VILLAGE OF DOWNERS GROVE
Report for the Village Council Meeting
6/21/2016

SUBJECT:	SUBMITTED BY:
Main & Maple – Planned Unit Development, Rezoning and Special Use	Stan Popovich, AICP Director of Community Development

SYNOPSIS

The petitioner is requesting approval of a Planned Unit Development, Rezoning and Special Use to permit the construction of a mixed-use building with 3,900 square feet of retail space and 115 apartments at 946 Maple Avenue, 1000 Maple Avenue and 5245 Main Street.

STRATEGIC PLAN ALIGNMENT

The goals for 2015-2017 include *Strong, Diverse Local Economy*.

FISCAL IMPACT

See Redevelopment Agreement staff report.

RECOMMENDATION

Approval on the June 28, 2016 active agenda per the Plan Commission's 6-2 positive recommendation. The Plan Commission found the proposal to be an appropriate use in the district, compatible with the Comprehensive Plan and meets all standards for approval of a Zoning Map Amendment for a PUD Overlay per Section 28.12.030, a Planned Unit Development with deviations per Section 28.12.040 and a Special Use per Section 28.12.050. The dissenting commissioners felt the corner does need to be developed but thought this development was too big, too dense, and out of character with Main Street.

BACKGROUND

Property Information & Zoning Request

The subject property sits at the northeast corner of Main Street and Maple Avenue and consists of three properties. The three properties contain a Village parking lot, a commercial building and a non-conforming single family home. All three properties are zoned DB, Downtown Business Zoning District. The applicant is applying for a Planned Unit Development (PUD) to accommodate this development. As part of the PUD approval, a rezoning from DB to DB/PUD is required. The applicant is also requesting Special Use approval for the use of an apartment building which is an allowable Special Use in the DB zoning district.

Development Plan

The applicant is proposing to construct a six-story mixed use building that contains the following features:

- 3,900 square feet of retail space which can be for a single tenant or split for two tenants
- 115 apartment units

  - 16 efficiency units
  - 68 one bedroom units
  - 26 two bedroom units
  - 5 three bedroom units
- 162 enclosed off-street parking spaces
- 10 on-street parking spaces
- Apartment amenities
  - Pool, pool deck, club room, fitness room, sky lounge, pet spa and bike lounge
- On-site Management Office

The six-story building would be improved with a variety of high quality building materials including two brick colors and metal or cementitious panels. The retail and lobby space provides a glass storefront along Main Street and a portion of Maple Avenue.

Compliance with the Comprehensive Plan

The subject property is identified in the Comprehensive Plan as part of Catalyst Site #16 and is prime for a redevelopment to advance the vision for downtown. The proposed development advances several of the goals and objectives found in the Comprehensive Plan including:

- Redevelops a key catalyst site and underutilized downtown site
- Creates a southern gateway into downtown
- Creates a transit and pedestrian-oriented development
- Maintains a commitment to quality architecture
- Enhances the downtown district as the cultural and social center of the community

Compliance with the Zoning Ordinance

The petitioner is requesting a planned unit development to account for the requested increase in density from what is permitted in the DB zoning district. The proposed development meets all other zoning ordinance bulk requirements. The Zoning Ordinance notes that certain types of developments are appropriate for planned unit developments, and that these types will also achieve planning goals. These types include:

- Developments that provide housing variety
- Mixed-use developments
- Developments that are consistent with the Comprehensive Plan

The proposed mixed-use development is appropriate for a PUD.

Compliance with the Subdivision Ordinance

The applicant will meet all requirements of the Subdivision Ordinance. The applicant will administratively consolidate the three existing lots, provide a fee-in-lieu for two parkway trees along Main Street and provide the required park district and school district donations.

Compliance with the Downtown Design Guidelines

The proposed development meets the design guidelines in the following manner:

- Provides visual interest and high quality materials throughout the building
- Provides a pedestrian-friendly space through the inclusion of storefronts along the street
- Creates a distinctive building through the roof line, building voids and building planes

Engineering\Public Improvements

The petitioner will be dedicating three feet of right-of-way along Maple Avenue and will also be dedicating right-of-way at the intersection of Main Street and Maple Avenue. Additionally, the applicant will be providing 10 on-street parking spaces, two on Main Street and eight on Maple Avenue. The petitioner will be combining the small amount of detention that is currently provided at 1000 Maple Avenue with the required Post Construction Best Management Practices in accordance with the Village's Stormwater Ordinance.

Traffic and Parking

A traffic and parking impact study for the proposed development was completed by the petitioner. Based on the development's location and transit-oriented development approach, the study projected minimal impact on the existing traffic in the area. The study examined surrounding intersections and found that all the intersections will continue to operate at current levels after the development is completed.

The petitioner will be providing 162 interior parking spaces for their 115 apartment units. The petitioner is not required to provide parking for the retail component of their development. The development will displace 29 existing parking spaces within the Village parking lot. As shown in the staff report, the parking lot was always intended to be temporary in nature. Various plans completed by the Village beginning in 1997 showed the lot as either a park or a mixed-use development site, including the 2011 Comprehensive Plan which identified the site as part of Catalyst Site #16 and identified it as a "key site for infill."

The Village's 2011 Parking Study found a surplus of parking on the south side of the tracks that could accommodate additional development. The applicant completed a parking study which concluded the loss of parking in the Village parking lot can be accommodated within the surrounding area while maintaining effective parking conditions. The Village contracted with an independent third-party traffic and parking engineering firm to review the applicant's study. The independent review concurred with the applicant's findings.

Public Comment

During the Plan Commission meeting, the public expressed the concerns listed below. The Village offers the following comments:

Concern	Response
Loss of 29 Village owned and operated parking spaces	• This parking lot was always intended to be temporary • The 2011 Comprehensive Plan identifies this site as a "key site for infill" • The proposed 10 on-street parking spaces help offset the loss of the 29 spaces • The Parking study found these spaces can be accommodated elsewhere in close proximity within the surrounding area • There is available existing on-street parking for retail shoppers • The parking deck has the capacity to accommodate displaced employee parking
Inadequate parking for visitors, overnight guests and building support vehicles	• Two on-street Maple Avenue parking spaces will be designated loading spaces prior to 11:00 am • Service call vehicles will be allowed to temporarily park in the residential garage • On-site maintenance personnel will offset some

	service calls • Commuter parking lots are open to the general public after 11:00 am on weekdays and all day on weekends and holidays • Overnight parking is currently available in Commuter Lot L and the Parking Deck
Density	• The proposed development meets the goals of the Comprehensive Plan to develop a catalyst site • The Comprehensive Plan notes higher density multi-family uses should be located near commercial areas
Traffic	• The Traffic study took into account the proposed development and the adjacent Marquis on Maple development, and determined no significant decline in level of service to adjacent intersections • The Traffic study was reviewed by both the Village and a 3rd party who concurred with findings
Collection of garbage and loading and unloading of moving trucks	• The Maple Avenue on-street parking is designed to accommodate garbage trucks and mid-sized moving vehicles • The loading and parking zone combinations are currently used on Curtiss Street and along Highland Avenue adjacent to Station Crossing and were also recently approved for Burlington Station at 5100 Forest Avenue

ATTACHMENTS

Ordinance
Aerial Map
Staff Report with attachments dated June 6, 2016
Plan Commission draft minutes dated June 6, 2016
Park District Letter dated June 10, 2016
Applicant response to Park District letter

ORDINANCE NO. _____

AN ORDINANCE REZONING CERTAIN PROPERTY
LOCATED AT THE NORTHEAST CORNER OF MAIN STREET AND MAPLE AVENUE

WHEREAS, the real estate located at 946 Maple, 1000 Maple and 5245 Main Street, on the northeast corner of Main Street and Maple Avenue, hereinafter described has been classified as "DB, Downtown Business" under the Zoning Ordinance of the Village of Downers Grove; and

WHEREAS, the owner or owners of said real estate have requested that such property be rezoned as hereinafter provided; and

WHEREAS, such petition was referred to the Plan Commission of the Village of Downers Grove, and said Plan Commission has given the required public notice, has conducted a public hearing respecting said petition on June 6, 2016 and has made its findings and recommendations all in accordance with the statutes of the State of Illinois and the ordinances of the Village of Downers Grove; and

WHEREAS, making due allowance for existing conditions, the conservation of property values, the development of the property in conformance to the official Comprehensive Plan of the Village of Downers Grove, and the current uses of the property affected, the Council has determined that the proposed rezoning is for the public good.

NOW, THEREFORE, BE IT ORDAINED by the Council of the Village of Downers Grove, in DuPage County, Illinois, as follows:

SECTION 1. The Zoning Map of the Village, pursuant to Section 28.12.030 of the Downers Grove Municipal Code, is hereby further amended by rezoning to "DB/PUD, Downtown Business/Planned Unit Development" the zoning classification of the following described real estate, to wit:

PARCEL 1
THAT PART OF LOT 18 OF ASSESSOR'S SUBDIVISION OF SECTION 7 AND SECTION 8, TOWNSHIP 38 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DEFINED AS FOLLOWS; BEGINNING ON THE NORTH LINE OF MAPLE AVENUE, AT THE SOUTHWEST CORNER OF SAID LOT 18; THENCE NORTH 1 ½ DEGREES WEST ALONG THE WEST LINE OF SAID LOT, 195.5 FEET TO A POST; THENCE NORTH 77 ½ DEGREES EAST 40 FEET FOR A PLACE OF BEGINNING; THENCE SOUTH 4 ¾ DEGREES EAST 184 FEET TO THE NORTH LINE OF SAID MAPLE AVENUE; THENCE NORTH 85 ½ DEGREES EAST ALONG THE NORTH LINE OF SAID MAPLE AVENUE, 60 FEET; THENCE NORTH TO A POINT ON THE SOUTH LINE OF LOT THERETOFORE CONVEYED TO ELLA F. SCHOFIELD BY DEED RECORDED IN BOOK 67 OF DEEDS, PAGE 339, 34.86 FEET EAST OF THE PLACE OF BEGINNING; THENCE SOUTH 77 ½ DEGREES WEST 34.86 FEET TO THE PLACE OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

PARCEL 2
THAT PART OF LOT 18 OF ASSESSOR'S SUBDIVISION OF SECTION 7 AND SECTION 8, TOWNSHIP 38 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DEFINED AS FOLLOWS; BEGINNING ON THE NORTH LINE OF MAPLE AVENUE, AT THE SOUTHWEST CORNER OF SAID LOT 18; THENCE NORTH 1 ½ DEGREES WEST, ALONG THE WEST LINE OF SAID LOT. 195.5 FEET TO A POST; THENCE NORTH 77.5 DEGREES EAST 74.86 FEET FOR A POINT OF BEGINNING; THENCE SOUTH TO A POINT ON THE NORTH LINE OF MAPLE AVENUE; 100 FEET SOUTHWEST OF THE SOUTHEAST CORNER OF SAID LOT 18; THENCE

NORTH 85.5 DEGREES EAST ALONG THE NORTH LINE OF SAID MAPLE AVENUE, 50 FEET; THENCE NORTH 20.25 DEGREES WEST, TO A POINT NORTH 77.5 DEGREES EAST, 34.86 FEET FROM THE POINT OF BEGINNNG; THENCE SOUTH 77.5 DEGREES WEST 34.86 FEET TO THE BEGINNING, IN DUPAGE COUNTY, ILLINOIS.

PARCEL 3
THE EAST FIFTY (50) FEET OF LOT EIGHTEEN (18) IN ASSESSOR'S SUBDIVISION OF SECTION EIGHT (8), TOWNSHIP THIRTY EIGHT (38) NORTH, RANGE ELEVEN (11), EAST OF THE THIRD PRINCIPAL MERIDIAN, (EXCEPT THAT PART THEREOF LYING NORTH OF THE SOUTH LINE OF LAND CONVEYED TO ELLA F. SCHOFIELD BY DEED DOCUMENT 47158) SAID LOT BEING SITUATED UPON AND A PART OF THE SOUTHWEST QUARTER (N.I.B.L.) OF SECTION EIGHT (8), TOWNSHIP THIRTY EIGHT (38) NORTH, RANGE ELEVEN (11), EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED OCTOBER 2, 1871 IN BOOK 2 OF PLATS, PAGE 29 AS DOCUMENT 14481, IN DUPAGE COUNTY, ILLINOIS.

PARCEL 4
THAT PART OF OUT LOT 1 IN CURTISS' ADDITION TO DOWNERS GROVE AS RECORDED AS
DOCUMENT NUMBER 7317 LYING SOUTH OF LOT 22 IN ASSESSORS SUBDIVISION OF SECTION 8, TOWNSHIP 38 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN AND LYING WEST OF LOT 18 IN SAID ASSESSORS SUBDIVISION; ALSO LOTS 20, 21 AND 22 IN SAID ASSESSORS SUBDIVISION; ALSO THAT PART OF LOT 18 IN SAID ASSESSORS SUBDIVISION DESCRIBED BY BEGINNING ON THE NORTH LINE OF MAPLE AVENUE AT THE SOUTHWEST CORNER OF SAID LOT 18; THENCE NORTH 1 ½ DEGREES WEST ALONG THE WEST LINE OF SAID LOT 18 A DISTANCE OF 118.9 FEET; THENCE NORTH 77 DEGREES EAST A DISTANCE OF 44.2 FEET; THENCE SOUTH 4¾ DEGREES EAST A DISTANCE OF 107.4 FEET TO THE NORTH LINE OF SAID MAPLE AVENUE;THENCE SOUTH 65 ½ DEGREES WEST ALONG SAID NORTH LINE A DISTANCE OF 54.2 FEET TO THE PLACE OF BEGINNING, ALL IN DUPAGE COUNTY, ILLINOIS.

Commonly known as 946 Maple Avenue, 1000 Maple Avenue & 5245 Main Street (a/k/a the Northeast corner of Main Street and Maple Avenue,) Downers Grove, IL 60515
PINs 09-08-306-017,-018, -019, -020, -027, -028, -029 and -030

SECTION 2. The official zoning map shall be amended to reflect the change in zoning classification effected by Section 1 of this ordinance, subject to the following conditions:

1. Any changes to the conditions represented by the Petitioner as the basis for this petition, whether those changes occur prior to or after Village approval, shall be promptly reported to the Village. The Village reserves the right to re-open its review process upon receipt of such information; and

2. It is the Petitioner's obligation to maintain compliance with all applicable Federal, State, County and Village laws, ordinances, regulations, and policies.

SECTION 3. That the rezoning meets the requirements of the Zoning Ordinance as follows:

1. The existing use and zoning of nearby property;
2. The extent to which the particular zoning restrictions affect property values;
3. The extent to which any diminution in property value is offset by an increase in the public health, safety and welfare;

4. The suitability of the subject property for the zoned purposes;

5. The length of time that the subject property has been vacant as zoned, considering the context of land development in the vicinity;

6. The value to the community of the proposed use; and

7. The comprehensive plan.

SECTION 4. That all ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

SECTION 5. This ordinance shall be in full force and effect from and after its passage and publication in pamphlet form as provided by law.

_____
Mayor

Passed:
Published:
Attest: _____
Village Clerk

1\mw\Ord.16\Main&Maple-Rezoning-16-PLC-0021

946 Maple Ave, 1000 Maple Ave, 5245 Main Street - Location Map

VILLAGE OF DOWNERS GROVE
REPORT FOR THE PLAN COMMISSION
JUNE 6, 2016 AGENDA

SUBJECT:	TYPE:	SUBMITTED BY:
16-PLC-0021 946 Maple Avenue, 1000 Maple Avenue and 5245 Main Street	Special Use, Planned Unit Development, and Rezoning	Stan Popovich, AICP Director Community Development Department

REQUEST
The petitioner is requesting approval of a Special Use, Planned Unit Development and Rezoning from DB (Downtown Business) to DB/PUD (Downtown Business / Planned Unit Development) to permit the construction of a mixed-use building with 3,900 square feet of retail space and 115 apartments at 946 Maple Avenue, 1000 Maple Avenue and 5245 Main Street.

NOTICE
The application has been filed in conformance with applicable procedural and public notice requirements.

GENERAL INFORMATION

OWNERS: Robert E. King and Lynda A. King
Co-Trustees under Declaration of Joint Trust
946 Maple Avenue
Downers Grove, IL 60515

Chicago Title Land Trust Co.
Trust Number 8002349926
Sievers Construction Co. Inc
548 Ocean Cay Drive
Key Largo, FL 33037

Village of Downers Grove
801 Burlington Avenue
Downers Grove, IL 60515

APPLICANT: Trammell Crow Chicago Development, Inc.
2215 S. York Road, Suite 204
Oak Brook, IL 60523

PROPERTY INFORMATION

EXISTING ZONING: DB, Downtown Business District
EXISTING LAND USE: Single Family Residential, Commercial, Parking Lot
PROPERTY SIZE: 0.871 acres (37,961 square feet)
PINS: 09-08-306-017, -018, -019, -020, -027, -028, -029 and -030

SURROUNDING ZONING AND LAND USES

	ZONING	FUTURE LAND USE
NORTH:	DB, Downtown Business	Downtown / Mixed Use
SOUTH:	DB, Downtown Business	Downtown / Mixed Use
EAST:	DB, Downtown Business	Downtown / Mixed Use
WEST:	DB, Downtown Business	Downtown / Mixed Use

ANALYSIS

SUBMITTALS

This report is based on the following documents, which are on file with the Department of Community Development:

1. Application/Petition for Public Hearing
2. Location Map
3. Project Narrative
4. Plats of Survey
5. Engineering Plans
6. Architectural Drawings
7. Building Material Samples
8. Neighborhood Meeting Summary
9. Traffic and Parking Study

PROJECT DESCRIPTION

The petitioner is requesting approval of a Special Use, Planned Unit Development, and a rezoning from DB (Downtown Business) to DB/PUD (Downtown Business / Planned Unit Development) to permit the construction of a mixed-use 115 unit apartment building at the northeast corner of Main Street and Maple Avenue. The subject site consists of three lots. The western lot is known as 5245 Main Street and is currently occupied by a Village parking lot with 29 parking spaces. The middle lot is known as 1000 Burlington Avenue and is currently occupied by a commercial office building. The eastern lot is known as 946 Maple Avenue and is occupied by a lawful non-conforming single family home. All three lots are zoned DB, Downtown Business.

The petitioner is proposing to combine the three lots and redevelop the property with a six-story building providing 3,900 square feet of retail space along Main Street and 115 apartments above. The development provides 162 residential parking spaces in three levels of parking, two of which are underground. The proposed retail space along Main Street is designed for either one or two new retail tenants.

The 115 apartments are located on floors two through six. The apartments are a mix of alcove (efficiency) units and one-, two- and three-bedroom units. The lobby and office component of the apartment use is located at the corner of Main Street and Maple Avenue. Apartment amenities include a bike lounge and pet spa within the middle parking level. A club room, fitness room, yoga studio and an amenity terrace with a pool are on the second level with the amenity terrace overlooking the Main Street and Maple Avenue intersection. The sixth level includes a sky lounge with an outdoor terrace overlooking Main Street.

The entrance to the 162 car resident parking garage is located at the far eastern side of the Maple Avenue façade. The parking garage is located on the eastern half of the first level with two levels below grade.

The parking garage includes handicap, tandem and compact parking spaces.

The proposed development will provide eight on-street parking spaces on Maple Avenue and two additional on-street parking spaces on Main Street. Two of the Maple Avenue parking spaces will be designated as loading spaces during off-peak hours so that they can be used for deliveries, moving, and garbage collection.

The proposed building will be primarily clad with brick and metal or cementitious panels. The brick will be the predominant material along the first floor along both Main Street and Maple Avenue. Brick will also be the primary material along the six-story Main Street façade, wrapping around the amenity terrace and through the first bay of the Maple Avenue façade. Panels will be used for the remaining Maple Avenue façade along with other secondary facades. Protruding balconies are located along the Maple Avenue façade and on other secondary facades as well.

HISTORY OF VILLAGE OWNED PROPERTY LOCATED AT MAIN STREET & MAPLE AVENUE

1993 – Village purchased the property which was improved with a vacant gas station.

1994 – Village demolished the gas station and converted the property to green space.

1995 – Village pursued a plan to develop the property with a park.

1997 – A Central Business District Master Plan was prepared and recommended the property be improved with a park.

2001 – In anticipation of the parking deck construction, construction of a temporary parking lot was proposed. A November 2001 report to the Village Council stated 'staff began looking at ways in which a temporary parking lot could be constructed at the site.' The report continues to note that the lot would be used for "approximately four to six years." At a Village Council meeting, Village Manager Ginex was asked why the four to six year timeframe is being considered, and responded, 'that time period allows ample time for a developer to take over that corner.'

2002 – The temporary parking lot was constructed.

2003 – Joint Plan Commission and Economic Development Workshop discussions identified the property for commercial development. The joint group also encouraged continued transit oriented mixed-use in the downtown to foster a complimentary mix of uses.

2006 – The Village Council directed staff to facilitate the redevelopment of the property as part of the Downtown Tax Increment Financing Strategy. The Village published a Request for Proposals for the redevelopment of the property. The Village Council approved a motion authorizing the Village Manager to negotiate a Redevelopment Agreement with InterCapital Partners. The Village entered into an Agreement with InterCapital Partners to redevelop the site with a mixed use development.

2007 – The Village approved a Planned Unit Development with InterCapital Partners for this site to build a mixed-use building. The developer did not proceed with the development due to economic conditions.

2011 - The Village adopted the Comprehensive Plan with a Downtown Focus Area Plan. The Downtown Focus Area Plan identifies this site as Catalyst Site #16 and notes it "is a key site for infill development which would create a strong gateway into Downtown. The recently-constructed parking garage likely

offsets any lost public parking resulting from development of the surface lot." A graphic depicting Downtown Redevelopment Concepts shows a mixed-use building on this property.

2016 – The Village Council authorized the Village Manager to negotiate a redevelopment agreement with Trammel Crow Chicago Development Inc. for a mixed use development.

COMPLIANCE WITH THE COMPREHENSIVE PLAN

According to the Comprehensive Plan, the subject property is designated as part of Catalyst Site #16. The Comprehensive Plan identifies the following key features of Catalyst Site #16:

- The southern gateway into the downtown
- Existing conditions, setbacks and buildings do not currently create a gateway
- The Village owned parking lot is a key site for infill development which would create a strong presence as a gateway into downtown
- The parking garage likely offsets any lost public parking resulting from the redevelopment of the surface parking lot

The proposed development will provide a strong presence and create the southern gateway into downtown. The development is oriented towards the intersection of Main Street and Maple Avenue and provides a modern gateway into the downtown. As documented in the traffic and parking study, the loss of parking in the Village lot can be accommodated in the parking garage.

The downtown focus area key concepts include:

- Redevelopment of key sites
- Development that is pedestrian-oriented
- Retail shops with attractive window displays
- Maintain a commitment to quality architecture
- Create a sense of enclosure

The proposed development redevelops a key catalyst site at the southern entrance to the downtown and provides a pedestrian-oriented development. The design of the building with retail and active space along both facades provides a pedestrian friendly environment. The development provides 3,900 square feet of first floor retail along Main Street adjacent to the existing mixed use building's retail space to the north. The materials and modern design of the development continues the Village's commitment to quality architecture.

The Comprehensive Plan also encourages Transit Oriented Development to take advantage of transportation opportunities. The proposed development is consistent with the Transit Oriented Development approach as it provides higher density residential uses within a 10-minute walk of the Main Street Metra station.

The Residential Policy Recommendations in the Comprehensive Plan notes that future multi-family development should be located near significant activity centers. The proposed mixed-use development is located in the downtown and will bring additional households to the downtown to maintain a vibrant and active downtown.

The proposed development also meets other goals in the Comprehensive Plan. These goals include:

- Redevelops an underutilized downtown site
- Promotes a development that further enhances the downtown as the cultural and social center of

the community
- Reinforces the walkable nature of downtown by orienting the building towards Main Street and Maple Avenue near the property line
- Provides additional residents in close proximity to the downtown commercial core
- Follows transit-oriented development guidelines for downtown redevelopment

The proposed use is consistent with the intent of the Comprehensive Plan.

COMPLIANCE WITH THE ZONING ORDINANCE

The three properties are zoned DB, Downtown Business. Per Section 28.5.010 of the Zoning Ordinance, retail uses are permitted uses in the DB zoning district while apartments are allowed as Special Uses in the DB zoning district. Based on the number of proposed apartment units, the petitioner is requesting a Planned Unit Development designation. Compliance with the applicable bulk and parking requirements of the Zoning Ordinance are highlighted in the table below:

Zoning Requirements

Main & Maple	**Required**	**Proposed**
Lot area per dwelling unit	800 sq ft (min)	330 sq ft
North Setback (SideYard)	0’	5’-8”
East Setback (Rear Yard)	0’	8’-0”
South Setback (Street Yard)	0’	2’-11”
West Setback (Street Yard)	0’	2’-0”
Build-to Zone (BTZ)		
Minimum / Maximum	0’ / 10’	2’-11”
BTZ – Main Street	80%	94%
BTZ – Maple Avenue	30%	97%
Corner Build-To Zone	100%	100%
Building Height	32’ (min) / 70’ (max)	70’
Parking Spaces	161	162

A Planned Unit Development is intended to accommodate development that may be difficult to carry out under applicable zoning standards and results in public benefits that are at least commensurate with the degree of flexibility provided. Examples of development types that are appropriate for PUD approval, per Section 4.030.A.1 of the Zoning Ordinance include:

- Developments that provide housing variety
- Mixed-use developments
- Developments that are consistent with the goals and policies of the Comprehensive Plan

The proposed development provides housing variety by providing a variety of apartments with different numbers of bedrooms. Additionally, the development provides an amenity package that is not currently available in downtown, thus creating additional housing variety in the Village. The development is a mixed-use development with retail and residential uses and helps advance the goals of the Comprehensive Plan by developing Catalyst Site #16 and other goals as described above.

A PUD will also achieve a variety of planning goals as outlined in Section 4.030.A.2 of the Zoning Ordinance:

- Implementation of and consistency with the comprehensive plan and other relevant plans and policies
- Variety in housing types and sizes to accommodate households of all ages, sizes, incomes and lifestyle choices
- Compact, mixed-use development patterns where residential, commercial, civic and open spaces are located in close proximity to one another

The proposed development meets the provisions of a Planned Unit Development as, according to the applicant, the additional density allows both private and public amenities to be added to the site that would not be found in other similar properties in the Village.

The proposed development implements improvements to Catalyst Site #16 that are identified in the Comprehensive Plan. The building provides a southern gateway into downtown and provides a mixed-use building that connects the commercial areas of downtown to the intersection of Main Street and Maple Avenue. The development provides a mix of bedroom counts that can accommodate households of different ages, sizes, incomes and lifestyles. The mixed-use building is in downtown which is the cultural and social center of the Village. The development is in close proximity to other institutional and civic spaces in the downtown, including the Lincoln Center and two houses of worship along Maple Avenue.

The existing 37,961 square foot site consists of three parcels. Section 28.11.020 of the Zoning Ordinance requires the construction of a principal structure to occur on a single Lot of Record. Should the proposed development be approved, the petitioner will be required to administratively consolidate the three lots pursuant to Section 20.507 of the Subdivision Ordinance prior to building permit issuance.

COMPLIANCE WITH DOWNTOWN DESIGN GUIDELINES

The Downtown Design Guidelines provide guidance for building design which will assist in creating a vibrant downtown. The guidelines divide the building's design into three sections, the base, middle and top. As recommended by the Design Guidelines, the building's base provides windows along the street and high quality brick and panel building materials to provide a pedestrian friendly space. A horizontal expression between the first and second floor also contributes to defining the base of the building and creating a pedestrian friendly space. The location of the retail space along Main Street extends the existing commercial core of the downtown further to the south and wraps the activities onto Maple Avenue.

The sidewalks along Main Street will run up to the building's edge while a small landscaping strip will be located between the Maple Avenue sidewalk and the building's Maple Avenue façade. The incorporation of on-street parking on Maple Avenue will provide both a visual and physical separation between pedestrians and vehicles.

The middle of the building should include windows in rhythm with the base level, reflect proportionate shapes and patterns and should be visually appealing through detailing, openings and materials. The middle of the proposed building meets these guidelines. The windows and protruding balconies are in rhythm with the base level and provide proportionate shapes. The Maple Avenue façade provides two planes which provide a visually appealing façade. The proposed amenity deck at the corner of Main Street and Maple Avenue provides a void space in the massing allowing the building to respect the corner and act as a gateway to the downtown.

The guidelines note the top of the building should be an expression of form as the building meets the sky and the roof should give distinction to the entire building. The sixth floor stands out as a different

expression of form through the use of different building materials. The building materials change from brick to all panels and the roof projects out. The sixth floor is also recessed along Main Street to provide two balconies for outdoor entertaining along Main Street. The proposed cornices vary in height and material cover and provide distinction to the entire building.

COMPLIANCE WITH THE SUBDIVISION AND DEVELOPMENT ORDINANCE

The Subdivision Ordinance requires that developments requesting special use approval for multi-family developments provide park and school donations to offset the impact of new residential units. The proposed development will include 115 apartments (16 efficiency, 68 one bedroom units, 26 two bedroom units and 5 three bedroom units). The petitioner receives a credit for the existing single family residential home that is part of the proposed redevelopment. Based upon the number of units and the number of bedrooms, the total donation is $668,116.88 ($604,035.78 to the Park District, $47,088.75 to Elementary School District 58, and $16,992.35 to High School District 99). Payment of these donations must be made to the Village prior to the issuance of any site development or building permits.

ENGINEERING/PUBLIC IMPROVEMENTS

The petitioner is proposing to dedicate right-of-way to the Village as part of this project. The dedication includes three feet of land along Maple Avenue and a triangle piece at the intersection of Main Street and Maple Avenue. The Maple Avenue dedication will provide 33-feet of right-of-way on the north side of Maple Avenue and be in-line with the recent dedication by the Marquis on Maple development immediately to the east. The corner right-of-way dedication eliminates an acute angle intersection and provides the Village with additional right-of-way should it be needed in the future.

The petitioner is proposing to improve Maple Avenue by providing eight on-street parking spaces. The eight spaces will provide an urban context to the building and sidewalk and provide a separation from the street for pedestrians walking along Maple Avenue. The petitioner will also provide two additional on-street parking spaces along Main Street. These new spaces will be located where the access point to the existing parking lot is located. The addition of these 10 parking spaces leaves the net decrease of parking spaces at 19.

The petitioner's loading and unloading zone for move-ins, garbage collection, and deliveries will be the two easternmost parking spaces on Maple Avenue. It is anticipated that these spaces be designated loading zones prior to 11:00am to provide for these services. The management company will coordinate resident move ins and outs to ensure loading zones are available.

The petitioner will not be installing parkway trees along Maple Avenue but will be providing two new parkway trees along Main Street. Due to the anticipated construction impact on the existing trees along Main Street, the Village is requiring the petitioner provide a $1,000 fee-in-lieu to the Village so that the Village can plant two new trees once development is complete.

The existing commercial property at 1000 Maple Avenue has a small detention area that the petitioner will be accommodating in their design to provide the same amount of detention volume. The petitioner is not required to provide additional detention per the Village's Stormwater and Flood Plain Ordinance. However, the petitioner is providing a small amount of storage to satisfy stormwater volume and water quality requirements. This storage is located under the commercial space along Main Street and will account for the 1.25-inch storm and will treat runoff onsite for regularly occurring events. The proposed development will comply with the Village's Stormwater and Flood Plain Ordinance.

New water service and sanitary sewer services will be provided off of main lines located within Maple Avenue. The Downers Grove Sanitary District conceptually approved the request for sanitary sewer service to this development.

TRAFFIC AND PARKING

The petitioner completed a traffic impact and parking study based on their proposed development. Based on the proposed improvements, the study found that the additional traffic generated from the development will not significantly affect future conditions at the nearby intersections. The study also found that the current parking demand at the Village parking lot can be accommodated in the surrounding area.

The study examined three intersections, Main Street and Grove Street, Main Street and Maple Avenue and Main Street and Washington Street. The study found that these intersections currently operate at an acceptable level of service with only the westbound approach to Maple Avenue and Washington Street operating poorly due to a high level of volume westbound through traffic. The study examined future conditions in 2018 and 2023 and took into account projected growth throughout the area in addition to the additional traffic from the Marquis on Maple and the proposed project. The study concluded that the intersections will continue to operate at acceptable levels of service with only the westbound approach to Maple Avenue and Washington Street continuing to operate at a similar level of service due to the continuing high volume of westbound through traffic.

The study also examined the loss of the 29 parking space Village parking lot at the corner of Main Street and Maple Avenue. The study examined occupancy rates of the Main and Maple parking lot, adjacent on-street parking and the parking deck. Their findings are shown below:

Parking Occupancy

	Main & Maple Parking Lot	On-Street	Parking Garage
Weekday			
Midday	48% - 69%	49%	70%
Evening	14% - 86%	91%	20%
Weekend			
Midday	34% - 76%	70% - 92%	17% - 32%
Evening	34% - 76%	70% - 92%	17% - 32%

There is available parking in the parking deck to accommodate the weekday midday employee parking being displaced by the development. Weekday daily parking in the parking deck would remain heavily utilized, but will not be impacted by the proposed displacement. Weekday evenings would be anticipated to have similar utilization demands after the development is constructed. The study concluded that the loss of parking at the Main and Maple parking lot can be accommodated within the surrounding area while maintaining effective parking conditions.

The Village completed a downtown parking study in 2011 to ensure that the village is planning and managing available parking in a manner that best serves downtown Downers Grove. The study examined existing parking utilization and examined what type of new development could occur that would be supported by the existing parking. The study found that an overall parking surplus existed, with the primary supply of surplus parking being south of the railroad tracks. The study found that the south side of downtown had a surplus of 272 parking spaces and could support new development, including up to 75,000 square feet of new retail south of the railroad tracks with the existing parking supply. While redevelopment of existing spaces has occurred, 75,000 square feet of new retail space has not been

constructed in the downtown since the completion of the study. Based on the 2011 study, the existing parking supply will be able to accommodate the net loss of 19 parking spaces from the existing Main and Maple parking lot.

In late 2001 the existing parking lot site was open green space. In anticipation of the downtown parking deck construction starting in 2002, the Village Council was considering parking options for the downtown as the parking deck construction was anticipated to take between 12 and 14 months and would drastically reduce the amount of available parking downtown during that period. As such, the Village began looking at the subject site as an opportunity to construct a temporary parking lot containing 29 parking spaces. The temporary lot would provide some relief during construction. Throughout the discussion on the temporary parking lot, it was anticipated that the parking lot would be used for four to six years before it would be redeveloped.

When the parking deck opened in 2004, the Village immediately began looking for redevelopment opportunities for the subject site. In September 2006, the Village entered into a redevelopment agreement to construct a mixed-use building at the subject site. The proposed retail and townhouse project was approved by the Village Council in June 2007. However, the project did not move forward due to the recession and the parking lot has remained in place since. As can be evidenced from as early as 2001, the Village has always intended to redevelop the parking lot site with the understanding that the parking deck is able to accommodate the displaced parking spaces from the subject parking lot.

With regard to traffic and roadway impacts, staff concurs with the findings of the petitioner's traffic study. The proposed development will have a minimal impact on the adjacent road network. Based on the Village's intent that the parking lot is temporary in nature, the 2011 parking study and the petitioner's examination of parking, staff concurs that the net loss of 19 parking spaces can be accommodated elsewhere in the downtown and will not negatively impact the parking in the downtown.

PUBLIC SAFETY REQUIREMENTS

The Fire Prevention Division of the Fire Department has reviewed the application. Access for the Fire Department will be along both Main Street and Maple Avenue. All floors will be equipped with fire alarms and will be sprinkled, as required by Village regulations.

NEIGHBORHOOD COMMENT

Notice was provided to all property owners 250 feet or less from the subject property in addition to posting the public hearing sign and publishing a legal notice in the *Downers Grove Suburban Life*. Staff has spoken to two nearby residents who were supportive of the proposed development.

A neighborhood meeting was held by the petitioner on May 24, 2016. A total of fourteen residents attended with twenty seven documented comments and questions. The comments varied, but included the loss of parking spaces in the Village owned parking lot, traffic, stormwater management and move-ins and –outs. A summary of the meeting and the petitioner's responses from that meeting are attached.

FINDINGS OF FACT

The applicant is requesting a Special Use, Planned Unit Development and Rezoning approval for the development of a mixed-use building in the DB zoning district. Staff finds that the proposal meets the standards for granting a Planned Unit Development, Rezoning and a Special Use as outlined below:

Planned Unit Development

Section 28.12.040.C.6 Review and Approval Criteria

The decision to amend the zoning map to approve a PUD development plan and to establish a PUD overlay district are matters of legislative discretion that are not controlled by any single standard. In

making recommendations and decisions regarding approval of planned unit developments, review and decision-making bodies must consider at least the following factors:

a. The zoning map amendment review and approval criteria of Sec. 12.030.I.
See the analysis of rezoning review and approval criteria below. This standard is met.

b. Whether the proposed PUD development plan and map amendment would be consistent with the comprehensive plan and any other adopted plans for the subject area.
The proposed mixed-use development is consistent with the Comprehensive Plan in the following ways:

- Redevelopment of Catalyst Site #16
- Development that is pedestrian-oriented
- Redevelops an underutilized downtown site
- Promotes a development that further enhances the downtown as the cultural and social center of the community
- Reinforces the walkable nature of downtown by orienting the building towards Main Street and Maple Avenue near the property line
- Provides additional residents in close proximity to the downtown commercial core
- Follows transit-oriented development guidelines for downtown redevelopment

This standard is met.

c. Whether PUD development plan complies with the PUD overlay district provisions of Sec. 4.030.
The proposed project is appropriate for a PUD under Section 4.030.A.1 of the Zoning Ordinance and meets several of the PUD overlay district objectives as found in Section 4.030.A.2 of the Zoning Ordinance. Section 4.030.A.1 of the Zoning Ordinance notes that development types that may be appropriate for PUD approval include, developments that provide housing variety, mixed-use developments and developments that are consistent with the goals and policies of the Comprehensive Plan. The proposed development falls within these appropriate PUD types.

The proposed development includes elements that further the following objectives as identified in Section 4.030.A.2 of the Zoning Ordinance:

- Implementation of and consistency with the comprehensive plan and other relevant plans and policies
- Variety in housing types and sizes to accommodate households of all ages, sizes, incomes and lifestyle choices
- Compact, mixed-use development patterns where residential, commercial, civic and open spaces are located in close proximity to one another
- High quality buildings and improvements that are compatible with surrounding areas, as determined by their arrangement, massing, form, character and landscaping

This standard is met.

d. Whether the proposed development will result in public benefits that are greater than or at least equal to those that would have resulted from development under conventional zoning regulations.
The proposed development as a PUD versus traditional zoning allows for the site to provide additional residents to the downtown and create an attractive southern gateway into the downtown.

Additional benefits include the continuation of the downtown commercial core to Maple Avenue and the continuation of the Main Street and Maple Avenue streetwalls to the intersection. The subject site is underutilized and a redevelopment would have a positive impact on the surrounding area. This standard is met.

e. Whether appropriate terms and conditions have been imposed on the approval to protect the interests of surrounding property owners and residents, existing and future residents of the PUD and the general public.

There are several conditions being requested as part of the approval. The conditions being requested will ensure that the proposed development satisfies all applicable building and fire codes to protect the building and adjacent property owners. The conditions will ensure the building is constructed of high quality material and will follow any approvals granted. This standard is met.

Zoning Map Amendment

Section 12.030.I. Zoning Map Amendment Review and Approval Criteria

The decision to amend the zoning map is a matter of legislative discretion that is not controlled by any single standard. In making recommendations and decisions about zoning map amendments, review and decision-making bodies must consider at least the following factors:

1. ***The existing use and zoning of nearby property.***

   The three existing properties include a lawful non-conforming residential home, a commercial office building and a Village parking lot. All three lots are zoned DB (Downtown Business). The adjacent property to the north is zoned DB and contains a mixed-use building with first floor retail and apartment living above. To the west, are older commercial buildings also zoned DB. The properties to the south consists of one single family residential unit and commercial uses with many of the uses located in single family residential type houses. These properties are also zoned DB. The property to the east is zoned DB and is currently under construction for a 54-unit condominium building. The proposed mixed-use development with DB/PUD zoning is consistent with the adjacent developments and the existing DB zoning designation. This standard is met.

2. ***The extent to which the particular zoning restrictions affect property values.***

   The proposed rezoning to DB/PUD will not negatively impact property values. The proposed mixed-use building may improve property values as this development will replace a vacant parking lot and replace two older structures, one of which is a lawful non-conforming single family residence. The PUD overlay restrictions will ensure a high quality building is constructed on the property. As identified in the Comprehensive Plan, the development of this catalyst site may lead to additional development in the area. This standard is met.

3. ***The extent to which any diminution in property value is offset by an increase in the public health, safety and welfare.***

   The proposed rezoning will not negatively impact property values or the public health, safety and welfare of the community or neighborhood. This standard is met.

4. ***The suitability of the subject property for the zoned purposes.***

   Currently, the property is zoned Downtown Business (DB) with the proposal to rezone to DB/PUD. The existing lawful non-conforming single family use is not a suitable use in the DB zoning district, as single family residential is not a permitted use in the DB zoning district. The proposed retail component of the mixed-use development is a permitted use in the DB district, while apartments are an allowable Special Use in the DB zoning district. The property is suitable for a mixed-use development that provides retail and residential uses as identified in the

Comprehensive Plan. This site is suited for a mixed-use development which will help promote a vibrant downtown and provide diverse housing options in downtown near the Metra train station. This standard is met.

5. ***The length of time that the subject property has been vacant as zoned, considering the context of land development in the vicinity.***
The subject property is not vacant. The existing Village parking lot is utilized daily while the commercial property is currently occupied. The occupied single family residence is not an appropriate use in the DB zoning district. The overall property is underutilized and would benefit from improvements as promoted in the Comprehensive Plan and the zoning district classification table. The petitioner is proposing an appropriate type of land development for this property. This standard is met.

6. ***The value to the community of the proposed use.***
The redevelopment of this site will add value to the downtown and the community. The project's location will create an attractive southern gateway into the downtown and provide additional residents who will shop and dine in the downtown. The proposed development adds housing variety to the downtown and connects the commercial core of downtown to Maple Avenue. This standard is met.

7. ***The comprehensive plan.***
As noted above, the proposed development meets many of the Comprehensive Plan's goals and objectives, including but not limited to:

- Redevelopment of Catalyst Site #16
- Development that is pedestrian-oriented
- Redevelops an underutilized downtown site
- Promotes a development that further enhances the downtown as the cultural and social center of the community
- Reinforces the walkable nature of downtown by orienting the building towards Main Street and Maple Avenue near the property line
- Provides additional residents in close proximity to the downtown commercial core
- Follows transit-oriented development guidelines for downtown redevelopment

This standard is met.

Special Use
Section 28.12.050.H Approval Criteria – Special Uses
No special use may be recommended for approval or approved unless the respective review or decision-making body determines that the proposed special use is constituent with and in substantial compliance with all Village Council policies and plans and that the applicant has presented evidence to support each of the following conclusions:

1. ***That the proposed use is expressly authorized as a Special Use in the district in which it is to be located;***
The property is zoned Downtown Business (DB). Under Section 5.010 of the Zoning Ordinance, apartment/condo buildings are an allowable Special Use in the DB zoning district. This standard is met.

2. ***That the proposed use at the proposed location is necessary or desirable to provide a service or a facility that is in the interest of public convenience and will contribute to the general welfare of the neighborhood or community.***
   The proposed mixed-use building is desirable to provide a facility that is in the interest of public convenience and will contribute to the general welfare of the community. Redevelopment of this site as proposed will enhance the character of downtown and create a southern gateway into the downtown. The proposed building will provide additional housing opportunities for people wishing to live in downtown. The increase in the number of residents in downtown has the potential to increase the desirability of the downtown to retailers looking to locate in downtown Downers Grove. The proposed development meets many of the goals and policies outlined in the Comprehensive Plan. This standard is met.

3. ***That the proposed use will not, in the particular case, be detrimental to the health, safety or general welfare of persons residing or working in the vicinity or be injurious to property values or improvements in the vicinity.***
   The proposed mixed-use development will not have a negative impact on the health, safety or general welfare of the general vicinity. The development will contribute to the general welfare of the community by providing a variety of housing options in close proximity to the downtown to support nearby businesses. With upscale rental as is being proposed, the product will provide a housing option that appeals to younger households and empty nesters, which is a goal of the Comprehensive Plan. This standard is met.

RECOMMENDATIONS

The proposed Planned Unit Development, Rezoning and Special Use for a mixed-use 115 apartment unit building is consistent with the Comprehensive Plan, the Zoning Ordinance and surrounding zoning and land use classifications. Based on the findings listed above, staff recommends the Plan Commission recommend the Village Council **approve** the requested Planned Unit Development, Rezoning and Special Use as requested in case 16-PLC-0021 subject to the following conditions:

1. The Special Use, Planned Unit Development and Rezoning shall substantially conform to the staff report, renderings, architecture plans prepared by ESG Architects, Inc, dated May 23, 2016, and engineering and landscape plans prepared by Kimley Horn and Associates, Inc, May 23, 2016, except as such plans may be modified to conform to the Village codes and ordinances.
2. The petitioner shall consolidate the three lots into a single lot of record pursuant to Section 20.507 of the Subdivision Ordinance prior to the issuance of any site development or building permits.
3. Prior to issuing any site development or building permits, the petitioner shall make park and school donations in the amount of $668,116.88 ($604,035.78 to the Park District, $47,088.75 to Elementary School District 58, and $16,992.35 to High School District 99).
4. The building shall be equipped with an automatic suppression and an automatic and manual fire alarm system in accordance with the Village's requirements.
5. Prior to the issuance of any building or development permits, the petitioner shall pay to the Village a $1,000 fee-in-lieu per Village approved parkway tree subject to verification by the Village Forrester.

Staff Report Approved By:

_____

Stan Popovich, AICP
Director of Community Development

-att

P:\P&CD\PROJECTS\PLAN COMMISSION\2016 PC Petition Files\16-PLC-0021 - Main & Maple - PUD, Rezoning, SU for multi-family\Staff Report 16PLC0021.doc

0 50 100 Feet

946 Maple Ave, 1000 Maple Ave, 5245 Main Street - Location Map

N

COUNCIL WORKSHOP ITEM

ITEM: Temporary Parking Lot: NE Corner of Main and Maple
DATE: November 6, 2001
PREPARED BY: Riccardo F. Ginex, Village Manager
PURPOSE: Approval of a contract for approval of a temporary parking lot .

DISCUSSION:

Construction on the Central Business Parking Deck will begin next year. This construction will cause the downtown parking situation to be disrupted for a twelve to fourteen month period. With the construction, available parking for shoppers in the downtown area will be drastically reduced. To that end, Staff began looking at alternative parking sites in the downtown area. One site that stood out as under utilized was the grassy area at the North East corner of Main and Maple. This site has sat dormant for a number of years and is only used during Heritage Fest as a staging area.

Staff began looking at ways in which a temporary parking lot could be constructed at the site. C.M. Lavoie and Associates, Inc., was asked to provide Staff with a variety of parking lot iterations. It was determined that the best concept was a lot that contained twenty-nine (29) parking spaces. (Twenty-eight regular spaces and one handicapped space.) All of these spaces would be designated for shopper parking at the south end of the Downtown area.

We anticipate that this parking area will be utilized for approximately four to six years. In addition to the parking it will provide, it can be used for Heritage Fest, the Bike Race, the Fine Arts Festival, and any other community event.

Entrances to the lot would include a "right-in" off of westbound Maple Avenue and a "right-in", "right-out" onto Main Street. On the eastern part of the lot a three-foot retaining wall would be constructed to ease the slope from the adjacent property.

This project can be funded in the CBD TIF fund out of current budgeted dollars in accounts 107.529.0000.5707 for engineering costs, and 107.529.0000.5711 for construction costs. Because the Village deferred the construction of Washington Street, and also due to the timing of the Parking Deck construction, the CBD TIF budget will be substantially under budget for 2001-02, making it possible to fund this project without the need for a budget amendment.

Since the asphalt processing plants close during the middle of December, Staff is seeking Council approval so construction can begin as soon as possible. C.M. Lavoie and Associates, is presently under contract with the Village for the engineering. They have provided a cost estimate of $95,000 for construction on this project. The construction of this parking facility would be performed by Martam Construction Inc., who is also under contract with the Village. However, Staff may assist with the pavement portion of the project depending on their workload.

ATTACHMENT:

Plans and Budget Spreadsheet.

RECOMMENDATION:

Place on Active Agenda for Approval at the Council Meeting on November 20th, a contract with Martam Construction Inc. for an amount not to exceed $95,000.

C.M. LAVOIE & ASSOCIATES, INC.
633 ROGERS STREET
DOWNERS GROVE, ILLINOIS 60515

FINAL ENGINEERING
ENGINEER'S OPINION OF PROBABLE COST

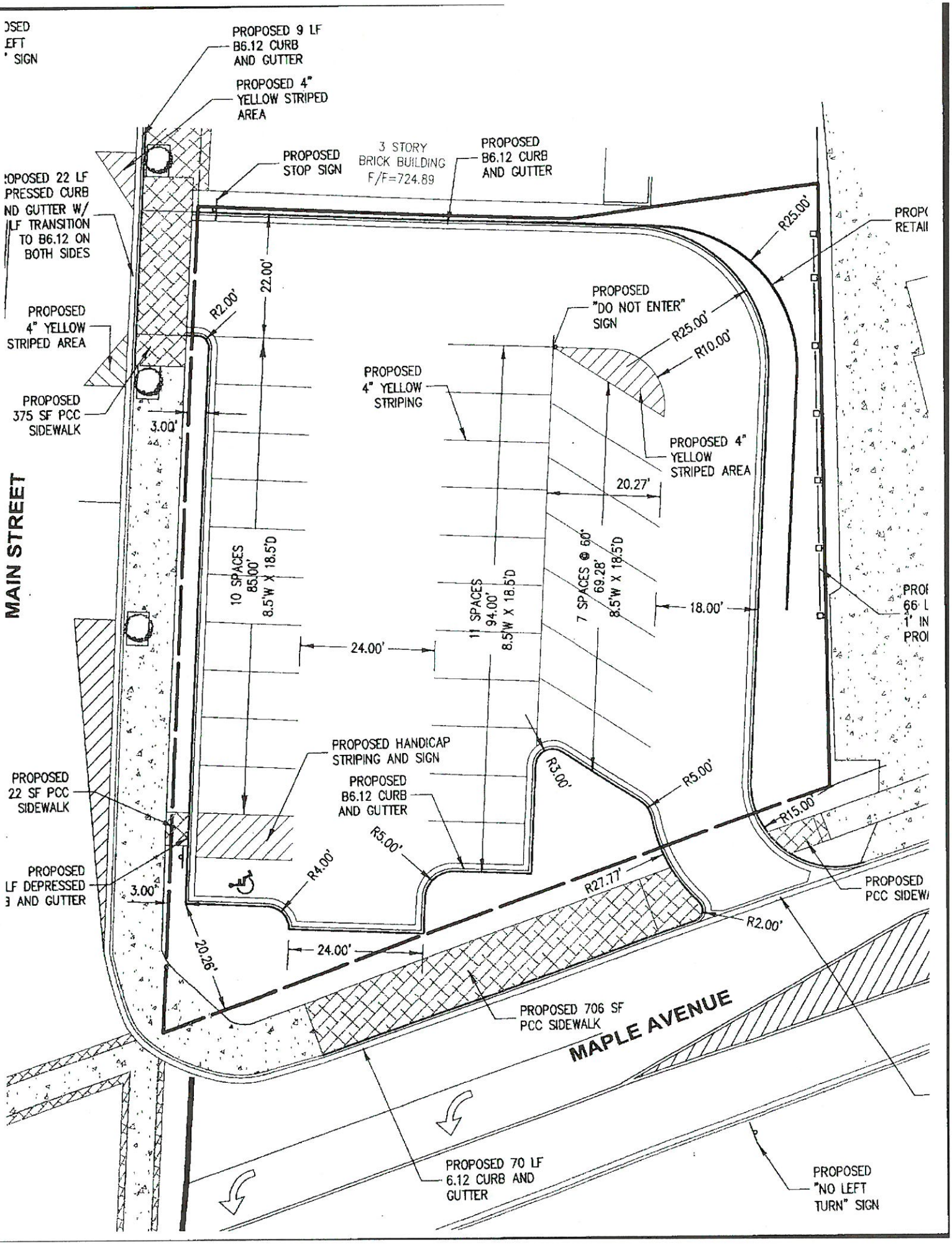
PROJECT NAME : TEMPORARY PARKING FACILITY — PROJECT MANAGER: CML

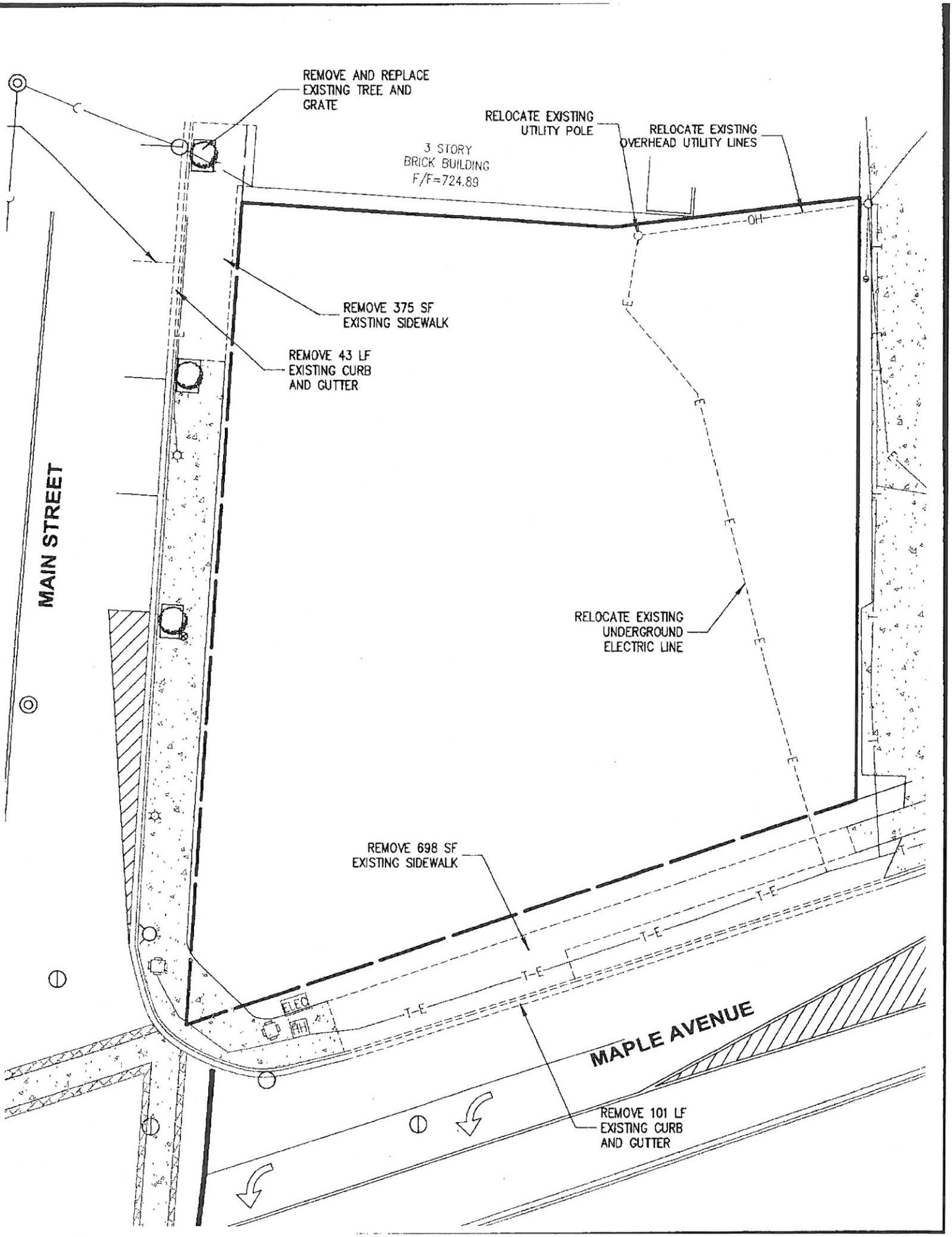
LOCATION : N/E CORNER OF MAPLE AVENUE AND MAIN STREET, DOWNERS GROVE, ILLINOIS 60515 — DATE: 11-05-01

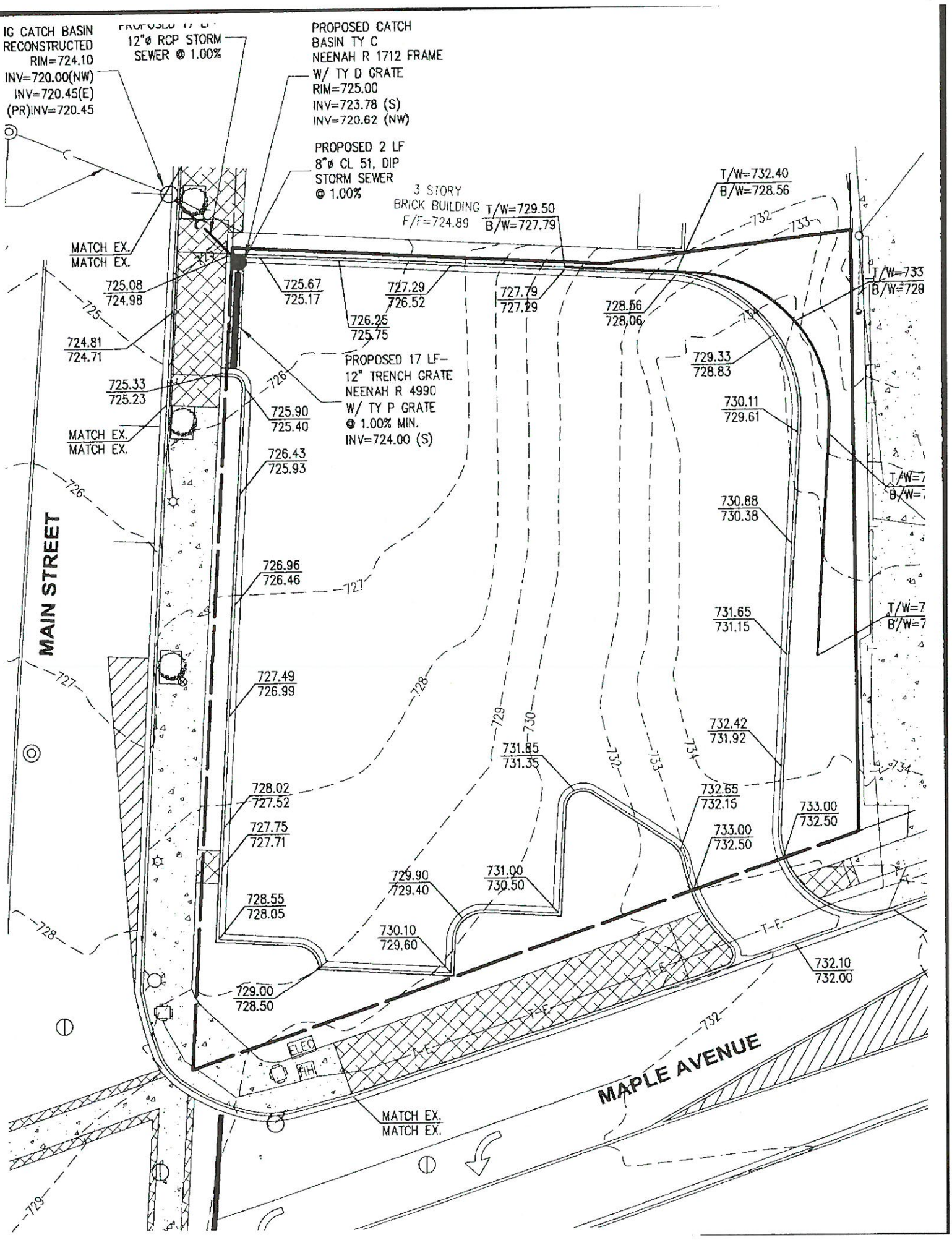
CLIENT NAME : VILLAGE OF DOWNERS GROVE, 5101 WALNUT, DOWNERS GROVE, ILLINOIS — PROJECT NUMBER: 01-264

PER PLANS LAST REVISED: 11-05-01

ITEM NUMBER	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
EARTHWORK					
1	EXCAVATION	900	CY	$35.00	$31,500.00
					$31,500.00
PAVEMENT/SITEWORK					
2	1 1/2" BITUMINOUS SURFACE COURSE, CL I	104	TON	$58.00	$6,032.00
3	BITUMINOUS PRIME COAT	180	GAL	$2.00	$360.00
4	2" BITUMINOUS BASE COURSE, CL I	138	TON	$55.00	$7,590.00
5	PRIME COAT (0.40 GAL / SY) (HEAVY DUTY)	1,082	GAL	$1.60	$1,731.20
6	AGGREGATE BASE COUSRE, 9"	1,200	SY	$4.00	$4,800.00
7	DRIVEWAY PAVEMENT REMOVAL	48	SY	$5.00	$240.00
7	PCC DRIVEWAY PAVEMENT, 7"	23	SY	$45.00	$1,035.00
8	COMBINATION CONC. CURB AND GUTTER, REMOVAL & REPLACEMEN	163	LF	$17.00	$2,771.00
9	COMBINATION CONCRETE CURB AND GUTTER, B.612	454	LF	$14.00	$6,356.00
10	SIDEWALK REMOVAL	705	SF	$2.00	$1,410.00
11	PCC SIDEWALK, 5 "	802	SF	$8.00	$6,416.00
12	RETAINING WALL	100	LF	$150.00	$15,000.00
13	HAND RAIL	66	LF	$10.00	$660.00
					$53,741.20
STORM SEWER					
14	STORM SEWER, 12" RCP	12	LF	$50.00	$600.00
15	TRENCH DRAIN AND GRATE	22	LF	$160.00	$3,520.00
16	CATCH BASIN, TY C, W/TY R #1712 FRAME AND GRATE	1	EA	$750.00	$750.00
17	CATCH BASIN, TY A, 4' DIA, W/TY 1 FRAME AND GRATE	1	EA	$1,500.00	$1,500.00
18	STRUCTURE TO BE REMOVED	1	EA	$300.00	$300.00
					$6,670.00
LANDSCAPING					
19	TREE TO BE REMOVED	1	EA	$100.00	$100.00
20	ORNAMENTAL TREE, 6"	1	EA	$600.00	$600.00
21	SODDING, SPECIAL	396	SY	$5.50	$2,178.00
22	REMOVE AND REPLACE TREEWELL GRATE	1	EA	$350.00	$350.00
					$3,228.00
SIGNING AND STRIPING					
23	STRIPING REMOVAL	1	LS	$300.00	$300.00
24	STOP SIGN	1	EA	$350.00	$350.00
25	NO LEFT TURN SIGN	1	EA	$350.00	$350.00
26	STRIPING	1	LS	$2,800.00	$2,800.00
27	DO NOT ENTER SIGN	1	EA	$350.00	$350.00
					$3,850.00
				PROJECT SUB-TOTAL:	**$95,489.20**
				5% CONTINGENCIES:	**$4,774.46**
				PROJECT TOTAL:	**$100,263.66**


PROPOSED 9 LF B6.12 CURB AND GUTTER
PROPOSED 4" YELLOW STRIPED AREA
PROPOSED STOP SIGN
3 STORY BRICK BUILDING F/F=724.89
PROPOSED B6.12 CURB AND GUTTER
PROPOSED 22 LF DEPRESSED CURB AND GUTTER W/ LF TRANSITION TO B6.12 ON BOTH SIDES
PROPOSED 4" YELLOW STRIPED AREA
PROPOSED 375 SF PCC SIDEWALK
MAIN STREET
R2.00'
22.00'
3.00'
PROPOSED "DO NOT ENTER" SIGN
R25.00'
R10.00'
PROPOSED 4" YELLOW STRIPING
PROPOSED 4" YELLOW STRIPED AREA
20.27'
10 SPACES 85.00' 8.5'W X 18.5'D
11 SPACES 94.00' 8.5'W X 18.5'D
7 SPACES @ 60° 69.28' 8.5'W X 18.5'D
18.00'
24.00'
PROPOSED HANDICAP STRIPING AND SIGN
PROPOSED 22 SF PCC SIDEWALK
PROPOSED B6.12 CURB AND GUTTER
R3.00'
R5.00'
R15.00'
R4.00'
R27.77'
PROPOSED PCC SIDEWA
3.00'
20.26'
24.00'
R2.00'
PROPOSED 706 SF PCC SIDEWALK
MAPLE AVENUE
PROPOSED 70 LF 6.12 CURB AND GUTTER
PROPOSED "NO LEFT TURN" SIGN

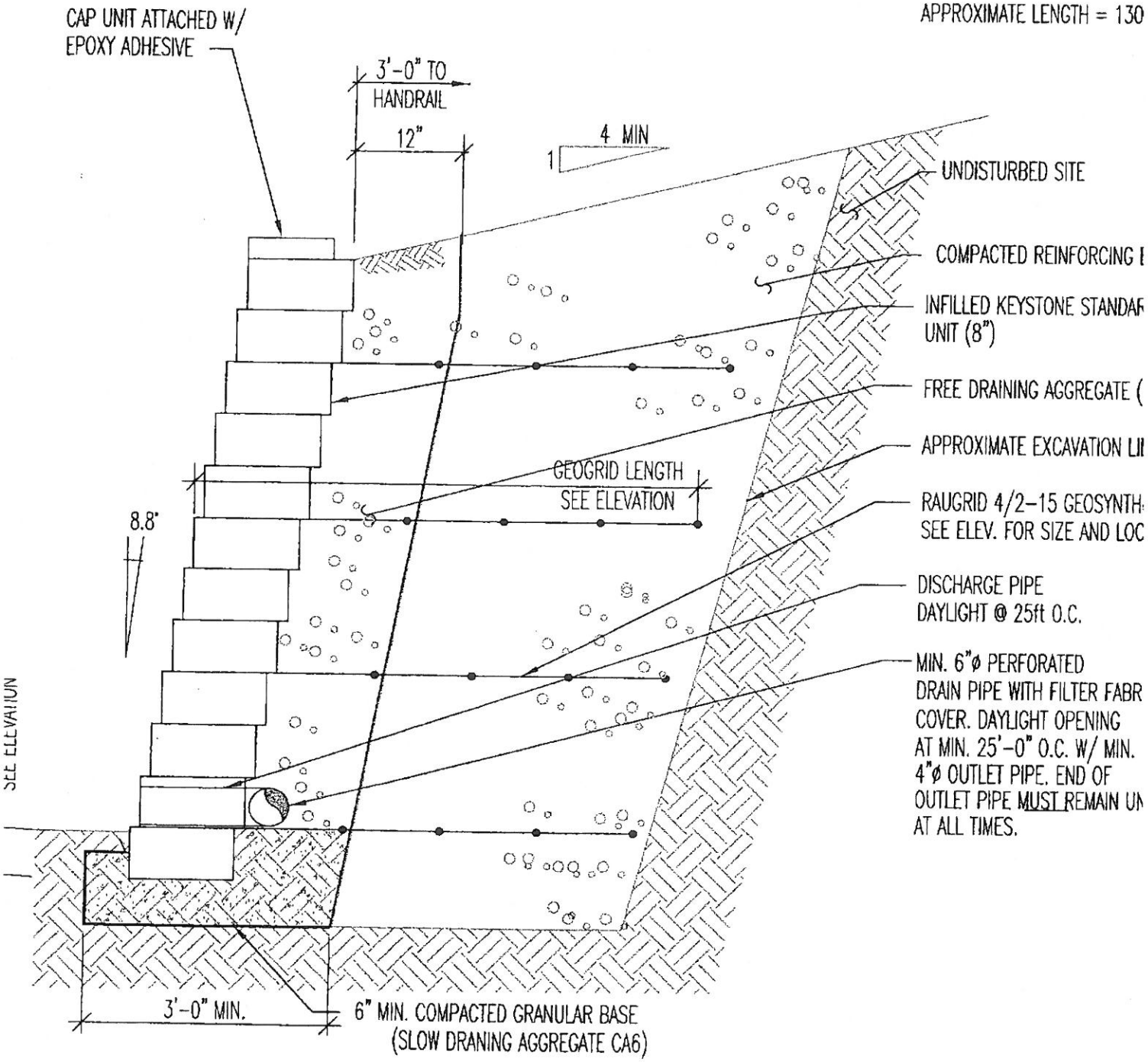

REMOVE AND REPLACE EXISTING TREE AND GRATE
RELOCATE EXISTING UTILITY POLE
RELOCATE EXISTING OVERHEAD UTILITY LINES
3 STORY BRICK BUILDING F/F=724.89
REMOVE 375 SF EXISTING SIDEWALK
REMOVE 43 LF EXISTING CURB AND GUTTER
MAIN STREET
RELOCATE EXISTING UNDERGROUND ELECTRIC LINE
REMOVE 698 SF EXISTING SIDEWALK
ELEC
MAPLE AVENUE
REMOVE 101 LF EXISTING CURB AND GUTTER


IG CATCH BASIN
RECONSTRUCTED
RIM=724.10
INV=720.00(NW)
INV=720.45(E)
(PR)INV=720.45
12"ø RCP STORM
SEWER @ 1.00%
PROPOSED CATCH
BASIN TY C
NEENAH R 1712 FRAME
W/ TY D GRATE
RIM=725.00
INV=723.78 (S)
INV=720.62 (NW)
PROPOSED 2 LF
8"ø CL 51, DIP
STORM SEWER
@ 1.00%
3 STORY
BRICK BUILDING
F/F=724.89
T/W=729.50
B/W=727.79
T/W=732.40
B/W=728.56
MATCH EX.
MATCH EX.
725.08
724.98
725.67
725.17
727.29
726.52
727.79
727.29
728.56
728.06
726.25
725.75
724.81
724.71
PROPOSED 17 LF-
12" TRENCH GRATE
NEENAH R 4990
W/ TY P GRATE
@ 1.00% MIN.
INV=724.00 (S)
729.33
728.83
725.33
725.23
725.90
725.40
730.11
729.61
MATCH EX.
MATCH EX.
726.43
725.93
730.88
730.38
MAIN STREET
726.96
726.46
731.65
731.15
727.49
726.99
732.42
731.92
731.85
731.35
728.02
727.52
732.65
732.15
733.00
732.50
727.75
727.71
733.00
732.50
729.90
729.40
731.00
730.50
728.55
728.05
730.10
729.60
732.10
732.00
729.00
728.50
ELEC
MH
MAPLE AVENUE
MATCH EX.
MATCH EX.

1"=10' (H SCALE)

PARKING LOT WALL EL

APPROXIMATE LENGTH = 130



SECTION @ RETAINING WALL

N.T.S.

OTES: 1) GRID LENGTHS MAY BE ELONGATED IN FIELD AS DESIRED FOR UNIFORMITY

2) MIN. RETAINING SOIL BRG CAPACITY Q = 3000 PSF
3) MIN. SITE SOIL ANGLE OF FRICTION, ø = 28° MIN.
4) MIN. REINFORCING BACKFILL ANGLE OF FRICTION, ø = 28° MIN.
5) COMPACT BACKFILL TO 95% STANDARD PROCTOR DENSITY

VILLAGE OF DOWNERS GROVE

COUNCIL ACTION SUMMARY

INITIATED: Dir. of Public Works (Name) **DATE:** November 20, 2001

RECOMMENDATION FROM: N/A (Board or Department) **FILE REF:** _____

NATURE OF ACTION:

___ Ordinance

___ Resolution

_X_ Motion

___ Other

STEPS NEEDED TO IMPLEMENT ACTION:

Motion to approve Change Order #1 to an agreement with Martam Construction, Inc. in relation to the Central Business District Redevelopment, Phase IV, Project No. 15-00. The Village Manager and staff are authorized to take such action as may be necessary to carry out the terms of this motion.

SUMMARY OF ITEM:

03

Adoption of this motion will authorize Change Order #1 with Martam Construction, Inc. in the amount of $12,910.00. This project will cover the excavation and utility work for the Main and Maple Parking Lot which will provide for temporary parking during the construction of the CBD Parking Deck.

RECORD OF ACTION TAKEN:

_____

_____

_____

l\wp8\cas.01\MartamPh4-CO-.mot

Date: November 14, 2001 Project: CBD-Phase 4

Change Order: Main/Maple Parking Lot Excavation/Utility Work **ONLY** Project #: 15-00

CONTRACTOR: Martam Construction, Inc.

ADDRESS: 1200 Gasket Drive
Elgin, IL 60120

CHANGE: Main and Maple Parking Lot construction

Begin work on excavation and utility work for Main and Maple parking lot. See detailed work items and agreed unit prices on attached spreadsheet. Funding is available in account 107.529.0000.5711.

Additions:

Total Additions:	$ 12,910.00
Deletions:	None
TOTAL ADDITIONAL COST:	**$ 12,910.00**

Approval Recommended: Funds Available:

_____ _____

The work covered by this order shall be performed under the same terms and conditions as that included in the original contract.

Changes Authorized and Approved:

_____
OWNER by Village Manager Date

_____
CONTRACTOR Date

Original Contract Amount	$ 2,429,002.45
Net Change from Previous Change Orders:	$ 20,691.00
Amount of this Order: (increase / decrease)	$ 12,910.00
Revised Contract	**$2,466,603.45**

11/13/2001

Temporary Lot: Main & Maple. The Manager said construction of the CBD parking deck will cause some parking disruptions in the area. Staff is looking at ways to construct a temporary parking lot at the Main and Maple site. The best concept would provide 29 spaces, one of which would be handicapped. They would be designated as shopper parking, and would be utilized for approximately 4-6 years for shopping and special events. There will be a right-in off of westbound Maple Avenue and right-out onto Main Street. It will be funded by the TIF funds. Manager Ginex said staff is requesting approval to do this as soon as possible. The cost estimate is $95,000. He said the engineering firm of C.M. Lavoie and Martam Construction are under contract with the Village and would be doing some of the work. Other work would be done in-house.

Commissioner Schnell asked why they will go to the expense of paving this if it is a temporary lot. She added that 4-6 years is longer than temporary. She asked why 4-6 years is being considered, and why they are recommending asphalt. Manager Ginex said that the time period allows amble time for a developer to take over that corner.

Jane Gerdes , Assistant Director of Public Works said that the reason they are considering asphalt is that that have to plow the lot, and it is difficult to plow gravel. She said this would be 3" of asphalt. Commissioner Schnell asked what the cost would be to turn it back to a park. Ms. Gerdes said the retaining wall will be left for the potential of returning it to a park at some later time. The costs would be to remove the gravel and add plants.

Commissioner Tully asked whether they anticipated the impact on traffic on Main and Maple. Manager Ginex said that is why they want it right-in and right-out. Commissioner Tully said he meant the construction project itself, and Ms. Gerdes said they would probably have to do some closings for about a week to ten days. Staging would be done by blocking the parking spaces. She said they anticipate no barricades, detours or overnight blockage.

Commissioner Tully said they should focus on barriers for the pedestrian areas. He said he does not have a problem with it being a temporary lot as long as the Council reviews this in terms of the long-range plans for this property.

Jim Russ of the Downtown Management Board thanked the Council for its foresight and initiative to move forward with this temporary parking plan. He said the biggest issue that comes up with potential new business is parking. Some businesses choose not to come to the Village due to the lack of parking. He said it is important that it be a paved lot as it is an entry to the downtown.

Vincent Barrett , 4921 Highland, said it is imperative that the Council have a documented plan as to specifics regarding returning that lot to a park. He said the costs should also be figured in.

11/20/01

ORDINANCE NO . 4337 **A motion was made by Commissioner Tully, seconded by Commissioner Sisul, to Adopt this file. Mayor Krajewski declared the motion carried by the following vote: Votes:** Yea: Commissioner Gilbert, Commissioner Sisul, Commissioner Schnell, Commissioner Tully, Commissioner Zabloudil and Mayor Krajewski **Indexes:** Stop Sign – Franklin & Highland

MOT00 -00695 Motion: Authorize Change Order #1 with Martam Construction, Inc. for Temporary Parking Lot at NE Corner of Main and Maple **Sponsors:** Manager's Office **Summary of Item:** This will authorize Change Order #2 with Martam Construction, Inc. in the amount of $82,090.00 for the Main and Maple Parking Lot. Change Order #1 in the amount of $12,000 was previously approved by the Village Manager pursuant to his authority under the Downers Grove Purchasing Ordinance.

Motion to approve Change Order #2 in an amount not to exceed $82,090 to an agreement with Martam Construction, Inc. in relation to the Central Business District Redevelopment, Phase IV, Project No. 15-00. The Village Manager and staff are authorized to take such action as may be necessary to carry out the terms of this motion. Attorney Blondin said the Village Manager previously approved $12,500 for work on Main and Maple pursuant to his authority. The Change Order basically concerns the construction part of the project which would be for the balance of $82,090 to finish the parking lot. That amount requires Council approval. **A motion was made by Commissioner Sisul, seconded by Commissioner Gilbert, to Authorize this file. Mayor Krajewski declared the motion carried by the following vote: Votes:** Yea: Commissioner Gilbert, Commissioner Sisul, Commissioner Schnell, Commissioner Tully, Commissioner Zabloudil and Mayor Krajewski **Indexes:** Parking Lot – NE Corner of Main and Maple

Planning Commission Submittal

Table of Contents

MAPLE & MAIN

May 23, 2016

HIGHSTREET RESIDENTIAL

esg

Project Purpose and Vision
The purpose and vision for the proposed project is the creation of a boutique transit-oriented residential mixed-use development located in close proximity to the Main Street train station while being uniquely embedded into a picturesque suburb with a vibrant streetscape and distinctive small town charm. The proposed redevelopment will replace an existing single-family home, office structure and large surface parking lot. The subject property contains 8 lots of record (3 owners) which will require a lot consolidation if the project is approved. The development team will continue to work with the neighborhood, Village staff and Village officials to ensure that the proposed project is success for all stakeholders involved.

Project Overview
The proposed redevelopment will help extend the active neighborhood fabric further south along Main Street and wrap around Maple Avenue, enhancing a livable pedestrian friendly neighborhood. The 0.85 acre site is located within walking distance to the Main Street train station, many bus routes, bike lanes and sidewalk network. The project will be located at the epicenter of the Downtown, and will include 115 market-rate apartment units, including a best-in-class resident amenity package, and approximately 3,908 square feet (SF) of ground floor retail/restaurant space.

The abundance of resident amenities will include a pet spa and bike lounge in the basement level, a hotel-like lobby/leasing center and Wi-Fi coffee lounge on the 1st level; fitness center, yoga studio, club room, chef kitchen, resort style pool deck with an outdoor kitchen located on the 2nd level; and sky deck located on the 6th level with unencumbered views of the surrounding area. The building will offer its residents on-site management, indoor heated parking, private storage lockers, and a guest suite for resident visitors. On-site parking stalls will total 1.4:1 parking ratio, which is code compliant, and all parking stalls will be enclosed within the building footprint. The parking stall count will include 161 stalls, including 6 ADA.

The building will offer various unit types for its diverse tenant profile tailored to all demographics in search of luxury living. Unit types will range from Studio/Alcove units to 3-bedroom units, including 563-760 SF studio/alcove units, 623-800 SF 1-bedroom units, 934-983 SF 1-bedroom + den units, 1,121-1,246 SF 2-bedroom units, and 1,342 SF 3-bedroom units. This variety in housing types will help to accommodate households of all ages, sizes and incomes. The average unit size is 866 SF and will achieve rents in the range of approximately $1,500-$4,000/month.

Building Design
The architectural design and massing of the proposed development is based on guidance from urban design and achieves the goals and policies of the Village's Comprehensive Plan. The overall design carefully nestles a 6-story residential building within the existing block and is respectful to its residential neighbors in terms of height, massing, ground level circulation and landscaping. It is important that the proposed building relate to the character of the downtown area. Drawing from the existing context, the building materials, scale and articulation of elements work to reinforce a sense of place. As a mixed-use building, the development has a responsibility to enhance the retail activity on the street, while creating a livable, engaged residential community above.

