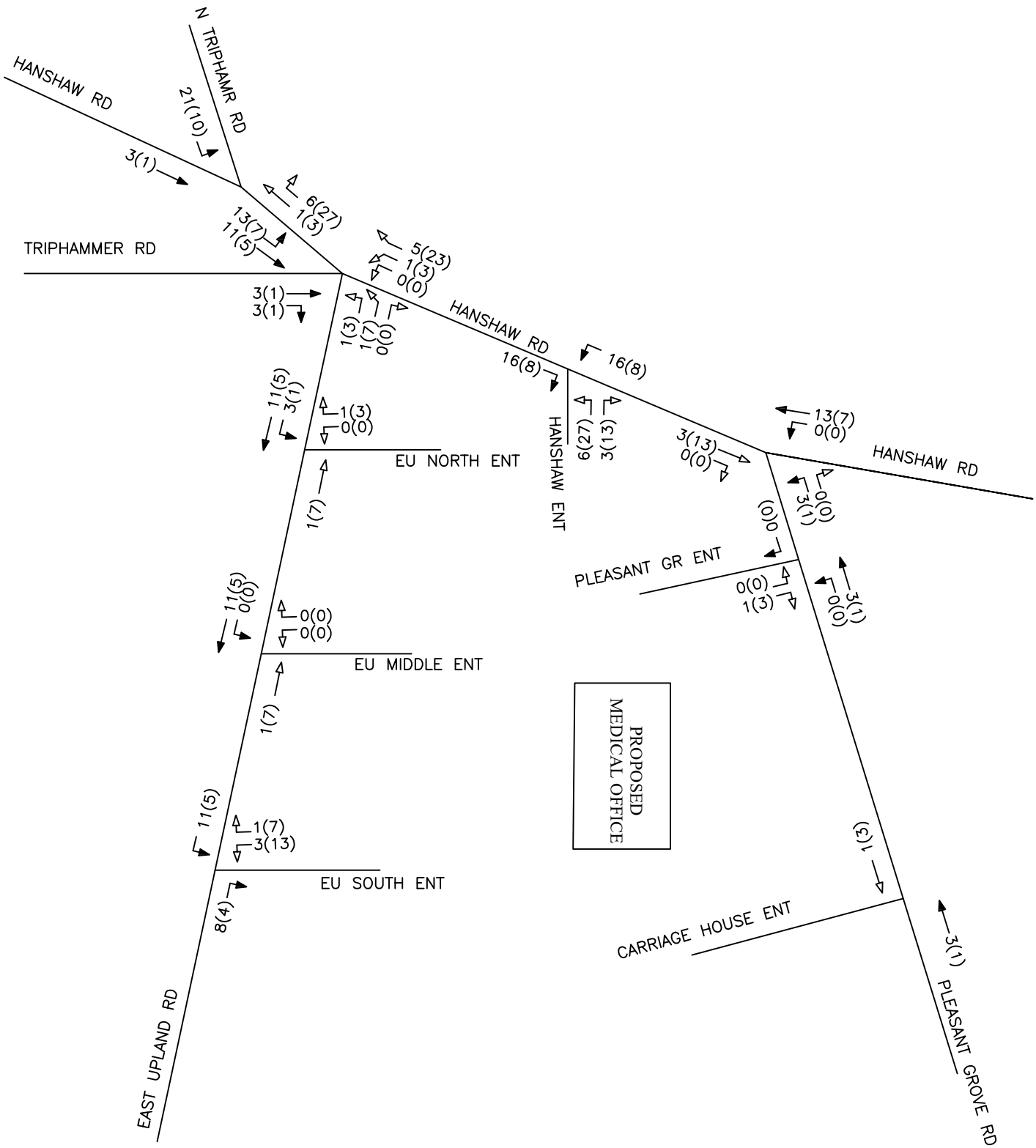
PEAK HOUR VOLUMES TRIP DISTRIBUTION

PROPOSED MEDICAL OFFICE BLDG
AT CORNERS COMMUNITY CENTER
VILLAGE OF CAYUGA HEIGHTS, NY

SRF ASSOCIATES

WWW.SRFA.NET

Transportation Engineering & Planning Consultants



→ = ENTERING TRIPS
→ = EXITING TRIPS

PROJECT NO: 36019

KEY

N

NOT TO SCALE

00(00) = AM(PM)

→ = ENTERING TRIPS
→ = EXITING TRIPS

FIGURE 7R

SITE GENERATED TRIPS

PROPOSED MEDICAL OFFICE BLDG
AT CORNERS COMMUNITY CENTER
VILLAGE OF CAYUGA HEIGHTS, NY

SRF ASSOCIATES
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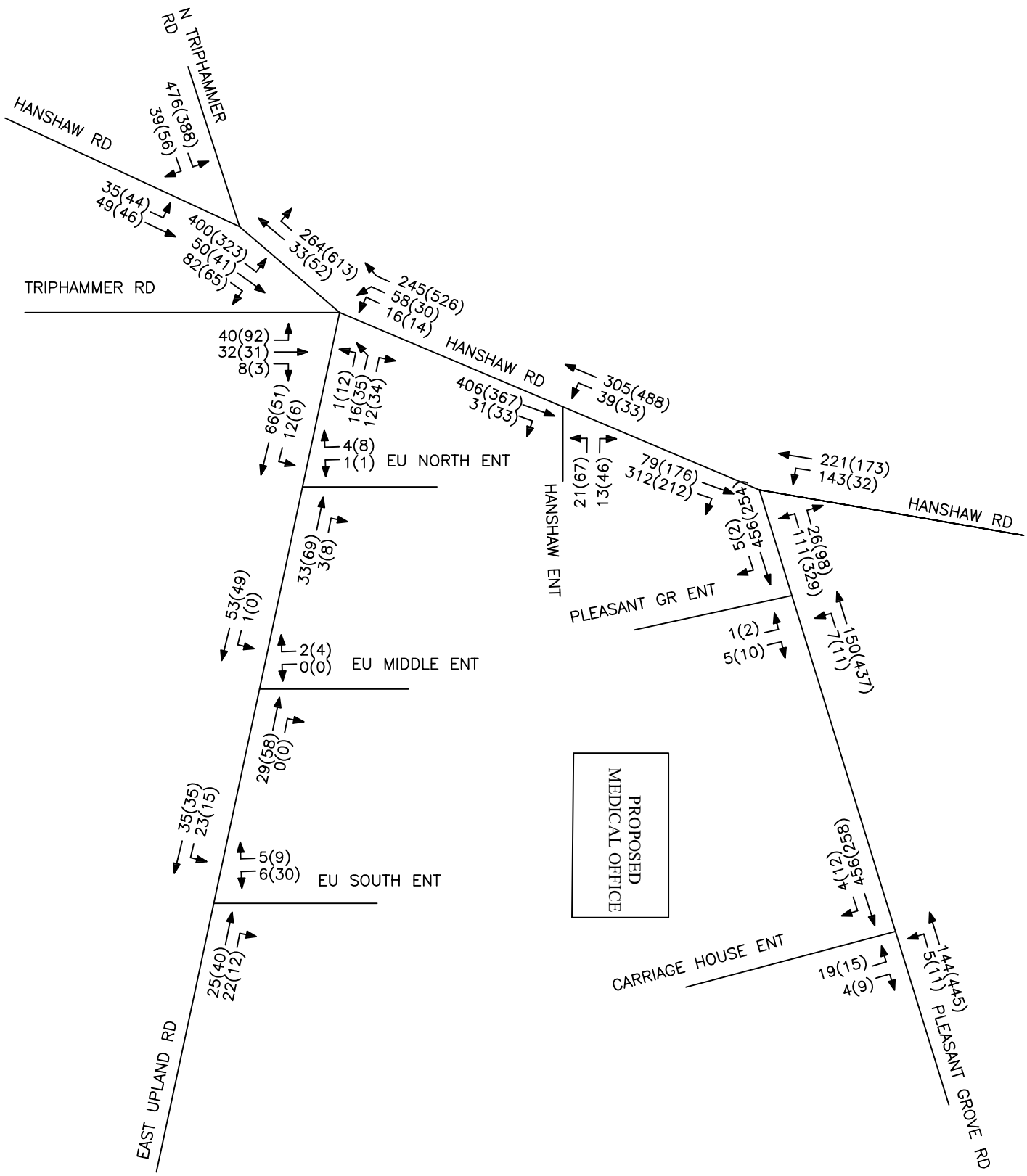
Transportation Engineering & Planning Consultants



PROJECT NO: 36019

KEY

N

NOT TO SCALE

00(00) = AM(PM)

FIGURE 8R

PEAK HOUR VOLUMES
FULL DEVELOPMENT CONDITIONS

PROPOSED MEDICAL OFFICE BLDG
AT CORNERS COMMUNITY CENTER
VILLAGE OF CAYUGA HEIGHTS, NY

SRF ASSOCIATES

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Transportation Engineering & Planning Consultants

APPENDICES

A1

Collected Traffic Volume Data

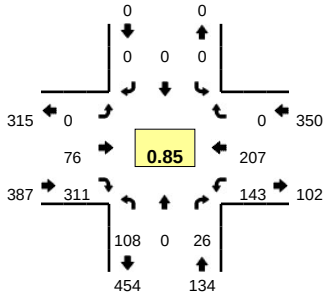
Type of peak hour being reported: Intersection Peak

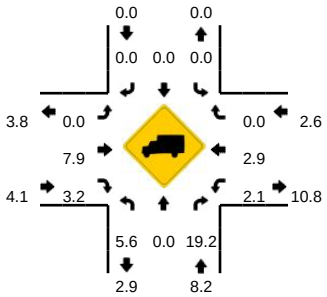
Method for determining peak hour: Total Entering Volume

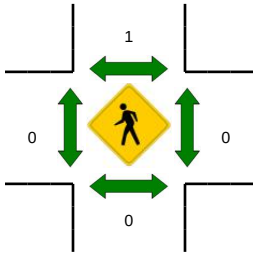
LOCATION: Pleasant Grove Rd -- Hanshaw Rd
CITY/STATE: Ithaca, NY

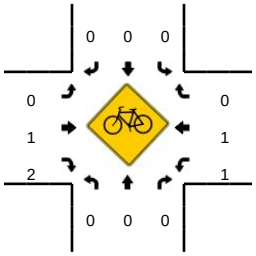
QC JOB #: 13777201
DATE: Thu, Apr 14 2016

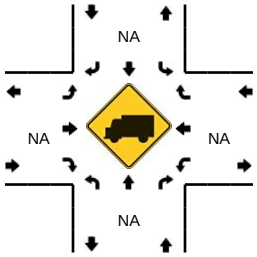
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

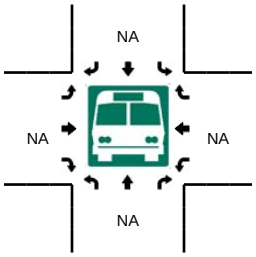












15-Min Count Period Beginning At	Pleasant Grove Rd (Northbound)				Pleasant Grove Rd (Southbound)				Hanshaw Rd (Eastbound)				Hanshaw Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	9	0	0	0	0	0	0	0	0	8	40	0	16	13	0	0	86	
7:15 AM	7	0	2	0	0	0	0	0	0	16	46	0	12	24	0	0	107	
7:30 AM	18	0	5	0	0	0	0	0	0	22	70	0	25	39	0	0	179	
7:45 AM	29	0	4	0	0	0	0	0	0	19	97	0	55	52	0	0	256	628
8:00 AM	23	0	3	0	0	0	0	0	0	19	83	0	29	51	0	0	208	750
8:15 AM	24	0	8	0	0	0	0	0	0	19	68	0	22	41	0	0	182	825
8:30 AM	32	0	11	0	0	0	0	0	0	19	63	0	37	63	0	0	225	871
8:45 AM	33	0	6	0	0	0	0	0	0	23	65	0	27	53	0	0	207	822

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	116	0	16	0	0	0	0	0	0	76	388	0	220	208	0	0	1024
Heavy Trucks	12	0	8		0	0	0		0	0	20		0	0	0		40
Pedestrians		0				4				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

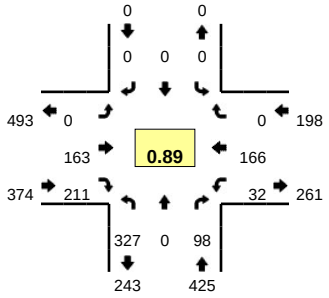
Type of peak hour being reported: Intersection Peak

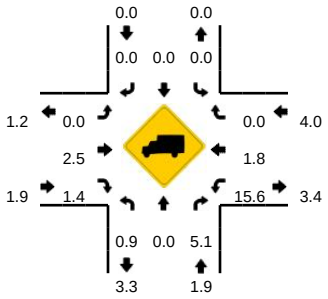
Method for determining peak hour: Total Entering Volume

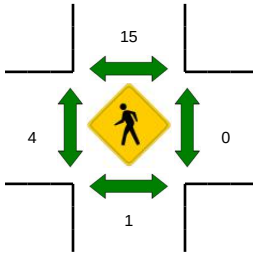
LOCATION: Pleasant Grove Rd -- Hanshaw Rd
CITY/STATE: Ithaca, NY

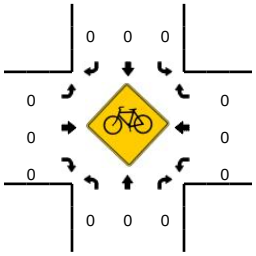
QC JOB #: 13777202
DATE: Thu, Apr 14 2016

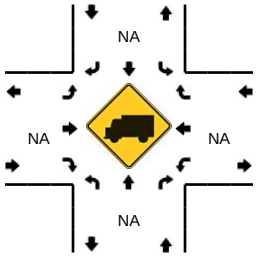
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

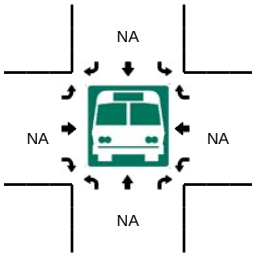












15-Min Count Period Beginning At	Pleasant Grove Rd (Northbound)				Pleasant Grove Rd (Southbound)				Hanshaw Rd (Eastbound)				Hanshaw Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	66	0	15	0	0	0	0	0	0	40	35	0	10	34	0	0	200	
4:15 PM	82	0	22	0	0	0	0	0	0	35	44	0	7	37	0	0	227	
4:30 PM	77	0	25	0	0	0	0	0	0	25	46	0	12	32	0	0	217	
4:45 PM	77	0	24	0	0	0	0	0	0	39	52	0	7	47	0	0	246	890
5:00 PM	101	0	26	0	0	0	0	0	0	59	49	0	4	41	0	0	280	970
5:15 PM	72	0	23	0	0	0	0	0	0	40	64	0	9	46	0	0	254	997
5:30 PM	79	0	12	0	0	0	0	0	0	34	39	0	8	41	0	0	213	993
5:45 PM	61	0	22	0	0	0	0	0	0	41	48	0	8	27	0	0	207	954

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	404	0	104	0	0	0	0	0	0	236	196	0	16	164	0	0	1120
Heavy Trucks	0	0	0		0	0	0		0	4	0		4	0	0		8
Pedestrians		0				12				8				0			20
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

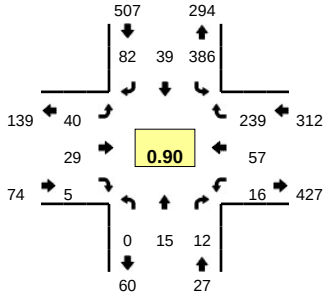
LOCATION: Triphammer Rd/Upland Rd -- Hanshaw Rd

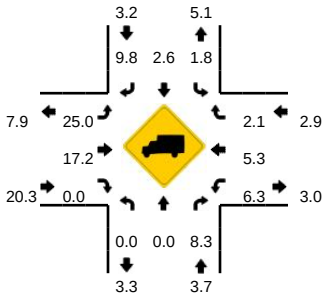
CITY/STATE: Ithaca, NY

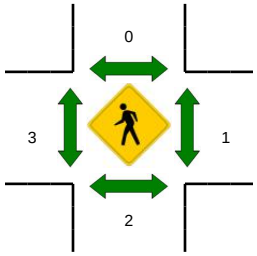
QC JOB #: 13777203

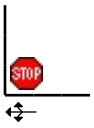
DATE: Thu, Apr 14 2016

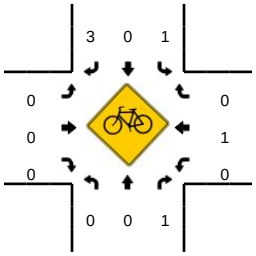
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

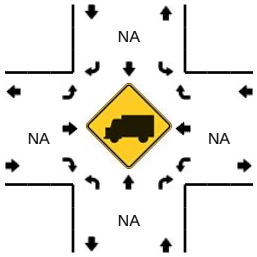


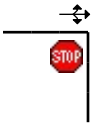


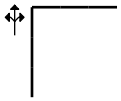


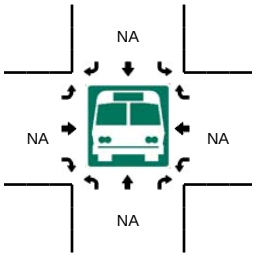












15-Min Count Period Beginning At	Triphammer Rd/Upland Rd (Northbound)				Triphammer Rd/Upland Rd (Southbound)				Hanshaw Rd (Eastbound)				Hanshaw Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	1	3	0	43	8	8	0	6	2	0	0	2	2	17	0	92	
7:15 AM	1	2	3	0	60	6	19	0	10	1	0	0	3	8	17	0	130	
7:30 AM	0	0	5	0	86	9	18	0	4	6	1	0	6	12	35	0	182	
7:45 AM	0	3	3	0	118	9	22	0	7	6	1	0	3	16	67	0	255	659
8:00 AM	0	2	0	0	96	11	25	0	11	10	2	0	5	20	53	0	235	802
8:15 AM	0	4	2	0	90	7	19	0	13	8	0	0	2	10	52	0	207	879
8:30 AM	0	6	7	0	82	12	16	0	9	5	2	0	6	11	67	0	223	920
8:45 AM	2	4	9	0	91	13	11	0	9	3	0	0	8	13	70	0	233	898

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	12	12	0	472	36	88	0	28	24	4	0	12	64	268	0	1020
Heavy Trucks	0	0	4		4	0	4		4	4	0		0	0	8		28
Pedestrians		0				0				4				4			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

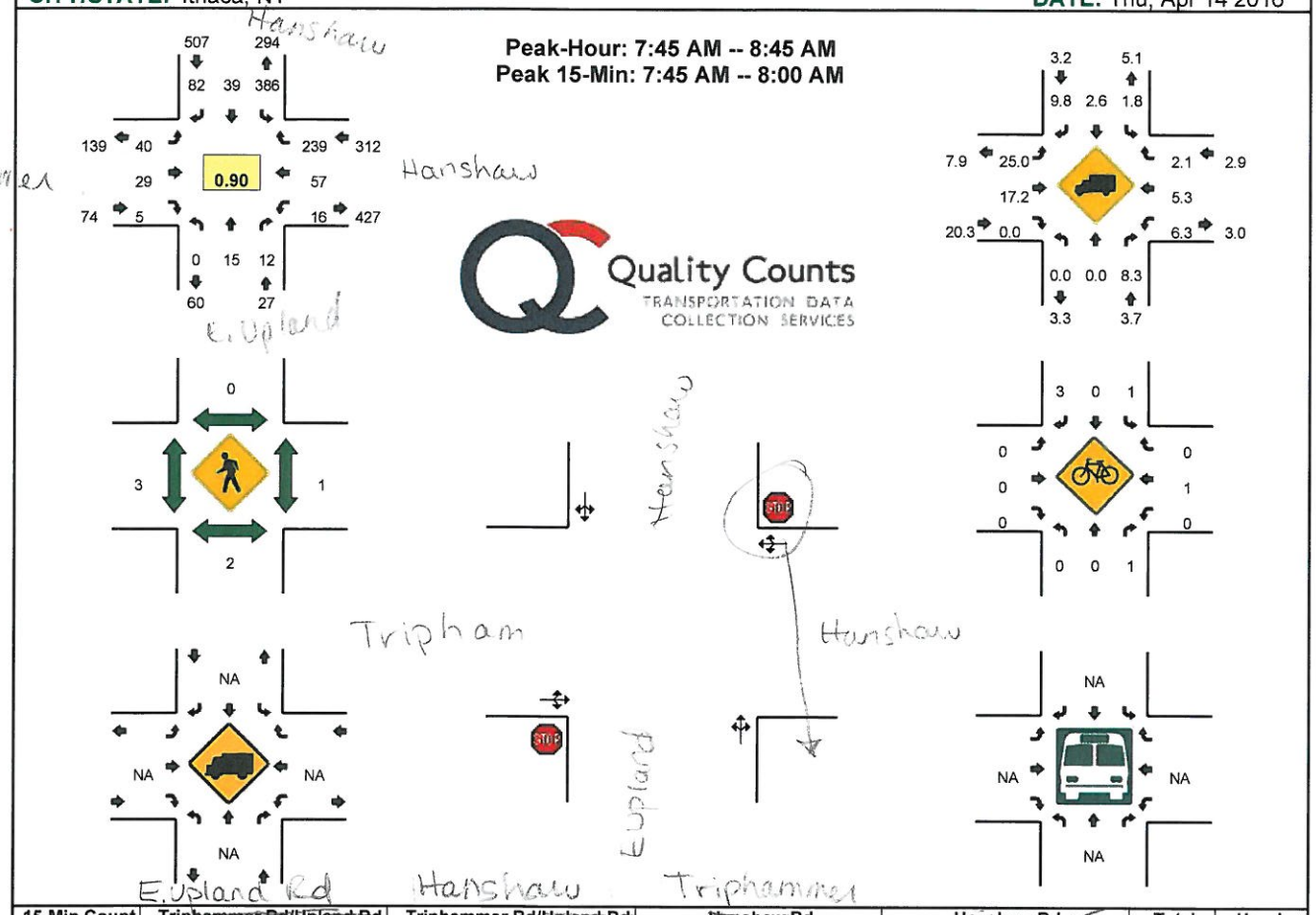
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Triphammer Rd/Upland Rd -- Hanshaw Rd
CITY/STATE: Ithaca, NY

QC JOB #: 13777203
DATE: Thu, Apr 14 2016

Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM



15-Min Count Period Beginning At	~~Triphammer Rd/Upland Rd (Northbound)~~				Triphammer Rd/Upland Rd (Southbound)				~~Hanshaw Rd (Eastbound)~~				Hanshaw Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	1	3	0	43	8	8	0	6	2	0	0	2	2	17	0	92	
7:15 AM	1	2	3	0	60	6	19	0	10	1	0	0	3	8	17	0	130	1+84+56=141
7:30 AM	0	0	5	0	86	9	18	0	4	6	0	0	6	12	35	0	182	
7:45 AM	0	3	3	0	118	9	22	0	7	6	1	0	3	16	67	0	255	659
8:00 AM	0	2	0	0	96	11	25	0	11	10	2	0	5	20	53	0	235	802
8:15 AM	0	4	2	0	90	7	19	0	13	8	0	0	2	10	52	0	207	879
8:30 AM	0	6	7	0	82	12	16	0	9	5	2	0	6	11	67	0	223	920
8:45 AM	2	4	9	0	91	13	11	0	9	3	0	0	8	13	70	0	233	898
7-8	1	6	14	0	307	32	67	0	27	15	2		14	38	136	0		
8-9	2	16	18	0	359	43	71	0	42	71	4		21	54	242	0		

AM Peak 7:15-8:15

E Upland AM Peak 7:15-8:15

1+7+11=19 ↑ 35+4+17 =56

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	12	12	0	472	36	88	0	28	24	4	0	12	64	268	0	1020
Heavy Trucks	0	0	4		4	0	4		4	4	0		0	0	8		28
Pedestrians		0				0				4				4			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Brenaan Thompson 610-306-7419
610-850-9112

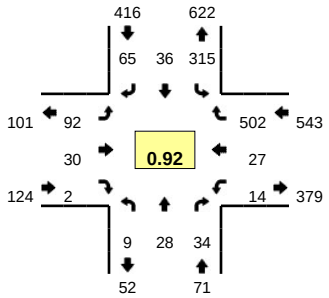
Type of peak hour being reported: Intersection Peak

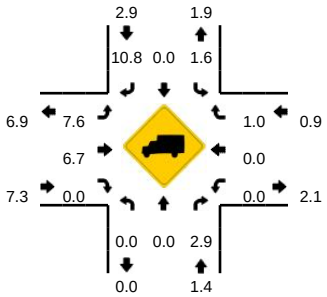
Method for determining peak hour: Total Entering Volume

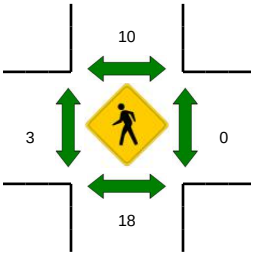
LOCATION: Triphammer Rd/Upland Rd -- Hanshaw Rd
CITY/STATE: Ithaca, NY

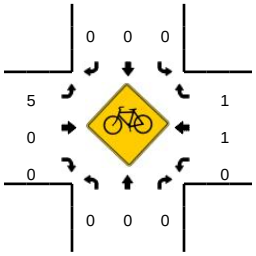
QC JOB #: 13777204
DATE: Thu, Apr 14 2016

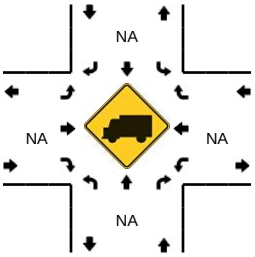
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

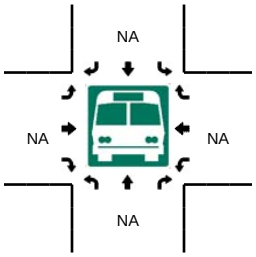












15-Min Count Period Beginning At	Triphammer Rd/Upland Rd (Northbound)				Triphammer Rd/Upland Rd (Southbound)				Hanshaw Rd (Eastbound)				Hanshaw Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	6	9	0	68	12	12	0	20	7	1	0	5	4	92	0	236	
4:15 PM	1	7	0	0	81	9	12	0	26	7	2	0	5	7	119	0	276	
4:30 PM	1	6	9	0	64	8	15	0	23	3	1	0	3	8	117	0	258	
4:45 PM	0	6	5	0	79	5	21	0	22	11	1	0	5	7	122	0	284	1054
5:00 PM	2	6	13	0	82	11	18	0	18	6	1	0	4	10	142	0	313	1131
5:15 PM	5	7	8	0	90	8	11	0	29	7	0	0	3	1	115	0	284	1139
5:30 PM	2	9	8	0	64	12	15	0	23	6	0	0	2	9	123	0	273	1154
5:45 PM	1	5	7	0	76	8	12	0	26	7	1	0	1	6	93	0	243	1113

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	24	52	0	328	44	72	0	72	24	4	0	16	40	568	0	1252
Heavy Trucks	0	0	0		0	0	8		4	0	0		0	0	4		16
Pedestrians		8				8				4				0			20
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

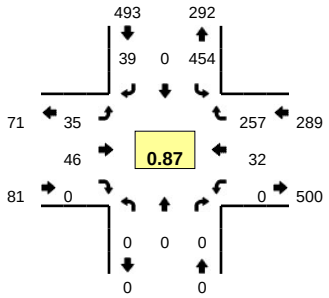
LOCATION: N Triphammer Rd -- Hanshaw Rd

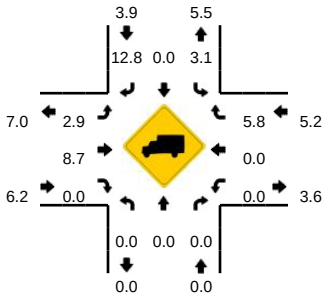
CITY/STATE: Ithaca, NY

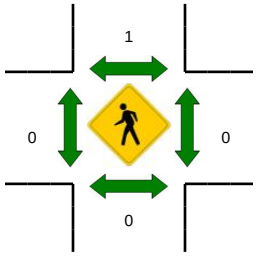
QC JOB #: 13777205

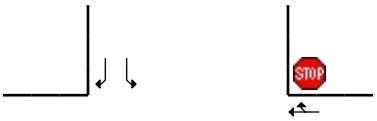
DATE: Thu, Apr 14 2016

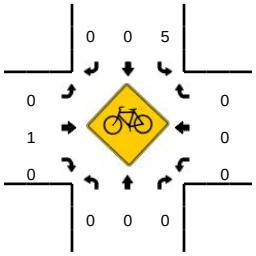
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

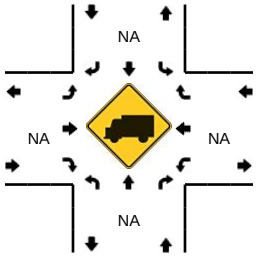


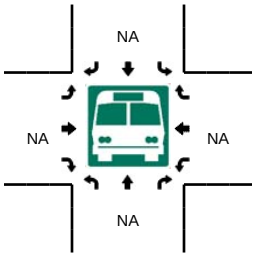












15-Min Count Period Beginning At	N Triphammer Rd (Northbound)				N Triphammer Rd (Southbound)				Hanshaw Rd (Eastbound)				Hanshaw Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	51	0	4	0	3	6	0	0	0	2	23	0	89	
7:15 AM	0	0	0	0	79	0	5	0	3	5	0	0	0	1	28	0	121	
7:30 AM	0	0	0	0	106	0	5	1	9	9	0	0	0	3	36	0	169	
7:45 AM	0	0	0	0	130	0	11	0	16	17	0	0	0	8	65	0	247	626
8:00 AM	0	0	0	0	116	0	6	0	8	11	0	0	0	8	55	0	204	741
8:15 AM	0	0	0	0	108	0	12	0	5	8	0	0	0	6	65	0	204	824
8:30 AM	0	0	0	0	100	0	10	0	6	10	0	0	0	10	72	0	208	863
8:45 AM	0	0	0	0	98	0	9	0	6	15	0	0	0	12	66	0	206	822

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	520	0	44	0	64	68	0	0	0	32	260	0	988
Heavy Trucks	0	0	0		12	0	4		0	0	0		0	0	12		28
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

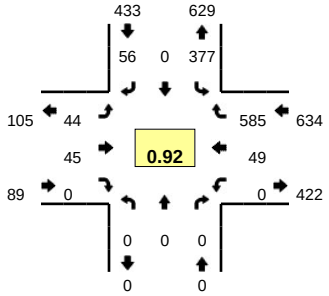
LOCATION: N Triphammer Rd -- Hanshaw Rd

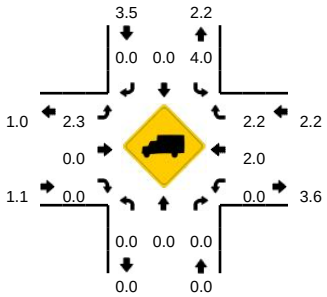
CITY/STATE: Ithaca, NY

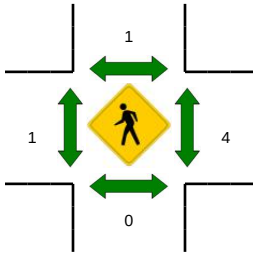
QC JOB #: 13777206

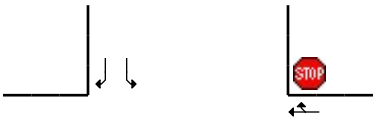
DATE: Thu, Apr 14 2016

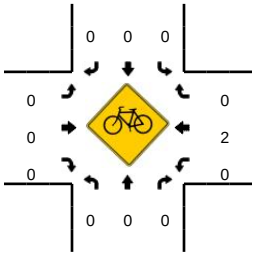
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

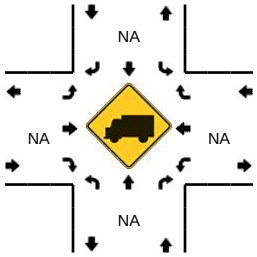


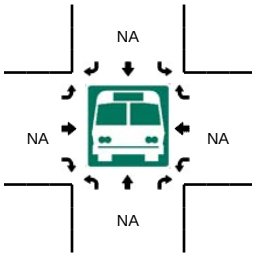












15-Min Count Period Beginning At	N Triphammer Rd (Northbound)				N Triphammer Rd (Southbound)				Hanshaw Rd (Eastbound)				Hanshaw Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	85	0	13	0	9	7	0	0	0	8	113	0	235	
4:15 PM	0	0	0	0	93	0	13	0	5	10	0	0	0	14	144	0	279	
4:30 PM	0	0	0	0	78	0	10	0	9	7	0	0	0	13	134	0	251	
4:45 PM	0	0	0	0	95	0	9	0	12	10	0	0	0	8	145	0	279	1044
5:00 PM	0	0	0	0	103	0	19	0	8	11	0	0	0	14	159	0	314	1123
5:15 PM	0	0	0	0	98	0	12	0	13	11	0	0	0	12	142	0	288	1132
5:30 PM	0	0	0	0	81	0	16	0	11	13	0	0	0	15	139	0	275	1156
5:45 PM	0	0	0	0	89	0	14	0	12	8	0	0	0	9	115	0	247	1124

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	412	0	76	0	32	44	0	0	0	56	636	0	1256
Heavy Trucks	0	0	0		16	0	0		4	0	0		0	0	12		32
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

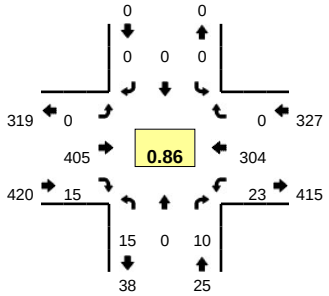
Type of peak hour being reported: Intersection Peak

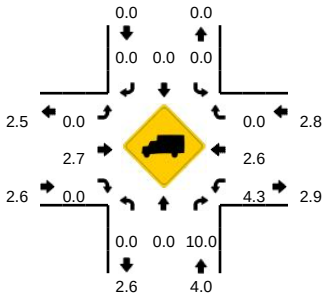
Method for determining peak hour: Total Entering Volume

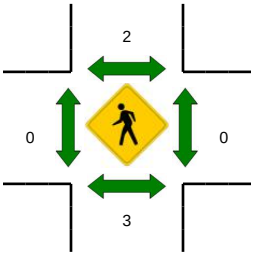
LOCATION: Corners Comm Ent -- Hanshaw Rd
CITY/STATE: Ithaca, NY

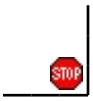
QC JOB #: 13777207
DATE: Thu, Apr 14 2016

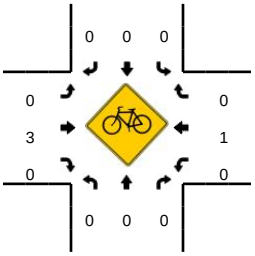
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

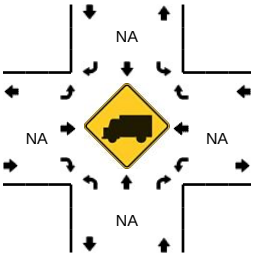


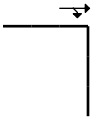


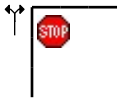


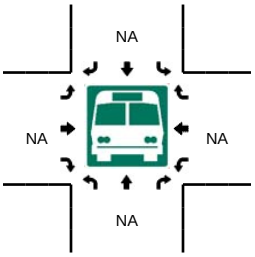












15-Min Count Period Beginning At	Corners Comm Ent (Northbound)				Corners Comm Ent (Southbound)				Hanshaw Rd (Eastbound)				Hanshaw Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	0	4	0	0	0	0	0	0	47	0	0	2	20	0	0	75	
7:15 AM	3	0	2	0	0	0	0	0	0	60	2	0	5	26	0	0	98	
7:30 AM	2	0	1	0	0	0	0	0	0	93	2	0	6	49	0	0	153	
7:45 AM	5	0	4	0	0	0	0	0	0	124	3	0	6	83	0	0	225	551
8:00 AM	2	0	3	0	0	0	0	0	0	104	3	0	5	71	0	0	188	664
8:15 AM	5	0	0	0	0	0	0	0	0	90	6	0	5	65	0	0	171	737
8:30 AM	3	0	3	0	0	0	0	0	0	87	3	0	7	85	0	0	188	772
8:45 AM	3	0	3	0	0	0	0	0	0	94	10	0	3	89	0	0	202	749

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	20	0	16	0	0	0	0	0	0	496	12	0	24	332	0	0	900
Heavy Trucks	0	0	0		0	0	0		0	12	0		0	8	0		20
Pedestrians		4				0				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

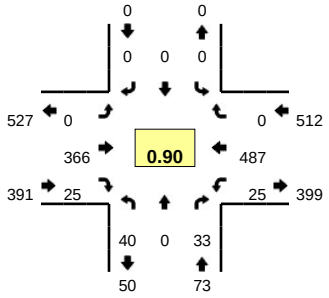
Type of peak hour being reported: Intersection Peak

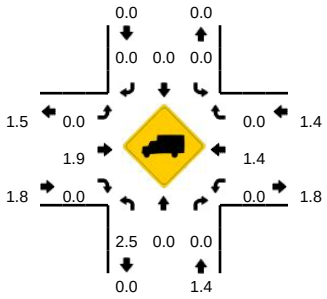
Method for determining peak hour: Total Entering Volume

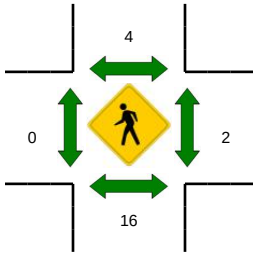
LOCATION: Corners Comm Ent -- Hanshaw Rd
CITY/STATE: Ithaca, NY

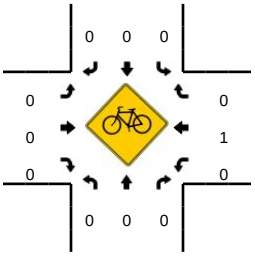
QC JOB #: 13777208
DATE: Thu, Apr 14 2016

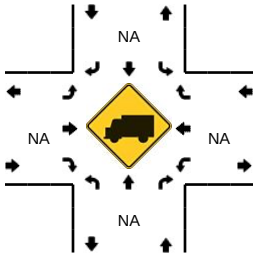
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

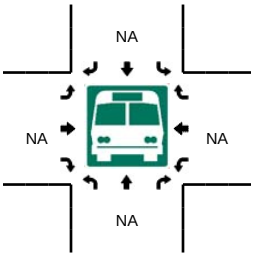












15-Min Count Period Beginning At	Corners Comm Ent (Northbound)				Corners Comm Ent (Southbound)				Hanshaw Rd (Eastbound)				Hanshaw Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	8	0	3	0	0	0	0	0	0	74	10	0	9	95	0	0	199	
4:15 PM	17	0	7	0	0	0	0	0	0	77	8	0	7	118	0	0	234	
4:30 PM	11	0	6	0	0	0	0	0	0	77	8	0	3	112	0	0	217	
4:45 PM	10	0	9	0	0	0	0	0	0	90	7	0	6	127	0	0	249	899
5:00 PM	10	0	12	0	0	0	0	0	0	97	5	0	5	141	0	0	270	970
5:15 PM	9	0	6	0	0	0	0	0	0	102	5	0	11	107	0	0	240	976
5:30 PM	12	0	6	0	0	0	0	0	0	71	6	0	3	118	0	0	216	975
5:45 PM	10	0	6	0	0	0	0	0	0	83	6	0	5	91	0	0	201	927

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	40	0	48	0	0	0	0	0	0	388	20	0	20	564	0	0	1080
Heavy Trucks	4	0	0		0	0	0		0	4	0		0	0	0		8
Pedestrians		12				8				0				0			20
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

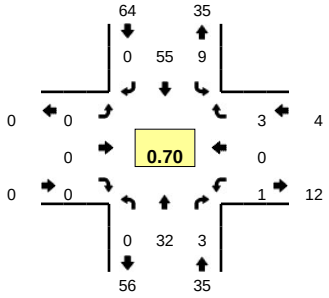
Type of peak hour being reported: Intersection Peak

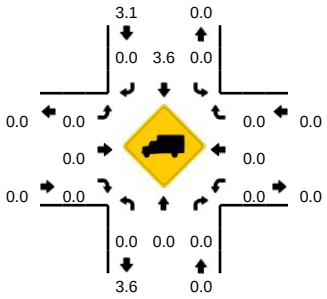
Method for determining peak hour: Total Entering Volume

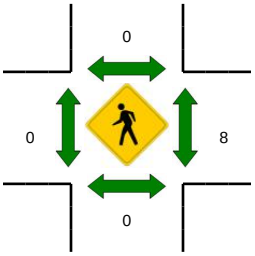
LOCATION: Corners Comm Ent N -- E Upland Rd
CITY/STATE: Ithaca, NY

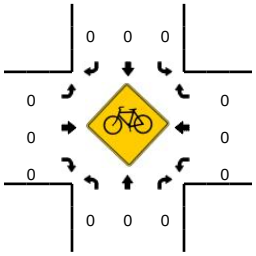
QC JOB #: 13777209
DATE: Thu, Apr 14 2016

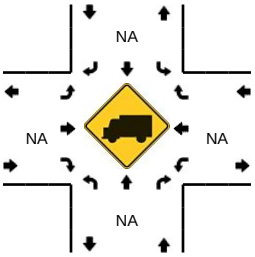
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

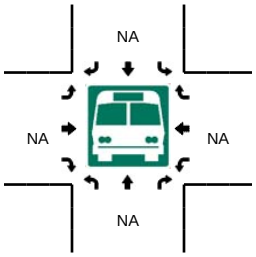












15-Min Count Period Beginning At	Corners Comm Ent N (Northbound)				Corners Comm Ent N (Southbound)				E Upland Rd (Eastbound)				E Upland Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	3	0	0	2	7	0	0	0	0	0	0	0	0	0	0	12	
7:15 AM	0	5	0	0	0	8	0	0	0	0	0	0	1	0	0	0	14	
7:30 AM	0	5	0	0	3	15	0	0	0	0	0	0	0	0	0	0	23	
7:45 AM	0	6	1	0	2	11	0	0	0	0	0	0	0	0	0	0	20	69
8:00 AM	0	4	1	0	2	13	0	0	0	0	0	0	0	0	0	0	20	77
8:15 AM	0	3	0	0	2	9	0	0	0	0	0	0	0	0	1	0	15	78
8:30 AM	0	12	0	0	2	16	0	0	0	0	0	0	0	0	1	0	31	86
8:45 AM	0	13	2	0	3	17	0	0	0	0	0	0	1	0	1	0	37	103

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	52	8	0	12	68	0	0	0	0	0	0	4	0	4	0	148
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Pedestrians		0				0				0				4			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

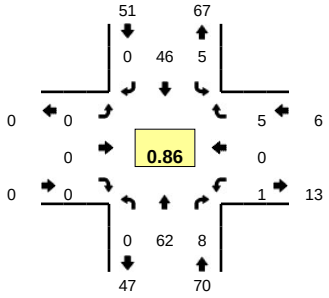
Type of peak hour being reported: Intersection Peak

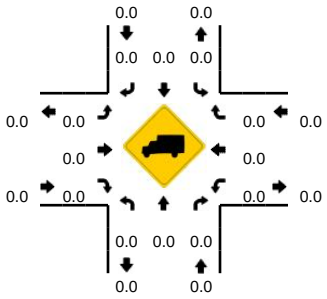
Method for determining peak hour: Total Entering Volume

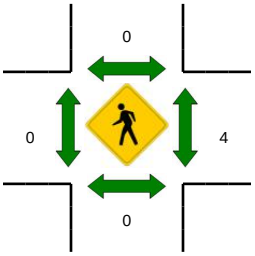
LOCATION: Corners Comm Ent N -- E Upland Rd
CITY/STATE: Ithaca, NY

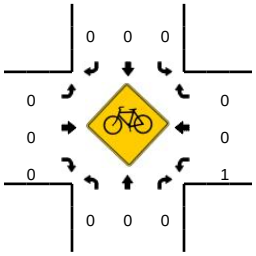
QC JOB #: 13777210
DATE: Thu, Apr 14 2016

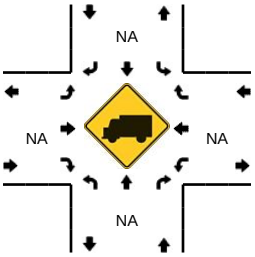
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

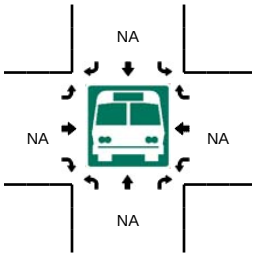












15-Min Count Period Beginning At	Corners Comm Ent N (Northbound)				Corners Comm Ent N (Southbound)				E Upland Rd (Eastbound)				E Upland Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	12	2	0	1	16	0	0	0	0	0	0	0	0	1	0	32	
4:15 PM	0	7	2	0	3	13	0	0	0	0	0	0	0	0	2	0	27	
4:30 PM	0	12	1	0	2	10	0	0	0	0	0	0	1	0	1	0	27	
4:45 PM	0	11	1	0	2	8	0	0	0	0	0	0	1	0	1	0	24	110
5:00 PM	0	19	0	0	0	16	0	0	0	0	0	0	0	0	2	0	37	115
5:15 PM	0	13	2	0	1	9	0	0	0	0	0	0	0	0	2	0	27	115
5:30 PM	0	19	0	0	2	13	0	0	0	0	0	0	0	0	0	0	34	122
5:45 PM	0	11	6	0	2	8	0	0	0	0	0	0	1	0	1	0	29	127

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	76	0	0	0	64	0	0	0	0	0	0	0	0	8	0	148
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Pedestrians		0				0				0				8			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

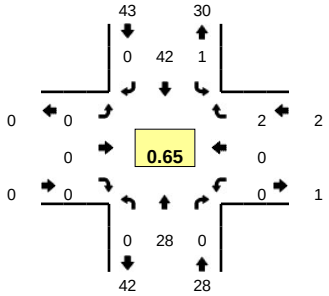
Type of peak hour being reported: Intersection Peak