A tremendous amount of thought and research around the Downers Grove design guidelines and goals of the neighborhood were considered while designing and defining the project. The building will be constructed utilizing a wood-framed structure over a concrete podium, and the exterior materials will consist of various building materials (brick, metal panel, lap siding, composite siding, stone and glass). Windows will be either expansive, allowing plenty of daylight into the dwelling units and retail bays. Exterior facades will feature a simple system of recessed and hung balconies that allow residents to take advantage of private outdoor space.

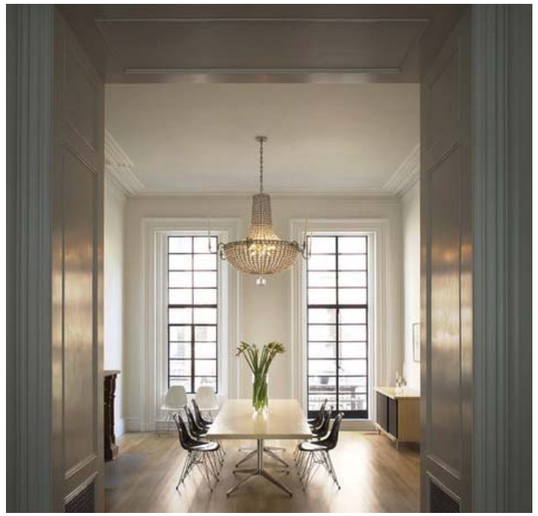
This project will support the residents' sustainable living experience by incorporating LEED standards, by providing energy-efficient appliances, low-flow water fixtures, low-VOC paints and building-wide recycling practices. The building will be designed to incorporate assemblies that ensure the highest quality acoustical of performance between units and floor assemblies.

The proposed building amenities will help to foster a positive social atmosphere for residents and visitors. The development features expansive amenities that we typically see in larger projects located in major metropolitan cities around the country.

Streetscape and Public Realm
The redevelopment will dramatically improve the current site conditions. Beyond the multiple uses, the building will have a handsome exterior and site design that will provide a warm and welcoming pedestrian experience. The building will be positioned to visually define the street edge while screening all enclosed parking. The project will incorporate attractive, high-quality native landscaping, lighting and exterior signage. Public seating and bike racks can be located adjacent to the residential and retail entrances on Main Street and Maple Avenue.

Adding resident dwelling units at this location naturally creates a more inviting streetscape, as more people will be walking and biking to and from the site which creates an energetic, safe and people-friendly hub, in place of the existing conditions today. Four existing curb cuts will be removed and adjacent sidewalk conditions will be improved, thus supporting nearby sites and encouraging area residents to walk to their shopping and entertainment needs.

Compliance with Comprehensive Plan
The proposed redevelopment was designed in accordance with Section 9 of the Downers Grove Comprehensive Plan. The northeast corner of Main Street and Maple Avenue was designated by the Village as a catalyst site for redevelopment (#16). The proposed development addresses the Village's goals identified in the Key Concepts. The project was designed with the intent of establishing the southern gateway into the Downtown. As identified in the Comprehensive Plan, "The village-owned surface parking lot on the northeast corner is a key site for infill development which would create a strong presence as a gateway into Downtown. As evidenced by our traffic impact and parking study completed by Kimley-Horn, the recently-constructed parking garage will likely offset any lost public parking resulting from development of the surface lot.



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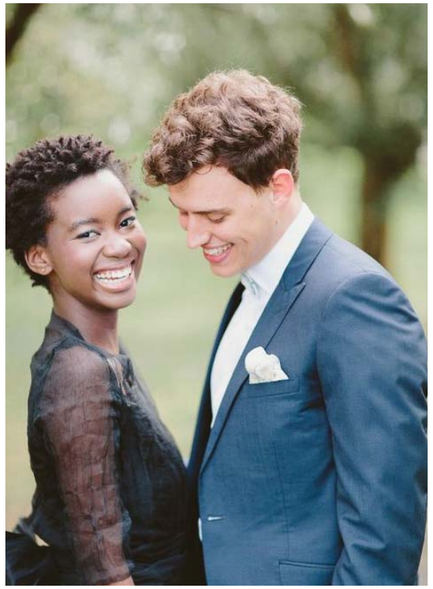
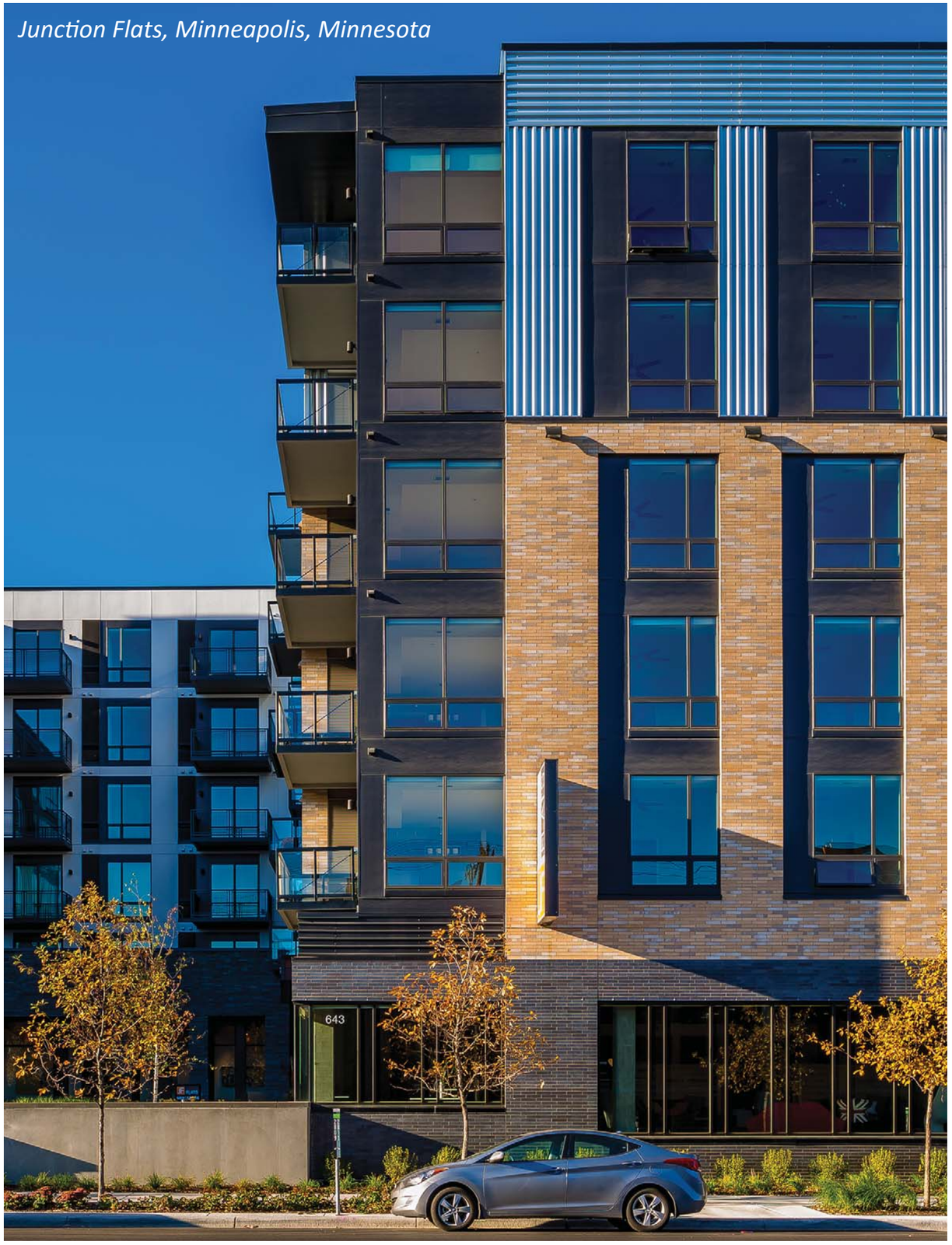
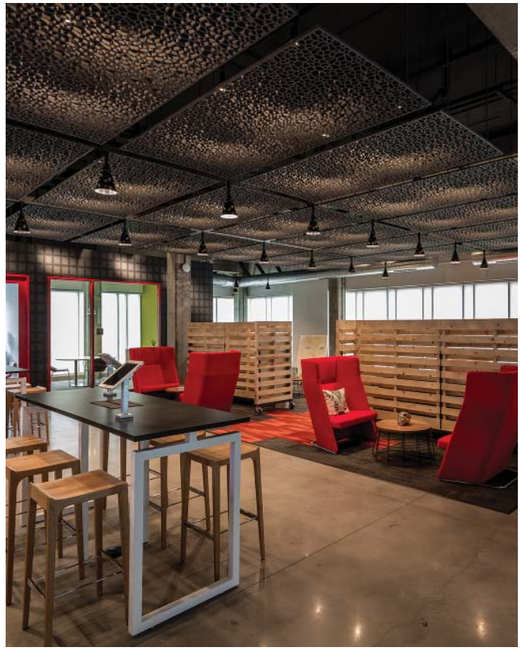
WASH ROOM




TEAM EXPERIENCE

HIGHSTREET RESIDENTIAL | esg architects



JUNCTION FLATS

MINNEAPOLIS, MINNESOTA

Junction Flats exemplifies how ESG is addressing exciting new opportunities for creating transit-oriented, amenity-rich, mixed-use residences.

The 6-story, 182-unit, 240,000 sf residence, located in the burgeoning North Loop neighborhood, fulfills the city's need for creative, high-density residential/livework and commercial buildings along and near transit corridors and hubs.

Junction Flats is located a short walk from a new multi-model transit center and adjacent to the Target Field baseball stadium and other entertainment options. The neighborhood is also home to numerous restaurants, cafes, micro-breweries and boutique retail, as well as bike paths, dog parks, and the Mississippi River and its recreation areas.

ESG boosted the attractiveness of the contemporary residences by incorporating 1 and 2-bedroom apartments, as well as innovative live/work units. Amenities include a pool deck with cabanas, fire pits and bar/grill; a rooftop lounge; first-level lounge, event area and bar area; conference room; business center; fitness center; bicycle storage; and dog run and dog wash station.

An infill project in the bustling North Loop, Junction Flats demonstrates ESG's expertise in innovating contemporary, amenity rich residences that compete for today's discerning resident.

Junction Flats was delivered in summer 2013.

TEAM EXPERIENCE

HIGHSTREET RESIDENTIAL | esg architects

ARCATA

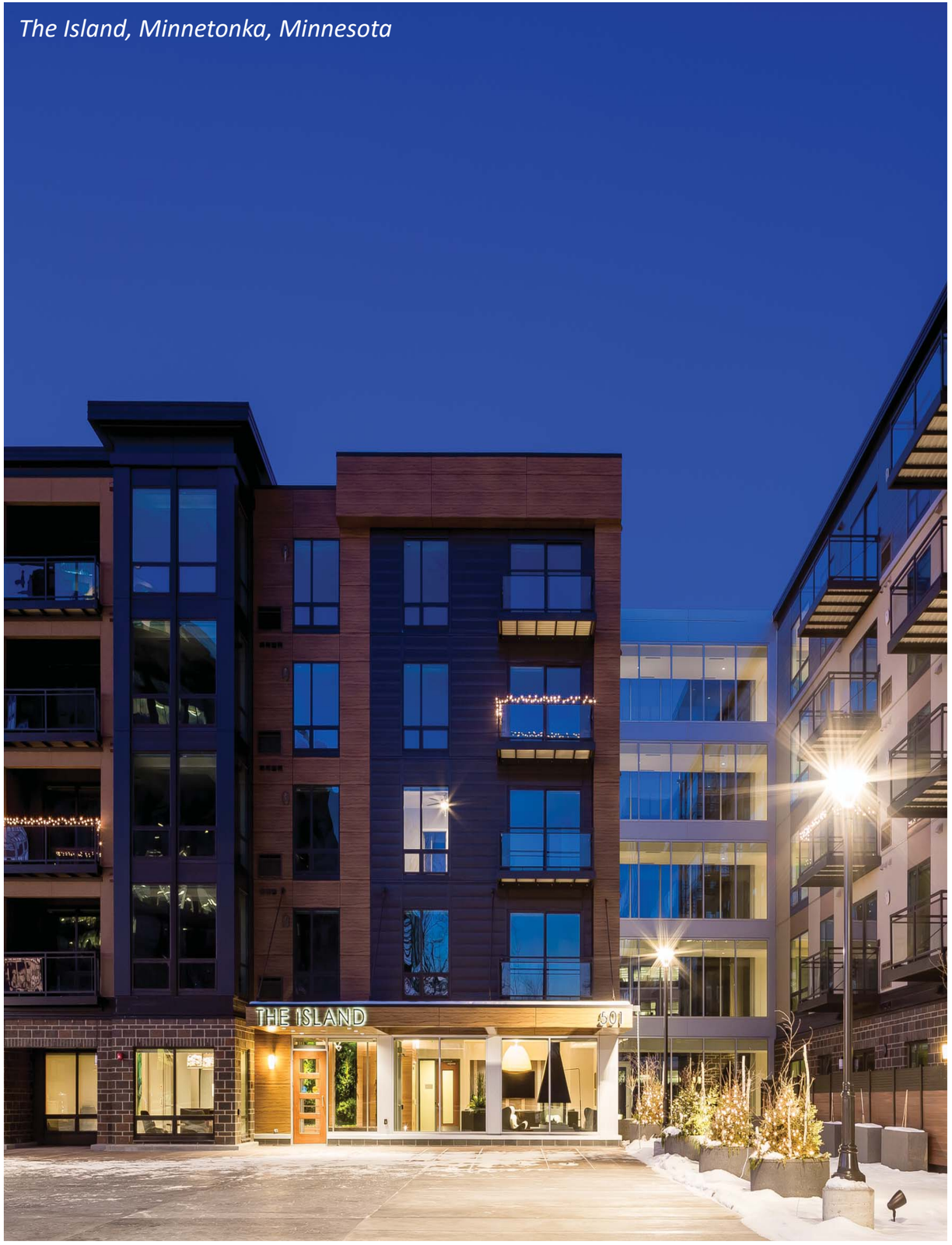
GOLDEN VALLEY, MINNESOTA

Arcata is a luxury apartment building in Golden Valley, a first-ring suburb of Minneapolis, Minnesota. The site is situated among a collection of distinctive modern and post-modern period office buildings and a major project goal was to harmonize with and enrich this unique neighborhood context.

The new building's architectural design responds to, and dialogues with, the adjacent properties. The six story building is broken into several related building blocks that are organized in a manner that creates an internal courtyard, which becomes an oasis for residents, providing an abundance of amenities as well as privacy from the surrounding office buildings.

With 165 units, Arcata offers spacious studio, one bedroom, one bedroom plus den and two bedroom apartment homes with floor plans ranging in size from 526 to 1,156 square feet. Amenities include a lobby bar, club room and lounge, a giant pool deck with bar/ grill area and gas fire pit, a 24 hour fitness center, a resort-style pool and bocce ball court.

Arcata is the perfect location for those who love easy access to the big city, but are seeking the charm of a quieter tight-knit neighborhood community. It is the best of both worlds: modern suburban living, with the city at your fingertips.



TEAM EXPERIENCE

THE ISLAND RESIDENCES AT CARLSON CENTER APARTMENTS

MINNETONKA, MINNESOTA

The Island Residences at Carlson Center is a 174-unit, five-story, Class A residential located in the heart of Carlson Center, a corporate office campus nestled within a secluded natural oasis of green space and bounded by water on all sides.

The Island includes studio, one bedroom, one bedroom plus den, two bedroom, two bedroom plus den and three bedroom units. The site provides direct access to outdoor amenities and includes waterfront views from all sides of the building. The site is located off of Carlson Parkway with direct access to I-394 and I-494. The building is positioned within a steep slope and thick trees to preserve the natural ambiance.

Apartment dwellers will enjoy the trails and trees, heated underground parking, lap length pool and the surrounding lake - living in the natural setting will offer a breathtaking indoor-outdoor relationship. Amenities include clubroom, guest suite, WiFi coffee lounge and fitness center.

The site is located within minutes of Wayzata Bay and Lake Minnetonka shores, home to some of the most affluent residential neighborhoods in the state. The Island is within a five minute drive from Ridgedale Center, a regional shopping mall anchored by Macy's and Nordstrom.

The Island opened its doors in November 2015, and is now leasing.

TEAM EXPERIENCE

3118 WEST LAKE STREET

MINNEAPOLIS, MINNESOTA

3118 West Lake Street is a 1.89 acre site with 164 unit, 6-story, Class A+ residential mixed-use building with a gateway location to the Lake Calhoun District in Minneapolis. Construction began in Q2/2015, to be ready for occupancy in Q1/2017.

3118 West Lake is contemporary with studio, alcove, 1-bedroom, 2-bedroom, 2-bedroom plus a den and 3-bedroom apartments. The unit mix includes a number of premium bedrooms with spectacular views of the surrounding lake and Minneapolis skyline. The commercial portion of the development consists of 5,000 square feet of indoor restaurant space and an outdoor patio.

The residential common area amenities include a hotel style lounge, conference room and fitness center and yoga room. The outdoor deck on the third level offers breathtaking views of Lake Calhoun, resort style pool, fire pit, grilling lounge and access to the club room complete with an entertainment kitchen. The sixth level sky lounge and viewing deck has an internal stairwell leading to the rooftop deck featuring a fireplace and seating area.

The site is located in the Uptown-Lakes area and is 2.5 miles from downtown Minneapolis and next to the Minneapolis Greenway which offers residents the opportunity to walk or bike to various destinations. The project will offer spectacular views of Lake Calhoun, Lake of the Isles, and downtown Minneapolis. Access to the nearby upscale restaurants, entertainment and shopping provides bundant options for an active lifestyle.

TEAM EXPERIENCE

MIDTOWN SQUARE
GLENVIEW, ILLINOIS

Midtown Square is a transit oriented Class A multifamily community within walking distance to Glenview Metra train Station. Midtown Square is a 215,000 square foot building, featuring 138 luxury apartment units and 9,000 square feet of first floor retail space, including a drive-thru. Midtown Square offers one bedroom and two-bedroom units.

Community Amenities include covered heated garage parking, club room, 24 hour fitness center, business center, wine room, pool table, WI-FI coffee lounge, secured bicycle storage and access control with telephone intercom. Midtown Square is pet friendly and features a dog washing station.

Apartments feature quartz kitchen counter tops, gas ranges, stainless steel appliances, in-home washers and dryers, spacious bathrooms with double sinks, large walk-in closets. Balconies and patios are available.

Midtown Square opened its doors November 2014.

HIGHSTREET RESIDENTIAL | esg architects

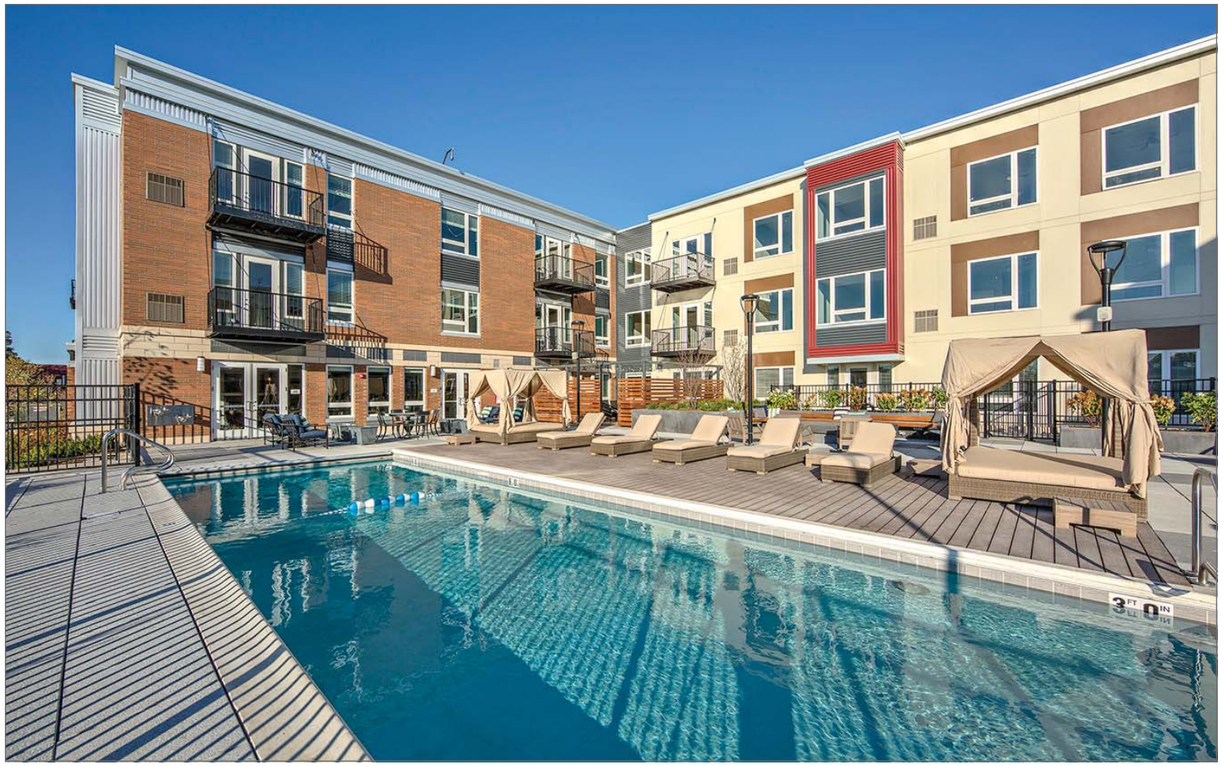
PARK 205
PARK RIDGE, ILLINOIS

Park 205 is a 3-story Class “A” 115-unit apartment development in Park Ridge, Illinois. The apartment complex includes one bedroom, one bedroom plus den, two bedroom, two bedroom plus den and three bedroom units. Amenities include pool and sun deck, club room overlooking pool, fitness center, business center, dog spa, bicycle storage, and covered/heated parking.

Park 205 is the first LEED® Silver multifamily development in Park Ridge. The apartment community is located in prestigious Uptown Park Ridge, only 5 miles (10 minute drive) northeast from O’Hare International Airport, and within minutes from major federal expressways - Interstate 294, Interstate 94 and Interstate 90.

The site is adjacent to a newly constructed Whole Foods market and within a four minute walk to the Park Ridge Metra station, connecting the site to the central business district within 30 minutes.

Park 205 was delivered in October 2015, and is now leasing.



CASE STUDY

HIGHSTREET RESIDENTIAL | esg architects

PARK 205

PARK RIDGE, ILLINOIS

- ✓ LOCATION
- ✓ SUB-MARKET
- ✓ PRODUCT
- ✓ SERVICE

CASE STUDY

HIGHSTREET RESIDENTIAL | esg architects

PARK 205

PARK RIDGE, ILLINOIS

- ✓ BEST-IN-CLASS AMENITY PACKAGE
- ✓ ABUNDANCE OF SOCIAL SPACES
- ✓ INDOOR-OUTDOOR LIVING

CASE STUDY

HIGHSTREET RESIDENTIAL | esg architects

PARK 205

PARK RIDGE, ILLINOIS

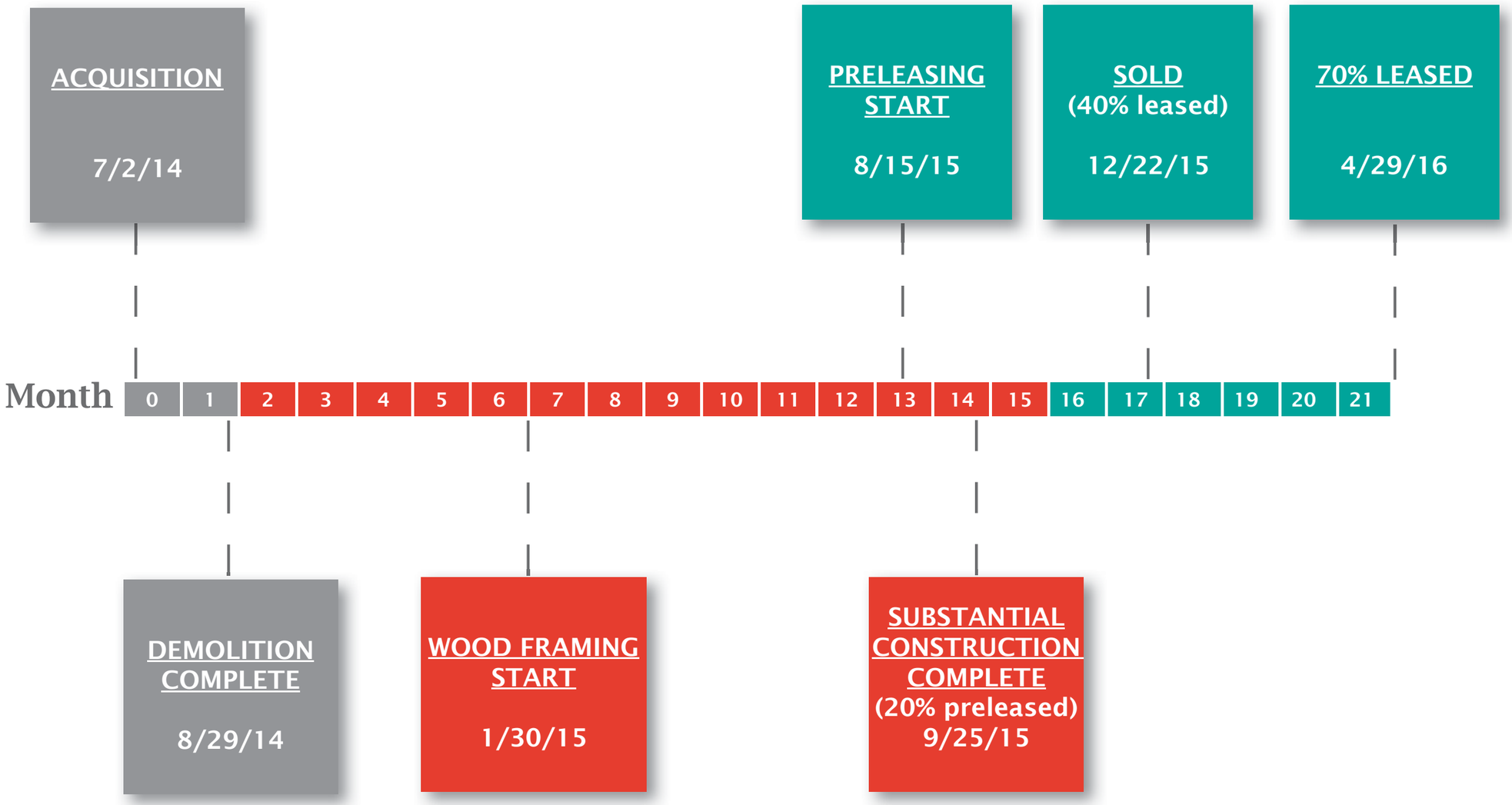
- ✓ LUXURIOUS LIVING
- ✓ SOPHISTICATED FINISHES
- ✓ CONTEMPORARY STYLE

CASE STUDY

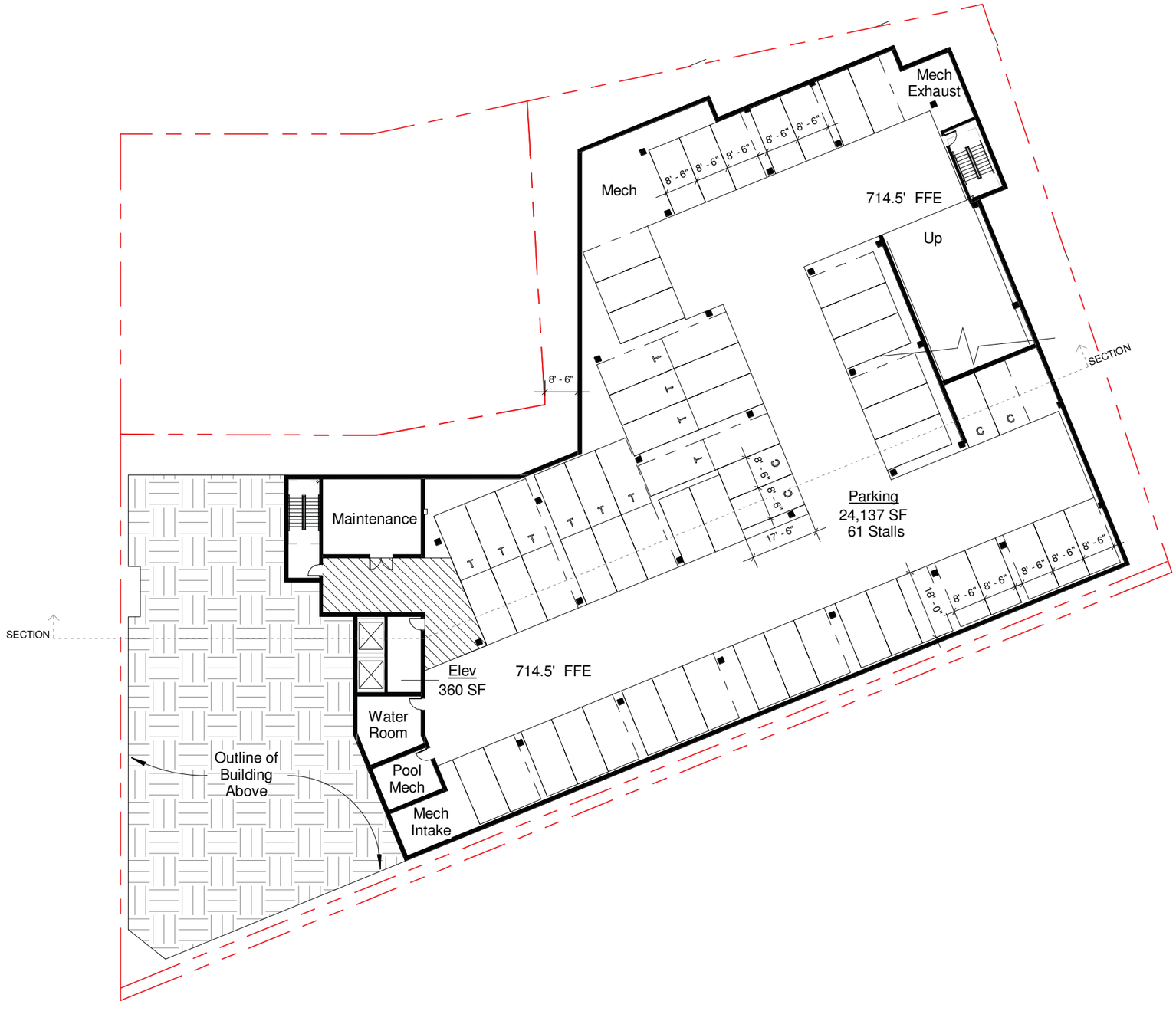
PARK 205

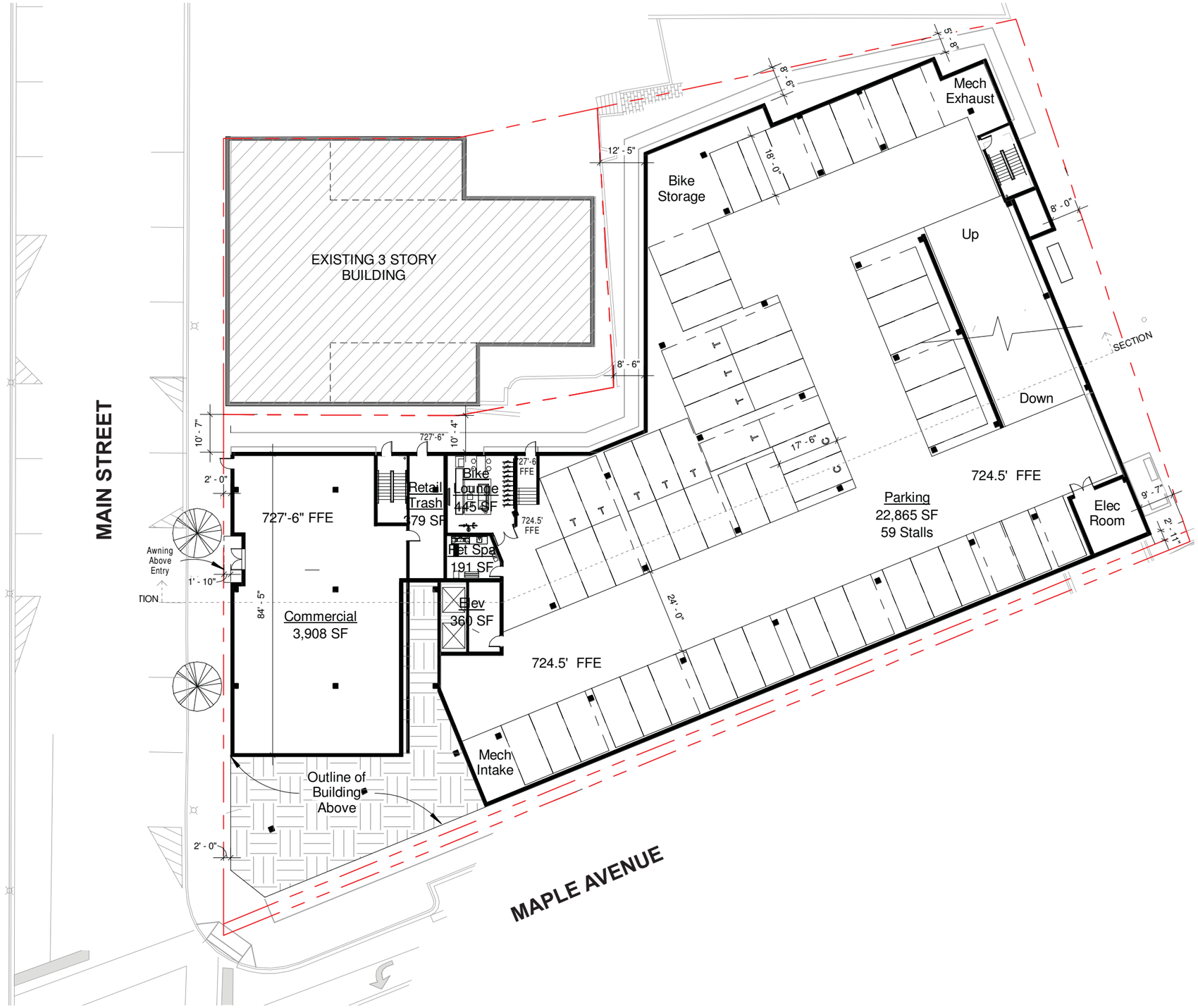
PARK RIDGE, ILLINOIS

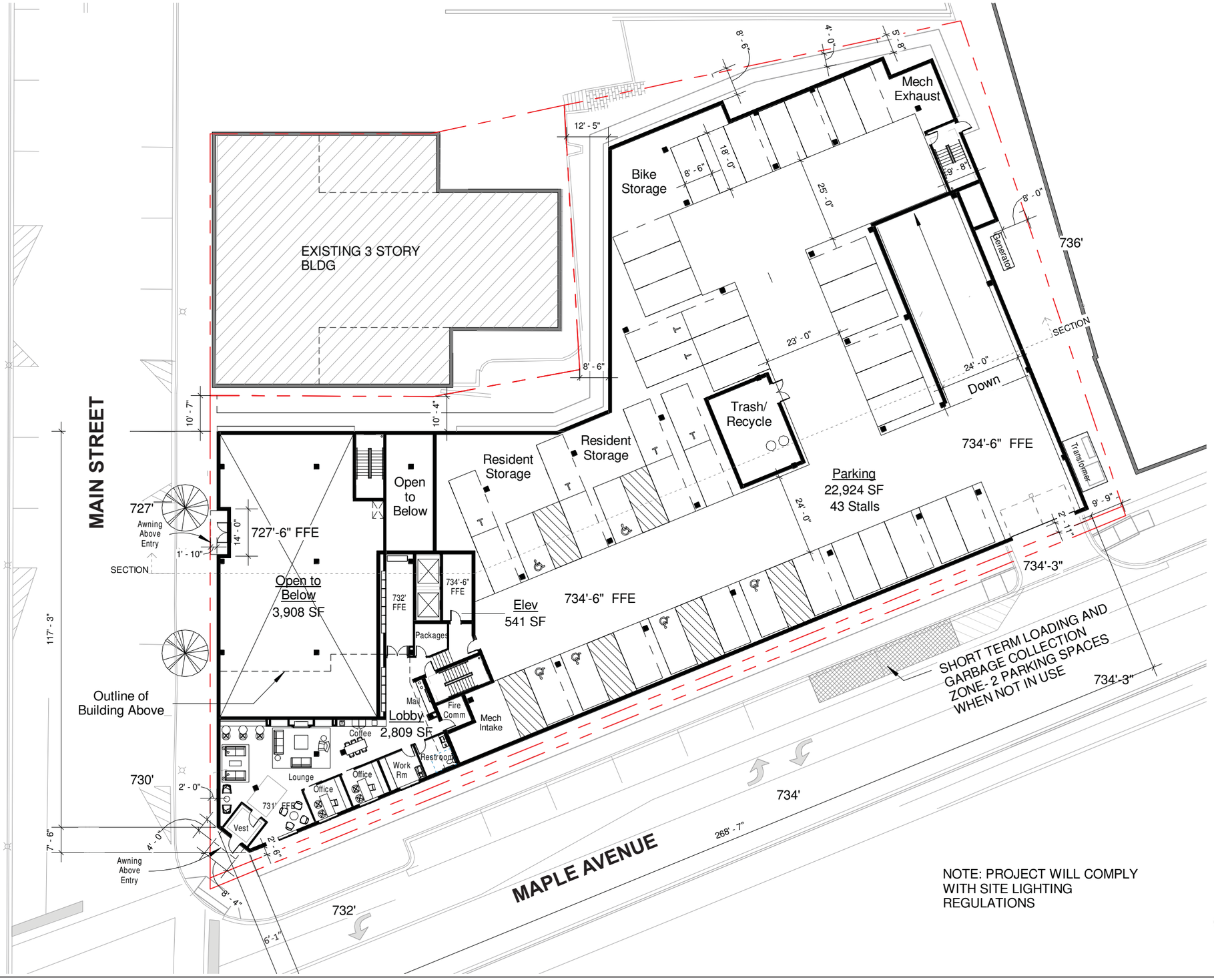
PROJECT TIMELINE



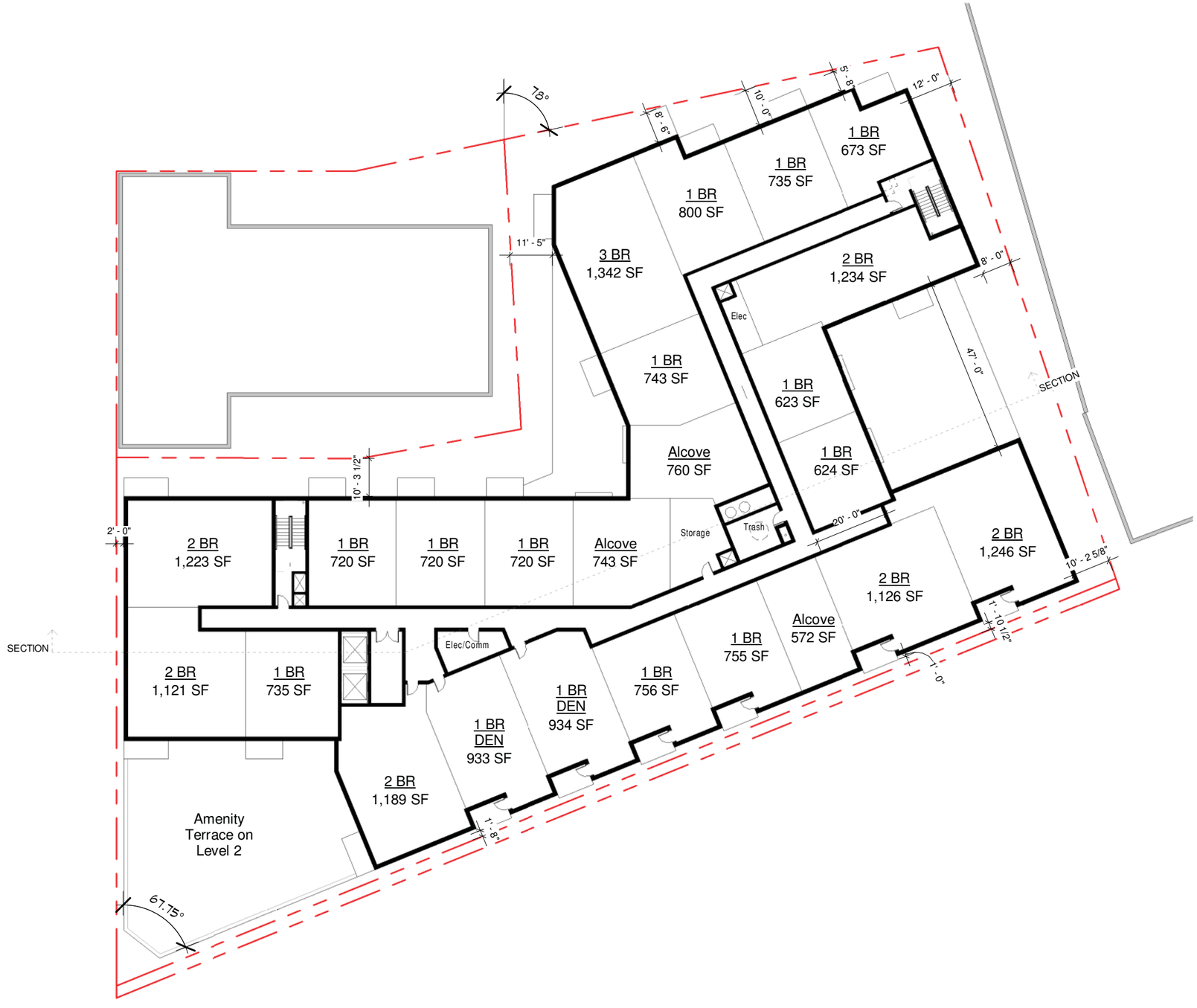

GROVE STREET
MAIN STREET
MAPLE AVENUE
Lot Area:
37,083 SF or .87 acres


Mech
Exhaust
Mech
714.5' FFE
Up
SECTION
8' - 6"
Maintenance
Parking
24,137 SF
61 Stalls
17' - 6"
18' - 0"
SECTION
Elev
360 SF
714.5' FFE
Water
Room
Pool
Mech
Mech
Intake
Outline of
Building
Above
0' 5' 15' 30'

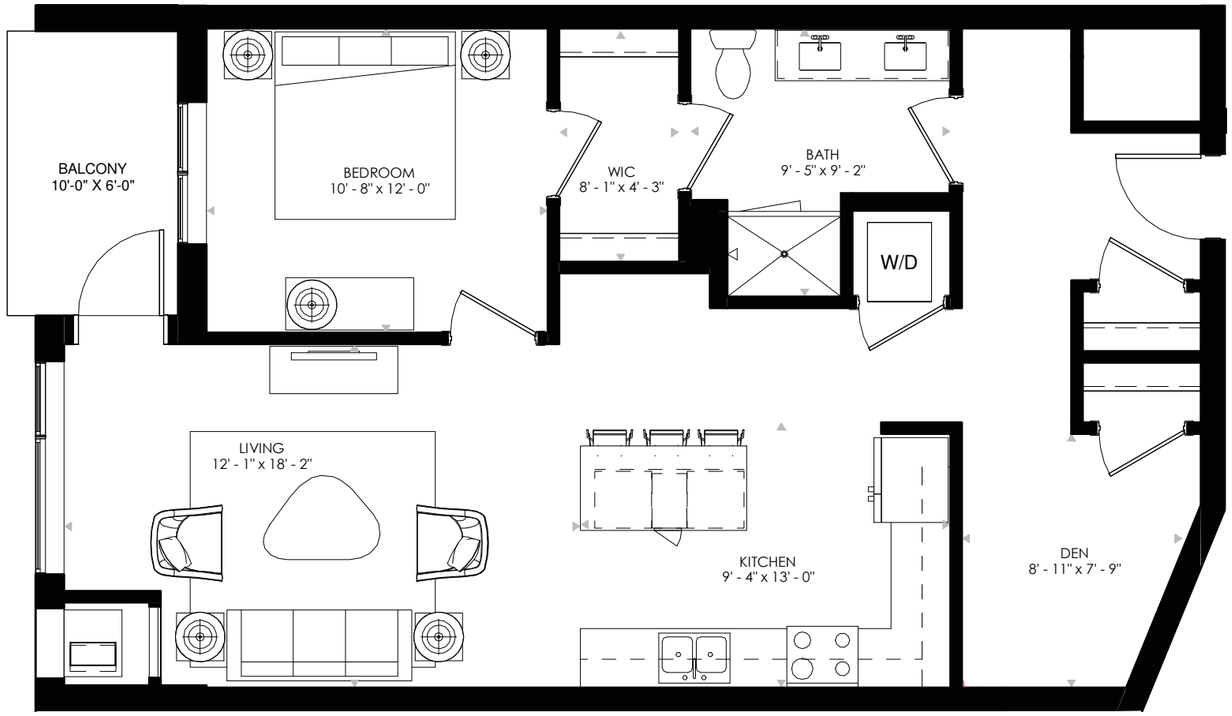

MAIN STREET
EXISTING 3 STORY BUILDING
Bike Storage
Mech Exhaust
Up
Down
SECTION
724.5' FFE
Parking
22,865 SF
59 Stalls
Elec Room
727'-6" FFE
Retail
Trash
279 SF
Bike Lounge
445 SF
Pet Spa
191 SF
Elev
360 SF
Commercial
3,908 SF
Awning Above Entry
Outline of Building Above
Mech Intake
MAPLE AVENUE
12' - 5"
8' - 6"
18' - 0"
8' - 0"
17' - 6"
24' - 0"
84' - 5"
10' - 7"
10' - 4"
2' - 0"
1' - 10"
9' - 7"
2' - 11"
0' 5' 15' 30'


MAIN STREET
MAPLE AVENUE
EXISTING 3 STORY BLDG
Bike Storage
Mech Exhaust
Generator
Trash/ Recycle
Resident Storage
Resident Storage
Parking
22,924 SF
43 Stalls
734'-6" FFE
Transformer
Down
SECTION
736'
734'-3"
Open to Below
3,908 SF
727'-6" FFE
727'
Awning Above Entry
SECTION
Elev
541 SF
734'-6" FFE
732' FFE
734'-6" FFE
Packages
Outline of Building Above
Lobby
2,809 SF
Mail
Fire Comm
Mech Intake
Coffee
Lounge
Office
Office
Work Rm
Restroom
730'
731' FFE
Vest
Awning Above Entry
732'
734'
734'-3"
SHORT TERM LOADING AND GARBAGE COLLECTION ZONE- 2 PARKING SPACES WHEN NOT IN USE
NOTE: PROJECT WILL COMPLY WITH SITE LIGHTING REGULATIONS
0' 5' 15' 30'

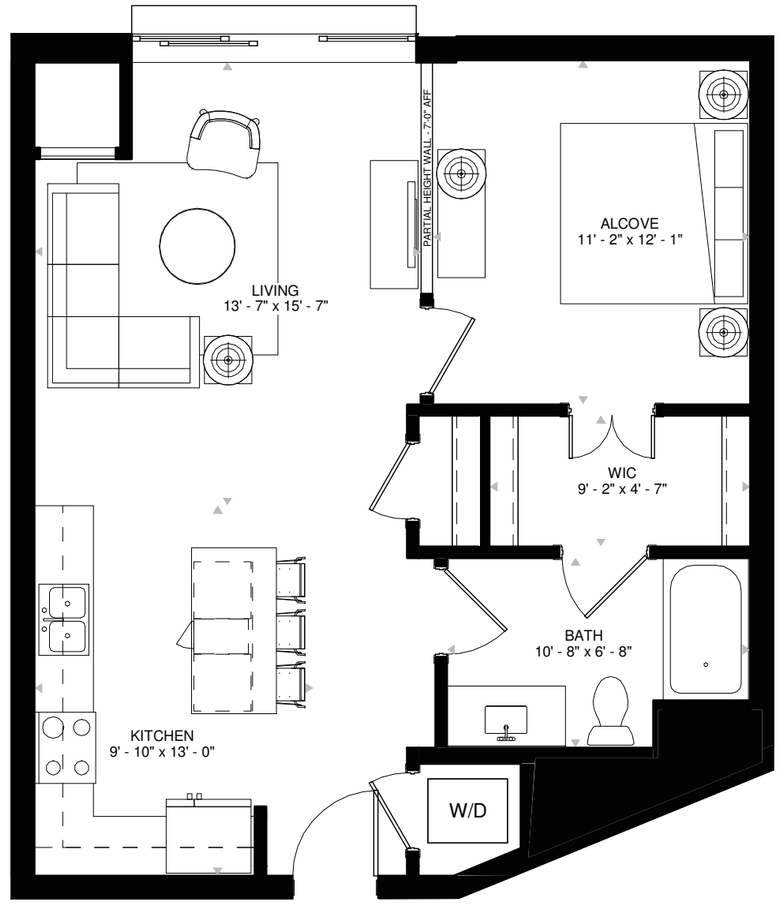

78°
11' - 5"
8' - 6"
5' - 8"
12' - 0"
8' - 0"
20' - 0"
9' - 8 5/8"
10' - 3 1/2"
2' - 0"
3 BR
1,342 SF
1 BR
800 SF
1 BR
735 SF
1 BR
673 SF
2 BR
1,234 SF
Elec
Patio
1 BR
743 SF
1 BR
623 SF
Patio
COURTYARD
(SYNTHETIC TURF)
SECTION
Patio
Alcove
760 SF
1 BR
624 SF
Trash
Storage
2 BR
1,223 SF
1 BR
720 SF
1 BR
720 SF
1 BR
720 SF
Alcove
743 SF
2 BR
1,246 SF
2 BR
1,126 SF
Alcove
572 SF
1 BR
755 SF
1 BR
756 SF
1 BR
DEN
934 SF
Level 2
746'-6" FFE
SECTION
Club
Room
1,394 SF
WC
WC
Elec/Comm
Yoga
Studio
Fitness
1,651 SF
Amenity
Terrace
2,741 SF
Pool
Extent of
Trellis
Awning
Below
Extent of
Trellis
0' 5' 15' 30'


18°
8' - 6"
10' - 0"
5' - 8"
12' - 0"
1 BR
673 SF
1 BR
735 SF
1 BR
800 SF
11' - 5"
3 BR
1,342 SF
2 BR
1,234 SF
8' - 0"
Elec
1 BR
743 SF
1 BR
623 SF
47' - 0"
SECTION
Alcove
760 SF
1 BR
624 SF
10' - 3 1/2"
2' - 0"
2 BR
1,223 SF
1 BR
720 SF
1 BR
720 SF
1 BR
720 SF
Alcove
743 SF
Storage
Trash
20' - 0"
2 BR
1,246 SF
2 BR
1,126 SF
10' - 2 5/8"
1' - 10 1/2"
1' - 0"
Alcove
572 SF
1 BR
755 SF
SECTION
Elec/Comm
2 BR
1,121 SF
1 BR
735 SF
1 BR
DEN
934 SF
1 BR
756 SF
1 BR
DEN
933 SF
2 BR
1,189 SF
1' - 8"
Amenity
Terrace on
Level 2
67.75°
0' 5' 15' 30'

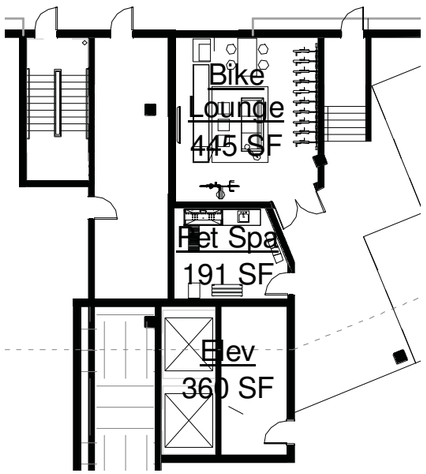

78°
5' - 8"
8' - 9"
12' - 0"
1 BR
673 SF
1 BR
735 SF
1 BR
800 SF
11' - 5"
3 BR
1,342 SF
2 BR
1,234 SF
8' - 0"
Elec
1 BR
743 SF
1 BR
623 SF
47' - 0"
SECTION
Alcove
760 SF
1 BR
624 SF
10' - 3 1/2"
Terrace
1 BR
DEN
983 SF
1 BR
720 SF
1 BR
720 SF
1 BR
720 SF
Alcove
743 SF
Storage
Trash
20' - 0"
2 BR
1,246 SF
10' - 2 5/8"
2 BR
1,126 SF
SECTION
Terrace
Elec/Comm
Alcove
572 SF
1 BR
755 SF
1 BR
756 SF
Alcove
563 SF
1 BR
DEN
934 SF
1 BR
DEN
933 SF
Sky
Lounge
758 SF
2 BR
1,189 SF
Amenity
Terrace on
Level 2
67.75°
0' 5' 15' 30'



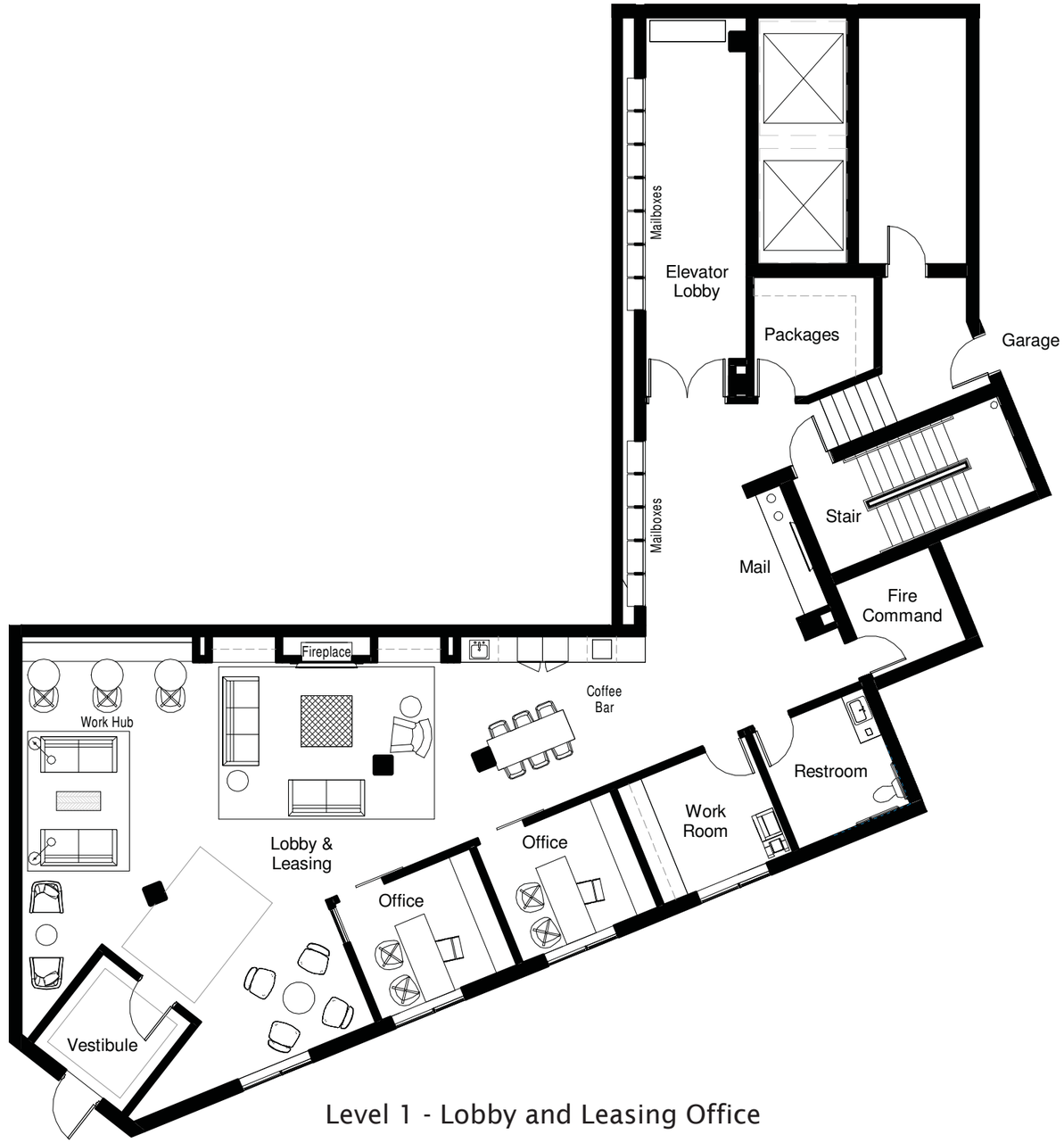
ONE BEDROOM + DEN



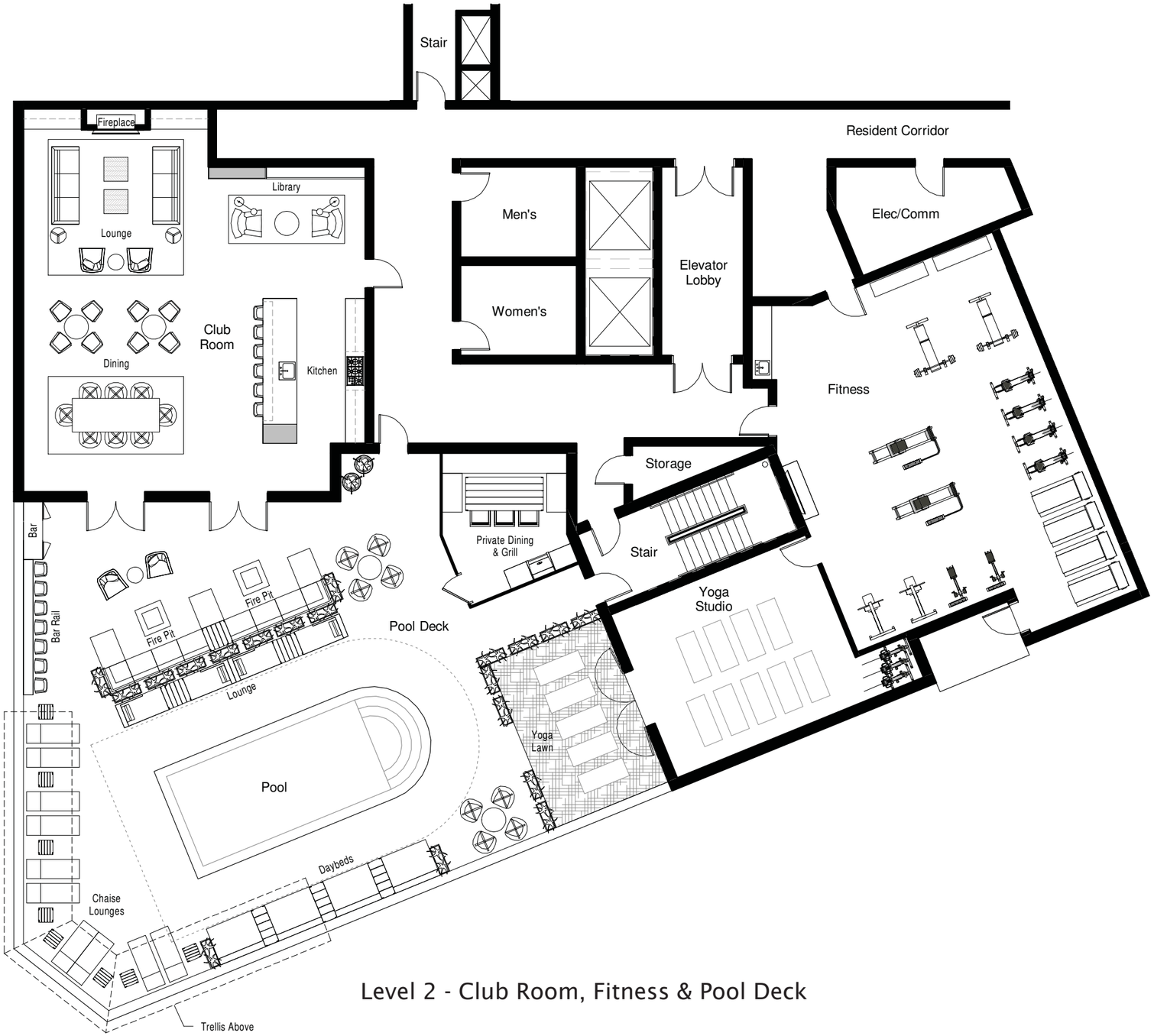
ALCOVE



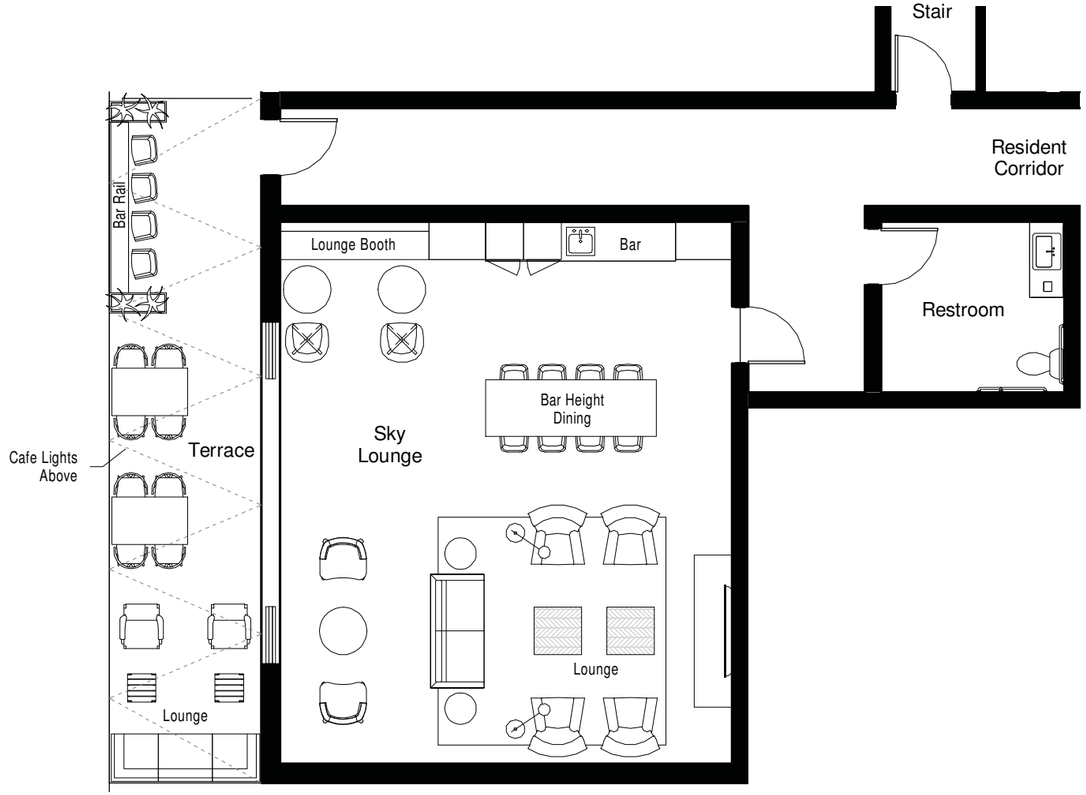
Level P2 - Pet and Bike Amenities



Level 1 - Lobby and Leasing Office



Level 2 - Club Room, Fitness & Pool Deck



Level 6 - Sky Lounge & Terrace


MAIN STREET
MAPLE AVENUE


MAIN STREET
MAPLE AVENUE

3D MASSING - AERIAL VIEW

N

HIGHSTREET RESIDENTIAL esg


MAIN STREET

3D MASSING - STREET PERSPECTIVE VIEW
ALONG MAPLE AVENUE

3D MASSING - STREET PERSPECTIVE VIEW
ALONG MAPLE AVENUE

3D MASSING - STREET PERSPECTIVE VIEW
ALONG MAIN STREET

3D MASSING - STREET PERSPECTIVE VIEW
ALONG MAIN STREET


MAPLE
MAIN

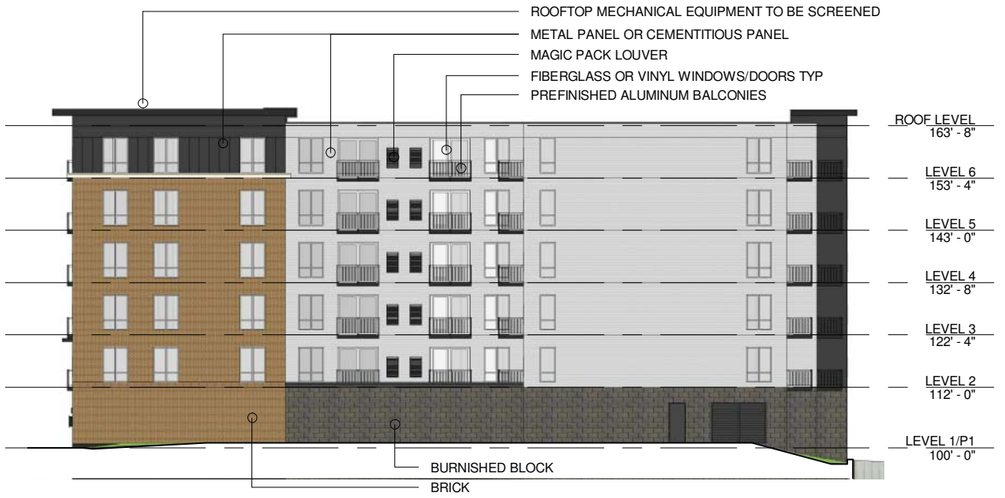
WEST ELEVATION

1" = 30'-0"

SOUTH ELEVATION

1" = 30'-0"

0' 5' 15' 30'



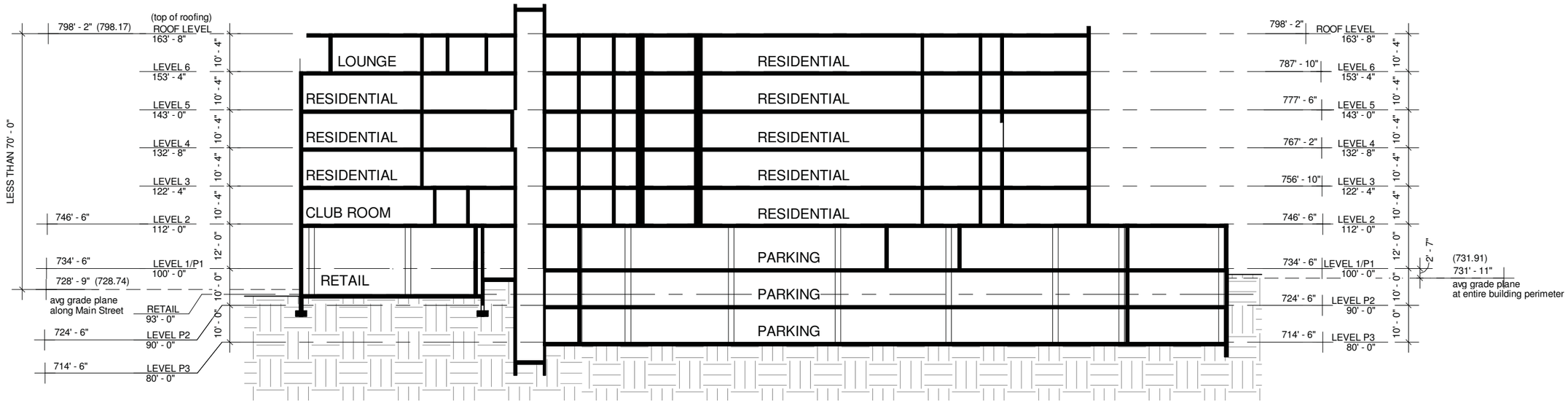
EAST ELEVATION

1" = 30'-0"

NORTH ELEVATION

1" = 30'-0"

0' 5' 15' 30'


LESS THAN 70' - 0"
798' - 2" (798.17)
(top of roofing)
ROOF LEVEL
163' - 8"
LEVEL 6
153' - 4"
LEVEL 5
143' - 0"
LEVEL 4
132' - 8"
LEVEL 3
122' - 4"
746' - 6"
LEVEL 2
112' - 0"
734' - 6"
LEVEL 1/P1
100' - 0"
728' - 9" (728.74)
avg grade plane
along Main Street
RETAIL
93' - 0"
724' - 6"
LEVEL P2
90' - 0"
714' - 6"
LEVEL P3
80' - 0"
10' - 4"
10' - 4"
10' - 4"
10' - 4"
10' - 4"
12' - 0"
10' - 0"
10' - 0"
LOUNGE
RESIDENTIAL
RESIDENTIAL
RESIDENTIAL
RESIDENTIAL
CLUB ROOM
RETAIL
RESIDENTIAL
RESIDENTIAL
RESIDENTIAL
RESIDENTIAL
PARKING
PARKING
PARKING
798' - 2"
ROOF LEVEL
163' - 8"
787' - 10"
LEVEL 6
153' - 4"
777' - 6"
LEVEL 5
143' - 0"
767' - 2"
LEVEL 4
132' - 8"
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LEVEL 3
122' - 4"
746' - 6"
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112' - 0"
734' - 6"
LEVEL 1/P1
100' - 0"
724' - 6"
LEVEL P2
90' - 0"
714' - 6"
LEVEL P3
80' - 0"
10' - 4"
10' - 4"
10' - 4"
10' - 4"
10' - 4"
12' - 0"
10' - 0"
10' - 0"
2' - 7"
(731.91)
731' - 11"
avg grade plane
at entire building perimeter

Maple & Main
Downers Grove, IL

Average Grade Plane Exhibit

5/23/2016

To comply with Downers Grove zoning code, the lowest average grade plane at either Main Street or Maple Avenue is used as a baseline. The lowest condition is along Main Street and equals 728.74. The proposed highest portions of the roofing are at 798.17 and thus comply with the requirement to be less than 70'-0".

To comply with Downers Grove building code, the project must comply with the 2006 IBC definitions of "Basement" and "Story Above Grade Plane". The design meets these code requirements because Level P2 is a Basement and not a Story Above Grade Plane. This designation is achieved because the average grade plane (per 2006 IBC definition) is at 731.91. At 734.5, the finished floor above Level P2 is less than 6'-0" above grade plane. Additionally, this floor level is also less than 12'-0" above the lowest finished ground level of 726.47.

	Average	Spot Elevations at Building Perimeter												
WEST ELEVATION B (MAIN)	**728.74**	726.47	731.00											
SOUTH ELEVATION (MAPLE)	**733.93**	731.00	731.97	732.94	733.40	733.75	734.13	734.87	735.06	735.21	735.21	735.22	734.50	733.85
EAST ELEVATION	**733.00**	733.85	733.07	733.00	733.00	733.00	732.00	734.50	731.57					
NORTH ELEVATION A	**730.93**	731.57	731.10	730.84	730.54	730.68	730.85							
WEST ELEVATION A	**731.22**	730.85	730.98	731.11	731.25	731.92								
NORTH ELEVATION B	**728.72**	731.92	732.00	727.50	727.47	726.97	726.47							
OVERALL AVG GRADE PLANE	**731.91**													

Notes:

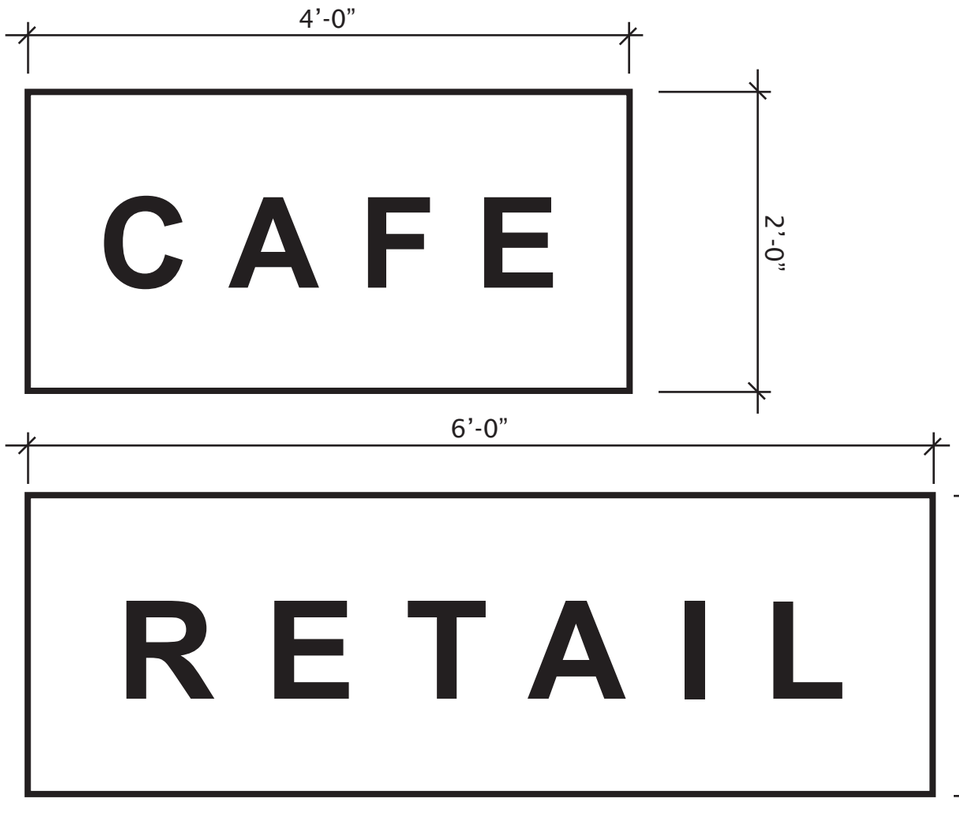
There is variance in the number of spot elevations used to calculate the averages due to varying length of facades and the number of corners (especially at the north and east sides).

The lowest grade spot elevation is 726.47.

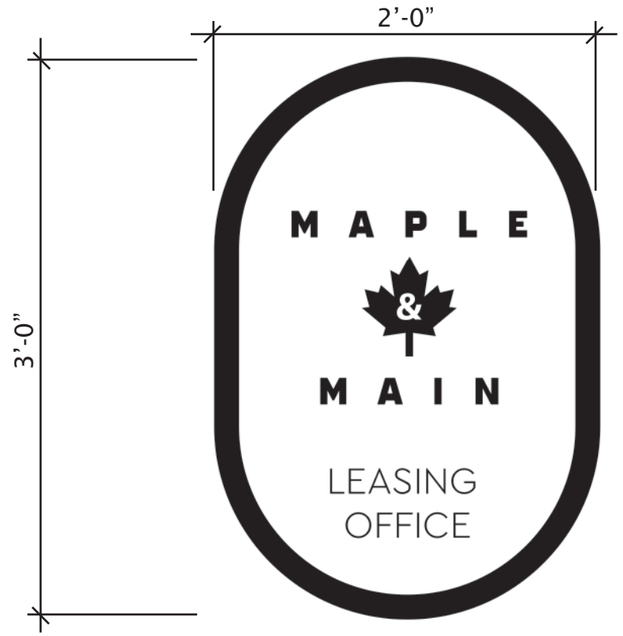
Building Signage

Proposed exterior building signage will meet the requirements of the Downers Grove Zoning Ordinace, Article 9: Signs.

- The total square footage of all signs will not exceed 300 sq ft;
- Blade signs will be at least 8 ft above grade and less than 6 sq ft each and will not project more than 36 inches from the facade;
- Projecting signs will not be internally lit;
- Each retail business will display one wall sign per tenant frontage along the street;
- Wall signs will not cover openings and will not extend more than 12” from wall plane.

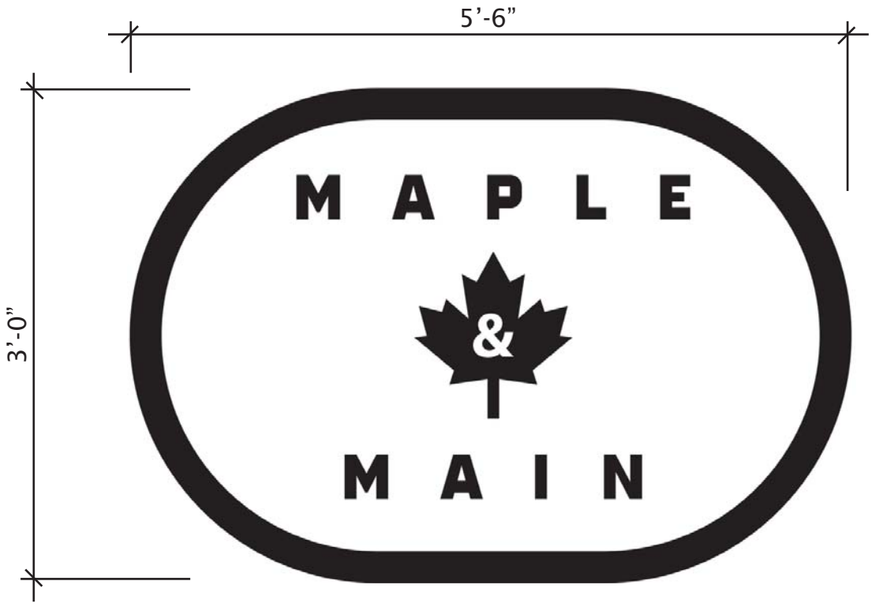


Retail signs (not to scale)
(Final sign designs to be submitted, once tenants are confirmed.)



Max size: 6 sf

Residential Blade Sign (not to scale)



Residential Entry Sign (not to scale)

BUILDING AREA SUMMARY

	TOTAL GSF	PARKING GSF	STALLS	TANDEM	RETAIL*	AMENITY	APT GSF	APT RSF	DUs
LEVEL P3	24,497	24,137	51	10		LOBBY	360		
LEVEL P2	23,861	22,865	48	9		636	360		
LEVEL 1/P1	30,561	22,924	37	6	3,908	2,809	920		
LEVEL 2	24,000					3,045	20,955	17,047	20
LEVEL 3	24,933						24,933	21,025	24
LEVEL 4	24,933						24,933	21,025	24
LEVEL 5	24,933						24,933	21,025	24
LEVEL 6	23,307					758	22,549	19,493	23
	201,025	69,926	136	25	3,908	7,248	119,943	99,615	115

RSF/UNIT 866

STALLS/UNIT 1.40

GSF/Stall P3	396
GSF/Stall P2	401
GSF/Stall P1	533
GSF/Stall Total	514

(includes tandem spaces)

ESG Architects
5/20/2016

*GSF does not include Open To Below Spaces at Lobby and Retail

	Alcove	1 BR	1 BR DEN	2 BR	3 BR	DUs	Beds
LEVEL 1/P1							
LEVEL 2	3	11	1	4	1	20	26
LEVEL 3	3	12	2	6	1	24	32
LEVEL 4	3	12	2	6	1	24	32
LEVEL 5	3	12	2	6	1	24	32
LEVEL 6	4	11	3	4	1	23	31
	16	58	10	26	5	115	153
	14%	50%	9%	23%	4%		
Ave RSF	683	716	938	1193	1342	866	
Size Range	563-760	623-800	934-983	1121-1246	1342		

Zoning Table

Below is a zoning table for the proposed redevelopment of the northeast corner of Main Street and Maple Avenue. The only deviation from code is the lot area per dwelling unit requirement of 800 SF.

Project Name:	Downers Grove Apartments				
Address:	NE Corner of Main Street and Maple Avenue				
PIN(s):	Owner: Village, PIN # 09-08-306-017				
	Owner: Village, PIN # 09-08-306-018				
	Owner: Village, PIN # 09-08-306-019				
	Owner: Village, PIN # 09-08-306-020				
	Owner: Village, PIN # 09-08-306-027				
	Owner: 1000 Maple, PIN # 09-08-306-028				
	Owner: 1000 Maple, PIN # 09-08-306-029				
	Owner: King , PIN # 09-08-306-030				
Zoning District:	Downtown Business (DB)				
Existing Use:	Surface Parking Lot, Office Building and Single-Family Residential				
Proposed Use:	Mixed-Use - Multi-family and Retail				
Petition Type:	Planned Unit Development/Special Use				
Deviations:	Reduce MLA to allow 115 units (vs. 46 units)				
Requirement	***Factor***	***Required***	***Proposed***	***Meets Requirement***	***Difference (if deviations)***
Lot Area per Dwelling Unit (1)	Minimum	800	322	No	478
North Setback	Minimum	0'	5'-8" to 10'-7"	Yes	
South Setback	Minimum	0'	2'-11"	Yes	
East Setback	Minimum	0'	8'-0" to 15'-0"	Yes	
West Setback	Minimum	0'	2'-0"	Yes	
Floor Area Ratio	Maximum	-	3.61	Yes	
Building Height	Minimum/Maximum	32'/70'	70'	Yes	
Parking Spaces	Minimum	161	161	Yes	
Building Coverage	Minimum	-	83%	Yes	
Off-Street Loading (2)	Minimum	1	1	Yes	

(1) includes reducing the Lot Size by 3' on the south side of the site along Maple Avenue.
(2) loading to occur along Maple Avenue (2 stalls) - stalls will be loading zone during specific hours.

Planned Unit Development Criteria
The proposed redevelopment requires a PUD development approval by the Village. The following approval factors are achieved by the proposed project (see relief request below):

a) The zoning map amendment review and approval criteria of Sec. 12.030 in the case of new Planned Unit Development proposals: ACHIEVED
b) Whether the proposed PUD development plan and map amendment would be consistent with the comprehensive plan and any other adopted plans for the subject area: ACHIEVED
c) Whether PUD development complies with the PUD overlay district provisions of Sec. 4.030: ACHIEVED
d) Whether PUD development will result in public benefits that are greater than or at least equal to those that would have resulted from development under conventional zoning regulations: ACHIEVED
e) Whether appropriate terms and conditions have been imposed on the approval to protect the interests of the surrounding property owners and residents, existing and future residents of the PUD and the general public: ACHIEVED

Special Use Criteria
The proposed redevelopment requires a Special Use approval by the Village. The following approval factors are achieved by the proposed project (see request below):

1. That the proposed use is expressly authorized as a special use in the district in which it is to be located: ACHIEVED
2. that the proposed use as the proposed location is necessary or desirable to provide a service or facility that is in the interest of the public convenience and will contribute to the general welfare of the neighborhood and community: ACHIEVED
3. that the proposed use will not, in the particular case, be detrimental to the health, safety, or general welfare of persons residing or working in the vicinity or be injurious to property values or improvements in the vicinity: ACHIEVED

Required Approvals – Relief Required
We are respectfully requesting approval of a Zoning Map Amendment to a Planned Unit Development for the site and the corresponding Special Use to allow a residential development within the Downtown District, as well as a departure from the minimum lot area per dwelling unit.

The required minimum lot area per dwelling unit is 800 SF. We are respectfully requesting 478 SF of relief, as the proposed design includes 115 units, equating to a minimum lot area per dwelling unit of 322 SF.

This relief is required to deliver an unsurpassed multi-family development in Downers Grove. The proposed development will be institutionally owned and operated, offering residents and visitors on-site management, a best-in-class amenity package, including a code compliant 100% enclosed parking structure, indoor and outdoor living spaces, and sophisticated building and unit finishes, that will allow the property to achieve rental rates in the range of $2.35/SF-$2.55/SF.

In order to deliver this level of product and service in a luxury boutique apartment building in the suburban Chicago market, you have to find a paramount site, in a superior submarket, and deliver an institutional quality development (minimum unit count of 115 units). The proposed development fits the criteria above and we are confident our team can deliver a successful development for the residents and visitors of Downers Grove.

Enclosed are concept inspiration images to portray the design intent, as well as a case study outlining our recent success at Park 205, a 115-unit multi-family development recently completed by our team in Park Ridge, IL. We envision a similar product and service offering in Downers Grove.

Planned Unit Development Relief Request Criteria
a) *The zoning map amendment review and approval criteria of Sec. 12.030 in the case of new Planned Unit Development proposals. The proposed development satisfies all of the review and approval criteria (#1-7) outlined in sect*ion 12.030. The use is compatible with nearby properties, there is not a negative impact on neighboring property values, the property is suitable for the uses included in the proposed development, the land assemblage includes redevelopment of a surface parking lot which does not maximize the full development potential of the site, the redevelopment will provide the community with a luxury housing option for its residents and visitors, including a retail use on the ground floor, and is directly in accordance with the Comprehensive Plan.

b) *Whether the proposed PUD development plan and map amendment would be consistent with the comprehensive plan and any other adopted plans for the subject area.* The Comprehensive Plan identifies the subject property as a catalyst redevelopment site. Furthermore, the site is guided in the Comprehensive Plan as Downtown/Mixed-Use, which is consistent with the proposal scope and use.

c) *Whether PUD development complies with the PUD overlay district provisions of Sec. 4.030.* The Proposed PUD development complies with the overlay district provisions as outlined above.

d) *Whether PUD development will result in public benefits that are greater than or at least equal to those that would have resulted from development under conventional zoning regulations.* The PUD proposal request will result in a public benefit to the Village as it will allow for a transition between the Downtown District and the Downtown Transition area, by properly scaling the massing within the neighborhood. The project will include connections to the existing pedestrian network and other circulation nodes. More importantly, the project will soften the broken-up streetscape along Main Street and Maple Avenue by eliminating 4 curb cuts (proposed plan includes 1 curb cut in total accessed off of Maple Avenue on the east side of the site). Each of the streetscapes (Main Street and Maple Avenue) will connect the urban fabric resulting in a pedestrian friendly corridor. The overall quality of the building and associated improvement will be a major benefit to the housing supply in the Village.

e) *Whether appropriate terms and conditions have been imposed on the approval to protect the*

PRELIMINARY ENGINEERING PLANS

MAPLE & MAIN

MAPLE AVE. & MAIN STREET
DOWNERS GROVE, IL 60515

Call Before You Dig
JULIE
1-800-892-0123

UTILITY AND GOVERNING AGENCY CONTACTS

ENGINEERING DEPARTMENT
VILLAGE OF DOWNERS GROVE
5101 WALNUT AVENUE
DOWNERS GROVE, IL 60515-4074
TEL: (630) 434-5461
CONTACT: NAN NEWLON

SANITARY SEWER SERVICE
VILLAGE OF DOWNERS GROVE
5101 WALNUT AVENUE
DOWNERS GROVE, IL 60515-4074
TEL: (630) 434-5461
CONTACT: NAN NEWLON

STORM SEWER SERVICE
VILLAGE OF DOWNERS GROVE
5101 WALNUT AVENUE
DOWNERS GROVE, IL 60515-4074
TEL: (630) 434-5489
CONTACT: KAREN DAULTON LANGE

WATER SERVICE
VILLAGE OF DOWNERS GROVE
5101 WALNUT AVENUE
DOWNERS GROVE, IL 60515-4074
TEL: (630) 434-5461
CONTACT: NAN NEWLON

ROADWAY AUTHORITY
VILLAGE OF DOWNERS GROVE
5101 WALNUT AVENUE
DOWNERS GROVE, IL 60515-4074
TEL: (630) 434-5461
CONTACT: NAN NEWLON

POWER COMPANY
COMMONWEALTH EDISON
201 W. ARTHUR AVE.
MT. PROSPECT, IL 60056-2295
TEL: (847) 870-2124

NATURAL GAS COMPANY
NICOR GAS
1011 WILEY ROAD
SCHAUMBURG, IL 60195
TEL: (847) 843-0627 EXT. 335

TELEPHONE
AT&T
688 INDUSTRIAL DRIVE
ELMHURST, IL 60126
TEL: (630) 600-6347

PROJECT TEAM

DEVELOPER
TRAMMELL CROW CHICAGO DEVELOPMENT, INC.
2215 SOUTH YORK ROAD
OAK BROOK, IL 60523
TEL: (630) 990-1532
CONTACT: DAVID PAINO

ARCHITECT
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MINNEAPOLIS, MN 55415
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CONTACT: CHRISTOPHER WILLETTE

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1001 WARRENVILLE RD, SUITE 350
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TEL: (331) 481-7329
EMAIL: JARED.KENYON@KIMLEY-HORN.COM
CONTACT: JARED KENYON, P.E.

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EMAIL: TIM.SJOGREN@KIMLEY-HORN.COM
CONTACT: TIM SJOGREN, P.T.O.E.

LANDSCAPE ARCHITECT
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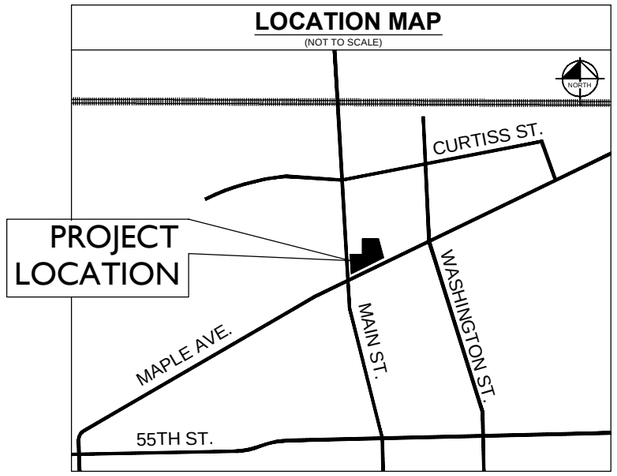
LISLE, IL 60532
TEL: (331) 481-7335
EMAIL: KEITH.DEMCHINSKI@KIMLEY-HORN.COM
CONTACT: KEITH DEMCHINSKI, P.L.A.

SURVEYOR
SPACECO INC.
9575 W. HIGGINS ROAD, SUITE 700
ROSEMONT, IL 60018
TEL: (847) 696-4060
CONTACT: JERRY CHRISTOPH

LOCATION MAP
(NOT TO SCALE)



SHEET INDEX	
SHEET NUMBER	SHEET TITLE
C0.0	TITLE SHEET
C1.0	DEMOLITION PLAN
C2.0	SITE PLAN
C3.0	EROSION CONTROL PLAN
C4.0	GRADING PLAN
C5.0	UTILITY PLAN
L1.0	LANDSCAPE PLAN

BENCHMARKS

SITE BENCHMARKS:
(LOCATIONS SHOWN ON SURVEY)

SBM #1 CUT BOX ON TRAFFIC SIGNAL BOX AT NORTHEAST CORNER OF MAIN STREET AND MAPLE AVENUE.
ELEVATION=714.3 (NAVD 88)

DUPAGE COUNTY BENCHMARKS:

BENCHMARK #0005 PID#DK3311
ELEVATION=714.33 (NAVD 88)

PROFESSIONAL ENGINEER'S CERTIFICATION

I, JARED J. KENYON, A LICENSED PROFESSIONAL ENGINEER OF IL, HEREBY CERTIFY THAT THIS SUBMISSION, PERTAINING ONLY TO THE "C" SERIES CIVIL SHEETS LISTED ABOVE, WAS PREPARED ON BEHALF OF ELNESS SWENSON GRAHAM ARCHITECTS, INC. BY KIMLEY-HORN AND ASSOCIATES, INC. UNDER MY PERSONAL DIRECTION. THIS TECHNICAL SUBMISSION IS INTENDED TO BE USED AS AN INTEGRAL PART OF AND IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND CONTRACT DOCUMENTS.

DATED THIS _____ DAY OF _____ , A.D., 2016.

_____
IL LICENSED PROFESSIONAL ENGINEER 062-059479
MY LICENSE EXPIRES ON NOVEMBER 30, 2017

No.	REVISIONS	DATE	BY
1	PER VILLAGE COMMENTS	05/23/16	JJK

Kimley»Horn
© 2016 KIMLEY-HORN AND ASSOCIATES, INC.
1001 WARRENVILLE ROAD, SUITE 350,
LISLE, IL 60532
PHONE: 630-487-5550
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: TJS
DRAWN BY: TJS
CHECKED BY: JJK

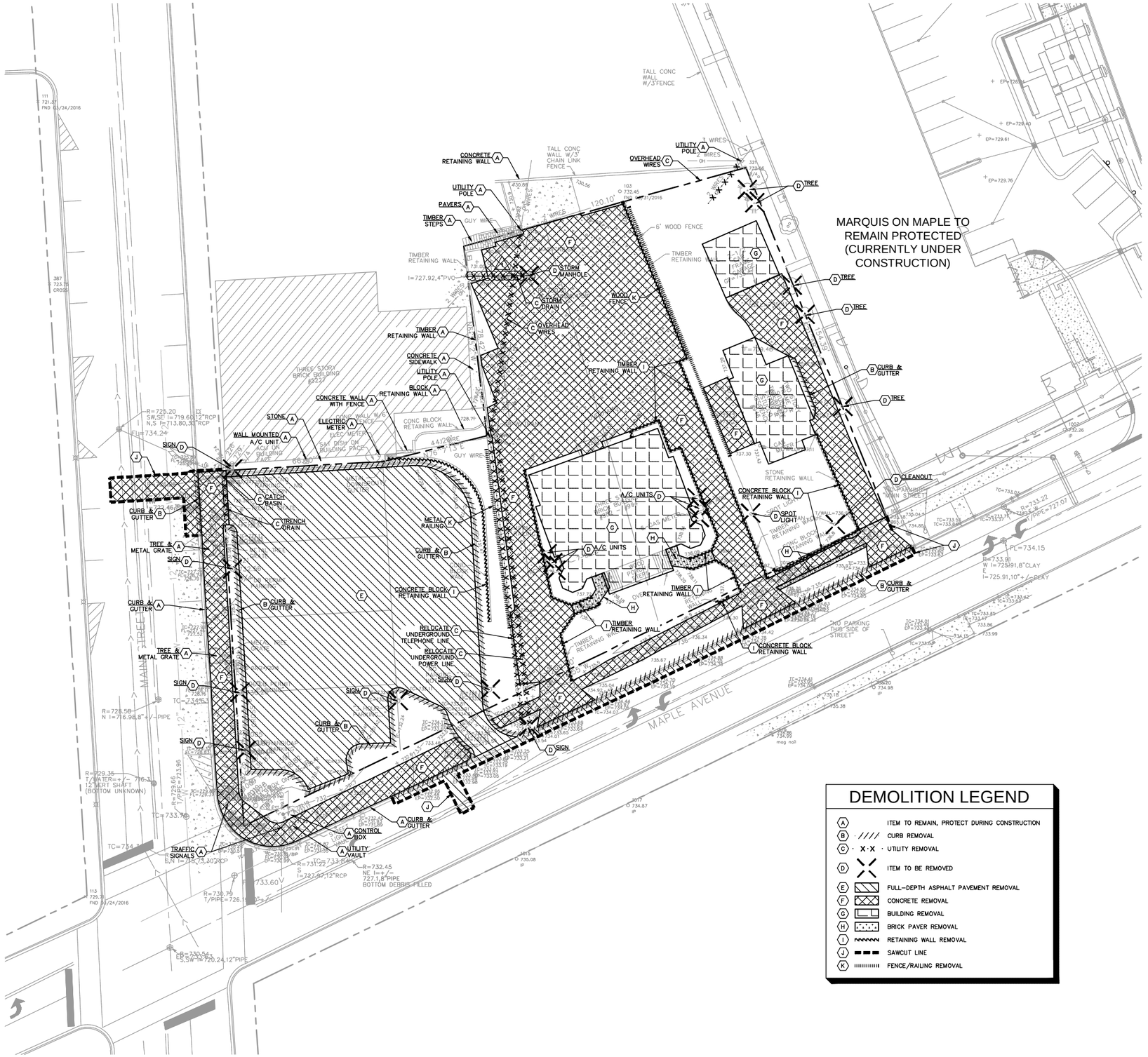
esg TrammellCrowCompany

TITLE SHEET

MAPLE & MAIN
DOWNERS GROVE, IL

ORIGINAL ISSUE: 05/02/2016
KHA PROJECT NO. 168221001
SHEET NUMBER
C0.0

Drawing name: K:\CHS_LDEV\168221001_ESG_Downers Grove_IL\2 Design\CAD\PlanSheets\C0.0 TITLE SHEET.dwg TITLE SHEET May 23, 2016 8:03am by: tom.szafranski
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



DEMOLITION LEGEND

A	ITEM TO REMAIN, PROTECT DURING CONSTRUCTION
B	CURB REMOVAL
C	UTILITY REMOVAL
D	ITEM TO BE REMOVED
E	FULL-DEPTH ASPHALT PAVEMENT REMOVAL
F	CONCRETE REMOVAL
G	BUILDING REMOVAL
H	BRICK PAVER REMOVAL
I	RETAINING WALL REMOVAL
J	SAWCUT LINE
K	FENCE/RAILING REMOVAL

DEMOLITION NOTES

GENERAL DEMOLITION NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED.
2. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
3. THE GENERAL CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
4. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
5. IF DEMOLITION OR CONSTRUCTION ON SITE WILL INTERFERE WITH THE ADJACENT PROPERTY OWNER'S TRAFFIC FLOW, THE CONTRACTOR SHALL COORDINATE WITH ADJACENT PROPERTY OWNER, TO MINIMIZE THE IMPACT ON TRAFFIC FLOW. TEMPORARY RE-ROUTING OF TRAFFIC IS TO BE ACCOMPLISHED BY USING IDOT APPROVED TRAFFIC BARRICADES, BARRELS, AND/OR CONES. TEMPORARY SIGNAGE AND FLAGMEN MAY BE ALSO NECESSARY.
6. CONTRACTOR SHALL NOT DEMOLISH ANYTHING OUTSIDE THE OWNERS LEASE/PROPERTY LINE UNLESS SPECIFICALLY MENTIONED ON THIS SHEET.
7. QUANTITIES DEPICTED ON THIS SHEET SHALL SERVE AS A GUIDE ONLY. CONTRACTOR TO VERIFY ALL DEMOLITION QUANTITIES.
8. PRIOR TO BIDDING AND CONSTRUCTION, CONTRACTOR TO REFER TO OWNER PROVIDED PHASE I ENVIRONMENTAL SITE ASSESSMENT AND ASBESTOS REPORT FOR SITE SPECIFIC CONDITIONS AND CONSIDERATIONS.
9. CONTRACTOR SHALL BEGIN CONSTRUCTION OF ANY LIGHT POLE BASES FOR RELOCATED LIGHT FIXTURES AND RELOCATION OF ELECTRICAL SYSTEM AS SOON AS DEMOLITION BEGINS. CONTRACTOR SHALL BE AWARE THAT INTERRUPTION OF POWER TO ANY LIGHT POLES OR SIGNS SHALL NOT EXCEED 24 HOURS
10. EROSION CONTROL MUST BE ESTABLISHED PRIOR TO ANY WORK ON SITE INCLUDING DEMOLITION.
11. REFER TO GEOTECHNICAL REPORT PROVIDED BY OTHERS FOR ALL SUBSURFACE INFORMATION.

DEMOLITION NOTES

THE EXTENT OF SITE DEMOLITION WORK IS AS SHOWN ON THE CONTRACT DOCUMENTS AND AS SPECIFIED HEREIN. SEE ARCHITECTURAL DRAWINGS FOR LIMITS AND PROPER DEMOLITION OF EXISTING BUILDING. FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND SERVICE NECESSARY TO COMPLETE THE WORK. DEMOLITION INCLUDES, BUT IS NOT LIMITED TO, REMOVAL AND DISPOSAL OFFSITE OF THE FOLLOWING ITEMS:

- SIDEWALK AND ON-SITE PAVEMENT
- BUILDINGS, FOUNDATIONS, AND SUPPORTING WALLS AND SLABS
- DEBRIS AND FOUNDATIONS FROM ALL DEMOLISHED STRUCTURES
- ALL PAVEMENT TO BE REMOVED ADJACENT TO PAVEMENT THAT IS TO REMAIN SHALL BE SAWCUT FULL DEPTH AT THE EDGES PRIOR TO REMVAL TO OBTAIN A "CLEAN" JOINT WHERE IT ABUTS NEW CURB OR PAVEMENT.

CONTRACTOR MUST RECEIVE APPROVAL FROM CIVIL ENGINEER AND GEOTECHNICAL ENGINEER FOR THE MATERIAL TYPE AND USE IF CONTRACTOR DESIRES TO REUSE DEMOLISHED SITE PAVEMENT AS STRUCTURAL FILL.

DISPOSAL OF DEMOLISHED MATERIALS

REMOVE FROM SITE DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM DEMOLITION OPERATIONS. BURNING OF REMOVED MATERIALS FROM DEMOLISHED STRUCTURES WILL NOT BE PERMITTED ON SITE. TRANSPORT MATERIALS REMOVED FROM DEMOLISHED STRUCTURES AND DISPOSE OF OFF SITE IN A LEGAL MANNER.

LANDSCAPE PROTECTION AND REMOVAL

SEE LANDSCAPE PLANS FOR INFORMATION ON LANDSCAPE AND TREE PROTECTION, PRESERVATION AND REMOVAL.

UTILITY SERVICES

EXISTING UTILITIES, WHICH DO NOT SERVICE STRUCTURES BEING DEMOLISHED, ARE TO BE KEPT IN SERVICE AND PROTECTED AGAINST DAMAGE DURING DEMOLITION OPERATIONS. CONTRACTOR SHALL ARRANGE FOR SHUT-OFF OF UTILITIES SERVING STRUCTURES TO BE DEMOLISHED. CONTRACTOR IS RESPONSIBLE FOR TURNING OFF, DISCONNECTING, AND SEALING INDICATED UTILITIES BEFORE STARTING DEMOLITION OPERATIONS. EXISTING UTILITIES TO BE ABANDONED ARE TO BE CAPPED AT BOTH ENDS AND FILLED WITH FA-1 OR APPROVED EQUAL. ALL UNDERGROUND UTILITIES TO BE REMOVED ARE TO BE BACKFILLED WITH ENGINEERED FILL OR SELECT EXCAVATED MATERIAL, AS APPROVED BY THE GEOTECHNICAL ENGINEER, TO 95% OF MODIFIED PROCTOR DENSITY WITHIN PAVED AREAS AND TO 90% OF MODIFIED PROCTOR DENSITY FOR GREEN SPACE AREAS, IN ACCORDANCE WITH THE EARTHWORK SPECIFICATIONS. ALL PRIVATE UTILITIES (ELECTRIC, CABLE, TELEPHONE, FIBER OPTIC, GAS) SHALL BE REMOVED AND RELOCATED PER THE UTILITY OWNER AND THE LOCAL MUNICIPALITY'S REQUIREMENTS.

UTILITY PROTECTION

UNDERGROUND UTILITIES SHOWN ARE BASED ON ATLASES AND AVAILABLE INFORMATION PRESENTED AT THE TIME OF SURVEY. CONTRACTOR SHOULD CALL "JULIE" (1-800-892-0123) TO COORDINATE FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE ORDERING MATERIALS OR COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY. CONTRACTOR SHALL LOCATE AND PROTECT EXISTING UNDERGROUND AND OVERHEAD UTILITIES DURING CONSTRUCTION. UTILITY PROTECTION SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY OWNER AND AS DIRECTED BY THE GOVERNING MUNICIPALITY. DAMAGED CABLES/CONDUITS SHALL BE REPLACED IMMEDIATELY. ALL EXISTING STRUCTURES TO REMAIN SHALL BE PROTECTED THROUGHOUT THE CONSTRUCTION PROCESS. ALL DAMAGED STRUCTURES SHALL BE REPLACED IN-KIND AND THEIR REPLACEMENT COST SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. PROPER NOTIFICATION TO THE OWNERS OF THE EXISTING UTILITIES SHALL BE MADE AT LEAST 48 HOURS BEFORE CONSTRUCTION COMMENCES.

POLLUTION CONTROLS

USE WATER SPRINKLING, TEMPORARY ENCLOSURES, AND OTHER SUITABLE METHODS TO LIMIT DUST AND DIRT RISING AND SCATTERING IN THE AIR TO THE LOWEST LEVEL. COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION. SEE EROSION CONTROL SHEETS FOR FURTHER EROSION CONTROL REQUIREMENTS.

FILLING BASEMENTS AND VOIDS

COMPLETELY FILL BELOW-GRADE AREAS AND VOIDS RESULTING FROM DEMOLITION OF STRUCTURES TO THE FINAL LINES AND GRADES SHOWN ON THE CONTRACT DOCUMENTS. BACKFILL MATERIAL SHALL BE IDOT APPROVED CRUSHED LIMESTONE (CA-6) OR APPROVED EQUAL. USE SATISFACTORY SOIL MATERIALS CONSISTING OF STONE, GRAVEL AND SAND, FREE FROM DEBRIS, TRASH, FROZEN MATERIALS, ROOTS AND OTHER ORGANIC MATTER. PRIOR TO PLACEMENT OF FILL MATERIALS, ENSURE THAT AREAS TO BE FILLED ARE FREE OF STANDING WATER, FROST, FROZEN MATERIAL, TRASH AND DEBRIS. PLACE FILL MATERIALS IN HORIZONTAL LAYERS NOT EXCEEDING 9" IN LOOSE DEPTH. COMPACT EACH LAYER AT OPTIMUM MOISTURE CONTENT OF FILL MATERIAL TO 95% OF MODIFIED PROCTOR DENSITY UNLESS SUBSEQUENT EXCAVATION FOR NEW WORK IS REQUIRED.

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1-800-892-0123

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No.	REVISIONS	DATE	BY
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DESIGNED BY: TJS
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DEMOLITION PLAN

MAPLE & MAIN
DOWNERS GROVE, IL

ORIGINAL ISSUE: 05/02/2016
KHA PROJECT NO. 168221001
SHEET NUMBER
C1.0

Drawing name: K:\CHS_LIDE\168221001_ESG_Downers Grove_IL\2 Design\C4D\PlanSheets\C1.0 DEMOLITION PLAN.dwg DEMOLITION PLAN May 23, 2016 8:03am by: tom.szofranski
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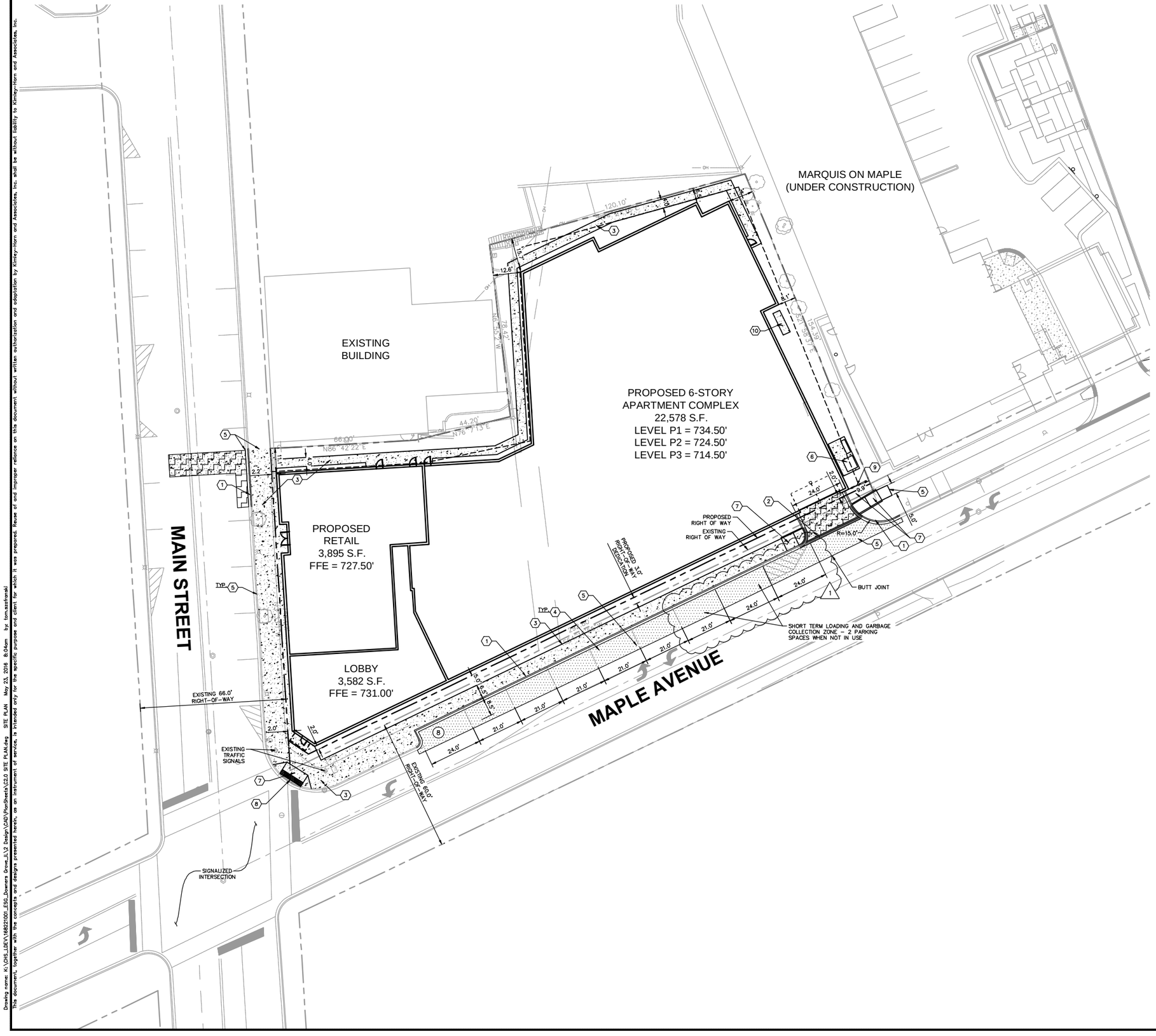

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GENERAL NOTES

1. ALL DIMENSIONS REFER TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
3. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.
4. RADII ADJACENT TO PARKING STALL AND NOT DIMENSIONED ON THIS PLAN SHALL BE 3-FEET, TYPICAL.
5. REFER TO ARCHITECTURAL PLANS FOR MONUMENT SIGN DETAILS. SEE MEP PLANS FOR SITE ELECTRICAL DRAWINGS.
6. ALL PROPOSED ON-SITE STRIPING SHALL BE PAINTED UNLESS OTHERWISE NOTED.

KEY NOTES

1. B6.12 CONCRETE CURB AND GUTTER, TYP. (SEE DETAILS)
2. DEPRESSED CURB AND GUTTER
3. CONCRETE SIDEWALK, TYP. (SEE DETAILS)
4. 4" WIDE PAINTED SOLID LINE, TYP.
5. CONNECT TO EXISTING PAVEMENT, SIDEWALK, CURB, TYP.
6. TRANSFORMER PAD (SEE ARCHITECTURAL PLANS FOR DETAILS)
7. ACCESSIBLE RAMP (SEE DETAILS)
8. 2' WIDE TACTILE WARNING STRIP
9. 6' SCREENING FENCE
10. GENERATOR PAD (SEE ARCHITECTURAL PLANS FOR DETAILS)

PAVING AND CURB LEGEND

- STANDARD DUTY ASPHALT PAVEMENT — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- CONCRETE SIDEWALK — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- HEAVY DUTY CONCRETE PAVEMENT — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- STANDARD PITCH CONCRETE CURB AND GUTTER
- REVERSE PITCH CONCRETE CURB AND GUTTER
- CONCRETE DEPRESSED CURB AND GUTTER
- (8) PARKING COUNT

PARKING SUMMARY

ONSITE:		
PARKING SPACES REQUIRED (1.4 SPACES/RESIDENTIAL UNIT)	= 161	SPACES
REGULAR PARKING SPACES PROVIDED	= 155	SPACES (1)
ACCESSIBLE PARKING SPACES REQUIRED	= 6	SPACES
ACCESSIBLE PARKING SPACES PROVIDED	= 6	SPACES
TOTAL PARKING SPACES PROVIDED	= 161	SPACES
OFFSITE:		
PARKING SPACES REQUIRED (CITY STANDARD)	= 0	SPACES
REGULAR PARKING SPACES PROVIDED	= 10	SPACES (1)
ACCESSIBLE PARKING SPACES REQUIRED	= 0	SPACES
ACCESSIBLE PARKING SPACES PROVIDED	= 0	SPACES
TOTAL PARKING SPACES PROVIDED	= 10	SPACES

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SITE PLAN

MAPLE & MAIN
DOWNERS GROVE, IL

ORIGINAL ISSUE:
05/02/2016

KHA PROJECT NO.
168221001

SHEET NUMBER
C2.0

Drawing name: K:\CHS_LIB\EV\168221001_ESG_Downers Grove_IL\2 Design\CAD\PlanSheets\C2.0 SITE PLAN.dwg SITE PLAN May 23, 2016 8:04am by: tom.szafranski
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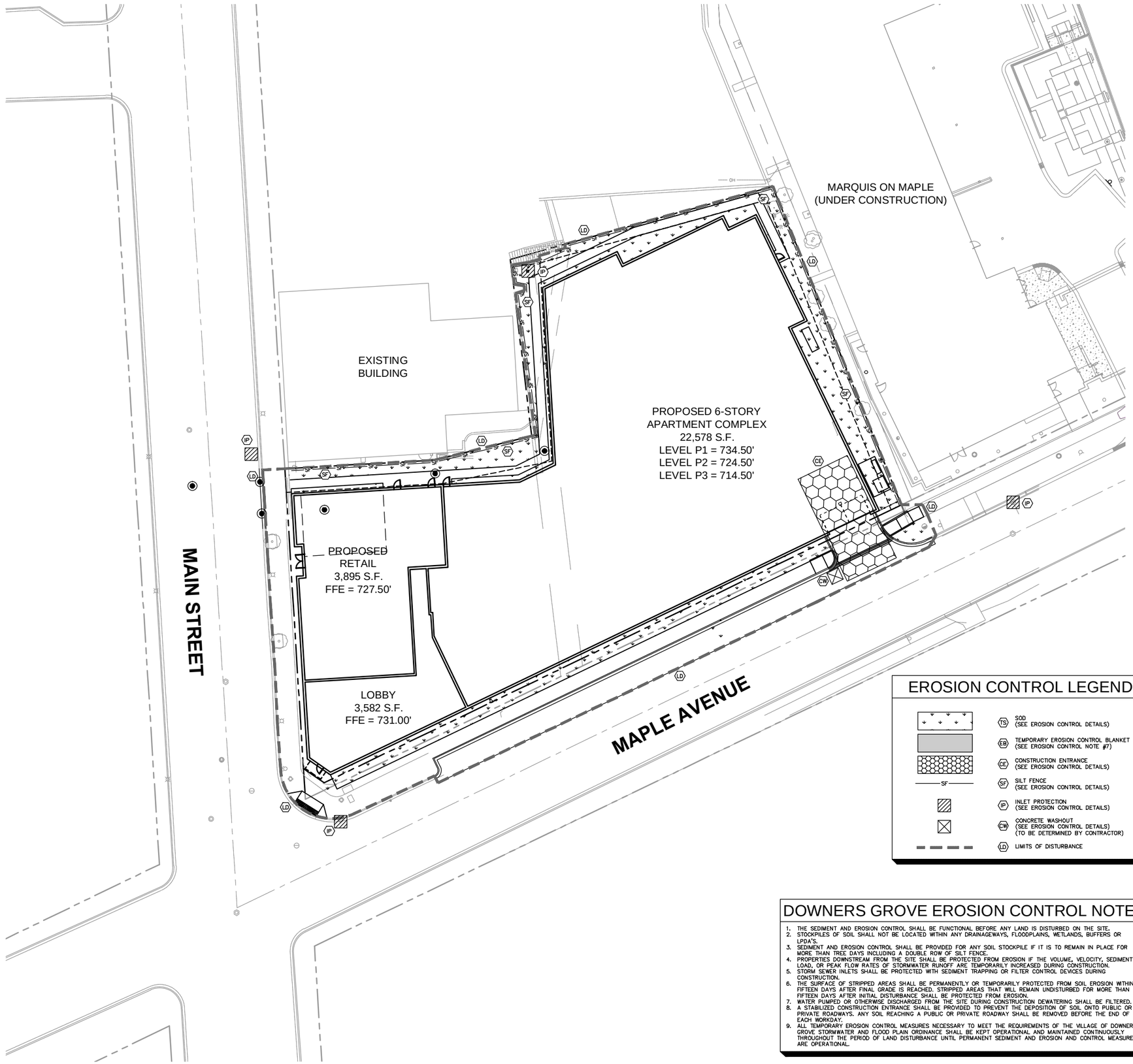

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EROSION CONTROL NOTES

1. CONSTRUCTION ENTRANCE SHALL BE LOCATED SO AS TO PROVIDE THE LEAST AMOUNT OF DISTURBANCE TO THE FLOW OF TRAFFIC IN AND OUT OF THE SITE. ADDITIONALLY, CONSTRUCTION ENTRANCE SHALL BE LOCATED TO COINCIDE WITH THE PHASING OF THE PAVEMENT REPLACEMENT.
2. POST CONSTRUCTION STORM WATER POLLUTION CONTROL MEASURES INCLUDE STABILIZATION BY PERMANENT PAVING, DRAINAGE SYSTEM STRUCTURE, OR LANDSCAPING.
3. TEMPORARY AND PERMANENT STABILIZATION PRACTICES AND BMP'S SHALL BE INSTALLED AT THE EARLIEST POSSIBLE TIME DURING THE CONSTRUCTION SEQUENCE. AS AN EXAMPLE, PERIMETER SILT FENCE SHALL BE INSTALLED BEFORE COMMENCEMENT OF ANY GRADING ACTIVITIES. OTHER BMP'S SHALL BE INSTALLED AS SOON AS PRACTICABLE AND SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION IS ATTAINED. CONTRACTOR SHALL ALSO REFERENCE CIVIL AND LANDSCAPE PLANS SINCE PERMANENT STABILIZATION IS PROVIDED BY LANDSCAPING, THE BUILDING(S), AND SITE PAVING.
4. BMP'S HAVE BEEN LOCATED AS INDICATED ON THIS PLAN IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN ORDER TO MINIMIZE SEDIMENT TRANSFER. FOR EXAMPLE: SILT FENCES LOCATED AT TOE OF SLOPE AND INLET PROTECTION FOR INLETS RECEIVING SEDIMENT FROM SITE RUN-OFF.
5. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN.
6. ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE REVIEWING ENGINEER, ENVIRONMENTAL SPECIALIST, OR ARBORIST AS APPROPRIATE. MAJOR REVISIONS MUST BE APPROVED BY THE PLANNING AND DEVELOPMENT DEPARTMENT AND THE DRAINAGE UTILITY DEPARTMENT. MINOR CHANGES OR ADDITIONAL CONTROL MEASURES TO BE MADE AS FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE ENVIRONMENTAL INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES AT NO ADDITIONAL COST TO THE OWNER.
7. CONTRACTOR SHALL PLACE EROSION CONTROL BLANKET (NORTH AMERICAN GREEN S150BN OR APPROVED EQUAL) ON ALL SITE AREAS WITH SLOPES GREATER THAN 4:1, AND IN THE BOTTOM AND SIDE SLOPES OF ALL SWALES.
8. PRIOR TO FINAL ACCEPTANCE, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
9. PERMANENT, FINAL PLANT COVERING OR STRUCTURES SHALL BE INSTALLED PRIOR TO FINAL ACCEPTANCE.
10. ALL CONTROL DEVICES THAT FUNCTION SIMILARLY TO SILT FENCE OR FIBER ROLLS MUST BE REPAIRED, REPLACED OR SUPPLEMENTED WITH EFFECTIVE CONTROLS WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES ONE-THIRD THE HEIGHT OF THE DEVICE. THESE REPAIRS MUST BE MADE WITHIN 24 HOURS OF THE RAINFALL EVENT OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.
11. ALL SEDIMENT DELTAS AND DEPOSITS MUST BE REMOVED FROM SURFACE WATERS, DRAINAGE WAYS, CATCH BASINS AND OTHER DRAINAGE SYSTEMS. ALL AREAS WHERE SEDIMENT REMOVAL RESULTED IN EXPOSED SOIL MUST BE RESTABILIZED. THE REMOVAL AND STABILIZATION MUST TAKE PLACE IMMEDIATELY, BUT NO MORE THAN 7 DAYS AFTER THE RAINFALL EVENT UNLESS PRECLUDED BY LEGAL, REGULATORY OR PHYSICAL ACCESS CONSTRAINTS. ALL REASONABLE EFFORTS MUST BE USED TO OBTAIN ACCESS. ONCE ACCESS IS OBTAINED, REMOVAL AND STABILIZATION MUST TAKE PLACE IMMEDIATELY, BUT NO MORE THAN 7 DAYS LATER. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL APPROPRIATE AUTHORITIES AND RECEIVING THE APPLICABLE PERMITS PRIOR TO CONDUCTING ANY WORK.
12. ACCUMULATIONS OF TRACKED AND DEPOSITED SEDIMENT MUST BE REMOVED FROM OFF-SITE PAVED SURFACES WITHIN 24 HOURS OR SOONER IF REQUIRED. SEDIMENT TRACKING MUST BE MINIMIZED BY THE APPROPRIATE MANAGEMENT PRACTICE, LIKE A DEDICATED SITE EXIT WITH AN AGGREGATE SURFACE OR DESIGNATED OFFSITE PARKING AREA. CONTRACTOR IS RESPONSIBLE FOR STREET SWEEPING AND/OR SCRAPING IF YOUR PRACTICES ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED FROM THE SITE.
13. SURFACE WATERS, DRAINAGE DITCHES AND CONVEYANCE SYSTEMS MUST BE INSPECTED FOR SEDIMENT DEPOSITS.
14. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL EROSION CONTROL MEASURES AS INDICATED ON THIS SHEET IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED BY KIMLEY-HORN AND ASSOCIATES, INC. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING THE PROVISIONS INDICATED IN THE SWPPP, INCLUDING EROSION CONTROL MEASURES AND INSPECTION FREQUENCY, AS REQUIRED BY THE IEPA NPDES PHASE II PERMIT PROGRAM REQUIREMENTS.
15. PUMPING SEDIMENT LADEN WATER INTO ANY STORMWATER FACILITY THAT IS NOT DESIGNATED TO BE A SEDIMENT TRAP, DRAINAGEWAY, OR OFFSITE AREA EITHER DIRECTLY OR INDIRECTLY WITHOUT FILTRATION IS PROHIBITED.
16. SOIL STOCKPILES SHALL NOT BE LOCATED IN A DRAINAGEWAY, FLOOD PLAIN AREA OR A DESIGNATED BUFFER, UNLESS OTHERWISE APPROVED, UNDER SPECIFIC CONDITIONS TO BE ESTABLISHED BY THE DIRECTOR OR ADMINISTRATOR.
17. STOCKPILES TO REMAIN IN PLACE FOR MORE THAN THREE DAYS SHALL BE PROVIDED WITH SESC MEASURES. MATERIAL IS TO BE HAULED OFF IMMEDIATELY AND LEGALLY IF NO STOCKPILE IS TO REMAIN IN PLACE.
18. ALL TEMPORARY SESC MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED.TRAPPED SEDIMENT AND OTHER DISTURBED SOILS RESULTING FROM TEMPORARY MEASURES SHALL BE PROPERLY DISPOSED OF PRIOR TO PERMANENT STABILIZATION.
19. WATER REMOVED FROM TRAPS, BASINS, AND OTHER WATER HOLDING DEPRESSIONS OR EXCAVATIONS MUST FIRST PASS THROUGH A SEDIMENT CONTROL AND/OR FILTRATION DEVICE. WHEN DEWATERING DEVICES ARE USED, DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION.

EROSION CONTROL LEGEND

- TS — SOD (SEE EROSION CONTROL DETAILS)
- EB — TEMPORARY EROSION CONTROL BLANKET (SEE EROSION CONTROL NOTE #7)
- CE — CONSTRUCTION ENTRANCE (SEE EROSION CONTROL DETAILS)
- SF — SILT FENCE (SEE EROSION CONTROL DETAILS)
- IP — INLET PROTECTION (SEE EROSION CONTROL DETAILS)
- CW — CONCRETE WASHOUT (SEE EROSION CONTROL DETAILS) (TO BE DETERMINED BY CONTRACTOR)
- LD — LIMITS OF DISTURBANCE

DOWNERS GROVE EROSION CONTROL NOTES

1. THE SEDIMENT AND EROSION CONTROL SHALL BE FUNCTIONAL BEFORE ANY LAND IS DISTURBED ON THE SITE.
2. STOCKPILES OF SOIL SHALL NOT BE LOCATED WITHIN ANY DRAINAGEWAYS, FLOODPLAINS, WETLANDS, BUFFERS OR LPDA'S.
3. SEDIMENT AND EROSION CONTROL SHALL BE PROVIDED FOR ANY SOIL STOCKPILE IF IT IS TO REMAIN IN PLACE FOR MORE THAN TREE DAYS INCLUDING A DOUBLE ROW OF SILT FENCE.
4. PROPERTIES DOWNSTREAM FROM THE SITE SHALL BE PROTECTED FROM EROSION IF THE VOLUME, VELOCITY, SEDIMENT LOAD, OR PEAK FLOW RATES OF STORMWATER RUNOFF ARE TEMPORARILY INCREASED DURING CONSTRUCTION.
5. STORM SEWER INLETS SHALL BE PROTECTED WITH SEDIMENT TRAPPING OR FILTER CONTROL DEVICES DURING CONSTRUCTION.
6. THE SURFACE OF STRIPPED AREAS SHALL BE PERMANENTLY OR TEMPORARILY PROTECTED FROM SOIL EROSION WITHIN FIFTEEN DAYS AFTER FINAL GRADE IS REACHED. STRIPPED AREAS THAT WILL REMAIN UNDISTURBED FOR MORE THAN FIFTEEN DAYS AFTER INITIAL DISTURBANCE SHALL BE PROTECTED FROM EROSION.
7. WATER PUMPED OR OTHERWISE DISCHARGED FROM THE SITE DURING CONSTRUCTION DEWATERING SHALL BE FILTERED.
8. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROVIDED TO PREVENT THE DEPOSITION OF SOIL ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SOIL REACHING A PUBLIC OR PRIVATE ROADWAY SHALL BE REMOVED BEFORE THE END OF EACH WORKDAY.
9. ALL TEMPORARY EROSION CONTROL MEASURES NECESSARY TO MEET THE REQUIREMENTS OF THE VILLAGE OF DOWNERS GROVE STORMWATER AND FLOOD PLAIN ORDINANCE SHALL BE KEPT OPERATIONAL AND MAINTAINED CONTINUOUSLY THROUGHOUT THE PERIOD OF LAND DISTURBANCE UNTIL PERMANENT SEDIMENT AND EROSION AND CONTROL MEASURES ARE OPERATIONAL.

EROSION CONTROL SCHEDULE AND SEQUENCING:

I. ROUGH GRADING	CONSTRUCTION ENTRANCE/EXIT, SILT FENCE PROTECTION, CONCRETE WASHOUT AREA AND TREE PROTECTION SHALL BE INSTALLED PRIOR TO THE INITIATION OF ROUGH GRADING, AS NEEDED. TEMPORARY EROSION CONTROL MEASURES TO BE INSTALLED UPON COMPLETION OF ROUGH GRADING AND AS NECESSARY THROUGHOUT CONSTRUCTION.
II. UTILITY INSTALLATION	ALL PRIOR EROSION CONTROL MEASURES INSTALLED ABOVE TO BE MAINTAINED AS NECESSARY DURING UTILITY INSTALLATION. STORM STRUCTURE INLET PROTECTION SHALL BE INSTALLED AS STORM DRAINAGE SYSTEM IS CONSTRUCTED.
III. PAVING	ALL PRIOR EROSION CONTROL MEASURES INSTALLED ABOVE TO BE MAINTAINED AS NECESSARY DURING PAVING AND THROUGHOUT THE REMAINDER OF THE PROJECT.
IV. FINAL GRADING/SOIL STABILIZATION/ LANDSCAPING	ALL TEMPORARY EROSION CONTROL MEASURES TO BE REMOVED AT THE CONCLUSION OF THE PROJECT AS DIRECTED BY THE LOCAL MUNICIPALITY.

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SCALE: AS NOTED
DESIGNED BY: TJS
DRAWN BY: TJS
CHECKED BY: JJK

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EROSION CONTROL PLAN

MAPLE & MAIN
DOWNERS GROVE, IL

ORIGINAL ISSUE: 05/02/2016
KHA PROJECT NO. 168221001
SHEET NUMBER
C3.0

Drawing name: K:\CHS_LIB\C\168221001_ESG_Downers Grove_IL\2 Design\CAD\PlanSheets\C3.0 EROSION CONTROL PLAN.dwg EROSION CONTROL PLAN May 23, 2016 8:04am by tom.szoltanski
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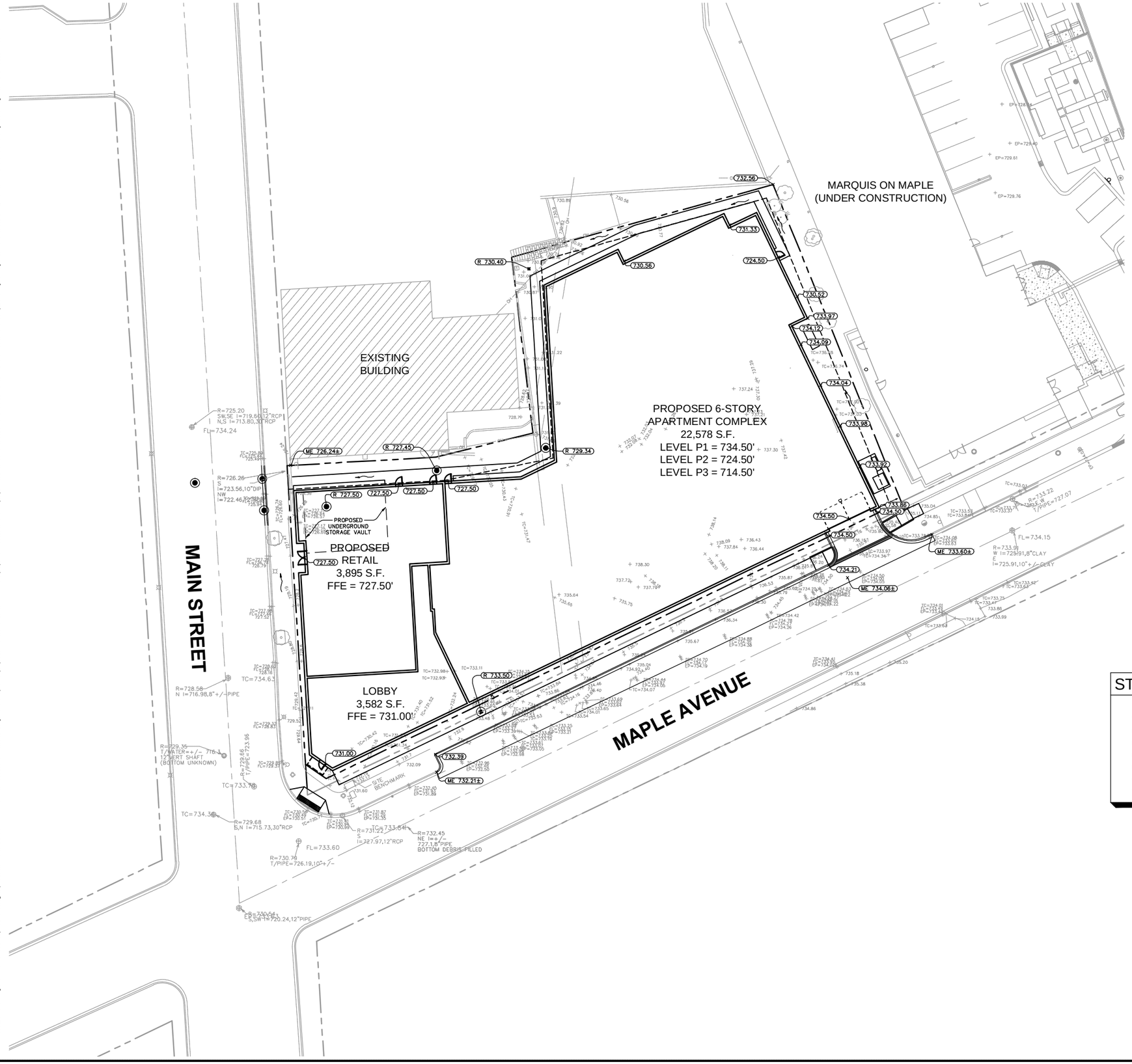

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GRADING NOTES

1. CONTRACTOR TO VERIFY ALL EXISTING TOPOGRAPHY AND STRUCTURES ON THE SITE AND IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING WORK.
2. ALL PAVEMENT SPOT GRADE ELEVATIONS AND RIM ELEVATIONS WITHIN OR ALONG CURB AND GUTTER REFER TO FLOW LINE ELEVATIONS UNLESS OTHERWISE NOTED.
3. ALL ELEVATIONS SHOWN DEPICT FINISHED GRADE UNLESS OTHERWISE NOTED. GENERAL CONTRACTOR TO COORDINATE WITH EXCAVATION, LANDSCAPE AND PAVING SUBCONTRACTORS REGARDING TOPSOIL THICKNESS FOR LANDSCAPE AREAS AND PAVEMENT SECTION THICKNESS FOR PAVED AREAS TO PROPERLY ENSURE ADEQUATE CUT TO ESTABLISH SUBGRADE ELEVATIONS.
4. NO EARTHEN SLOPE SHALL BE GREATER THAN 3:1, UNLESS OTHERWISE NOTED.
5. MAXIMUM SLOPE IN ACCESSIBLE PARKING SPACES AND LOADING ZONES SHALL NOT EXCEED 2.0% IN ALL DIRECTIONS.
6. MAXIMUM RUNNING SLOPE SHALL NOT EXCEED 5% AND CROSS SLOPE SHALL NOT EXCEED 2% ON ALL SIDEWALKS AND ACCESSIBLE ROUTES.
7. WHEN NATURAL FLOW OF DRAINAGE IS AWAY FROM CURB, CONTRACTOR TO INSTALL REVERSE GUTTER PITCH.
8. MATCH EXISTING ELEVATIONS AT THE PROPERTY LIMITS.

GRADING LEGEND

EP = EDGE OF PAVEMENT
FL = FLOW LINE
TC = TOP OF CURB
ME = MATCH ELEVATION
TF = TOP OF FOUNDATION
R = RIM ELEVATION
TW = TOP OF WALL
FG = FINISHED GRADE
TS = TOP OF STAIRS
BS = BOTTOM OF STAIRS
ME = MATCH EXISTING

620 — PROPOSED CONTOUR
RIDGE — RIDGE LINE
X.XX% — SLOPE AND FLOW DIRECTION
100-YEAR OVERLAND OVERFLOW ROUTE
DETENTION BASIN 100-YEAR EMERGENCY OVERLAND OVERFLOW ROUTE
PROPOSED SWALE
PROPOSED RETAINING WALL
REVERSED PITCH CURB AND GUTTER
AR — ACCESSIBLE ROUTE

STORMWATER MANAGEMENT SUMMARY

TOTAL LOT AREA	0.85 AC
TOTAL AREA DISTURBED	0.85 AC
EXISTING IMPERVIOUS AREA	0.65 AC
PROPOSED IMPERVIOUS AREA	0.76 AC
PROPOSED LANDSCAPED AREA	0.09 AC
DETENTION REPLACEMENT VOLUME REQUIRED	0.03 AC-FT
VOLUME CONTROL REQUIRED	0.08 AC-FT
TOTAL VOLUME OF STORAGE PROVIDED	0.11 AC-FT

No.	REVISIONS	DATE	BY
1	PER VILLAGE COMMENTS	05/23/16	JJK

Kimley»Horn
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1001 WARRENVILLE ROAD, SUITE 350,
LISLE, IL 60532
PHONE: 630-487-5550
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: TJS
DRAWN BY: TJS
CHECKED BY: JJK

esg Hammel Green Company

GRADING PLAN

MAPLE & MAIN
DOWNERS GROVE, IL

ORIGINAL ISSUE:
05/02/2016

KHA PROJECT NO.
168221001

SHEET NUMBER
C4.0

Drawing name: K:\CHS_LDEV\168221001_ESG_Downers Grove_JL\2 Design\CAD\ProSheets\C3.0 GRADING AND DRAINAGE PLAN.dwg GRADING PLAN May 23, 2016 8:05am by: tom.szofranski
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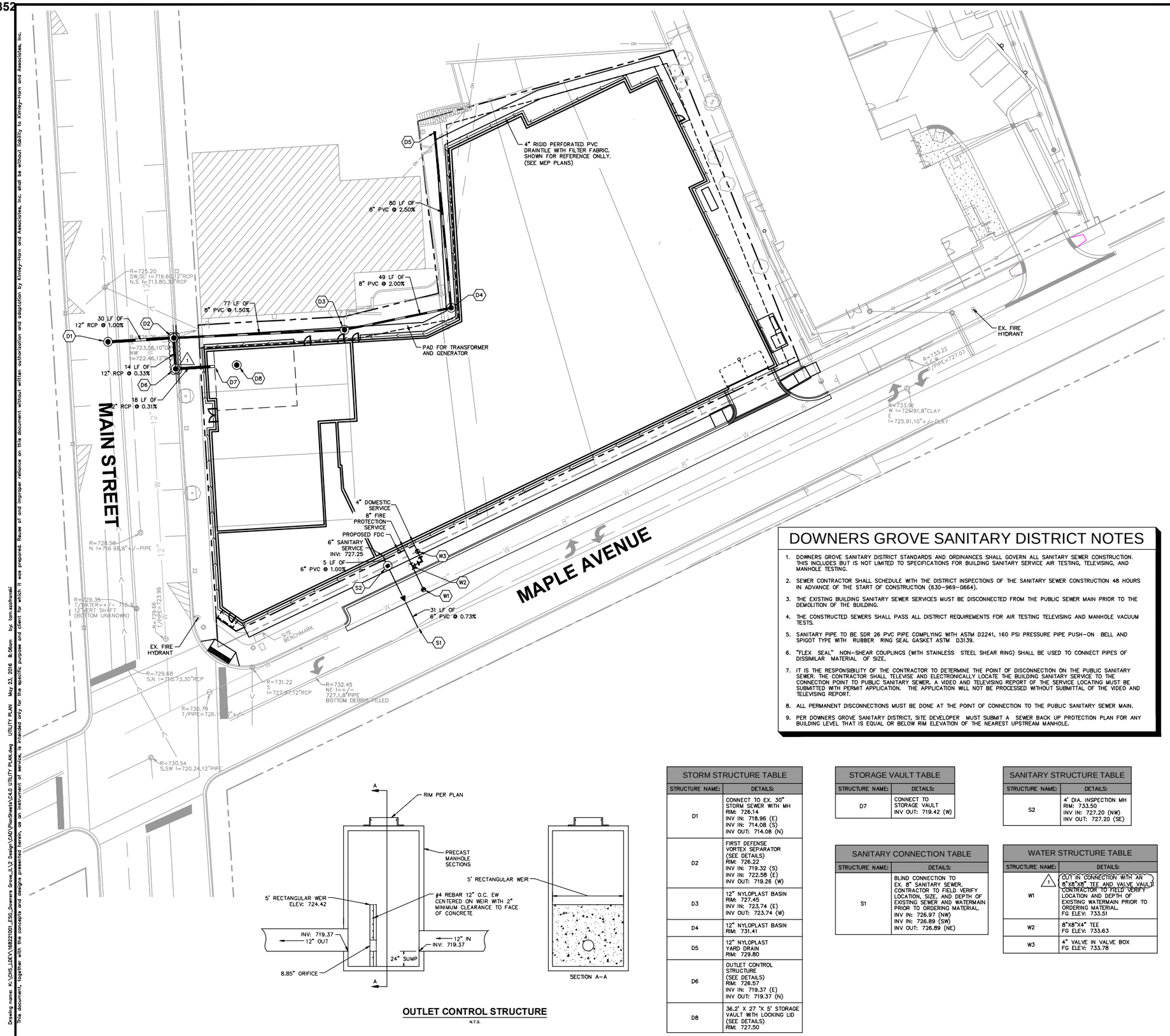

OUTLET CONTROL STRUCTURE
N.T.S.

Call Before You Dig
JULIE
1-800-892-0123

NORTH
GRAPHIC SCALE IN FEET
0 10 20 40

UTILITY LEGEND

- EX. WATER LINE
- EX. HYDRANT
- EX. WATER VALVE
- EX. SANITARY SEWER LINE
- EX. SANITARY SEWER MANHOLE
- EX. STORM DRAIN LINE
- EX. STORM MANHOLE
- EX. STORM STRUCTURE/INLET
- EX. OVERHEAD ELECTRIC LINE
- PROPOSED UNDERGROUND ELECTRIC LINE
- GAS LINE (BY GAS COMPANY)
- PROPOSED PHONE LINE
- PROPOSED STORM SEWER LINE
- PROPOSED FOUNDATION DRAIN (SEE MEP PLANS)
- PROPOSED OPEN LID STORM STRUCTURE (PAVEMENT USE NEENAH R-2540) (GRASS USE NEENAH R-4340-B BEEHIVE)
- PROPOSED CLOSED LID STORM STRUCTURE (PAVEMENT USE NEENAH R-1772) (GRASS USE NEENAH R-1786)
- PROPOSED OPEN LID CURB STRUCTURE (B6.12 C&G USE NEENAH R-3281-A)
- PROPOSED SANITARY SEWER LINE
- PROPOSED SANITARY MANHOLE
- PROPOSED STORM/SANITARY CLEANOUT
- PROPOSED WATER LINE
- PROPOSED VALVE VAULT
- PROPOSED VALVE BOX
- PROPOSED FIRE HYDRANT
- PROPOSED LIGHT POLE
- PROPOSED TRANSFORMER PAD (BY OTHERS)

DOWNERS GROVE SANITARY DISTRICT NOTES

1. DOWNERS GROVE SANITARY DISTRICT STANDARDS AND ORDINANCES SHALL GOVERN ALL SANITARY SEWER CONSTRUCTION. THIS INCLUDES BUT IS NOT LIMITED TO SPECIFICATIONS FOR BUILDING SANITARY SERVICE AIR TESTING, TELEVISING, AND MANHOLE TESTING.
2. SEWER CONTRACTOR SHALL SCHEDULE WITH THE DISTRICT INSPECTIONS OF THE SANITARY SEWER CONSTRUCTION 48 HOURS IN ADVANCE OF THE START OF CONSTRUCTION (630-969-0664).
3. THE EXISTING BUILDING SANITARY SEWER SERVICES MUST BE DISCONNECTED FROM THE PUBLIC SEWER MAIN PRIOR TO THE DEMOLITION OF THE BUILDING.
4. THE CONSTRUCTED SEWERS SHALL PASS ALL DISTRICT REQUIREMENTS FOR AIR TESTING TELEVISING AND MANHOLE VACUUM TESTS.
5. SANITARY PIPE TO BE SDR 26 PVC PIPE COMPLYING WITH ASTM D2241, 160 PSI PRESSURE PIPE PUSH-ON BELL AND SPIGOT TYPE WITH RUBBER RING SEAL GASKET ASTM D3139.
6. "FLEX SEAL" NON-SHEAR COUPLINGS (WITH STAINLESS STEEL SHEAR RING) SHALL BE USED TO CONNECT PIPES OF DISSIMILAR MATERIAL OF SIZE.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE POINT OF DISCONNECTION ON THE PUBLIC SANITARY SEWER. THE CONTRACTOR SHALL TELEVISE AND ELECTRONICALLY LOCATE THE BUILDING SANITARY SERVICE TO THE CONNECTION POINT TO PUBLIC SANITARY SEWER. A VIDEO AND TELEVISING REPORT OF THE SERVICE LOCATING MUST BE SUBMITTED WITH PERMIT APPLICATION. THE APPLICATION WILL NOT BE PROCESSED WITHOUT SUBMITTAL OF THE VIDEO AND TELEVISING REPORT.
8. ALL PERMANENT DISCONNECTIONS MUST BE DONE AT THE POINT OF CONNECTION TO THE PUBLIC SANITARY SEWER MAIN.
9. PER DOWNERS GROVE SANITARY DISTRICT, SITE DEVELOPER MUST SUBMIT A SEWER BACK UP PROTECTION PLAN FOR ANY BUILDING LEVEL THAT IS EQUAL OR BELOW RIM ELEVATION OF THE NEAREST UPSTREAM MANHOLE.

UTILITY NOTES

GENERAL UTILITY NOTES

1. ALL WATER LINES ≤ 3" SHALL BE DUCTILE IRON PIPE, CLASS 52.
2. ALL SANITARY SEWER LINES SHALL BE PVC MEETING, ASTM D-3034 SDR 26 EXCEPT FOR SANITARY SEWER THAT CROSSES ABOVE WATER MAIN, THIS PIPE SHALL BE AWWA C900 (UNLESS WATER MAIN CASING IS UTILIZED). PROVIDE 42" MINIMUM COVER.
3. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS.
4. ALL ELECTRIC AND TELEPHONE EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.
5. CONSTRUCTION SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNTIL WRITTEN APPROVAL HAS BEEN RECEIVED BY THE ENGINEER FROM THE APPROPRIATE GOVERNING AUTHORITY AND CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER.
6. CONTRACTOR TO CALL "JULIE" (1-800-892-0123) TO COORDINATE FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE ORDERING MATERIALS OR COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY.
7. PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OTHER UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM THE ENGINEER AND THE OWNER/DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION. THE MUNICIPALITY SHALL BE NOTIFIED OF ANY AND ALL CHANGES TO THE DESIGN PLANS.
8. CONTRACTOR SHALL COMPLY COMPLETELY WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS IS TO INCLUDE, BUT NOT LIMITED FOR ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH PERFORMANCE CRITERIA AS REQUIRED BY OSHA.
9. CONTRACTOR TO AVOID DISRUPTION OF ANY ADJACENT TENANT'S TRAFFIC OPERATIONS DURING INSTALLATION OF UTILITIES.
10. ALL DIMENSIONS ARE TO CENTERLINE OF PIPE OR CENTER OF MANHOLE UNLESS NOTED OTHERWISE.
11. SEE ARCHITECTURAL AND MEP PLANS FOR EXACT UTILITY CONNECTION LOCATIONS AT BUILDING.
12. LIGHT POLES SHOWN FOR COORDINATION PURPOSES ONLY AND DO NOT REPRESENT ACTUAL SIZE. SEE SITE LIGHTING PLANS BY OTHERS FOR MORE INFORMATION.
13. SEE DETAILS FOR LOCATING STORM STRUCTURES WITHIN THE CURB LINE.
14. STORMWATER FACILITIES MUST BE FUNCTIONAL BEFORE BUILDING CONSTRUCTION BEGINS.

STORM STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
D1	CONNECT TO EX. 30" STORM SEWER WITH MH RIM: 726.14 INV IN: 718.96 (E) INV IN: 714.08 (S) INV OUT: 714.08 (N)
D2	FIRST DEFENSE VORTEX SEPARATOR (SEE DETAILS) RIM: 726.22 INV IN: 719.32 (S) INV IN: 722.58 (E) INV OUT: 719.26 (W)
D3	12" NYLOPLAST BASIN RIM: 727.45 INV IN: 723.74 (E) INV OUT: 723.74 (W)
D4	12" NYLOPLAST BASIN RIM: 731.41
D5	12" NYLOPLAST YARD DRAIN RIM: 729.80
D6	OUTLET CONTROL STRUCTURE (SEE DETAILS) RIM: 726.57 INV IN: 719.37 (E) INV OUT: 719.37 (N)
D8	36.2' X 27 'X 5' STORAGE VAULT WITH LOCKING LID (SEE DETAILS) RIM: 727.50

STORAGE VAULT TABLE	
STRUCTURE NAME:	DETAILS:
D7	CONNECT TO STORAGE VAULT INV OUT: 719.42 (W)

SANITARY CONNECTION TABLE	
STRUCTURE NAME:	DETAILS:
S1	BLIND CONNECTION TO EX. 8" SANITARY SEWER. CONTRACTOR TO FIELD VERIFY LOCATION, SIZE, AND DEPTH OF EXISTING SEWER AND WATERMAIN PRIOR TO ORDERING MATERIAL. INV IN: 726.97 (NW) INV IN: 726.89 (SW) INV OUT: 726.89 (NE)

SANITARY STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
S2	4' DIA. INSPECTION MH RIM: 733.50 INV IN: 727.20 (NW) INV OUT: 727.20 (SE)

WATER STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
W1	1 CUT IN CONNECTION WITH AN 8"X8"X8" TEE AND VALVE VAULT. CONTRACTOR TO FIELD VERIFY LOCATION AND DEPTH OF EXISTING WATERMAIN PRIOR TO ORDERING MATERIAL. FG ELEV: 733.51
W2	8"X8"X4" TEE FG ELEV: 733.63
W3	4" VALVE IN VALVE BOX FG ELEV: 733.78

No.	REVISIONS	DATE	BY
1	PER VILLAGE COMMENTS	05/23/16	JJK

Kimley»Horn

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1001 E. WARRENVILLE ROAD, SUITE 350,
NAPERVILLE, IL 60563
PHONE: 630-487-5550
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: TJS
DRAWN BY: TJS
CHECKED BY: JJK

esg TrammellCrowCompany

UTILITY PLAN

MAPLE & MAIN
DOWNERS GROVE, IL

ORIGINAL ISSUE: 05/02/2016
KHA PROJECT NO. 168221001
SHEET NUMBER
C5.0

Drawing name: K:\CHS_LDEV\168221001_ESG_Downers Grove_IL\2 Design\CAD\PlanSheets\C4.0 UTILITY PLAN.dwg UTILITY PLAN May 23, 2016 8:06am by: tom.szafranski
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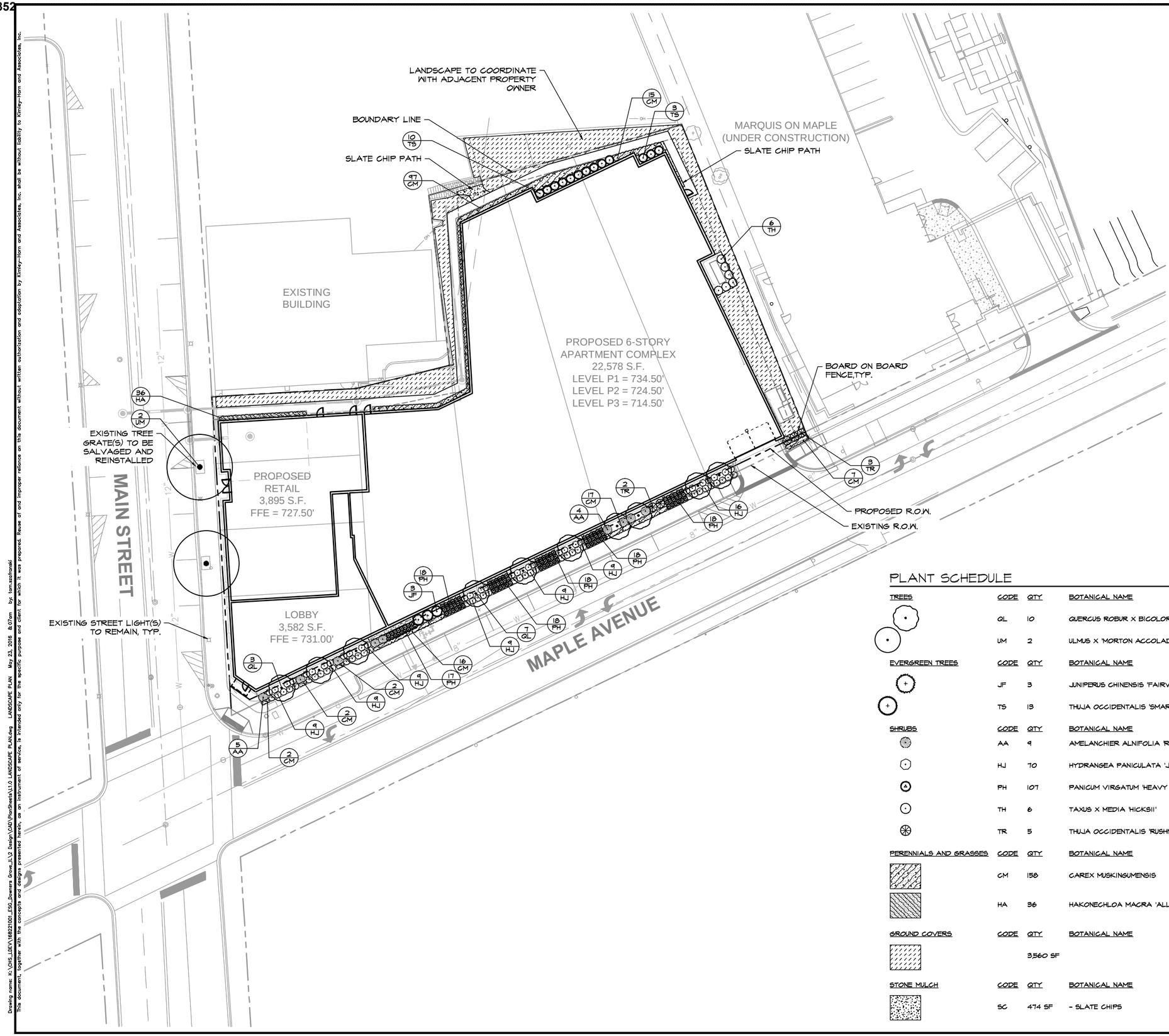

Call Before You Dig
JULIE
1-800-892-0123

NORTH

GRAPHIC SCALE IN FEET
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PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL
	QL	10	QUERCUS ROBUR X BICOLOR 'LONG'	REGAL PRINCE OAK	B & B	2.5" CAL MIN
	UM	2	ULMUS X 'MORTON ACCOLADE' TM	ELM	B & B	2.5" CAL MIN
EVERGREEN TREES	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CAL**
	JF	3	JUNIPERUS CHINENSIS 'FAIRVIEW'	FAIRVIEW JUNIPER	B & B	6' HT
	TS	13	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN ARBORVITAE	B & B	6' HT
SHRUBS	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**SPACING**
	AA	9	AMELANCHIER ALNIFOLIA 'REGENT'	SASKATOON SERVICEBERRY	15 GAL	SEE PLAN
	HJ	70	HYDRANGEA PANICULATA 'JANE'	LITTLE LIME HYDRANGEA	5 GAL	SEE PLAN
	PH	107	PANICUM VIRGATUM 'HEAVY METAL'	BLUE SWITCH GRASS	3 GAL	SEE PLAN
	TH	6	TAXUS X MEDIA 'HICKSII'	HICKS YEW	5 GAL	SEE PLAN
	TR	5	THUJA OCCIDENTALIS 'RUSHMORE'	AMERICAN ARBORVITAE	B & B	SEE PLAN
PERENNIALS AND GRASSES	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**SPACING**
	CM	158	CAREX MUSKINGUMENSIS	PALM SEDGE	1 GAL	24" OC
	HA	36	HAKONECHLOA MACRA 'ALL GOLD'	JAPANESE FOREST GRASS	1 GAL	18" OC
GROUND COVERS	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**SIZE**
		3,560 SF		SOD	SOD	
STONE MULCH	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**SIZE**
	SC	474 SF	- SLATE CHIPS	'BLACK'	COVER	VARIES

No.	REVISIONS	DATE	BY
1	PER VILLAGE COMMENTS	05/23/16	JJK

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WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: LJ
DRAWN BY: LJ
CHECKED BY: KD

esg TrammellCrow Company

LANDSCAPE PLAN

MAPLE & MAIN
DOWNERS GROVE, IL

ORIGINAL ISSUE: 05/02/2016
KHA PROJECT NO. 168221001
SHEET NUMBER
L1.0

Drawing name: K:\DHS_LDEV\168221001_ESG_Downers Grove_IL\2 Design\CAD\PlanSheets\L1.0 LANDSCAPE PLAN.dwg LANDSCAPE PLAN May 23, 2016 8:07am by: tom.szafranski
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FINAL PLAT OF SUBDIVISION

HIGH STREET ON MAIN STREET SUBDIVISION

TO CONSOLIDATE LOTS

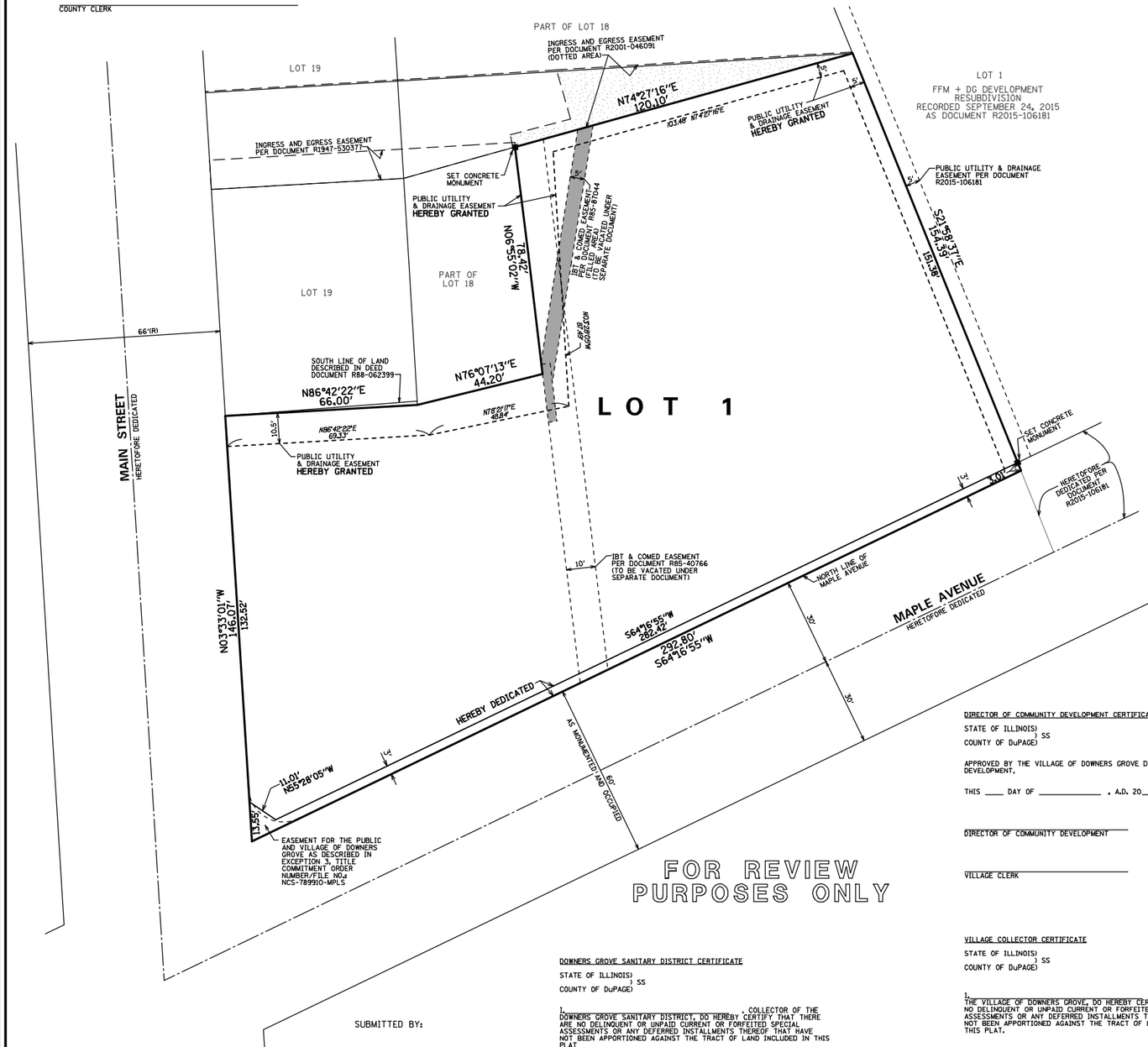
PART OF THE SOUTHWEST 1/4 OF SECTION 8, TOWNSHIP 38 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ALL IN DUPAGE COUNTY, ILLINOIS

(NEW LOT LAYOUT AND EASEMENTS)

LOT	SQ FT.	ACRES
1	37,039	0.850
RIGHT OF WAY	922	0.021
TOTAL	37,961	0.871

COMMON ADDRESS:
1000 MAPLE AVENUE
DOWNERS GROVE, IL 60515

P.I.N.:
09-08-306-017
09-08-306-018
09-08-306-019
09-08-306-020
09-08-306-027
09-08-306-028
09-08-306-029
09-08-306-030



FOR REVIEW PURPOSES ONLY

SUBMITTED BY:

PREPARED FOR:
KIMLEY-HORN
1001 WARRENVILLE ROAD
SUITE 350
LISLE, ILLINOIS 60532

COUNTY CLERK CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF DuPAGE)

I, _____, COUNTY CLERK OF DUPAGE COUNTY, ILLINOIS, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT GENERAL TAXES, NO UNPAID FORFEITED TAXES AND NO REDEEMABLE TAX SALES AGAINST ANY OF THE LAND INCLUDED IN THIS PLAT. I FURTHER CERTIFY THAT I HAVE RECEIVED ALL STATUTORY FEES IN CONNECTION WITH THIS PLAT.