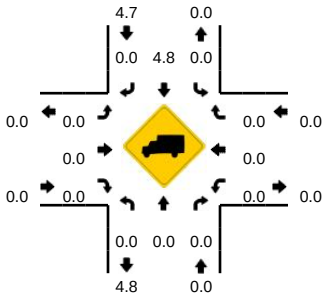
Method for determining peak hour: Total Entering Volume

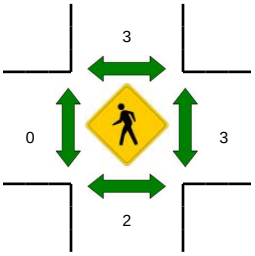
LOCATION: Corners Comm Ent Mid -- E Upland Rd
CITY/STATE: Ithaca, NY

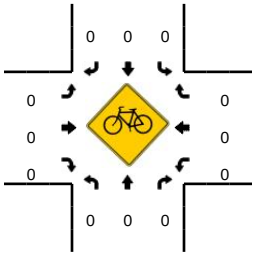
QC JOB #: 13777211
DATE: Thu, Apr 14 2016

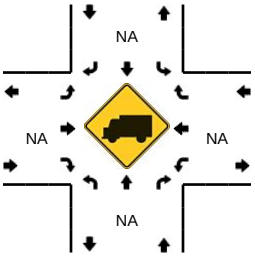
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

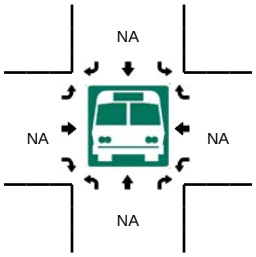












15-Min Count Period Beginning At	Corners Comm Ent Mid (Northbound)				Corners Comm Ent Mid (Southbound)				E Upland Rd (Eastbound)				E Upland Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	
7:15 AM	0	5	1	0	2	5	0	0	0	0	0	0	0	0	0	0	13	
7:30 AM	0	4	0	0	0	8	0	0	0	0	0	0	0	0	0	0	12	
7:45 AM	0	7	0	0	0	3	0	0	0	0	0	0	0	0	0	0	10	38
8:00 AM	0	4	0	0	0	10	0	0	0	0	0	0	0	0	1	0	15	50
8:15 AM	0	3	0	0	1	6	0	0	0	0	0	0	0	0	0	0	10	47
8:30 AM	0	9	0	0	0	11	0	0	0	0	0	0	0	0	0	0	20	55
8:45 AM	0	12	0	0	0	15	0	0	0	0	0	0	0	0	1	0	28	73

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	48	0	0	0	60	0	0	0	0	0	0	0	0	4	0	112
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Pedestrians		0				0				0				4			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

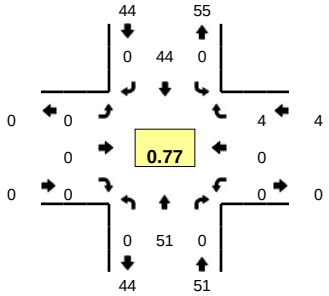
Type of peak hour being reported: Intersection Peak

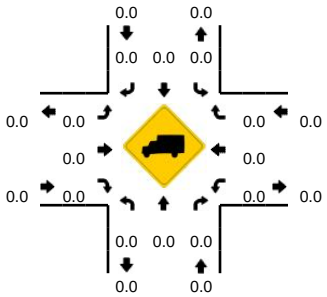
Method for determining peak hour: Total Entering Volume

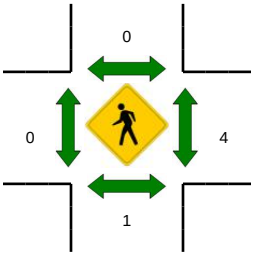
LOCATION: Corners Comm Ent Mid -- E Upland Rd
CITY/STATE: Ithaca, NY

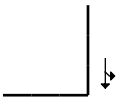
QC JOB #: 13777212
DATE: Thu, Apr 14 2016

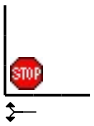
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

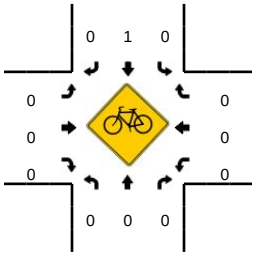


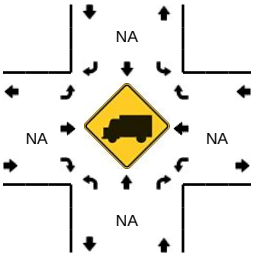


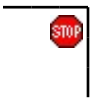


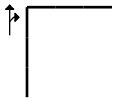


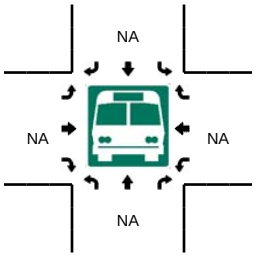












15-Min Count Period Beginning At	Corners Comm Ent Mid (Northbound)				Corners Comm Ent Mid (Southbound)				E Upland Rd (Eastbound)				E Upland Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	12	0	0	1	16	0	0	0	0	0	0	0	0	0	0	29	
4:15 PM	0	7	0	0	0	13	0	0	0	0	0	0	0	0	0	0	20	
4:30 PM	0	11	0	0	0	12	0	0	0	0	0	0	0	0	0	0	23	
4:45 PM	0	12	0	0	0	9	0	0	0	0	0	0	0	0	0	0	21	93
5:00 PM	0	15	0	0	0	16	0	0	0	0	0	0	0	0	1	0	32	96
5:15 PM	0	10	0	0	0	8	0	0	0	0	0	0	0	0	2	0	20	96
5:30 PM	0	14	0	0	0	11	0	0	0	0	0	0	0	0	1	0	26	99
5:45 PM	0	11	0	0	0	9	0	0	0	0	0	0	0	0	1	0	21	99

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	60	0	0	0	64	0	0	0	0	0	0	0	0	4	0	128
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Pedestrians		0				0				0				8			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

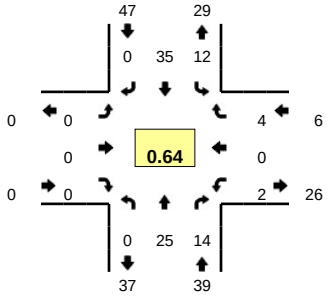
Type of peak hour being reported: Intersection Peak

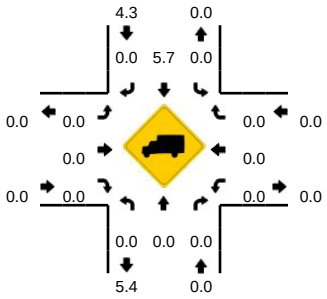
Method for determining peak hour: Total Entering Volume

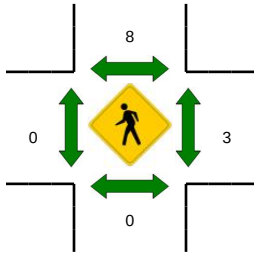
LOCATION: Corners Comm Ent S -- E Upland Rd
CITY/STATE: Ithaca, NY

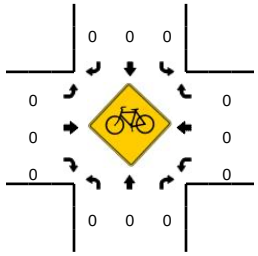
QC JOB #: 13777213
DATE: Thu, Apr 14 2016

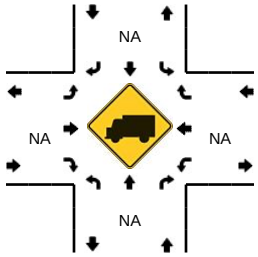
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

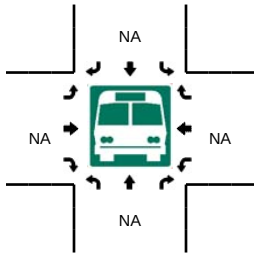












15-Min Count Period Beginning At	Corners Comm Ent S (Northbound)				Corners Comm Ent S (Southbound)				E Upland Rd (Eastbound)				E Upland Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	2	0	0	0	1	0	0	0	0	0	0	1	0	0	0	4	
7:15 AM	0	6	1	0	2	3	0	0	0	0	0	0	2	0	0	0	14	
7:30 AM	0	3	0	0	1	5	0	0	0	0	0	0	1	0	1	0	11	
7:45 AM	0	8	0	0	3	3	0	0	0	0	0	0	0	0	0	0	14	43
8:00 AM	0	2	3	0	5	6	0	0	0	0	0	0	0	0	1	0	17	56
8:15 AM	0	2	1	0	0	6	0	0	0	0	0	0	0	0	1	0	10	52
8:30 AM	0	11	5	0	5	8	0	0	0	0	0	0	0	0	0	0	29	70
8:45 AM	0	10	5	0	2	15	0	0	0	0	0	0	2	0	2	0	36	92

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	40	20	0	8	60	0	0	0	0	0	0	8	0	8	0	144
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Pedestrians		0				0				0				4			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

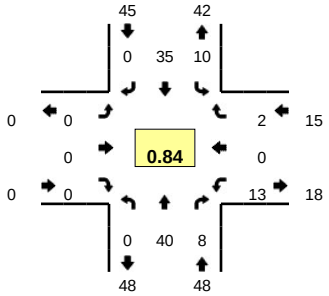
Type of peak hour being reported: Intersection Peak

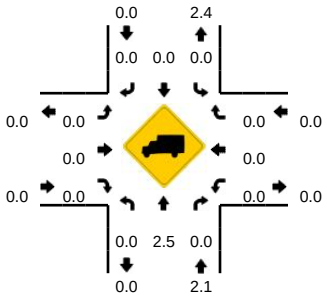
Method for determining peak hour: Total Entering Volume

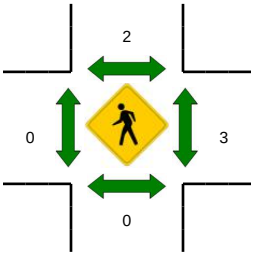
LOCATION: Corners Comm Ent S -- E Upland Rd
CITY/STATE: Ithaca, NY

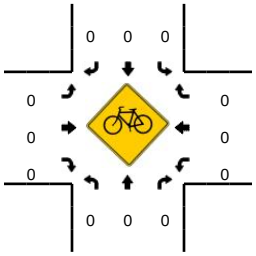
QC JOB #: 13777214
DATE: Thu, Apr 14 2016

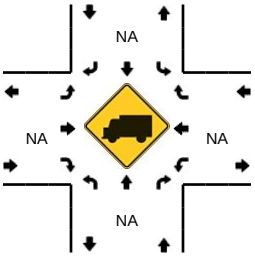
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

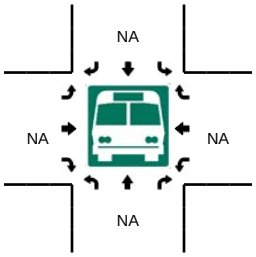












15-Min Count Period Beginning At	Corners Comm Ent S (Northbound)				Corners Comm Ent S (Southbound)				E Upland Rd (Eastbound)				E Upland Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	13	1	0	5	9	0	0	0	0	0	0	4	0	0	0	32	
4:15 PM	0	6	2	0	1	11	0	0	0	0	0	0	1	0	0	0	21	
4:30 PM	0	11	1	0	2	9	0	0	0	0	0	0	4	0	1	0	28	
4:45 PM	0	10	4	0	2	6	0	0	0	0	0	0	4	0	1	0	27	108
5:00 PM	0	12	1	0	2	10	0	0	0	0	0	0	2	0	3	0	30	106
5:15 PM	0	6	1	0	2	7	0	0	0	0	0	0	3	0	1	0	20	105
5:30 PM	0	11	1	0	2	6	0	0	0	0	0	0	4	0	2	0	26	103
5:45 PM	0	11	1	0	1	9	0	0	0	0	0	0	3	0	0	0	25	101

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	52	4	0	20	36	0	0	0	0	0	0	16	0	0	0	128
Heavy Trucks	0	4	0		0	0	0		0	0	0		0	0	0		4
Pedestrians		0				0				0				8			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

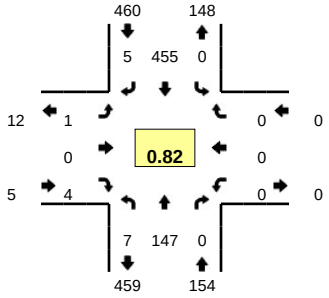
Type of peak hour being reported: Intersection Peak

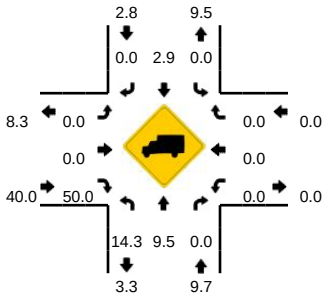
Method for determining peak hour: Total Entering Volume

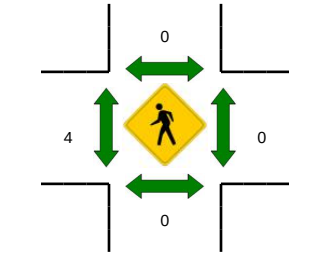
LOCATION: Corners Comm Ent -- Pleasant Grove Rd
CITY/STATE: Ithaca, NY

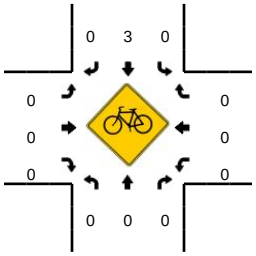
QC JOB #: 13777215
DATE: Thu, Apr 14 2016

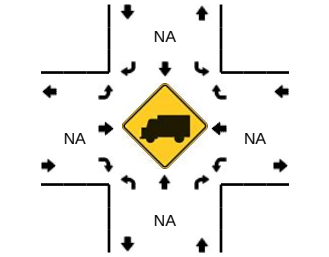
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

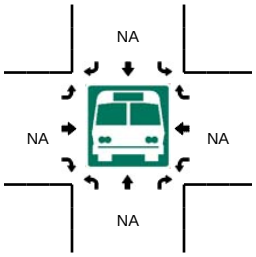












15-Min Count Period Beginning At	Corners Comm Ent (Northbound)				Corners Comm Ent (Southbound)				Pleasant Grove Rd (Eastbound)				Pleasant Grove Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	9	0	0	0	55	1	0	0	0	1	0	0	0	0	0	66	
7:15 AM	0	11	0	0	0	60	0	0	0	0	0	0	0	0	0	0	71	
7:30 AM	0	23	0	0	0	99	0	0	0	0	1	0	0	0	0	0	123	
7:45 AM	2	34	0	0	0	153	0	0	0	0	0	0	0	0	0	0	189	449
8:00 AM	1	30	0	0	0	112	0	0	0	0	0	0	0	0	0	0	143	526
8:15 AM	4	33	0	0	0	91	3	0	0	0	1	0	0	0	0	0	132	587
8:30 AM	0	50	0	0	0	99	2	0	1	0	3	0	0	0	0	0	155	619
8:45 AM	5	42	0	0	0	91	2	0	0	0	1	0	0	0	0	0	141	571

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	136	0	0	0	612	0	0	0	0	0	0	0	0	0	0	756
Heavy Trucks	0	24	0		0	20	0		0	0	0		0	0	0		44
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

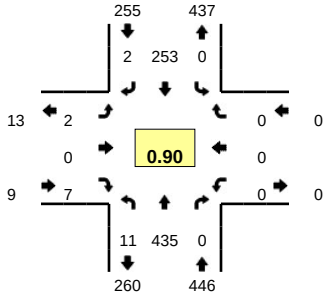
Type of peak hour being reported: Intersection Peak

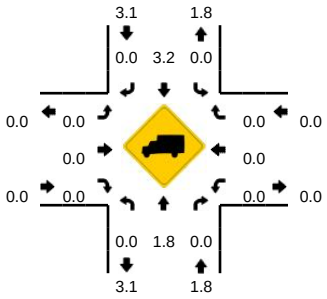
Method for determining peak hour: Total Entering Volume

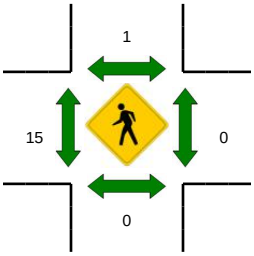
LOCATION: Corners Comm Ent -- Pleasant Grove Rd
CITY/STATE: Ithaca, NY

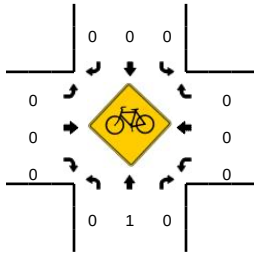
QC JOB #: 13777216
DATE: Thu, Apr 14 2016

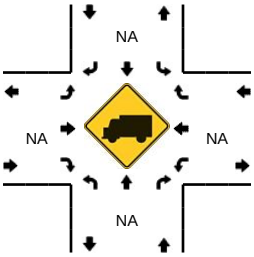
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

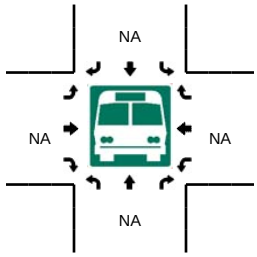












15-Min Count Period Beginning At	Corners Comm Ent (Northbound)				Corners Comm Ent (Southbound)				Pleasant Grove Rd (Eastbound)				Pleasant Grove Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	79	0	0	0	48	1	0	1	0	1	0	0	0	0	0	132	
4:15 PM	4	103	0	0	0	50	1	0	2	0	0	0	0	0	0	0	160	
4:30 PM	1	104	0	0	0	61	1	0	0	0	2	0	0	0	0	0	169	
4:45 PM	3	104	0	0	0	61	0	0	1	0	0	0	0	0	0	0	169	630
5:00 PM	6	131	0	0	0	56	1	0	1	0	2	0	0	0	0	0	197	695
5:15 PM	1	96	0	0	0	75	0	0	0	0	3	0	0	0	0	0	175	710
5:30 PM	2	77	0	0	0	43	0	0	0	0	1	0	0	0	0	0	123	664
5:45 PM	0	84	0	0	0	57	0	0	0	0	0	0	0	0	0	0	141	636

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	24	524	0	0	0	224	4	0	4	0	8	0	0	0	0	0	788
Heavy Trucks	0	0	0		0	4	0		0	0	0		0	0	0		4
Pedestrians		0				0				12				0			12
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

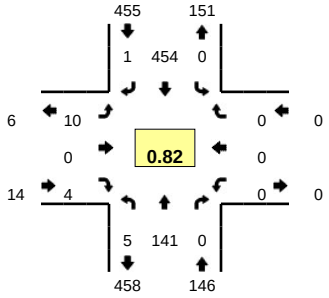
LOCATION: Carriage House Ent -- Pleasant Grove Rd

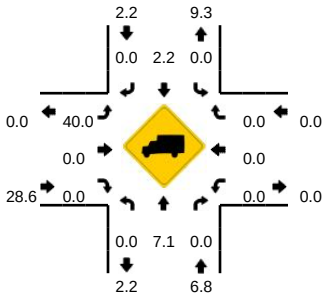
CITY/STATE: Ithaca, NY

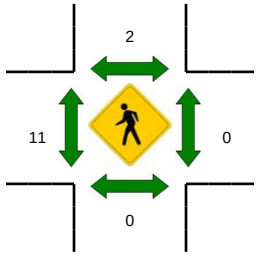
QC JOB #: 13777217

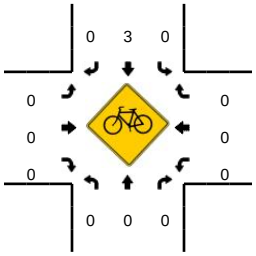
DATE: Thu, Apr 14 2016

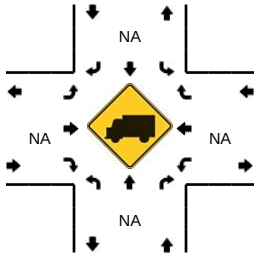
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

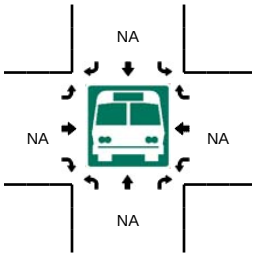












15-Min Count Period Beginning At	Carriage House Ent (Northbound)				Carriage House Ent (Southbound)				Pleasant Grove Rd (Eastbound)				Pleasant Grove Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	8	0	0	0	56	0	0	0	0	2	0	0	0	0	0	66	
7:15 AM	0	11	0	0	0	58	0	0	0	0	1	0	0	0	0	0	70	
7:30 AM	1	24	0	0	0	99	0	0	1	0	2	0	0	0	0	0	127	
7:45 AM	0	33	0	0	0	152	0	0	2	0	1	0	0	0	0	0	188	451
8:00 AM	3	26	0	0	0	109	0	0	3	0	0	0	0	0	0	0	141	526
8:15 AM	1	35	0	0	0	90	1	0	2	0	3	0	0	0	0	0	132	588
8:30 AM	1	47	0	0	0	103	0	0	3	0	0	0	0	0	0	0	154	615
8:45 AM	1	48	0	0	0	93	0	0	1	0	3	0	0	0	0	0	146	573

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	132	0	0	0	608	0	0	8	0	4	0	0	0	0	0	752
Heavy Trucks	0	20	0		0	12	0		0	0	0		0	0	0		32
Pedestrians		0				0				8				0			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

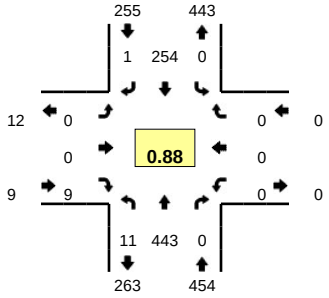
LOCATION: Carriage House Ent -- Pleasant Grove Rd

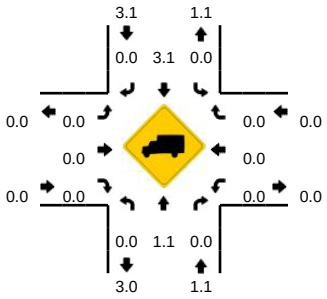
CITY/STATE: Ithaca, NY

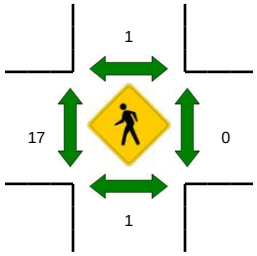
QC JOB #: 13777218

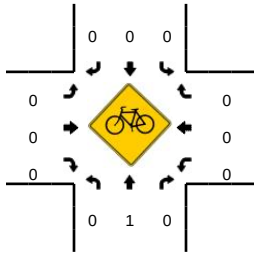
DATE: Thu, Apr 14 2016

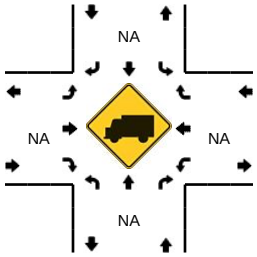
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

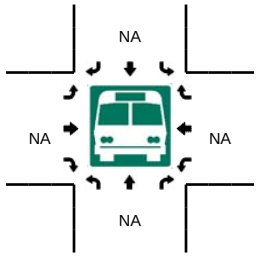












15-Min Count Period Beginning At	Carriage House Ent (Northbound)				Carriage House Ent (Southbound)				Pleasant Grove Rd (Eastbound)				Pleasant Grove Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	83	0	0	0	47	1	0	0	0	1	0	0	0	0	0	134	
4:15 PM	1	105	0	0	0	50	0	0	1	0	3	0	0	0	0	0	160	
4:30 PM	1	104	0	0	0	63	0	0	0	0	0	0	0	0	0	0	168	
4:45 PM	0	117	0	0	0	59	0	0	0	0	1	0	0	0	0	0	177	639
5:00 PM	6	133	0	0	0	57	1	0	0	0	6	0	0	0	0	0	203	708
5:15 PM	4	89	0	0	0	75	0	0	0	0	2	0	0	0	0	0	170	718
5:30 PM	4	97	0	0	0	54	1	0	1	0	1	0	0	0	0	0	158	708
5:45 PM	1	82	0	0	0	57	0	0	1	0	0	0	0	0	0	0	141	672

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	24	532	0	0	0	228	4	0	0	0	24	0	0	0	0	0	812
Heavy Trucks	0	0	0		0	4	0		0	0	0		0	0	0		4
Pedestrians		0				0				12				0			12
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

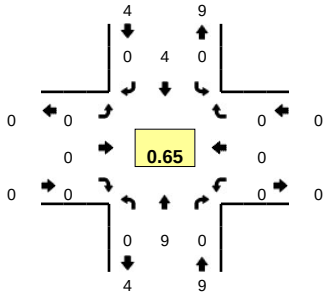
LOCATION: Carriage House -- Corners Comm

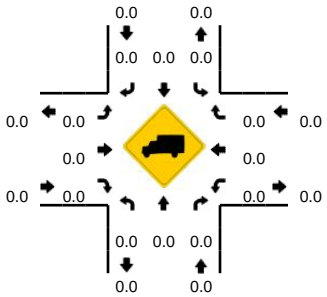
CITY/STATE: Ithaca, NY

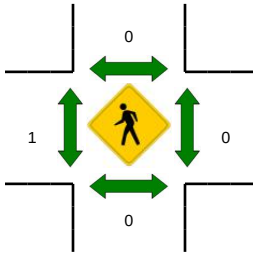
QC JOB #: 13777219

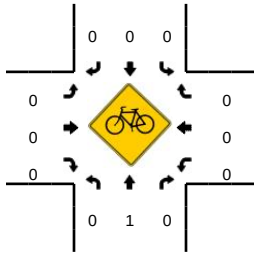
DATE: Thu, Apr 14 2016

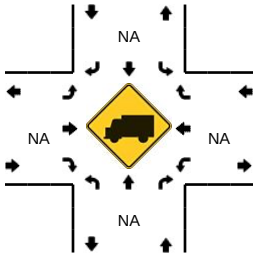
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

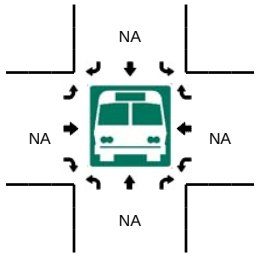












15-Min Count Period Beginning At	Carriage House (Northbound)				Carriage House (Southbound)				Corners Comm (Eastbound)				Corners Comm (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	
7:30 AM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	
7:45 AM	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5	10
8:00 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	12
8:15 AM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	13
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
8:45 AM	0	4	0	0	0	3	0	0	0	0	0	0	0	0	0	0	7	12

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	16	0	0	0	4	0	0	0	0	0	0	0	0	0	0	20
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

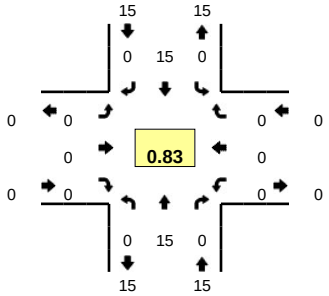
LOCATION: Carriage House -- Corners Comm

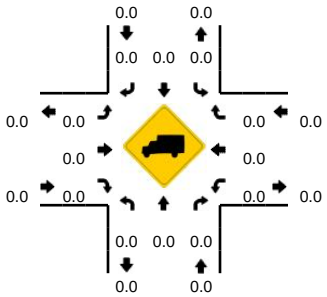
CITY/STATE: Ithaca, NY

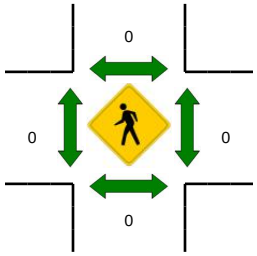
QC JOB #: 13777220

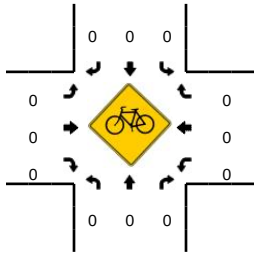
DATE: Thu, Apr 14 2016

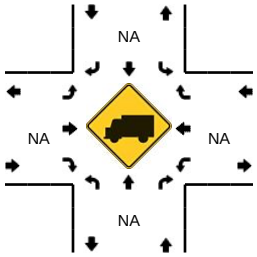
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

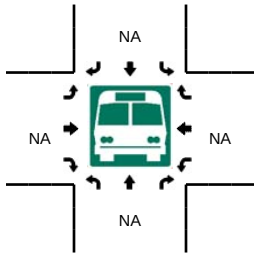












15-Min Count Period Beginning At	Carriage House (Northbound)				Carriage House (Southbound)				Corners Comm (Eastbound)				Corners Comm (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	5	
4:15 PM	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	5	
4:30 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4	
4:45 PM	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	5	19
5:00 PM	0	5	0	0	0	4	0	0	0	0	0	0	0	0	0	0	9	23
5:15 PM	0	2	0	0	0	6	0	0	0	0	0	0	0	0	0	0	8	26
5:30 PM	0	5	0	0	0	3	0	0	0	0	0	0	0	0	0	0	8	30
5:45 PM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	28

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	20	0	0	0	16	0	0	0	0	0	0	0	0	0	0	36
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 4/21/2016 10:51 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

A2

Miscellaneous Traffic Data and Calculations

STATION: **368402**

New York State Department of Transportation

Traffic Count Hourly Report

ROAD #: **0160** ROAD NAME: **HANSHAW ROAD**
DIRECTION: Eastbound FACTOR GROUP: 30
STATE DIR CODE: 1 WK OF YR: 35
DATE OF COUNT: 08/23/2010
NOTES LANE 1: 000000368402

COUNT TAKEN BY: ORG CODE: TST INITIALS: WJ

FROM: **N TRIPHAMMER R**
REC. SERIAL #: 5144
PLACEMENT: 150 Ft W of Pleasant Grove
@ REF MARKER:
ADDL DATA:
COUNT TYPE: AXLE PAIRS
PROCESSED BY: ORG CODE: R03 INITIALS: JAB

TO: **E VILLAGE BNDR**
FUNC. CLASS: 16
NHS: no
JURIS: Village
CC Stn:
BATCH ID: DOT-R03R3WW35a

COUNTY: **Tompkins**
VILLAGE: **CAYUGA HEIGHT**
LION#:
BIN:
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		AM												PM														
1	S																											
2	M																											
3	T																											
4	W																											
5	T																											
6	F																											
7	S																											
8	S																											
9	M																											
10	T																											
11	W																											
12	T																											
13	F																											
14	S																											
15	S																											
16	M																											
17	T																											
18	W																											
19	T																											
20	F																											
21	S																											
22	S																											
23	M															**395**	**389**	**519**	**516**	**406**	**295**	**258**	**155**	**73**	**44**			
24	T	**28**	**17**	**8**	**9**	**19**	**49**	**132**	**357**	**413**	**314**	**307**	**374**	**509**	**405**	**389**	**459**	**535**	**537**	**362**	**301**	**201**	**159**	**77**	**41**	6002	537	17
25	W	**31**	**13**	**7**	**7**	**17**	**53**	**129**	**385**	**463**	**374**	**317**	**332**	**468**	**479**	**406**	**529**	**608**	**630**	**460**	**377**	**286**	**186**	**96**	**69**	6722	630	17
26	T	**14**	**15**	**11**	**8**	**21**	**60**	**152**	**358**	**474**	**386**	**325**	**468**	**487**	**506**	**403**	**494**	**527**	**617**	**383**	**317**	**266**	**144**	**74**	**37**	6547	617	17
27	F	**24**	**14**	**3**	**6**	**12**	**61**	**127**	**366**	**484**	**387**	**358**	**443**	**529**	**555**	**470**												
28	S																											
29	S																											
30	M																											
31	T																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

24	15	7	8	17	55	133	359	450	358	321	397	479	455	391	460	537	565	396	316	248	158	79	47	**ADT** 6275

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
5	97	5	94	565	9%	0.982	1.099

ESTIMATED (one way)

AADT
5710

New York State Department of Transportation

Traffic Count Hourly Report

ROAD #: **0160** ROAD NAME: **HANSHAW ROAD**
DIRECTION: Westbound FACTOR GROUP: 30
STATE DIR CODE: 2 WK OF YR: 35
DATE OF COUNT: 08/23/2010
NOTES LANE 1: 000000368402

COUNT TAKEN BY: ORG CODE: TST INITIALS: WJ

FROM: **N TRIPHAMMER R**
REC. SERIAL #: 5144
PLACEMENT: 150 Ft W of Pleasant Grove
@ REF MARKER:
ADDL DATA:
COUNT TYPE: AXLE PAIRS
PROCESSED BY: ORG CODE: R03 INITIALS: JAB

TO: **E VILLAGE BNDR**
FUNC. CLASS: 16
NHS: no
JURIS: Village
CC Stn:
BATCH ID: DOT-R03R3WW35a

COUNTY: **Tompkins**
VILLAGE: **CAYUGA HEIGHT**
LION#:
BIN:
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		AM												PM														
1	S																											
2	M																											
3	T																											
4	W																											
5	T																											
6	F																											
7	S																											
8	S																											
9	M																											
10	T																											
11	W																											
12	T																											
13	F																											
14	S																											
15	S																											
16	M																											
17	T																											
18	W																											
19	T																											
20	F																											
21	S																											
22	S																											
23	M															**274**	**323**	**342**	**371**	**271**	**188**	**135**	**102**	**67**	**36**			
24	T	**21**	**10**	**11**	**7**	**11**	**19**	**62**	**154**	**275**	**247**	**246**	**303**	**267**	**257**	**288**	**300**	**344**	**386**	**273**	**177**	**156**	**86**	**80**	**41**	4021	386	17
25	W	**24**	**4**	**6**	**3**	**8**	**23**	**63**	**135**	**225**	**207**	**223**	**268**	**240**	**217**	**204**	**208**	**219**	**270**	**214**	**148**	**149**	**79**	**39**	**11**	3187	270	17
26	T	**16**	**9**	**3**	**3**	**6**	**33**	**67**	**144**	**230**	**204**	**159**	**143**	**181**	**176**	**206**	**172**	**312**	**209**	**228**	**151**	**102**	**95**	**53**	**30**	2932	312	16
27	F	**15**	**10**	**12**	**3**	**9**	**24**	**77**	**155**	**229**	**190**	**187**	**248**	**220**	**204**	**198**												
28	S																											
29	S																											
30	M																											
31	T																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																								ADT
19	**8**	**8**	**4**	**8**	**25**	**66**	**144**	**236**	**208**	**200**	**236**	**225**	**213**	**239**	**246**	**299**	**303**	**242**	**163**	**134**	**88**	**59**	**29**	**3402**

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
5	97	5	94	303	9%	0.982	1.099

ESTIMATED (one way)

AADT
3096

STATION: 362029

New York State Department of Transportation
Roadway Traffic Count Hourly Report

ROUTE/ROAD:	N TRIPHAMMER RD	FROM:	HANSHAW ROAD	TO:	VILLAGE N BOUN	REGION-COUNTY:	3-TOMPKINS
FED DIR CODE:	1, 5	REF. MARKER:		FUNC. CLASS:	16 - U Minor Arterial	MUNI:	Cayuga Heights-Village-1085
ST DIR CODE:	6	END MILEPOST:	.57	FACTOR GROUP:	30	BIN:	
DOT ID:	138648	LANES BY DIR:	1 North 1 South	CC STN:		RR CROSSING:	
BEGIN DATE:	9/15/2014	WEEK OF YEAR:	37	ADDL DATA:	CLS SPD	HPMS SAMPLE:	
NOTES 1:		PLACEMENT:	400 FT S OF WINTHROP DR	JURISDICTION:	04-City or village	1 WAY CODE:	
NOTES 2:						COUNT TYPE:	Vehicle
TAKEN BY:	TST-BMS	PROCESSED BY:	DOT-SJW	BATCH ID:	DOT-SJWR3WW38	SPEED LIMIT:	

DATE	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	DAILY TOTAL	HIGH COUNT	HIGH HOUR
9/15, Mon													**740**	**727**	**711**	**790**	**935**	**1047**	**784**	**497**	**342**	**276**	**136**	**68**	7053		
9/16, Tue	**40**	**28**	**19**	**28**	**48**	**90**	**253**	**623**	**889**	**740**	**621**	**686**	**746**	**753**	**720**	**768**	**996**	**1046**	**797**	**535**	**354**	**321**	**175**	**94**	11370	1046	17-18
9/17, Wed	**57**	**28**	**20**	**19**	**40**	**87**	**241**	**686**	**908**	**704**	**670**	**689**	**817**	**813**	**724**	**868**	**1051**	**1093**	**785**	**561**	**376**	**287**	**195**	**86**	11805	1093	17-18
9/18, Thu	**39**	**20**	**23**	**27**	**42**	**80**	**256**	**666**	**911**	**630**	**619**														3313		
AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6 AM to Fri Noon)																									**AWDT**		
	45	**25**	**21**	**25**	**43**	**86**	**250**	**658**	**903**	**691**	**637**	**688**	**768**	**764**	**718**	**809**	**994**	**1062**	**789**	**531**	**357**	**295**	**169**	**83**	11410		

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY Roadway High Hour	Roadway % of day	North High Hour	North % of day	South High Hour	South % of day
3	71	3	71	1062	9.3	565	11.2	644	10.1

ESTIMATED AADT Roadway	North	South
10743	4762	5981

FACTOR

Month	Seasonal	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Axl
9	1.06		1.00	1.00	1.00	1.00			1.00

STATION: 362029

New York State Department of Transportation
NB Traffic Count Hourly Report

ROUTE/ROAD:	N TRIPHAMMER RD	FROM:	HANSHAW ROAD	TO:	VILLAGE N BOUN	REGION-COUNTY:	3-TOMPKINS
FED DIR CODE:	1	REF. MARKER:		FUNC. CLASS:	16 - U Minor Arterial	MUNI:	Cayuga Heights-Village-1085
ST DIR CODE:	6	END MILEPOST:	.57	FACTOR GROUP:	30	BIN:	
DOT ID:	138648	LANES BY DIR:	1 North	CC STN:		RR CROSSING:	
BEGIN DATE:	9/15/2014	WEEK OF YEAR:	37	ADDL DATA:	CLS SPD	HPMS SAMPLE:	
NOTES 1:		PLACEMENT:	400 FT S OF WINTHROP DR	JURISDICTION:	04-City or village	1 WAY CODE:	
NOTES 2:						COUNT TYPE:	Vehicle
TAKEN BY:	TST-BMS	PROCESSED BY:	DOT-SJW	BATCH ID:	DOT-SJWR3WW38	SPEED LIMIT:	

DATE	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	DAILY TOTAL	HIGH COUNT	HIGH HOUR
9/15, Mon													**336**	**331**	**366**	**430**	**536**	**546**	**377**	**229**	**144**	**128**	**68**	**43**	3534		
9/16, Tue	**23**	**19**	**14**	**11**	**12**	**18**	**67**	**160**	**256**	**252**	**262**	**321**	**334**	**341**	**344**	**402**	**560**	**559**	**400**	**223**	**155**	**165**	**89**	**53**	5040	560	16-17
9/17, Wed	**31**	**19**	**13**	**2**	**7**	**15**	**79**	**173**	**249**	**245**	**286**	**276**	**373**	**388**	**356**	**451**	**598**	**556**	**381**	**266**	**174**	**128**	**113**	**50**	5229	598	16-17
9/18, Thu	**26**	**12**	**18**	**6**	**10**	**19**	**73**	**167**	**272**	**219**	**249**														1071		
AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6 AM to Fri Noon)																									**AWDT**		
	27	**17**	**15**	**6**	**10**	**17**	**73**	**167**	**259**	**239**	**266**	**299**	**348**	**353**	**355**	**428**	**565**	**554**	**386**	**239**	**158**	**140**	**90**	**49**	5058		

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY Roadway High Hour	Roadway % of day	North High Hour	North % of day	South High Hour	South % of day
3	71	3	71	1062	9.3	565	11.2	644	10.1

ESTIMATED AADT Roadway	North	South
10743	4762	5981

FACTOR

Month	Seasonal	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Axl
9	1.06		1.00	1.00	1.00	1.00			1.00

STATION: 362029

New York State Department of Transportation
SB Traffic Count Hourly Report

ROUTE/ROAD:	N TRIPHAMMER RD	FROM:	HANSHAW ROAD	TO:	VILLAGE N BOUN	REGION-COUNTY:	3-TOMPKINS
FED DIR CODE:	5	REF. MARKER:		FUNC. CLASS:	16 - U Minor Arterial	MUNI:	Cayuga Heights-Village-1085
ST DIR CODE:	6	END MILEPOST:	.57	FACTOR GROUP:	30	BIN:	
DOT ID:	138648	LANES BY DIR:	1 South	CC STN:		RR CROSSING:	
BEGIN DATE:	9/15/2014	WEEK OF YEAR:	37	ADDL DATA:	CLS SPD	HPMS SAMPLE:	
NOTES 1:		PLACEMENT:	400 FT S OF WINTHROP DR	JURISDICTION:	04-City or village	1 WAY CODE:	
NOTES 2:						COUNT TYPE:	Vehicle
TAKEN BY:	TST-BMS	PROCESSED BY:	DOT-SJW	BATCH ID:	DOT-SJWR3WW38	SPEED LIMIT:	

DATE	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	DAILY TOTAL	HIGH COUNT	HIGH HOUR
9/15, Mon													**404**	**396**	**345**	**360**	**399**	**501**	**407**	**268**	**198**	**148**	**68**	**25**	3519		
9/16, Tue	**17**	**9**	**5**	**17**	**36**	**72**	**186**	**463**	**633**	**488**	**359**	**365**	**412**	**412**	**376**	**366**	**436**	**487**	**397**	**312**	**199**	**156**	**86**	**41**	6330	633	08-09
9/17, Wed	**26**	**9**	**7**	**17**	**33**	**72**	**162**	**513**	**659**	**459**	**384**	**413**	**444**	**425**	**368**	**417**	**453**	**537**	**404**	**295**	**202**	**159**	**82**	**36**	6576	659	08-09
9/18, Thu	**13**	**8**	**5**	**21**	**32**	**61**	**183**	**499**	**639**	**411**	**370**														2242		
AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6 AM to Fri Noon)																									**AWDT**		
	19	**9**	**6**	**18**	**34**	**68**	**177**	**492**	**644**	**453**	**371**	**389**	**420**	**411**	**363**	**381**	**429**	**508**	**403**	**292**	**200**	**154**	**79**	**34**	6352		

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY Roadway High Hour	Roadway % of day	North High Hour	North % of day	South High Hour	South % of day
3	71	3	71	1062	9.3	565	11.2	644	10.1

ESTIMATED AADT Roadway	North	South
10743	4762	5981

FACTOR

Month	Seasonal	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Axl
9	1.06		1.00	1.00	1.00	1.00			1.00

SRF ASSOCIATES
WWW.SRFA.NET
Traffic Engineering & Planning Consultants

Proposed Medical Office Building at Community Corners, Village of Cayuga Heights, Tompkin

Documentation of Ambient Traffic Volume Growth

Roadway	Segment begins at	Segment counted at	2014	2016	Annual Growth
N Triphammer Road	Hanshaw Road	400' S of Winthrop (1558' N of Hanshaw	10,743	10,620	-0.57%

Roadway	Segment begins at	Segment counted at	2010	2016	Annual Growth
Hanshaw Road	N. Triphammer	150' W of Pleasant Grove	8,606	8,860	0.49%

Project Information	
Project Name:	Community Corners Medical Office
No:	36019
Date:	4/28/2016, REV 8/03/16
City:	Cayuga Heights
State/Province:	New York
Zip/Postal Code:	
Country:	United States
Client Name:	HOLT
Analyst's Name:	LBD/ACD
Edition:	ITE-TGM 9th Edition

Land Use	Size	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.		Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	
		Entry	Exit	Entry	Exit
720 - Medical-Dental Office Building	28.2 1000 Sq. Feet Gross Floor Area	53	14	26	67
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		0	0	0	0
Non-pass-by		53	14	26	67
Total		53	14	26	67
Total Reduction		0	0	0	0
Total Internal		0	0	0	0
Total Pass-by		0	0	0	0
Total Non-pass-by		53	14	26	67

PROPOSED MEDICAL OFFICE BLDG at COMMUNITY CORNERS
TOWN OF BRIGHTON, CAYUGA HEIGHTS, NY
AM PEAK

Num of yrs: 1

LOCATION NUMBER	INTERSECTION DESCRIPTION	2016 Existing Volume	2017 Bkgd Vol 0.25%	Adj Vol for Carriage Hse Apts	PROPOSED MEDICAL OFFICE BUILDING Enter Dist. %	Exit Dist. %	Trips IN 53	Trips OUT 14	Site Trips	Pass-by Trips	Full Build Volumes
1	**Hanshaw Road & North Triphammer Road**										
	SR	39	39				0	0	0		39
	ST						0	0	0		0
	SL	454	455		40%		21	0	21		476
	WR	257	258			40%	0	6	6		264
	WT	32	32			5%	0	1	1		33
	WL						0	0	0		0
	NR						0	0	0		0
	NT						0	0	0		0
	NL						0	0	0		0
	ER						0	0	0		0
	ET	46	46		5%		3	0	3		49
	EL	35	35				0	0	0		35
4	**East Upland Road/Hanshaw Road/Triphammer Road**										
	SR	82	82				0	0	0		82
	ST	39	39		20%		11	0	11		50
	SL	386	387		25%		13	0	13		400
	WR	239	240			35%	0	5	5		245
	WT	57	57			5%	0	1	1		58
	WL	16	16			0%	0	0	0		16
	NR	12	12			0%	0	0	0		12
	NT	15	15			10%	0	1	1		16
	NL	0	0			5%	0	1	1		1
	ER	5	5		5%		3	0	3		8
	ET	29	29		5%		3	0	3		32
	EL	40	40				0	0	0		40
6	**East Upland Road/Community Corners North Entrance**										
	SR						0	0	0		0
	ST	55	55		20%		11	0	11		66
	SL	9	9		5%		3	0	3		12
	WR	3	3			5%	0	1	1		4
	WT						0	0	0		0
	WL	1	1			0%	0	0	0		1
	NR	3	3				0	0	0		3
	NT	32	32			10%	0	1	1		33
	NL						0	0	0		0
	ER						0	0	0		0
	ET						0	0	0		0
	EL						0	0	0		0
8	**East Upland Road/Community Corners Middle Entrance**										
	SR						0	0	0		0
	ST	42	42		20%		11	0	11		53
	SL	1	1		0%		0	0	0		1
	WR	2	2			0%	0	0	0		2
	WT						0	0	0		0
	WL	0	0			0%	0	0	0		0
	NR	0	0				0	0	0		0
	NT	28	28			10%	0	1	1		29
	NL						0	0	0		0
	ER						0	0	0		0
	ET						0	0	0		0
	EL						0	0	0		0
10	**East Upland Road/Community Corners South Entrance**										
	SR						0	0	0		0
	ST	35	35				0	0	0		35
	SL	12	12		20%		11	0	11		23
	WR	4	4			10%	0	1	1		5
	WT						0	0	0		0
	WL	2	2	1		20%	0	3	3		6
	NR	14	14		15%		8	0	8		22
	NT	25	25				0	0	0		25
	NL						0	0	0		0
	ER						0	0	0		0
	ET						0	0	0		0
	EL						0	0	0		0