GIVEN UNDER MY HAND AND SEAL OF THE COUNTY CLERK OF DUPAGE COUNTY, ILLINOIS,

THIS ____ DAY OF _____ , A.D. 20_____ .

_____
COUNTY CLERK

RECORDER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF DuPAGE)

THIS PLAT WAS FILED FOR RECORD IN THE RECORDER'S OFFICE OF DUPAGE COUNTY, ILLINOIS, ON

THIS ____ DAY OF _____ , A.D. 20_____ , AT_____

O'CLOCK___ M. AS DOCUMENT NUMBER_____ .

_____
RECORDER OF DEEDS

DOWNERS GROVE SANITARY DISTRICT CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF DuPAGE)

I, _____ , COLLECTOR OF THE DOWNERS GROVE SANITARY DISTRICT, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT OR UNPAID CURRENT OR FORFEITED SPECIAL ASSESSMENTS OR ANY DEFERRED INSTALLMENTS THEREOF THAT HAVE NOT BEEN APPORTIONED AGAINST THE TRACT OF LAND INCLUDED IN THIS PLAT

DATED THIS ____ DAY OF _____ , A.D. 20_____ .

_____
DOWNERS GROVE SANITARY DISTRICT COLLECTOR

DIRECTOR OF COMMUNITY DEVELOPMENT CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF DuPAGE)

APPROVED BY THE VILLAGE OF DOWNERS GROVE DIRECTOR OF COMMUNITY DEVELOPMENT,

THIS ____ DAY OF _____ , A.D. 20_____ .

_____
DIRECTOR OF COMMUNITY DEVELOPMENT

_____
VILLAGE CLERK

VILLAGE COLLECTOR CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF DuPAGE)

I, _____ , COLLECTOR FOR THE VILLAGE OF DOWNERS GROVE, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT OR UNPAID CURRENT OR FORFEITED SPECIAL ASSESSMENTS OR ANY DEFERRED INSTALLMENTS THEREOF THAT HAVE NOT BEEN APPORTIONED AGAINST THE TRACT OF LAND, INCLUDED IN THIS PLAT.

DATE:_____

_____
VILLAGE COLLECTOR

OWNER'S CERTIFICATE

STATE OF _____)
) SS
COUNTY OF _____)

_____ HEREBY CERTIFY THAT IT IS THE OWNER OF THE HEREON DESCRIBED PROPERTY AND IT HAS CAUSED THE SAME TO BE SURVEYED AND SUBDIVIDED AS SHOWN ON THE PLAT HEREON DRAWN.

DATED THIS ____ DAY OF _____ , 20____.

_____
OWNER

ADDRESS:

_____

_____

_____

NOTARY'S CERTIFICATE

STATE OF_____)
) SS
COUNTY OF _____)

I, _____ , A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT

_____ PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNER, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE/SHE SIGNED AND DELIVERED THE ANNEXED PLAT AS HIS/HER OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH

GIVEN UNDER MY HAND AND NOTARIAL SEAL

THIS ____ DAY OF _____ , A.D. 20 ____ .

_____
NOTARY PUBLIC

MY COMMISSION EXPIRES: _____

SCHOOL DISTRICT CERTIFICATE

STATE OF_____)
) SS
COUNTY OF _____)

THE UNDERSIGNED DO HEREBY CERTIFY THAT, AS OWNERS OF THE PROPERTY DESCRIBED HEREON, AND KNOWN AS "HIGH STREET ON MAIN STREET SUBDIVISION" TO THE BEST OF OUR KNOWLEDGE, IS LOCATED WITHIN THE BOUNDARIES OF HIGH SCHOOL DISTRICT 99, AND DOWNERS GROVE 58 ELEMENTARY SCHOOL DISTRICT IN DUPAGE COUNTY, ILLINOIS.

DATED AT_____ , _____

THIS ____ DAY OF _____ , A.D. 20_____ .

_____
OWNER

ADDRESS:

_____

_____

_____

DRAINAGE CERTIFICATE

I, _____ , A REGISTERED PROFESSIONAL ENGINEER IN ILLINOIS AND_____ , THE OWNER OF THE LAND DEPICTED HEREON OR HIS DULY AUTHORIZED ATTORNEY, DO HEREBY STATE, THAT TO THE BEST OF OUR KNOWLEDGE AND BELIEF, REASONABLE PROVISION HAS BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH SURFACE WATERS AND PUBLIC AREAS, OR DRAINS WHICH THE SUBDIVIDER HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL BE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES SO AS TO REDUCE THE LIKELIHOOD OF DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION. FURTHER, AS ENGINEER, I HEREBY CERTIFY THAT THE PROPERTY WHICH IS THE SUBJECT OF THIS SUBDIVISION OR ANY PART THEREOF IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA AS IDENTIFIED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

DATED THIS ____ DAY OF _____ , 20____.

OWNER (OR ATTORNEY)

_____

NAME: _____

REGISTERED PROFESSIONAL ENGINEER

_____

LICENSE EXPIRES: _____

Declaration of Restrictive Covenants:

The undersigned owner hereby declares that the real property described in and depicted on this plat of subdivision shall be held, transferred, sold, conveyed and occupied subject to the following covenants and restrictions:

(a) All public utility structures and facilities, whether located on public or private property, shall be constructed wholly underground, except for transformers, transformer pads, light poles, regulators, valves, markers and similar structures approved by the Village Engineer of the Village of Downers Grove prior to recording of this plat of subdivision.

(b) An easement for serving the subdivision, and other property with storm drainage, sanitary sewer, street lighting, potable water service and other public utility services, is hereby reserved for and granted to the Village of Downers Grove and Downers Grove Sanitary District, their respective successors and assigns, jointly and separately, to install, operate and maintain and remove, from time to time, facilities and equipment used in connection with the public water supply, transmission lines, sanitary sewers, storm drainage system, street lighting system, or other public utility service, and their appurtenances, either on, over, across, below or through the ground shown within the dotted lines on the plat marked Public Utility and/or Drainage Easement, or similar language designating a stormwater or sewer easement, and the property designated on the plat for streets and alleys, together with the right to cut, trim or remove trees, bushes and roots as may be reasonably required incident to the rights herein given, and the right to enter upon the subdivided property for all such purposes. Obstructions shall not be placed over grantees facilities or in, upon or over, the property within the stormwater or sewer easement without the prior written consent of grantees. After installation of any such facilities, the grade of the subdivided property shall not be altered in a manner so as to interfere with the proper operation and maintenance thereof.

Whereas, said lots will be conveyed to purchasers subject to this declaration to the end that the restrictions imposed shall inure to the benefit of each and all of the purchasers of such lots whether they shall have become such before or after the date thereof, and their respective heirs and assigns, and

Whereas, the aforesaid property described on the attached plat is located entirely within the corporate limits of the Village of Downers Grove, Illinois, and

Whereas, all of the provisions, restrictions, conditions, covenants, agreements, and charges herein contained shall run with and bind all of said lots and land and shall inure to the benefit of, and be enforceable by the Village of Downers Grove, Illinois, and the owners or owner of any of the lots of land comprised within said plat, and their respective heirs, executors, administrators, successors and assigns.

Now, therefore, all persons, firms or corporations now owning the aforesaid property do covenant and agree that they or any person, firm or corporation hereafter acquiring any property or lots shown upon the attached plat of subdivision are hereby subjected to the following restrictions running with said property to whomsoever owned, to wit:
1. No improvements shall be made in or upon the stormwater easement, including detention or retention areas, as described in the plat of subdivision, except for landscape installation of trees, shrubs, bushes and grass and the installation of underground utility lines and driveways.

2. Each owner or purchaser shall be responsible for maintaining the stormwater easement, including detention or retention areas, applicable to his lot in such manner as to insure the free and uninterrupted flow of storm water through the drainage system of the subdivision, and shall not destroy or modify grades or slopes without having first received prior written approval of the Village of Downers Grove, Illinois.

3. In the event any owner or purchaser fails to properly maintain the stormwater easement, including detention or retention areas, the Village of Downers Grove, Illinois, shall upon ten days prior written notice, reserve the right to perform, or have performed on its behalf, any maintenance work to or upon the stormwater easement, including detention or retention areas, reasonably necessary to insure adequate stormwater storage and free flow of stormwater through the stormwater easement, including detention or retention areas.

4. In the event the Village of Downers Grove, Illinois, shall be required to perform, or have performed on its behalf, any maintenance work to or upon the stormwater easement, including detention or retention areas, the cost together with the additional sum of ten percent shall, upon recordation of a notice of lien within sixty days of completion of the work, constitute a lien against this lot which may be foreclosed by an action brought by or on behalf of the Village of Downers Grove, Illinois.

5. The aforesaid restrictions and covenants, and each and every one of them, are hereby expressly made an essential part of this instrument, and shall be and remain of perpetual efficacy and obligation in respect to the said premises and the parties herein designated, their and each of their successors, heirs, and assigns.

In witness whereof, the owners have set their hands upon the attached plat the day and date first written thereon.

_____
OWNER

_____
PRINTED NAME

ADDRESS:

_____

_____

_____

NOTARY'S CERTIFICATE

STATE OF_____)
) SS
COUNTY OF _____)

I, _____ , A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT

_____ PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNER, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE/SHE SIGNED AND DELIVERED THE ANNEXED PLAT AS HIS/HER OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH

GIVEN UNDER MY HAND AND NOTARIAL SEAL

THIS ____ DAY OF _____ , A.D. 20 ____ .

_____
NOTARY PUBLIC

MY COMMISSION EXPIRES: _____

REVISIONS:
05/20/2016

SPACECO INC.

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

DATE: 04/29/2016
JOB NO: 9291
FILENAME: 9291SUB-01
SHEET 1 OF 2

N:\Projects\9291\SURVEY\9291SUB-01.dgn Default User=seekalich

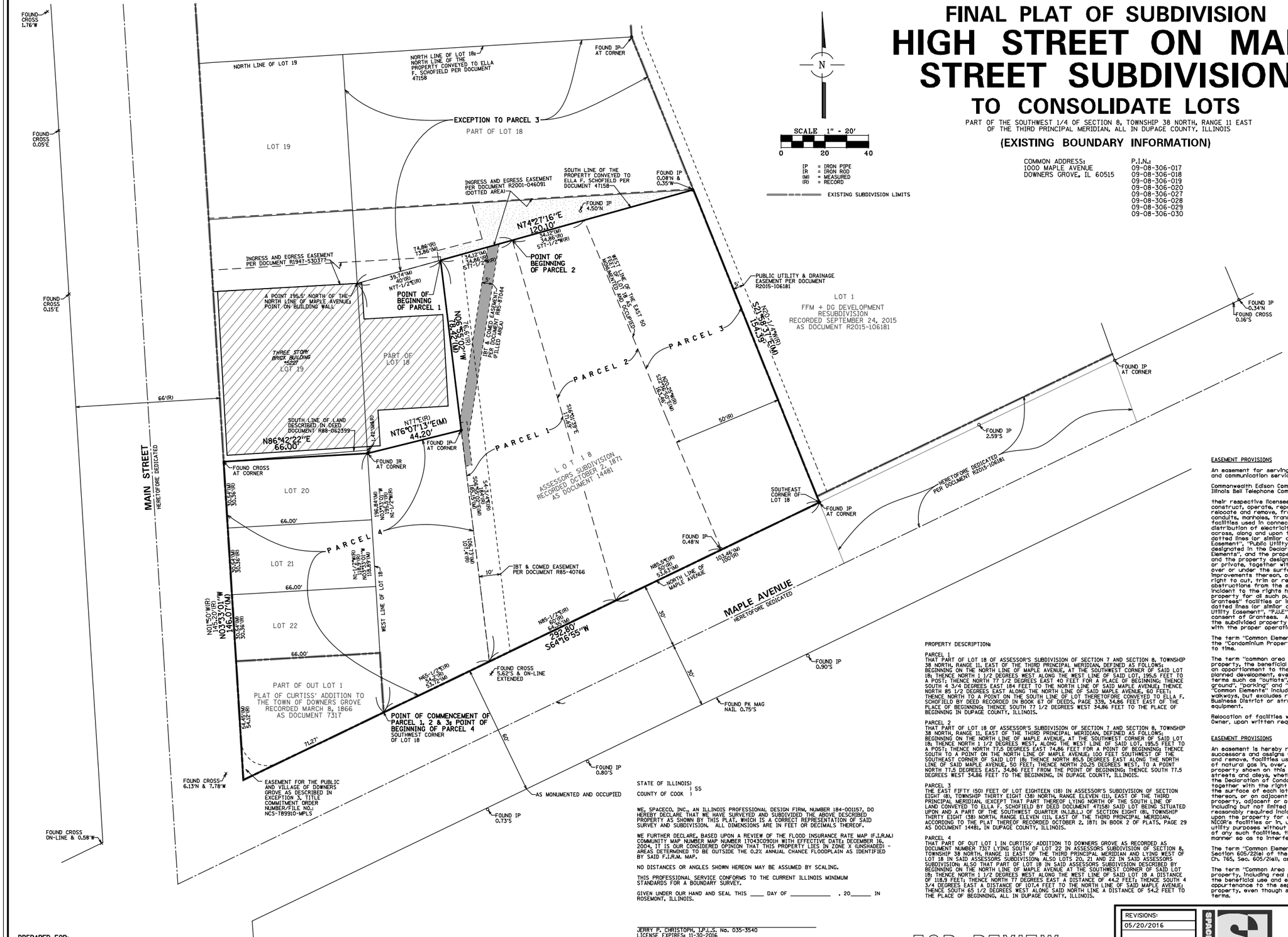
FINAL PLAT OF SUBDIVISION
HIGH STREET ON MAIN STREET SUBDIVISION
TO CONSOLIDATE LOTS

PART OF THE SOUTHWEST 1/4 OF SECTION 8, TOWNSHIP 38 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ALL IN DUPAGE COUNTY, ILLINOIS

(EXISTING BOUNDARY INFORMATION)

COMMON ADDRESS:
1000 MAPLE AVENUE
DOWNERS GROVE, IL 60515

P.I.N.:
09-08-306-017
09-08-306-018
09-08-306-019
09-08-306-020
09-08-306-027
09-08-306-028
09-08-306-029
09-08-306-030



PREPARED FOR:
KIMLEY-HORN
1001 WARRENVILLE ROAD
SUITE 350
LISLE, ILLINOIS 60532

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

WE, SPACECO, INC., AN ILLINOIS PROFESSIONAL DESIGN FIRM, NUMBER 184-001157, DO HEREBY DECLARE THAT WE HAVE SURVEYED AND SUBDIVIDED THE ABOVE DESCRIBED PROPERTY AS SHOWN BY THIS PLAT, WHICH IS A CORRECT REPRESENTATION OF SAID SURVEY AND SUBDIVISION. ALL DIMENSIONS ARE IN FEET OR DECIMALS THEREOF.

WE FURTHER DECLARE, BASED UPON A REVIEW OF THE FLOOD INSURANCE RATE MAP (F.I.R.M.) COMMUNITY MAP NUMBER MAP NUMBER 17043C0930H WITH EFFECTIVE DATE: DECEMBER 16, 2004, IT IS OUR CONSIDERED OPINION THAT THIS PROPERTY LIES IN ZONE X (UNSHADED) - AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN AS IDENTIFIED BY SAID F.I.R.M. MAP.

NO DISTANCES OR ANGLES SHOWN HEREON MAY BE ASSUMED BY SCALING.

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

GIVEN UNDER OUR HAND AND SEAL THIS ____ DAY OF _____ , 20_____ IN ROSEMONT, ILLINOIS.

_____
JERRY P. CHRISTOPH, I.P.L.S. No. 035-3540
LICENSE EXPIRES: 11-30-2016

(VALID ONLY IF EMBOSSED SEAL AFFIXED)

COMPARE ALL DIMENSIONS BEFORE BUILDING AND REPORT ANY DISCREPANCIES AT ONCE. REFER TO DEED OR TITLE POLICY FOR BUILDING LINES AND EASEMENTS.

PROPERTY DESCRIPTION:

PARCEL 1
THAT PART OF LOT 18 OF ASSESSOR'S SUBDIVISION OF SECTION 7 AND SECTION 8, TOWNSHIP 38 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DEFINED AS FOLLOWS: BEGINNING ON THE NORTH LINE OF MAPLE AVENUE, AT THE SOUTHWEST CORNER OF SAID LOT 18; THENCE NORTH 1 1/2 DEGREES WEST ALONG THE WEST LINE OF SAID LOT, 195.5 FEET TO A POST; THENCE NORTH 77 1/2 DEGREES EAST, 40 FEET FOR A PLACE OF BEGINNING; THENCE SOUTH 4 3/4 DEGREES EAST 184 FEET TO THE NORTH LINE OF SAID MAPLE AVENUE; THENCE NORTH 85 1/2 DEGREES EAST ALONG THE NORTH LINE OF SAID MAPLE AVENUE, 60 FEET; THENCE NORTH TO A POINT ON THE SOUTH LINE OF LOT THERETOFORE CONVEYED TO ELLA F. SCHOFIELD BY DEED RECORDED IN BOOK 67 OF DEEDS, PAGE 339, 34.86 FEET EAST OF THE PLACE OF BEGINNING; THENCE SOUTH 77 1/2 DEGREES WEST 34.86 FEET TO THE PLACE OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

PARCEL 2
THAT PART OF LOT 18 OF ASSESSOR'S SUBDIVISION OF SECTION 7 AND SECTION 8, TOWNSHIP 38 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DEFINED AS FOLLOWS; BEGINNING ON THE NORTH LINE OF MAPLE AVENUE, AT THE SOUTHWEST CORNER OF SAID LOT 18; THENCE NORTH 1 1/2 DEGREES WEST, ALONG THE WEST LINE OF SAID LOT, 195.5 FEET TO A POST; THENCE NORTH 77.5 DEGREES EAST 74.86 FEET FOR A POINT OF BEGINNING; THENCE SOUTH TO A POINT ON THE NORTH LINE OF MAPLE AVENUE; 100 FEET SOUTHWEST OF THE SOUTHEAST CORNER OF SAID LOT 18; THENCE NORTH 85.5 DEGREES EAST ALONG THE NORTH LINE OF SAID MAPLE AVENUE, 50 FEET; THENCE NORTH 20.25 DEGREES WEST, TO A POINT NORTH 77.5 DEGREES EAST, 34.86 FEET FROM THE POINT OF BEGINNING; THENCE SOUTH 77.5 DEGREES WEST 34.86 FEET TO THE BEGINNING, IN DUPAGE COUNTY, ILLINOIS.

PARCEL 3
THE EAST FIFTY (50) FEET OF LOT EIGHTEEN (18) IN ASSESSOR'S SUBDIVISION OF SECTION EIGHT (8), TOWNSHIP THIRTY EIGHT (38) NORTH, RANGE ELEVEN (11), EAST OF THE THIRD PRINCIPAL MERIDIAN, (EXCEPT THAT PART THEREOF LYING NORTH OF THE SOUTH LINE OF LAND CONVEYED TO ELLA F. SCHOFIELD BY DEED DOCUMENT 47158) SAID LOT BEING SITUATED UPON AND A PART OF THE SOUTHWEST QUARTER (N.E.&.L.) OF SECTION EIGHT (8), TOWNSHIP THIRTY EIGHT (38) NORTH, RANGE ELEVEN (11), EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED OCTOBER 2, 1871 IN BOOK 2 OF PLATS, PAGE 29 AS DOCUMENT 1448), IN DUPAGE COUNTY, ILLINOIS.

PARCEL 4
THAT PART OF OUT LOT 1 IN CURTISS' ADDITION TO DOWNERS GROVE AS RECORDED AS DOCUMENT NUMBER 7317 LYING SOUTH OF LOT 22 IN ASSESSORS SUBDIVISION OF SECTION 8, TOWNSHIP 38 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN AND LYING WEST OF LOT 18 IN SAID ASSESSORS SUBDIVISION, ALSO LOTS 20, 21 AND 22 IN SAID ASSESSORS SUBDIVISION; ALSO THAT PART OF LOT 18 IN SAID ASSESSORS SUBDIVISION DESCRIBED BY BEGINNING ON THE NORTH LINE OF MAPLE AVENUE AT THE SOUTHWEST CORNER OF SAID LOT 18; THENCE NORTH 1 1/2 DEGREES WEST ALONG THE WEST LINE OF SAID LOT 18 A DISTANCE OF 118.9 FEET; THENCE NORTH 77 DEGREES EAST A DISTANCE OF 44.2 FEET; THENCE SOUTH 4 3/4 DEGREES EAST A DISTANCE OF 107.4 FEET TO THE NORTH LINE OF SAID MAPLE AVENUE; THENCE SOUTH 85 1/2 DEGREES WEST ALONG SAID NORTH LINE A DISTANCE OF 54.2 FEET TO THE PLACE OF BEGINNING, ALL IN DUPAGE COUNTY, ILLINOIS.

EASEMENT PROVISIONS

An easement for serving the subdivision and other property with electric and communication service is hereby reserved for and granted to

Commonwealth Edison Company and AT&T Teleholdings Incorporated, Illinois a.k.a. Illinois Bell Telephone Company, Grantees,

their respective licensees, successors and assigns jointly and severally, to construct, operate, repair, maintain, modify, reconstruct, replace, supplement, relocate and remove, from time to time, poles, guys, anchors, wires, cables, conduits, manholes, transformers, pedestals, equipment cabinets or other facilities used in connection with overhead and underground transmission and distribution of electricity, communications, sounds and signals in, over, under, across, along and upon the surface of the property shown within the dashed or dotted lines (or similar designation) on the plat and marked "Easement", "Utility Easement", "Public Utility Easement", "P.U.E" (or similar designation), the property designated in the Declaration of Condominium and/or on this plat as "Common Elements", and the property designated on the plat as "common area or areas", and the property designated on the plat for streets and alleys, whether public or private, together with the rights to install required service connections over or under the surface of each lot and common area or areas to serve improvements thereon, or on adjacent lots, and common area or areas, the right to cut, trim or remove trees, bushes, roots and saplings and to clear obstructions from the surface and subsurface as may be reasonably required incident to the rights herein given, and the right to enter upon the subdivided property for all such purposes. Obstructions shall not be placed over Grantees' facilities or in, upon or over the property within the dashed or dotted lines (or similar designation) marked "Easement", "Utility Easement", "Public Utility Easement", "P.U.E" (or similar designation) without the prior written consent of Grantees. After installation of any such facilities, the grade of the subdivided property shall not be altered in a manner so as to interfere with the proper operation and maintenance thereof.

The term "Common Elements" shall have the meaning set forth for such term in the "Condominium Property Act", Chapter 765 ILCS 605/2(c), as amended from time to time.

The term "common area or areas" is defined as a lot, parcel or area of real property, the beneficial use and enjoyment of which is reserved in whole or as an appurtenment to the separately owned lots, parcels or areas within the planned development, even though such be otherwise designated on the plat by terms such as "outlots", "common elements", "open space", "open area", "common ground", "parking" and "common area". The term "common area or areas", and "Common Elements" include real property surfaced with interior driveways and walkways, but excludes real property physicaly occupied by building, service Business District or structures such as a pool, retention pond or mechanical equipment.

Relocation of facilities will be done by Grantees at cost of the Grantor/Lot Owner, upon written request.

EASEMENT PROVISIONS

An easement is hereby reserved for and granted to NICOR GAS COMPANY, its successors and assigns ("NI-Gas") to install, operate, maintain, repair, replace and remove, facilities used in connection with the transmission and distribution of natural gas in, over, under, across, along and upon the surface of the property shown on this plat marked "Easement", "Common Area or Areas" and streets and alleys, whether public or private, and the property designated in the Declaration of Condominium and/or on this plat as "Common Elements" together with the right to install required service connections over or under the surface of each lot and Common Area or Areas to serve improvements thereon, or on adjacent lots, and Common Area or Areas, and to serve other property, adjacent or otherwise, and the right to remove obstructions, including but not limited to, trees, bushes, roots and fences, as may be reasonably required incident to the rights herein given, and the right to enter upon the property for all such purposes. Obstructions shall not be placed over NICOR's facilities or in, upon or over the property identified on this plat for utility purposes without the prior written consent of NICOR. After installation of any such facilities, the grade of the property shall not be altered in a manner so as to interfere with the proper operation and maintenance thereof.

The term "Common Elements" shall have that meaning set forth for such term in Section 605/22(e) of the "Condominium Property Act" (Illinois Compiled Statutes, Ch. 765, Sec. 605/2(e)), as amended from time to time.

The term "Common Area or Areas" is defined as a lot, parcel or area of real property, including real property surfaced with interior driveways and walkways, the beneficial use and enjoyment of which is reserved in whole as an appurtenance to the separately owned lots, parcels or areas within the property, even though such areas may be designated on this plat by other terms.

FOR REVIEW PURPOSES ONLY

REVISIONS:
05/20/2016

SPACECO INC.

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

DATE: 04/29/2016
JOB NO: 9291
FILENAME: 9291SUB-01
SHEET 2 OF 2

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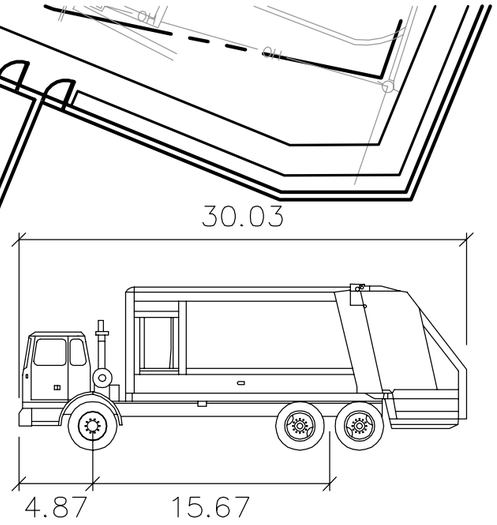
GARBAGE TRUCK ENTERING & LEAVING LOADING ZONE

PROPOSED 6-STORY APARTMENT COMPLEX
22,578 S.F.
FFE = 734.50'
LEVEL P1 = 724.50'
LEVEL P2 = 714.50'



Heil DuraPack 5000

feet

Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 45.0

Kimley»Horn
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1001 WARRENVILLE ROAD, SUITE 350, LISLE, IL 60532
PHONE: 630-487-5550 WWW.KIMLEY-HORN.COM

05/23/2016

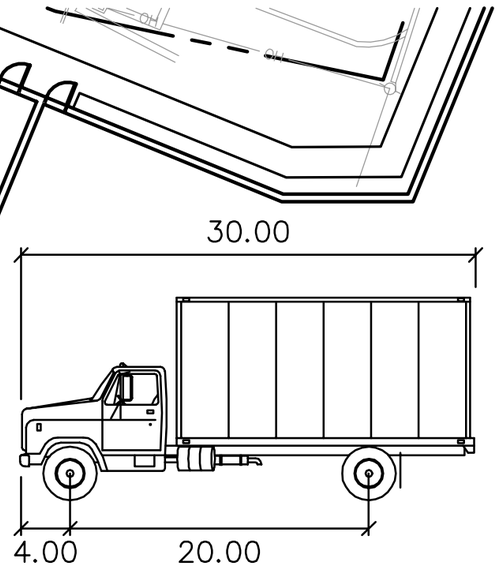
GARBAGE TRUCK AUTOTURN EXHIBIT

MAPLE & MAIN, DOWNERS GROVE, IL

SHEET NUMBER
EX. 1

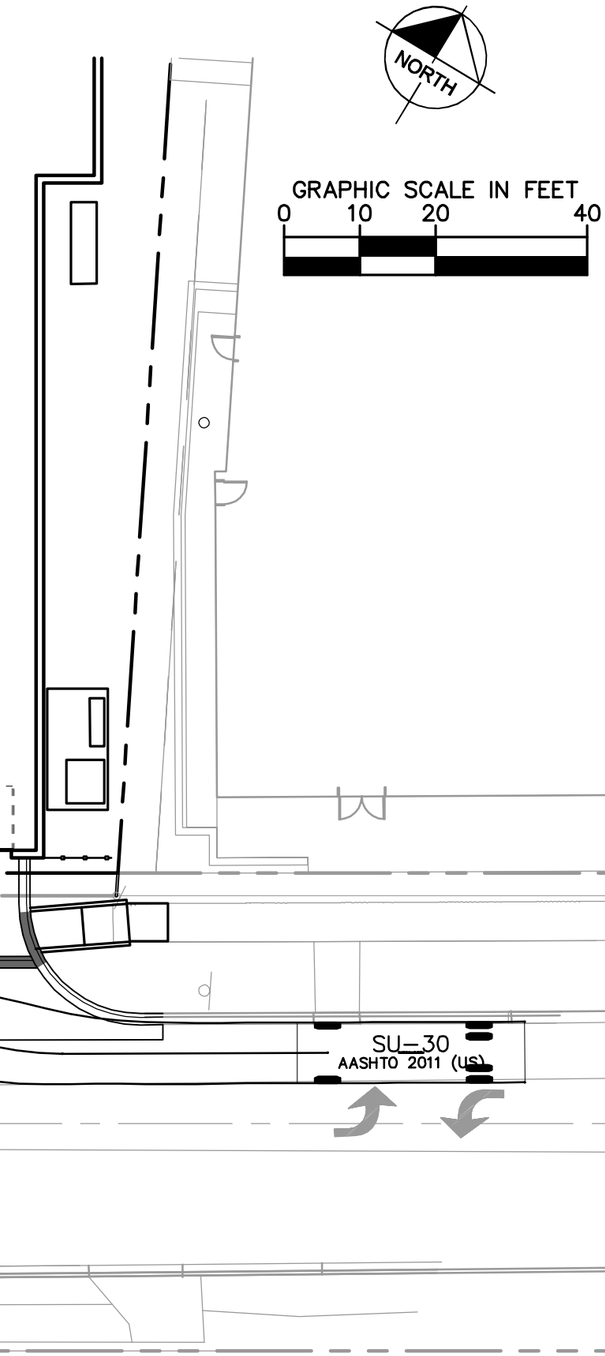
MOVING TRUCK ENTERING & LEAVING LOADING ZONE

PROPOSED 6-STORY APARTMENT COMPLEX
22,578 S.F.
FFE = 734.50'
LEVEL P1 = 724.50'
LEVEL P2 = 714.50'



SU–30 feet

Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.8



Kimley»Horn

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1001 WARRENVILLE ROAD, SUITE 350, LISLE, IL 60532
PHONE: 630–487–5550 WWW.KIMLEY–HORN.COM

05/23/2016

MOVING TRUCK AUTOTURN EXHIBIT

MAPLE & MAIN, DOWNERS GROVE, IL

SHEET NUMBER
EX. 2

elness swenson graham architects inc.

PROJECT NAME: **Maple & Main Apartments**

ATTENDEES*: Grady Hamilton – High Street Residential
John Carlson – High Street Residential
Mary Lucas – High Street Residential
David Paino – High Street Residential
Aaron Roseth – ESG Architects
Gretchen Camp – ESG Architects
Jared Kenyon – Kimley-Horn
Tim Sjoegren – Kimley-Horn

*See enclosed sign-in sheet for residents in attendance

SUBMITTED BY: Developer – High Street Residential

MEETING DATE: May 24, 2016

PURPOSE: Downers Grove Neighborhood Meeting

Item		Resp. Party	Date Req.
1.01	Overview of project team, company history and project experience by Grady Hamilton and Johnny Carlson.	Info	
1.02	Review of project plans and building design by Aaron Roseth and Gretchen Camp.	Info	
	Questions/Comments from Residents		
1.03	Is the parking in the garage public? *-It will be for residents (and resident visitors)*	Info	
1.04	Will the corner of Maple & Main sidewalk encroach on street? *-No, the sidewalk corner curb will remain in the same place.*	Info	
1.05	Will the parking stalls on Main St. remain? *-Yes.*	Info	
1.06	How do you handle move ins? *-There are two designated stalls on Maple for move ins.*	Info	
1.07	Will there be enough parking? *-Yes. Our parking ratio is 1.4, which is consistent with code.*	Info	
1.08	Is the retail two levels? *-No, the retail is one level, but has higher ceilings because of grade change.*	Info	
1.09	Will there be any low income residents? *-The building is market-rate.*	Info	
1.10	What is our target demographic? - *We believe the project will attract tenants looking for luxury amenity rich living. Many young professionals, married couples not ready to buy a home and empty nesters looking for ease of living.*	Info	
1.11	Will you limit the maximum occupants allowed in each unit? What are the specific occupant limits? - *High Street Residential contracts with a third-party professional*	**High Street Residential**	**5/31/16**

Item Ref.	Notes	Action By	Date Req'd.
	management company – In the lease form, it provides for occupant restrictions and income qualifications for a specific unit type. This is standard practice at all of our properties. ***TCC sent this information to the attendee inquiring on 5/25/16 per separate email. TCC will provide this to the Village staff prior to the Planning Commission Hearing.***		
1.12	Concerned about traffic issues, especially with the addition of the condo next door (in addition to this apartment bldg.) *Tim Sjogren provided a summary of the traffic impact study completed by Kimley-Horn. He confirmed that the projections include additional growth around the subject site, including the condo demand to the east, and his findings prove that there will be no material impact to the existing infrastructure. Tim also mentioned that these are typical conditions and challenges of any downtown development.*	Info	
1.13	What is the plan for stormwater management? What type of flooding events did you look at? *-The civil plans submitted include a stormwater vault that will collect water and release it at a regulated rate. The stormwater vault is sized to handle a 100 year storm event (up to 7.58 inches of rain in a 24 hour period).*	Info	
1.14	The parking stalls you are showing on Maple, how does that work? Do the existing drive lanes remain the same? *-The existing drive lanes will remain in place on Maple Avenue. The on-street parking stalls (as part of the new development) will be located in the Village right of way (ROW), outside of the existing drive lanes. The current drive lanes will not be encroached on as the subject site provided the Village with additional land/ROW as part of this development (moved lot line to give Village more land).*	Info	
1.15	How far is your proposed curb cut from the intersection? - *Approximately 250 feet.*	Info	
1.16	Will there be landscaping along Maple? - *Yes. The landscape plans submitted include this area being heavily landscaped.*	Info	
1.17	What will be the noise control for the pool deck? Will you allow memberships for the pool? *-The building will be professionally managed with on-site management, including security cameras. There will be hours of operations for the indoor and outdoor community areas, so our residents and neighboring property owners are not disrupted during evening and morning hours. No outside memberships to the pool or community spaces will be offered. These areas are for residents and resident guests only.*	Info	
1.18	Are you allowing dogs in the building? - *Yes. There will be size and breed restrictions.*	Info	
1.19	What type of construction is this? Aren't there noise concerns with a wood-framed building? *-Construction Type I-A parking garage with two levels underground along with a single story above grade plane of Construction Type I-A. In addition, there are 5 stories of Construction Type III on top of the I-A making the structure six stories above grade plane. The Type III structure is separated from the Type I-A with a 3-HR horizontal separation. This is the same construction type that we have administered on all of our luxury projects around the country. We forensically design and construct the building so there are no issues with noise. Most importantly, we strictly follow the IIC and SIC guidelines and regulations.*	Info	

Item Ref.	Notes	Action By	Date Req'd.
1.20	This is a great project, but are you eliminating the surface parking lot? Were other retailers notified that the parking lot is going away? This is a major asset for business owners and it is a concern that it will be taken away. This is a bigger picture concern. The project is beautiful, but my opposition to the project would be the loss of parking. It is assumed that resident guests will use the added parallel stalls. - ***Kimley-Horn studied the parking supply and demand of the surrounding area. The loss of the parking lot can be adequately handled within the Village parking garage. The Village staff will address this in further detail at the Planning Commission Hearing.***	**Village staff**	**6/6/16**
1.21	Does the Traffic Study show the back-up of vehicles that occurs during peak times on Maple Avenue? What are the findings? Turning left into the apartment building and turning left out will be very difficult. *Kimley-Horn stated that these are typical movements in a downtown and they are not a concern.* ***Kimley-Horn will provide more detailed information about vehicle back-ups at the Planning Commission Hearing.***	**Kimley-Horn**	**6/6/16**
1.22	Can't make a left onto Maple any time I try to get out of the existing surface parking lot. *-Noted. This movement is included in our Traffic Impact Study.*	Info	
1.23	Where are you in the process? - *Planning Commission Hearing on June 6th and Board Hearing on July 5th. (two board meetings required to be fully-entitled)*	Info	
1.24	What is the height limit? - *Code compliant - 70 feet.*	Info	
1.25	Disappointed with wood construction; think it is an inferior building type. -Noted.	Info	
1.26	How long does TCC retain ownership of their buildings? On average. Who is your partner for this project? Do you have financing lined up? *-High Street Residential partners with institutional equity and debt providers to deliver a class A luxury product. Every project is unique from an ownership and hold period; TCC has a joint venture partner selected for this project.*	Info	
1.27	What you are proposing is lovely. Just concerned about all the new buildings going up and how that impacts traffic. *-Kimley-Horn re-stated the Traffic Impact Study findings. There is no material change to the current conditions with the subject development, the condo building to the east and future growth.*	Info	
1.28	Agree that this is a great project.	Info	
1.29	What is the pricing for the units? *-This ranges based on unit type. Rents will range between $1,500 - $4,000 per month, excluding parking and utilities.*	Info	
1.30	Do you build condo units? - *TCC does develop condo units. We are confident that apartments are the right product for this site.*	Info	
	End of meeting		

MAPLE & MAIN

Traffic Impact and Parking Study

Downers Grove, Illinois

Revised May 2016

Prepared for:

TRAMMELL CROW CHICAGO DEVELOPMENT, INC.

Kimley»Horn

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LIST OF EXHIBITS

EXECUTIVE SUMMARY

Kimley-Horn and Associates, Inc., (Kimley-Horn) was retained by Trammell Crow Chicago Development, Inc., to prepare a traffic impact and parking study for a mixed-use development proposed for the northeast quadrant of the Main Street/Maple Avenue intersection in Downers Grove, Illinois. The development plan includes 115 apartment units, approximately 4,000 square feet of ground floor retail/restaurant space, a 161-stall parking garage, and 10 on-street parking spaces along the site's Maple Avenue and Main Street frontages. Parking garage ingress and egress is planned on Maple Avenue near the eastern site boundary.

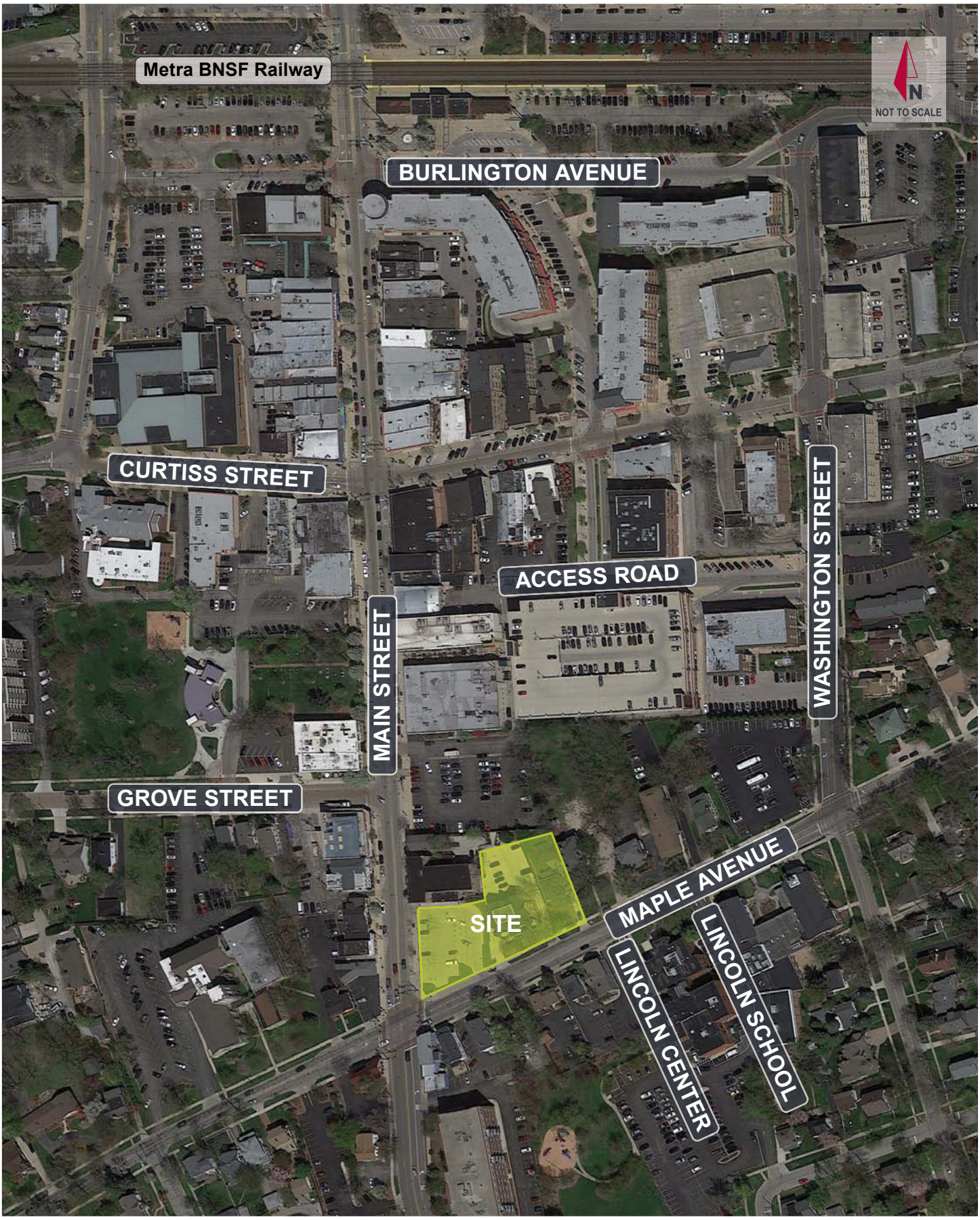
The addition of development traffic is not anticipated to significantly affect future conditions at the study intersections, all of which are projected to operate at an acceptable level of service. Only one approach, the evening peak hour westbound movements on Maple Avenue/Washington Street, shows high delay currently and will continue to in the future. Traffic associated with additional development around the subject site, as well as regional traffic growth along the corridor, are responsible for the vast majority of this delay and would be present even if the proposed development were not built.

Projected future parking utilization was reviewed by adding the observed parking demand at the Main/Maple surface parking lot (which will be displaced as a result of the proposed development) to that in the surrounding parking areas. Based upon this review, it is anticipated that the displaced users can largely be accommodated within the surrounding area while maintaining effective parking conditions. High current demand from daily, permit, and employee users in the existing parking garage suggests there may be some benefit to redesignating a portion of the hourly parking for these users, but the existing configuration is likely to accommodate the parking demand observed.

1. INTRODUCTION

Kimley-Horn and Associates, Inc. (Kimley-Horn) was retained by Trammell Crow Chicago Development, Inc., to prepare a traffic impact and parking study for a mixed-use development proposed for the northeast quadrant of the Main Street/Maple Avenue intersection in Downers Grove, Illinois. The current development plan includes a residential apartment building with first floor retail/restaurant space and a parking garage. Full access to the garage would be provided on Maple Avenue, approximately 315 feet east of its intersection with Main Street. An aerial view of the study location and the surrounding roadway network is presented in **Exhibit 1**.

As a part of this study, the existing network was analyzed to determine the current operations at the study intersections. Site-generated traffic was then added to the projected future opening year and build-plus-five traffic volumes in order to assess the impact of the proposed development on the study intersections and at the proposed garage access driveway. This report presents and documents Kimley-Horn's data collection, summarizes the evaluation of traffic conditions on the surrounding roadways, documents occupancy rates at nearby parking facilities, details the potential impact of site-generated traffic on the adjacent roadway network, and reviews parking occupancy related to the displacement of the Main/Maple surface lot.



Kimley»Horn

EXHIBIT 1
SITE LOCATION MAP

2. EXISTING CONDITIONS

Kimley-Horn conducted a field visit to collect relevant information pertaining to existing land uses in the surrounding area, the adjacent street system, current traffic volumes and operating conditions, parking occupancy data, lane configurations and traffic controls at nearby intersections, and other key roadway characteristics. This section of the report details information on these existing conditions.

2.1. Area Connectivity & Land Uses

The subject site is located within the Village of Downers Grove's Downtown Business (DB) district, approximately a quarter-mile south of the Downers Grove Main Street Metra Station. The site is currently occupied by an office building (which was converted from a large residence), a public parking lot, and a single-family residence. The lot provides 10 Downtown Business (DB) permit parking stalls, 18 three-hour parking stalls, and single handicap parking stall. The intersection of Main Street/Maple Avenue is located within a commercial area, which extends south along Main Street towards Summit Street. A variety of retail uses are located along Main Street north of the site, including restaurants, a barbershop, and specialty retailers, and the area to the south provides a mix of small businesses within converted residential properties, residential and institutional uses, including the Downers Grove Park District Lincoln Center, the First Baptist Church, and the Downers Grove Christian School. The areas to the west and east are primarily residential in use. First United Methodist Church is located on the northwest quadrant of the Main Street/Maple Avenue intersection, across from the subject site. Fishel Park is located north of the site along Grove Street. The Downers Grove public parking garage is located approximately a quarter of a mile northeast of the site (approximate 4 minute walk). Easy access to/from the surrounding interstates is provided within six miles of the site: Interstate 355 (I-355) to the west, I-55 to the south, and I-294 to the east and I-88 to the north. In addition, access to United State Route 34 (US 34/Ogden Avenue) is provided approximately a mile north along Main Street and access to Illinois Route 83 (IL-83/Kingery Highway) is provided less than four miles to the east.

2.2. Existing Roadway Characteristics

The study area roadways within the vicinity of the proposed development include Main Street, Maple Avenue, Grove Street, and Washington Street. Descriptions of each roadway are summarized below.

Main Street is a north-south roadway that generally provides one travel lane in each direction. On-street parking is provided on the roadway north of Maple Avenue through the study area. At its signalized intersection with Maple Avenue, the north leg of Main Street provides an exclusive left-turn lane, shared through/right-turn lane, and a single receiving lane. The south leg provides a shared left-turn/through lane, an exclusive right-turn lane and two receiving lanes. It should be noted that northbound left turns are prohibited at the intersection during the weekday peak periods; however, since vehicles were observed making this movement during field observations, it is included in the analysis. At its intersection with Grove Street, Main Street provides a shared left-turn/through with a single receiving lane on its south leg and a shared through/right-turn leg with a single receiving lane on its north leg. A 25 mile per hour (MPH) speed limit is posted in the study area. Through the study area, the roadway is under the jurisdiction of the Village of Downers Grove.

Maple Avenue is a northeast-southwest roadway under the jurisdiction of the Village of Downers Grove that generally provides one lane in each direction. A three-lane cross-section provided between Main Street and Washington Street that includes a two-way-left-turn lane in addition to a single lane in each direction. For purposes of this study, this roadway is referred to as an east-west roadway. At its signalized intersection with Main Street, Maple Avenue provides exclusive left-turn lanes with shared through/right-turn lanes and a single receiving lane on its east and west legs. At its all-way stop-controlled intersection with Washington Street, the west leg provides an exclusive left-turn lane, a shared through/right-turn lane, and a single receiving lane while the east leg provides a shared left-turn/through lane, an exclusive right-turn lane, and a single receiving lane. Within the study area, the speed limit is posted as 30 MPH.

Washington Street is a north-south roadway that provides one lane in each direction and terminates less than one quarter-mile north of Maple Avenue at its intersection with Burlington Avenue (just south of the Metra tracks). At its all-way stop-controlled intersection with Maple Avenue, the north leg of Washington Avenue provides a shared left-turn/through lane, an exclusive right-turn lane, and a single receiving lane. The south leg provides a shared left-turn/through/right-turn lane with a single receiving lane. The speed limit is posted as 25 MPH within the study area and the roadway is under Village of Downers Grove jurisdiction.

Grove Street is an east-west roadway that provides one lane in each direction terminating less than one quarter-mile west of the study area at Carpenter Street. At its stop-controlled T intersection with Main Street, Grove Street provides a shared left-/right-turn lane and a single receiving lane. Although not posted, the roadway is assumed to have a 25 MPH speed limit, consistent with other roadways in the study area. The roadway is under the jurisdiction of the Village of Downers Grove.

2.3. Traffic Count Data

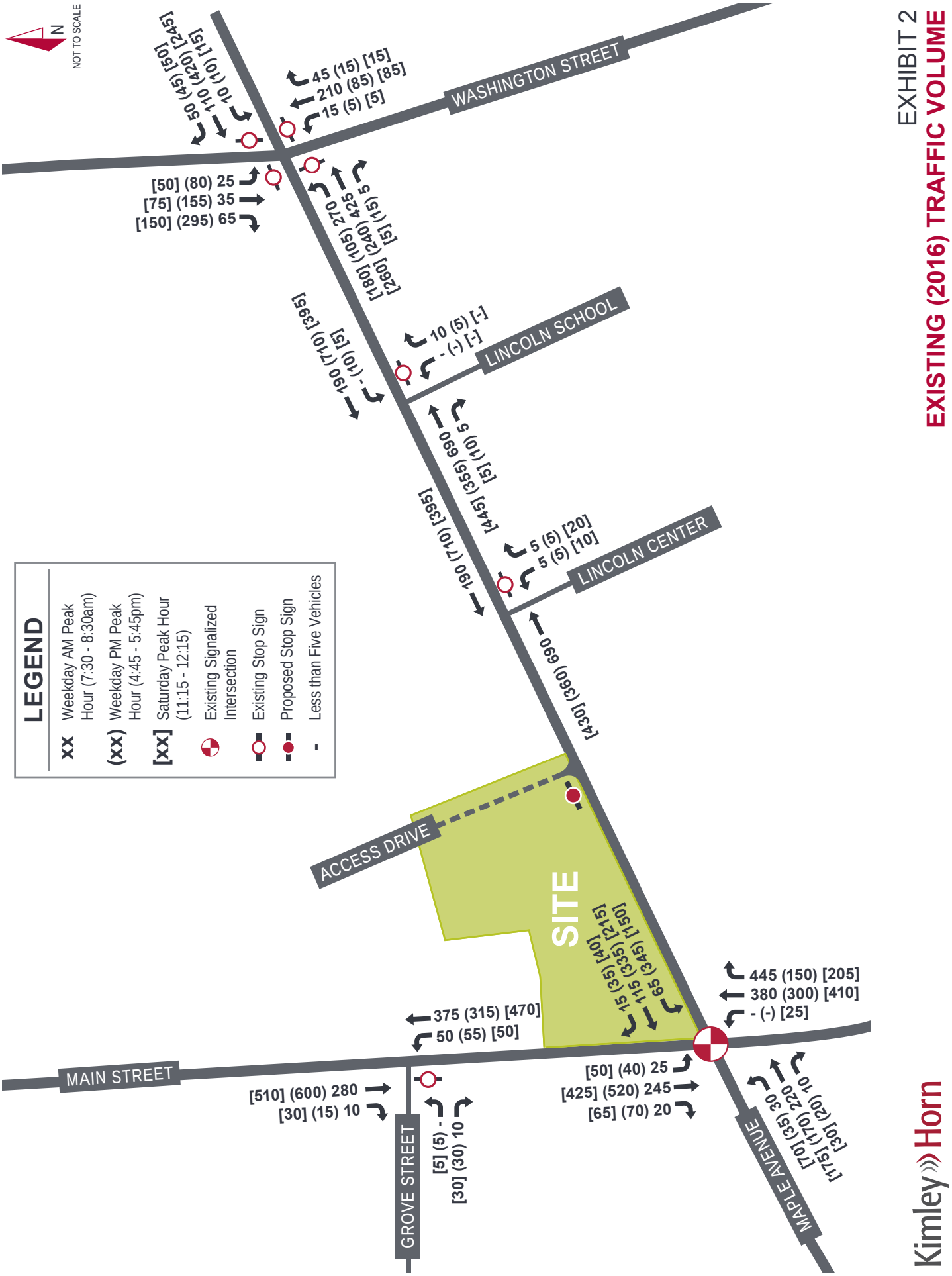
Turning movement count data was collected in April of 2016 at the following intersections:

- Main Street/Maple Avenue
- Main Street/Grove Avenue
- Maple Avenue/Washington Street

Data collection took place during the following peak periods:

- Weekday morning: 7:00 to 9:00 AM
- Weekday evening: 4:00 to 6:00 PM
- Saturday midday: 11:00 AM to 1:00 PM

This data indicates that peak traffic volumes occur within the study area on weekdays from 7:15-8:15 AM and 4:30-5:30 PM and on Saturday from 11:15 AM-12:15 PM. Per direction of Village staff, turning movements to/from the Lincoln Center and Downers Grove Christian School driveways were referenced from the October 24, 2014 traffic impact study prepared by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA).The existing traffic data is presented in **Exhibit 2**. During the morning peak hour, there is a heavy volume of northbound-to-eastbound traffic at the intersection of Main Street and


N
NOT TO SCALE
WASHINGTON STREET
LINCOLN SCHOOL
LINCOLN CENTER
ACCESS DRIVE
SITE
MAIN STREET
GROVE STREET
MAPLE AVENUE
LEGEND
XX Weekday AM Peak Hour (7:30 - 8:30am)
(XX) Weekday PM Peak Hour (4:45 - 5:45pm)
[XX] Saturday Peak Hour (11:15 - 12:15)
Existing Signalized Intersection
Existing Stop Sign
Proposed Stop Sign
- Less than Five Vehicles
[50] (80) 25
[75] (155) 35
[150] (295) 65
10 (10) [15]
50 (45) [50]
[245]
45 (15) [15]
210 (85) [85]
15 (5) [5]
[5] (15) 5
[260] (240) 425
[180] (105) 270
10 (5) [-]
- (-) [-]
190 (10) [5]
[395]
[5] (10) 5
[445] (355) 690
5 (5) [20]
5 (5) [10]
190 (710) [395]
690 (360) [430]
65 (45) 115
[150] [215] 15
[40] (35) 15
445 (150) [205]
380 (300) [410]
- (-) [25]
375 (315) [470]
50 (55) [50]
[510] (600) 280
[30] (15) 10
[5] (5) -
[30] (30) 10
[50] (40) 25
[425] (520) 245
[65] (70) 20
[175] (170) 220
[30] (20) 10
EXHIBIT 2
EXISTING (2016) TRAFFIC VOLUME
Kimley»Horn

Maple Avenue. A reverse of the morning pattern is shown to occur during the evening peak hour. This pattern is consistent with commuter travel patterns and is likely the result of area residents traveling to/from work. Traffic volumes during the Saturday peak hour are relatively balanced in the eastbound and westbound direction.

2.4. Parking Count Data

Per direction from Village of Downers Grove staff, parking occupancy data was collected at the following public parking locations within the site vicinity:

- Main Street/Maple Avenue Surface Parking Lot
- Downers Grove Parking Garage
- On-Street Parking along the Parking Garage Access Road
- On-Street Parking along Main Street between Maple Avenue and Curtis Avenue

The number of parked vehicles was recorded each hour for the following periods:

- Weekday midday: 11:00 AM to 2:00 PM
- Weekday evening: 5:00 to 11:00 PM
- Saturday: 11:00 AM to 11:00 PM

The collected occupancy data is summarized in **Table 2.1** for the weekday and **Table 2.2** for Saturday. It should be noted that all parking is free on the weekend and after 3 PM on weekdays.

Table 2.1. Parking Occupancy Count – Thursday (April 14, 2016)

Location	Existing # of Spaces	Midday Period										Evening Period									
		11:00 AM		12:00 PM		1:00 PM		5:00 PM		6:00 PM		7:00 PM		8:00 PM		9:00 PM		10:00 PM	
		# of Parked	% Occupancy	# of Parked	% Occupancy	# of Parked	% Occupancy	# of Parked	% Occupancy	# of Parked	% Occupancy	# of Parked	% Occupancy	# of Parked	% Occupancy	# of Parked	% Occupancy	# of Parked	% Occupancy
Main/Maple Surface Lot																			
DB Permit + 1 Handicap	11	7	64%	8	73%	3	27%	7	64%	3	27%	9	82%	6	55%	3	27%	1	9%
3-Hour Parking	18	7	39%	12	67%	14	78%	12	67%	9	50%	16	89%	17	94%	7	39%	3	17%
Total	*29*	14	48%	20	69%	17	59%	19	66%	12	41%	25	86%	23	79%	10	34%	4	14%
On-Street Parking																			
Main Street (Curtiss to Grove)	26	10	38%	25	96%	24	92%	21	81%	26	100%	23	88%	25	96%	24	92%	22	85%
Main Street (Grove to Maple)	14	3	21%	12	86%	10	71%	9	64%	12	86%	14	100%	12	86%	9	64%	8	57%
Parking Garage Access Road (4-Hour)	9	9	100%	6	67%	5	56%	6	67%	7	78%	7	78%	5	56%	4	44%	4	44%
Parking Garage Access Road (4-Hour)	4	4	100%	4	100%	4	100%	3	75%	3	75%	4	100%	4	100%	3	75%	2	50%
Total	*53*	26	49%	47	89%	43	81%	39	74%	48	91%	48	91%	46	87%	40	75%	36	68%
Downers Grove Garage																			
Level 1 (4-Hour)	144	96	67%	97	67%	100	69%	109	76%	112	78%	110	76%	121	84%	104	72%	78	54%
Level 2 (Employee Permit)	165	153	93%	152	92%	153	93%	76	46%	53	32%	49	30%	49	30%	42	25%	26	16%
Level 3 (All Day $3.00)	166	165	99%	165	99%	166	100%	111	67%	35	21%	15	9%	10	6%	6	4%	1	1%
Level 4 (All Day $3.00)	166	166	100%	166	100%	166	100%	128	77%	55	33%	19	11%	8	5%	4	2%	2	1%
Level 5 (Daily Permit)	131	131	100%	130	99%	130	99%	113	86%	41	31%	17	13%	10	8%	8	6%	3	2%
Total	*772*	711	92%	710	92%	715	93%	537	70%	296	38%	210	27%	198	26%	164	21%	110	14%

Table 2.2. Parking Occupancy Count – Saturday (April 16, 2016)

Location	Existing # of Spaces	11:00 AM		12:00 PM		1:00 PM		2:00 PM		3:00 PM		4:00 PM		5:00 PM		6:00 PM		7:00 PM		8:00 PM		9:00 PM		10:00 PM	
		# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy
Main/Maple Surface Lot																									
DB Permit + 1 Handicap	11	5	45%	7	64%	5	45%	8	73%	6	55%	3	27%	6	55%	6	55%	6	55%	8	73%	7	64%	7	64%
3-Hour Parking	18	15	83%	15	83%	16	89%	13	72%	11	61%	7	39%	7	39%	8	44%	13	72%	10	56%	5	28%	5	28%
Total	*29*	20	69%	22	76%	21	72%	21	72%	17	59%	10	34%	13	45%	14	48%	19	66%	18	62%	12	41%	12	41%
On-Street Parking																									
Main Street (Curtiss to Grove)	26	25	96%	24	92%	24	92%	23	88%	24	92%	22	85%	26	100%	26	100%	25	96%	26	100%	21	81%	23	88%
Main Street (Grove to Maple)	14	13	93%	12	86%	10	71%	12	86%	9	64%	11	79%	7	50%	12	86%	11	79%	13	93%	11	79%	9	64%
Parking Garage Access Road (4-Hour)	9	8	89%	9	100%	8	89%	8	89%	7	78%	8	89%	5	56%	7	78%	8	89%	9	100%	6	67%	5	56%
Parking Garage Access Road (4-Hour)	4	3	75%	3	75%	3	75%	3	75%	3	75%	2	50%	2	50%	2	50%	3	75%	1	25%	0	0%	0	0%
Total	*53*	49	92%	48	91%	45	85%	46	87%	43	81%	43	81%	40	75%	47	89%	47	89%	49	92%	38	72%	37	70%
Downers Grove Garage																									
Level 1 (4-Hour)	144	126	88%	125	87%	121	84%	126	88%	109	76%	108	75%	95	66%	96	67%	102	71%	101	70%	96	67%	87	60%
Level 2 (Employee Permit)	165	102	62%	103	62%	78	47%	74	45%	63	38%	53	32%	54	33%	48	29%	60	36%	54	33%	48	29%	39	24%
Level 3 (All Day $3.00)	166	9	5%	11	7%	9	5%	9	5%	8	5%	6	4%	6	4%	5	3%	5	3%	3	2%	3	2%	1	1%
Level 4 (All Day $3.00)	166	5	3%	6	4%	4	2%	4	2%	4	2%	2	1%	3	2%	3	2%	3	2%	2	1%	2	1%	2	1%
Level 5 (Daily Permit)	131	2	2%	2	2%	2	2%	3	2%	2	2%	2	2%	2	2%	2	2%	3	2%	3	2%	2	2%	2	2%
Total	*772*	244	32%	247	32%	214	28%	216	28%	186	24%	171	22%	160	21%	154	20%	173	22%	163	21%	151	20%	131	17%

As shown in Table 2.1, the parking occupancy rates in the Main/Maple surface lot range from 48 to 69 percent in during the midday period and from 14 percent to 86 percent during the evening period on the observed Thursday. The number of vehicles parked in the DB permit stalls varied throughout the study period suggesting turnover in the lot throughout the day. During the observation period, on-street parking occupancy rates varied from a low of 49 percent in the midday period to a high of 91 percent during the evening period. Within the Downers Grove garage, occupancy rates were fairly consistent across the midday period, with hourly parking just under 70 percent, employee parking at approximately 93 percent, and daily permit and all day parking both between 99 and 100 percent.

After 5 PM, the overall occupancy of the parking garage is shown to decrease significantly with less than 20 percent of the garage occupied after 9 PM. This is reduction is largely due to employee and permit parkers leaving the facility after the work day is completed. During this same period, occupancy rates for hourly parking are shown to increase slightly compared to the midday rates, likely due to continued restaurant and retail activity.

During the Saturday observation period, shown in Table 2.2, parking occupancy rates fluctuated throughout the day in the Main/Maple surface lot and ranged from 34 to 76 percent. On-street parking was fairly well utilized throughout the day ranging from 70 to 92 percent, with a higher occupancy rate shown along the northern portion of Main Street between Curtiss Street and Grove Street. Parking within the garage was significantly lower on the observed Saturday compared to the Thursday observations, with the total garage occupancy rates ranging from 17 to 32 percent for the study period.

3. FUTURE CONDITIONS

This section of the report outlines the proposed site plan, summarizes site-specific traffic characteristics, and develops future traffic projections for analysis.

3.1. Development Characteristics & Site Access

The proposed development plan consists of a six-story building that includes 115 apartments, approximately 4,000 square feet of first-floor restaurant/retail space, and a 161 stall parking garage. Three floors of parking will be provided for the building with two below-grade and the other at-grade. In addition, eight on-street parking stalls will be provided along Maple Avenue east of Main Street and two on-street parking stalls will be provided along the east side of Main Street at the location of the former parking lot access driveway. To accommodate anticipated loading and delivery activity for the development, it is recommended that the easternmost on-street parking stalls be designated as a loading zone prior to 11 AM. As shown in the site plan included in the appendix, full access to the parking garage is proposed along Maple Avenue approximately 315 feet east of its intersection with Main Street.

3.2. Trip Generation

In order to calculate site-generated traffic projections for the proposed mixed-use development, data was referenced from the Institute of Transportation Engineers (ITE) manual Trip Generation, Ninth Edition. Trip generation data for the proposed uses are shown in **Table 3.1**. A copy of the ITE data is provided in the Appendix. The exact use for the first-floor restaurant/retail space is unknown at this time; therefore, to provide a conservative analysis it is assumed as a high-turnover restaurant for the purposes of this analysis.

Table 3.1. ITE Trip Generation Data by Land Use

ITE Land Use	Unit	Weekday		Saturday Midday Peak
		AM Peak	PM Peak	
Apartment (LUC 220)	Per Dwelling Unit	T = 0.49 (X) + 3.73 20% in/80% out	T = 0.55 (X) + 17.65 65% in/35% out	T = 0.41 (X) + 19.23 54% in/46% out[1]
High-Turnover (Sit Down) Restaurant (LUC 932)	Per 1,000 sq. ft.	T = 10.81 (X) 55% in/45% out	T = 9.85 (X) 60% in/40% out	T = 14.07 (X) 53% in/47% out

T - Site-generated trips
X - 1,000 square feet gross floor area
1 - ITE data does not provide a distribution for Saturday Peak Hour of Generator for LUC 220 (Apartment); therefore, the distribution for the same period from a similar land use, LUC 221 (Low-Rise Apartment), is applied.

Due to the urban context, availability of a convenient public transportation option, and nature of the land uses in the site area, it is assumed that more non-auto activity would occur at the site than in typical auto-oriented suburban locations. As such, adjustments are applied to the conventional Trip Generation data to incorporate these non-auto modes of transportation. To determine a similar mode split for areas within the vicinity of the Metra Station, census data for Means of Transportation to Work data was referenced for the census tracts within a quarter-mile of the Downers Grove Main Street

station. A summary of this data is provided in **Table 3.2**, and detailed information for each census tract is included in the study appendix.

Table 3.2. Mode Split Characteristics[1]

Mode of Transportation	Population	Percent
Automobile		
Car	2,473	69%
Taxicab	32	1%
Subtotal	2,505	70%
Other Methods		
Public Transportation (excluding taxi)	719	20%
Bicycle	26	1%
Walk	119	3%
Other Means	47	1%
Worked at Home	166	5%
Subtotal	1,077	30%
Total	3,582	100%

1 – Includes data referenced from the 2010-2014 American Community Survey 5-Year Estimates for Block Groups 1 and 2 of census tracts 8449.01, and Block Groups 1, 2, and 3 of census tract 8449.02.

Based on the census data, approximately 30 percent of nearby residents maintain non-auto commutes in the surrounding neighborhood. The largest single mode share is public transit (20 percent). Thus, it is reasonable to assume that residents of the proposed site would exhibit a similar mode share to that of others in the surrounding area. As a result, a reduction of 30 percent was applied to ITE data for the apartments. For consistency, a 30 percent reduction was also applied to the restaurant trips, which would be assumed to include the increased likelihood that restaurant patrons would walk from the proposed apartment units, the downtown business district, and the surrounding residential neighborhoods due to the urban location of the proposed site. As detailed in the next section of the report, adjustment for pass-by trips and internal capture are not included in the analysis. The majority of pass-by and internally capture trips are assumed to occur by those traveling to the site via non-auto modes and are therefore accounted for as part of the 30 percent mode share reduction.

Per these assumptions and the calculations detailed previously, site-generated traffic projections are presented in **Table 3.3**.

Table 3.3. Site-Generated Traffic Projections

Land Use	Unit	Weekday						Saturday		
		AM Peak			PM Peak			Midday Peak		
		In	Out	Total	In	Out	Total	In	Out	Total
Apartment	115 dwelling units	10	50	60	50	30	80	35	30	65
High-Turnover (Sit-Down) Restaurant	4,000 square feet	25	20	45	25	15	40	30	25	55
Total New Trips		*35*	*70*	*105*	*75*	*45*	*120*	*65*	*55*	*120*
Less Non-Auto Trips (30%)[1]		*-15*	*-20*	*-35*	*-25*	*-15*	*-40*	*-20*	*-20*	*-40*
Total New Auto Trips[5]		20	50	70	50	30	80	45	35	80

1 - Non-auto mode reduction based upon census data for Means of Transportation to Work from the 2010-2014 American Community Survey 5-Year Estimates.

3.3. Directional Distribution

The estimated distribution of site-generated traffic on the surrounding roadway network as it approaches and departs the site is a function of several variables, such as the nature of surrounding land uses, prevailing traffic volumes/patterns, and the ease with which motorists can travel various sections of the area roadway network. The anticipated directional distribution is presented in **Exhibit 3** and is summarized in **Table 3.4.**

Table 3.4. Estimated Trip Distribution

Traveling to/from:	Portion of Site Traffic
North on Main Street	30%
South on Main Street	20%
East on Maple Avenue	30%
West on Maple Avenue	20%
Total	100%

3.4. Site Traffic Assignment

The site traffic assignment, representing traffic volumes associated with the proposed development at the study intersections and access driveway, is a function of the estimated trip generation (Table 3.3) and the directional distribution (Table 3.4/Exhibit 3). The peak hour site traffic assignment is presented in **Exhibit 4**.

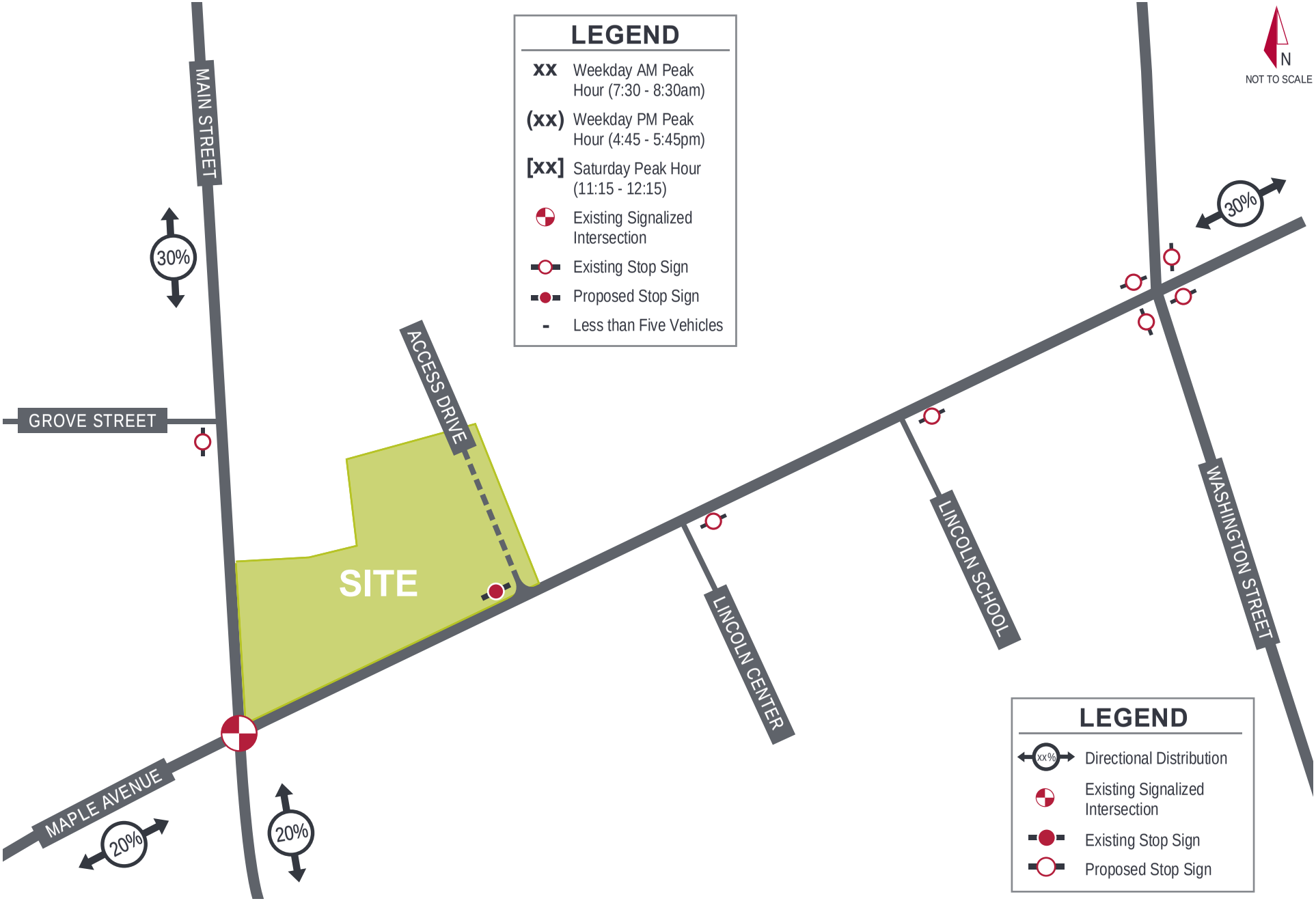


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EXHIBIT 3
TRIP DISTRIBUTION

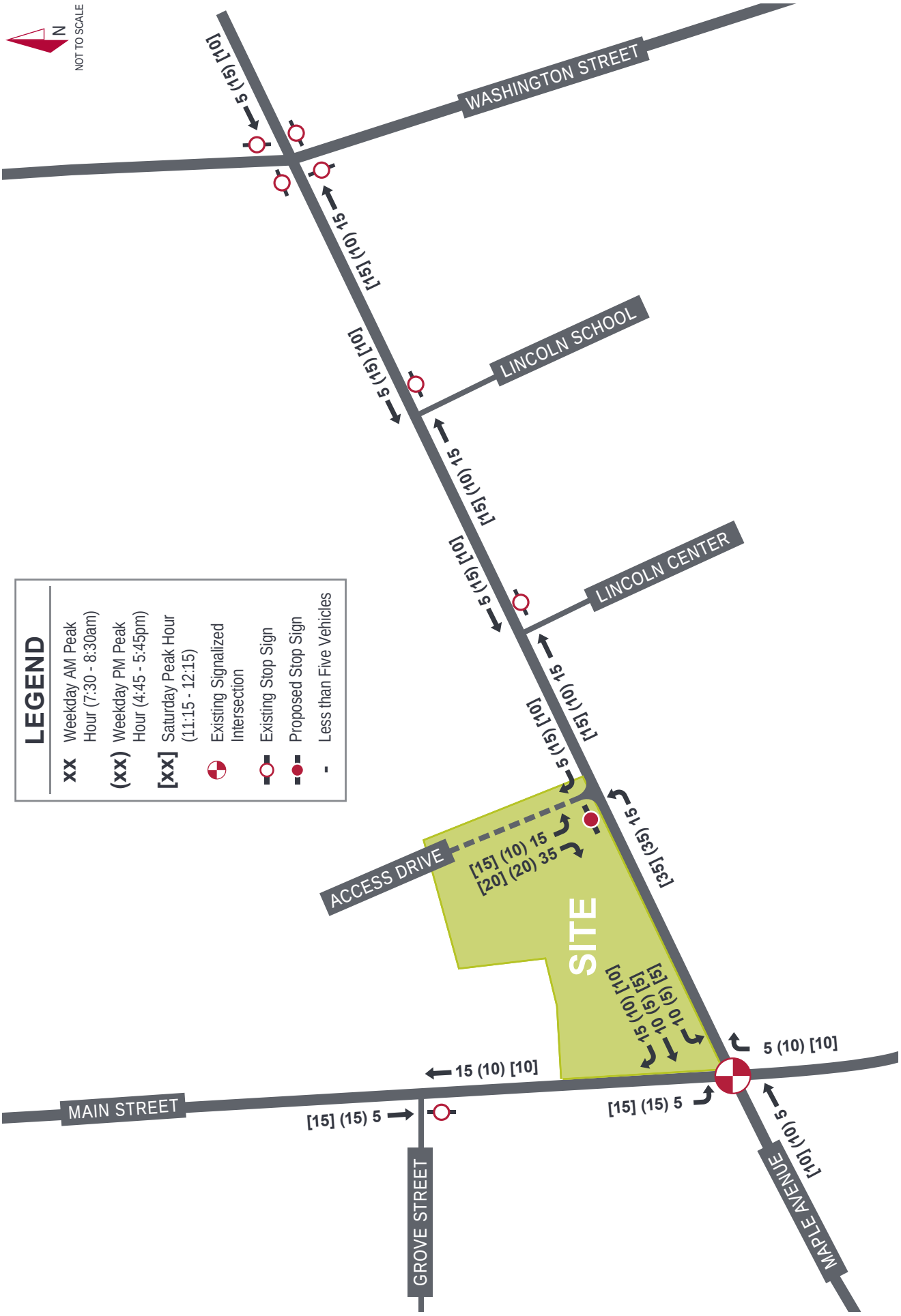

EXHIBIT 4
SITE TRIP ASSIGNMENT

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3.5. Background Traffic Projections

The proposed development is expected to be constructed in Year 2018; therefore, per direction from the Village of Downers Grove, Kimley-Horn evaluated future traffic conditions for an opening (2018) and horizon (build-plus-five conditions, 2023) design year. Based on information received from the Village, a compounded growth rate of one-half percent per year was applied to existing traffic volumes to evaluate future traffic conditions. This is equivalent to roughly one percent growth over two years (opening year) and four percent growth over seven years (horizon year). To account for traffic related to the condominiums currently under construction at 940 Maple Avenue, site trip assignment for the property was referenced from the October 24, 2014 traffic impact study prepared by KLOA. Traffic assignments from the KLOA study were rounded to the nearest five and combined with the grown traffic volumes to establish future background volumes for each condition. Because of the rounding related to the KLOA trip assignment, future traffic volumes may not balance between intersections. The resulting traffic projections for the future opening year and build-plus-five scenarios are presented in **Exhibits 5** and **6**, respectively.