PROPOSED MEDICAL OFFICE BLDG at COMMUNITY CORNERS
TOWN OF BRIGHTON, CAYUGA HEIGHTS, NY
AM PEAK

Num of yrs: 1

LOCATION NUMBER	INTERSECTION DESCRIPTION	2016 Existing Volume	2017 Bkgd Vol 0.25%	Adj Vol for Carriage Hse Apts	PROPOSED MEDICAL OFFICE BUILDING Enter Dist. %	Exit Dist. %	Trips IN 53	Trips OUT 14	Site Trips	Pass-by Trips	Full Build Volumes
13	**Hanshaw Road/Community Corners Hanshaw Entrance**										
	SR						0	0	0		0
	ST						0	0	0		0
	SL						0	0	0		0
	WR						0	0	0		0
	WT	304	305				0	0	0		305
	WL	23	23		30%		16	0	16		39
	NR	10	10			20%	0	3	3		13
	NT						0	0	0		0
	NL	15	15			40%	0	6	6		21
	ER	15	15		30%		16	0	16		31
	ET	405	406				0	0	0		406
	EL						0	0	0		0
15	**Pleasant Grove Road/Hanshaw Road**										
	SR						0	0	0		0
	ST						0	0	0		0
	SL						0	0	0		0
	WR						0	0	0		0
	WT	207	208		25%		13	0	13		221
	WL	143	143		0%		0	0	0		143
	NR	26	26			0%	0	0	0		26
	NT						0	0	0		0
	NL	108	108		5%		3	0	3		111
	ER	311	312			0%	0	0	0		312
	ET	76	76			20%	0	3	3		79
	EL						0	0	0		0
16	**Pleasant Grove Road/Community Corners Pleasant Grove Entrance**										
	SR	5	5				0	0	0		5
	ST	455	456				0	0	0		456
	SL						0	0	0		0
	WR						0	0	0		0
	WT						0	0	0		0
	WL						0	0	0		0
	NR						0	0	0		0
	NT	147	147		5%		3	0	3		150
	NL	7	7		0%		0	0	0		7
	ER	4	4			5%	0	1	1		5
	ET						0	0	0		0
	EL	1	1			0%	0	0	0		1
17	**Pleasant Grove Road/Carriage House Entrance**										
	SR	1	1	3			0	0	0		4
	ST	454	455			5%	0	1	1		456
	SL						0	0	0		0
	WR						0	0	0		0
	WT						0	0	0		0
	WL						0	0	0		0
	NR						0	0	0		0
	NT	141	141		5%		3	0	3		144
	NL	5	5				0	0	0		5
	ER	4	4				0	0	0		4
	ET						0	0	0		0
	EL	10	10	9			0	0	0		19
22	**Carriage House Entrance/Community Corners Interior Driveways**										
	SR	0	0				0	0	0		0
	ST	4	4	-4			0	0	0		0
	SL	0	0				0	0	0		0
	WR	0	0				0	0	0		0
	WT	0	0				0	0	0		0
	WL	0	0				0	0	0		0
	NR	0	0				0	0	0		0
	NT	9	9	-9			0	0	0		0
	NL	0	0				0	0	0		0
	ER	0	0				0	0	0		0
	ET	0	0				0	0	0		0
	EL	0	0				0	0	0		0

PROPOSED MEDICAL OFFICE BLDG at COMMUNITY CORNERS
TOWN OF BRIGHTON, CAYUGA HEIGHTS, NY
PM PEAK

Num of yrs

Seasonal Adjustment: 1

LOCATION NUMBER	INTERSECTION DESCRIPTION	2016 Existing Volume	2017 Bkgd Vol 0.25%	Adj Vol for Carriage Hse Apts	PROPOSED MEDICAL OFFICE BUILDING Enter Dist. %	Exit Dist. %	Trips IN 26	Trips OUT 67	Site Trips	Pass-by Trips	Full Build Volumes
1	**Hanshaw Road & North Triphammer Road**										
	SR	56	56				0	0	0		56
	ST						0	0	0		0
	SL	377	378		40%		10	0	10		388
	WR	585	586			40%	0	27	27		613
	WT	49	49			5%	0	3	3		52
	WL						0	0	0		0
	NR						0	0	0		0
	NT						0	0	0		0
	NL						0	0	0		0
	ER						0	0	0		0
	ET	45	45		5%		1	0	1		46
	EL	44	44				0	0	0		44
4	**East Upland Road/Hanshaw Road/Triphammer Road**										
	SR	65	65				0	0	0		65
	ST	36	36		20%		5	0	5		41
	SL	315	316		25%		7	0	7		323
	WR	502	503			35%	0	23	23		526
	WT	27	27			5%	0	3	3		30
	WL	14	14			0%	0	0	0		14
	NR	34	34			0%	0	0	0		34
	NT	28	28			10%	0	7	7		35
	NL	9	9			5%	0	3	3		12
	ER	2	2		5%		1	0	1		3
	ET	30	30		5%		1	0	1		31
	EL	92	92				0	0	0		92
6	**East Upland Road/Community Corners North Entrance**										
	SR						0	0	0		0
	ST	46	46		20%		5	0	5		51
	SL	5	5		5%		1	0	1		6
	WR	5	5			5%	0	3	3		8
	WT						0	0	0		0
	WL	1	1			0%	0	0	0		1
	NR	8	8				0	0	0		8
	NT	62	62			10%	0	7	7		69
	NL						0	0	0		0
	ER						0	0	0		0
	ET						0	0	0		0
	EL						0	0	0		0
8	**East Upland Road/Community Corners Middle Entrance**										
	SR						0	0	0		0
	ST	44	44		20%		5	0	5		49
	SL	0	0		0%		0	0	0		0
	WR	4	4			0%	0	0	0		4
	WT						0	0	0		0
	WL	0	0			0%	0	0	0		0
	NR	0	0				0	0	0		0
	NT	51	51			10%	0	7	7		58
	NL						0	0	0		0
	ER						0	0	0		0
	ET						0	0	0		0
	EL						0	0	0		0
10	**East Upland Road/Community Corners South Entrance**										
	SR						0	0	0		0
	ST	35	35				0	0	0		35
	SL	10	10		20%		5	0	5		15
	WR	2	2			10%	0	7	7		9
	WT						0	0	0		0
	WL	13	13	4		20%	0	13	13		30
	NR	8	8		15%		4	0	4		12
	NT	40	40				0	0	0		40
	NL						0	0	0		0
	ER						0	0	0		0
	ET						0	0	0		0
	EL						0	0	0		0

PROPOSED MEDICAL OFFICE BLDG at COMMUNITY CORNERS
TOWN OF BRIGHTON, CAYUGA HEIGHTS, NY
PM PEAK

Num of yrs
Seasonal Adjustment: 1

LOCATION NUMBER	INTERSECTION DESCRIPTION	2016 Existing Volume	2017 Bkgd Vol 0.25%	Adj Vol for Carriage Hse Apts	PROPOSED MEDICAL OFFICE BUILDING Enter Dist. %	Exit Dist. %	Trips IN 26	Trips OUT 67	Site Trips	Pass-by Trips	Full Build Volumes
13	**Hanshaw Road/Community Corners Hanshaw Entrance**										
	SR						0	0	0		0
	ST						0	0	0		0
	SL						0	0	0		0
	WR						0	0	0		0
	WT	487	488				0	0	0		488
	WL	25	25		30%		8	0	8		33
	NR	33	33			20%	0	13	13		46
	NT						0	0	0		0
	NL	40	40			40%	0	27	27		67
	ER	25	25		30%		8	0	8		33
	ET	366	367				0	0	0		367
	EL						0	0	0		0
15	**Pleasant Grove Road/Hanshaw Road**										
	SR						0	0	0		0
	ST						0	0	0		0
	SL						0	0	0		0
	WR						0	0	0		0
	WT	166	166		25%		7	0	7		173
	WL	32	32		0%		0	0	0		32
	NR	98	98			0%	0	0	0		98
	NT						0	0	0		0
	NL	327	328		5%		1	0	1		329
	ER	211	212			0%	0	0	0		212
	ET	163	163			20%	0	13	13		176
	EL						0	0	0		0
16	**Pleasant Grove Road/Community Corners Pleasant Grove Entrance**										
	SR	2	2				0	0	0		2
	ST	253	254				0	0	0		254
	SL						0	0	0		0
	WR						0	0	0		0
	WT						0	0	0		0
	WL						0	0	0		0
	NR						0	0	0		0
	NT	435	436		5%		1	0	1		437
	NL	11	11		0%		0	0	0		11
	ER	7	7			5%	0	3	3		10
	ET						0	0	0		0
	EL	2	2			0%	0	0	0		2
17	**Pleasant Grove Road/Carriage House Entrance**										
	SR	1	1	11			0	0	0		12
	ST	254	255			5%	0	3	3		258
	SL						0	0	0		0
	WR						0	0	0		0
	WT						0	0	0		0
	WL						0	0	0		0
	NR						0	0	0		0
	NT	443	444		5%		1	0	1		445
	NL	11	11				0	0	0		11
	ER	9	9				0	0	0		9
	ET						0	0	0		0
	EL	0	0	15			0	0	0		15
22	**Carriage House Entrance/Community Corners Interior Driveways**										
	SR	0	0				0	0	0		0
	ST	15	15	-15			0	0	0		0
	SL	0	0				0	0	0		0
	WR	0	0				0	0	0		0
	WT	0	0				0	0	0		0
	WL	0	0				0	0	0		0
	NR	0	0				0	0	0		0
	NT	15	15	-15			0	0	0		0
	NL	0	0				0	0	0		0
	ER	0	0				0	0	0		0
	ET	0	0				0	0	0		0
	EL	0	0				0	0	0		0

INPUTS

Description: Shared Parking Analysis - Existing Site

ksf = thousand square feet

Projected Parking Supply: 285					Mode Adjustment				Noncaptive Ratio			
			Max Parking Spaces		Weekday		Weekend		Weekday		Weekend	
Land Use	**Quantity**		**Weekday**	**Weekend**	**Daytime**	**Evening**	**Daytime**	**Evening**	**Daytime**	**Evening**	**Daytime**	**Evening**
Community Shopping Center (<400 ksf)	15,515	sf GLA	45	50	95%	95%	95%	95%	95%	95%	95%	95%
Employee			11	12	95%	95%	95%	95%	95%	95%	95%	95%
Regional Shopping Center (400 to 600 ksf)		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Super Regional Shopping Center (>600 ksf)		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Fine/Casual Dining Restaurant		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Family Restaurant	4,636	sf GLA	42	59	95%	95%	95%	95%	95%	95%	95%	95%
Employee			7	10	95%	95%	95%	95%	95%	95%	95%	95%
Fast Food Restaurant		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Nightclub		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Cineplex		seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Performing Arts Theater		seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Arena		seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Pro Football Stadium		seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Pro Baseball Stadium		seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Health Club	11,953	sf GLA	79	66	95%	95%	95%	95%	95%	95%	95%	95%
Employee			5	3	95%	95%	95%	95%	95%	95%	95%	95%
Convention Center		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Hotel-Business		rooms	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Hotel-Leisure		rooms	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Restaurant/Lounge		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Conference Ctr/Banquet (20 to 50 sq ft/guest room)		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Convention Space (>50 sq ft/guest room)		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Residential, Rental, Shared Spaces		units	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Reserved		sp/unit	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Guest		units	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Residential, Owned, Shared Spaces		units	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Reserved		sp/unit	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Guest		units	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office <25 ksf	5,475	sf GLA	2	0	95%	95%	95%	95%	95%	95%	95%	95%
Employee			19	2	95%	95%	95%	95%	95%	95%	95%	95%
Office 25 to 100 ksf		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office 100 to 500 ksf		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office >500 ksf		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Data Processing Office		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Medical/Dental Office	8,955	sf GLA	27	27	95%	95%	95%	95%	95%	95%	95%	95%
Employee			13	13	95%	95%	95%	95%	95%	95%	95%	95%
Bank (Branch) with Drive-In		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Subtotal Customer/Guest Spaces			195	202								
Subtotal Employee/Resident Spaces			55	40								
Subtotal Reserved Spaces			0	0								
Total Parking Spaces			250	242								

SHARED PARKING SUMMARY

Table 5/26/2016
Project: Corners Community Center, Village of Cayuga Heights, NY
Description: Shared Parking Analysis - Existing Site

SHARED PARKING DEMAND SUMMARY

PEAK MONTH: DECEMBER -- PEAK PERIOD: 1 PM, WEEKDAY

			Weekday					Weekend					Weekday			Weekend		
	Project Data				Non-					Non-			Peak Hr Adj	Peak Mo Adj	Estimated Parking	Peak Hr Adj	Peak Mo Adj	Estimated Parking
Land Use	**Quantity**	**Unit**	**Base Rate**	**Mode Adj**	**Captive Ratio**	**Project Rate**	**Unit**	**Base Rate**	**Mode Adj**	**Captive Ratio**	**Project Rate**	**Unit**	**1 PM**	**December**	**Demand**	**11 AM**	**December**	**Demand**
Community Shopping	15,515	sf GLA	2.90	0.95	0.95	2.62	/ksf GLA	3.20	0.95	0.95	2.89	/ksf GLA	1.00	1.00	41	0.70	1.00	32
Employee			0.70	0.95	0.95	0.63	/ksf GLA	0.80	0.95	0.95	0.72	/ksf GLA	1.00	1.00	10	0.95	1.00	10
Family Restaurant	4,636	sf GLA	9.00	0.95	0.95	8.12	/ksf GLA	12.75	0.95	0.95	11.51	/ksf GLA	0.90	1.00	34	0.90	1.00	48
Employee			1.50	0.95	0.95	1.35	/ksf GLA	2.25	0.95	0.95	2.03	/ksf GLA	1.00	1.00	6	1.00	1.00	9
Health Club	11,953	sf GLA	6.60	0.95	0.95	5.96	/ksf GLA	5.50	0.95	0.95	4.96	/ksf GLA	0.70	0.90	45	0.50	0.90	27
Employee			0.40	0.95	0.95	0.36	/ksf GLA	0.25	0.95	0.95	0.23	/ksf GLA	0.75	1.00	3	0.50	1.00	1
Residential, Rental, S		units	1.50	1.00	1.00	1.50	/unit	1.50	1.00	1.00	1.50	/unit	0.70	1.00	0	0.70	1.00	0
Reserved		sp/unit	0	1.00	1.00	0	/unit	0	1.00	1.00	0	/unit	1.00	1.00	0	1.00	1.00	0
Guest		units	0	1.00	1.00	0	/unit	0	1.00	1.00	0	/unit	0.20	1.00	0	0.20	1.00	0
Reserved		sp/unit	0.00	1.00	1.00	0.00	/unit	0.00	1.00	1.00	0.00	/unit	1.00	1.00	0	1.00	1.00	0
Guest		units	0.15	1.00	1.00	0.15	/unit	0.15	1.00	1.00	0.00	/unit	0.20	1.00	0	0.20	1.00	0
Office <25 ksf	5,475	sf GLA	0.30	0.95	0.95	0.27	/unit	0.03	0.95	0.95	0.03	/unit	0.45	1.00	1	1.00	1.00	0
Medical/Dental Office	8,955	sf GLA	3.00	0.95	0.95	2.71	/ksf GLA	3.00	0.95	0.95	2.71	/ksf GLA	0.90	1.00	22	1.00	1.00	24
Employee			1.50	0.95	0.95	1.35	/ksf GLA	1.50	0.95	0.95	1.35	/ksf GLA	1.00	1.00	12	1.00	1.00	12
													Customer		143	Customer		131
													Employee		46	Employee		34
													Reserved		0	Reserved		0
													Total		189	Total		165

WEEKDAY MONTH-BY-MONTH ESTIMATED PARKING DEMAN

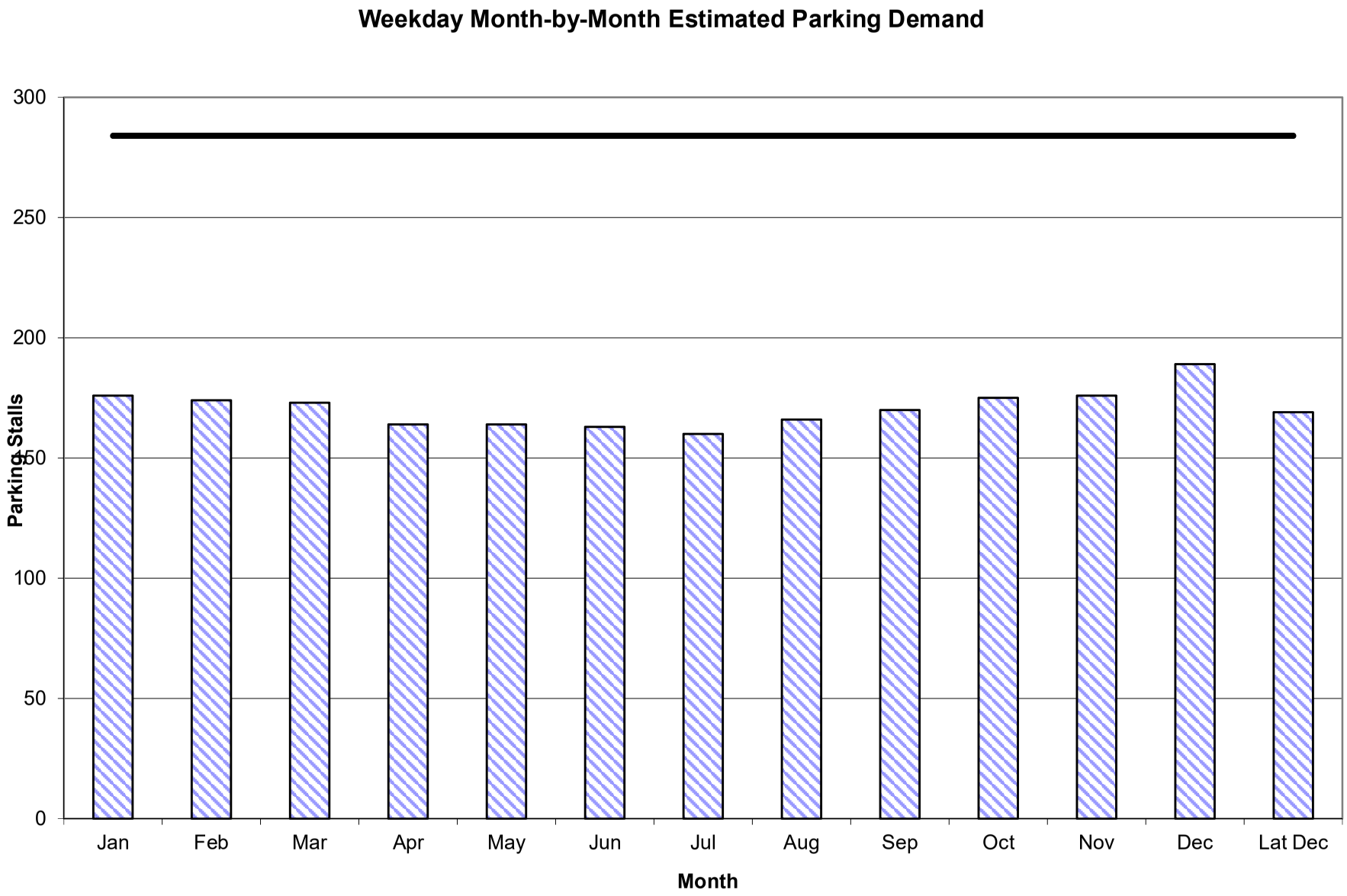
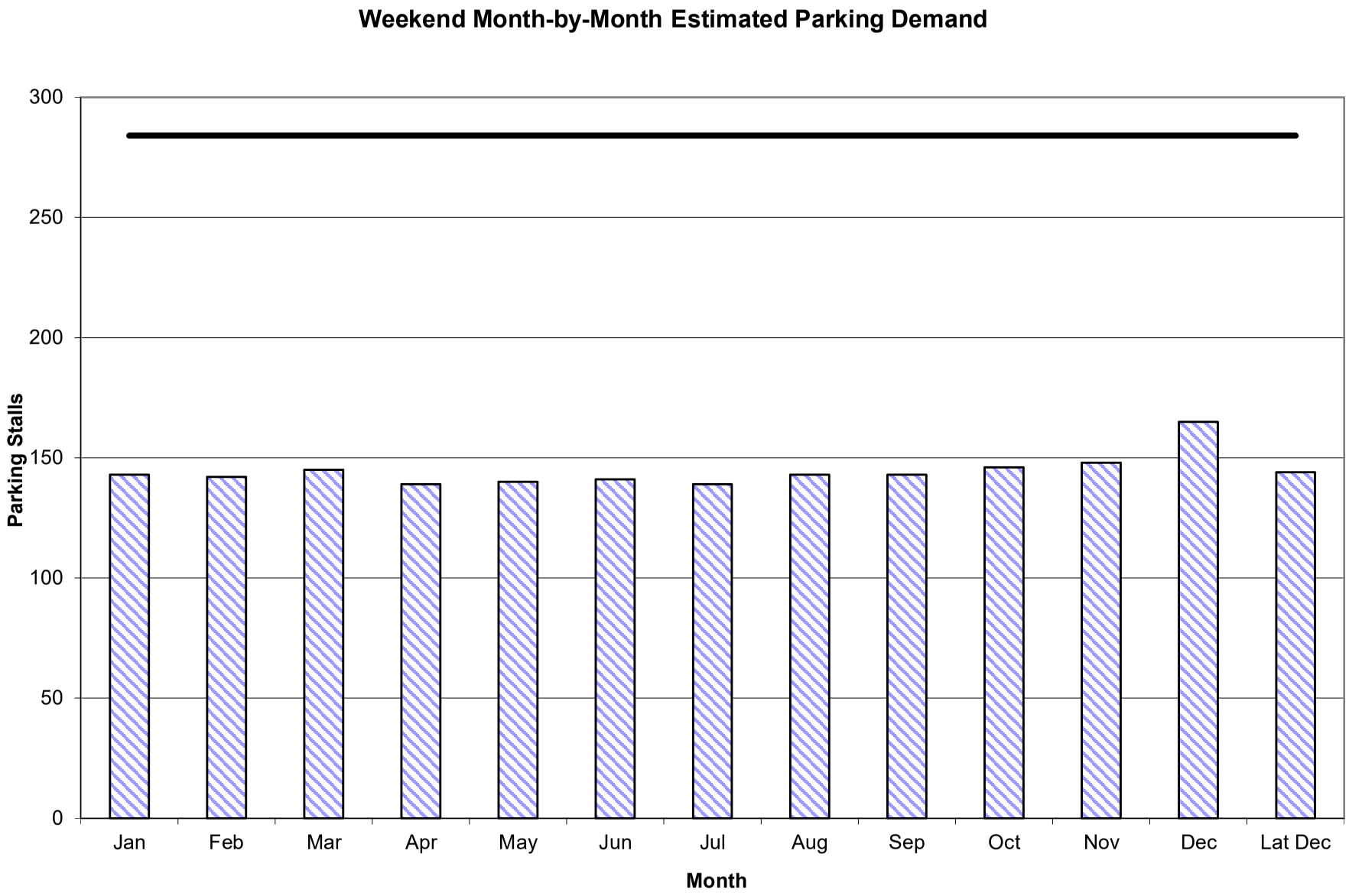
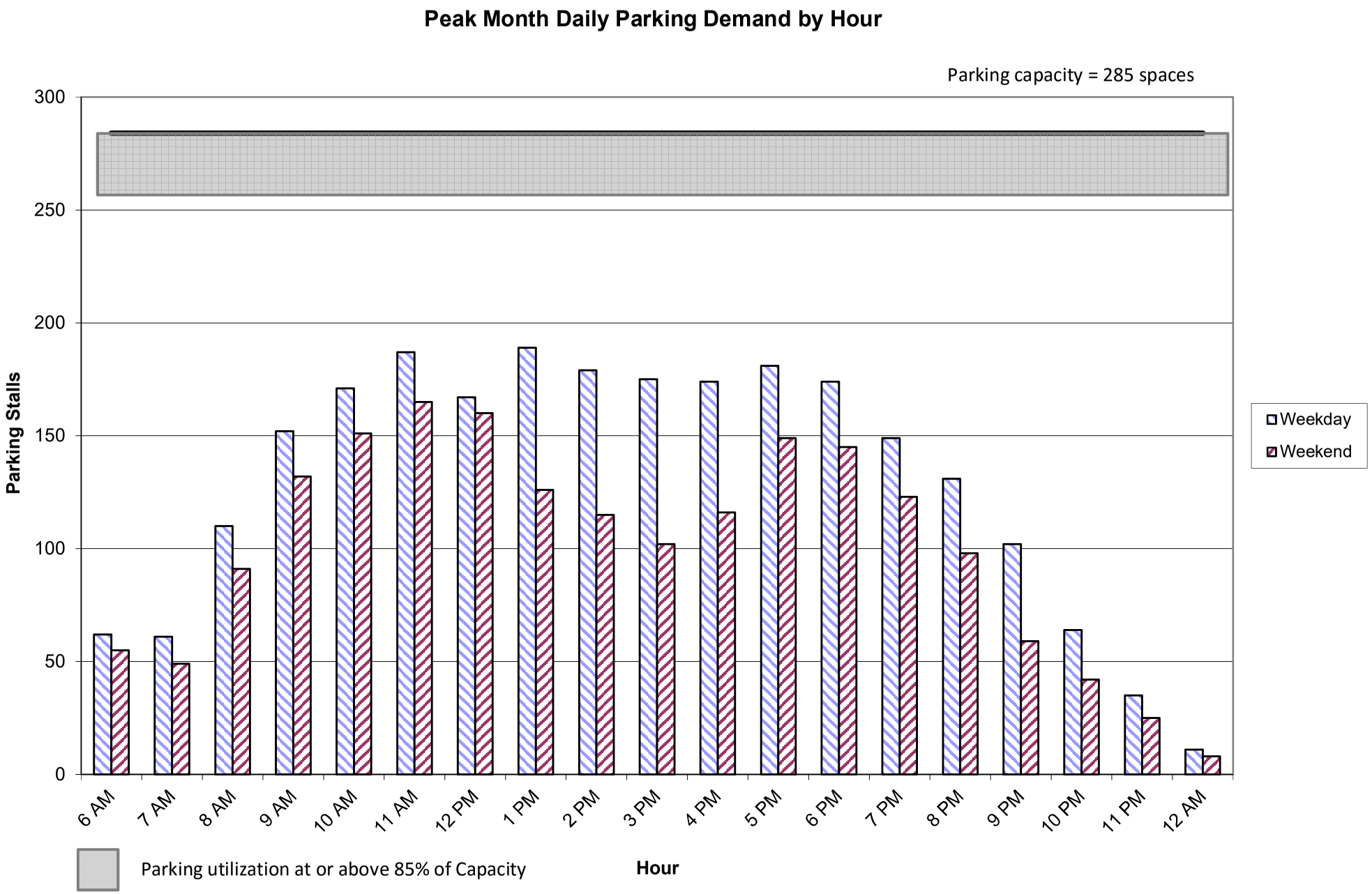


Figure 4


Weekend Month-by-Month Estimated Parking Demand
300
250
200
150
100
50
0
Parking Stalls
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Lat Dec
Month

HOURLY VARIATION BY PEAK MONTH



INPUTS

Description: Shared Parking Analysis - Mixed Use Development

ksf = thousand square feet

Projected Parking Supply: 298					Mode Adjustment				Noncaptive Ratio			
			Max Parking Spaces		Weekday		Weekend		Weekday		Weekend	
Land Use	**Quantity**		**Weekday**	**Weekend**	**Daytime**	**Evening**	**Daytime**	**Evening**	**Daytime**	**Evening**	**Daytime**	**Evening**
Community Shopping Center (<400 ksf)	15,515	sf GLA	45	50	95%	95%	95%	95%	95%	95%	95%	95%
Employee			11	12	95%	95%	95%	95%	95%	95%	95%	95%
Regional Shopping Center (400 to 600 ksf)		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Super Regional Shopping Center (>600 ksf)		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Fine/Casual Dining Restaurant		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Family Restaurant	4,636	sf GLA	42	59	95%	95%	95%	95%	95%	95%	95%	95%
Employee			7	10	95%	95%	95%	95%	95%	95%	95%	95%
Fast Food Restaurant		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Nightclub		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Cineplex		seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Performing Arts Theater		seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Arena		seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Pro Football Stadium		seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Pro Baseball Stadium		seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Health Club	11,953	sf GLA	79	66	95%	95%	95%	95%	95%	95%	95%	95%
Employee			5	3	95%	95%	95%	95%	95%	95%	95%	95%
Convention Center		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Hotel-Business		rooms	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Hotel-Leisure		rooms	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Restaurant/Lounge		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Conference Ctr/Banquet (20 to 50 sq ft/guest room)		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Convention Space (>50 sq ft/guest room)		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Residential, Rental, Shared Spaces		units	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Reserved		sp/unit	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Guest		units	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Residential, Owned, Shared Spaces		units	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Reserved		sp/unit	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Guest		units	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office <25 ksf	4,275	sf GLA	1	0	95%	95%	95%	95%	95%	95%	95%	95%
Employee			15	1	95%	95%	95%	95%	95%	95%	95%	95%
Office 25 to 100 ksf		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office 100 to 500 ksf		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office >500 ksf		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Data Processing Office		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Medical/Dental Office	32,155	sf GLA	96	96	95%	95%	95%	95%	95%	95%	95%	95%
Employee			48	48	95%	95%	95%	95%	95%	95%	95%	95%
Bank (Branch) with Drive-In		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Subtotal Customer/Guest Spaces			263	271								
Subtotal Employee/Resident Spaces			86	74								
Subtotal Reserved Spaces			0	0								
Total Parking Spaces			349	345								

SHARED PARKING SUMMARY

Table 8/4/2016
Project: Corners Community Center, Village of Cayuga Heights, NY
Description: Shared Parking Analysis - Mixed Use Development

SHARED PARKING DEMAND SUMMARY

PEAK MONTH: DECEMBER -- PEAK PERIOD: 11 AM, WEEKDAY

			Weekday					Weekend					Weekday			Weekend		
	Project Data				Non-					Non-			Peak Hr Adj	Peak Mo Adj	Estimated Parking	Peak Hr Adj	Peak Mo Adj	Estimated Parking
Land Use	**Quantity**	**Unit**	**Base Rate**	**Mode Adj**	**Captive Ratio**	**Project Rate**	**Unit**	**Base Rate**	**Mode Adj**	**Captive Ratio**	**Project Rate**	**Unit**	**11 AM**	**December**	**Demand**	**11 AM**	**December**	**Demand**
Community Shopping	15,515	sf GLA	2.90	0.95	0.95	2.62	/ksf GLA	3.20	0.95	0.95	2.89	/ksf GLA	0.75	1.00	30	0.70	1.00	32
Employee			0.70	0.95	0.95	0.63	/ksf GLA	0.80	0.95	0.95	0.72	/ksf GLA	0.95	1.00	9	0.95	1.00	10
Family Restaurant	4,636	sf GLA	9.00	0.95	0.95	8.12	/ksf GLA	12.75	0.95	0.95	11.51	/ksf GLA	0.90	1.00	34	0.90	1.00	48
Employee			1.50	0.95	0.95	1.35	/ksf GLA	2.25	0.95	0.95	2.03	/ksf GLA	1.00	1.00	6	1.00	1.00	9
Health Club	11,953	sf GLA	6.60	0.95	0.95	5.96	/ksf GLA	5.50	0.95	0.95	4.96	/ksf GLA	0.80	0.90	51	0.50	0.90	27
Employee			0.40	0.95	0.95	0.36	/ksf GLA	0.25	0.95	0.95	0.23	/ksf GLA	0.75	1.00	3	0.50	1.00	1
Residential, Rental, S		units	1.50	1.00	1.00	1.50	/unit	1.50	1.00	1.00	1.50	/unit	0.70	1.00	0	0.70	1.00	0
Reserved		sp/unit	0	1.00	1.00	0	/unit	0	1.00	1.00	0	/unit	1.00	1.00	0	1.00	1.00	0
Guest		units	0	1.00	1.00	0	/unit	0	1.00	1.00	0	/unit	0.20	1.00	0	0.20	1.00	0
Reserved		sp/unit	0.00	1.00	1.00	0.00	/unit	0.00	1.00	1.00	0.00	/unit	1.00	1.00	0	1.00	1.00	0
Guest		units	0.15	1.00	1.00	0.15	/unit	0.15	1.00	1.00	0.00	/unit	0.20	1.00	0	0.20	1.00	0
Office <25 ksf	4,275	sf GLA	0.30	0.95	0.95	0.27	/unit	0.03	0.95	0.95	0.03	/unit	0.45	1.00	0	1.00	1.00	0
Medical/Dental Office	32,155	sf GLA	3.00	0.95	0.95	2.71	/ksf GLA	3.00	0.95	0.95	2.71	/ksf GLA	1.00	1.00	87	1.00	1.00	87
Employee			1.50	0.95	0.95	1.35	/ksf GLA	1.50	0.95	0.95	1.35	/ksf GLA	1.00	1.00	43	1.00	1.00	43
													Customer		202	Customer		194
													Employee		75	Employee		64
													Reserved		0	Reserved		0
													Total		277	Total		258

WEEKDAY MONTH-BY-MONTH ESTIMATED PARKING DEMAN

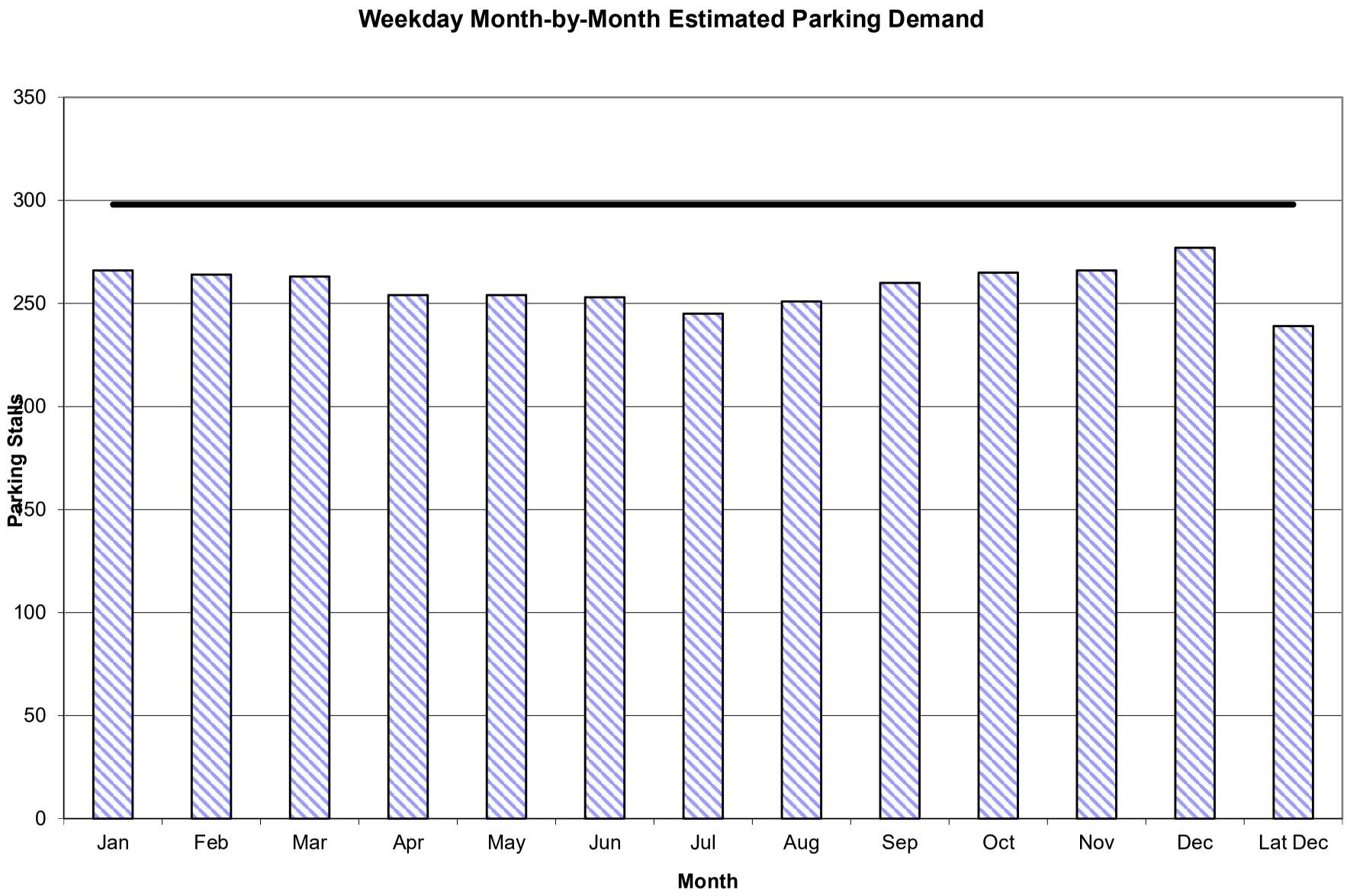
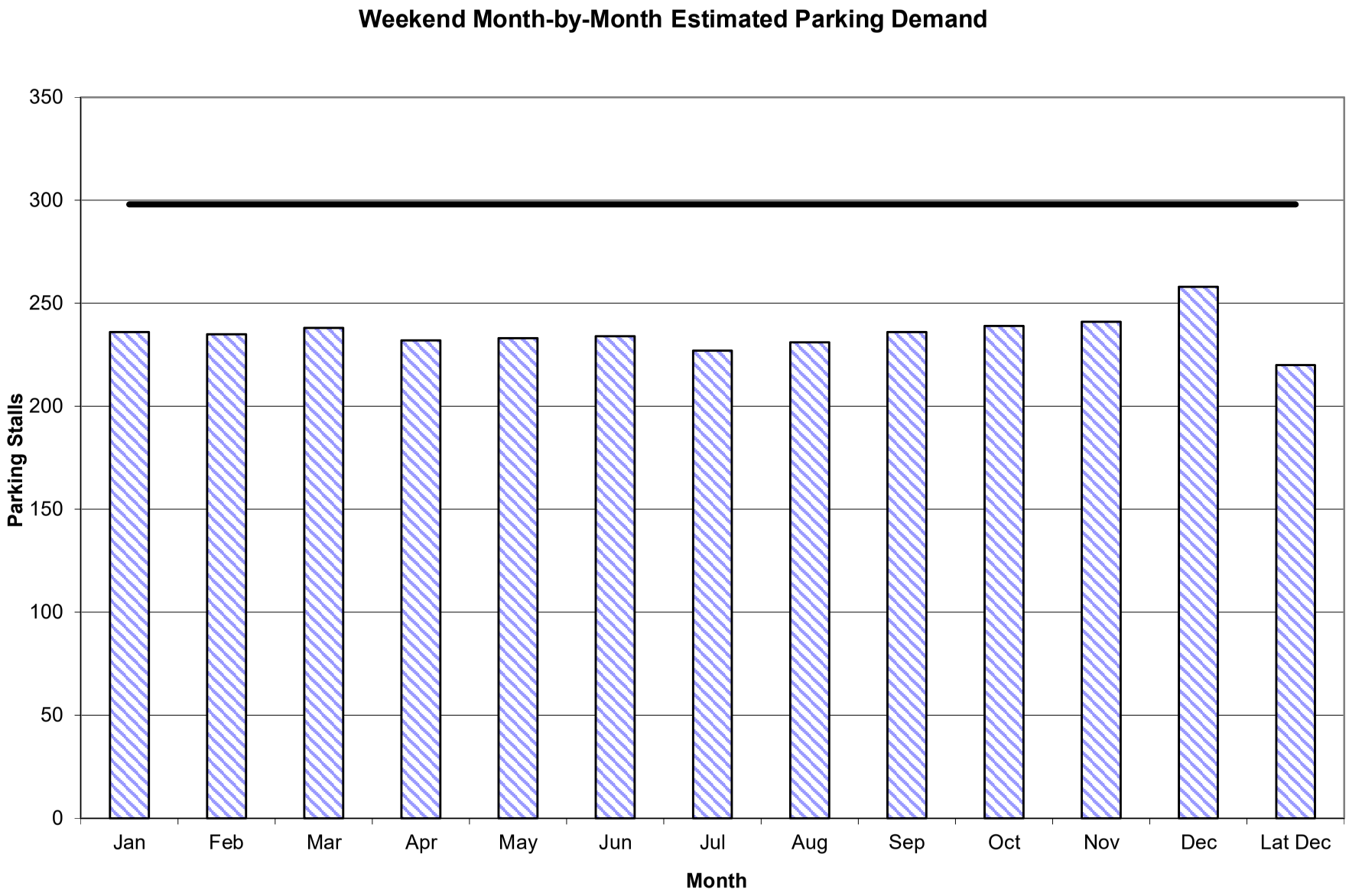
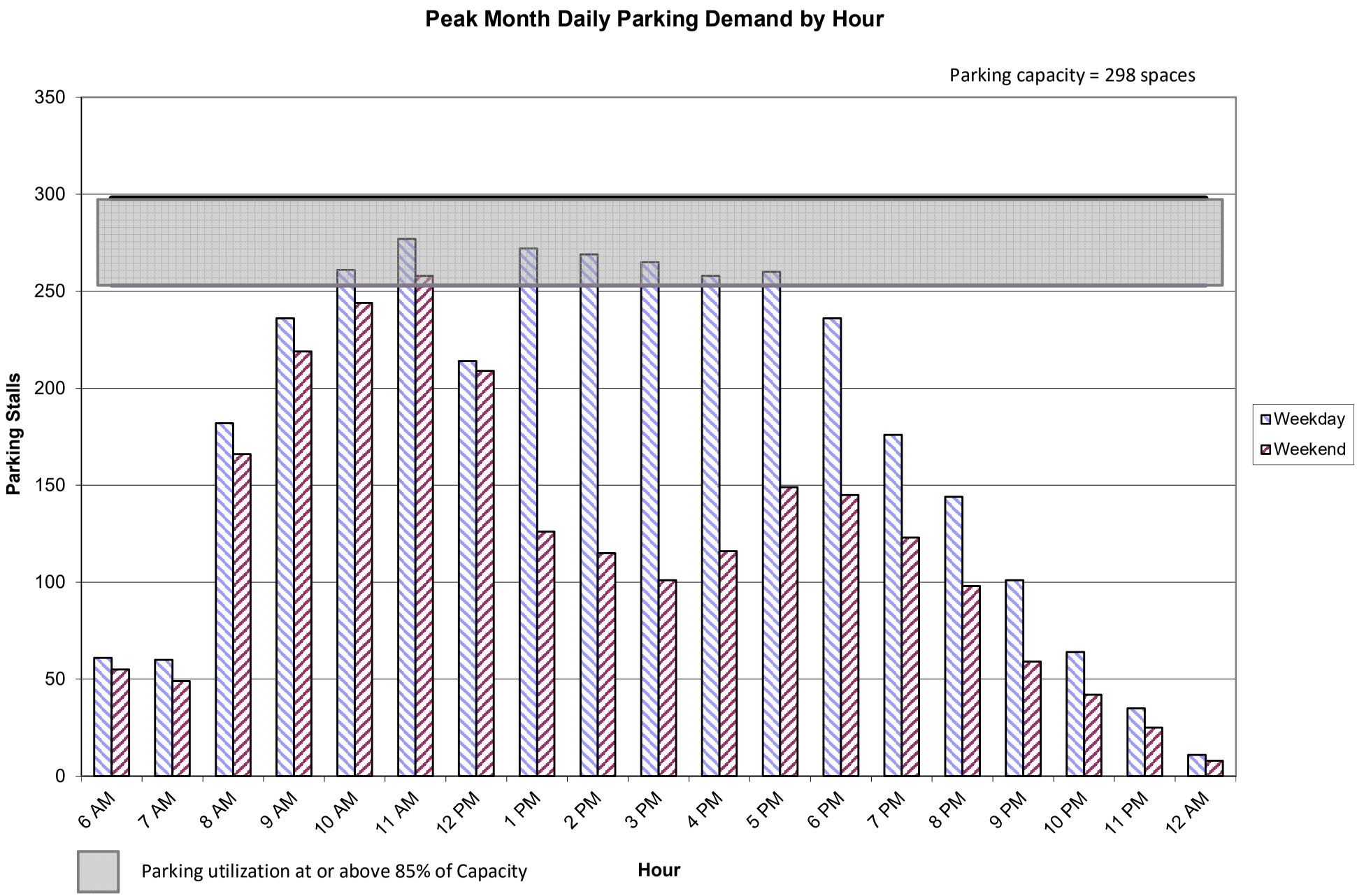