3.6. Future Build Traffic Projections

Total traffic projections for the opening (2018) and horizon (2023) design years were calculated by adding site trips (Exhibit 4) to future no-build traffic projections (Exhibits 5 and 6). Traffic projections for the future build scenarios are illustrated in **Exhibits 7** and **8**, respectively**.**

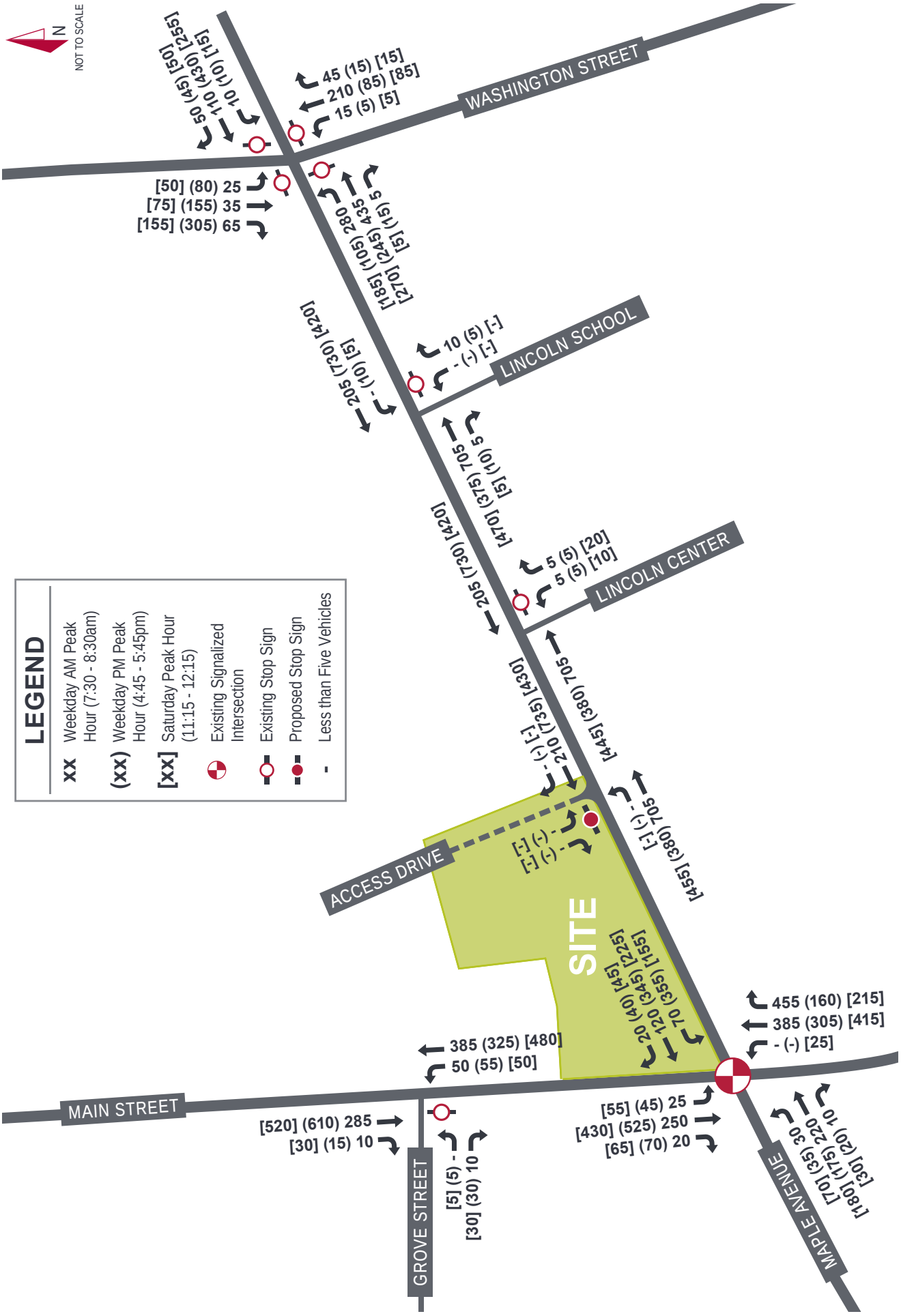


EXHIBIT 5

BACKGROUND (2018) TRAFFIC PROJECTIONS

Kimley»Horn

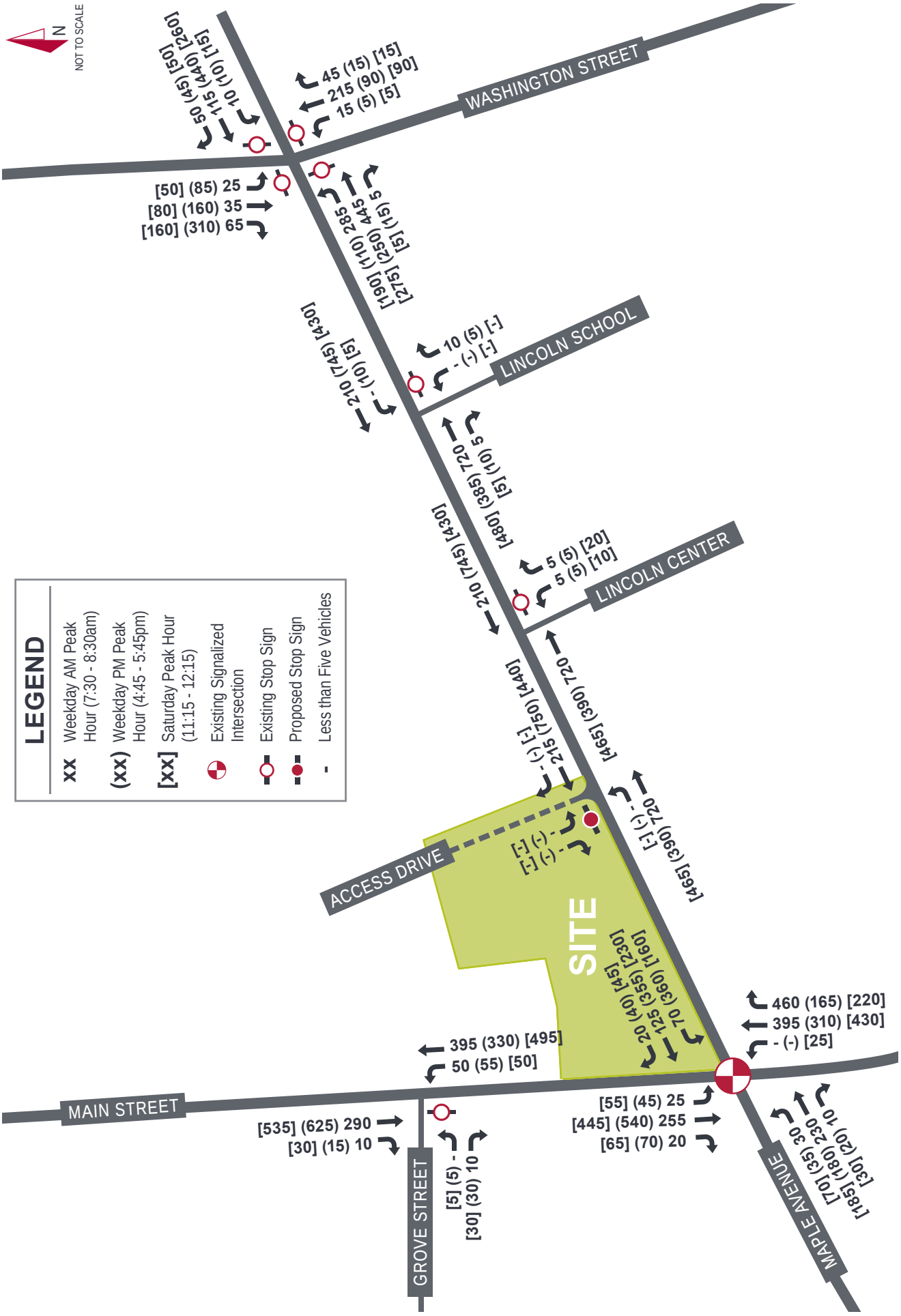


EXHIBIT 6

BACKGROUND (2023) TRAFFIC PROJECTIONS

Kimley»Horn

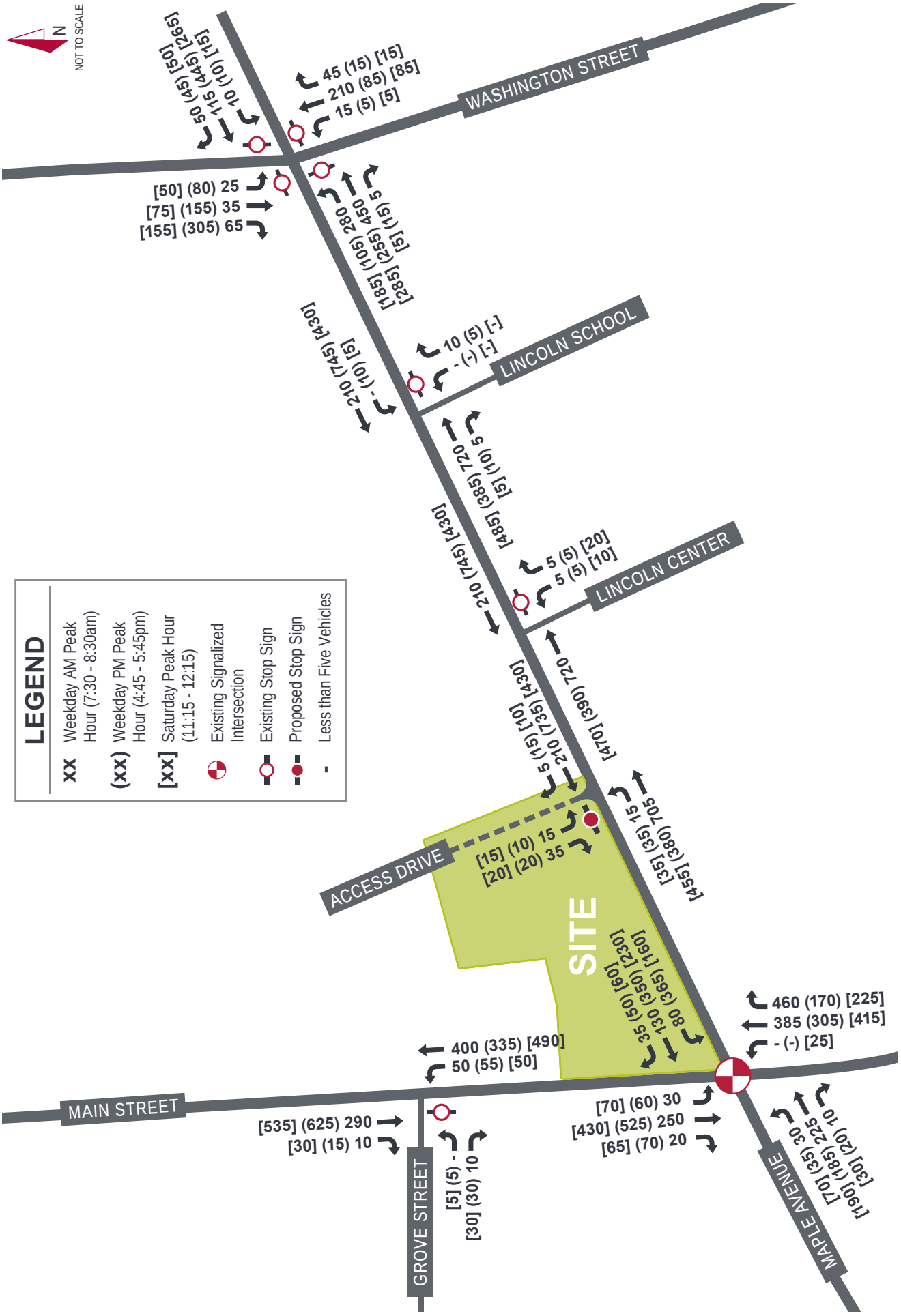


EXHIBIT 7

FUTURE (2018) TRAFFIC VOLUMES

Kimley»Horn

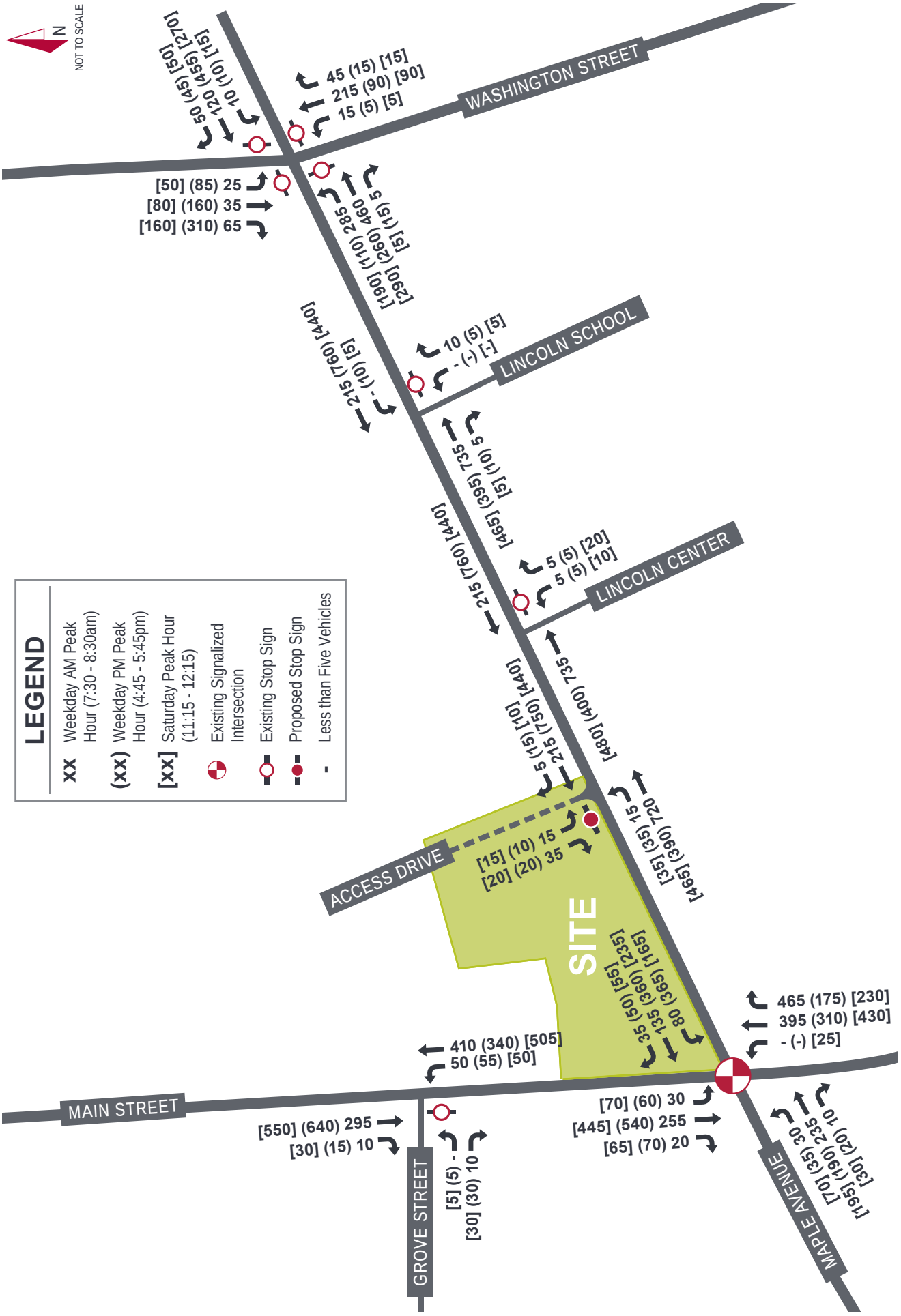


EXHIBIT 8

FUTURE (2023) TRAFFIC VOLUMES

Kimley»Horn

4. ANALYSES

This section of the report summarizes the analysis of existing and future traffic conditions at the study intersections, reviews the future area parking supply, and details recommendations for the site.

Capacity Analysis

Capacity analyses were conducted to assess existing and future operating conditions of the study intersections during the weekday morning, weekday evening, and Saturday midday peak hours. The capacity of an intersection quantifies its ability to accommodate traffic volumes and is expressed in terms of level of service (LOS), measured in average delay per vehicle. LOS grades range from A to F, with LOS A as the highest (best traffic flow and least delay), LOS E as saturated or at-capacity conditions, and LOS F as the lowest (oversaturated conditions). The lowest LOS grade typically accepted by jurisdictional transportation agencies in Northeastern Illinois is LOS D.

The LOS grades shown below, which are provided in the Transportation Research Board's Highway Capacity Manual (HCM), quantify and categorize the driver's discomfort, frustration, fuel consumption, and travel times experienced as a result of intersection control and the resulting traffic queuing. A detailed description of each LOS rating can be found in **Table 4.1**.

Table 4.1. Level of Service Grading Descriptions[1]

Level of Service	Description
A	Minimal control delay; traffic operates at primarily free-flow conditions; unimpeded movement within traffic stream.
B	Minor control delay at signalized intersections; traffic operates at an unimpeded level with slightly restricted movement within traffic stream.
C	Moderate control delay; movement within traffic stream more restricted than at LOS B; formation of queues contributes to lower average travel speeds.
D	Considerable control delay that may be substantially increased by small increases in flow; average travel speeds continue to decrease.
E	High control delay; average travel speed no more than 33 percent of free flow speed.
F	Extremely high control delay; extensive queuing and high volumes create exceedingly restricted traffic flow.

1 – Highway Capacity Manual 2010

Table 4.2 presents the range of control delay for each LOS rating as detailed in the HCM. Because signalized intersections are expected to carry a larger volume of vehicles and stopping is required during red time, higher delays are tolerated for the corresponding LOS ratings.

Table 4.2. Level of Service Grading Criteria[1]

Level of Service	Average Control Delay (s/veh) at:	
	Unsignalized Intersections	Signalized Intersections
A	0 – 10	0 – 10
B	> 10 – 15	> 10 – 20
C	> 15 – 25	> 20 – 35
D	> 25 – 35	> 35 – 55
E	> 35 – 50	> 55 – 80
F[2]	> 50	> 80

1 – Highway Capacity Manual 2010
2 – All movements with a Volume to Capacity (v/C) ratio greater than 1 receive a rating of LOS F.

Synchro analysis software was utilized to evaluate capacity of the study intersections (reported overall and by approach) for the weekday morning and evening and Saturday midday peak hours. In order to perform these analyses, existing signal timing data was obtained from the Village of Downers Grove for the study intersection of Main Street/Maple Avenue. The provided timings were used in the existing and future capacity analysis with no adjustments.

Table 4.3 summarizes the capacity analysis results for existing and future peak hour traffic conditions. Additional capacity analysis details are included in the appendix. To provide a conservative analysis, the potential reduction in trips on the roadway network due to the demolition of the existing surface parking lot and office building were not considered.

Table 4.3. Intersection Levels of Service

Intersection	Existing (Year 2016) Conditions						Opening (Year 2018) Conditions						Horizon (Year 2023) Conditions					
	AM Peak		PM Peak		SAT Peak		AM Peak		PM Peak		SAT Peak		AM Peak		PM Peak		SAT Peak	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Main Street/Maple Avenue ★																		
Northbound	9	A	12	B	12	B	9	A	12	B	13	B	10-	A	12	B	13	B
Southbound	13	B	25	C	18	B	14	B	26	C	19	B	14	B	27	C	19	B
Eastbound	40	D	43	D	25	C	39	D	43	D	25	C	39	D	43	D	25	C
Westbound	25	C	35-	C	25	C	25	C	36	D	26	C	24	C	37	D	26	C
Intersection	*17*	*B*	*27*	*C*	*19*	*B*	*17*	*B*	*28*	*C*	*19*	*B*	*18*	*B*	*29*	*C*	*20*	*B*
Main Street/Grove Street △																		
Northbound	1	A	2	A	1	A	1	A	2	A	2	A	1	A	2	A	2	A
Eastbound	10+	B	15-	B	14	B	11	B	15+	C	15-	B	11	B	16	C	15+	C
Maple Avenue/Lincoln Center △																		
Northbound	13	B	12	B	11	B	14	B	12	B	12	B	14	B	12	B	12	B
Maple Avenue/Lincoln School △																		
Northbound	14	B	11	B	11	B	14	B	12	B	12	B	14	B	12	B	12	B
Westbound	<1	A	<1	A	<1	A	<1	A	<1	A	<1	A	<1	A	<1	A	<1	A

★ – Signalized Intersection
△ – Minor-Leg Stop-Controlled Intersection
▲ – All-Way Stop-Controlled Intersection

Table 4.3. Intersection Levels of Service (Cont.)

Intersection	Existing (Year 2016) Conditions						Opening (Year 2018) Conditions						Horizon (Year 2023) Conditions					
	AM Peak		PM Peak		SAT Peak		AM Peak		PM Peak		SAT Peak		AM Peak		PM Peak		SAT Peak	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Maple Avenue/Washington Street ▲																		
Northbound	18	C	14	B	12	B	18	C	15-	B	12	B	18	C	15+	C	13	B
Southbound	10+	B	19	C	11	B	10+	B	19	C	11	B	11	B	20	C	12	B
Eastbound	23	C	18	C	13	B	27	D	19	C	15-	B	29	D	20	C	15+	C
Westbound	11	B	51	F	14	B	11	B	63	F	15+	C	11	B	63	F	16	C
Intersection	*19*	*C*	*29*	*D*	*13*	*B*	*21*	*C*	*33*	*D*	*14*	*B*	*23*	*C*	*34*	*D*	*14*	*B*
Maple Avenue/ Access Drive △																		
Southbound	N/A						11	B	15+	C	12	B	11	B	15+	C	12	B
Eastbound	N/A						<1	A	1	A	1	A	<1	A	1	A	1	A

★ – Signalized Intersection
△ – Minor-Leg Stop-Controlled Intersection
▲ – All-Way Stop-Controlled Intersection

As shown in the preceding table, the study intersections currently operate at an acceptable LOS for all approaches with one exception. During the evening peak hour, the westbound approach of the Maple Avenue/Washington Street intersection currently operates at LOS F as a result of the relatively high volume of westbound through traffic. With the addition of site traffic, the majority study intersections are anticipated to operate similarly to existing conditions for the future opening (2018) and horizon (2023) conditions. The westbound approach of the Maple Avenue/Washington Street intersection, is projected to continue operating at LOS F. Further examination reveals that the addition of horizon year background traffic results in a roughly 23 percent increase in delay for the approach (approximately 12 seconds), with site traffic accounting for the less than one percent of the total increase in delay (less than one-half second). It should also be noted that during future horizon conditions, site traffic is projected to account for less than five percent of vehicles using the westbound left-turn/through lane group during the evening peak hour.

Based on the existing and projected traffic volumes, a traffic signal warrant was evaluated for the Maple Avenue/Washington Street intersection. Signal warrant criteria specified by IDOT was utilized which is based upon the signal warrants provided in the Manual on Uniform Traffic Control Devices (MUTCD). Peak hour volumes were reduced to 55 percent of the projected value per typical IDOT practice for evaluating an eight-hour warrant. Although the minor-street volumes satisfy the criteria, the major-street hourly volumes would need to increase by approximately 200 vehicles to meet these guidelines. Due to the all-way stop control currently in place at the intersection, and the delay it imposes on all vehicles, it is possible that some drivers may be using alternate routes for east-west travel through the area. As such, and if a signal is desired by the Village, a sub-area review may be helpful to understand how traffic may redistribute to Maple Avenue were a traffic signal to be installed at this location.

The 95th percentile queues projected for the westbound through and left-turn at the Main Street/Maple Avenue intersection are shown to extend beyond the proposed site access in existing and future conditions. Therefore, at times the site access driveway may be blocked by westbound vehicles on Maple Avenue. This condition currently occurs at the inbound driveway provided for the office building, which will be demolished as part of the proposed development. The proposed driveway access is located as far east as possible on the property in order to maximize the distance between the site access and the Main Street/Maple Avenue intersection. If desired, “DO NOT BLOCK DRIVEWAY” signage and striping could be installed along Maple Avenue to encourage westbound vehicles to leave a gap along Maple Avenue for entering and exiting site vehicles.

On-Street and Public Parking Analysis

The parking occupancy data detailed in Section 2.4 was utilized to develop an understanding of how the displacement of the public parking provided in the Main/Maple surface parking lot could impact area parking occupancy rates. Since both hourly and DB permit parking will be displaced, the collected data is summarized into the following three categories: hourly parking, employee/DB permit parking, and daily (fee and permit). Because parking is free and available to all users after 3 PM on weekdays and all day on weekends, the parking types were combined for the weekday evening and Saturday analysis. The projected future parking occupancy is developed by dividing the total number of vehicles parked within the study area by the total future number of parking stalls available (which

excludes the Main/Maple lot and adds the eight on-street parking stalls proposed for Maple Avenue and two on-street stalls proposed for Main Street). The estimated future parking occupancy rates are summarized in **Table 4.4** for the weekday and **Table 4.5** for Saturday.

Table 4.4. Parking Occupancy – Weekday

Location	# of Spaces	Midday Period						# of Spaces	Evening Period											
		11:00 AM		12:00 PM		1:00 PM			5:00 PM		6:00 PM		7:00 PM		8:00 PM		9:00 PM		10:00 PM	
		# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy		# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy
Existing Parking (excluding Main/Maple lot)																				
Hourly	197	122	62%	144	73%	143	73%													
Daily (fee/permit)	463	462	100%	461	100%	462	100%	825[1]	576	70%	344	42%	258	31%	244	30%	204	25%	146	18%
DB/Employee Permit	165	153	93%	152	92%	153	93%													
Displaced Parking Demand from Main/Maple Lot																				
Hourly		7	39%	12	67%	14	78%													
Daily (fee/permit)		N/A	N/A	N/A	N/A	N/A	N/A	-29[1]	19	66%	12	41%	25	86%	23	79%	10	34%	4	14%
DB/Employee Permit		7	64%	8	73%	3	27%													
Projected Future[2]																				
Hourly	207	129	62%	156	75%	157	76%													
Daily (fee/permit)	463	462	100%	461	100%	462	100%	833[1]	595	71%	356	43%	283	34%	267	32%	214	26%	150	18%
DB/Employee Permit	165	160	97%	160	97%	156	95%													

1 – All parking is free after 3PM; therefore, for the purposes of this analysis all parking was considered the same type after 3PM.
2 – Future parking stalls equals the number of existing stall (excluding the Main/Maple surface lot) plus the ten additional on-street parking stalls proposed along Maple Avenue and Main Street.

Table 4.5. Parking Occupancy – Saturday

Location	# of Spaces	11:00 AM		12:00 PM		1:00 PM		2:00 PM		3:00 PM		4:00 PM		5:00 PM		6:00 PM		7:00 PM		8:00 PM		9:00 PM		10:00 PM	
		# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy	# of Parked Vehicles	% Occupancy
Existing Parking (excluding Main/Maple lot)																									
All Parking Types	825[1]	293	36%	295	36%	259	31%	262	32%	229	28%	214	26%	200	24%	201	24%	220	27%	212	26%	189	23%	168	20%
Displaced Parking Demand from Main/Maple Lot																									
All Parking Types		20	69%	22	76%	21	72%	21	72%	17	59%	10	34%	13	45%	14	48%	19	66%	18	62%	12	41%	12	41%
Projected Future[2]																									
All Parking Types	835[1]	313	37%	317	38%	280	34%	283	34%	313	29%	224	27%	213	26%	215	26%	239	29%	230	28%	201	24%	180	22%

1 – All parking is free on weekends; therefore, for the purposes of this analysis all parking was considered the same type on the weekend.
2 – Future parking stalls equals the number of existing stall (excluding the Main/Maple surface lot) plus the ten additional on-street parking stalls proposed along Maple Avenue and Main Street.

The existing weekday midday occupancy rates for employee parking within the garage range from 92 to 93 percent, suggesting that the current supply of employee parking stalls is nearing capacity prior to considering the impacts of those displaced from the Main/Maple lot. With the displacement (up to 8 observed users), the weekday midday employee parking occupancy rates are projected to range between 95 to 97 percent, however, the existing demand can still be accommodated within the existing supply. Daily (fee/permit) parking would remain heavily utilized, but will not be impacted by displacement from the development of the subject parcel.

Hourly parking space occupancy during the weekday midday period is shown to range from 62 percent to 76 percent and likely reflects retail and restaurant users in the downtown area. Given this lower level of utilization, consideration could be given to reallocate a number of hourly spaces to employee users to accommodate peak demand during the weekday midday period. After 5 PM when all parking is free, parking occupancy is projected to remain similar to existing conditions. The peak occupancy during the evening period (71 percent) is projected to occur for the garage at 5 PM.

Based on the Saturday analysis shown in **Table 4.5**, the future parking occupancy is projected to be less than 40 percent throughout the day. As such, it is anticipated the displaced parking can generally be accommodated within the surrounding area while maintaining effective parking conditions.

Off-Street Parking Analysis

The proposed plan includes 161 parking spaces within the on-site parking garage. Based on the zoning ordinance for the Village of Downers Grove, the off-street parking requirements and calculations associated with the proposed residential and restaurant are shown below.

Table 4.6. Village Required Parking

Type	Size	Ordinance (spaces/unit)	Required Spaces
Residential	115 units	1.4 spaces/dwelling unit[1]	161
Restaurants	4,000 square feet	N/A[2]	0
Total			161

1 - Per the Village of Downers Grove Zoning Ordinance Section 7.030,

2 - Per the Village of Downers Grove Zoning Ordinance Section 7.050, minimum off-street parking is not required for non-residential uses within DB zone.

As shown in **Table 4.6**, the proposed development requires 161 parking spaces based upon Village of Downers Grove off-street parking requirements. The proposed site plan includes 161 off-street parking spaces; therefore, the proposed plan satisfies the off-site parking requirements.

5. RECOMMENDATIONS & CONCLUSIONS

Based on an evaluation of existing and future traffic and parking conditions, the following recommendations are identified for the study area upon construction and occupancy of the subject site:

- Locate the site access driveway as far east as possible on Maple Avenue
- Provide a one inbound and a single outbound lane at the site access driveway
- Post minor-leg stop-control for outbound traffic at the proposed site access driveway
- Consider the installation of “DO NOT BLOCK DRIVEWAY” signage and striping on Maple Avenue at the site access driveway
- Provide at least 161 off-street parking stalls within the proposed garage
- Provide eight on-street parking stalls along the north side of Maple Avenue adjacent to the site frontage
- Provide two on-street parking stalls along the east side of Main Street at the location of the former site access driveways
- Designate the easternmost on-street parking stalls as loading zones prior to 11 AM

The addition of development traffic is not anticipated to significantly affect future conditions at the study intersections. Based upon the review of future parking occupancy rates, it is anticipated that the existing parking demand can be effectively accommodated after parking is displaced from the Main/Maple lot as result of the proposed development.

While sight distance appears to be adequate within the study area, care should be taken with landscaping, signage, and monumentation at the subject site to ensure that adequate horizontal sight distance is provided for vehicles exiting the proposed parking garage. If alterations to the site plan or land use should occur, changes to the analysis provided within this study may be needed.

APPENDIX

Conceptual Site Plan

Existing Capacity Reports

Opening (Year 2018) Conditions Synchro Reports

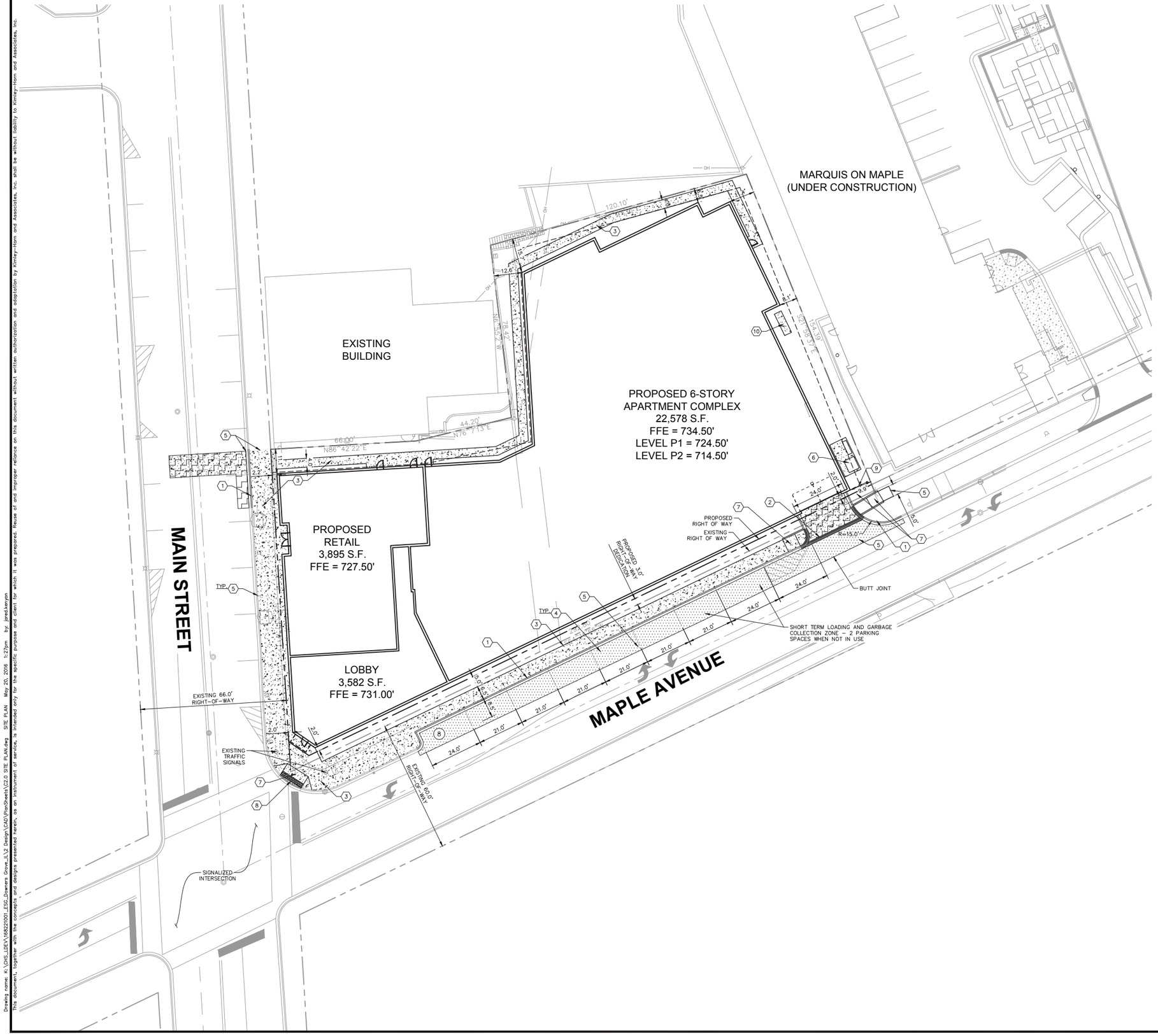
Horizon (Year 2023) Conditions Synchro Reports

Data from the ITE manual Trip Generation, 9th Edition

Census Data

Traffic Count Data

CONCEPTUAL SITE PLAN



Call Before You Dig
JULIE
1-800-892-0123

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

GENERAL NOTES

1. ALL DIMENSIONS REFER TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
3. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.
4. RADII ADJACENT TO PARKING STALL AND NOT DIMENSIONED ON THIS PLAN SHALL BE 3-FEET, TYPICAL.
5. REFER TO ARCHITECTURAL PLANS FOR MONUMENT SIGN DETAILS. SEE MEP PLANS FOR SITE ELECTRICAL DRAWINGS.
6. ALL PROPOSED ON-SITE STRIPING SHALL BE PAINTED UNLESS OTHERWISE NOTED.

KEY NOTES

1. B6.12 CONCRETE CURB AND GUTTER, TYP. (SEE DETAILS)
2. DEPRESSED CURB AND GUTTER
3. CONCRETE SIDEWALK, TYP. (SEE DETAILS)
4. 4" WIDE PAINTED SOLID LINE, TYP.
5. CONNECT TO EXISTING PAVEMENT, SIDEWALK, CURB, TYP.
6. TRANSFORMER PAD (SEE ARCHITECTURAL PLANS FOR DETAILS)
7. ACCESSIBLE RAMP (SEE DETAILS)
8. 2' WIDE TACTILE WARNING STRIP
9. 6' SCREENING FENCE
10. GENERATOR PAD (SEE ARCHITECTURAL PLANS FOR DETAILS)

PAVING AND CURB LEGEND

- STANDARD DUTY ASPHALT PAVEMENT — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- CONCRETE SIDEWALK — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- HEAVY DUTY CONCRETE PAVEMENT — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- STANDARD PITCH CONCRETE CURB AND GUTTER
- REVERSE PITCH CONCRETE CURB AND GUTTER
- CONCRETE DEPRESSED CURB AND GUTTER
- (8) PARKING COUNT

PARKING SUMMARY

ONSITE:			
PARKING SPACES REQUIRED (1.4 SPACES/RESIDENTIAL UNIT)	= 161	SPACES	
REGULAR PARKING SPACES PROVIDED	= (155)	SPACES	1
ACCESSIBLE PARKING SPACES REQUIRED	= 6	SPACES	
ACCESSIBLE PARKING SPACES PROVIDED	= 6	SPACES	
TOTAL PARKING SPACES PROVIDED	= (161)	SPACES	
OFFSITE:			
PARKING SPACES REQUIRED (CITY STANDARD)	= 0	SPACES	
REGULAR PARKING SPACES PROVIDED	=(10)	SPACES	1
ACCESSIBLE PARKING SPACES REQUIRED	= 0	SPACES	
ACCESSIBLE PARKING SPACES PROVIDED	= 0	SPACES	
TOTAL PARKING SPACES PROVIDED	=(10)	SPACES	

NO.	REVISIONS	DATE	BY
1	PER VILLAGE COMMENTS	05/23/16	JJK

Kimley»Horn

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SCALE: AS NOTED
DESIGNED BY: TJS
DRAWN BY: TJS
CHECKED BY: JJK

esg Transmell Crow Company

SITE PLAN

MAPLE & MAIN
DOWNERS GROVE, IL

ORIGINAL ISSUE:
05/02/2016

KHA PROJECT NO.
168221001

SHEET NUMBER
C2.0

Drawing name: K:\CHS_LDEV\168221001_ESG_Downers Grove_IL\2 Design\CAD\PlanSheets\C2.0 SITE PLAN.dwg SITE PLAN May 20, 2016 1:27pm by: jared.kenyon
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EXISTING CONDITIONS SYNCHRO REPORTS

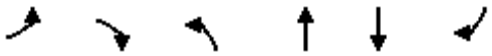
Weekday Morning Peak Hour

Weekday Evening Peak Hour

Saturday Midday Peak Hour

HCM Unsignalized Intersection Capacity Analysis
1: Main St. & Grove St.

5/20/2016



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	10	50	375	280	10
Future Volume (Veh/h)	1	10	50	375	280	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1	11	53	395	295	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				383		
pX, platoon unblocked	0.87					
vC, conflicting volume	802	300	306			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	695	300	306			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	96			
cM capacity (veh/h)	339	739	1255			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	12	448	306
Volume Left	1	53	0
Volume Right	11	0	11
cSH	673	1255	1700
Volume to Capacity	0.02	0.04	0.18
Queue Length 95th (ft)	1	3	0
Control Delay (s)	10.4	1.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.4	1.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		

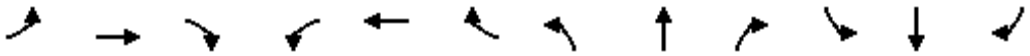
Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

5/20/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	220	10	65	115	15	1	380	445	25	245	20
Future Volume (vph)	30	220	10	65	115	15	1	380	445	25	245	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Storage Length (ft)	105		0	150		0	0		0	0		65
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	80			80			25			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.982				0.850		0.989	
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1711	1766	0	1711	1733	0	0	1783	1531	1342	1695	0
Flt Permitted	0.669			0.390						0.462		
Satd. Flow (perm)	1205	1766	0	702	1733	0	0	1783	1531	653	1695	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			8				260		5	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		1362			375			882			383	
Travel Time (s)		31.0			8.5			24.1			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	3%	9%	2%	2%	20%	2%	3%	2%	30%	7%	9%
Adj. Flow (vph)	32	232	11	68	121	16	1	400	468	26	258	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	243	0	68	137	0	0	401	468	26	279	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

5/20/2016



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	3	8		7	4			2	7		6	
Permitted Phases	8			4			2		2	6		
Detector Phase	3	8		7	4		2	2	7	6	6	
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0		15.0	15.0	6.0	15.0	15.0	
Minimum Split (s)	9.5	29.0		9.5	29.0		29.0	29.0	9.5	29.0	29.0	
Total Split (s)	12.0	25.0		25.0	38.0		40.0	40.0	25.0	40.0	40.0	
Total Split (%)	13.3%	27.8%		27.8%	42.2%		44.4%	44.4%	27.8%	44.4%	44.4%	
Maximum Green (s)	9.0	19.0		22.0	32.0		34.0	34.0	22.0	34.0	34.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		1.5	1.5	0.0	1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0			6.0	3.0	6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	4.0		1.5	4.0		4.0	4.0	1.5	4.0	4.0	
Recall Mode	None	None		None	None		C-Max	C-Max	None	C-Max	C-Max	
Walk Time (s)		8.0			8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		15.0			15.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	27.2	18.1		30.5	22.8			49.7	62.9	49.7	49.7	
Actuated g/C Ratio	0.30	0.20		0.34	0.25			0.55	0.70	0.55	0.55	
v/c Ratio	0.08	0.68		0.21	0.31			0.41	0.41	0.07	0.30	
Control Delay	17.7	42.3		19.6	27.3			14.5	3.9	12.5	12.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	17.7	42.3		19.6	27.3			14.5	3.9	12.5	12.9	
LOS	B	D		B	C			B	A	B	B	
Approach Delay		39.5			24.8			8.8			12.9	
Approach LOS		D			C			A			B	
Queue Length 50th (ft)	12	128		26	63			122	35	6	77	
Queue Length 95th (ft)	27	191		47	103			232	97	23	155	
Internal Link Dist (ft)		1282			295			802			303	
Turn Bay Length (ft)	105			150								
Base Capacity (vph)	454	400		490	621			985	1357	360	938	
Starvation Cap Reductn	0	0		0	0			0	0	0	0	
Spillback Cap Reductn	0	0		0	0			0	0	0	0	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	0.07	0.61		0.14	0.22			0.41	0.34	0.07	0.30	

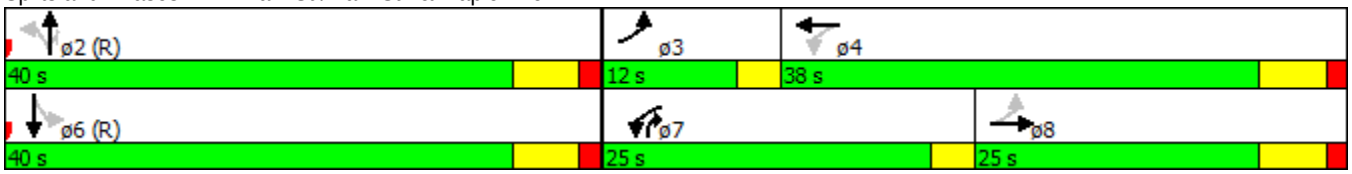
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 16.6		Intersection LOS: B	
Intersection Capacity Utilization 67.2%		ICU Level of Service C	

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

5/20/2016

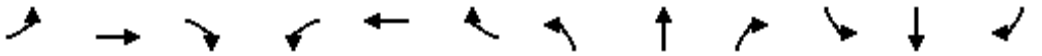
Analysis Period (min) 15

Splits and Phases: 2: Main St./Main St. & Maple Ave



HCM Unsignalized Intersection Capacity Analysis
4: Washington & Maple Ave

5/20/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	270	425	5	10	110	50	15	210	45	25	35	65
Future Volume (vph)	270	425	5	10	110	50	15	210	45	25	35	65
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	284	447	5	11	116	53	16	221	47	26	37	68

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total (vph)	284	452	127	53	284	63	68
Volume Left (vph)	284	0	11	0	16	26	0
Volume Right (vph)	0	5	0	53	47	0	68
Hadj (s)	0.53	0.03	0.08	-0.67	-0.05	0.33	-0.67
Departure Headway (s)	6.8	6.3	7.2	6.4	6.8	7.8	6.8
Degree Utilization, x	0.54	0.79	0.25	0.09	0.54	0.14	0.13
Capacity (veh/h)	516	560	469	518	500	424	481
Control Delay (s)	16.2	27.7	11.4	8.9	17.6	10.9	9.6
Approach Delay (s)	23.3		10.7		17.6	10.2	
Approach LOS	C		B		C	B	

Intersection Summary				
Delay	19.1			
Level of Service	C			
Intersection Capacity Utilization	50.6%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
100: Lincoln Center & Maple Ave

5/20/2016

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	690	0	0	190	5	5
Future Volume (Veh/h)	690	0	0	190	5	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	726	0	0	200	5	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	375					
pX, platoon unblocked			0.88		0.88	0.88
vC, conflicting volume			726		926	726
vC1, stage 1 conf vol					726	
vC2, stage 2 conf vol					200	
vCu, unblocked vol			624		851	624
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			846		447	429

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	726	200	5	5
Volume Left	0	0	5	0
Volume Right	0	0	0	5
cSH	1700	1700	447	429
Volume to Capacity	0.43	0.12	0.01	0.01
Queue Length 95th (ft)	0	0	1	1
Control Delay (s)	0.0	0.0	13.1	13.5
Lane LOS			B	B
Approach Delay (s)	0.0	0.0	13.3	
Approach LOS			B	

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	46.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
200: School Drive & Maple Ave

5/20/2016

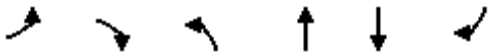
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	690	5	2	190	1	10
Future Volume (Veh/h)	690	5	2	190	1	10
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	726	5	2	200	1	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	525					
pX, platoon unblocked			0.89		0.89	0.89
vC, conflicting volume			731		932	728
vC1, stage 1 conf vol					728	
vC2, stage 2 conf vol					204	
vCu, unblocked vol			635		862	632
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	97
cM capacity (veh/h)			843		446	427

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	731	202	12
Volume Left	0	2	1
Volume Right	5	0	11
cSH	1700	843	428
Volume to Capacity	0.43	0.00	0.03
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.0	0.1	13.6
Lane LOS		A	B
Approach Delay (s)	0.0	0.1	13.6
Approach LOS			B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1: Main St. & Grove St.

5/20/2016



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	30	55	315	600	15
Future Volume (Veh/h)	5	30	55	315	600	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	32	58	332	632	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				383		
pX, platoon unblocked	0.89					
vC, conflicting volume	1088	640	648			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1040	640	648			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	93	94			
cM capacity (veh/h)	214	475	938			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	37	390	648
Volume Left	5	58	0
Volume Right	32	0	16
cSH	408	938	1700
Volume to Capacity	0.09	0.06	0.38
Queue Length 95th (ft)	7	5	0
Control Delay (s)	14.7	1.9	0.0
Lane LOS	B	A	
Approach Delay (s)	14.7	1.9	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		

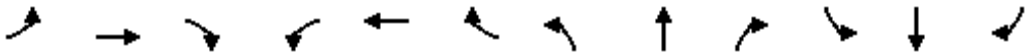
Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

5/20/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	170	20	345	335	35	1	300	150	40	520	70
Future Volume (vph)	35	170	20	345	335	35	1	300	150	40	520	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Storage Length (ft)	105		0	150		0	0		0	0		65
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	80			80			25			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.984			0.986				0.850		0.982	
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1694	1772	0	1711	1775	0	0	1801	1516	1711	1760	0
Flt Permitted	0.531			0.418				0.999		0.512		
Satd. Flow (perm)	947	1772	0	753	1775	0	0	1799	1516	922	1760	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			6				158		9	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		1362			387			882			383	
Travel Time (s)		31.0			8.8			24.1			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	6%
Adj. Flow (vph)	37	179	21	363	353	37	1	316	158	42	547	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	200	0	363	390	0	0	317	158	42	621	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

5/20/2016



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	3	8		7	4			2	7		6	
Permitted Phases	8			4			2		2	6		
Detector Phase	3	8		7	4		2	2	7	6	6	
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0		15.0	15.0	6.0	15.0	15.0	
Minimum Split (s)	9.5	29.0		9.5	29.0		29.0	29.0	9.5	29.0	29.0	
Total Split (s)	9.6	29.0		21.0	40.4		50.0	50.0	21.0	50.0	50.0	
Total Split (%)	9.6%	29.0%		21.0%	40.4%		50.0%	50.0%	21.0%	50.0%	50.0%	
Maximum Green (s)	6.6	23.0		18.0	34.4		44.0	44.0	18.0	44.0	44.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		1.5	1.5	0.0	1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0			6.0	3.0	6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	4.0		1.5	4.0		4.0	4.0	1.5	4.0	4.0	
Recall Mode	None	None		None	None		C-Max	C-Max	None	C-Max	C-Max	
Walk Time (s)		8.0			8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		15.0			15.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	26.2	17.1		40.6	32.1			50.4	73.9	50.4	50.4	
Actuated g/C Ratio	0.26	0.17		0.41	0.32			0.50	0.74	0.50	0.50	
v/c Ratio	0.13	0.65		0.77	0.68			0.35	0.14	0.09	0.70	
Control Delay	18.2	47.2		33.5	36.0			17.5	1.1	15.7	25.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	18.2	47.2		33.5	36.0			17.5	1.1	15.7	25.3	
LOS	B	D		C	D			B	A	B	C	
Approach Delay		42.7			34.8			12.1			24.7	
Approach LOS		D			C			B			C	
Queue Length 50th (ft)	14	117		169	221			118	0	13	289	
Queue Length 95th (ft)	30	179		228	306			205	19	37	#481	
Internal Link Dist (ft)		1282			307			802			303	
Turn Bay Length (ft)	105			150								
Base Capacity (vph)	302	411		477	619			906	1168	465	891	
Starvation Cap Reductn	0	0		0	0			0	0	0	0	
Spillback Cap Reductn	0	0		0	0			0	0	0	0	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	0.12	0.49		0.76	0.63			0.35	0.14	0.09	0.70	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 27.4		Intersection LOS: C	
Intersection Capacity Utilization 75.8%		ICU Level of Service D	

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

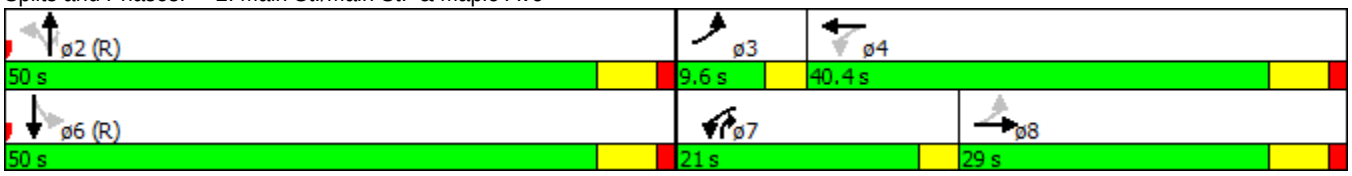
5/20/2016

Analysis Period (min) 15

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

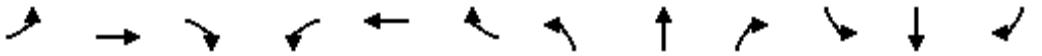
Queue shown is maximum after two cycles.

Splits and Phases: 2: Main St./Main St. & Maple Ave



HCM Unsignalized Intersection Capacity Analysis
4: Washington & Maple Ave

5/20/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	105	240	15	10	420	45	5	85	15	80	155	295
Future Volume (vph)	105	240	15	10	420	45	5	85	15	80	155	295
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	111	253	16	11	442	47	5	89	16	84	163	311

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total (vph)	111	269	453	47	110	247	311
Volume Left (vph)	111	0	11	0	5	84	0
Volume Right (vph)	0	16	0	47	16	0	311
Hadj (s)	0.57	-0.01	0.05	-0.67	-0.03	0.20	-0.67
Departure Headway (s)	8.3	7.7	7.5	6.8	8.5	7.8	7.0
Degree Utilization, x	0.26	0.58	0.95	0.09	0.26	0.54	0.60
Capacity (veh/h)	422	448	453	508	392	448	498
Control Delay (s)	13.0	19.6	55.3	9.3	14.4	18.4	18.7
Approach Delay (s)	17.7		51.0		14.4	18.6	
Approach LOS	C		F		B	C	

Intersection Summary				
Delay	28.5			
Level of Service	D			
Intersection Capacity Utilization	65.4%	ICU Level of Service	C	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
100: Lincoln Center & Maple Ave

5/20/2016

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	360	0	0	710	5	5
Future Volume (Veh/h)	360	0	0	710	5	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	379	0	0	747	5	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	387					
pX, platoon unblocked			0.91		0.91	0.91
vC, conflicting volume			379		1126	379
vC1, stage 1 conf vol					379	
vC2, stage 2 conf vol					747	
vCu, unblocked vol			269		1089	269
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			1179		421	701

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	379	747	5	5
Volume Left	0	0	5	0
Volume Right	0	0	0	5
cSH	1700	1700	421	701
Volume to Capacity	0.22	0.44	0.01	0.01
Queue Length 95th (ft)	0	0	1	1
Control Delay (s)	0.0	0.0	13.7	10.2
Lane LOS			B	B
Approach Delay (s)	0.0	0.0	11.9	
Approach LOS			B	

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	47.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
200: School Drive & Maple Ave

5/20/2016

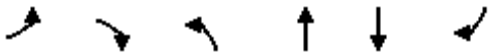
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	355	10	10	710	2	5
Future Volume (Veh/h)	355	10	10	710	2	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	374	11	11	747	2	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	521					
pX, platoon unblocked			0.92		0.92	0.92
vC, conflicting volume			385		1148	380
vC1, stage 1 conf vol					380	
vC2, stage 2 conf vol					769	
vCu, unblocked vol			284		1117	278
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			99		100	99
cM capacity (veh/h)			1172		409	698

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	385	758	7
Volume Left	0	11	2
Volume Right	11	0	5
cSH	1700	1172	581
Volume to Capacity	0.23	0.01	0.01
Queue Length 95th (ft)	0	1	1
Control Delay (s)	0.0	0.3	11.3
Lane LOS		A	B
Approach Delay (s)	0.0	0.3	11.3
Approach LOS			B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1: Main St. & Grove St.

5/20/2016



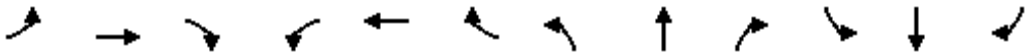
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	30	50	470	510	30
Future Volume (Veh/h)	5	30	50	470	510	30
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	32	53	495	537	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				383		
pX, platoon unblocked	0.83					
vC, conflicting volume	1154	553	569			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1083	553	569			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	94	95			
cM capacity (veh/h)	189	533	1003			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	37	548	569
Volume Left	5	53	0
Volume Right	32	0	32
cSH	428	1003	1700
Volume to Capacity	0.09	0.05	0.33
Queue Length 95th (ft)	7	4	0
Control Delay (s)	14.2	1.4	0.0
Lane LOS	B	A	
Approach Delay (s)	14.2	1.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

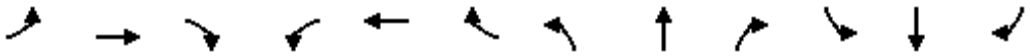
5/20/2016



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	175	30	150	215	40	25	410	205	50	425	65
Future Volume (vph)	70	175	30	150	215	40	25	410	205	50	425	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Storage Length (ft)	105		0	150		0	0		0	0		65
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	80			80			25			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.978			0.976				0.850		0.980	
Flt Protected	0.950			0.950				0.997		0.950		
Satd. Flow (prot)	1711	1761	0	1711	1757	0	0	1795	1531	1711	1765	0
Flt Permitted	0.509			0.513				0.957		0.401		
Satd. Flow (perm)	917	1761	0	924	1757	0	0	1723	1531	722	1765	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			13				216		12	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		1362			387			882			383	
Travel Time (s)		31.0			8.8			24.1			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	184	32	158	226	42	26	432	216	53	447	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	216	0	158	268	0	0	458	216	53	515	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	3	8		7	4			2	7		6	

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

5/20/2016



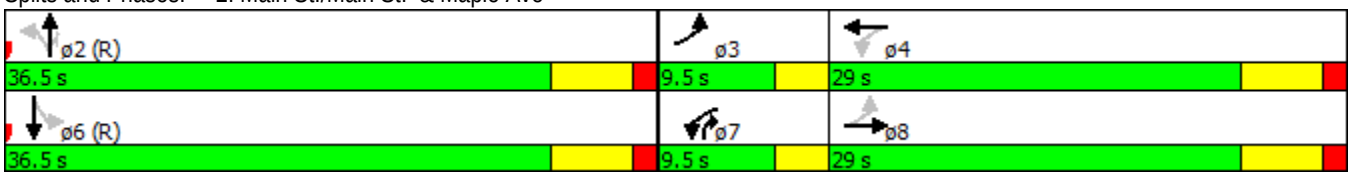
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8			4			2		2	6		
Detector Phase	3	8		7	4		2	2	7	6	6	
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0		15.0	15.0	6.0	15.0	15.0	
Minimum Split (s)	9.5	29.0		9.5	29.0		29.0	29.0	9.5	29.0	29.0	
Total Split (s)	9.5	29.0		9.5	29.0		36.5	36.5	9.5	36.5	36.5	
Total Split (%)	12.7%	38.7%		12.7%	38.7%		48.7%	48.7%	12.7%	48.7%	48.7%	
Maximum Green (s)	6.5	23.0		6.5	23.0		30.5	30.5	6.5	30.5	30.5	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		1.5	1.5	0.0	1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0			6.0	3.0	6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	4.0		1.5	4.0		4.0	4.0	1.5	4.0	4.0	
Recall Mode	None	None		None	None		C-Max	C-Max	None	C-Max	C-Max	
Walk Time (s)		8.0			8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		15.0			15.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	25.8	16.6		26.8	18.6			37.0	49.4	37.0	37.0	
Actuated g/C Ratio	0.34	0.22		0.36	0.25			0.49	0.66	0.49	0.49	
v/c Ratio	0.19	0.54		0.40	0.60			0.54	0.20	0.15	0.59	
Control Delay	14.3	28.5		17.6	29.6			17.6	1.6	14.0	18.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	14.3	28.5		17.6	29.6			17.6	1.6	14.0	18.1	
LOS	B	C		B	C			B	A	B	B	
Approach Delay		24.8			25.1			12.4			17.7	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)	21	84		48	108			139	0	13	158	
Queue Length 95th (ft)	40	132		75	165			267	25	39	302	
Internal Link Dist (ft)		1282			307			802			303	
Turn Bay Length (ft)	105			150								
Base Capacity (vph)	388	548		398	547			849	1083	356	876	
Starvation Cap Reductn	0	0		0	0			0	0	0	0	
Spillback Cap Reductn	0	0		0	0			0	0	0	0	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	0.19	0.39		0.40	0.49			0.54	0.20	0.15	0.59	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 18.6		Intersection LOS: B	
Intersection Capacity Utilization 74.7%		ICU Level of Service D	
Analysis Period (min) 15			

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

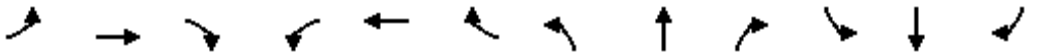
5/20/2016

Splits and Phases: 2: Main St./Main St. & Maple Ave



HCM Unsignalized Intersection Capacity Analysis
4: Washington & Maple Ave

5/20/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	180	260	5	15	245	50	5	85	15	50	75	150
Future Volume (vph)	180	260	5	15	245	50	5	85	15	50	75	150
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	189	274	5	16	258	53	5	89	16	53	79	158

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total (vph)	189	279	274	53	110	132	158
Volume Left (vph)	189	0	16	0	5	53	0
Volume Right (vph)	0	5	0	53	16	0	158
Hadj (s)	0.53	0.02	0.06	-0.67	-0.04	0.23	-0.67
Departure Headway (s)	6.9	6.3	6.6	5.9	7.1	7.1	6.2
Degree Utilization, x	0.36	0.49	0.50	0.09	0.22	0.26	0.27
Capacity (veh/h)	502	547	522	577	453	470	537
Control Delay (s)	12.5	14.1	14.9	8.2	12.1	11.4	10.4
Approach Delay (s)	13.4		13.8		12.1	10.8	
Approach LOS	B		B		B	B	

Intersection Summary				
Delay	12.8			
Level of Service	B			
Intersection Capacity Utilization	51.1%	ICU Level of Service		A
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
100: Lincoln Center & Maple Ave

5/20/2016

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	430	0	0	395	10	20
Future Volume (Veh/h)	430	0	0	395	10	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	453	0	0	416	11	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	387					
pX, platoon unblocked			0.92		0.92	0.92
vC, conflicting volume			453		869	453
vC1, stage 1 conf vol					453	
vC2, stage 2 conf vol					416	
vCu, unblocked vol			362		814	362
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	97
cM capacity (veh/h)			1101		531	628

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	453	416	11	21
Volume Left	0	0	11	0
Volume Right	0	0	0	21
cSH	1700	1700	531	628
Volume to Capacity	0.27	0.24	0.02	0.03
Queue Length 95th (ft)	0	0	2	3
Control Delay (s)	0.0	0.0	11.9	10.9
Lane LOS			B	B
Approach Delay (s)	0.0	0.0	11.3	
Approach LOS			B	

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	32.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
200: School Drive & Maple Ave

5/20/2016

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	445	5	5	395	1	1
Future Volume (Veh/h)	445	5	5	395	1	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	468	5	5	416	1	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	525					
pX, platoon unblocked			0.93		0.93	0.93
vC, conflicting volume			473		896	470
vC1, stage 1 conf vol					470	
vC2, stage 2 conf vol					426	
vCu, unblocked vol			399		853	396
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1082		519	609

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	473	421	2
Volume Left	0	5	1
Volume Right	5	0	1
cSH	1700	1082	560
Volume to Capacity	0.28	0.00	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.1	11.4
Lane LOS		A	B
Approach Delay (s)	0.0	0.1	11.4
Approach LOS			B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	34.8%	ICU Level of Service	A
Analysis Period (min)	15		

OPENING (YEAR 2018) CONDITIONS SYNCHRO REPORTS

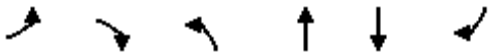
Weekday Morning Peak Hour

Weekday Evening Peak Hour

Saturday Midday Peak Hour

HCM Unsignalized Intersection Capacity Analysis
1: Main St. & Grove St.

5/20/2016



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	10	50	400	290	10
Future Volume (Veh/h)	1	10	50	400	290	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1	11	53	421	305	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				383		
pX, platoon unblocked	0.86					
vC, conflicting volume	838	310	316			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	732	310	316			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	98	96			
cM capacity (veh/h)	321	730	1244			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	12	474	316
Volume Left	1	53	0
Volume Right	11	0	11
cSH	660	1244	1700
Volume to Capacity	0.02	0.04	0.19
Queue Length 95th (ft)	1	3	0
Control Delay (s)	10.6	1.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.6	1.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		

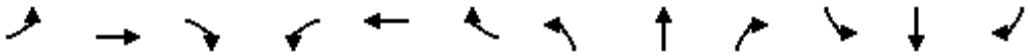
Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

5/20/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	225	10	80	130	35	1	385	460	30	250	20
Future Volume (vph)	30	225	10	80	130	35	1	385	460	30	250	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Storage Length (ft)	105		0	150		0	0		0	0		65
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	80			80			25			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.968				0.850		0.989	
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1711	1766	0	1711	1680	0	0	1783	1531	1342	1695	0
Flt Permitted	0.647			0.384						0.455		
Satd. Flow (perm)	1165	1766	0	691	1680	0	0	1783	1531	643	1695	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			17				252		5	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		1362			315			882			383	
Travel Time (s)		31.0			7.2			24.1			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	3%	9%	2%	2%	20%	2%	3%	2%	30%	7%	9%
Adj. Flow (vph)	32	237	11	84	137	37	1	405	484	32	263	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	248	0	84	174	0	0	406	484	32	284	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

5/20/2016



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	3	8		7	4			2	7		6	
Permitted Phases	8			4			2		2	6		
Detector Phase	3	8		7	4		2	2	7	6	6	
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0		15.0	15.0	6.0	15.0	15.0	
Minimum Split (s)	9.5	29.0		9.5	29.0		29.0	29.0	9.5	29.0	29.0	
Total Split (s)	12.0	25.0		25.0	38.0		40.0	40.0	25.0	40.0	40.0	
Total Split (%)	13.3%	27.8%		27.8%	42.2%		44.4%	44.4%	27.8%	44.4%	44.4%	
Maximum Green (s)	9.0	19.0		22.0	32.0		34.0	34.0	22.0	34.0	34.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		1.5	1.5	0.0	1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0			6.0	3.0	6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	4.0		1.5	4.0		4.0	4.0	1.5	4.0	4.0	
Recall Mode	None	None		None	None		C-Max	C-Max	None	C-Max	C-Max	
Walk Time (s)		8.0			8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		15.0			15.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	27.5	18.4		31.5	23.5			49.0	62.6	49.0	49.0	
Actuated g/C Ratio	0.31	0.20		0.35	0.26			0.54	0.70	0.54	0.54	
v/c Ratio	0.08	0.69		0.26	0.38			0.42	0.42	0.09	0.31	
Control Delay	17.2	42.2		19.7	26.9			15.2	4.3	13.2	13.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	17.2	42.2		19.7	26.9			15.2	4.3	13.2	13.5	
LOS	B	D		B	C			B	A	B	B	
Approach Delay		39.4			24.6			9.3			13.5	
Approach LOS		D			C			A			B	
Queue Length 50th (ft)	12	130		32	77			127	41	8	81	
Queue Length 95th (ft)	26	193		54	122			242	110	28	162	
Internal Link Dist (ft)		1282			235			802			303	
Turn Bay Length (ft)	105			150								
Base Capacity (vph)	448	402		494	608			970	1346	350	925	
Starvation Cap Reductn	0	0		0	0			0	0	0	0	
Spillback Cap Reductn	0	0		0	0			0	0	0	0	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	0.07	0.62		0.17	0.29			0.42	0.36	0.09	0.31	

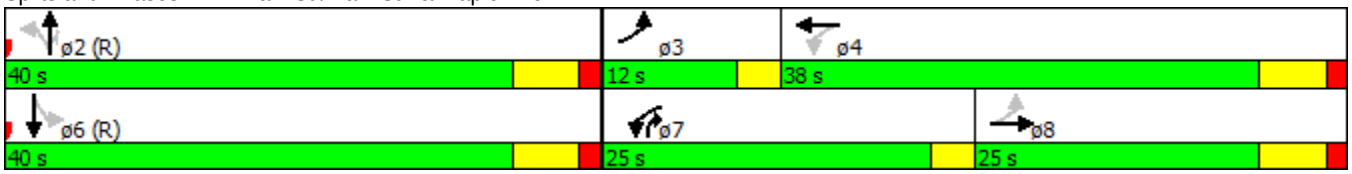
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 17.1		Intersection LOS: B	
Intersection Capacity Utilization 68.6%		ICU Level of Service C	

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

5/20/2016

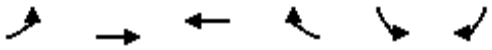
Analysis Period (min) 15

Splits and Phases: 2: Main St./Main St. & Maple Ave



HCM Unsignalized Intersection Capacity Analysis
3: Maple Ave & Access Drive

5/20/2016



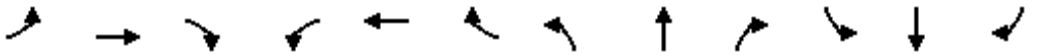
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	15	705	210	5	15	35
Future Volume (Veh/h)	15	705	210	5	15	35
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	16	742	221	5	16	37
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		315				
pX, platoon unblocked					0.88	
vC, conflicting volume	226				998	224
vC1, stage 1 conf vol					224	
vC2, stage 2 conf vol					774	
vCu, unblocked vol	226				929	224
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	99				96	95
cM capacity (veh/h)	1342				416	816

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	758	226	53
Volume Left	16	0	16
Volume Right	0	5	37
cSH	1342	1700	633
Volume to Capacity	0.01	0.13	0.08
Queue Length 95th (ft)	1	0	7
Control Delay (s)	0.3	0.0	11.2
Lane LOS	A		B
Approach Delay (s)	0.3	0.0	11.2
Approach LOS			B

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
4: Washington & Maple Ave

5/20/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	280	450	5	10	115	50	15	210	45	25	35	65
Future Volume (vph)	280	450	5	10	115	50	15	210	45	25	35	65
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	295	474	5	11	121	53	16	221	47	26	37	68

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total (vph)	295	479	132	53	284	63	68
Volume Left (vph)	295	0	11	0	16	26	0
Volume Right (vph)	0	5	0	53	47	0	68
Hadj (s)	0.53	0.03	0.08	-0.67	-0.05	0.33	-0.67
Departure Headway (s)	6.8	6.3	7.3	6.5	6.9	7.9	6.9
Degree Utilization, x	0.56	0.84	0.27	0.10	0.54	0.14	0.13
Capacity (veh/h)	514	560	465	513	496	426	485
Control Delay (s)	17.0	33.0	11.7	9.0	17.9	11.0	9.8
Approach Delay (s)	26.9		10.9		17.9	10.4	
Approach LOS	D		B		C	B	

Intersection Summary				
Delay	21.3			
Level of Service	C			
Intersection Capacity Utilization	51.9%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
100: Lincoln Center & Maple Ave

5/20/2016

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	720	0	0	210	5	5
Future Volume (Veh/h)	720	0	0	210	5	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	758	0	0	221	5	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	394					
pX, platoon unblocked			0.88		0.88	0.88
vC, conflicting volume			758		979	758
vC1, stage 1 conf vol					758	
vC2, stage 2 conf vol					221	
vCu, unblocked vol			660		910	660
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			820		429	409

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	758	221	5	5
Volume Left	0	0	5	0
Volume Right	0	0	0	5
cSH	1700	1700	429	409
Volume to Capacity	0.45	0.13	0.01	0.01
Queue Length 95th (ft)	0	0	1	1
Control Delay (s)	0.0	0.0	13.5	13.9
Lane LOS			B	B
Approach Delay (s)	0.0	0.0	13.7	
Approach LOS			B	

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
200: School Drive & Maple Ave

5/20/2016

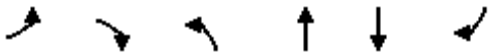
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	720	5	2	210	1	10
Future Volume (Veh/h)	720	5	2	210	1	10
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	758	5	2	221	1	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	519					
pX, platoon unblocked			0.89		0.89	0.89
vC, conflicting volume			763		986	760
vC1, stage 1 conf vol					760	
vC2, stage 2 conf vol					225	
vCu, unblocked vol			670		921	668
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	97
cM capacity (veh/h)			817		428	407

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	763	223	12
Volume Left	0	2	1
Volume Right	5	0	11
cSH	1700	817	409
Volume to Capacity	0.45	0.00	0.03
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.0	0.1	14.1
Lane LOS		A	B
Approach Delay (s)	0.0	0.1	14.1
Approach LOS			B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1: Main St. & Grove St.

5/20/2016



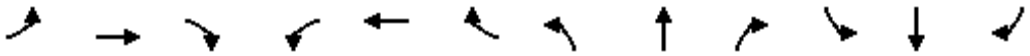
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	30	55	340	640	15
Future Volume (Veh/h)	5	30	55	340	640	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	32	58	358	674	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				383		
pX, platoon unblocked	0.89					
vC, conflicting volume	1156	682	690			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1112	682	690			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	93	94			
cM capacity (veh/h)	192	450	905			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	37	416	690
Volume Left	5	58	0
Volume Right	32	0	16
cSH	381	905	1700
Volume to Capacity	0.10	0.06	0.41
Queue Length 95th (ft)	8	5	0
Control Delay (s)	15.5	1.9	0.0
Lane LOS	C	A	
Approach Delay (s)	15.5	1.9	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

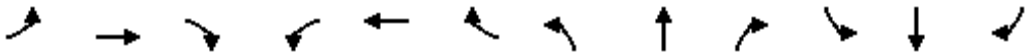
5/20/2016



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	190	20	365	360	50	1	310	175	60	540	70
Future Volume (vph)	35	190	20	365	360	50	1	310	175	60	540	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Storage Length (ft)	105		0	150		0	0		0	0		65
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	80			80			25			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.986			0.982				0.850		0.983	
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1694	1775	0	1711	1768	0	0	1801	1516	1711	1762	0
Flt Permitted	0.481			0.391				0.999		0.498		
Satd. Flow (perm)	858	1775	0	704	1768	0	0	1799	1516	897	1762	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			8				184		8	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		1362			315			882			383	
Travel Time (s)		31.0			7.2			24.1			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	6%
Adj. Flow (vph)	37	200	21	384	379	53	1	326	184	63	568	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	221	0	384	432	0	0	327	184	63	642	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

5/20/2016



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	3	8		7	4			2	7		6	
Permitted Phases	8			4			2		2	6		
Detector Phase	3	8		7	4		2	2	7	6	6	
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0		15.0	15.0	6.0	15.0	15.0	
Minimum Split (s)	9.5	29.0		9.5	29.0		29.0	29.0	9.5	29.0	29.0	
Total Split (s)	9.6	29.0		21.0	40.4		50.0	50.0	21.0	50.0	50.0	
Total Split (%)	9.6%	29.0%		21.0%	40.4%		50.0%	50.0%	21.0%	50.0%	50.0%	
Maximum Green (s)	6.6	23.0		18.0	34.4		44.0	44.0	18.0	44.0	44.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		1.5	1.5	0.0	1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0			6.0	3.0	6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	4.0		1.5	4.0		4.0	4.0	1.5	4.0	4.0	
Recall Mode	None	None		None	None		C-Max	C-Max	None	C-Max	C-Max	
Walk Time (s)		8.0			8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		15.0			15.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	27.4	18.2		41.9	33.3			49.1	72.8	49.1	49.1	
Actuated g/C Ratio	0.27	0.18		0.42	0.33			0.49	0.73	0.49	0.49	
v/c Ratio	0.13	0.68		0.81	0.73			0.37	0.16	0.14	0.74	
Control Delay	17.7	47.2		36.3	37.0			18.5	1.2	16.9	27.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	17.7	47.2		36.3	37.0			18.5	1.2	16.9	27.8	
LOS	B	D		D	D			B	A	B	C	
Approach Delay		43.0			36.7			12.2			26.9	
Approach LOS		D			D			B			C	
Queue Length 50th (ft)	14	129		177	247			127	0	22	316	
Queue Length 95th (ft)	30	197		#250	346			212	20	51	#549	
Internal Link Dist (ft)		1282			235			802			303	
Turn Bay Length (ft)	105			150								
Base Capacity (vph)	294	412		476	621			883	1158	440	869	
Starvation Cap Reductn	0	0		0	0			0	0	0	0	
Spillback Cap Reductn	0	0		0	0			0	0	0	0	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	0.13	0.54		0.81	0.70			0.37	0.16	0.14	0.74	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 28.9		Intersection LOS: C	
Intersection Capacity Utilization 94.6%		ICU Level of Service F	

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

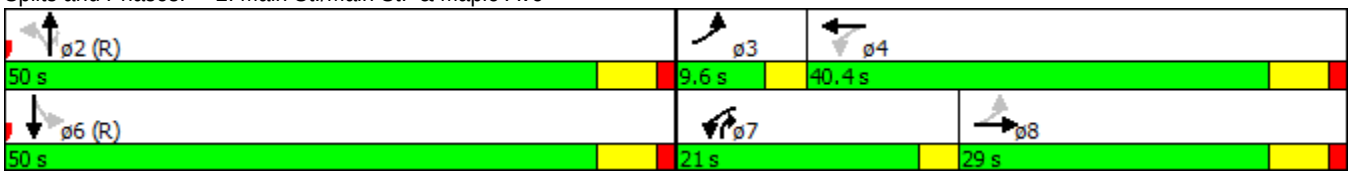
5/20/2016

Analysis Period (min) 15

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

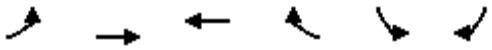
Queue shown is maximum after two cycles.

Splits and Phases: 2: Main St./Main St. & Maple Ave



HCM Unsignalized Intersection Capacity Analysis
3: Maple Ave & Drive Access

5/20/2016



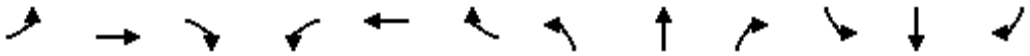
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	35	390	750	15	10	20
Future Volume (Veh/h)	35	390	750	15	10	20
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	37	411	789	16	11	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		315				
pX, platoon unblocked					0.90	
vC, conflicting volume	805				1282	797
vC1, stage 1 conf vol					797	
vC2, stage 2 conf vol					485	
vCu, unblocked vol	805				1257	797
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	95				97	95
cM capacity (veh/h)	819				378	387

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	448	805	32
Volume Left	37	0	11
Volume Right	0	16	21
cSH	819	1700	383
Volume to Capacity	0.05	0.47	0.08
Queue Length 95th (ft)	4	0	7
Control Delay (s)	1.3	0.0	15.2
Lane LOS	A		C
Approach Delay (s)	1.3	0.0	15.2
Approach LOS			C

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
4: Washington & Maple Ave

5/20/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	110	260	15	10	455	45	5	90	15	85	160	310
Future Volume (vph)	110	260	15	10	455	45	5	90	15	85	160	310
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	116	274	16	11	479	47	5	95	16	89	168	326

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total (vph)	116	290	490	47	116	257	326
Volume Left (vph)	116	0	11	0	5	89	0
Volume Right (vph)	0	16	0	47	16	0	326
Hadj (s)	0.57	0.00	0.05	-0.67	-0.03	0.21	-0.67
Departure Headway (s)	8.4	7.8	7.7	7.0	8.7	7.9	7.1
Degree Utilization, x	0.27	0.63	1.00	0.09	0.28	0.57	0.64
Capacity (veh/h)	417	444	490	497	385	444	493
Control Delay (s)	13.3	22.1	68.5	9.5	15.0	19.7	20.7
Approach Delay (s)	19.6		63.3		15.0	20.2	
Approach LOS	C		F		C	C	

Intersection Summary				
Delay	33.8			
Level of Service	D			
Intersection Capacity Utilization	68.9%	ICU Level of Service	C	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
100: Lincoln Center & Maple Ave

5/20/2016

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	400	0	0	760	5	5
Future Volume (Veh/h)	400	0	0	760	5	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	421	0	0	800	5	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	384					
pX, platoon unblocked			0.91		0.91	0.91
vC, conflicting volume			421		1221	421
vC1, stage 1 conf vol					421	
vC2, stage 2 conf vol					800	
vCu, unblocked vol			310		1192	310
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			1134		394	662

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	421	800	5	5
Volume Left	0	0	5	0
Volume Right	0	0	0	5
cSH	1700	1700	394	662
Volume to Capacity	0.25	0.47	0.01	0.01
Queue Length 95th (ft)	0	0	1	1
Control Delay (s)	0.0	0.0	14.3	10.5
Lane LOS			B	B
Approach Delay (s)	0.0	0.0	12.4	
Approach LOS			B	

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
200: School Drive & Maple Ave

5/20/2016

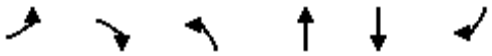
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	395	10	10	760	2	5
Future Volume (Veh/h)	395	10	10	760	2	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	416	11	11	800	2	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	525					
pX, platoon unblocked			0.91		0.91	0.91
vC, conflicting volume			427		1244	422
vC1, stage 1 conf vol					422	
vC2, stage 2 conf vol					822	
vCu, unblocked vol			327		1220	321
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			99		99	99
cM capacity (veh/h)			1128		383	659

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	427	811	7
Volume Left	0	11	2
Volume Right	11	0	5
cSH	1700	1128	546
Volume to Capacity	0.25	0.01	0.01
Queue Length 95th (ft)	0	1	1
Control Delay (s)	0.0	0.3	11.7
Lane LOS		A	B
Approach Delay (s)	0.0	0.3	11.7
Approach LOS			B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1: Main St. & Grove St.

5/20/2016



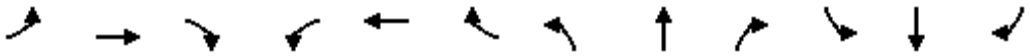
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	30	50	490	535	30
Future Volume (Veh/h)	5	30	50	490	535	30
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	32	53	516	563	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				383		
pX, platoon unblocked	0.82					
vC, conflicting volume	1201	579	595			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1137	579	595			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	94	95			
cM capacity (veh/h)	174	515	981			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	37	569	595
Volume Left	5	53	0
Volume Right	32	0	32
cSH	407	981	1700
Volume to Capacity	0.09	0.05	0.35
Queue Length 95th (ft)	7	4	0
Control Delay (s)	14.7	1.5	0.0
Lane LOS	B	A	
Approach Delay (s)	14.7	1.5	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

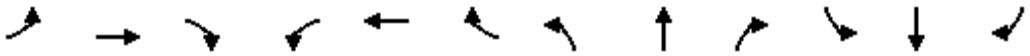
5/20/2016



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	190	30	160	230	55	25	415	225	70	430	65
Future Volume (vph)	70	190	30	160	230	55	25	415	225	70	430	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Storage Length (ft)	105		0	150		0	0		0	0		65
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	80			80			25			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.979			0.971				0.850		0.980	
Flt Protected	0.950			0.950				0.997		0.950		
Satd. Flow (prot)	1711	1763	0	1711	1748	0	0	1795	1531	1711	1765	0
Flt Permitted	0.456			0.492				0.957		0.391		
Satd. Flow (perm)	821	1763	0	886	1748	0	0	1723	1531	704	1765	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			17				237		12	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		1362			315			882			383	
Travel Time (s)		31.0			7.2			24.1			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	200	32	168	242	58	26	437	237	74	453	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	232	0	168	300	0	0	463	237	74	521	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	3	8		7	4			2	7		6	

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

5/20/2016



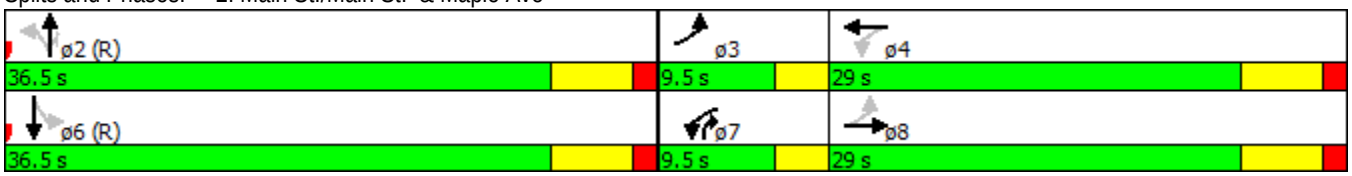
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8			4			2		2	6		
Detector Phase	3	8		7	4		2	2	7	6	6	
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0		15.0	15.0	6.0	15.0	15.0	
Minimum Split (s)	9.5	29.0		9.5	29.0		29.0	29.0	9.5	29.0	29.0	
Total Split (s)	9.5	29.0		9.5	29.0		36.5	36.5	9.5	36.5	36.5	
Total Split (%)	12.7%	38.7%		12.7%	38.7%		48.7%	48.7%	12.7%	48.7%	48.7%	
Maximum Green (s)	6.5	23.0		6.5	23.0		30.5	30.5	6.5	30.5	30.5	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		1.5	1.5	0.0	1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0			6.0	3.0	6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	4.0		1.5	4.0		4.0	4.0	1.5	4.0	4.0	
Recall Mode	None	None		None	None		C-Max	C-Max	None	C-Max	C-Max	
Walk Time (s)		8.0			8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		15.0			15.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	26.5	17.3		27.5	19.3			36.3	48.7	36.3	36.3	
Actuated g/C Ratio	0.35	0.23		0.37	0.26			0.48	0.65	0.48	0.48	
v/c Ratio	0.20	0.56		0.43	0.65			0.56	0.22	0.22	0.61	
Control Delay	13.9	28.5		17.6	30.2			18.4	1.6	15.6	19.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	13.9	28.5		17.6	30.2			18.4	1.6	15.6	19.0	
LOS	B	C		B	C			B	A	B	B	
Approach Delay		25.0			25.7			12.7			18.6	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)	21	90		50	119			146	0	19	166	
Queue Length 95th (ft)	40	142		79	184			271	26	53	307	
Internal Link Dist (ft)		1282			235			802			303	
Turn Bay Length (ft)	105			150								
Base Capacity (vph)	370	548		396	547			833	1078	340	859	
Starvation Cap Reductn	0	0		0	0			0	0	0	0	
Spillback Cap Reductn	0	0		0	0			0	0	0	0	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	0.20	0.42		0.42	0.55			0.56	0.22	0.22	0.61	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 19.2		Intersection LOS: B	
Intersection Capacity Utilization 88.8%		ICU Level of Service E	
Analysis Period (min) 15			

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

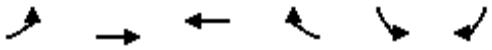
5/20/2016

Splits and Phases: 2: Main St./Main St. & Maple Ave



HCM Unsignalized Intersection Capacity Analysis
3: Maple Ave & Drive Access

5/20/2016



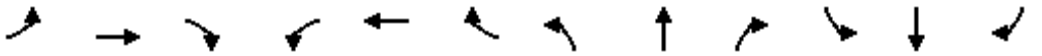
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	35	455	430	10	15	20
Future Volume (Veh/h)	35	455	430	10	15	20
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	37	479	453	11	16	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		315				
pX, platoon unblocked					0.91	
vC, conflicting volume	464				1012	458
vC1, stage 1 conf vol					458	
vC2, stage 2 conf vol					553	
vCu, unblocked vol	464				960	458
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	97				97	97
cM capacity (veh/h)	1097				467	602

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	516	464	37
Volume Left	37	0	16
Volume Right	0	11	21
cSH	1097	1700	535
Volume to Capacity	0.03	0.27	0.07
Queue Length 95th (ft)	3	0	6
Control Delay (s)	1.0	0.0	12.2
Lane LOS	A		B
Approach Delay (s)	1.0	0.0	12.2
Approach LOS			B

Intersection Summary			
Average Delay		0.9	
Intersection Capacity Utilization		62.5%	ICU Level of Service B
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
4: Washington & Maple Ave

5/20/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	185	285	5	15	265	50	5	85	15	50	75	155
Future Volume (vph)	185	285	5	15	265	50	5	85	15	50	75	155
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	195	300	5	16	279	53	5	89	16	53	79	163

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total (vph)	195	305	295	53	110	132	163
Volume Left (vph)	195	0	16	0	5	53	0
Volume Right (vph)	0	5	0	53	16	0	163
Hadj (s)	0.53	0.02	0.06	-0.67	-0.04	0.23	-0.67
Departure Headway (s)	6.9	6.4	6.7	6.0	7.3	7.3	6.4
Degree Utilization, x	0.38	0.54	0.55	0.09	0.22	0.27	0.29
Capacity (veh/h)	496	531	516	568	442	460	524
Control Delay (s)	12.9	15.6	16.3	8.3	12.3	11.7	10.7
Approach Delay (s)	14.6		15.1		12.3	11.2	
Approach LOS	B		C		B	B	

Intersection Summary				
Delay	13.7			
Level of Service	B			
Intersection Capacity Utilization	53.5%	ICU Level of Service		A
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
100: Lincoln Center & Maple Ave

5/20/2016

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	470	0	0	430	10	20
Future Volume (Veh/h)	470	0	0	430	10	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	495	0	0	453	11	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	376					
pX, platoon unblocked			0.92		0.92	0.92
vC, conflicting volume			495		948	495
vC1, stage 1 conf vol					495	
vC2, stage 2 conf vol					453	
vCu, unblocked vol			407		900	407
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	96
cM capacity (veh/h)			1059		502	592

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	495	453	11	21
Volume Left	0	0	11	0
Volume Right	0	0	0	21
cSH	1700	1700	502	592
Volume to Capacity	0.29	0.27	0.02	0.04
Queue Length 95th (ft)	0	0	2	3
Control Delay (s)	0.0	0.0	12.3	11.3
Lane LOS			B	B
Approach Delay (s)	0.0	0.0	11.7	
Approach LOS			B	

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	34.7%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
200: School Drive & Maple Ave

5/20/2016

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	485	5	5	430	1	1
Future Volume (Veh/h)	485	5	5	430	1	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	511	5	5	453	1	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	525					
pX, platoon unblocked			0.93		0.93	0.93
vC, conflicting volume			516		976	514
vC1, stage 1 conf vol					514	
vC2, stage 2 conf vol					463	
vCu, unblocked vol			447		940	445
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1040		490	573

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	516	458	2
Volume Left	0	5	1
Volume Right	5	0	1
cSH	1700	1040	528
Volume to Capacity	0.30	0.00	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.1	11.8
Lane LOS		A	B
Approach Delay (s)	0.0	0.1	11.8
Approach LOS			B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

HORIZON (YEAR 2023) CONDITIONS SYNCRHO REPORTS

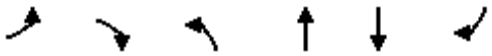
Weekday Morning Peak Hour

Weekday Evening Peak Hour

Saturday Midday Peak Hour

HCM Unsignalized Intersection Capacity Analysis
1: Main St. & Grove St.

5/20/2016



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	10	50	410	295	10
Future Volume (Veh/h)	1	10	50	410	295	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1	11	53	432	311	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				383		
pX, platoon unblocked	0.86					
vC, conflicting volume	854	316	322			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	745	316	322			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	98	96			
cM capacity (veh/h)	312	724	1238			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	12	485	322
Volume Left	1	53	0
Volume Right	11	0	11
cSH	652	1238	1700
Volume to Capacity	0.02	0.04	0.19
Queue Length 95th (ft)	1	3	0
Control Delay (s)	10.6	1.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.6	1.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		

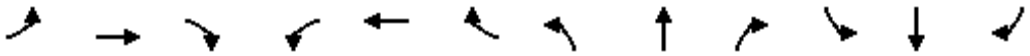
Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

5/20/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	235	10	80	135	35	1	395	465	30	255	20
Future Volume (vph)	30	235	10	80	135	35	1	395	465	30	255	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Storage Length (ft)	105		0	150		0	0		0	0		65
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	80			80			25			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.969				0.850		0.989	
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1711	1768	0	1711	1683	0	0	1783	1531	1342	1695	0
Flt Permitted	0.644			0.375						0.442		
Satd. Flow (perm)	1160	1768	0	675	1683	0	0	1783	1531	624	1695	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			16				237		5	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		1362			315			882			383	
Travel Time (s)		31.0			7.2			24.1			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	3%	9%	2%	2%	20%	2%	3%	2%	30%	7%	9%
Adj. Flow (vph)	32	247	11	84	142	37	1	416	489	32	268	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	258	0	84	179	0	0	417	489	32	289	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

5/20/2016



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	3	8		7	4			2	7		6	
Permitted Phases	8			4			2		2	6		
Detector Phase	3	8		7	4		2	2	7	6	6	
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0		15.0	15.0	6.0	15.0	15.0	
Minimum Split (s)	9.5	29.0		9.5	29.0		29.0	29.0	9.5	29.0	29.0	
Total Split (s)	12.0	25.0		25.0	38.0		40.0	40.0	25.0	40.0	40.0	
Total Split (%)	13.3%	27.8%		27.8%	42.2%		44.4%	44.4%	27.8%	44.4%	44.4%	
Maximum Green (s)	9.0	19.0		22.0	32.0		34.0	34.0	22.0	34.0	34.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		1.5	1.5	0.0	1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0			6.0	3.0	6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	4.0		1.5	4.0		4.0	4.0	1.5	4.0	4.0	
Recall Mode	None	None		None	None		C-Max	C-Max	None	C-Max	C-Max	
Walk Time (s)		8.0			8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		15.0			15.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	28.0	19.0		32.1	24.1			48.4	62.0	48.4	48.4	
Actuated g/C Ratio	0.31	0.21		0.36	0.27			0.54	0.69	0.54	0.54	
v/c Ratio	0.08	0.69		0.26	0.39			0.43	0.43	0.10	0.32	
Control Delay	16.8	41.9		19.4	26.8			15.8	4.8	13.7	14.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	16.8	41.9		19.4	26.8			15.8	4.8	13.7	14.0	
LOS	B	D		B	C			B	A	B	B	
Approach Delay		39.1			24.4			9.8			13.9	
Approach LOS		D			C			A			B	
Queue Length 50th (ft)	12	135		32	80			134	46	8	84	
Queue Length 95th (ft)	26	200		53	125			253	120	29	167	
Internal Link Dist (ft)		1282			235			802			303	
Turn Bay Length (ft)	105			150								
Base Capacity (vph)	454	407		497	608			959	1335	335	914	
Starvation Cap Reductn	0	0		0	0			0	0	0	0	
Spillback Cap Reductn	0	0		0	0			0	0	0	0	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	0.07	0.63		0.17	0.29			0.43	0.37	0.10	0.32	

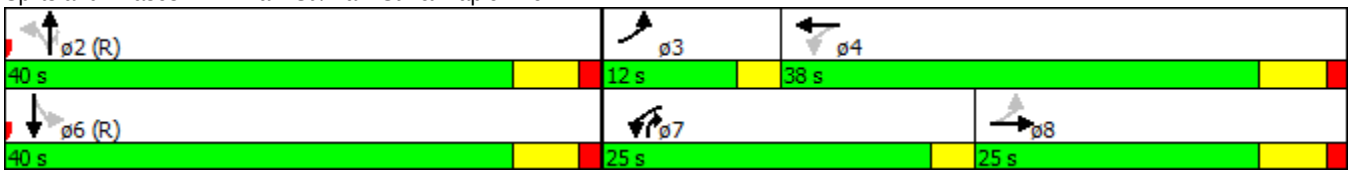
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 17.5		Intersection LOS: B	
Intersection Capacity Utilization 69.7%		ICU Level of Service C	

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

5/20/2016

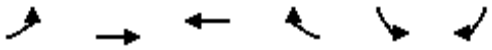
Analysis Period (min) 15

Splits and Phases: 2: Main St./Main St. & Maple Ave



HCM Unsignalized Intersection Capacity Analysis
3: Maple Ave & Access Drive

5/20/2016



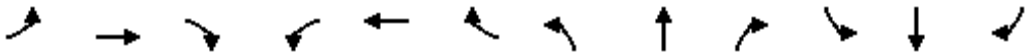
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	15	720	215	5	15	35
Future Volume (Veh/h)	15	720	215	5	15	35
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	16	758	226	5	16	37
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		315				
pX, platoon unblocked					0.87	
vC, conflicting volume	231				1018	228
vC1, stage 1 conf vol					228	
vC2, stage 2 conf vol					790	
vCu, unblocked vol	231				949	228
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	99				96	95
cM capacity (veh/h)	1337				408	811

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	774	231	53
Volume Left	16	0	16
Volume Right	0	5	37
cSH	1337	1700	624
Volume to Capacity	0.01	0.14	0.08
Queue Length 95th (ft)	1	0	7
Control Delay (s)	0.3	0.0	11.3
Lane LOS	A		B
Approach Delay (s)	0.3	0.0	11.3
Approach LOS			B

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
4: Washington & Maple Ave

5/20/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	285	460	5	10	120	50	15	215	45	25	35	65
Future Volume (vph)	285	460	5	10	120	50	15	215	45	25	35	65
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	300	484	5	11	126	53	16	226	47	26	37	68

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total (vph)	300	489	137	53	289	63	68
Volume Left (vph)	300	0	11	0	16	26	0
Volume Right (vph)	0	5	0	53	47	0	68
Hadj (s)	0.53	0.03	0.07	-0.67	-0.05	0.33	-0.67
Departure Headway (s)	6.9	6.4	7.3	6.6	6.9	8.0	7.0
Degree Utilization, x	0.57	0.86	0.28	0.10	0.56	0.14	0.13
Capacity (veh/h)	511	556	462	515	494	424	482
Control Delay (s)	17.5	36.1	11.9	9.1	18.4	11.1	9.9
Approach Delay (s)	29.0		11.1		18.4	10.5	
Approach LOS	D		B		C	B	

Intersection Summary				
Delay	22.7			
Level of Service	C			
Intersection Capacity Utilization	52.7%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
100: Lincoln Center & Maple Ave

5/20/2016

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	735	0	0	215	5	5
Future Volume (Veh/h)	735	0	0	215	5	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	774	0	0	226	5	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	380					
pX, platoon unblocked			0.88		0.88	0.88
vC, conflicting volume			774		1000	774
vC1, stage 1 conf vol					774	
vC2, stage 2 conf vol					226	
vCu, unblocked vol			673		931	673
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			806		420	400

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	774	226	5	5
Volume Left	0	0	5	0
Volume Right	0	0	0	5
cSH	1700	1700	420	400
Volume to Capacity	0.46	0.13	0.01	0.01
Queue Length 95th (ft)	0	0	1	1
Control Delay (s)	0.0	0.0	13.7	14.1
Lane LOS			B	B
Approach Delay (s)	0.0	0.0	13.9	
Approach LOS			B	

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
200: School Drive & Maple Ave

5/20/2016

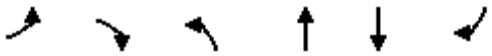
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	735	5	2	215	1	10
Future Volume (Veh/h)	735	5	2	215	1	10
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	774	5	2	226	1	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	525					
pX, platoon unblocked			0.88		0.88	0.88
vC, conflicting volume			779		1006	776
vC1, stage 1 conf vol					776	
vC2, stage 2 conf vol					230	
vCu, unblocked vol			683		941	681
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	97
cM capacity (veh/h)			803		419	398

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	779	228	12
Volume Left	0	2	1
Volume Right	5	0	11
cSH	1700	803	400
Volume to Capacity	0.46	0.00	0.03
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.0	0.1	14.3
Lane LOS		A	B
Approach Delay (s)	0.0	0.1	14.3
Approach LOS			B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1: Main St. & Grove St.

5/20/2016



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	30	55	340	640	15
Future Volume (Veh/h)	5	30	55	340	640	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	32	58	358	674	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				383		
pX, platoon unblocked	0.89					
vC, conflicting volume	1156	682	690			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1112	682	690			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	93	94			
cM capacity (veh/h)	192	450	905			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	37	416	690
Volume Left	5	58	0
Volume Right	32	0	16
cSH	381	905	1700
Volume to Capacity	0.10	0.06	0.41
Queue Length 95th (ft)	8	5	0
Control Delay (s)	15.5	1.9	0.0
Lane LOS	C	A	
Approach Delay (s)	15.5	1.9	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

5/20/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	190	20	365	360	50	1	310	175	60	540	70
Future Volume (vph)	35	190	20	365	360	50	1	310	175	60	540	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Storage Length (ft)	105		0	150		0	0		0	0		65
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	80			80			25			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.986			0.982				0.850		0.983	
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1694	1775	0	1711	1768	0	0	1801	1516	1711	1762	0
Flt Permitted	0.481			0.391				0.999		0.498		
Satd. Flow (perm)	858	1775	0	704	1768	0	0	1799	1516	897	1762	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			8				184		8	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		1362			315			882			383	
Travel Time (s)		31.0			7.2			24.1			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	6%
Adj. Flow (vph)	37	200	21	384	379	53	1	326	184	63	568	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	221	0	384	432	0	0	327	184	63	642	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

5/20/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	3	8		7	4			2	7		6	
Permitted Phases	8			4			2		2	6		
Detector Phase	3	8		7	4		2	2	7	6	6	
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0		15.0	15.0	6.0	15.0	15.0	
Minimum Split (s)	9.5	29.0		9.5	29.0		29.0	29.0	9.5	29.0	29.0	
Total Split (s)	9.6	29.0		21.0	40.4		50.0	50.0	21.0	50.0	50.0	
Total Split (%)	9.6%	29.0%		21.0%	40.4%		50.0%	50.0%	21.0%	50.0%	50.0%	
Maximum Green (s)	6.6	23.0		18.0	34.4		44.0	44.0	18.0	44.0	44.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		1.5	1.5	0.0	1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0			6.0	3.0	6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	4.0		1.5	4.0		4.0	4.0	1.5	4.0	4.0	
Recall Mode	None	None		None	None		C-Max	C-Max	None	C-Max	C-Max	
Walk Time (s)		8.0			8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		15.0			15.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	27.4	18.2		41.9	33.3			49.1	72.8	49.1	49.1	
Actuated g/C Ratio	0.27	0.18		0.42	0.33			0.49	0.73	0.49	0.49	
v/c Ratio	0.13	0.68		0.81	0.73			0.37	0.16	0.14	0.74	
Control Delay	17.7	47.2		36.3	37.0			18.5	1.2	16.9	27.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	17.7	47.2		36.3	37.0			18.5	1.2	16.9	27.8	
LOS	B	D		D	D			B	A	B	C	
Approach Delay		43.0			36.7			12.2			26.9	
Approach LOS		D			D			B			C	
Queue Length 50th (ft)	14	129		177	247			127	0	22	316	
Queue Length 95th (ft)	30	197		#250	346			212	20	51	#549	
Internal Link Dist (ft)		1282			235			802			303	
Turn Bay Length (ft)	105			150								
Base Capacity (vph)	294	412		476	621			883	1158	440	869	
Starvation Cap Reductn	0	0		0	0			0	0	0	0	
Spillback Cap Reductn	0	0		0	0			0	0	0	0	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	0.13	0.54		0.81	0.70			0.37	0.16	0.14	0.74	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 28.9		Intersection LOS: C	
Intersection Capacity Utilization 94.6%		ICU Level of Service F	

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

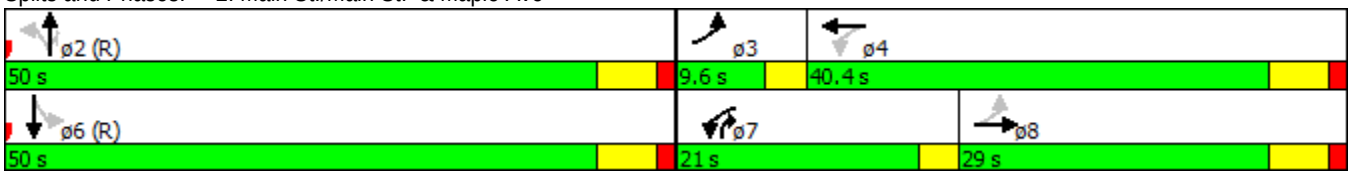
5/20/2016

Analysis Period (min) 15

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

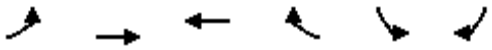
Queue shown is maximum after two cycles.

Splits and Phases: 2: Main St./Main St. & Maple Ave



HCM Unsignalized Intersection Capacity Analysis
3: Maple Ave & Drive Access

5/20/2016



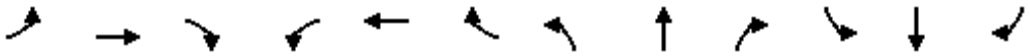
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	35	390	750	15	10	20
Future Volume (Veh/h)	35	390	750	15	10	20
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	37	411	789	16	11	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		315				
pX, platoon unblocked					0.90	
vC, conflicting volume	805				1282	797
vC1, stage 1 conf vol					797	
vC2, stage 2 conf vol					485	
vCu, unblocked vol	805				1257	797
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	95				97	95
cM capacity (veh/h)	819				378	387

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	448	805	32
Volume Left	37	0	11
Volume Right	0	16	21
cSH	819	1700	383
Volume to Capacity	0.05	0.47	0.08
Queue Length 95th (ft)	4	0	7
Control Delay (s)	1.3	0.0	15.2
Lane LOS	A		C
Approach Delay (s)	1.3	0.0	15.2
Approach LOS			C

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
4: Washington & Maple Ave

5/20/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	110	260	15	10	455	45	5	90	15	85	160	310
Future Volume (vph)	110	260	15	10	455	45	5	90	15	85	160	310
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	116	274	16	11	479	47	5	95	16	89	168	326

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total (vph)	116	290	490	47	116	257	326
Volume Left (vph)	116	0	11	0	5	89	0
Volume Right (vph)	0	16	0	47	16	0	326
Hadj (s)	0.57	0.00	0.05	-0.67	-0.03	0.21	-0.67
Departure Headway (s)	8.4	7.8	7.7	7.0	8.7	7.9	7.1
Degree Utilization, x	0.27	0.63	1.00	0.09	0.28	0.57	0.64
Capacity (veh/h)	417	444	490	497	385	444	493
Control Delay (s)	13.3	22.1	68.5	9.5	15.0	19.7	20.7
Approach Delay (s)	19.6		63.3		15.0	20.2	
Approach LOS	C		F		C	C	

Intersection Summary				
Delay	33.8			
Level of Service	D			
Intersection Capacity Utilization	68.9%	ICU Level of Service	C	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
100: Lincoln Center & Maple Ave

5/20/2016

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	400	0	0	760	5	5
Future Volume (Veh/h)	400	0	0	760	5	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	421	0	0	800	5	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	384					
pX, platoon unblocked			0.91		0.91	0.91
vC, conflicting volume			421		1221	421
vC1, stage 1 conf vol					421	
vC2, stage 2 conf vol					800	
vCu, unblocked vol			310		1192	310
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			1134		394	662

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	421	800	5	5
Volume Left	0	0	5	0
Volume Right	0	0	0	5
cSH	1700	1700	394	662
Volume to Capacity	0.25	0.47	0.01	0.01
Queue Length 95th (ft)	0	0	1	1
Control Delay (s)	0.0	0.0	14.3	10.5
Lane LOS			B	B
Approach Delay (s)	0.0	0.0	12.4	
Approach LOS			B	

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
200: School Drive & Maple Ave

5/20/2016

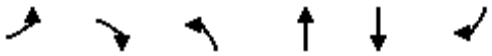
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	395	10	10	760	2	5
Future Volume (Veh/h)	395	10	10	760	2	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	416	11	11	800	2	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	525					
pX, platoon unblocked			0.91		0.91	0.91
vC, conflicting volume			427		1244	422
vC1, stage 1 conf vol					422	
vC2, stage 2 conf vol					822	
vCu, unblocked vol			327		1220	321
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			99		99	99
cM capacity (veh/h)			1128		383	659

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	427	811	7
Volume Left	0	11	2
Volume Right	11	0	5
cSH	1700	1128	546
Volume to Capacity	0.25	0.01	0.01
Queue Length 95th (ft)	0	1	1
Control Delay (s)	0.0	0.3	11.7
Lane LOS		A	B
Approach Delay (s)	0.0	0.3	11.7
Approach LOS			B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1: Main St. & Grove St.

5/20/2016



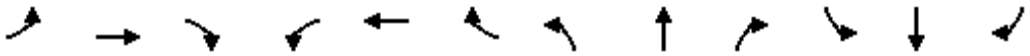
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	30	50	505	550	30
Future Volume (Veh/h)	5	30	50	505	550	30
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	32	53	532	579	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				383		
pX, platoon unblocked	0.81					
vC, conflicting volume	1233	595	611			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1171	595	611			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	94	95			
cM capacity (veh/h)	163	504	968			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	37	585	611
Volume Left	5	53	0
Volume Right	32	0	32
cSH	393	968	1700
Volume to Capacity	0.09	0.05	0.36
Queue Length 95th (ft)	8	4	0
Control Delay (s)	15.1	1.5	0.0
Lane LOS	C	A	
Approach Delay (s)	15.1	1.5	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

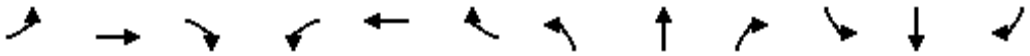
5/20/2016



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	195	30	165	235	55	25	430	230	70	445	65
Future Volume (vph)	70	195	30	165	235	55	25	430	230	70	445	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Storage Length (ft)	105		0	150		0	0		0	0		65
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	80			80			25			45		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980			0.971				0.850		0.981	
Flt Protected	0.950			0.950				0.997		0.950		
Satd. Flow (prot)	1711	1765	0	1711	1748	0	0	1795	1531	1711	1766	0
Flt Permitted	0.450			0.485				0.957		0.375		
Satd. Flow (perm)	810	1765	0	873	1748	0	0	1723	1531	675	1766	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			16				242		12	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		1362			315			882			383	
Travel Time (s)		31.0			7.2			24.1			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	205	32	174	247	58	26	453	242	74	468	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	237	0	174	305	0	0	479	242	74	536	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	3	8		7	4			2	7		6	

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

5/20/2016



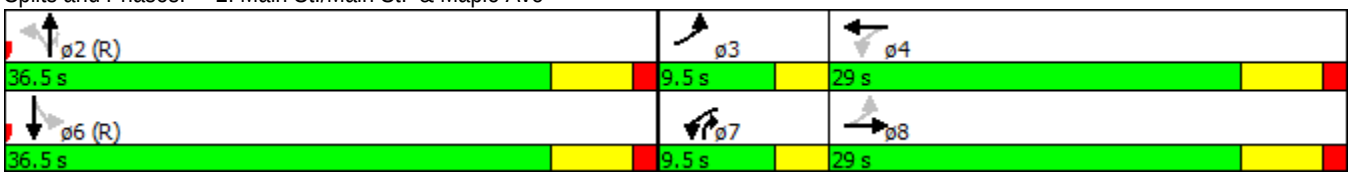
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8			4			2		2	6		
Detector Phase	3	8		7	4		2	2	7	6	6	
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0		15.0	15.0	6.0	15.0	15.0	
Minimum Split (s)	9.5	29.0		9.5	29.0		29.0	29.0	9.5	29.0	29.0	
Total Split (s)	9.5	29.0		9.5	29.0		36.5	36.5	9.5	36.5	36.5	
Total Split (%)	12.7%	38.7%		12.7%	38.7%		48.7%	48.7%	12.7%	48.7%	48.7%	
Maximum Green (s)	6.5	23.0		6.5	23.0		30.5	30.5	6.5	30.5	30.5	
Yellow Time (s)	3.0	4.5		3.0	4.5		4.5	4.5	3.0	4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		1.5	1.5	0.0	1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0			6.0	3.0	6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	4.0		1.5	4.0		4.0	4.0	1.5	4.0	4.0	
Recall Mode	None	None		None	None		C-Max	C-Max	None	C-Max	C-Max	
Walk Time (s)		8.0			8.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		15.0			15.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	26.7	17.5		27.7	19.5			36.1	48.5	36.1	36.1	
Actuated g/C Ratio	0.36	0.23		0.37	0.26			0.48	0.65	0.48	0.48	
v/c Ratio	0.20	0.56		0.44	0.65			0.58	0.23	0.23	0.63	
Control Delay	13.9	28.6		17.9	30.5			18.9	1.7	15.9	19.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	13.9	28.6		17.9	30.5			18.9	1.7	15.9	19.8	
LOS	B	C		B	C			B	A	B	B	
Approach Delay		25.1			25.9			13.1			19.3	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)	21	92		52	122			155	0	19	174	
Queue Length 95th (ft)	40	145		82	188			283	27	54	319	
Internal Link Dist (ft)		1282			235			802			303	
Turn Bay Length (ft)	105			150								
Base Capacity (vph)	369	548		394	547			829	1077	324	856	
Starvation Cap Reductn	0	0		0	0			0	0	0	0	
Spillback Cap Reductn	0	0		0	0			0	0	0	0	
Storage Cap Reductn	0	0		0	0			0	0	0	0	
Reduced v/c Ratio	0.20	0.43		0.44	0.56			0.58	0.22	0.23	0.63	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 19.5		Intersection LOS: B	
Intersection Capacity Utilization 90.9%		ICU Level of Service E	
Analysis Period (min) 15			

Lanes, Volumes, Timings
2: Main St./Main St. & Maple Ave

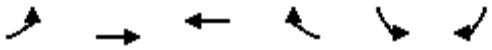
5/20/2016

Splits and Phases: 2: Main St./Main St. & Maple Ave



HCM Unsignalized Intersection Capacity Analysis
3: Maple Ave & Drive Access

5/20/2016



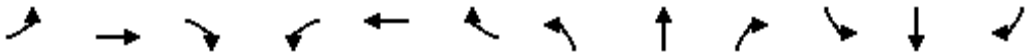
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	35	465	440	10	15	20
Future Volume (Veh/h)	35	465	440	10	15	20
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	37	489	463	11	16	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		315				
pX, platoon unblocked					0.90	
vC, conflicting volume	474				1032	468
vC1, stage 1 conf vol					468	
vC2, stage 2 conf vol					563	
vCu, unblocked vol	474				981	468
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	97				97	96
cM capacity (veh/h)	1088				460	595

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	526	474	37
Volume Left	37	0	16
Volume Right	0	11	21
cSH	1088	1700	528
Volume to Capacity	0.03	0.28	0.07
Queue Length 95th (ft)	3	0	6
Control Delay (s)	1.0	0.0	12.3
Lane LOS	A		B
Approach Delay (s)	1.0	0.0	12.3
Approach LOS			B

Intersection Summary			
Average Delay		0.9	
Intersection Capacity Utilization		63.3%	ICU Level of Service B
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
4: Washington & Maple Ave

5/20/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	190	290	5	15	270	50	5	90	15	50	80	160
Future Volume (vph)	190	290	5	15	270	50	5	90	15	50	80	160
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	200	305	5	16	284	53	5	95	16	53	84	168

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total (vph)	200	310	300	53	116	137	168
Volume Left (vph)	200	0	16	0	5	53	0
Volume Right (vph)	0	5	0	53	16	0	168
Hadj (s)	0.53	0.02	0.06	-0.67	-0.04	0.23	-0.67
Departure Headway (s)	7.1	6.5	6.8	6.1	7.4	7.4	6.5
Degree Utilization, x	0.39	0.56	0.57	0.09	0.24	0.28	0.30
Capacity (veh/h)	490	525	509	559	437	456	518
Control Delay (s)	13.3	16.5	17.2	8.5	12.7	12.1	11.1
Approach Delay (s)	15.2		15.9		12.7	11.5	
Approach LOS	C		C		B	B	

Intersection Summary				
Delay	14.3			
Level of Service	B			
Intersection Capacity Utilization	54.2%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
100: Lincoln Center & Maple Ave

5/20/2016

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	480	0	0	440	10	20
Future Volume (Veh/h)	480	0	0	440	10	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	505	0	0	463	11	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	385					
pX, platoon unblocked			0.92		0.92	0.92
vC, conflicting volume			505		968	505
vC1, stage 1 conf vol					505	
vC2, stage 2 conf vol					463	
vCu, unblocked vol			415		920	415
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	96
cM capacity (veh/h)			1049		495	585

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	505	463	11	21
Volume Left	0	0	11	0
Volume Right	0	0	0	21
cSH	1700	1700	495	585
Volume to Capacity	0.30	0.27	0.02	0.04
Queue Length 95th (ft)	0	0	2	3
Control Delay (s)	0.0	0.0	12.4	11.4
Lane LOS			B	B
Approach Delay (s)	0.0	0.0	11.8	
Approach LOS			B	

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	35.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
200: School Drive & Maple Ave

5/20/2016

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	495	5	5	440	1	1
Future Volume (Veh/h)	495	5	5	440	1	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	521	5	5	463	1	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	525					
pX, platoon unblocked			0.93		0.93	0.93
vC, conflicting volume			526		996	524
vC1, stage 1 conf vol					524	
vC2, stage 2 conf vol					473	
vCu, unblocked vol			454		959	451
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1030		483	566

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	526	468	2
Volume Left	0	5	1
Volume Right	5	0	1
cSH	1700	1030	521
Volume to Capacity	0.31	0.00	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.1	11.9
Lane LOS		A	B
Approach Delay (s)	0.0	0.1	11.9
Approach LOS			B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	37.1%	ICU Level of Service	A
Analysis Period (min)	15		

DATA FROM THE ITE MANUAL TRIP GENERATION, 9TH EDITION

Land Use: 932
High-Turnover (Sit-Down) Restaurant

Description

This land use consists of sit-down, full-service eating establishments with typical duration of stay of approximately one hour. This type of restaurant is usually moderately priced and frequently belongs to a restaurant chain. Generally, these restaurants serve lunch and dinner; they may also be open for breakfast and are sometimes open 24 hours per day. These restaurants typically do not take reservations. Patrons commonly wait to be seated, are served by a waiter/waitress, order from menus and pay for their meal after they eat. Some facilities contained within this land use may also contain a bar area for serving food and alcoholic drinks. Quality restaurant (Land Use 931), fast-food restaurant without drive-through window (Land Use 933), fast-food restaurant with drive-through window (Land Use 934) and fast-food restaurant with drive-through window and no indoor seating (Land Use 935) are related uses.

Additional Data

Users should exercise caution when applying statistics during the A.M. peak periods, as the sites contained in the database for this land use may or may not be open for breakfast. In cases where it was confirmed that the sites were not open for breakfast, data for the A.M. peak hour of the adjacent street traffic were removed from the database.

Information on approximate hourly variation in high-turnover (sit-down) restaurant traffic is shown in the following table. It should be noted, however, that the information contained in this table is based on a limited sample size. Therefore, caution should be exercised when applying the data. Also, some information provided in the table may conflict with the results obtained by applying the average rate or regression equations. When this occurs, it is suggested that the results from the average rate or regression equations be used, as they are based on a larger number of studies.

Hourly Variation in High-Turnover (Sit-Down) Restaurant Traffic						
	Average Weekday[a]		Average Saturday[b]		Average Sunday[c]	
Time	Percent of 24-Hour Entering Traffic	Percent of 24-Hour Exiting Traffic	Percent of 24-Hour Entering Traffic	Percent of 24-Hour Exiting Traffic	Percent of 24-Hour Entering Traffic	Percent of 24-Hour Exiting Traffic
6 a.m.–7 a.m.	1.5	0.8	0.9	0.6	0.1	0.4
7 a.m.–8 a.m.	3.0	1.7	2.2	1.0	0.9	1.3
8 a.m.–9 a.m.	3.6	2.3	4.1	2.8	1.7	0.1
9 a.m.–10 a.m.	4.1	2.7	4.1	3.5	1.4	1.2
10 a.m.–11 a.m.	3.3	3.2	4.6	3.7	2.3	4.2
11 a.m.–12 p.m.	7.4	3.8	4.6	4.0	5.5	2.6
12 p.m.–1 p.m.	8.6	6.6	5.1	3.6	8.8	3.9
1 p.m.–2 p.m.	4.8	8.6	4.4	4.3	6.6	8.2
2 p.m.–3 p.m.	3.2	5.5	3.8	4.3	5.9	5.1
3 p.m.–4 p.m.	3.0	4.0	3.6	3.5	8.7	7.2
4 p.m.–5 p.m.	5.6	4.5	4.5	4.0	10.0	8.4
5 p.m.–6 p.m.	9.7	4.6	7.1	4.3	12.4	10.5
6 p.m.–7 p.m.	10.7	7.9	9.9	6.7	11.3	10.0
7 p.m.–8 p.m.	9.5	9.0	8.5	7.3	8.7	9.3
8 p.m.–9 p.m.	7.7	9.0	8.1	8.5	5.9	8.0
9 p.m.–10 p.m.	4.9	8.6	6.5	7.3	4.2	7.5
10 p.m.–6 a.m.	9.4	17.2	18.0	30.6	5.6	12.1

Sites ranged in size from 4,500 to 21,000 square feet gross floor area
[a] Source numbers – 13, 88,126, 507 and The Traffic Group, Inc.; based on seven studies
[b] Source numbers – 13, 88,126 and The Traffic Group, Inc.; based on five studies
[c] Source numbers – 13, 88 and 126; based on three studies

Vehicle occupancy ranged from 1.39 to 1.69 persons per automobile on an average weekday. The average for the sites surveyed was approximately 1.52.

Five sites submitted for inclusion in this land use indicated the presence of an on-site pick-up window. From the limited data sample, it does not appear that the presence of a pick-up window had a significant impact on trip generation.

The outdoor seating area is not included in the overall gross floor area. Therefore, the number of seats may be a more reliable independent variable on which to establish trip generation rates for facilities having significant outdoor seating.

The sites were surveyed between the 1960s and the 2000s throughout the United States.

Source Numbers

2, 4, 5, 72, 90, 100, 126, 269, 275, 280, 300, 301, 305, 338, 340, 341, 358, 384, 424, 432, 437, 438, 444, 507, 555, 577, 589, 617, 618, 728

High-Turnover (Sit-Down) Restaurant
(932)

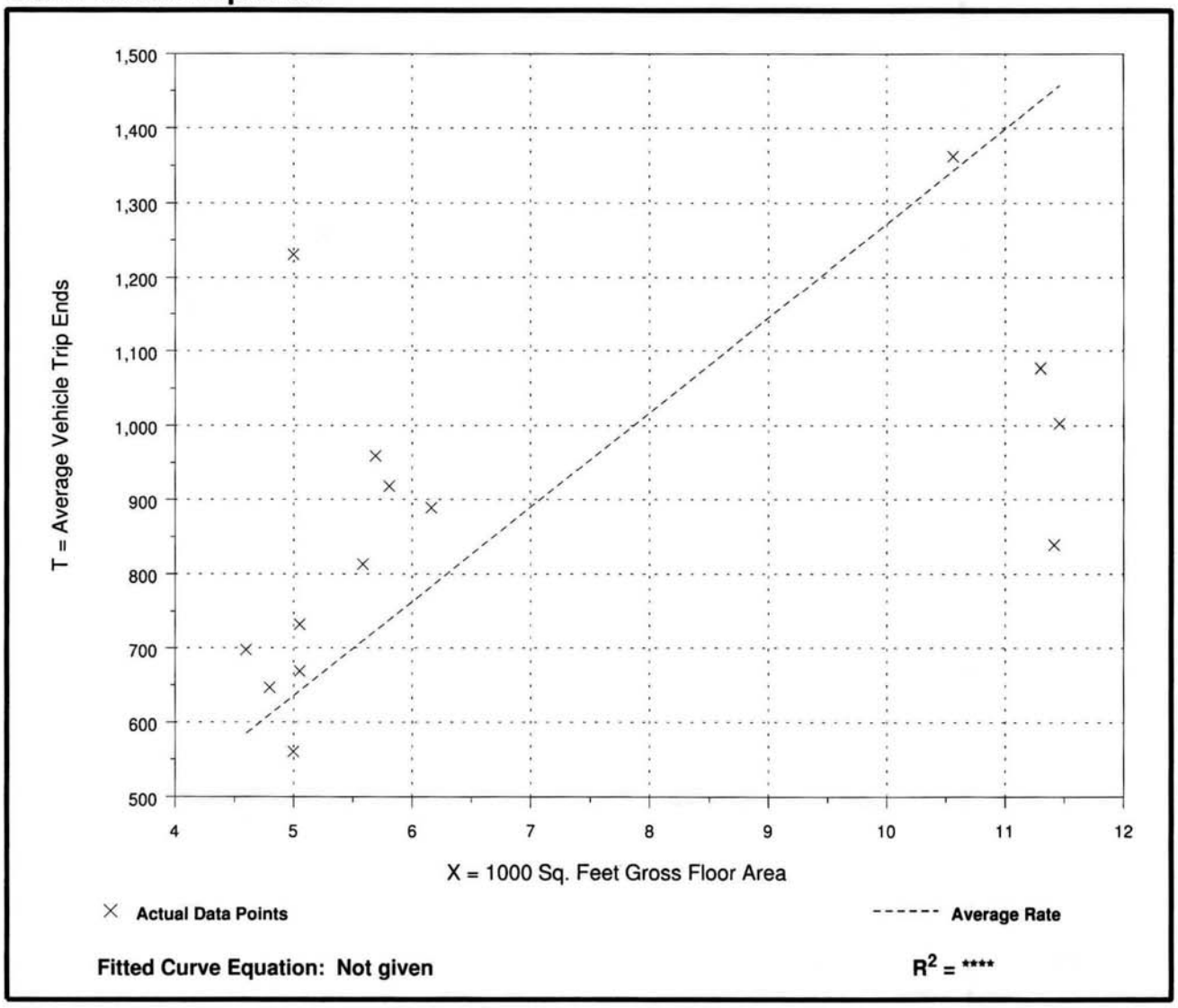
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday

Number of Studies: 14
Average 1000 Sq. Feet GFA: 7
Directional Distribution: 50% entering, 50% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
127.15	73.51 - 246.00	41.77

Data Plot and Equation



Fitted Curve Equation: Not given

R^2 = ****

High-Turnover (Sit-Down) Restaurant
(932)

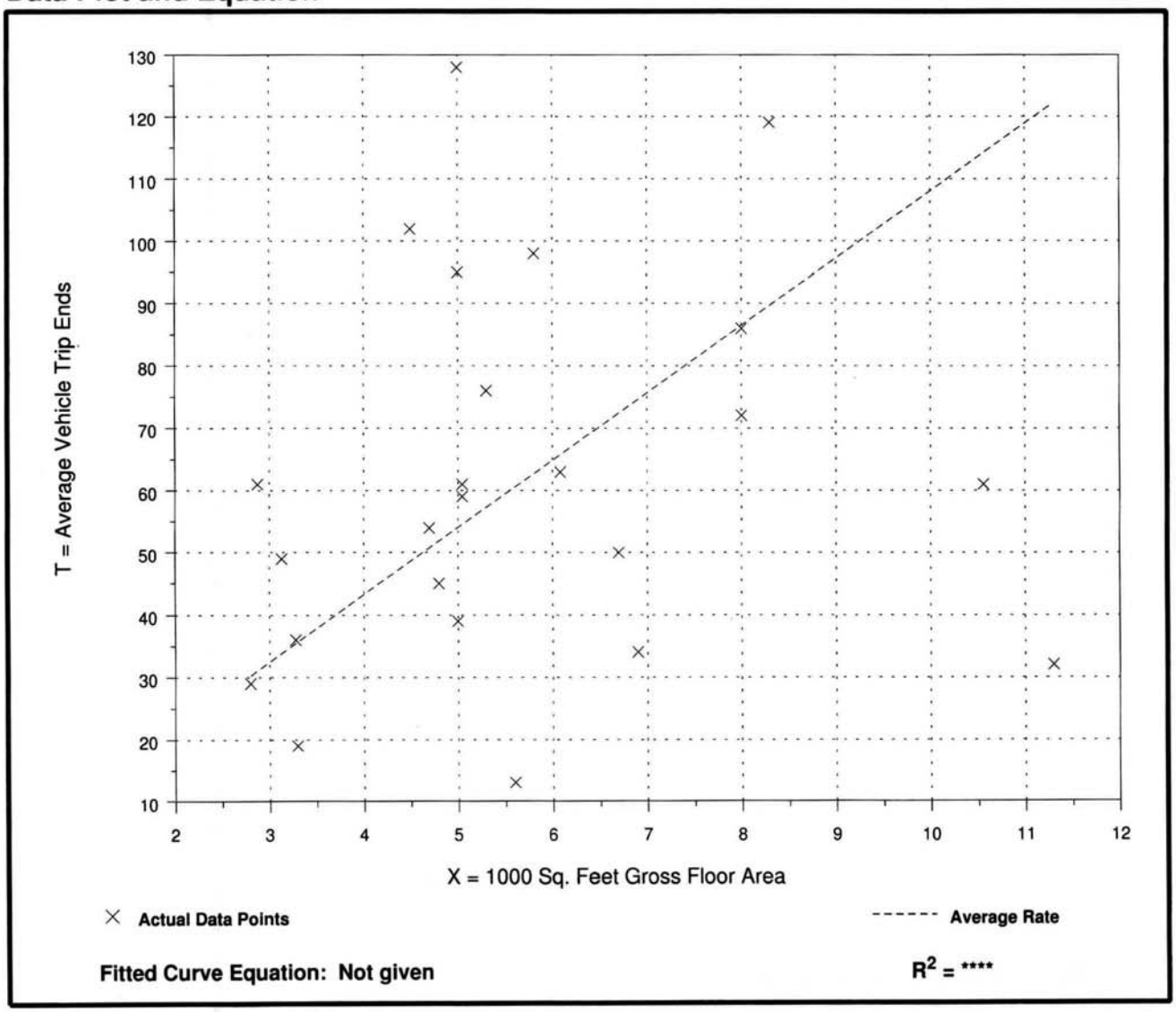
Average Vehicle Trip Ends vs: **1000 Sq. Feet Gross Floor Area**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 24
Average 1000 Sq. Feet GFA: 6
Directional Distribution: 55% entering, 45% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
10.81	2.32 - 25.60	6.59

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant
(932)

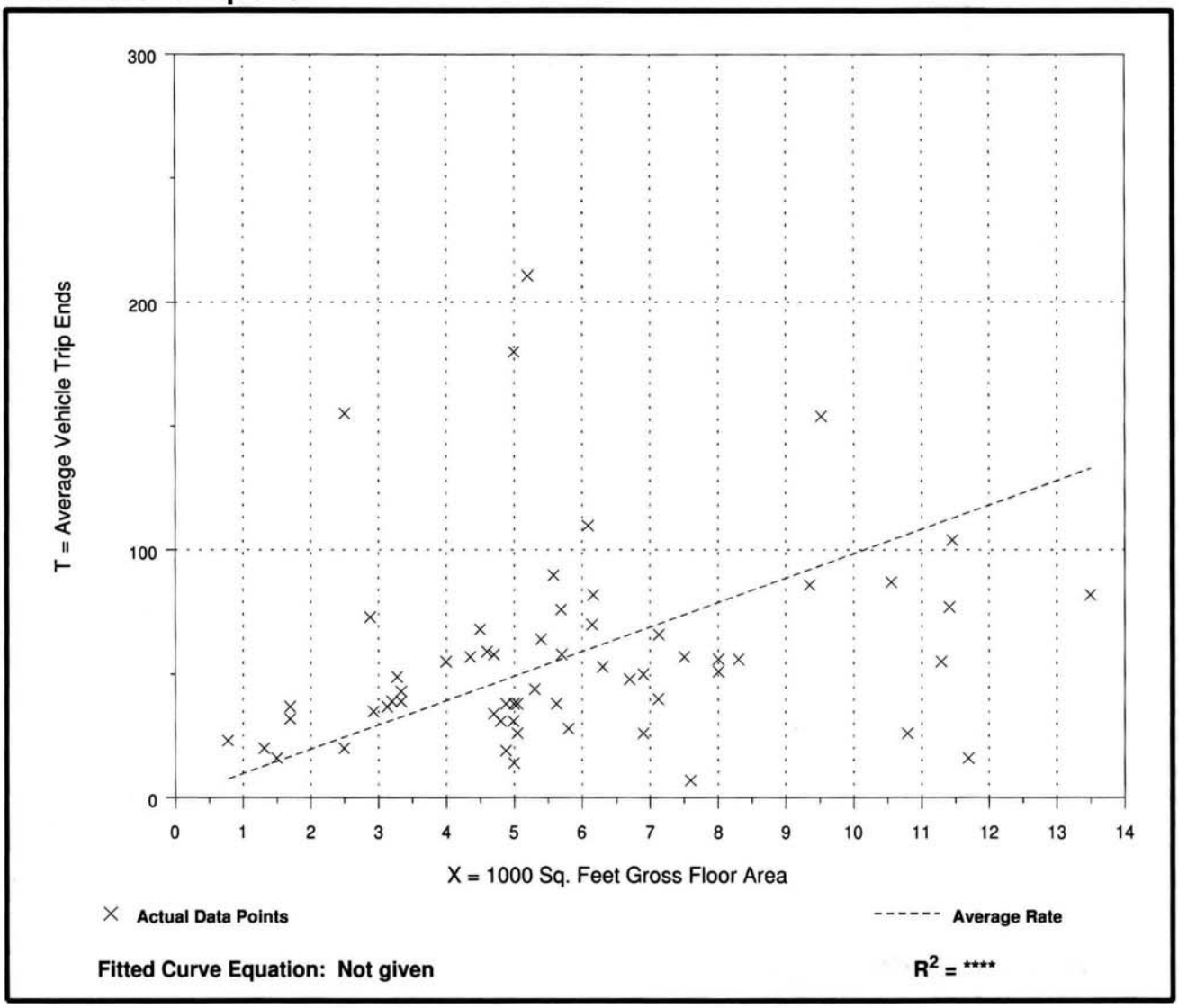
Average Vehicle Trip Ends vs: **1000 Sq. Feet Gross Floor Area**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 60
Average 1000 Sq. Feet GFA: 6
Directional Distribution: 60% entering, 40% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
9.85	0.92 - 62.00	8.54

Data Plot and Equation



Fitted Curve Equation: Not given

R^2 = ****

High-Turnover (Sit-Down) Restaurant
(932)

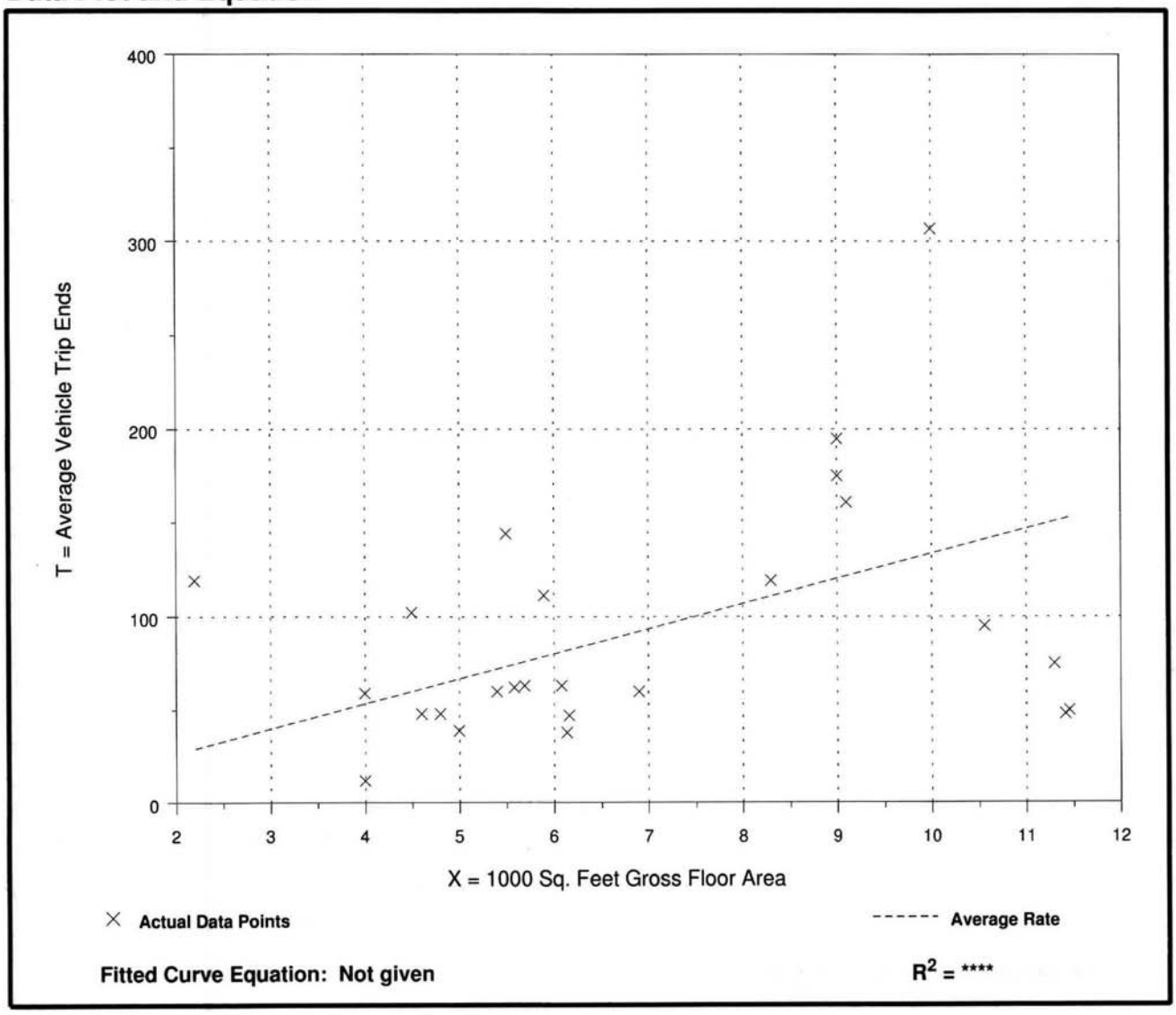
Average Vehicle Trip Ends vs: **1000 Sq. Feet Gross Floor Area**
On a: **Weekday,**
A.M. Peak Hour of Generator

Number of Studies: 25
Average 1000 Sq. Feet GFA: 7
Directional Distribution: 53% entering, 47% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
13.33	3.00 - 54.09	9.44

Data Plot and Equation



Fitted Curve Equation: Not given

R^2 = ****

High-Turnover (Sit-Down) Restaurant
(932)

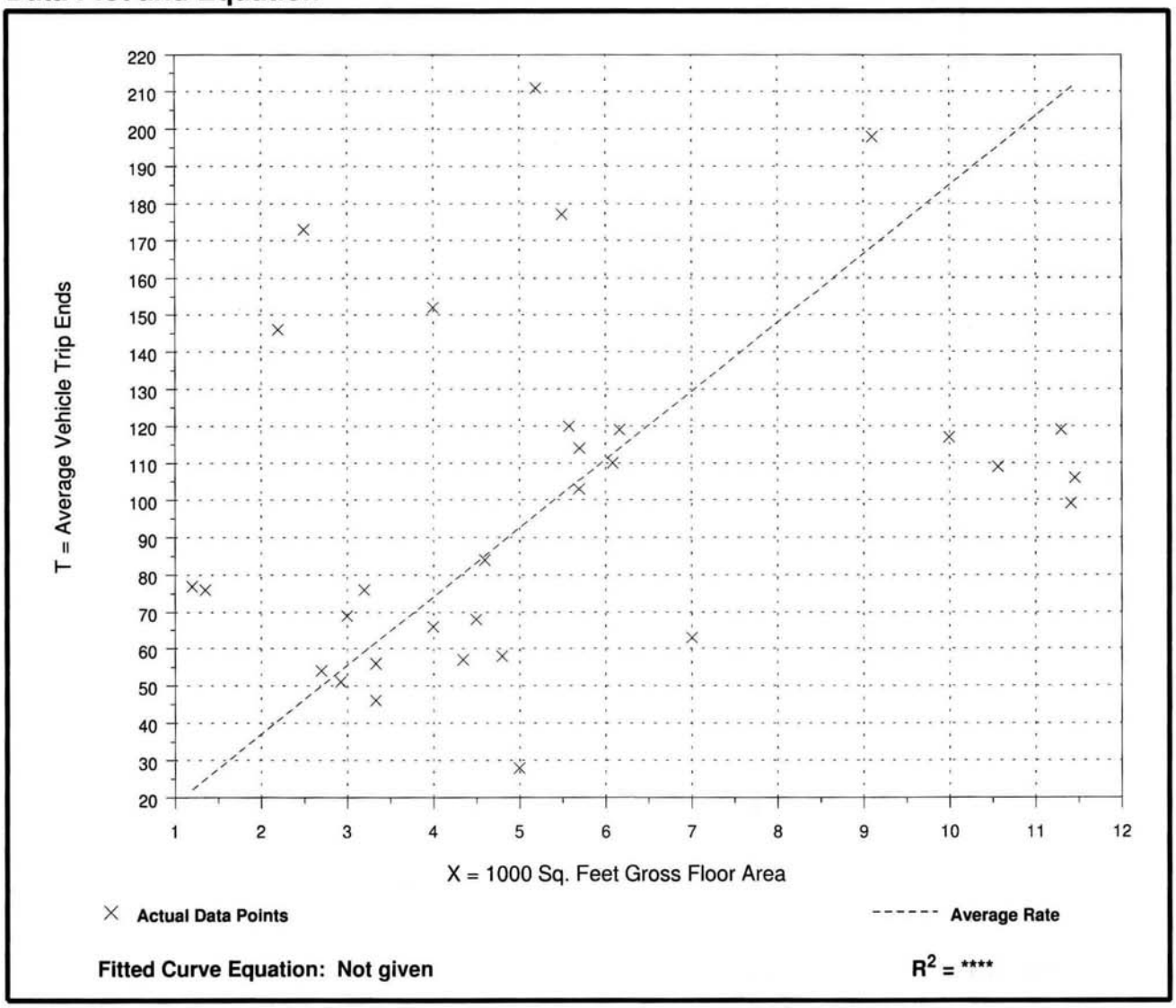
Average Vehicle Trip Ends vs: **1000 Sq. Feet Gross Floor Area**
On a: **Weekday,**
P.M. Peak Hour of Generator

Number of Studies: 31
Average 1000 Sq. Feet GFA: 5
Directional Distribution: 54% entering, 46% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
18.49	5.60 - 69.20	13.32

Data Plot and Equation



Fitted Curve Equation: Not given

R^2 = ****

High-Turnover (Sit-Down) Restaurant
(932)

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Saturday

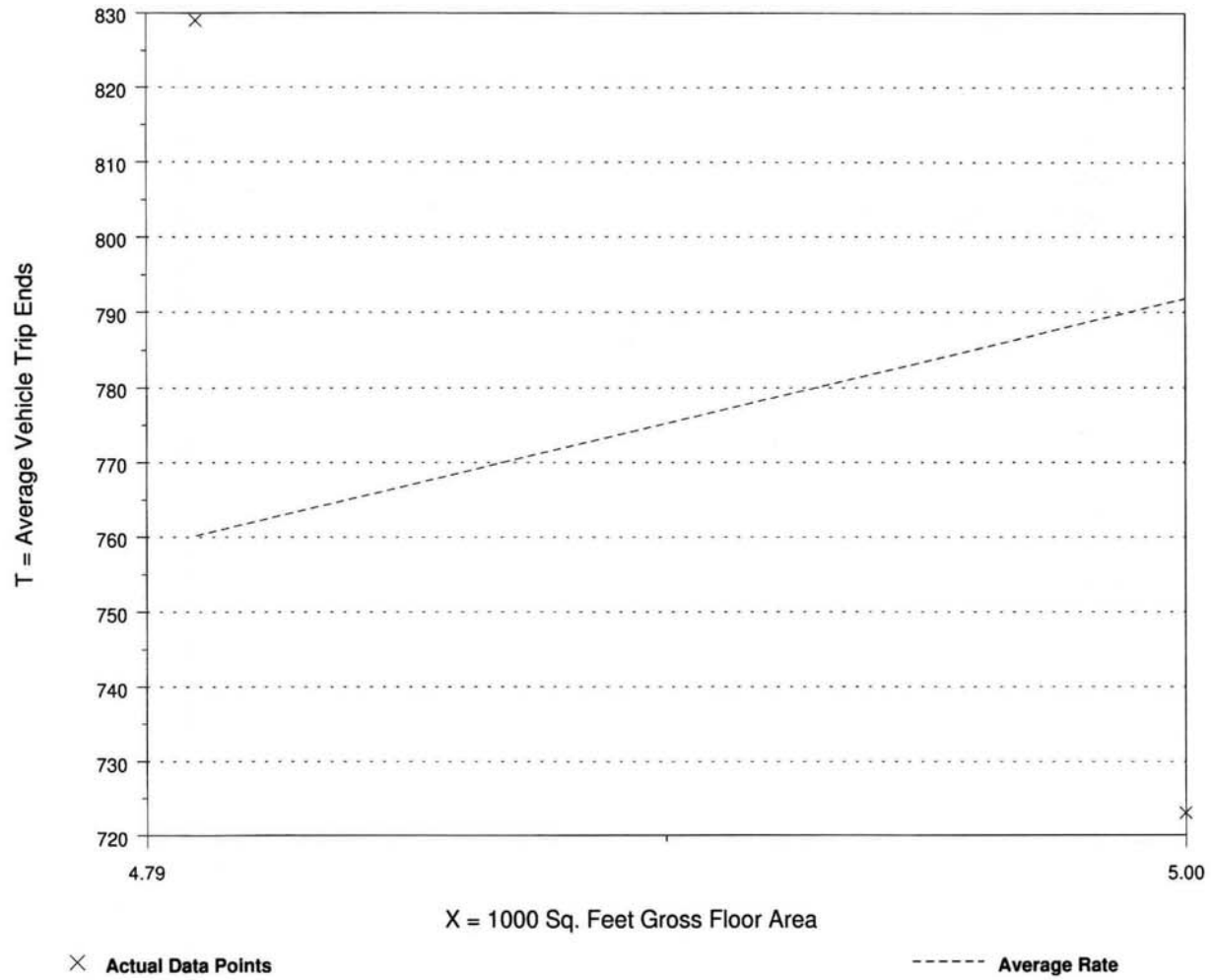
Number of Studies: 2
Average 1000 Sq. Feet GFA: 5
Directional Distribution: 50% entering, 50% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
158.37	144.60 - 172.71	*

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Fitted Curve Equation: Not given

R^2 = ****

High-Turnover (Sit-Down) Restaurant
(932)

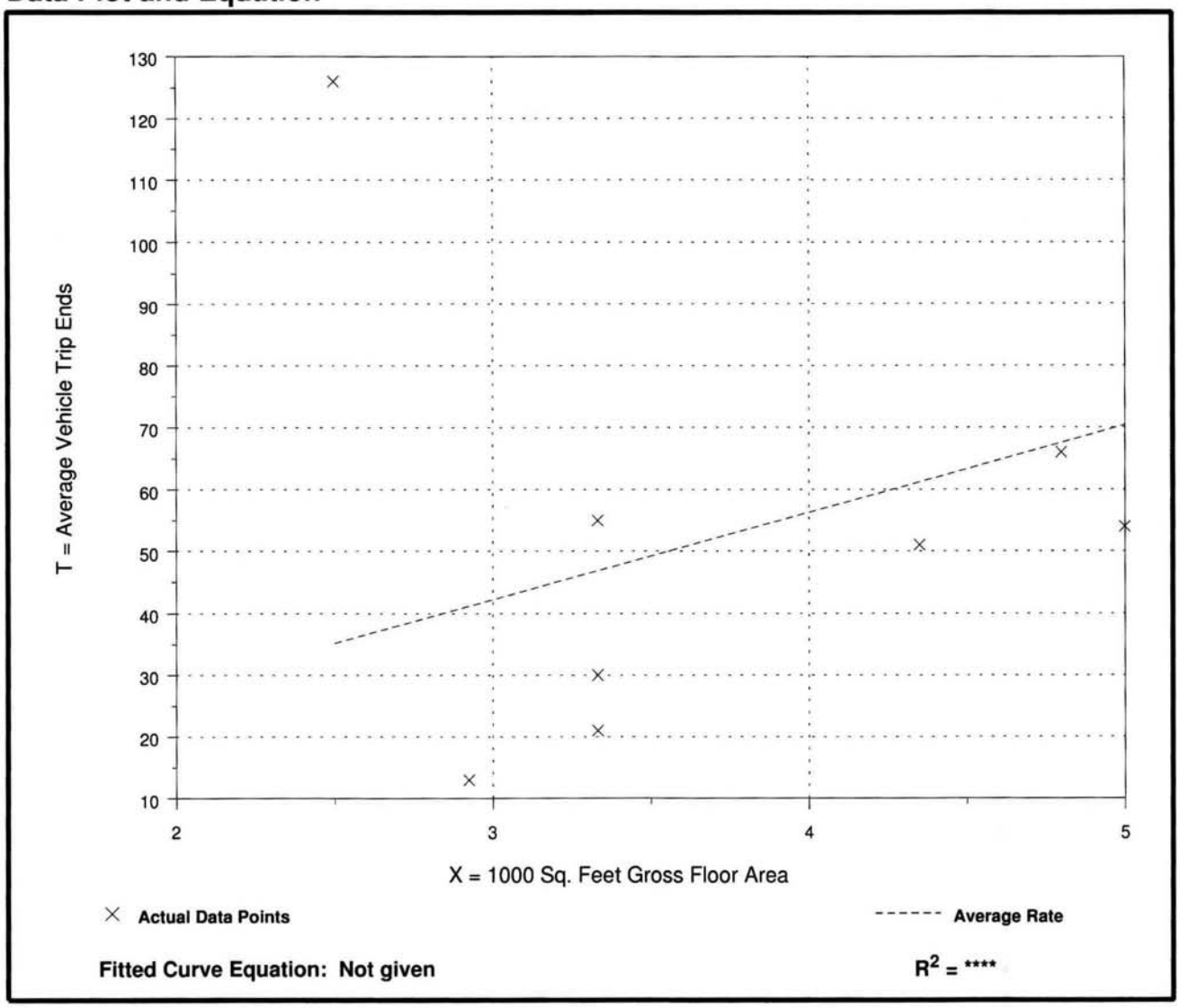
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Saturday,
Peak Hour of Generator

Number of Studies: 8
Average 1000 Sq. Feet GFA: 4
Directional Distribution: 53% entering, 47% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
14.07	4.44 - 50.40	12.19

Data Plot and Equation



Fitted Curve Equation: Not given

R^2 = ****

High-Turnover (Sit-Down) Restaurant
(932)

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Sunday

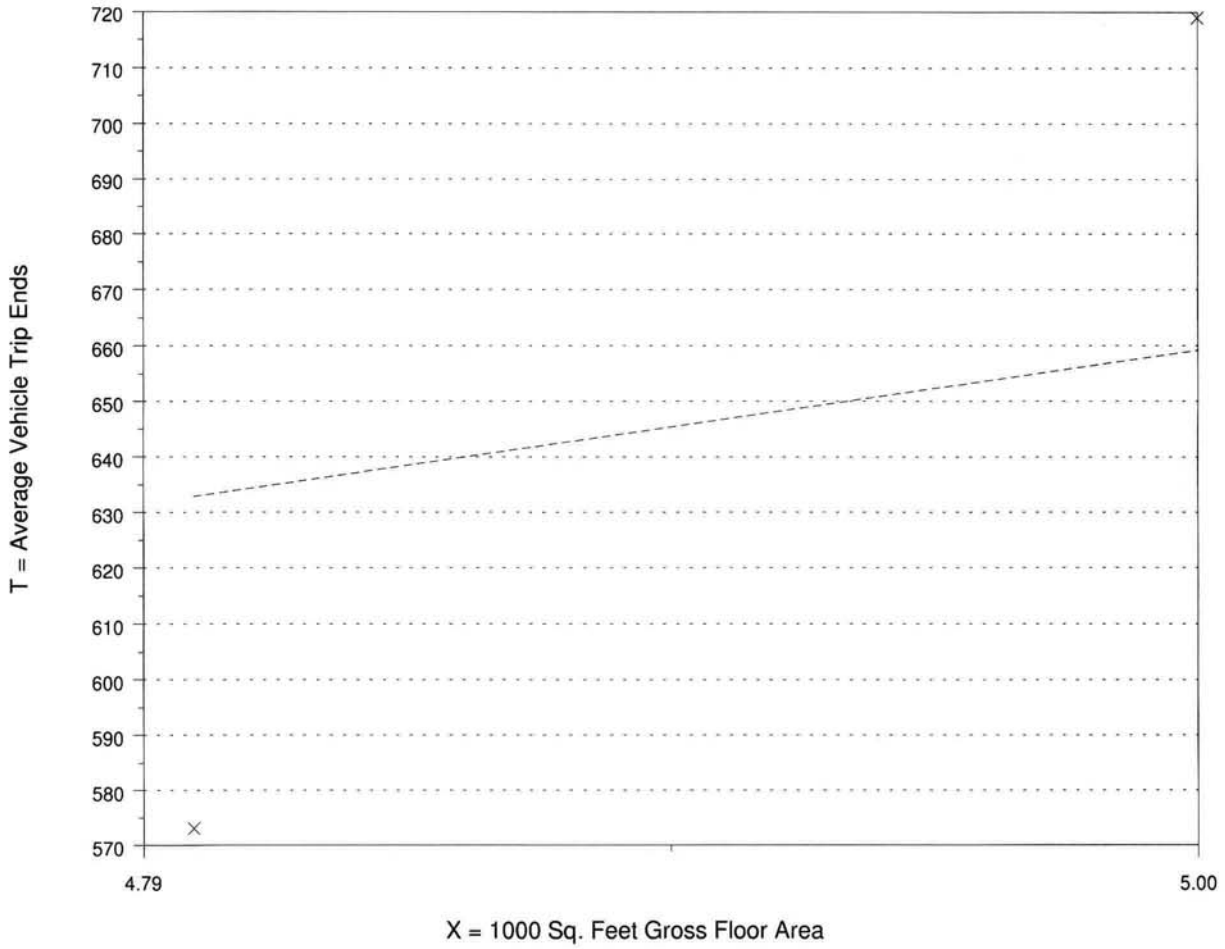
Number of Studies: 2
Average 1000 Sq. Feet GFA: 5
Directional Distribution: 50% entering, 50% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
131.84	119.38 - 143.80	*

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Fitted Curve Equation: Not given

R^2 = ****

High-Turnover (Sit-Down) Restaurant
(932)

Average Vehicle Trip Ends vs: **1000 Sq. Feet Gross Floor Area**
On a: **Sunday,**
Peak Hour of Generator

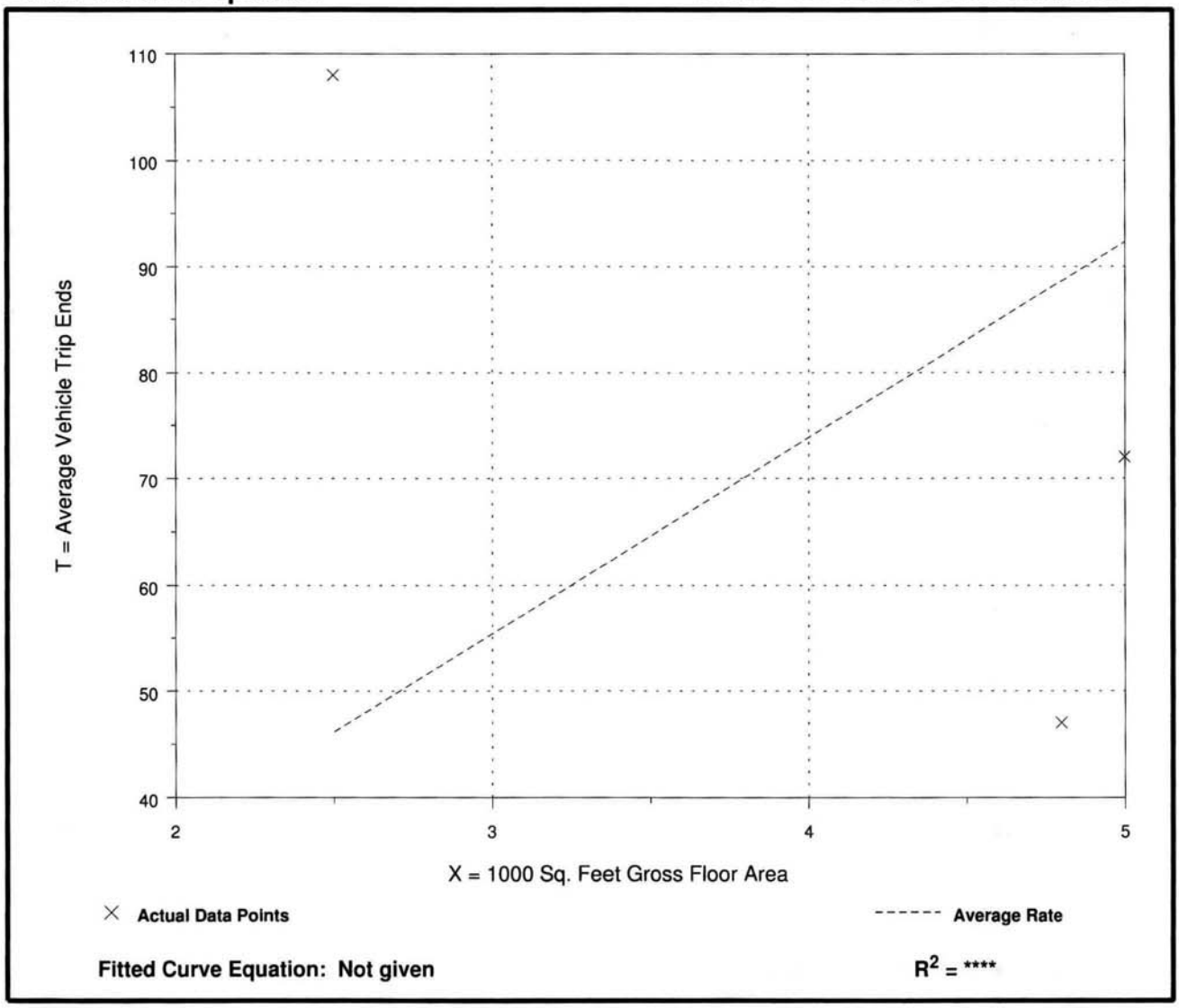
Number of Studies: 3
Average 1000 Sq. Feet GFA: 4
Directional Distribution: 55% entering, 45% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
18.46	9.79 - 43.20	13.74

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Fitted Curve Equation: Not given

R^2 = ****

High-Turnover (Sit-Down) Restaurant
(932)

Average Vehicle Trip Ends vs: Seats
On a: Weekday

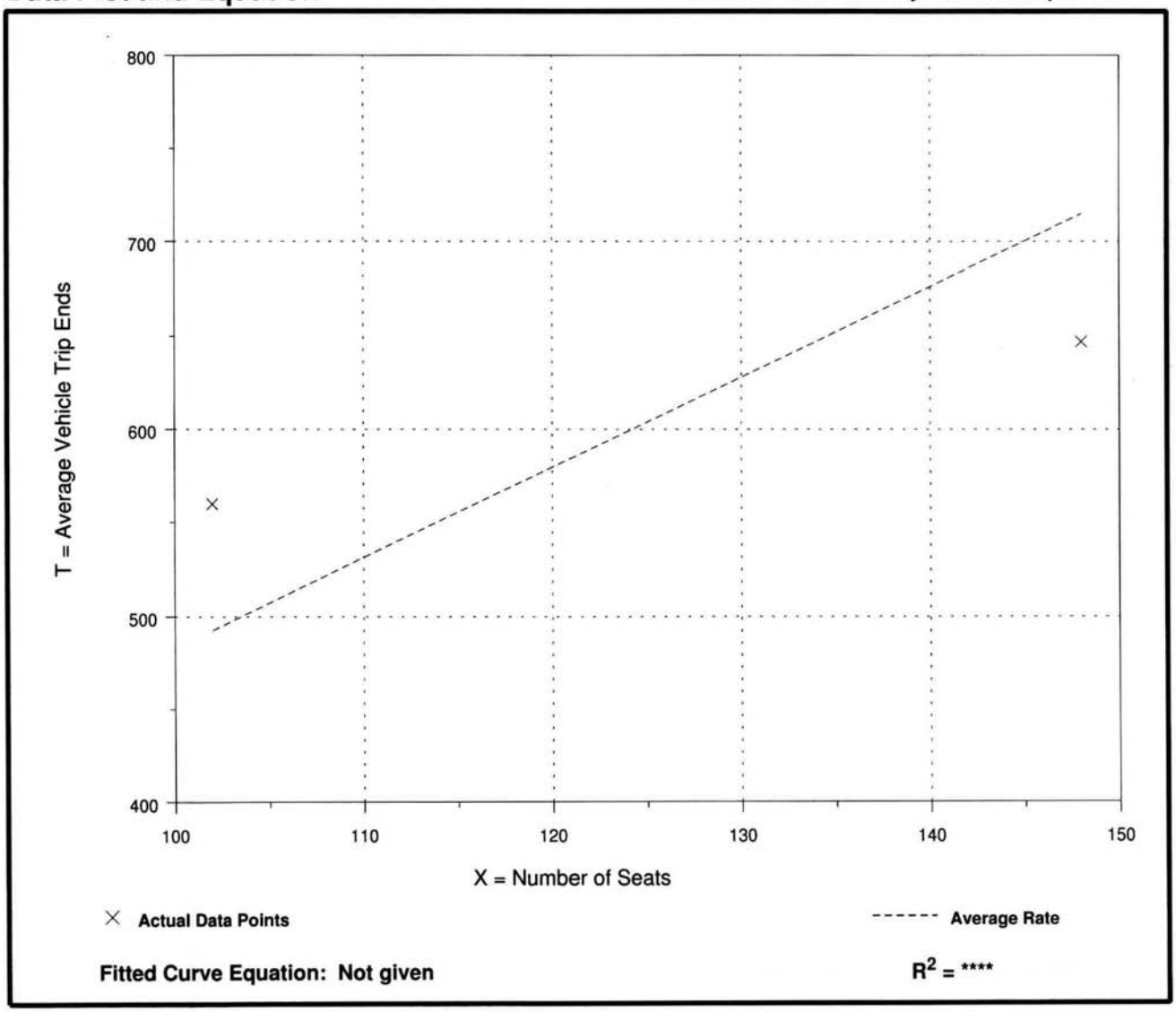
Number of Studies: 2
Average Number of Seats: 125
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
4.83	4.37 - 5.49	*

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Fitted Curve Equation: Not given

R^2 = ****

High-Turnover (Sit-Down) Restaurant
(932)