Figure 4


Weekend Month-by-Month Estimated Parking Demand
350
300
250
200
150
100
50
0
Parking Stalls
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Lat Dec
Month

HOURLY VARIATION BY PEAK MONTH



INPUTS

Description: Shared Parking Analysis - Medical Office Building ONLY

ksf = thousand square feet

Projected Parking Supply:					Mode Adjustment				Noncaptive Ratio			
			Max Parking Spaces		Weekday		Weekend		Weekday		Weekend	
Land Use	**Quantity**		**Weekday**	**Weekend**	**Daytime**	**Evening**	**Daytime**	**Evening**	**Daytime**	**Evening**	**Daytime**	**Evening**
Community Shopping Center (<400 ksf)		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Regional Shopping Center (400 to 600 ksf)		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Super Regional Shopping Center (>600 ksf)		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Fine/Casual Dining Restaurant		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Family Restaurant		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Fast Food Restaurant		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Nightclub		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Cineplex		seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Performing Arts Theater		seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Arena		seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Pro Football Stadium		seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Pro Baseball Stadium		seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Health Club		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Convention Center		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Hotel-Business		rooms	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Hotel-Leisure		rooms	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Restaurant/Lounge		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Conference Ctr/Banquet (20 to 50 sq ft/guest room)		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Convention Space (>50 sq ft/guest room)		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Residential, Rental, Shared Spaces		units	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Reserved		sp/unit	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Guest		units	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Residential, Owned, Shared Spaces		units	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Reserved		sp/unit	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Guest		units	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office <25 ksf		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office 25 to 100 ksf		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office 100 to 500 ksf		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office >500 ksf		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Data Processing Office		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Medical/Dental Office	23,200	sf GLA	70	70	95%	95%	95%	95%	100%	100%	100%	100%
Employee			35	35	95%	95%	95%	95%	100%	100%	100%	100%
Bank (Branch) with Drive-In		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Subtotal Customer/Guest Spaces			70	70								
Subtotal Employee/Resident Spaces			35	35								
Subtotal Reserved Spaces			0	0								
Total Parking Spaces			105	105								

SHARED PARKING SUMMARY

Table 8/4/2016
Project: Corners Community Center, Village of Cayuga Heights, NY
Description: Shared Parking Analysis - Proposed Medical Office Only

SHARED PARKING DEMAND SUMMARY

PEAK MONTH: JANUARY -- PEAK PERIOD: 10 AM, WEEKEND

			Weekday					Weekend					Weekday			Weekend		
	Project Data				Non-					Non-			Peak Hr Adj	Peak Mo Adj	Estimated Parking	Peak Hr Adj	Peak Mo Adj	Estimated Parking
Land Use	**Quantity**	**Unit**	**Base Rate**	**Mode Adj**	**Captive Ratio**	**Project Rate**	**Unit**	**Base Rate**	**Mode Adj**	**Captive Ratio**	**Project Rate**	**Unit**	**10 AM**	**January**	**Demand**	**10 AM**	**January**	**Demand**
Residential, Rental, S		units	1.50	1.00	1.00	1.50	/unit	1.50	1.00	1.00	1.50	/unit	0.75	1.00	0	0.75	1.00	0
Reserved		sp/unit	0	1.00	1.00	0	/unit	0	1.00	1.00	0	/unit	1.00	1.00	0	1.00	1.00	0
Guest		units	0	1.00	1.00	0	/unit	0	1.00	1.00	0	/unit	0.20	1.00	0	0.20	1.00	0
Reserved		sp/unit	0.00	1.00	1.00	0.00	/unit	0.00	1.00	1.00	0.00	/unit	1.00	1.00	0	1.00	1.00	0
Guest		units	0.15	1.00	1.00	0.15	/unit	0.15	1.00	1.00	0.00	/unit	0.20	1.00	0	0.20	1.00	0
Medical/Dental Office	23,200	sf GLA	3.00	0.95	1.00	2.85	/ksf GLA	3.00	0.95	1.00	2.85	/ksf GLA	1.00	1.00	67	1.00	1.00	67
Employee			1.50	0.95	1.00	1.43	/ksf GLA	1.50	0.95	1.00	1.43	/ksf GLA	1.00	1.00	33	1.00	1.00	33

Customer	67	Customer	67
Employee	33	Employee	33
Reserved	0	Reserved	0
Total	100	Total	100

A3

Level of Service: Criteria and Definitions

Level of Service Criteria

Highway Capacity Manual 2010

SIGNALIZED INTERSECTIONS

Level of Service is a qualitative measure describing operational conditions within a traffic stream, based on service measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort, and convenience. Level of Service for signalized intersections is defined in terms of delay specifically, average total delay per vehicle for a 15 minute analysis period. The ranges are as follows:

Level of Service	Control Delay per vehicle (seconds)
A	< 10
B	10 – 20
C	20 – 35
D	35 – 55
E	55 – 80
F	>80

UNSIGNALIZED INTERSECTIONS

Level of Service for unsignalized intersections is also defined in terms of delay. However, the delay criteria are different from a signalized intersection. The primary reason for this is driver expectation that a signalized intersection is designed to carry higher volumes than an unsignalized intersection. The total delay threshold for any given Level of Service is less for an unsignalized intersection than for a signalized intersection. The ranges are as follows:

Level of Service	Control Delay per vehicle (seconds)
A	< 10
B	10 – 15
C	15 – 25
D	25 – 35
E	35 - 50
F	>50

A4

Level of Service Calculations: Existing Conditions

1: Hanshaw Rd & N Triphammer Rd Performance by lane

Lane	EB	WB	SB	SB	All
Movements Served	LT	TR	L	R	
Denied Del/Veh (s)					0.5
Total Del/Veh (s)	9.6	0.6	10.8	3.0	7.1

4: East Upland Rd & Triphammer Rd & Hanshaw Rd Performance by lane

Lane	EB	EB	WB	NB	SB	All
Movements Served	L	TR	LTR	LTR	LTR	
Denied Del/Veh (s)						0.1
Total Del/Veh (s)	18.0	11.7	1.3	22.4	1.7	2.9

6: East Upland Rd & EU North Entrance Performance by lane

Lane	WB	NB	SB	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	2.6	0.4	0.8	0.7

8: East Upland Rd & EU Middle Entrance Performance by lane

Lane	WB	NB	SB	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	2.3	0.1	0.1	0.2

10: East Upland Road/East Upland Rd & EU South Entrance Performance by lane

Lane	WB	NB	SB	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.1
Total Del/Veh (s)	2.7	0.1	0.5	0.5

13: Hanshaw Entrance & Hanshaw Rd Performance by lane

Lane	EB	WB	NE	All
Movements Served	TR	LT	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.6	1.3	4.3	1.0

15: Pleasant Grove Rd & Hanshaw Rd Performance by lane

Lane	EB	WB	NB	NB	All
Movements Served	TR	LT	L	R	
Denied Del/Veh (s)					0.1
Total Del/Veh (s)	1.2	7.9	19.5	3.1	6.3

16: Pleasant Grove Rd & Pleasant Grove Entrance Performance by lane

Lane	EB	NB	SB	All
Movements Served	LR	LT	TR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	6.6	3.7	0.3	1.3

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	13.3

Intersection	
Int Delay, s/veh	11.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	35	46	32	257	454	39
Future Vol, veh/h	35	46	32	257	454	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	180
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	61	61	88	88	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	75	36	292	522	45

Major/Minor	Major2		Minor2	
Conflicting Flow All	-	0	182	182
Stage 1	-	-	182	-
Stage 2	-	-	0	-
Critical Hdwy	-	-	7.12	6.22
Critical Hdwy Stg 1	-	-	6.12	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	779	861
Stage 1	-	-	820	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	779	861
Mov Cap-2 Maneuver	-	-	779	-
Stage 1	-	-	820	-
Stage 2	-	-	-	-

Approach	WB	SB
HCM Control Delay, s	0	17.8
HCM LOS		C

Minor Lane/Major Mvmt	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	-	779	861
HCM Lane V/C Ratio	-	-	0.67	0.052
HCM Control Delay (s)	-	-	18.5	9.4
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	5.2	0.2

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	1	3	32	3	9	55
Future Vol, veh/h	1	3	32	3	9	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	58	58	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	6	55	5	11	69

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	149	58	0	0	60	0
Stage 1	58	-	-	-	-	-
Stage 2	91	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	843	1008	-	-	1544	-
Stage 1	965	-	-	-	-	-
Stage 2	933	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	837	1008	-	-	1544	-
Mov Cap-2 Maneuver	837	-	-	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	926	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	959	1544	-
HCM Lane V/C Ratio	-	-	0.008	0.007	-
HCM Control Delay (s)	-	-	8.8	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	2	28	0	1	42
Future Vol, veh/h	0	2	28	0	1	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	58	58	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	48	0	1	58

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	109	48	0	0	48	0
Stage 1	48	-	-	-	-	-
Stage 2	61	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	888	1021	-	-	1559	-
Stage 1	974	-	-	-	-	-
Stage 2	962	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	887	1021	-	-	1559	-
Mov Cap-2 Maneuver	887	-	-	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	961	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1021	1559	-
HCM Lane V/C Ratio	-	-	0.004	0.001	-
HCM Control Delay (s)	-	-	8.5	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	2	4	25	14	12	35
Future Vol, veh/h	2	4	25	14	12	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	38	38	61	61	69	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	11	41	23	17	51

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	138	52	0	0	64	0
Stage 1	52	-	-	-	-	-
Stage 2	86	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	855	1016	-	-	1538	-
Stage 1	970	-	-	-	-	-
Stage 2	937	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	846	1016	-	-	1538	-
Mov Cap-2 Maneuver	846	-	-	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	927	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	1.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	952	1538	-
HCM Lane V/C Ratio	-	-	0.017	0.011	-
HCM Control Delay (s)	-	-	8.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NEL	NER
Traffic Vol, veh/h	405	15	23	304	15	10
Future Vol, veh/h	405	15	23	304	15	10
Conflicting Peds, #/hr	0	0	0	0	0	0
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	83	83	89	89	69	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	488	18	26	342	22	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	506	0	890	497
Stage 1	-	-	-	-	497	-
Stage 2	-	-	-	-	393	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1059	-	313	573
Stage 1	-	-	-	-	611	-
Stage 2	-	-	-	-	682	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1059	-	304	573
Mov Cap-2 Maneuver	-	-	-	-	304	-
Stage 1	-	-	-	-	611	-
Stage 2	-	-	-	-	662	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.6	15.7
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	374	-	-	1059	-
HCM Lane V/C Ratio	0.097	-	-	0.024	-
HCM Control Delay (s)	15.7	-	-	8.5	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	6.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	76	311	143	207	108	26
Future Vol, veh/h	76	311	143	207	108	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	82	82	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	92	375	174	252	138	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	466	0	880	279
Stage 1	-	-	-	-	279	-
Stage 2	-	-	-	-	601	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1095	-	318	760
Stage 1	-	-	-	-	768	-
Stage 2	-	-	-	-	547	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1095	-	259	760
Mov Cap-2 Maneuver	-	-	-	-	259	-
Stage 1	-	-	-	-	768	-
Stage 2	-	-	-	-	446	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.6	29.2
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	259	760	-	-	1095	-
HCM Lane V/C Ratio	0.535	0.044	-	-	0.159	-
HCM Control Delay (s)	33.8	10	-	-	8.9	0
HCM Lane LOS	D	B	-	-	A	A
HCM 95th %tile Q(veh)	2.9	0.1	-	-	0.6	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	1	4	7	147	455	5
Future Vol, veh/h	1	4	7	147	455	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	31	31	77	77	75	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	13	9	191	607	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	819	610	613	0	-	0
Stage 1	610	-	-	-	-	-
Stage 2	209	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	345	494	966	-	-	-
Stage 1	542	-	-	-	-	-
Stage 2	826	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	342	494	966	-	-	-
Mov Cap-2 Maneuver	342	-	-	-	-	-
Stage 1	542	-	-	-	-	-
Stage 2	818	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.2	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	966	-	454	-	-
HCM Lane V/C Ratio	0.009	-	0.036	-	-
HCM Control Delay (s)	8.8	0	13.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

1: Hanshaw Rd & N Triphammer Rd Performance by lane

Lane	EB	WB	SB	SB	All
Movements Served	LT	TR	L	R	
Denied Del/Veh (s)					0.3
Total Del/Veh (s)	18.2	0.9	14.6	3.6	7.1

4: East Upland Rd & Triphammer Rd & Hanshaw Rd Performance by lane

Lane	EB	EB	WB	NB	SB	All
Movements Served	L	TR	LTR	LTR	LTR	
Denied Del/Veh (s)						0.5
Total Del/Veh (s)	97.3	74.2	1.5	50.6	1.5	14.2

6: East Upland Rd & EU North Entrance Performance by lane

Lane	WB	NB	SB	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	2.2	0.6	0.4	0.6

8: East Upland Rd & EU Middle Entrance Performance by lane

Lane	WB	NB	SB	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	2.3	0.1	0.0	0.2

10: East Upland Road/East Upland Rd & EU South Entrance Performance by lane

Lane	WB	NB	SB	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.1
Total Del/Veh (s)	3.4	0.1	0.4	0.7

13: Hanshaw Entrance & Hanshaw Rd Performance by lane

Lane	EB	WB	NE	All
Movements Served	TR	LT	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.7	1.3	8.0	1.5

15: Pleasant Grove Rd & Hanshaw Rd Performance by lane

Lane	EB	WB	NB	NB	All
Movements Served	TR	LT	L	R	
Denied Del/Veh (s)					0.0
Total Del/Veh (s)	1.2	2.2	12.9	4.9	5.5

16: Pleasant Grove Rd & Pleasant Grove Entrance Performance by lane

Lane	EB	NB	SB	All
Movements Served	LR	LT	TR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	118.7	5.8	0.2	5.4

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	23.9

Intersection	
Int Delay, s/veh	9.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	44	45	49	585	377	56
Future Vol, veh/h	44	45	49	585	377	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	180
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	92	92	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	48	53	636	424	63

Major/Minor	Major2		Minor2	
Conflicting Flow All	-	0	371	371
Stage 1	-	-	371	-
Stage 2	-	-	0	-
Critical Hdwy	-	-	7.12	6.22
Critical Hdwy Stg 1	-	-	6.12	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	586	675
Stage 1	-	-	649	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	586	675
Mov Cap-2 Maneuver	-	-	586	-
Stage 1	-	-	649	-
Stage 2	-	-	-	-

Approach	WB	SB
HCM Control Delay, s	0	23.6
HCM LOS		C

Minor Lane/Major Mvmt	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	-	586	675
HCM Lane V/C Ratio	-	-	0.723	0.093
HCM Control Delay (s)	-	-	25.5	10.9
HCM Lane LOS	-	-	D	B
HCM 95th %tile Q(veh)	-	-	6	0.3

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	1	5	62	8	5	46
Future Vol, veh/h	1	5	62	8	5	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	92	92	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	7	67	9	6	58

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	142	72	0	0	76	0
Stage 1	72	-	-	-	-	-
Stage 2	70	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	851	990	-	-	1523	-
Stage 1	951	-	-	-	-	-
Stage 2	953	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	848	990	-	-	1523	-
Mov Cap-2 Maneuver	848	-	-	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	949	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	963	1523	-
HCM Lane V/C Ratio	-	-	0.008	0.004	-
HCM Control Delay (s)	-	-	8.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	4	51	0	0	44
Future Vol, veh/h	0	4	51	0	0	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	85	85	69	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	60	0	0	64

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	124	60	0	0	60	0
Stage 1	60	-	-	-	-	-
Stage 2	64	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	871	1005	-	-	1544	-
Stage 1	963	-	-	-	-	-
Stage 2	959	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	871	1005	-	-	1544	-
Mov Cap-2 Maneuver	871	-	-	-	-	-
Stage 1	963	-	-	-	-	-
Stage 2	959	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1005	1544	-
HCM Lane V/C Ratio	-	-	0.008	-	-
HCM Control Delay (s)	-	-	8.6	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	13	2	40	8	10	35
Future Vol, veh/h	13	2	40	8	10	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	86	86	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	3	47	9	13	44

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	120	51	0	0	56	0
Stage 1	51	-	-	-	-	-
Stage 2	69	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	876	1017	-	-	1549	-
Stage 1	971	-	-	-	-	-
Stage 2	954	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	868	1017	-	-	1549	-
Mov Cap-2 Maneuver	868	-	-	-	-	-
Stage 1	971	-	-	-	-	-
Stage 2	945	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	1.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	885	1549	-
HCM Lane V/C Ratio	-	-	0.023	0.008	-
HCM Control Delay (s)	-	-	9.2	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NEL	NER
Traffic Vol, veh/h	366	25	25	487	40	33
Future Vol, veh/h	366	25	25	487	40	33
Conflicting Peds, #/hr	0	0	0	0	0	0
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	91	91	88	88	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	402	27	28	553	48	40

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	430	0	1026	416
Stage 1	-	-	-	-	416	-
Stage 2	-	-	-	-	610	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1129	-	260	637
Stage 1	-	-	-	-	666	-
Stage 2	-	-	-	-	542	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1129	-	251	637
Mov Cap-2 Maneuver	-	-	-	-	251	-
Stage 1	-	-	-	-	666	-
Stage 2	-	-	-	-	522	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.4	18.9
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	346	-	-	1129	-
HCM Lane V/C Ratio	0.254	-	-	0.025	-
HCM Control Delay (s)	18.9	-	-	8.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1	-	-	0.1	-

Intersection	
Int Delay, s/veh	14.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	163	211	32	166	327	98
Future Vol, veh/h	163	211	32	166	327	98
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	90	90	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	187	243	36	184	389	117

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	430	0	565	309
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	256	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1129	-	486	731
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	787	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1129	-	469	731
Mov Cap-2 Maneuver	-	-	-	-	469	-
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	759	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	33.4
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	469	731	-	-	1129	-
HCM Lane V/C Ratio	0.83	0.16	-	-	0.031	-
HCM Control Delay (s)	40.2	10.9	-	-	8.3	0
HCM Lane LOS	E	B	-	-	A	A
HCM 95th %tile Q(veh)	8.1	0.6	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	2	7	11	435	253	2
Future Vol, veh/h	2	7	11	435	253	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	81	81	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	9	14	537	298	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	863	299	300	0	-	0
Stage 1	299	-	-	-	-	-
Stage 2	564	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	325	741	1261	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	320	741	1261	-	-	-
Mov Cap-2 Maneuver	320	-	-	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	560	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.4	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1261	-	573	-	-
HCM Lane V/C Ratio	0.011	-	0.021	-	-
HCM Control Delay (s)	7.9	0	11.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

A5

Level of Service Calculations: Background Conditions

1: Hanshaw Rd & N Triphammer Rd Performance by lane

Lane	EB	WB	SB	SB	All
Movements Served	LT	TR	L	R	
Denied Del/Veh (s)					0.5
Total Del/Veh (s)	9.6	0.5	10.6	2.9	6.9

4: East Upland Rd & Triphammer Rd & Hanshaw Rd Performance by lane

Lane	EB	EB	WB	NB	SB	All
Movements Served	L	TR	LTR	LTR	LTR	
Denied Del/Veh (s)						0.1
Total Del/Veh (s)	23.1	11.9	1.3	22.2	1.7	3.1

6: East Upland Rd & EU North Entrance Performance by lane

Lane	WB	NB	SB	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	2.6	0.4	0.7	0.7

8: East Upland Rd & EU Middle Entrance Performance by lane

Lane	WB	NB	SB	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	2.3	0.1	0.1	0.2

10: East Upland Road/East Upland Rd & EU South Entrance Performance by lane

Lane	WB	NB	SB	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	2.5	0.1	0.5	0.4

13: Hanshaw Entrance & Hanshaw Rd Performance by lane

Lane	EB	WB	NE	All
Movements Served	TR	LT	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.6	1.3	3.9	1.0

15: Pleasant Grove Rd & Hanshaw Rd Performance by lane

Lane	EB	WB	NB	NB	All
Movements Served	TR	LT	L	R	
Denied Del/Veh (s)					0.1
Total Del/Veh (s)	1.2	7.7	19.1	3.4	6.2

16: Pleasant Grove Rd & Pleasant Grove Entrance Performance by lane

Lane	EB	NB	SB	All
Movements Served	LR	LT	TR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	6.6	5.0	0.3	1.6

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	13.4

Intersection	
Int Delay, s/veh	11.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	35	46	32	258	455	39
Future Vol, veh/h	35	46	32	258	455	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	180
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	61	61	88	88	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	75	36	293	523	45

Major/Minor	Major2		Minor2	
Conflicting Flow All	-	0	183	183
Stage 1	-	-	183	-
Stage 2	-	-	0	-
Critical Hdwy	-	-	7.12	6.22
Critical Hdwy Stg 1	-	-	6.12	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	778	859
Stage 1	-	-	819	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	778	859
Mov Cap-2 Maneuver	-	-	778	-
Stage 1	-	-	819	-
Stage 2	-	-	-	-

Approach	WB	SB
HCM Control Delay, s	0	17.9
HCM LOS		C

Minor Lane/Major Mvmt	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	-	778	859
HCM Lane V/C Ratio	-	-	0.672	0.052
HCM Control Delay (s)	-	-	18.6	9.4
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	5.3	0.2

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	1	3	32	3	9	55
Future Vol, veh/h	1	3	32	3	9	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	58	58	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	6	55	5	11	69

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	149	58	0	0	60	0
Stage 1	58	-	-	-	-	-
Stage 2	91	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	843	1008	-	-	1544	-
Stage 1	965	-	-	-	-	-
Stage 2	933	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	837	1008	-	-	1544	-
Mov Cap-2 Maneuver	837	-	-	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	926	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	959	1544	-
HCM Lane V/C Ratio	-	-	0.008	0.007	-
HCM Control Delay (s)	-	-	8.8	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	2	28	0	1	42
Future Vol, veh/h	0	2	28	0	1	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	58	58	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	48	0	1	58

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	109	48	0	0	48	0
Stage 1	48	-	-	-	-	-
Stage 2	61	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	888	1021	-	-	1559	-
Stage 1	974	-	-	-	-	-
Stage 2	962	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	887	1021	-	-	1559	-
Mov Cap-2 Maneuver	887	-	-	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	961	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1021	1559	-
HCM Lane V/C Ratio	-	-	0.004	0.001	-
HCM Control Delay (s)	-	-	8.5	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	2	4	25	14	12	35
Future Vol, veh/h	2	4	25	14	12	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	38	38	61	61	69	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	11	41	23	17	51