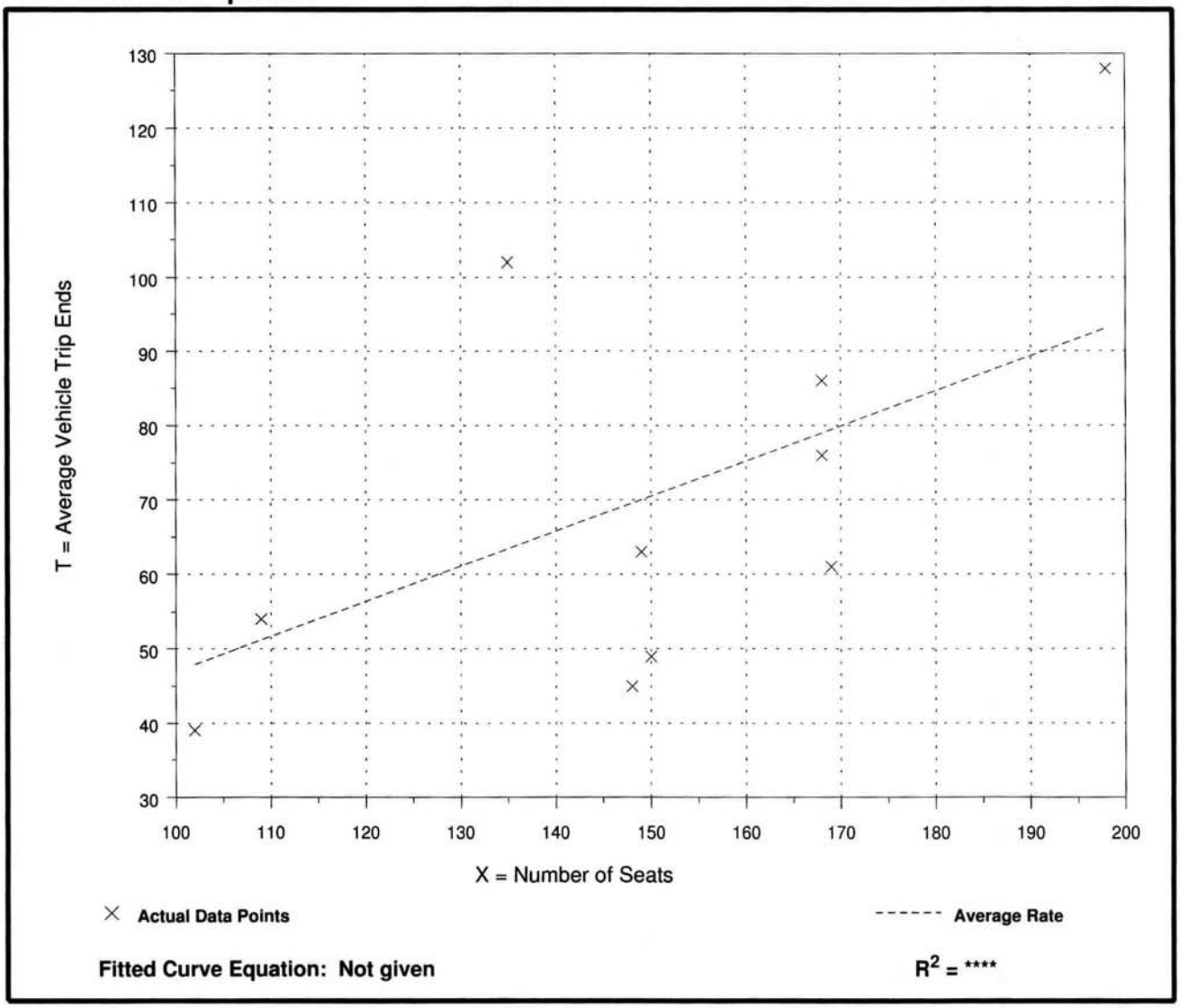
Average Vehicle Trip Ends vs: Seats
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 10
Average Number of Seats: 150
Directional Distribution: 52% entering, 48% exiting

Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.47	0.30 - 0.76	0.70

Data Plot and Equation



Fitted Curve Equation: Not given

R^2 = ****

High-Turnover (Sit-Down) Restaurant
(932)

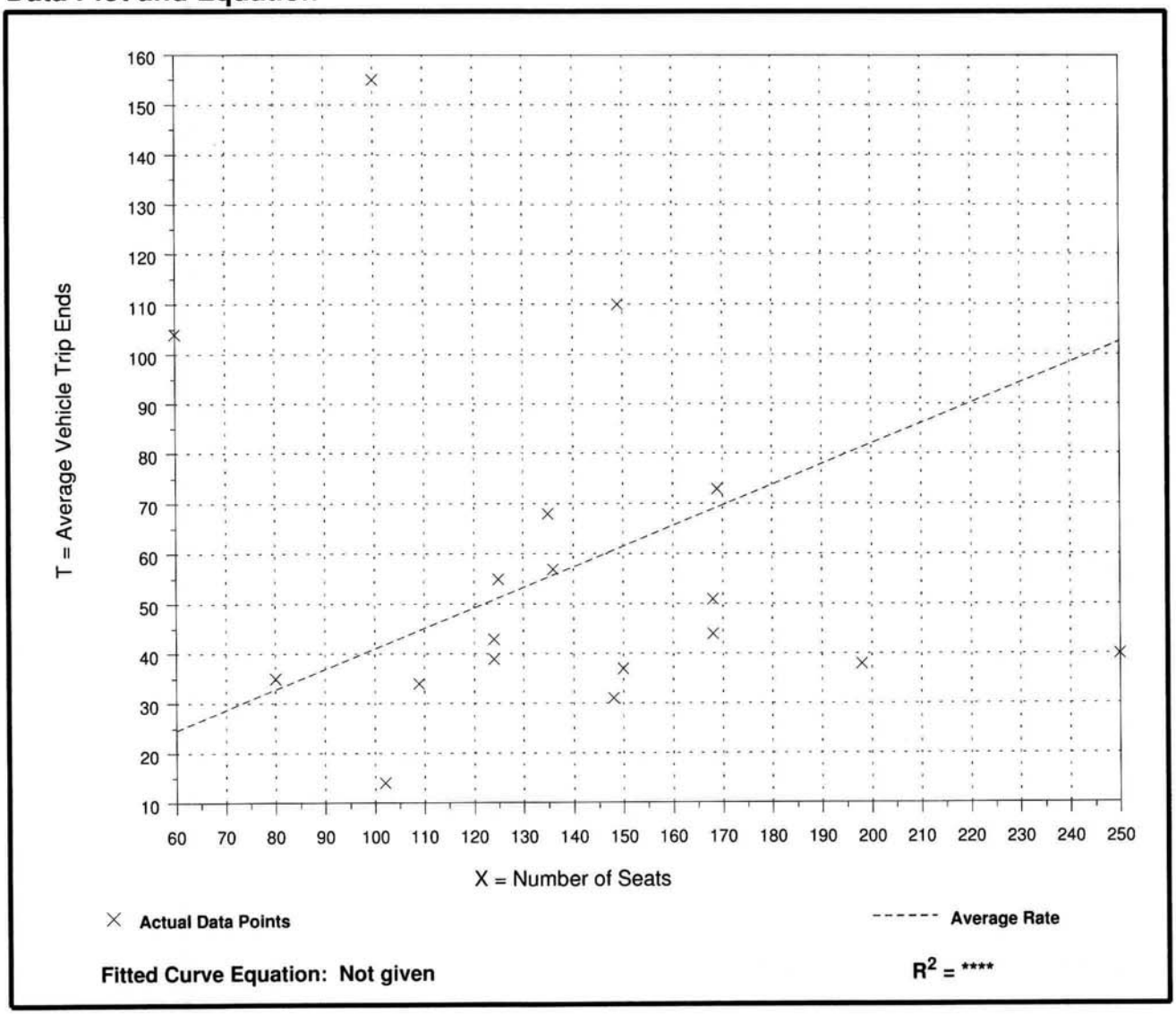
Average Vehicle Trip Ends vs: Seats
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 18
Average Number of Seats: 139
Directional Distribution: 57% entering, 43% exiting

Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.41	0.14 - 1.73	0.73

Data Plot and Equation



Fitted Curve Equation: Not given

R^2 = ****

High-Turnover (Sit-Down) Restaurant
(932)

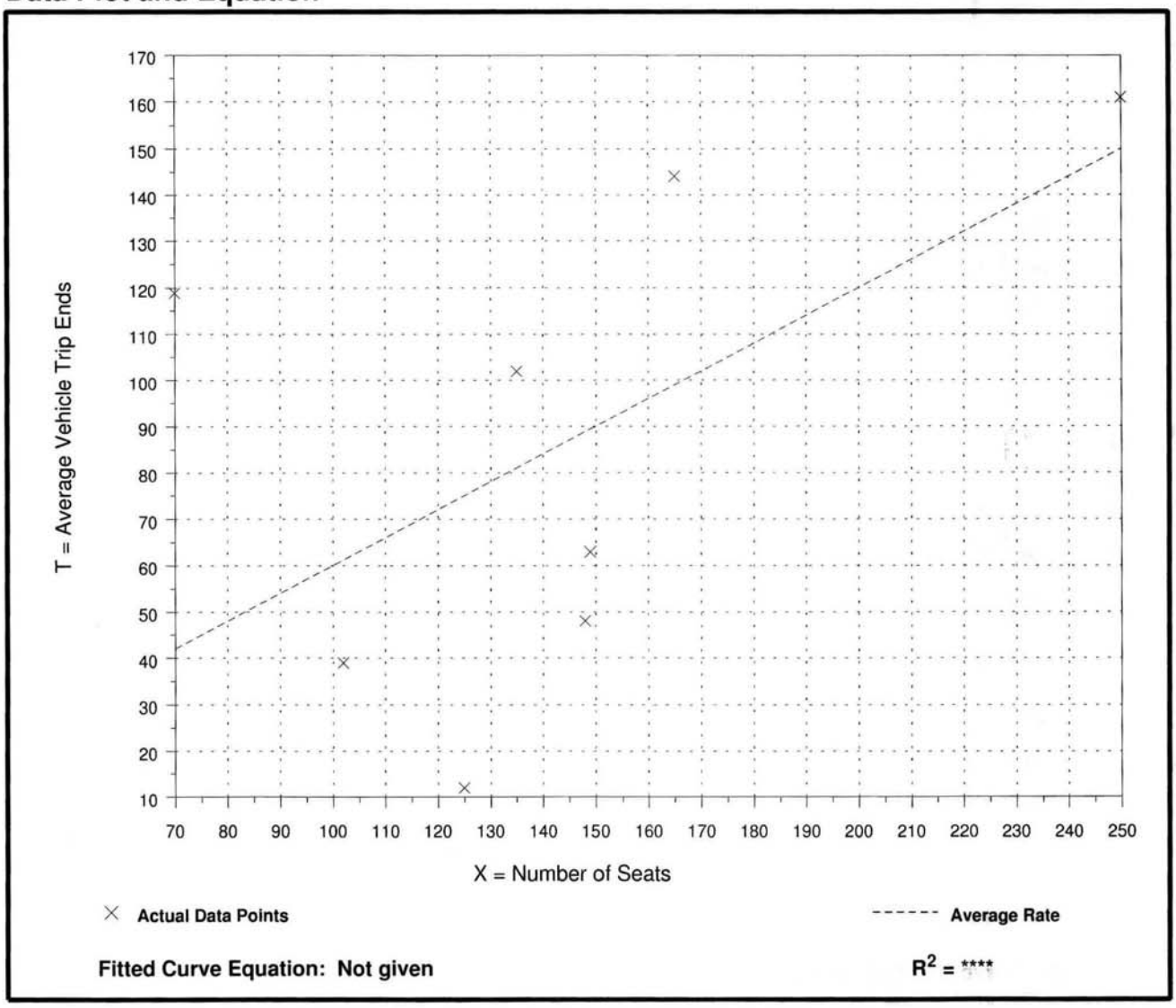
Average Vehicle Trip Ends vs: Seats
On a: Weekday,
A.M. Peak Hour of Generator

Number of Studies: 8
Average Number of Seats: 143
Directional Distribution: 58% entering, 42% exiting

Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.60	0.10 - 1.70	0.86

Data Plot and Equation



Fitted Curve Equation: Not given

R^2 = ****

High-Turnover (Sit-Down) Restaurant
(932)

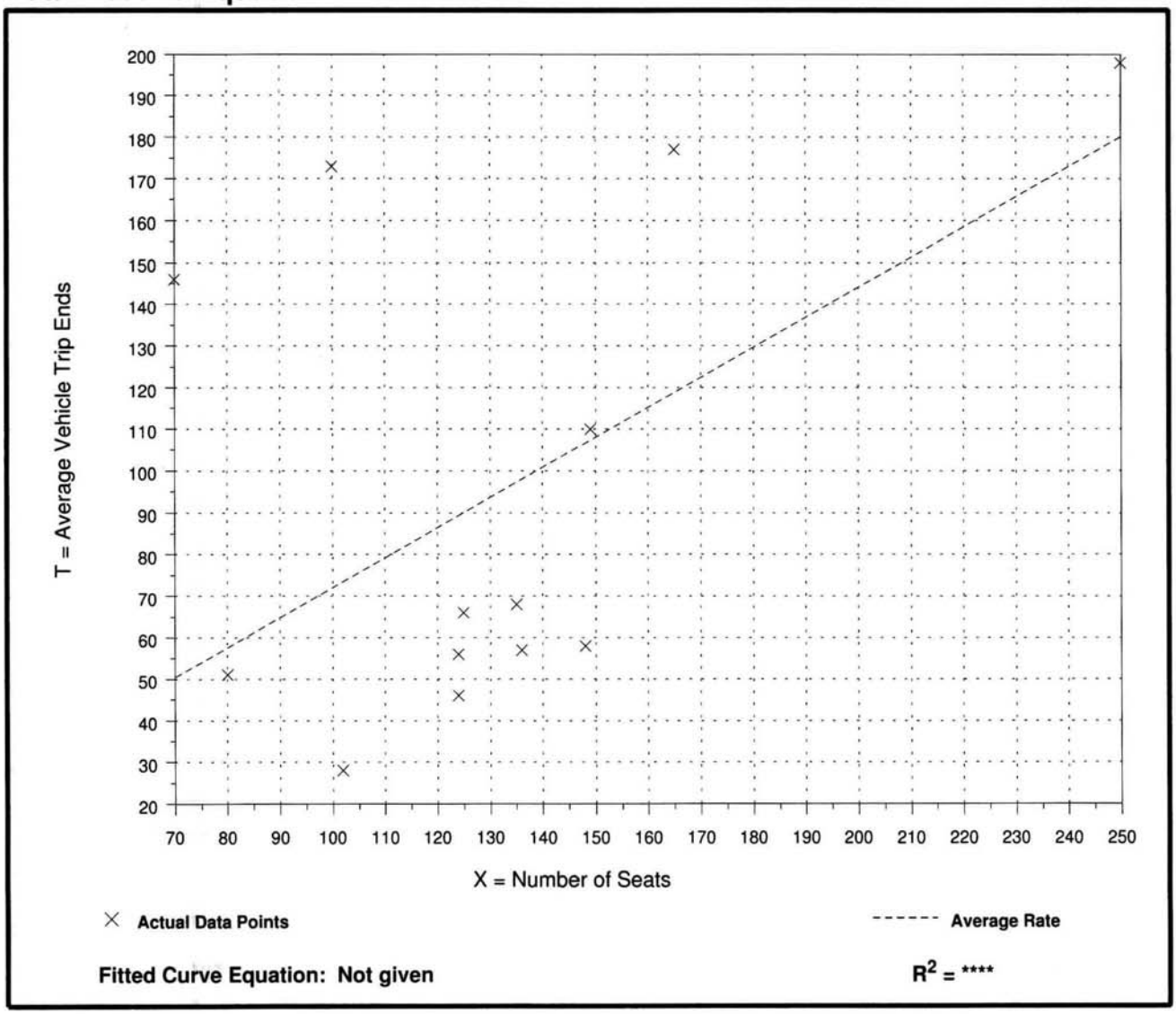
Average Vehicle Trip Ends vs: Seats
On a: Weekday,
P.M. Peak Hour of Generator

Number of Studies: 13
Average Number of Seats: 131
Directional Distribution: 52% entering, 48% exiting

Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.72	0.27 - 2.09	0.96

Data Plot and Equation



Fitted Curve Equation: Not given

R^2 = ****

High-Turnover (Sit-Down) Restaurant
(932)

Average Vehicle Trip Ends vs: Seats
On a: Saturday

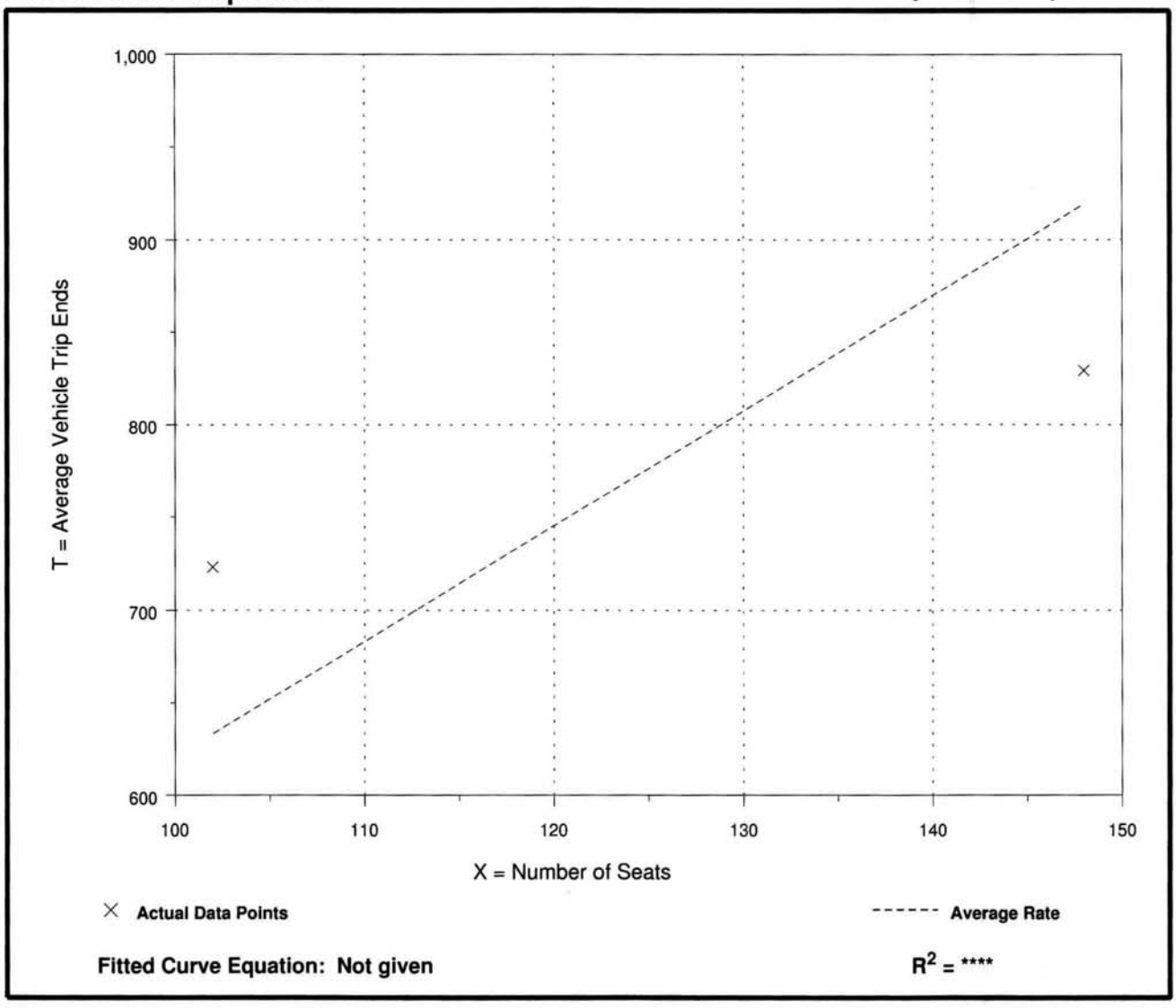
Number of Studies: 2
Average Number of Seats: 125
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
6.21	5.60 - 7.09	*

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Fitted Curve Equation: Not given

R^2 = ****

High-Turnover (Sit-Down) Restaurant
(932)

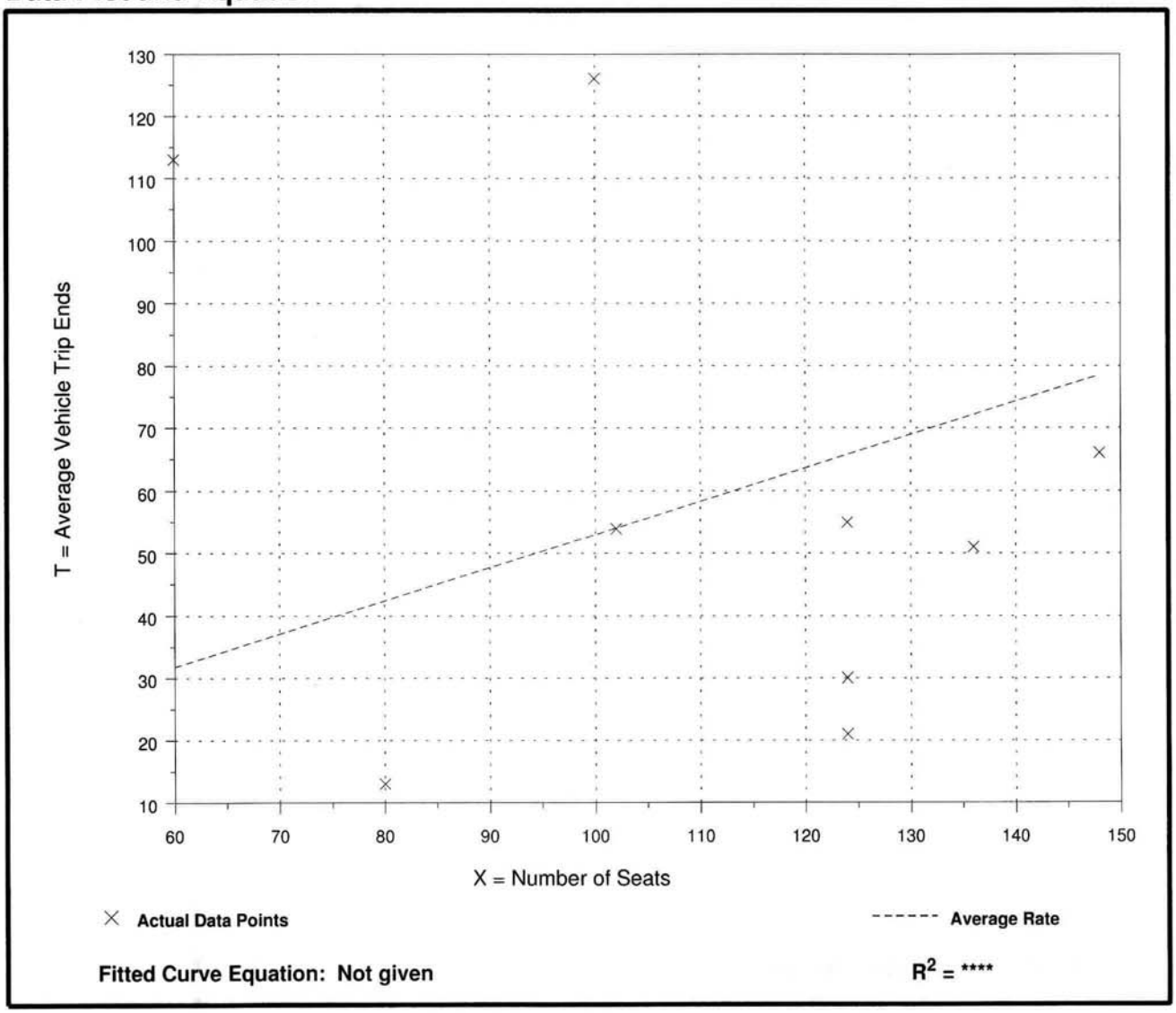
Average Vehicle Trip Ends vs: Seats
On a: Saturday,
Peak Hour of Generator

Number of Studies: 9
Average Number of Seats: 111
Directional Distribution: 53% entering, 47% exiting

Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.53	0.16 - 1.88	0.86

Data Plot and Equation



Fitted Curve Equation: Not given

R^2 = ****

High-Turnover (Sit-Down) Restaurant
(932)

Average Vehicle Trip Ends vs: Seats
On a: Sunday

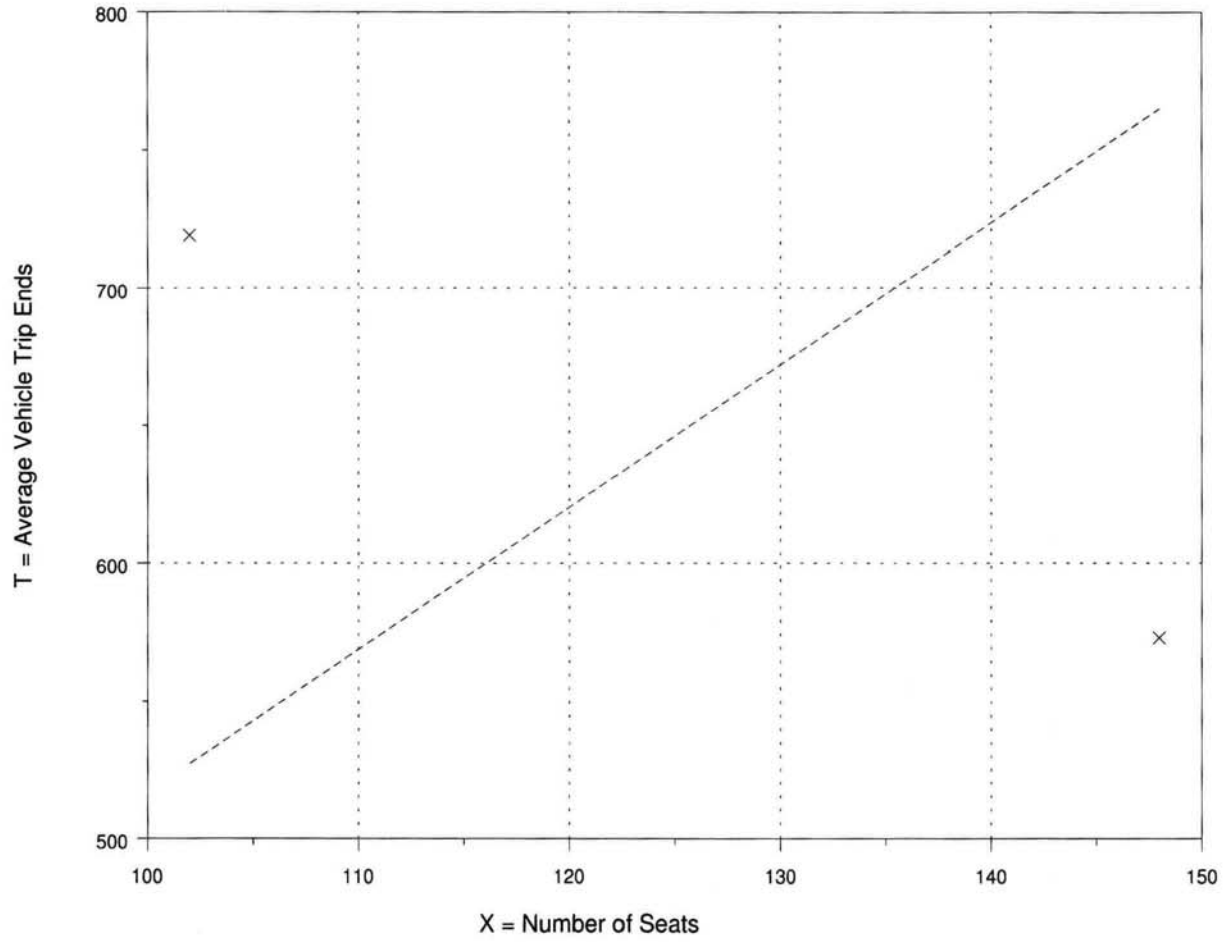
Number of Studies: 2
Average Number of Seats: 125
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
5.17	3.87 - 7.05	*

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Fitted Curve Equation: Not given

R^2 = ****

High-Turnover (Sit-Down) Restaurant
(932)

Average Vehicle Trip Ends vs: Seats
On a: Sunday,
Peak Hour of Generator

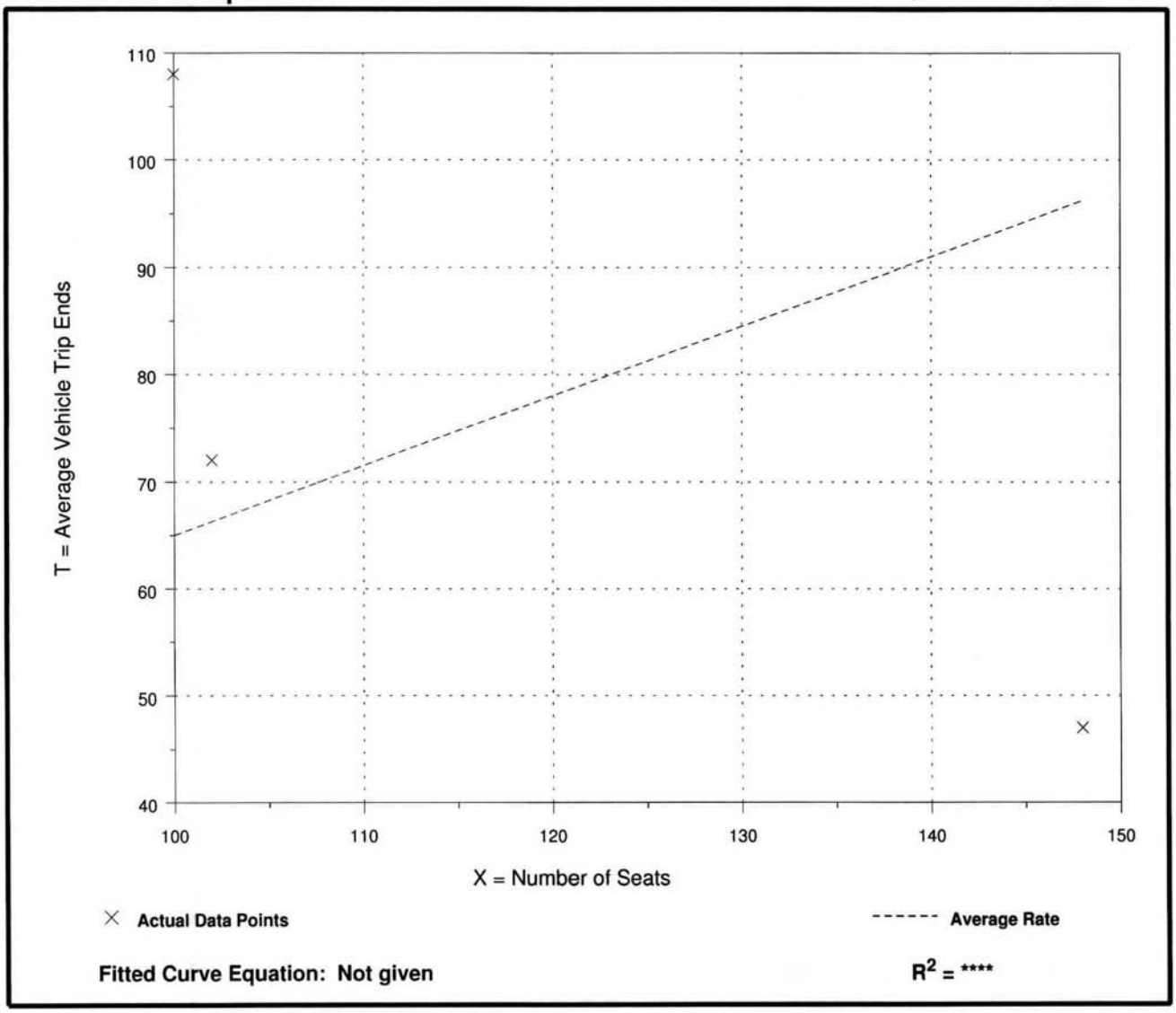
Number of Studies: 3
Average Number of Seats: 117
Directional Distribution: 55% entering, 45% exiting

Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.65	0.32 - 1.08	0.86

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Fitted Curve Equation: Not given

R^2 = ****

Land Use: 221
Low-Rise Apartment

Description

Low-rise apartments (rental dwelling units) are units located in rental buildings that have one or two levels (floors), such as garden apartments. Apartment (Land Use 220), high-rise apartment (Land Use 222) and mid-rise apartment (Land Use 223) are related uses.

Additional Data

The peak hour of the generator typically coincided with the peak hour of the adjacent street traffic.

The sites were surveyed between the early 1970s and the late 1990s throughout the United States and Canada.

Source Numbers

11, 21, 71, 98, 110, 177, 192, 300, 305, 306, 320, 321, 525

Land Use: 221
Low-Rise Apartment
Independent Variables with One Observation

The following trip generation data are for independent variables with only one observation. This information is shown in this table only; there are no related plots for these data.

Users are cautioned to use data with care because of the small sample size.

Independent Variable	Trip Generation Rate	Size of Independent Variable	Number of Studies	Directional Distribution
Persons				
Weekday A.M. Peak Hour of Adjacent Street Traffic	0.24	211	1	Not available
Weekday P.M. Peak Hour of Adjacent Street Traffic	0.38	211	1	Not available

Low-Rise Apartment
(221)

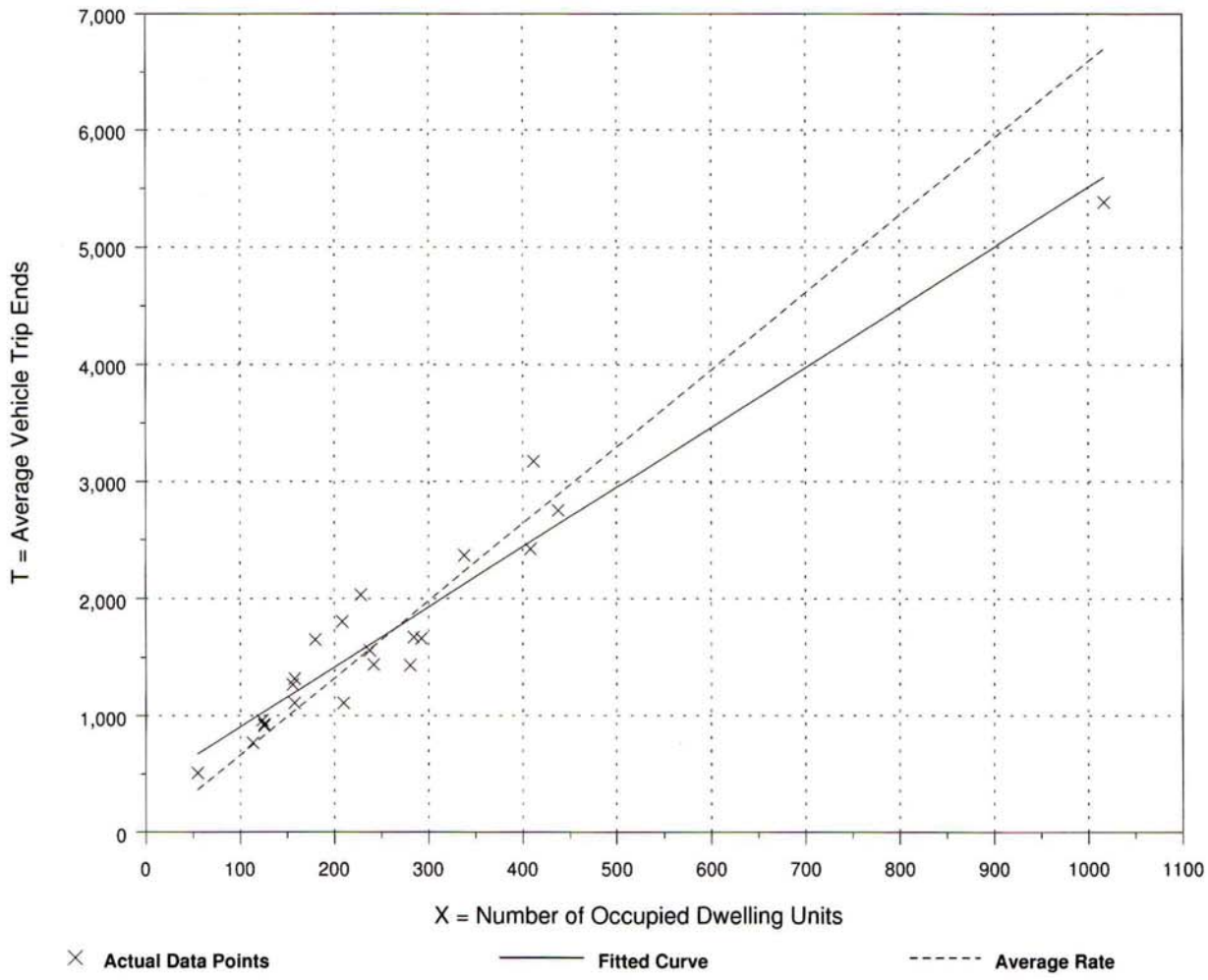
Average Vehicle Trip Ends vs: Occupied Dwelling Units
On a: Weekday

Number of Studies: 22
Avg. Num. of Occupied Dwelling Units: 264
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Occupied Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.59	5.10 - 9.24	2.84

Data Plot and Equation



Fitted Curve Equation: T = 5.12(X) + 387.53

R^2 = 0.93

Low-Rise Apartment
(221)

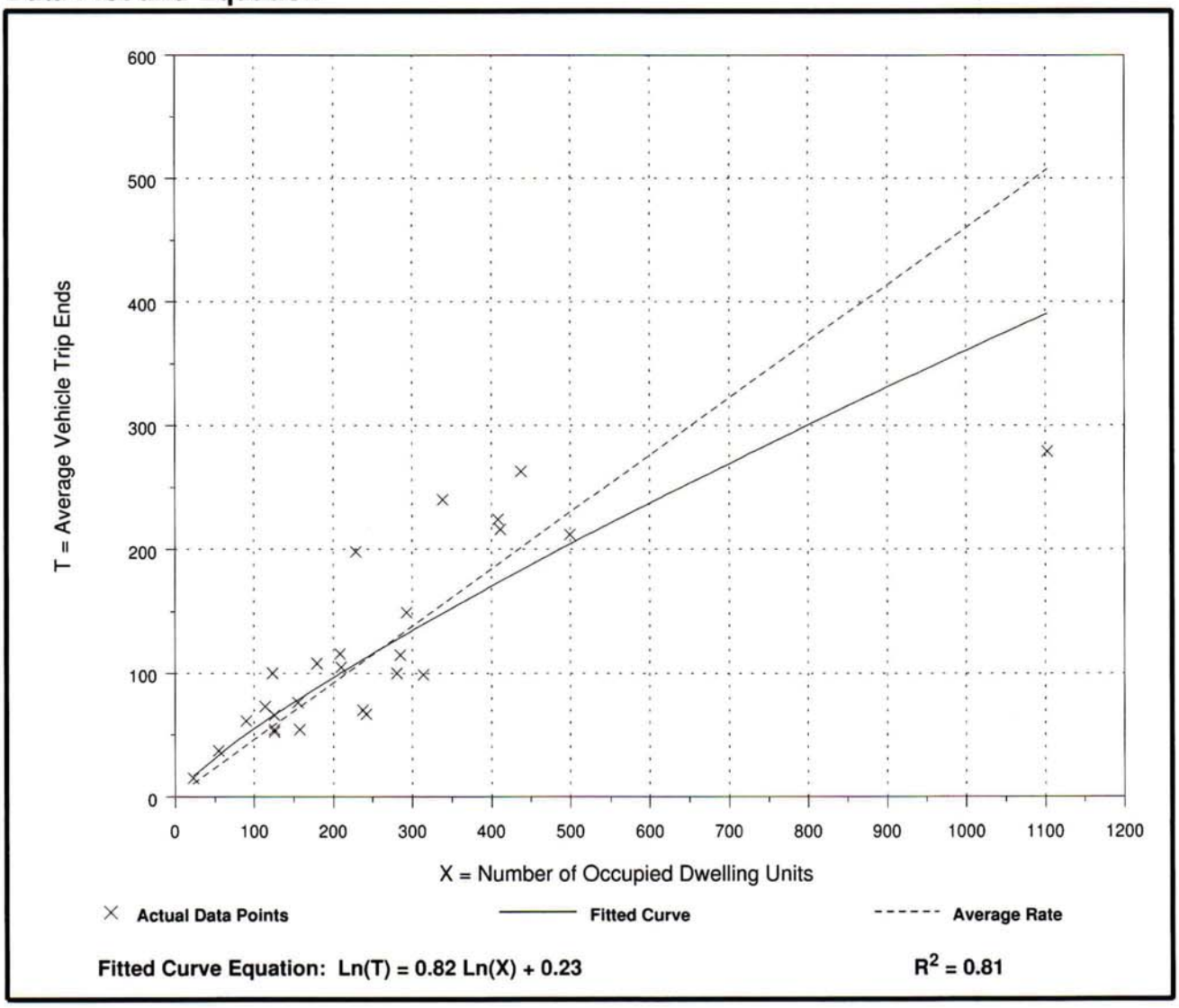
Average Vehicle Trip Ends vs: Occupied Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 27
Avg. Num. of Occupied Dwelling Units: 257
Directional Distribution: 21% entering, 79% exiting

Trip Generation per Occupied Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.46	0.25 - 0.86	0.70

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.82 Ln(X) + 0.23

R^2 = 0.81

Low-Rise Apartment
(221)

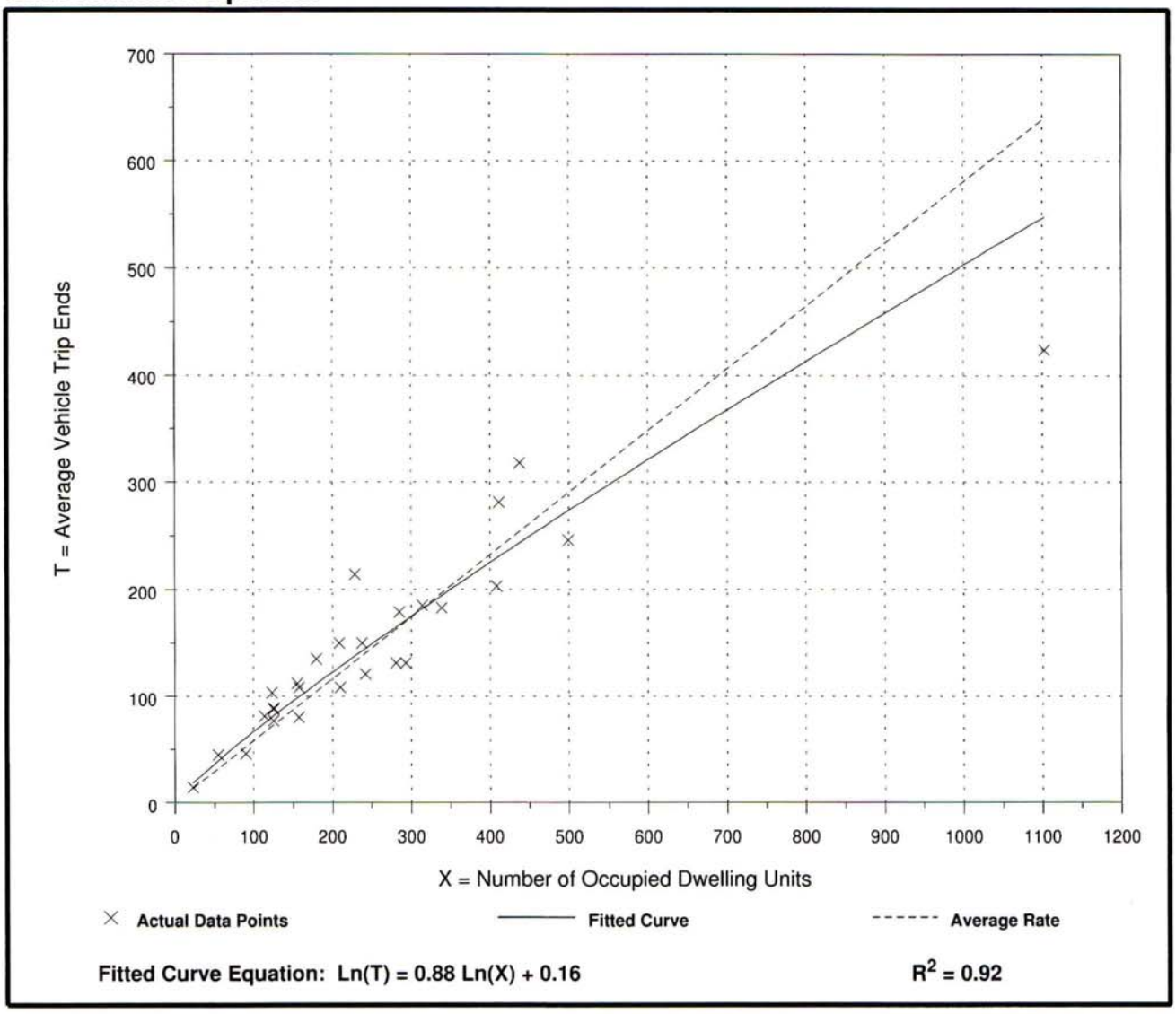
Average Vehicle Trip Ends vs: **Occupied Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 27
Avg. Num. of Occupied Dwelling Units: 257
Directional Distribution: 65% entering, 35% exiting

Trip Generation per Occupied Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.58	0.38 - 0.93	0.77

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.88 Ln(X) + 0.16

R^2 = 0.92

Low-Rise Apartment
(221)

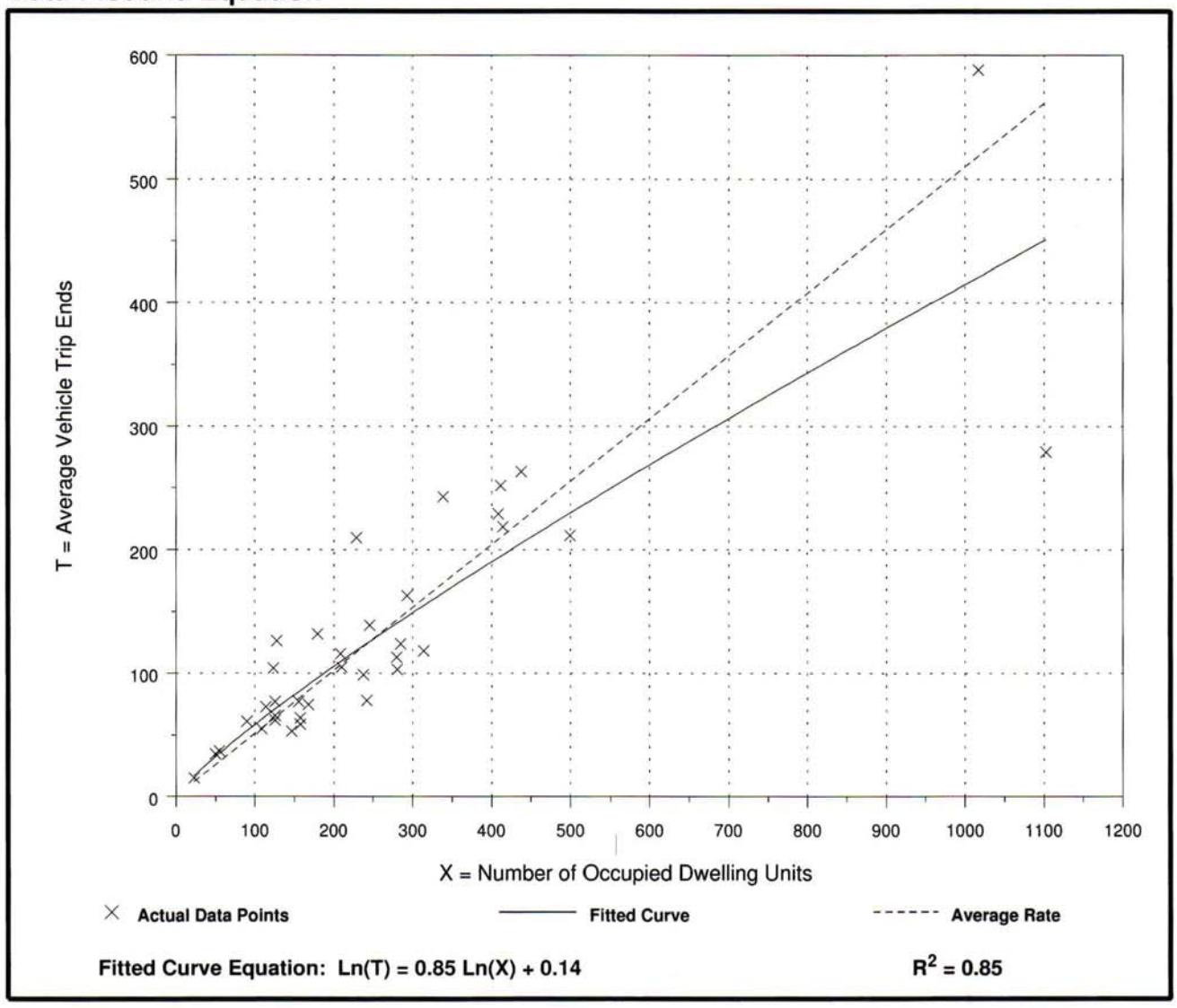
Average Vehicle Trip Ends vs: Occupied Dwelling Units
On a: Weekday,
A.M. Peak Hour of Generator

Number of Studies: 36
Avg. Num. of Occupied Dwelling Units: 264
Directional Distribution: 20% entering, 80% exiting

Trip Generation per Occupied Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.51	0.25 - 0.98	0.73

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.85 Ln(X) + 0.14 $R^2 = 0.85$

Low-Rise Apartment
(221)

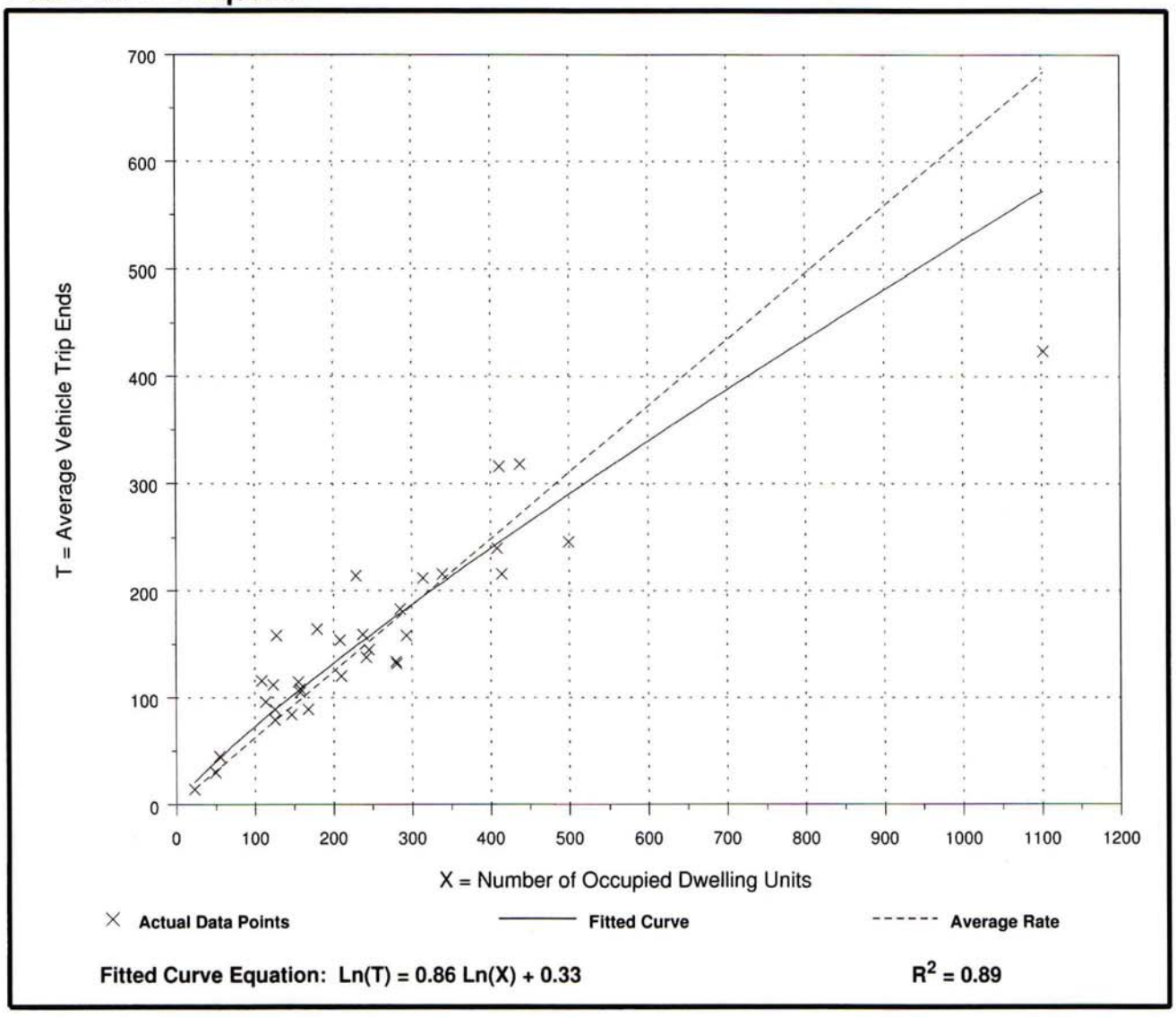
Average Vehicle Trip Ends vs: Occupied Dwelling Units
On a: Weekday,
P.M. Peak Hour of Generator

Number of Studies: 33
Avg. Num. of Occupied Dwelling Units: 250
Directional Distribution: 64% entering, 36% exiting

Trip Generation per Occupied Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.62	0.38 - 1.23	0.80

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.86 Ln(X) + 0.33

R^2 = 0.89

Low-Rise Apartment
(221)

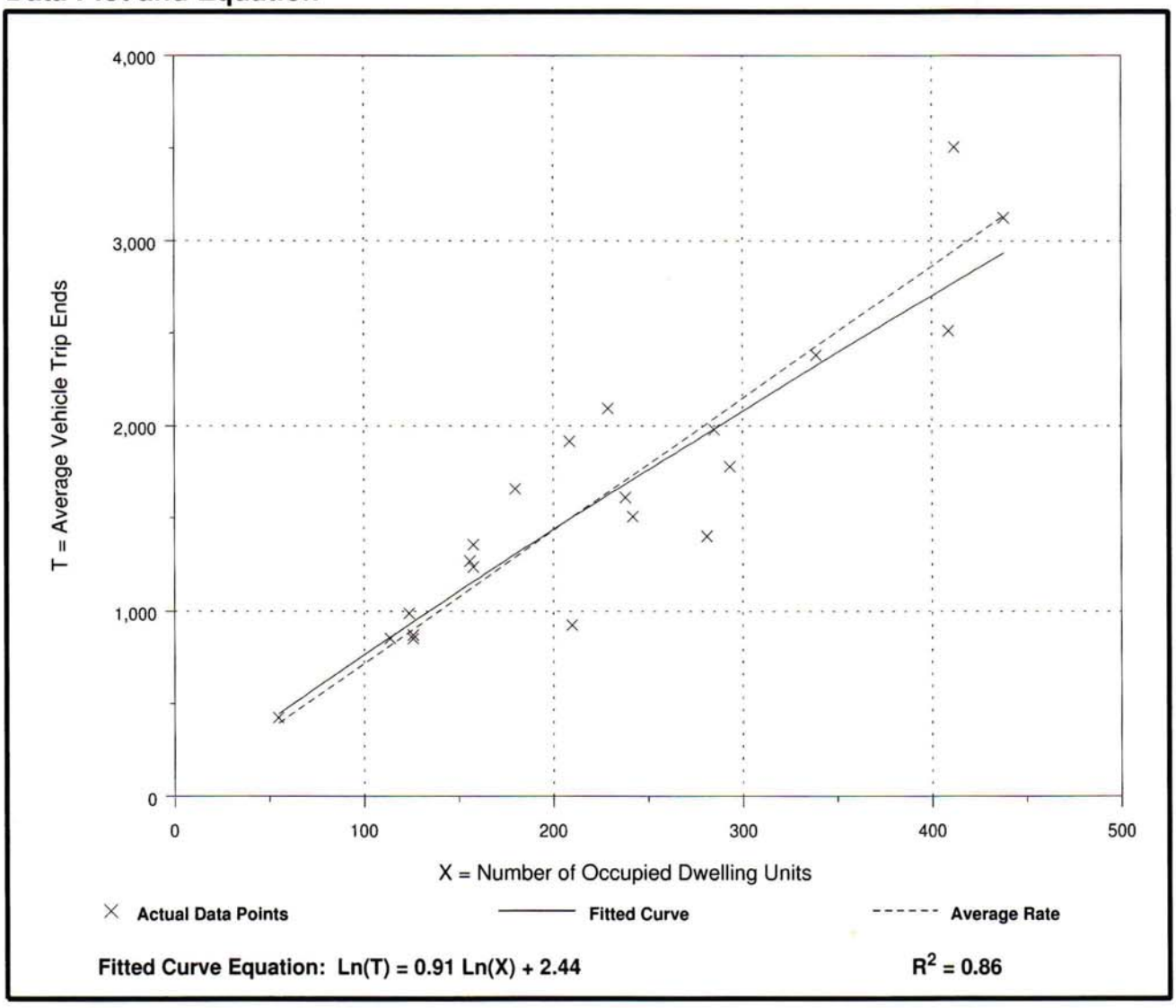
Average Vehicle Trip Ends vs: Occupied Dwelling Units
On a: Saturday

Number of Studies: 21
Avg. Num. of Occupied Dwelling Units: 228
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Occupied Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.16	4.41 - 9.20	2.96

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.91 Ln(X) + 2.44

R^2 = 0.86

Low-Rise Apartment
(221)

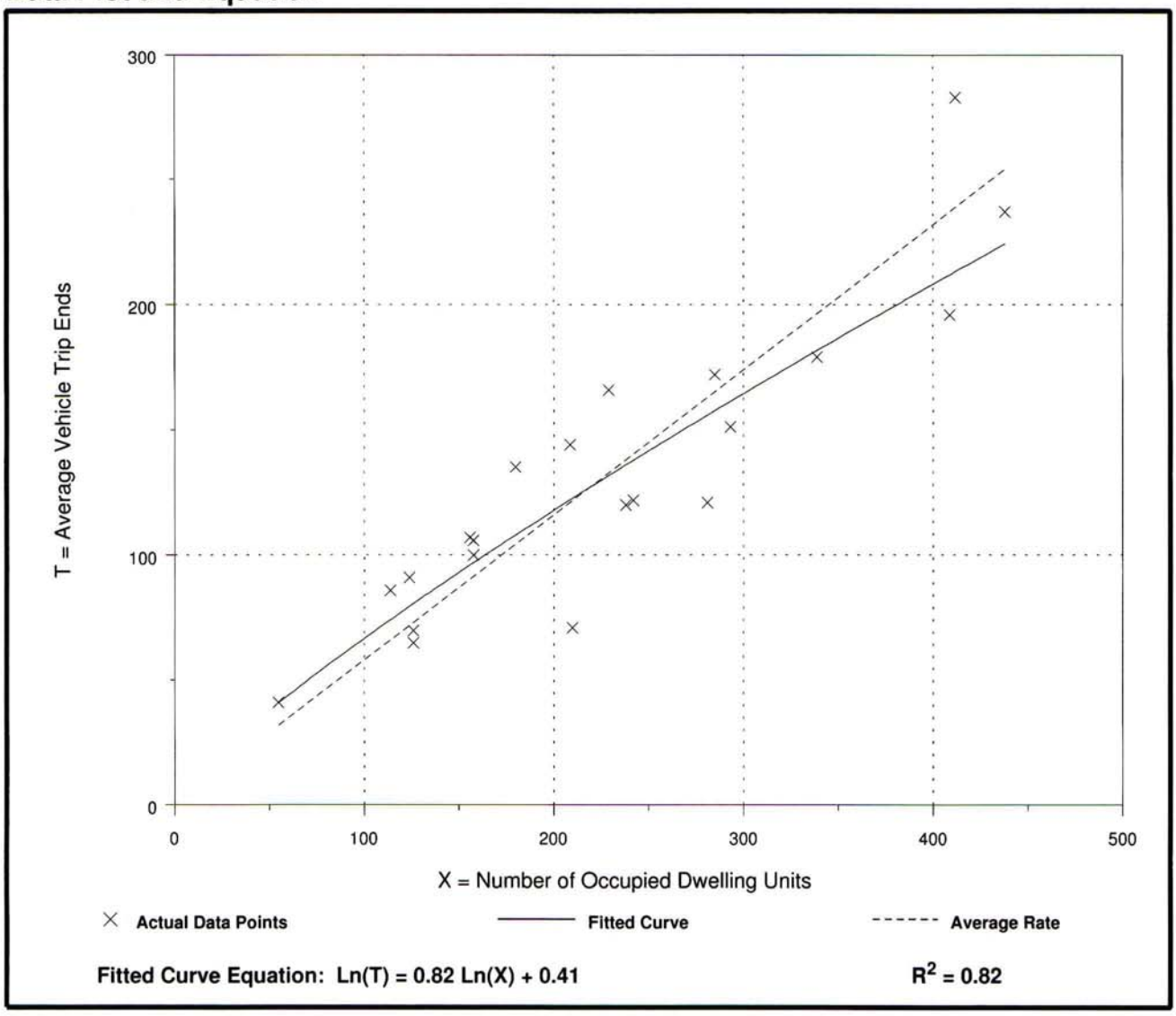
Average Vehicle Trip Ends vs: **Occupied Dwelling Units**
On a: **Saturday,**
Peak Hour of Generator

Number of Studies: 21
Avg. Num. of Occupied Dwelling Units: 228
Directional Distribution: 54% entering, 46% exiting

Trip Generation per Occupied Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.58	0.34 - 0.75	0.77

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.82 Ln(X) + 0.41

R^2 = 0.82

Low-Rise Apartment
(221)

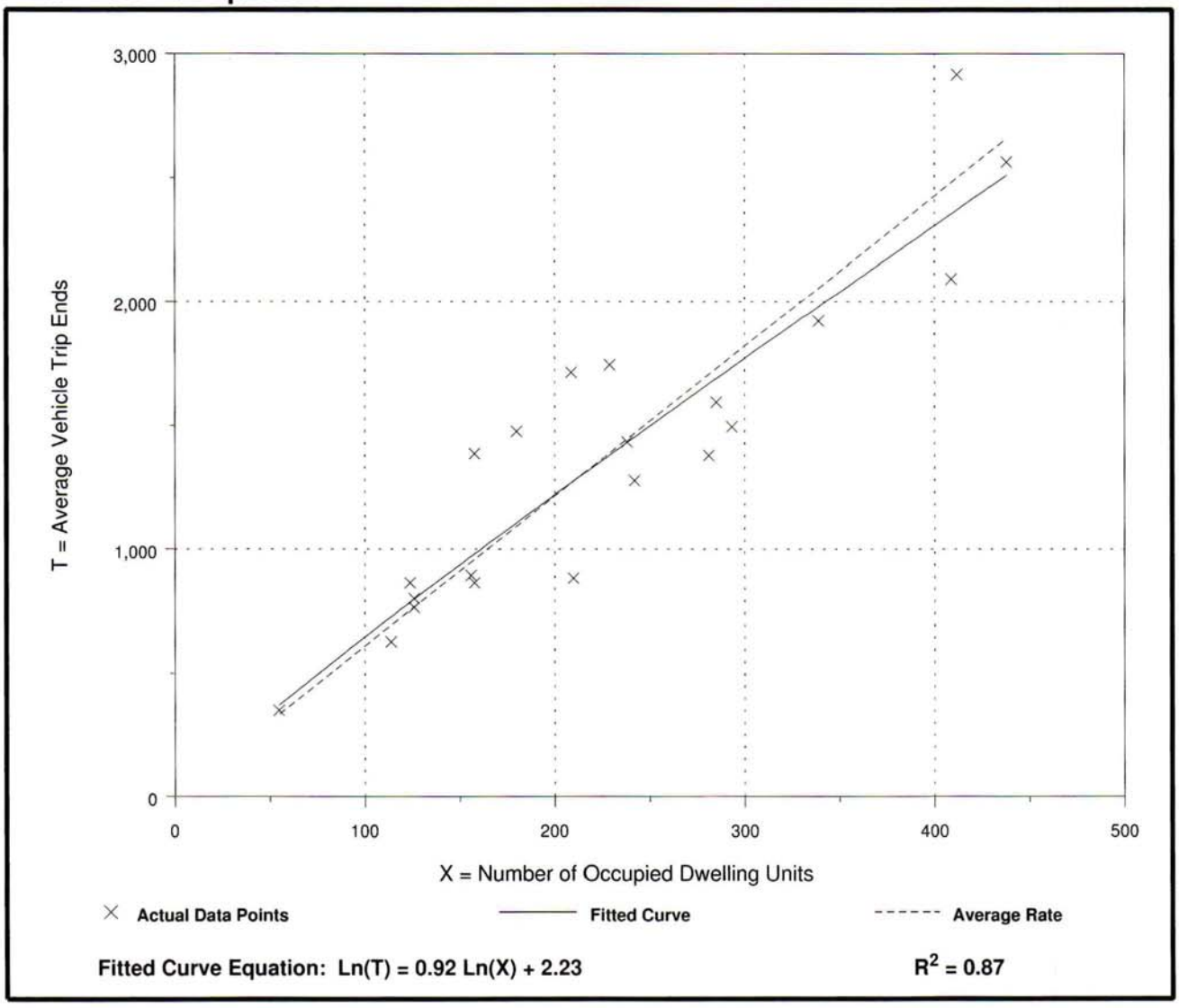
Average Vehicle Trip Ends vs: Occupied Dwelling Units
On a: Sunday

Number of Studies: 21
Avg. Num. of Occupied Dwelling Units: 228
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Occupied Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.07	4.20 - 8.77	2.71

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.92 Ln(X) + 2.23

R^2 = 0.87

Low-Rise Apartment
(221)

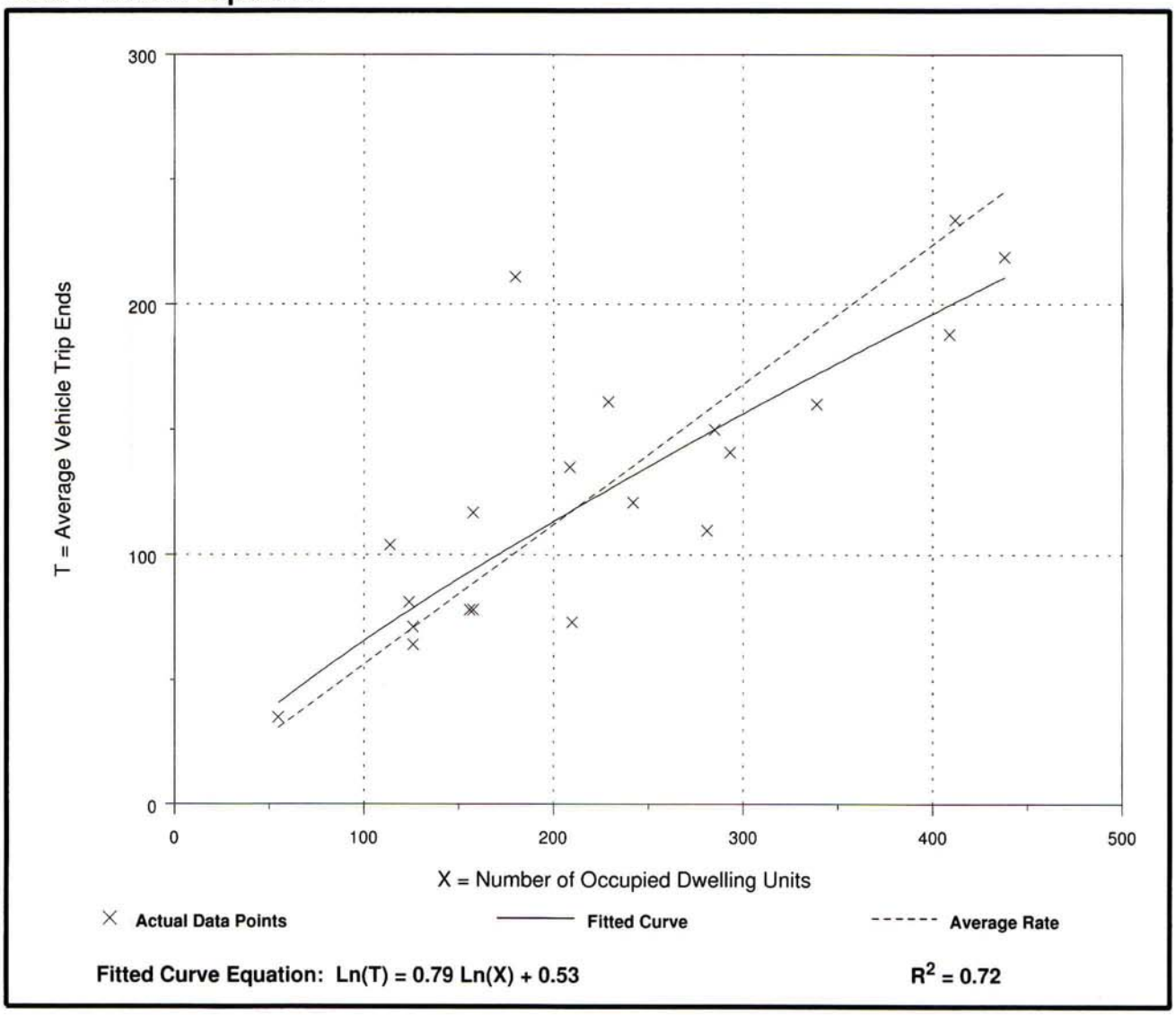
Average Vehicle Trip Ends vs: **Occupied Dwelling Units**
On a: **Sunday,**
Peak Hour of Generator

Number of Studies: 20
Avg. Num. of Occupied Dwelling Units: 227
Directional Distribution: 53% entering, 47% exiting

Trip Generation per Occupied Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.56	0.35 - 1.17	0.76

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.79 Ln(X) + 0.53

R^2 = 0.72

Low-Rise Apartment
(221)

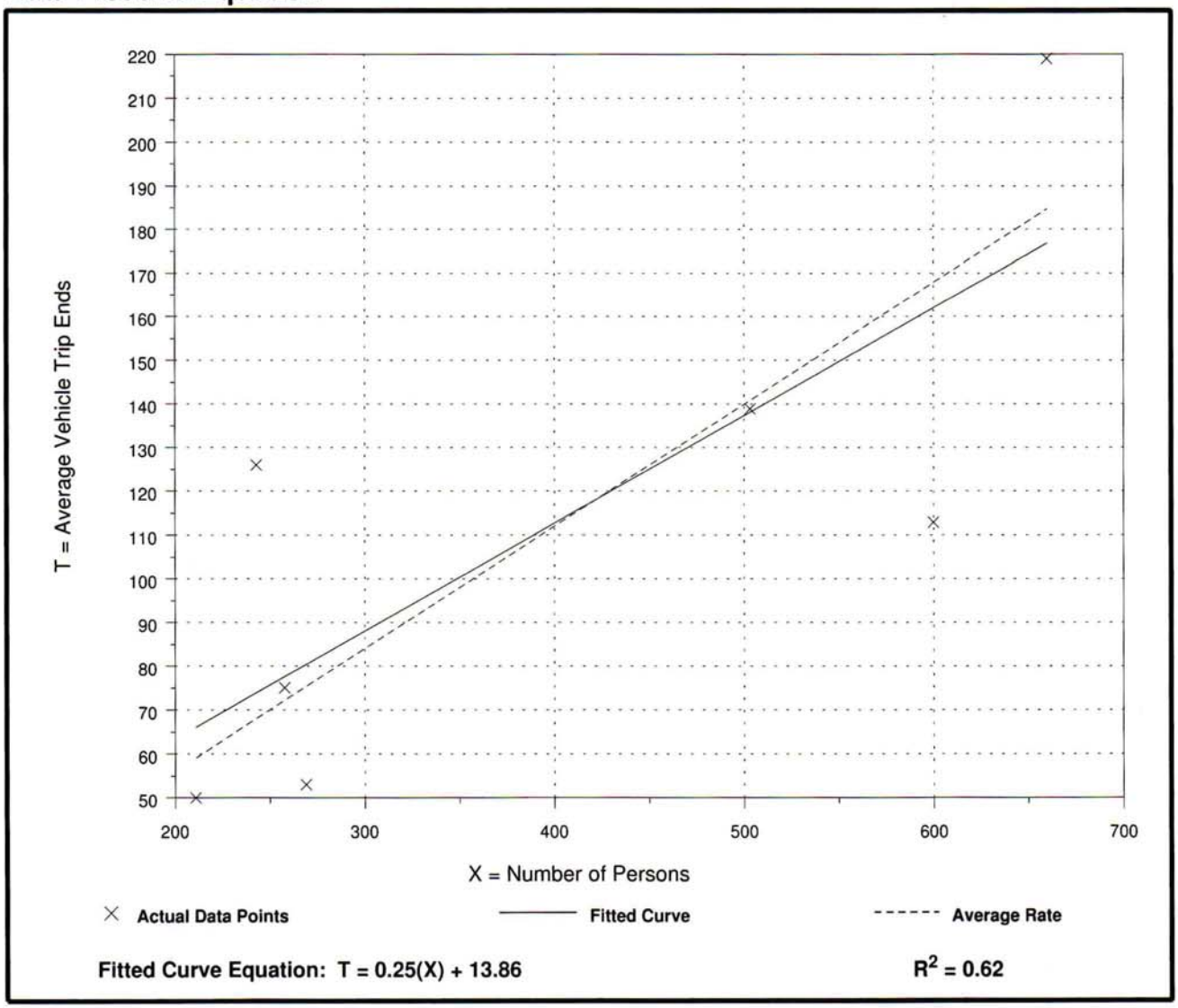
Average Vehicle Trip Ends vs: Persons
On a: Weekday,
A.M. Peak Hour of Generator

Number of Studies: 7
Average Number of Persons: 392
Directional Distribution: 17% entering, 83% exiting

Trip Generation per Person

Average Rate	Range of Rates	Standard Deviation
0.28	0.19 - 0.52	0.54

Data Plot and Equation



Fitted Curve Equation: T = 0.25(X) + 13.86

R^2 = 0.62

Low-Rise Apartment
(221)

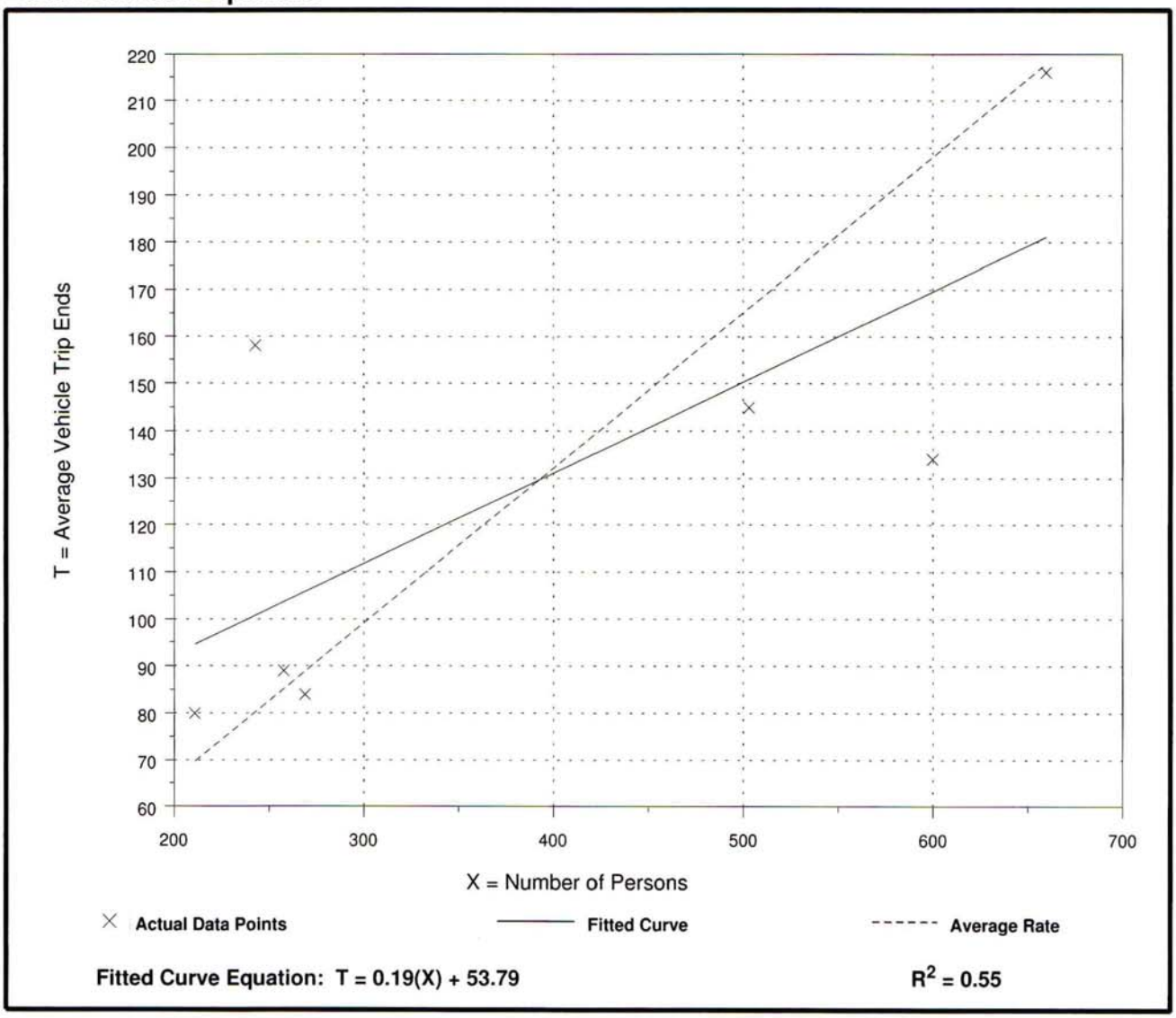
Average Vehicle Trip Ends vs: Persons
On a: Weekday,
P.M. Peak Hour of Generator

Number of Studies: 7
Average Number of Persons: 392
Directional Distribution: 63% entering, 37% exiting

Trip Generation per Person

Average Rate	Range of Rates	Standard Deviation
0.33	0.22 - 0.65	0.58

Data Plot and Equation



Fitted Curve Equation: T = 0.19(X) + 53.79

R^2 = 0.55

Land Use: 220
Apartment

Description

Apartments are rental dwelling units located within the same building with at least three other dwelling units, for example, quadraplexes and all types of apartment buildings. The studies included in this land use did not identify whether the apartments were low-rise, mid-rise, or high-rise. Low-rise apartment (Land Use 221), high-rise apartment (Land Use 222) and mid-rise apartment (Land Use 223) are related uses.

Additional Data

This land use included data from a wide variety of units with different sizes, price ranges, locations and ages. Consequently, there was a wide variation in trips generated within this category. Other factors, such as geographic location and type of adjacent and nearby development, may also have had an effect on the site trip generation.

The peak hour of the generator typically coincided with the peak hour of the adjacent street traffic.

The sites were surveyed between the late 1960s and the 2000s throughout the United States and Canada.

Many of the studies included in this land use did not indicate the total number of bedrooms. To assist in the future analysis of this land use, it is important that this information be collected and included in trip generation data submissions.