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	138	52	0	0	64	0
Stage 1	52	-	-	-	-	-
Stage 2	86	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	855	1016	-	-	1538	-
Stage 1	970	-	-	-	-	-
Stage 2	937	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	846	1016	-	-	1538	-
Mov Cap-2 Maneuver	846	-	-	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	927	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	1.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	952	1538	-
HCM Lane V/C Ratio	-	-	0.017	0.011	-
HCM Control Delay (s)	-	-	8.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NEL	NER
Traffic Vol, veh/h	406	15	23	305	15	10
Future Vol, veh/h	406	15	23	305	15	10
Conflicting Peds, #/hr	0	0	0	0	0	0
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	83	83	89	89	69	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	489	18	26	343	22	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	507	0	892	498
Stage 1	-	-	-	-	498	-
Stage 2	-	-	-	-	394	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1058	-	312	572
Stage 1	-	-	-	-	611	-
Stage 2	-	-	-	-	681	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1058	-	303	572
Mov Cap-2 Maneuver	-	-	-	-	303	-
Stage 1	-	-	-	-	611	-
Stage 2	-	-	-	-	661	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.6	15.7
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	373	-	-	1058	-
HCM Lane V/C Ratio	0.097	-	-	0.024	-
HCM Control Delay (s)	15.7	-	-	8.5	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	6.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	76	312	143	208	108	26
Future Vol, veh/h	76	312	143	208	108	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	82	82	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	92	376	174	254	138	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	467	0	882	280
Stage 1	-	-	-	-	280	-
Stage 2	-	-	-	-	602	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1094	-	317	759
Stage 1	-	-	-	-	767	-
Stage 2	-	-	-	-	547	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1094	-	258	759
Mov Cap-2 Maneuver	-	-	-	-	258	-
Stage 1	-	-	-	-	767	-
Stage 2	-	-	-	-	446	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.6	29.3
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	258	759	-	-	1094	-
HCM Lane V/C Ratio	0.537	0.044	-	-	0.159	-
HCM Control Delay (s)	34	10	-	-	8.9	0
HCM Lane LOS	D	B	-	-	A	A
HCM 95th %tile Q(veh)	2.9	0.1	-	-	0.6	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	1	4	7	147	456	5
Future Vol, veh/h	1	4	7	147	456	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	31	31	77	77	75	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	13	9	191	608	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	820	611	615	0	-	0
Stage 1	611	-	-	-	-	-
Stage 2	209	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	345	494	965	-	-	-
Stage 1	542	-	-	-	-	-
Stage 2	826	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	342	494	965	-	-	-
Mov Cap-2 Maneuver	342	-	-	-	-	-
Stage 1	542	-	-	-	-	-
Stage 2	818	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.2	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	965	-	454	-	-
HCM Lane V/C Ratio	0.009	-	0.036	-	-
HCM Control Delay (s)	8.8	0	13.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

1: Hanshaw Rd & N Triphammer Rd Performance by lane

Lane	EB	WB	SB	SB	All
Movements Served	LT	TR	L	R	
Denied Del/Veh (s)					0.4
Total Del/Veh (s)	23.9	0.9	19.1	3.6	9.2

4: East Upland Rd & Triphammer Rd & Hanshaw Rd Performance by lane

Lane	EB	EB	WB	NB	SB	All
Movements Served	L	TR	LTR	LTR	LTR	
Denied Del/Veh (s)						0.5
Total Del/Veh (s)	125.4	269.1	1.6	101.1	1.8	26.8

6: East Upland Rd & EU North Entrance Performance by lane

Lane	WB	NB	SB	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	2.2	0.9	0.6	0.8

8: East Upland Rd & EU Middle Entrance Performance by lane

Lane	WB	NB	SB	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	2.2	0.1	0.0	0.2

10: East Upland Road/East Upland Rd & EU South Entrance Performance by lane

Lane	WB	NB	SB	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.1
Total Del/Veh (s)	3.3	0.1	0.5	0.7

13: Hanshaw Entrance & Hanshaw Rd Performance by lane

Lane	EB	WB	NE	All
Movements Served	TR	LT	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.7	1.4	8.2	1.6

15: Pleasant Grove Rd & Hanshaw Rd Performance by lane

Lane	EB	WB	NB	NB	All
Movements Served	TR	LT	L	R	
Denied Del/Veh (s)					0.0
Total Del/Veh (s)	1.2	1.9	13.2	4.2	5.5

16: Pleasant Grove Rd & Pleasant Grove Entrance Performance by lane

Lane	EB	NB	SB	All
Movements Served	LR	LT	TR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	159.2	7.3	0.3	6.7

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	35.5

Intersection	
Int Delay, s/veh	9.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	44	45	49	586	378	56
Future Vol, veh/h	44	45	49	586	378	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	180
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	92	92	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	48	53	637	425	63

Major/Minor	Major2		Minor2	
Conflicting Flow All	-	0	372	372
Stage 1	-	-	372	-
Stage 2	-	-	0	-
Critical Hdwy	-	-	7.12	6.22
Critical Hdwy Stg 1	-	-	6.12	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	585	674
Stage 1	-	-	648	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	585	674
Mov Cap-2 Maneuver	-	-	585	-
Stage 1	-	-	648	-
Stage 2	-	-	-	-

Approach	WB	SB
HCM Control Delay, s	0	23.8
HCM LOS		C

Minor Lane/Major Mvmt	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	-	585	674
HCM Lane V/C Ratio	-	-	0.726	0.093
HCM Control Delay (s)	-	-	25.7	10.9
HCM Lane LOS	-	-	D	B
HCM 95th %tile Q(veh)	-	-	6.1	0.3

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	1	5	62	8	5	46
Future Vol, veh/h	1	5	62	8	5	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	92	92	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	7	67	9	6	58

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	142	72	0	0	76	0
Stage 1	72	-	-	-	-	-
Stage 2	70	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	851	990	-	-	1523	-
Stage 1	951	-	-	-	-	-
Stage 2	953	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	848	990	-	-	1523	-
Mov Cap-2 Maneuver	848	-	-	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	949	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	963	1523	-
HCM Lane V/C Ratio	-	-	0.008	0.004	-
HCM Control Delay (s)	-	-	8.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	4	51	0	0	44
Future Vol, veh/h	0	4	51	0	0	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	85	85	69	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	60	0	0	64

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	124	60	0	0	60	0
Stage 1	60	-	-	-	-	-
Stage 2	64	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	871	1005	-	-	1544	-
Stage 1	963	-	-	-	-	-
Stage 2	959	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	871	1005	-	-	1544	-
Mov Cap-2 Maneuver	871	-	-	-	-	-
Stage 1	963	-	-	-	-	-
Stage 2	959	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1005	1544	-
HCM Lane V/C Ratio	-	-	0.008	-	-
HCM Control Delay (s)	-	-	8.6	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	13	2	40	8	10	35
Future Vol, veh/h	13	2	40	8	10	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	86	86	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	3	47	9	13	44

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	120	51	0	0	56	0
Stage 1	51	-	-	-	-	-
Stage 2	69	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	876	1017	-	-	1549	-
Stage 1	971	-	-	-	-	-
Stage 2	954	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	868	1017	-	-	1549	-
Mov Cap-2 Maneuver	868	-	-	-	-	-
Stage 1	971	-	-	-	-	-
Stage 2	945	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	1.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	885	1549	-
HCM Lane V/C Ratio	-	-	0.023	0.008	-
HCM Control Delay (s)	-	-	9.2	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NEL	NER
Traffic Vol, veh/h	367	25	25	488	40	33
Future Vol, veh/h	367	25	25	488	40	33
Conflicting Peds, #/hr	0	0	0	0	0	0
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	91	91	88	88	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	403	27	28	555	48	40

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	431	0	1028	417
Stage 1	-	-	-	-	417	-
Stage 2	-	-	-	-	611	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1129	-	259	636
Stage 1	-	-	-	-	665	-
Stage 2	-	-	-	-	542	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1129	-	250	636
Mov Cap-2 Maneuver	-	-	-	-	250	-
Stage 1	-	-	-	-	665	-
Stage 2	-	-	-	-	522	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.4	19
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	345	-	-	1129	-
HCM Lane V/C Ratio	0.255	-	-	0.025	-
HCM Control Delay (s)	19	-	-	8.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1	-	-	0.1	-

Intersection	
Int Delay, s/veh	20.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	163	212	32	166	328	98
Future Vol, veh/h	163	212	32	166	328	98
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	90	90	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	187	244	36	184	390	117

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	431	0	565	309
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	256	-
Critical Hdwy	-	-	4.12	-	7.12	6.22
Critical Hdwy Stg 1	-	-	-	-	6.12	-
Critical Hdwy Stg 2	-	-	-	-	6.12	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1129	-	436	731
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	749	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1129	-	424	731
Mov Cap-2 Maneuver	-	-	-	-	424	-
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	722	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	46.9
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	424	731	-	-	1129	-
HCM Lane V/C Ratio	0.921	0.16	-	-	0.031	-
HCM Control Delay (s)	57.6	10.9	-	-	8.3	0
HCM Lane LOS	F	B	-	-	A	A
HCM 95th %tile Q(veh)	10.2	0.6	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	2	7	11	436	254	2
Future Vol, veh/h	2	7	11	436	254	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	81	81	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	9	14	538	299	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	865	300	301	0	-	0
Stage 1	300	-	-	-	-	-
Stage 2	565	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	324	740	1260	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	319	740	1260	-	-	-
Mov Cap-2 Maneuver	319	-	-	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	560	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.4	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1260	-	572	-	-
HCM Lane V/C Ratio	0.011	-	0.021	-	-
HCM Control Delay (s)	7.9	0	11.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

A6

Level of Service Calculations: Full Development Conditions

1: Hanshaw Rd & N Triphammer Rd Performance by lane

Lane	EB	WB	SB	SB	All
Movements Served	LT	TR	L	R	
Denied Del/Veh (s)					0.5
Total Del/Veh (s)	7.9	0.7	11.8	2.7	7.5

4: East Upland Rd & Triphammer Rd & Hanshaw Rd Performance by lane

Lane	EB	EB	WB	NB	SB	All
Movements Served	L	TR	LTR	LTR	LTR	
Denied Del/Veh (s)						0.1
Total Del/Veh (s)	19.9	14.5	1.6	13.9	2.9	4.0

6: East Upland Rd & EU North Entrance Performance by lane

Lane	WB	NB	SB	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	2.1	0.2	0.7	0.7

8: East Upland Rd & EU Middle Entrance Performance by lane

Lane	WB	NB	SB	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	2.2	0.1	0.1	0.1

10: East Upland Road/East Upland Rd & EU South Entrance Performance by lane

Lane	WB	NB	SB	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.1
Total Del/Veh (s)	2.9	0.1	0.9	0.8

13: Hanshaw Entrance & Hanshaw Rd Performance by lane

Lane	EB	WB	NE	All
Movements Served	TR	LT	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.9	1.9	9.2	1.7

15: Pleasant Grove Rd & Hanshaw Rd Performance by lane

Lane	EB	WB	NB	NB	All
Movements Served	TR	LT	L	R	
Denied Del/Veh (s)					0.1
Total Del/Veh (s)	1.4	8.1	26.5	4.8	7.7

16: Pleasant Grove Rd & Pleasant Grove Entrance Performance by lane

Lane	EB	NB	SB	All
Movements Served	LR	LT	TR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	4.7	5.2	0.4	1.7

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	15.5

Intersection	
Int Delay, s/veh	12.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	35	49	33	264	476	39
Future Vol, veh/h	35	49	33	264	476	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	180
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	61	61	88	88	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	80	38	300	547	45

Major/Minor	Major2		Minor2	
Conflicting Flow All	-	0	188	188
Stage 1	-	-	188	-
Stage 2	-	-	0	-
Critical Hdwy	-	-	7.12	6.22
Critical Hdwy Stg 1	-	-	6.12	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	772	854
Stage 1	-	-	814	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	772	854
Mov Cap-2 Maneuver	-	-	772	-
Stage 1	-	-	814	-
Stage 2	-	-	-	-

Approach	WB	SB
HCM Control Delay, s	0	19.4
HCM LOS		C

Minor Lane/Major Mvmt	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	-	772	854
HCM Lane V/C Ratio	-	-	0.709	0.052
HCM Control Delay (s)	-	-	20.2	9.4
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	6	0.2

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	4	33	3	12	66
Future Vol, veh/h	1	4	33	3	12	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	58	58	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	8	57	5	15	83

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	172	59	0	0	62	0
Stage 1	59	-	-	-	-	-
Stage 2	113	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	818	1007	-	-	1541	-
Stage 1	964	-	-	-	-	-
Stage 2	912	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	810	1007	-	-	1541	-
Mov Cap-2 Maneuver	810	-	-	-	-	-
Stage 1	964	-	-	-	-	-
Stage 2	903	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	1.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	960	1541	-
HCM Lane V/C Ratio	-	-	0.01	0.01	-
HCM Control Delay (s)	-	-	8.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	29	0	1	53
Future Vol, veh/h	0	2	29	0	1	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	58	58	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	50	0	1	74

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	126	50	0	0	50	0
Stage 1	50	-	-	-	-	-
Stage 2	76	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	869	1018	-	-	1557	-
Stage 1	972	-	-	-	-	-
Stage 2	947	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	868	1018	-	-	1557	-
Mov Cap-2 Maneuver	868	-	-	-	-	-
Stage 1	972	-	-	-	-	-
Stage 2	946	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1018	1557	-
HCM Lane V/C Ratio	-	-	0.004	0.001	-
HCM Control Delay (s)	-	-	8.6	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	5	25	22	23	35
Future Vol, veh/h	6	5	25	22	23	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	38	38	61	61	69	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	13	41	36	33	51

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	176	59	0	0	77	0
Stage 1	59	-	-	-	-	-
Stage 2	117	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	814	1007	-	-	1522	-
Stage 1	964	-	-	-	-	-
Stage 2	908	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	796	1007	-	-	1522	-
Mov Cap-2 Maneuver	796	-	-	-	-	-
Stage 1	964	-	-	-	-	-
Stage 2	888	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	2.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	880	1522	-
HCM Lane V/C Ratio	-	-	0.033	0.022	-
HCM Control Delay (s)	-	-	9.2	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	406	31	39	305	21	13
Future Vol, veh/h	406	31	39	305	21	13
Conflicting Peds, #/hr	0	0	0	0	0	0
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	83	83	89	89	69	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	489	37	44	343	30	19

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	527	0	938	508
Stage 1	-	-	-	-	508	-
Stage 2	-	-	-	-	430	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1040	-	293	565
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	656	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1040	-	278	565
Mov Cap-2 Maneuver	-	-	-	-	278	-
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	622	-

Approach	EB	WB	NE
HCM Control Delay, s	0	1	17.2
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	345	-	-	1040	-
HCM Lane V/C Ratio	0.143	-	-	0.042	-
HCM Control Delay (s)	17.2	-	-	8.6	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Intersection	
Int Delay, s/veh	6.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	79	312	143	221	111	26
Future Vol, veh/h	79	312	143	221	111	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	82	82	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	95	376	174	270	142	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	471	0	901	283
Stage 1	-	-	-	-	283	-
Stage 2	-	-	-	-	618	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1091	-	309	756
Stage 1	-	-	-	-	765	-
Stage 2	-	-	-	-	538	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1091	-	251	756
Mov Cap-2 Maneuver	-	-	-	-	251	-
Stage 1	-	-	-	-	765	-
Stage 2	-	-	-	-	437	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.5	31.6
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	251	756	-	-	1091	-
HCM Lane V/C Ratio	0.567	0.044	-	-	0.16	-
HCM Control Delay (s)	36.6	10	-	-	8.9	0
HCM Lane LOS	E	B	-	-	A	A
HCM 95th %tile Q(veh)	3.2	0.1	-	-	0.6	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	5	7	150	456	5
Future Vol, veh/h	1	5	7	150	456	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	31	31	77	77	75	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	16	9	195	608	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	824	611	615	0	-	0
Stage 1	611	-	-	-	-	-
Stage 2	213	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	343	494	965	-	-	-
Stage 1	542	-	-	-	-	-
Stage 2	823	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	340	494	965	-	-	-
Mov Cap-2 Maneuver	340	-	-	-	-	-
Stage 1	542	-	-	-	-	-
Stage 2	815	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.2	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	965	-	459	-	-
HCM Lane V/C Ratio	0.009	-	0.042	-	-
HCM Control Delay (s)	8.8	0	13.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

1: Hanshaw Rd & N Triphammer Rd Performance by lane

Lane	EB	WB	SB	SB	All
Movements Served	LT	TR	L	R	
Denied Del/Veh (s)					0.4
Total Del/Veh (s)	24.7	1.0	11.8	3.8	6.6

4: East Upland Rd & Triphammer Rd & Hanshaw Rd Performance by lane

Lane	EB	EB	WB	NB	SB	All
Movements Served	L	TR	LTR	LTR	LTR	
Denied Del/Veh (s)						0.7
Total Del/Veh (s)	75.7	42.5	1.6	69.7	1.5	14.2

6: East Upland Rd & EU North Entrance Performance by lane

Lane	WB	NB	SB	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	19.7	0.6	0.5	2.0

8: East Upland Rd & EU Middle Entrance Performance by lane

Lane	WB	NB	SB	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	2.1	0.2	0.1	0.2

10: East Upland Road/East Upland Rd & EU South Entrance Performance by lane

Lane	WB	NB	SB	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.1
Total Del/Veh (s)	3.8	0.1	1.1	1.3

13: Hanshaw Entrance & Hanshaw Rd Performance by lane

Lane	EB	WB	NE	All
Movements Served	TR	LT	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.8	1.3	11.7	2.3

15: Pleasant Grove Rd & Hanshaw Rd Performance by lane

Lane	EB	WB	NB	NB	All
Movements Served	TR	LT	L	R	
Denied Del/Veh (s)					0.1
Total Del/Veh (s)	1.1	3.1	11.7	4.2	5.0

16: Pleasant Grove Rd & Pleasant Grove Entrance Performance by lane

Lane	EB	NB	SB	All
Movements Served	LR	LT	TR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	4.2	4.8	0.3	2.9

Total Network Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	21.8

Intersection	
Int Delay, s/veh	10.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	44	46	52	613	388	56
Future Vol, veh/h	44	46	52	613	388	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	180
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	92	92	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	49	57	666	436	63

Major/Minor	Major2		Minor2	
Conflicting Flow All	-	0	390	390
Stage 1	-	-	390	-
Stage 2	-	-	0	-
Critical Hdwy	-	-	7.12	6.22
Critical Hdwy Stg 1	-	-	6.12	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	569	658
Stage 1	-	-	634	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	569	658
Mov Cap-2 Maneuver	-	-	569	-
Stage 1	-	-	634	-
Stage 2	-	-	-	-

Approach	WB	SB
HCM Control Delay, s	0	26.8
HCM LOS		D

Minor Lane/Major Mvmt	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	-	569	658
HCM Lane V/C Ratio	-	-	0.766	0.096
HCM Control Delay (s)	-	-	29.1	11
HCM Lane LOS	-	-	D	B
HCM 95th %tile Q(veh)	-	-	6.9	0.3

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	8	69	8	6	51
Future Vol, veh/h	1	8	69	8	6	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	92	92	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	11	75	9	8	64

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	158	79	0	0	84	0
Stage 1	79	-	-	-	-	-
Stage 2	79	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	833	981	-	-	1513	-
Stage 1	944	-	-	-	-	-
Stage 2	944	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	829	981	-	-	1513	-
Mov Cap-2 Maneuver	829	-	-	-	-	-
Stage 1	944	-	-	-	-	-
Stage 2	939	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	961	1513	-
HCM Lane V/C Ratio	-	-	0.012	0.005	-
HCM Control Delay (s)	-	-	8.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	4	58	0	0	49
Future Vol, veh/h	0	4	58	0	0	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	85	85	69	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	68	0	0	71

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	139	68	0	0	68	0
Stage 1	68	-	-	-	-	-
Stage 2	71	-	-	-	-	-
Critical Hdwy	7.12	6.22	-	-	4.12	-
Critical Hdwy Stg 1	6.12	-	-	-	-	-
Critical Hdwy Stg 2	6.12	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	831	995	-	-	1533	-
Stage 1	942	-	-	-	-	-
Stage 2	939	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	831	995	-	-	1533	-
Mov Cap-2 Maneuver	831	-	-	-	-	-
Stage 1	942	-	-	-	-	-
Stage 2	939	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	995	1533	-
HCM Lane V/C Ratio	-	-	0.008	-	-
HCM Control Delay (s)	-	-	8.6	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	9	40	12	15	35
Future Vol, veh/h	30	9	40	12	15	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	86	86	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	12	47	14	19	44

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	134	53	0	0	60	0
Stage 1	53	-	-	-	-	-
Stage 2	81	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	860	1014	-	-	1544	-
Stage 1	970	-	-	-	-	-
Stage 2	942	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	849	1014	-	-	1544	-
Mov Cap-2 Maneuver	849	-	-	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	930	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	2.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	882	1544	-
HCM Lane V/C Ratio	-	-	0.059	0.012	-
HCM Control Delay (s)	-	-	9.3	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	3

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	367	33	33	488	66	46
Future Vol, veh/h	367	33	33	488	66	46
Conflicting Peds, #/hr	0	0	0	0	0	0
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	91	91	88	88	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	403	36	38	555	80	55

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	440	0	1051	421
Stage 1	-	-	-	-	421	-
Stage 2	-	-	-	-	630	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1120	-	251	632
Stage 1	-	-	-	-	662	-
Stage 2	-	-	-	-	531	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1120	-	239	632
Mov Cap-2 Maneuver	-	-	-	-	239	-
Stage 1	-	-	-	-	662	-
Stage 2	-	-	-	-	505	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.5	24.1
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	321	-	-	1120	-
HCM Lane V/C Ratio	0.42	-	-	0.033	-
HCM Control Delay (s)	24.1	-	-	8.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	2	-	-	0.1	-

Intersection	
Int Delay, s/veh	16.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	176	212	32	173	329	98
Future Vol, veh/h	176	212	32	173	329	98
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	90	90	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	202	244	36	192	392	117

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	446	0	587	324
Stage 1	-	-	-	-	324	-
Stage 2	-	-	-	-	263	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1114	-	472	717
Stage 1	-	-	-	-	733	-
Stage 2	-	-	-	-	781	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1114	-	455	717
Mov Cap-2 Maneuver	-	-	-	-	455	-
Stage 1	-	-	-	-	733	-
Stage 2	-	-	-	-	753	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	37.4
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	455	717	-	-	1114	-
HCM Lane V/C Ratio	0.861	0.163	-	-	0.032	-
HCM Control Delay (s)	45.2	11	-	-	8.3	0
HCM Lane LOS	E	B	-	-	A	A
HCM 95th %tile Q(veh)	8.8	0.6	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	10	11	437	254	2
Future Vol, veh/h	2	10	11	437	254	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	81	81	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	13	14	540	299	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	867	300	301	0	-	0
Stage 1	300	-	-	-	-	-
Stage 2	567	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	323	740	1260	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	318	740	1260	-	-	-
Mov Cap-2 Maneuver	318	-	-	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	559	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1260	-	606	-	-
HCM Lane V/C Ratio	0.011	-	0.026	-	-
HCM Control Delay (s)	7.9	0	11.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-