Source Numbers

2, 4, 5, 6, 9, 10, 11, 12, 13, 14, 16, 19, 20, 34, 35, 40, 72, 91, 100, 108, 188, 192, 204, 211, 253, 283, 357, 436, 525, 530, 579, 583, 638

Apartment
(220)

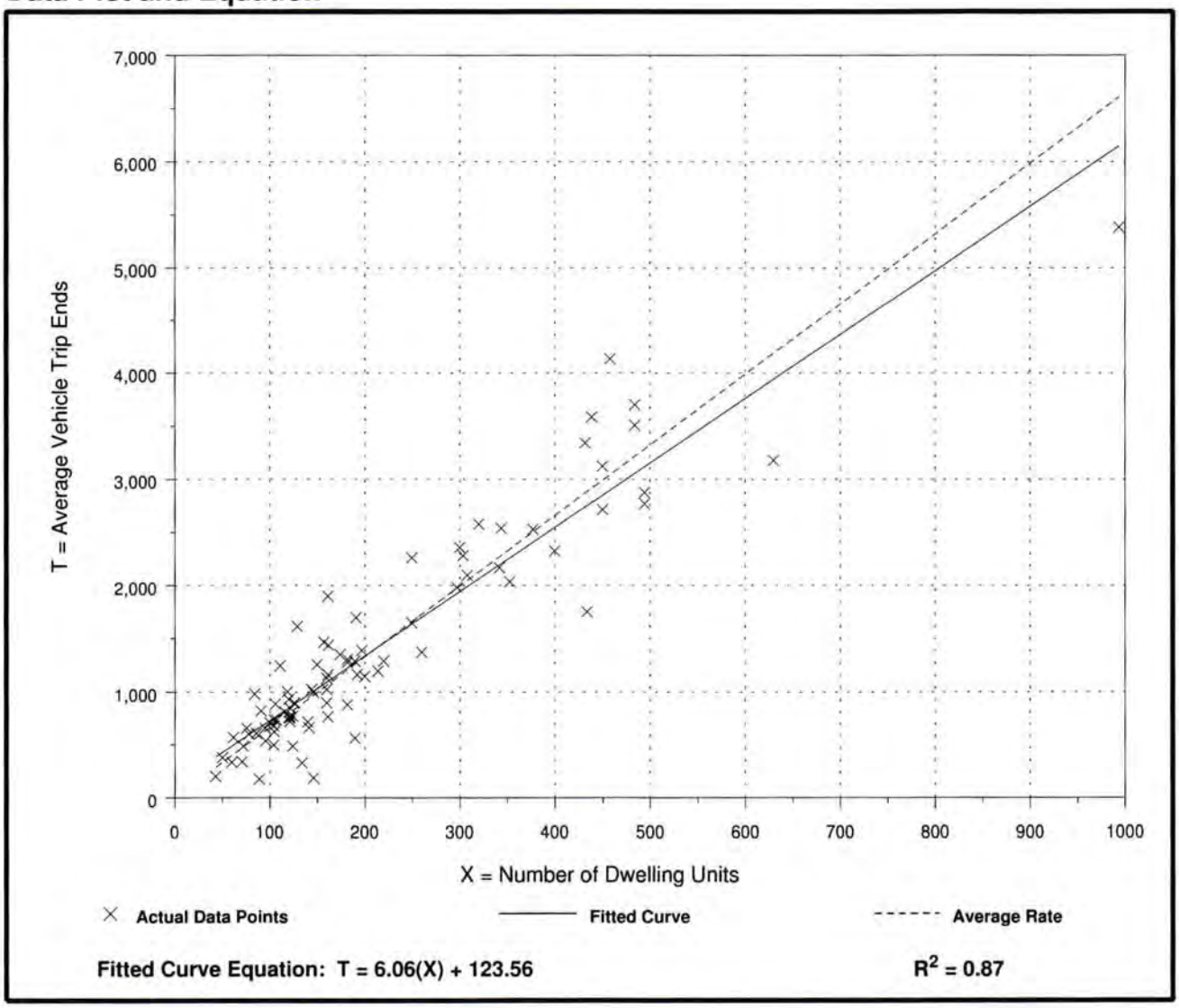
Average Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Number of Studies: 88
Avg. Number of Dwelling Units: 210
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.65	1.27 - 12.50	3.07

Data Plot and Equation



Fitted Curve Equation: T = 6.06(X) + 123.56

R^2 = 0.87

Apartment
(220)

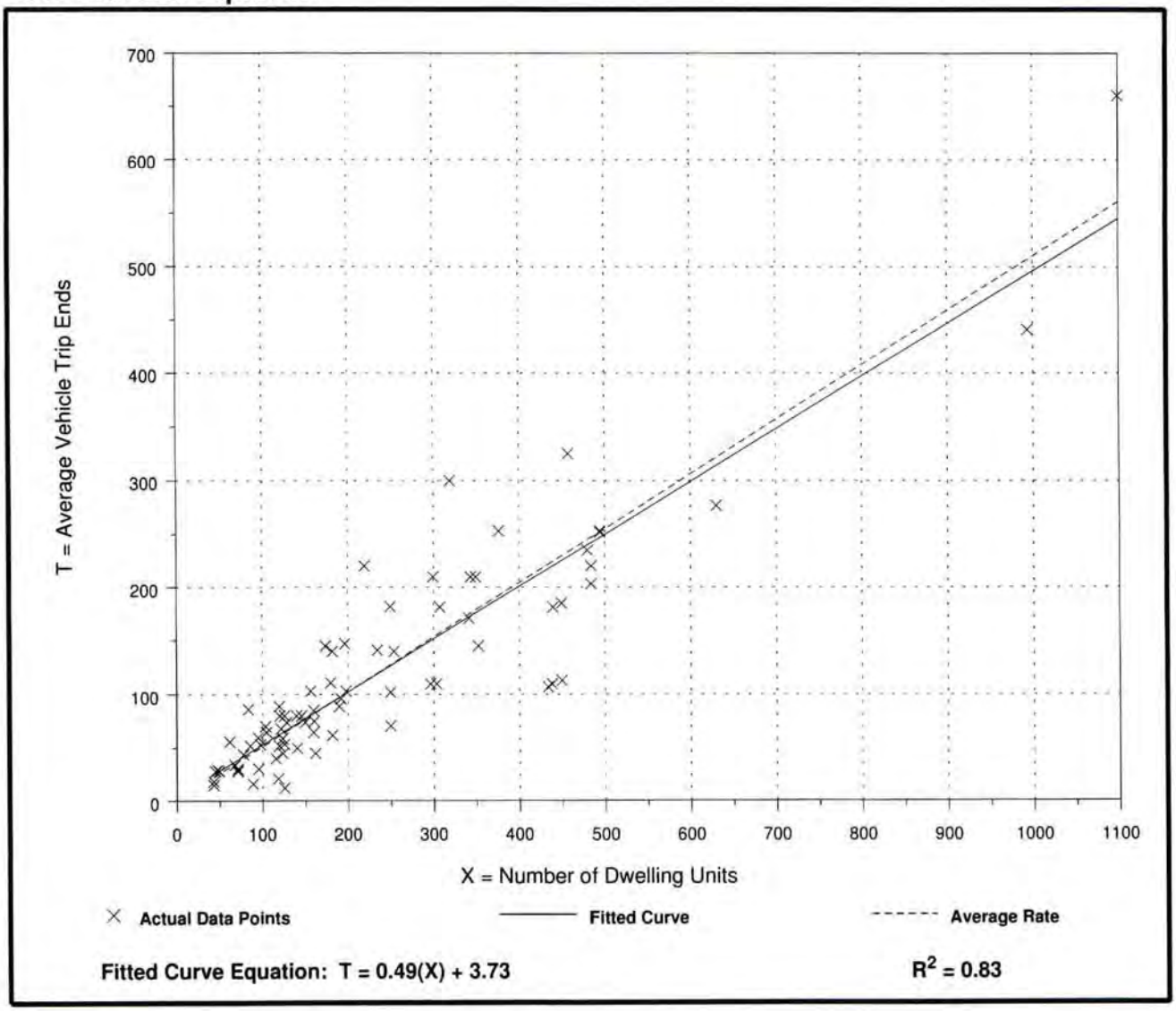
Average Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 78
Avg. Number of Dwelling Units: 235
Directional Distribution: 20% entering, 80% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.51	0.10 - 1.02	0.73

Data Plot and Equation



Fitted Curve Equation: T = 0.49(X) + 3.73

R^2 = 0.83

Apartment
(220)

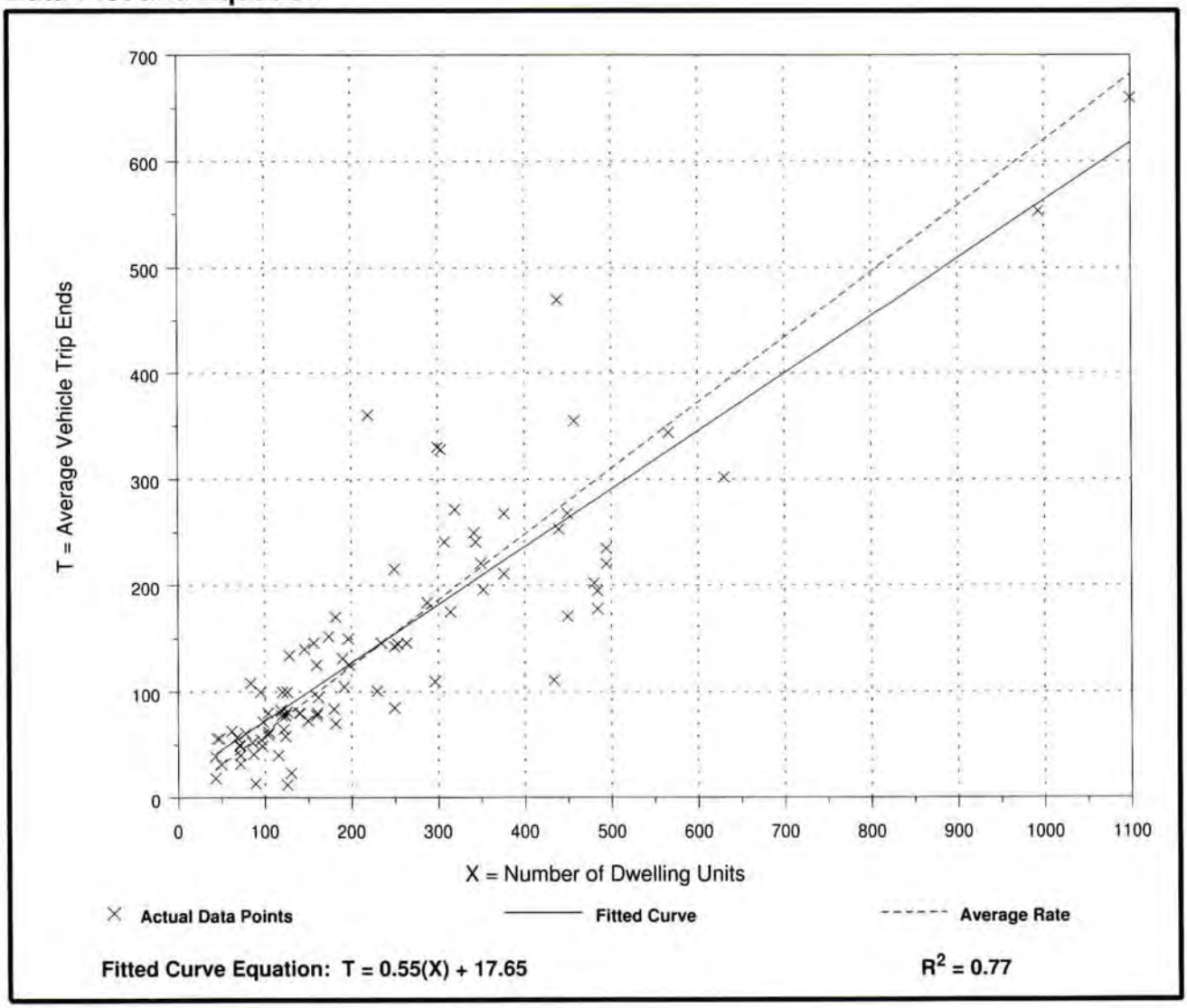
Average Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 90
Avg. Number of Dwelling Units: 233
Directional Distribution: 65% entering, 35% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.62	0.10 - 1.64	0.82

Data Plot and Equation



Fitted Curve Equation: T = 0.55(X) + 17.65

R^2 = 0.77

Apartment
(220)

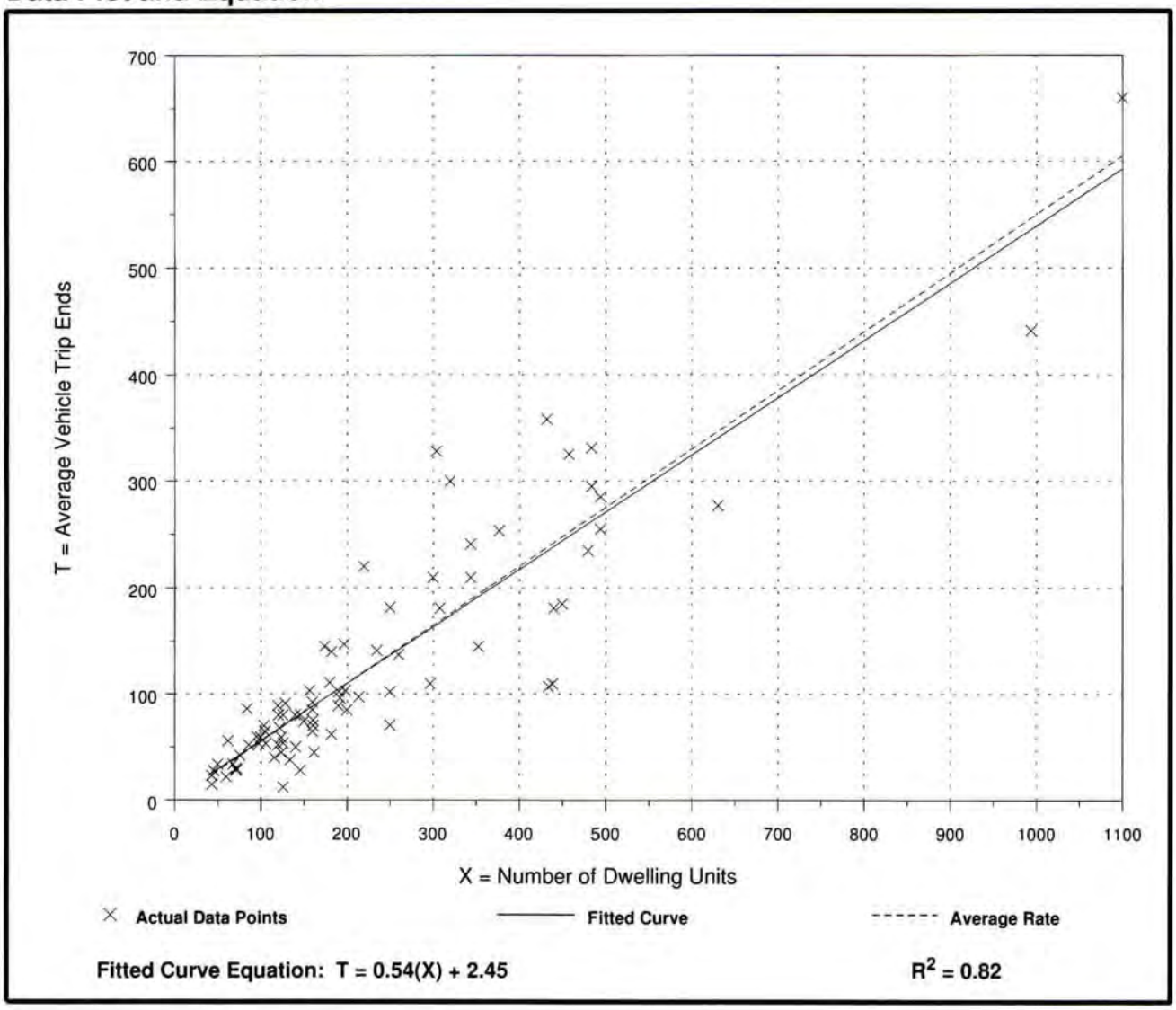
Average Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
A.M. Peak Hour of Generator

Number of Studies: 83
Avg. Number of Dwelling Units: 230
Directional Distribution: 29% entering, 71% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.55	0.10 - 1.08	0.76

Data Plot and Equation



Fitted Curve Equation: T = 0.54(X) + 2.45

R^2 = 0.82

Apartment
(220)

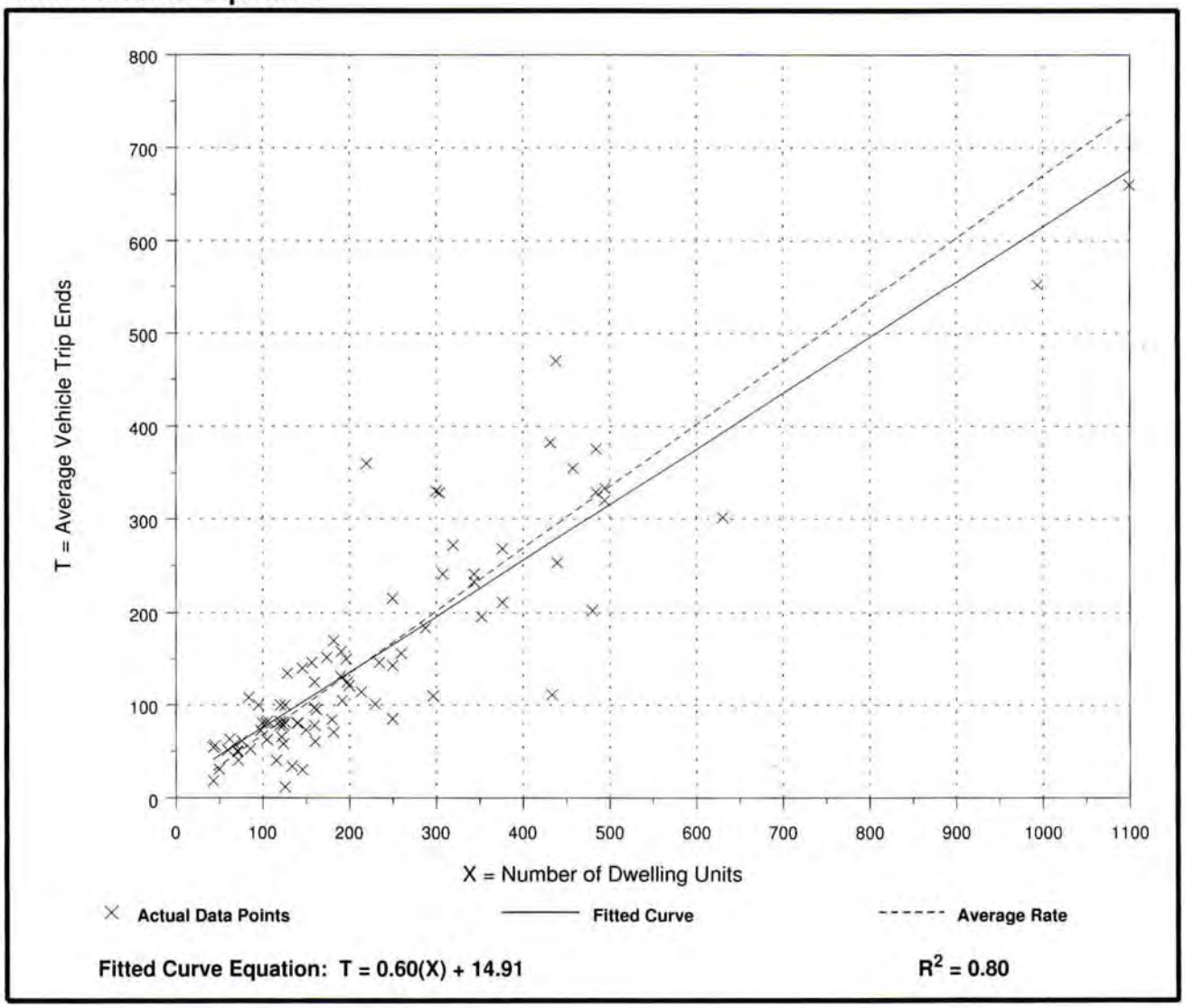
Average Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
P.M. Peak Hour of Generator

Number of Studies: 85
Avg. Number of Dwelling Units: 229
Directional Distribution: 61% entering, 39% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.67	0.10 - 1.64	0.85

Data Plot and Equation



Fitted Curve Equation: T = 0.60(X) + 14.91

R^2 = 0.80

Apartment
(220)

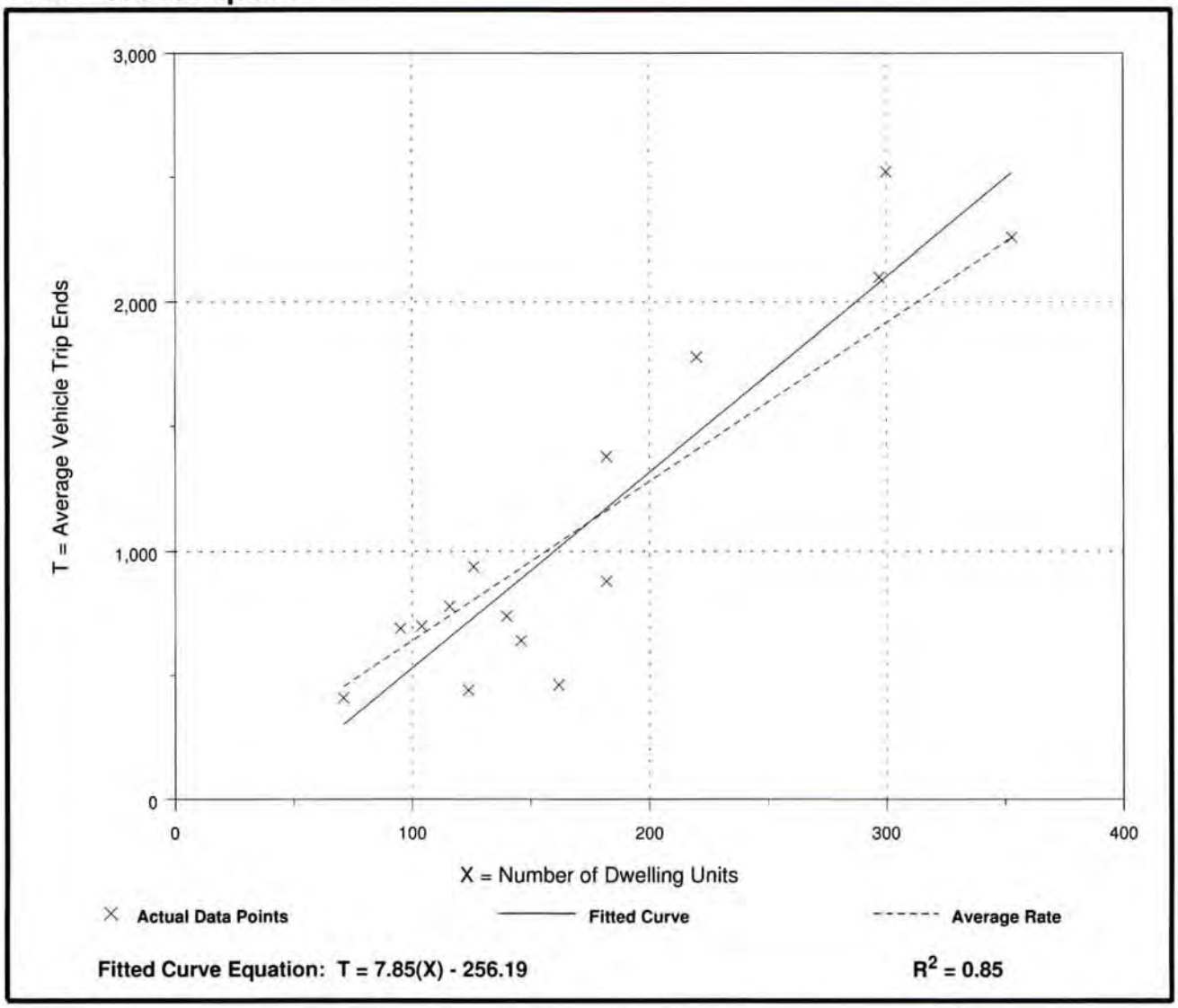
Average Vehicle Trip Ends vs: Dwelling Units
On a: Saturday

Number of Studies: 15
Avg. Number of Dwelling Units: 175
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.39	2.84 - 8.40	2.99

Data Plot and Equation



Fitted Curve Equation: T = 7.85(X) - 256.19

R^2 = 0.85

Apartment
(220)

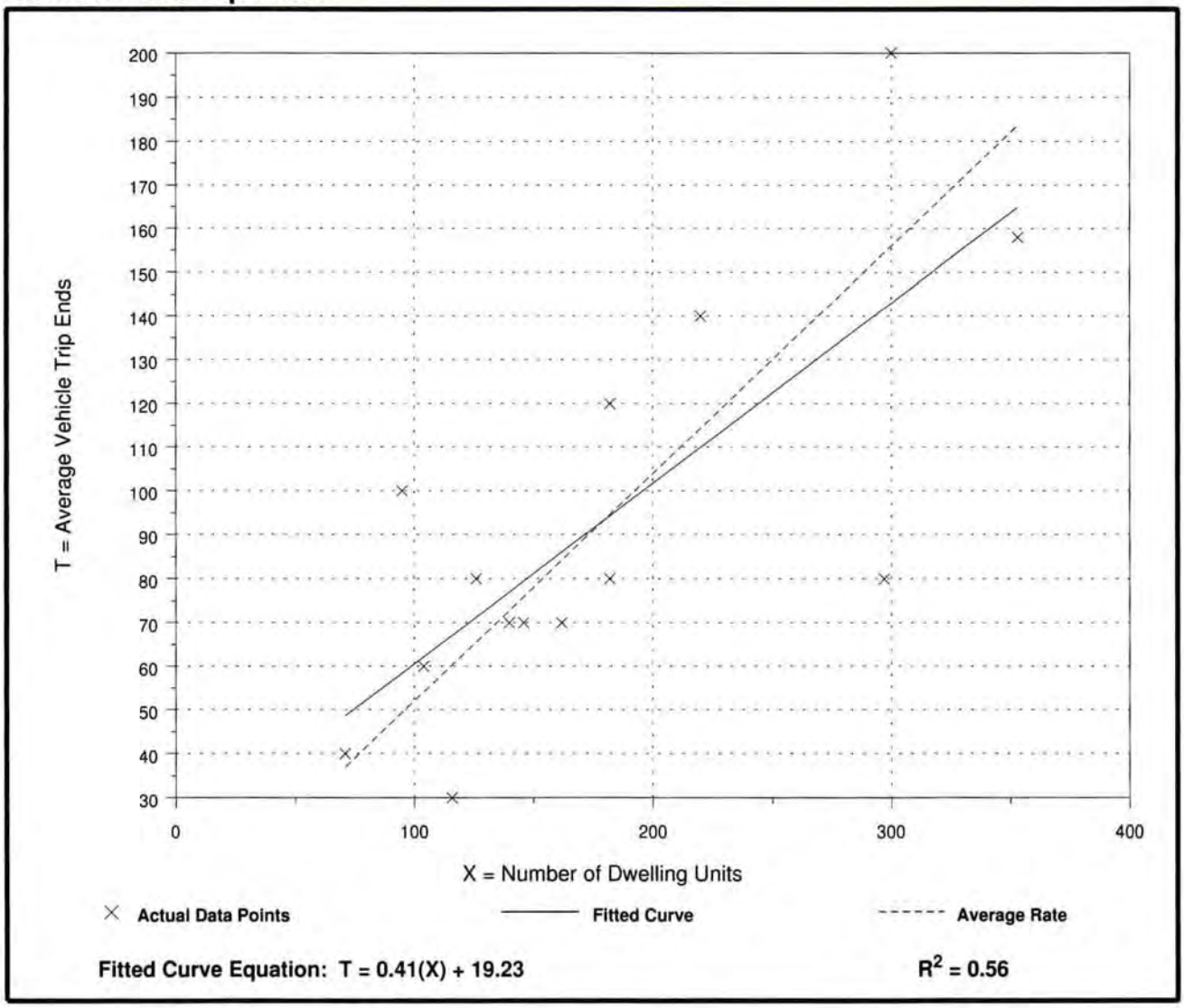
Average Vehicle Trip Ends vs: Dwelling Units
On a: Saturday,
Peak Hour of Generator

Number of Studies: 14
Avg. Number of Dwelling Units: 178
Directional Distribution: Not available

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.52	0.26 - 1.05	0.74

Data Plot and Equation



Fitted Curve Equation: T = 0.41(X) + 19.23

R^2 = 0.56

Apartment
(220)

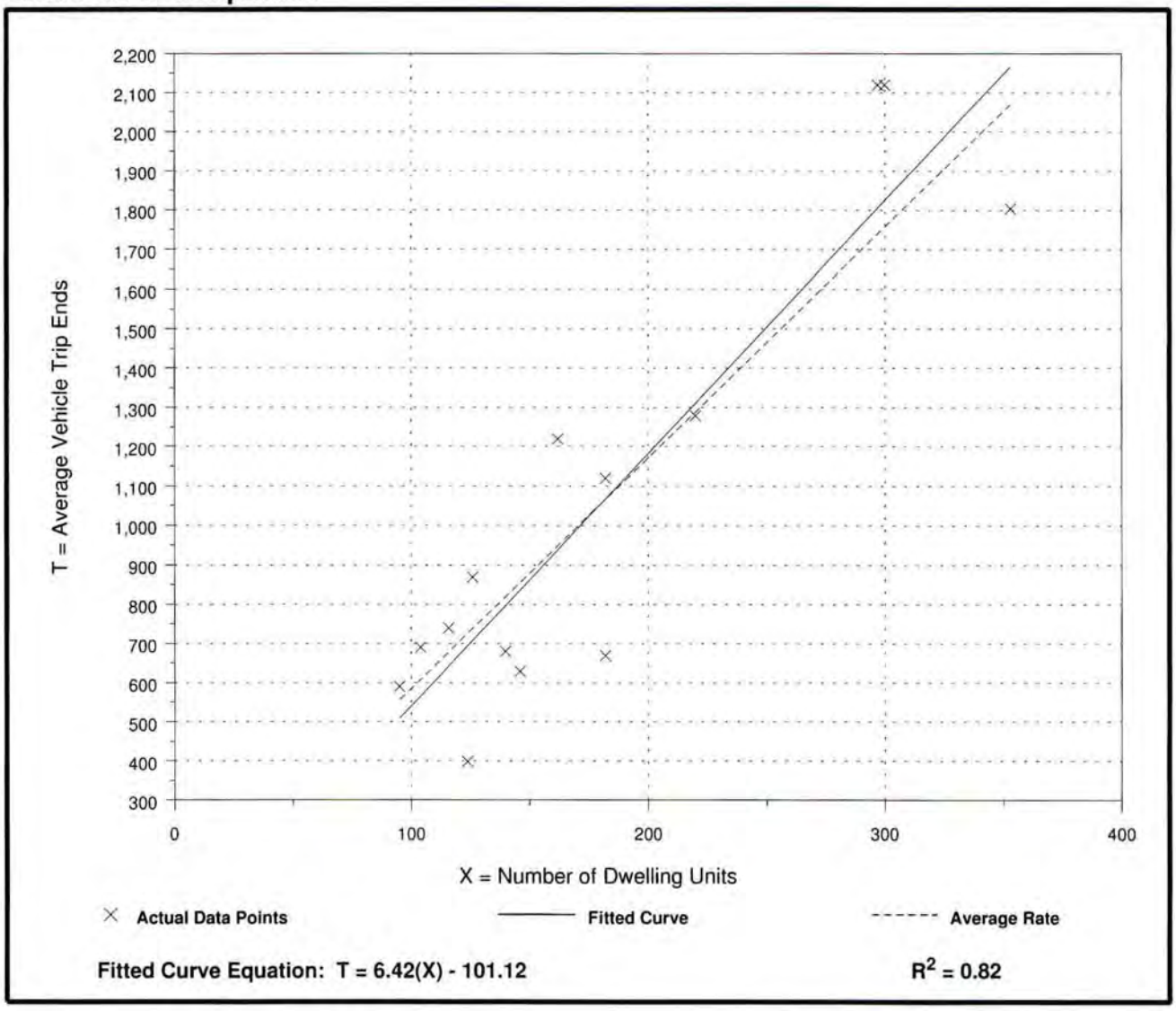
Average Vehicle Trip Ends vs: Dwelling Units
On a: Sunday

Number of Studies: 14
Avg. Number of Dwelling Units: 182
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
5.86	3.21 - 7.53	2.73

Data Plot and Equation



Fitted Curve Equation: T = 6.42(X) - 101.12

R^2 = 0.82

Apartment
(220)

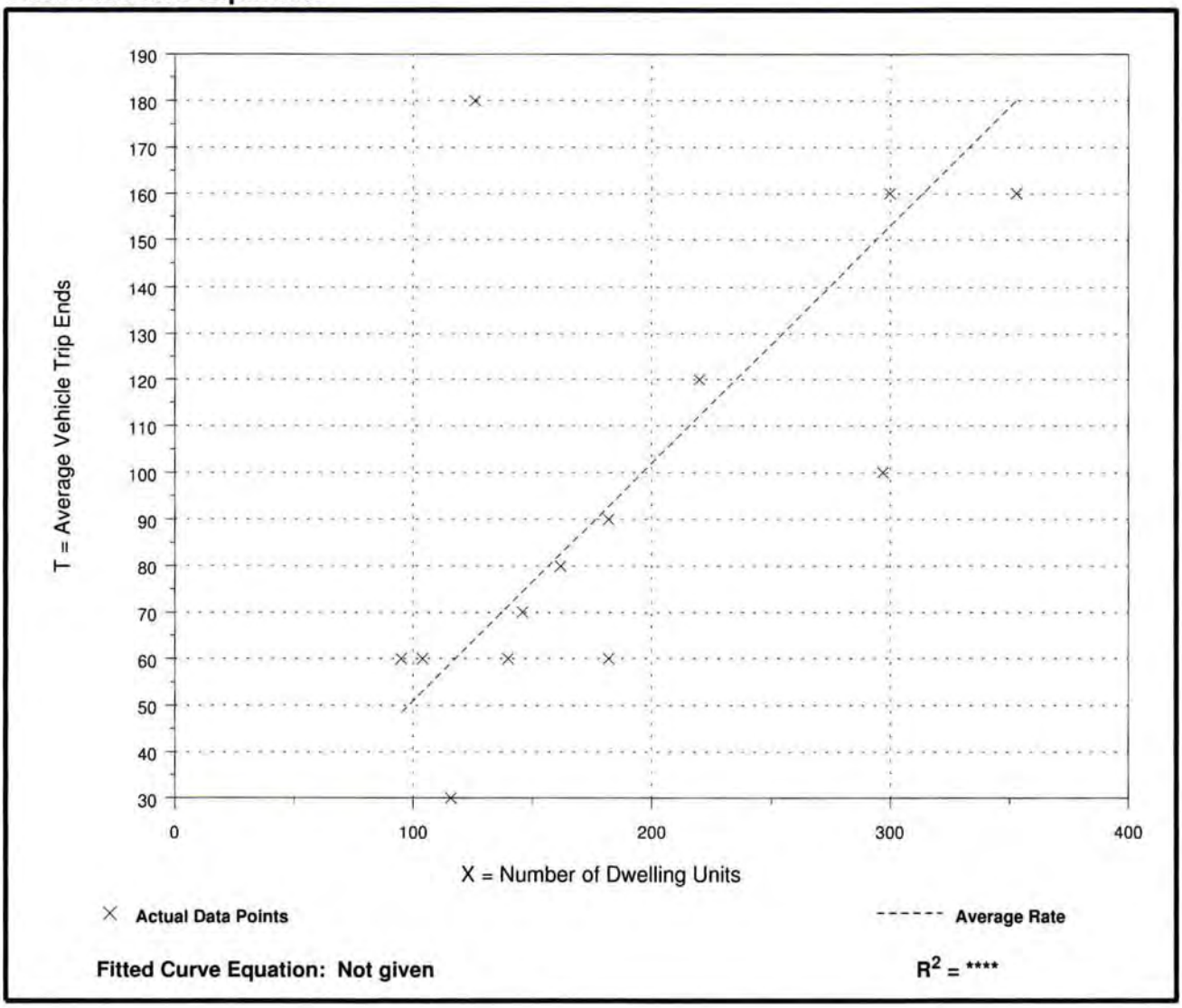
Average Vehicle Trip Ends vs: Dwelling Units
On a: Sunday,
Peak Hour of Generator

Number of Studies: 13
Avg. Number of Dwelling Units: 186
Directional Distribution: Not available

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.51	0.26 - 1.43	0.75

Data Plot and Equation



Fitted Curve Equation: Not given

R^2 = ****

Apartment
(220)

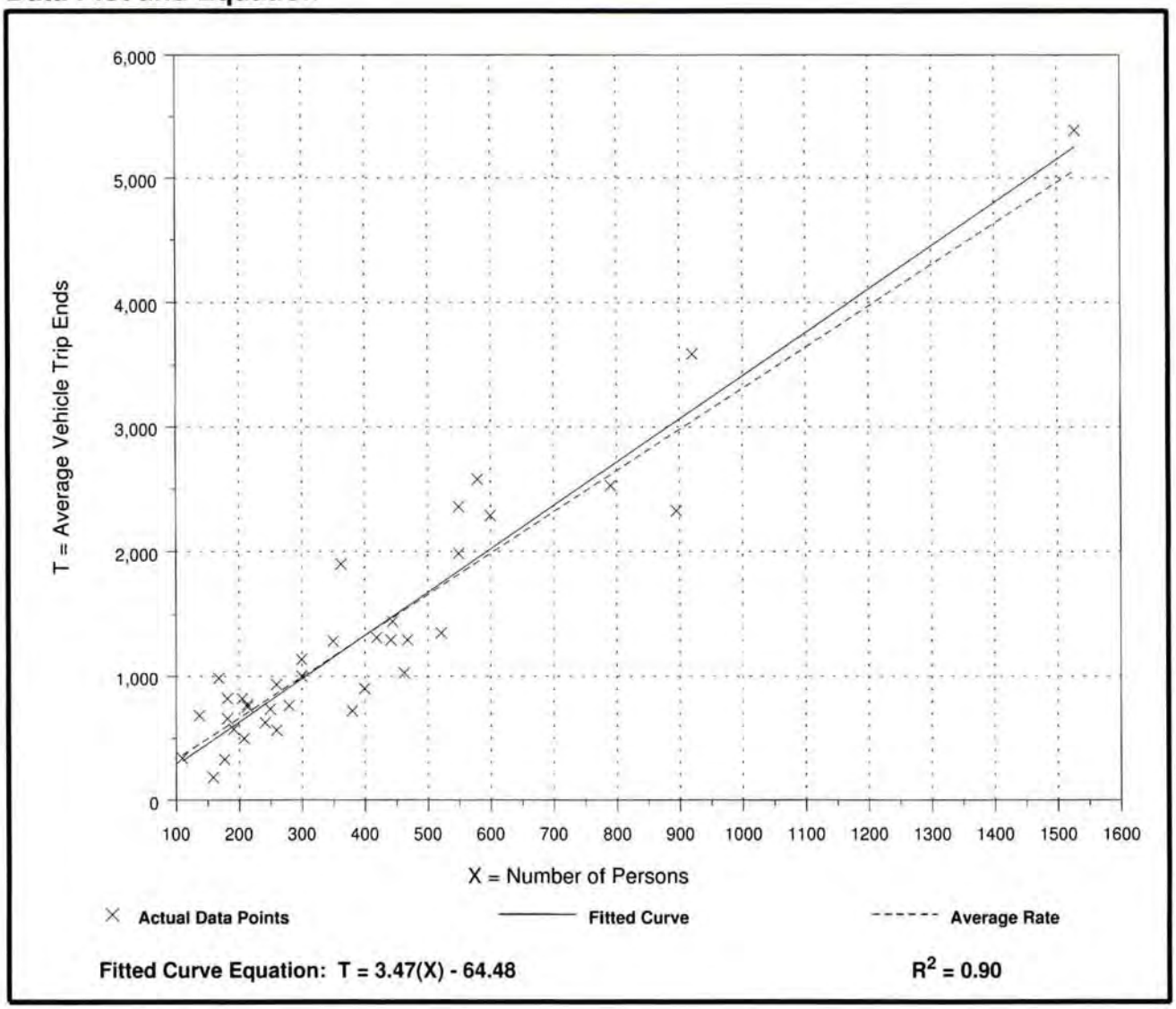
Average Vehicle Trip Ends vs: Persons
On a: Weekday

Number of Studies: 37
Average Number of Persons: 397
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Person

Average Rate	Range of Rates	Standard Deviation
3.31	1.16 - 5.85	1.99

Data Plot and Equation



Fitted Curve Equation: T = 3.47(X) - 64.48

R^2 = 0.90

Apartment
(220)

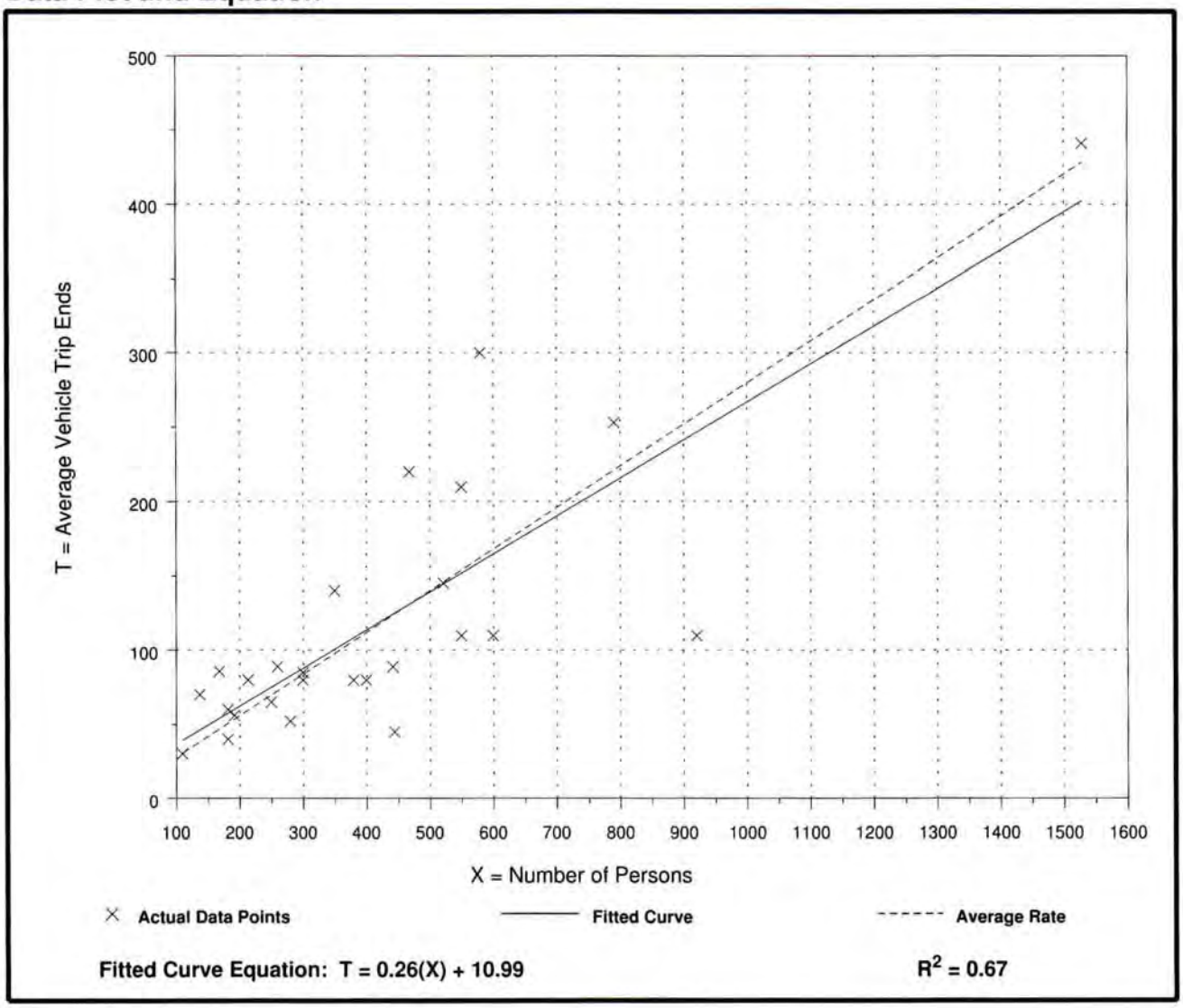
Average Vehicle Trip Ends vs: Persons
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 26
Average Number of Persons: 427
Directional Distribution: Not available

Trip Generation per Person

Average Rate	Range of Rates	Standard Deviation
0.28	0.10 - 0.52	0.54

Data Plot and Equation



Fitted Curve Equation: T = 0.26(X) + 10.99

R^2 = 0.67

Apartment
(220)

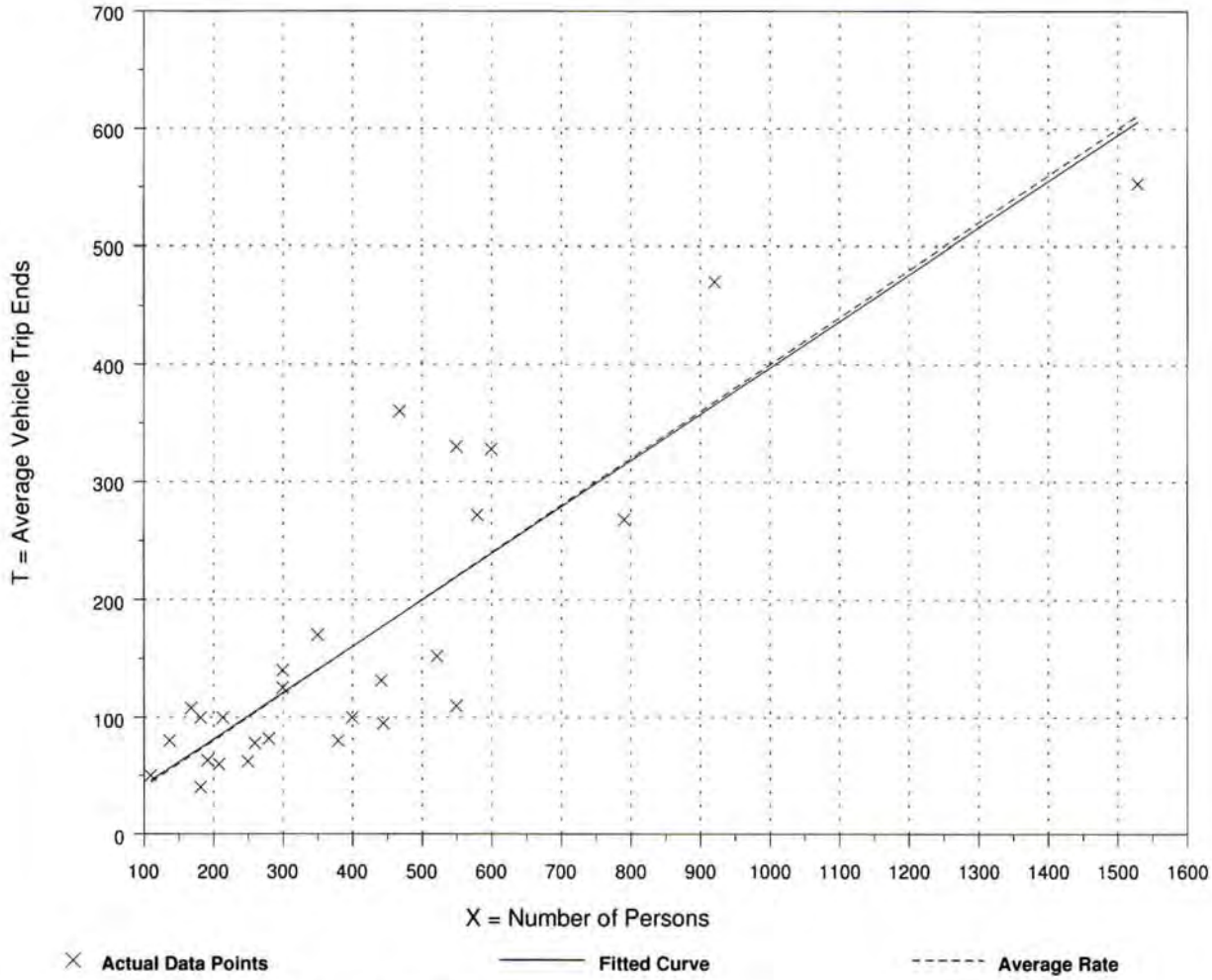
Average Vehicle Trip Ends vs: **Persons**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 28
Average Number of Persons: 412
Directional Distribution: Not available

Trip Generation per Person

Average Rate	Range of Rates	Standard Deviation
0.40	0.20 - 0.77	0.65

Data Plot and Equation



Fitted Curve Equation: T = 0.39(X) + 2.03

R^2 = 0.77

Apartment
(220)

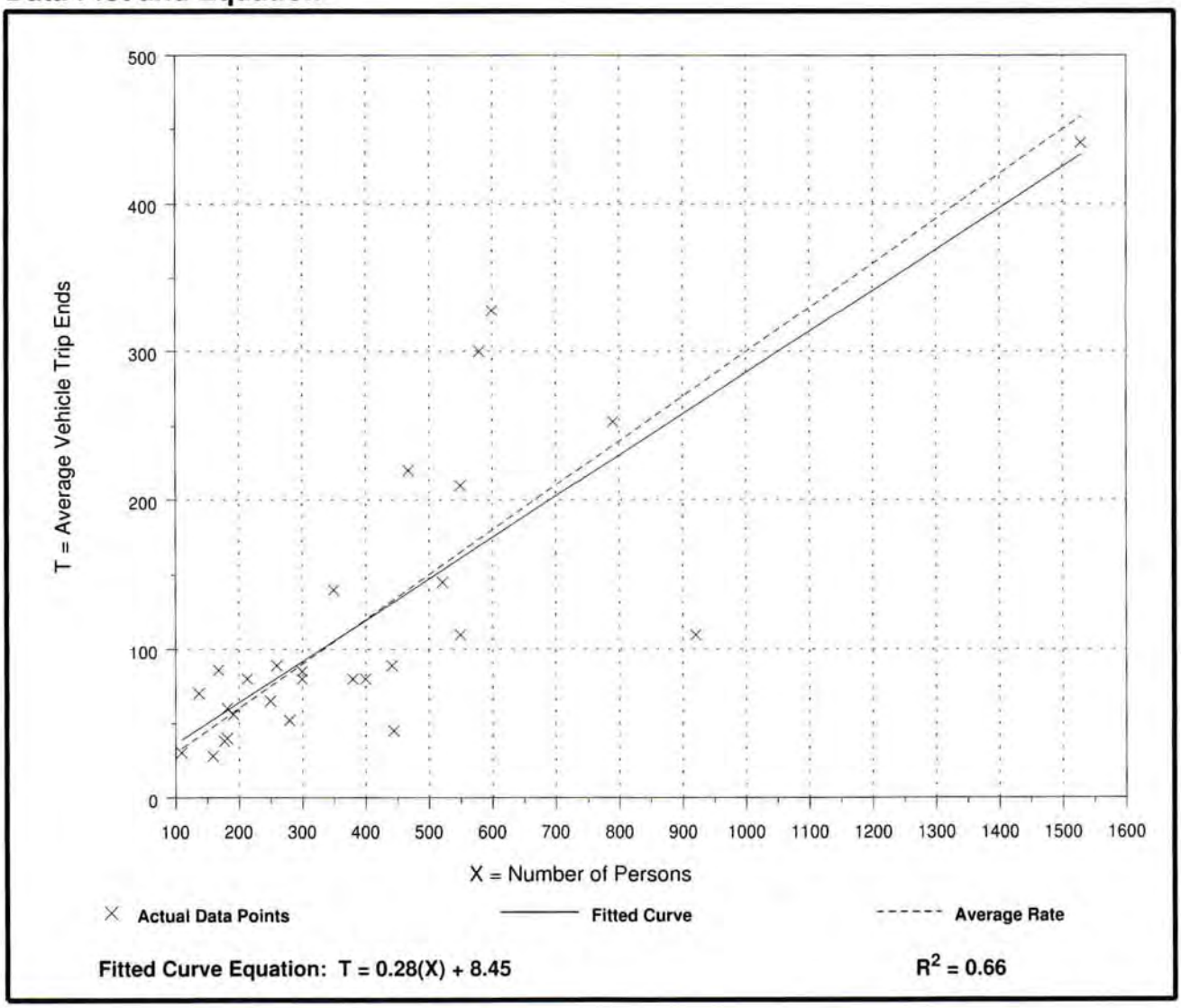
Average Vehicle Trip Ends vs: Persons
On a: Weekday,
A.M. Peak Hour of Generator

Number of Studies: 28
Average Number of Persons: 408
Directional Distribution: 48% entering, 52% exiting

Trip Generation per Person

Average Rate	Range of Rates	Standard Deviation
0.30	0.10 - 0.55	0.56

Data Plot and Equation



Fitted Curve Equation: T = 0.28(X) + 8.45

R^2 = 0.66

Apartment
(220)

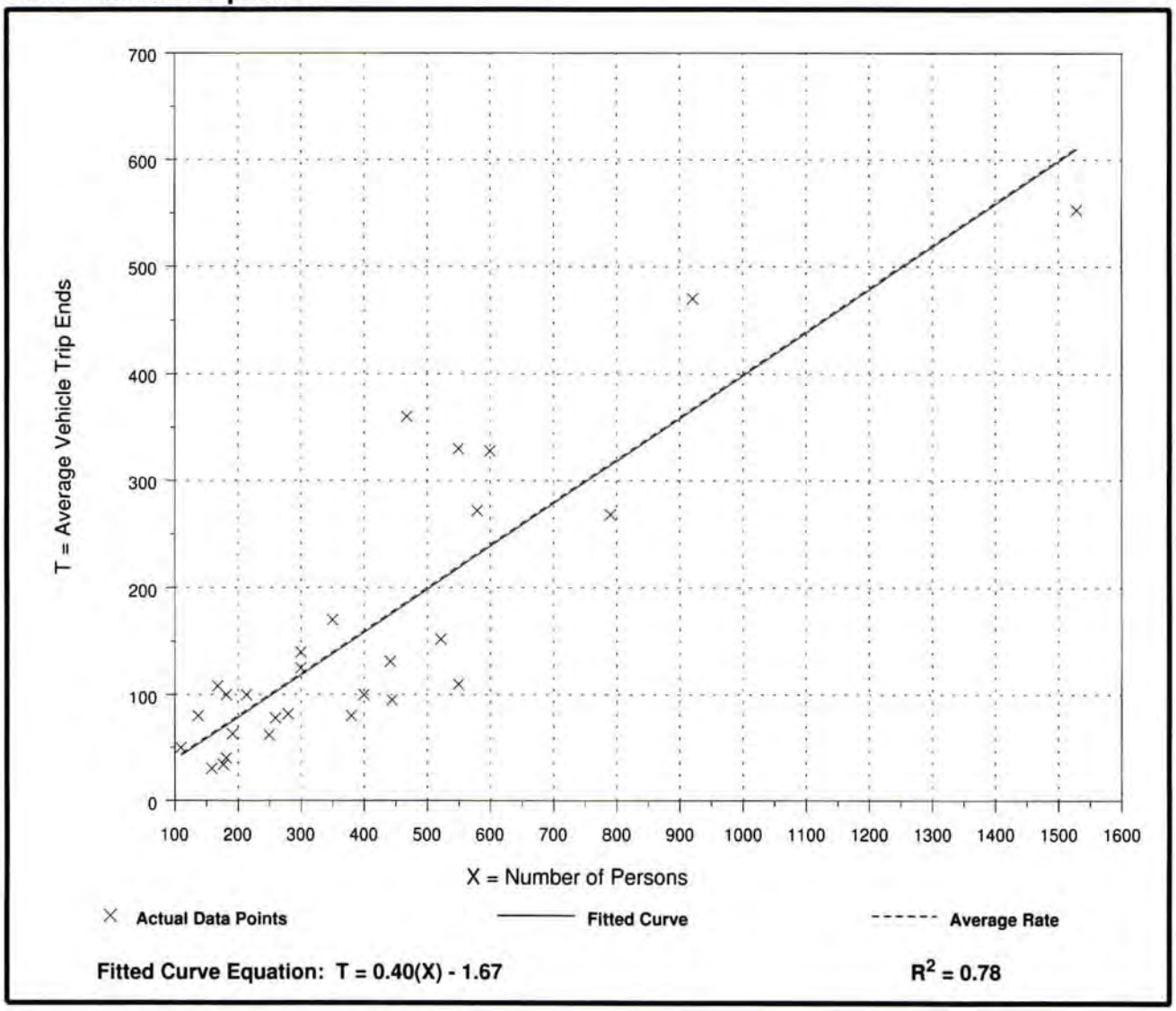
Average Vehicle Trip Ends vs: Persons
On a: Weekday,
P.M. Peak Hour of Generator

Number of Studies: 29
Average Number of Persons: 402
Directional Distribution: 59% entering, 41% exiting

Trip Generation per Person

Average Rate	Range of Rates	Standard Deviation
0.40	0.19 - 0.77	0.64

Data Plot and Equation



Fitted Curve Equation: T = 0.40(X) - 1.67

R^2 = 0.78

Apartment
(220)

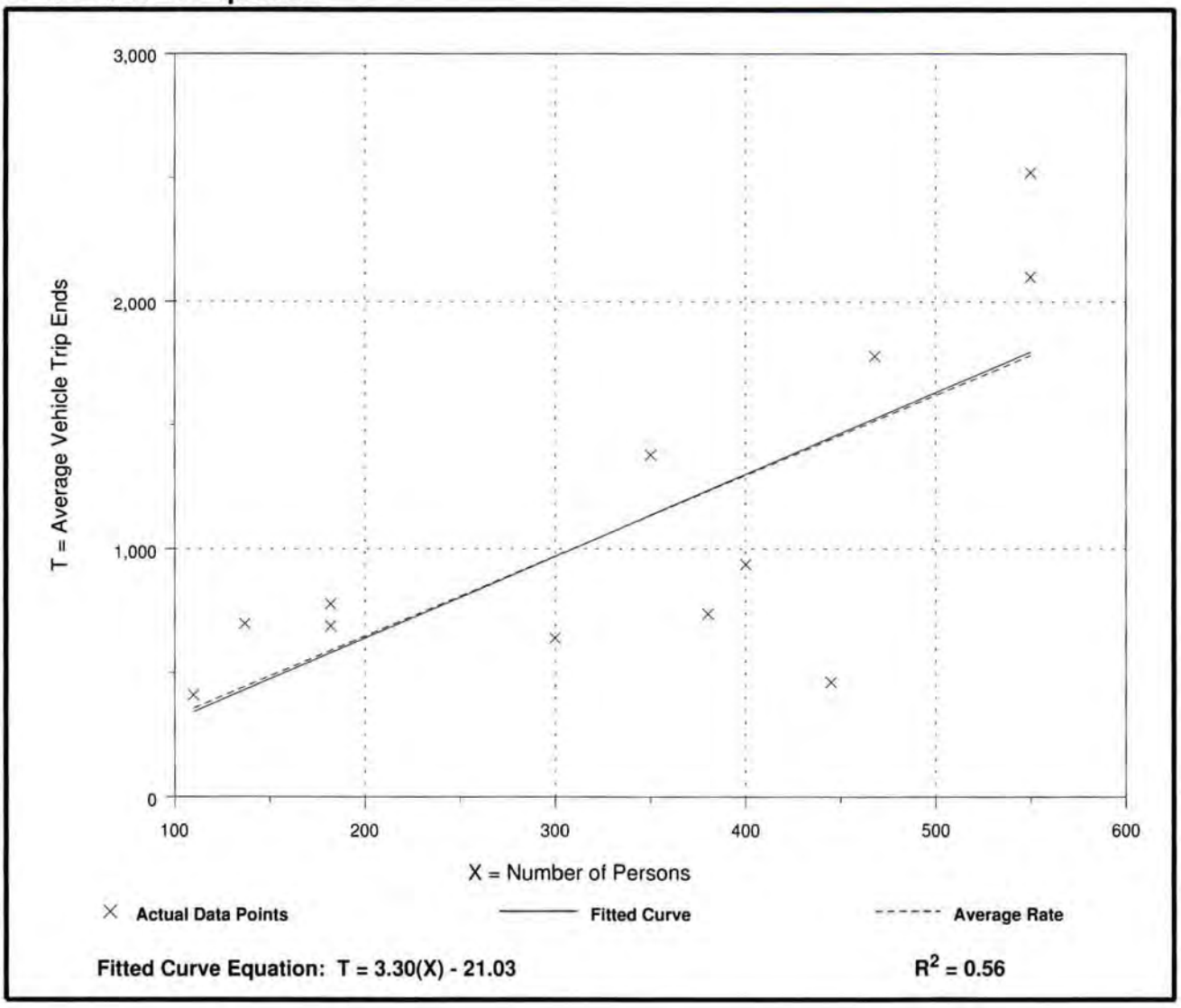
Average Vehicle Trip Ends vs: Persons
On a: Saturday

Number of Studies: 12
Average Number of Persons: 338
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Person

Average Rate	Range of Rates	Standard Deviation
3.24	1.03 - 5.11	2.16

Data Plot and Equation



Fitted Curve Equation: T = 3.30(X) - 21.03

R^2 = 0.56

Apartment
(220)

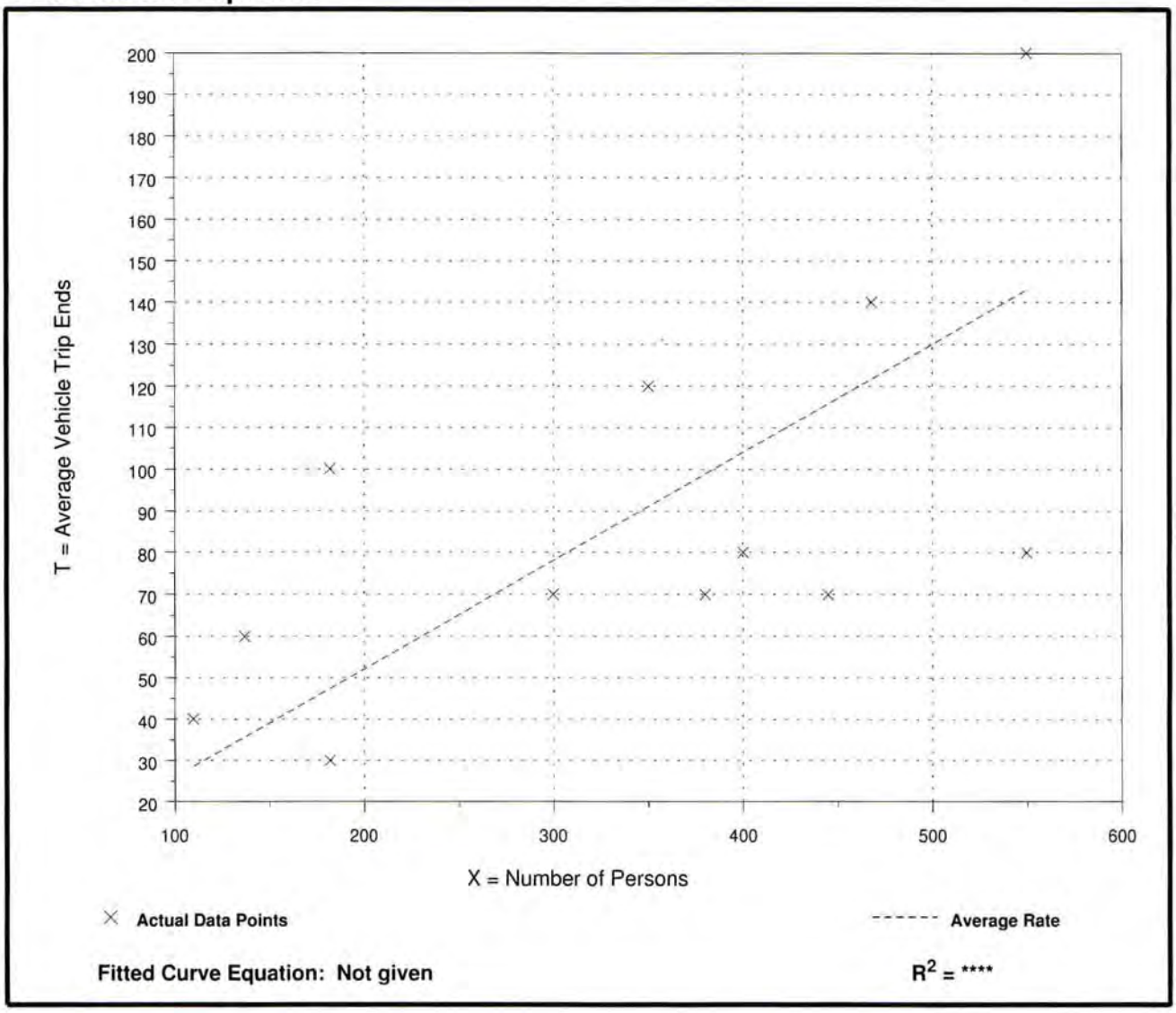
Average Vehicle Trip Ends vs: Persons
On a: Saturday,
Peak Hour of Generator

Number of Studies: 12
Average Number of Persons: 338
Directional Distribution: Not available

Trip Generation per Person

Average Rate	Range of Rates	Standard Deviation
0.26	0.15 - 0.55	0.52

Data Plot and Equation



Fitted Curve Equation: Not given

R^2 = ****

Apartment
(220)

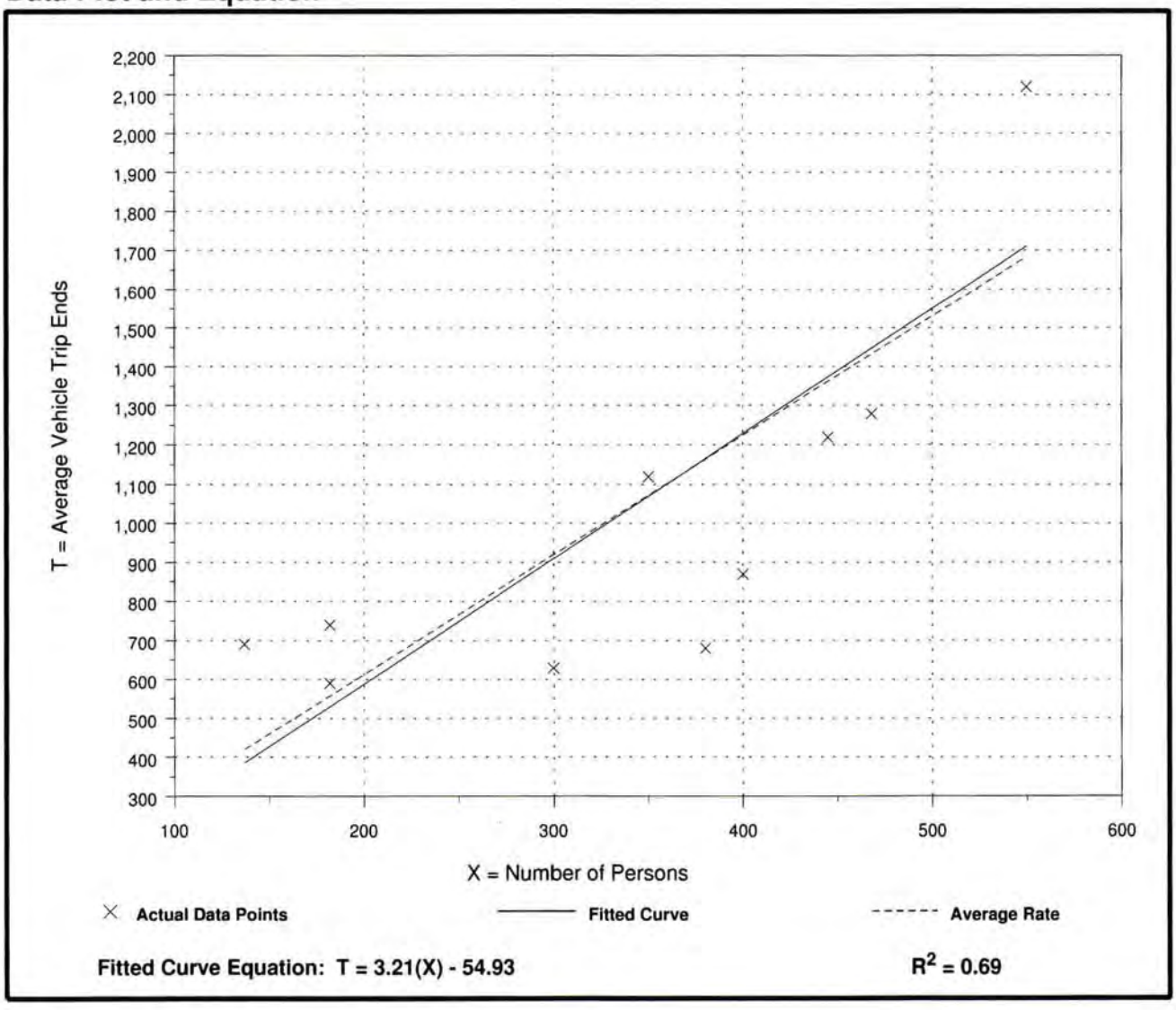
Average Vehicle Trip Ends vs: Persons
On a: Sunday

Number of Studies: 11
Average Number of Persons: 359
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Person

Average Rate	Range of Rates	Standard Deviation
3.06	1.79 - 5.04	1.93

Data Plot and Equation



Fitted Curve Equation: T = 3.21(X) - 54.93

R^2 = 0.69

Apartment
(220)

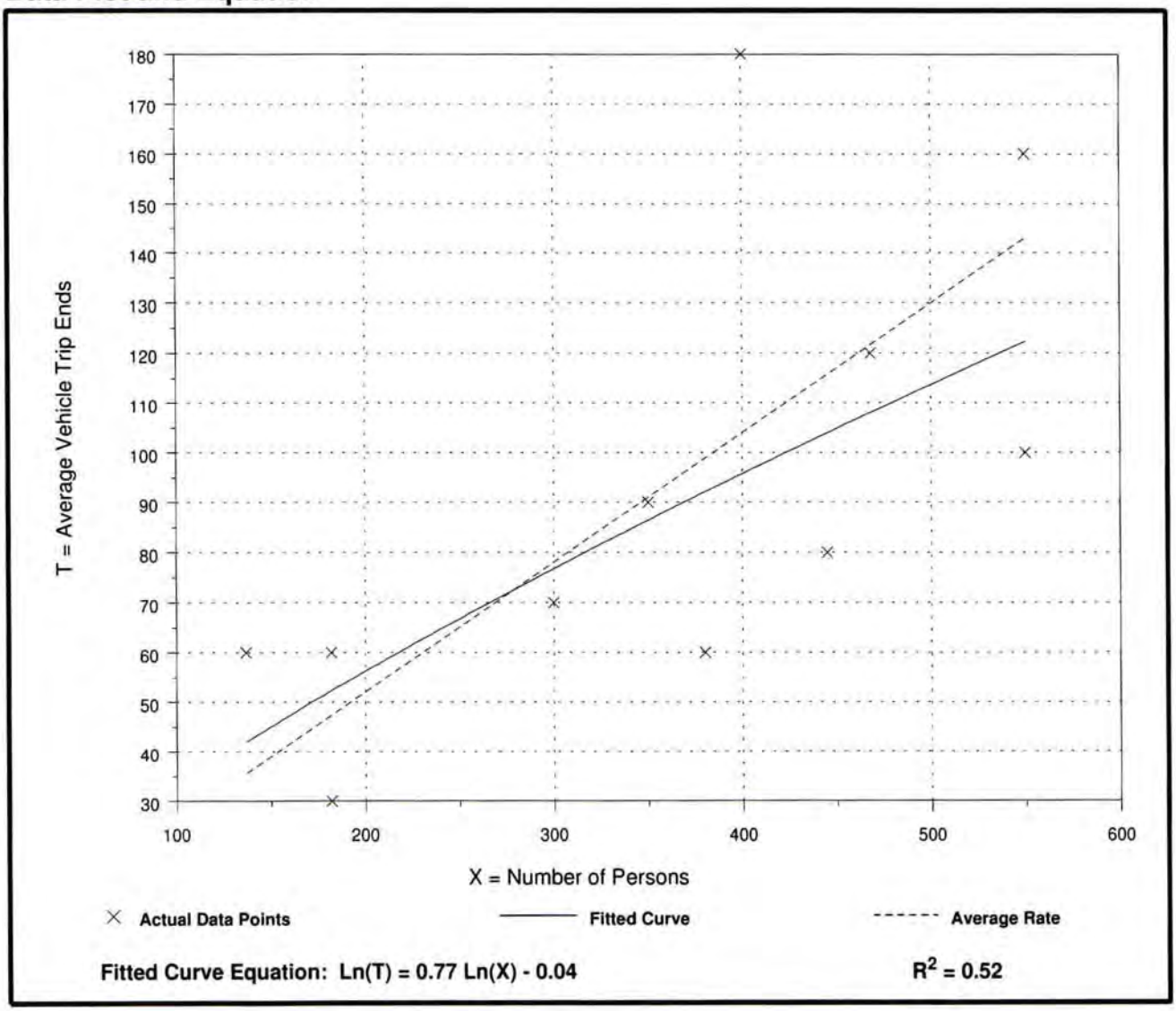
Average Vehicle Trip Ends vs: Persons
On a: Sunday,
Peak Hour of Generator

Number of Studies: 11
Average Number of Persons: 359
Directional Distribution: Not available

Trip Generation per Person

Average Rate	Range of Rates	Standard Deviation
0.26	0.16 - 0.45	0.51

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.77 Ln(X) - 0.04 $R^2 = 0.52$

Apartment
(220)

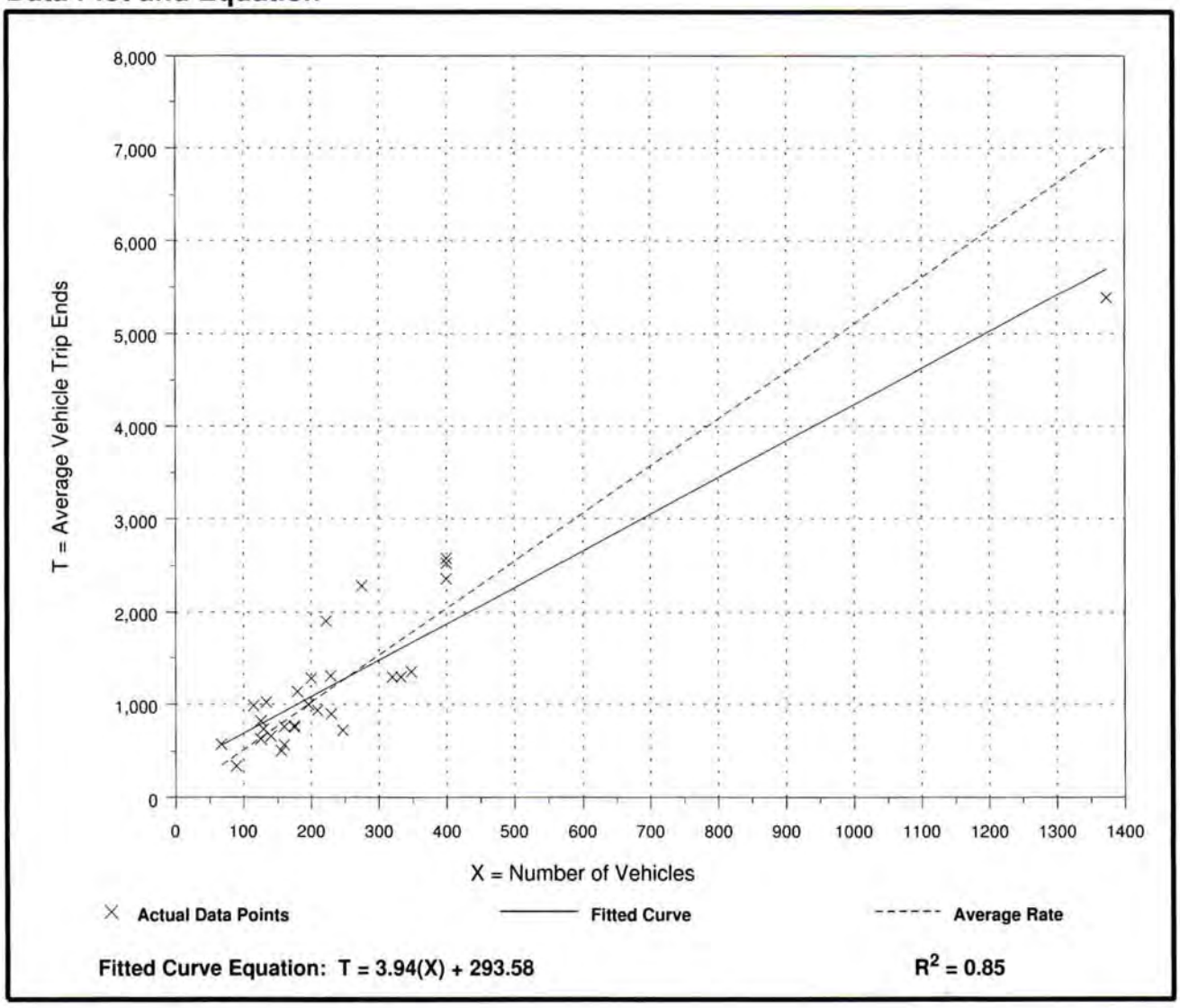
Average Vehicle Trip Ends vs: Vehicles
On a: Weekday

Number of Studies: 29
Average Number of Vehicles: 252
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Vehicle

Average Rate	Range of Rates	Standard Deviation
5.10	2.91 - 8.57	2.73

Data Plot and Equation



Fitted Curve Equation: T = 3.94(X) + 293.58

R^2 = 0.85

Apartment
(220)

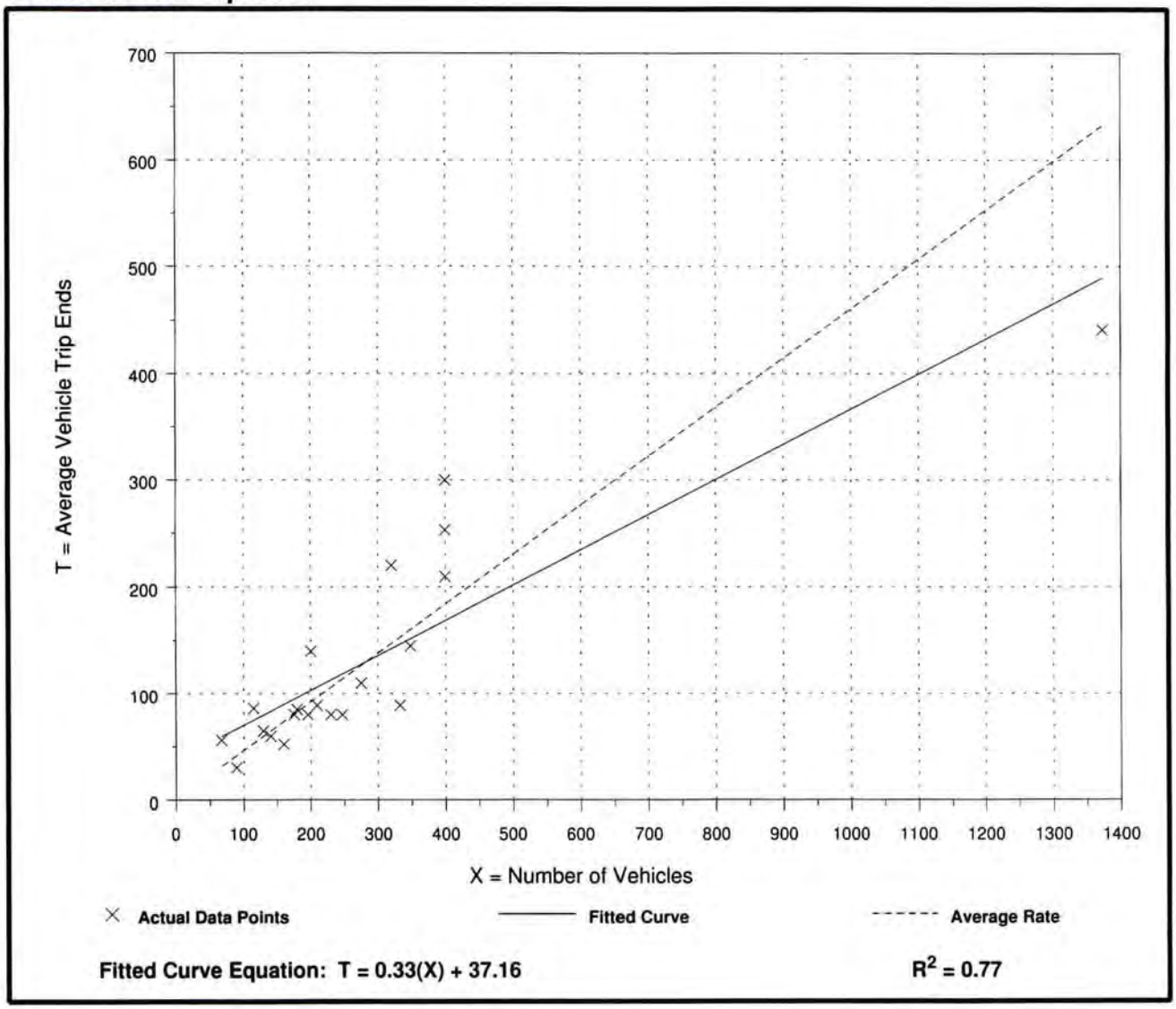
Average Vehicle Trip Ends vs: Vehicles
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 21
Average Number of Vehicles: 285
Directional Distribution: Not available

Trip Generation per Vehicle

Average Rate	Range of Rates	Standard Deviation
0.46	0.27 - 0.82	0.69

Data Plot and Equation



Fitted Curve Equation: T = 0.33(X) + 37.16

R^2 = 0.77

Apartment
(220)

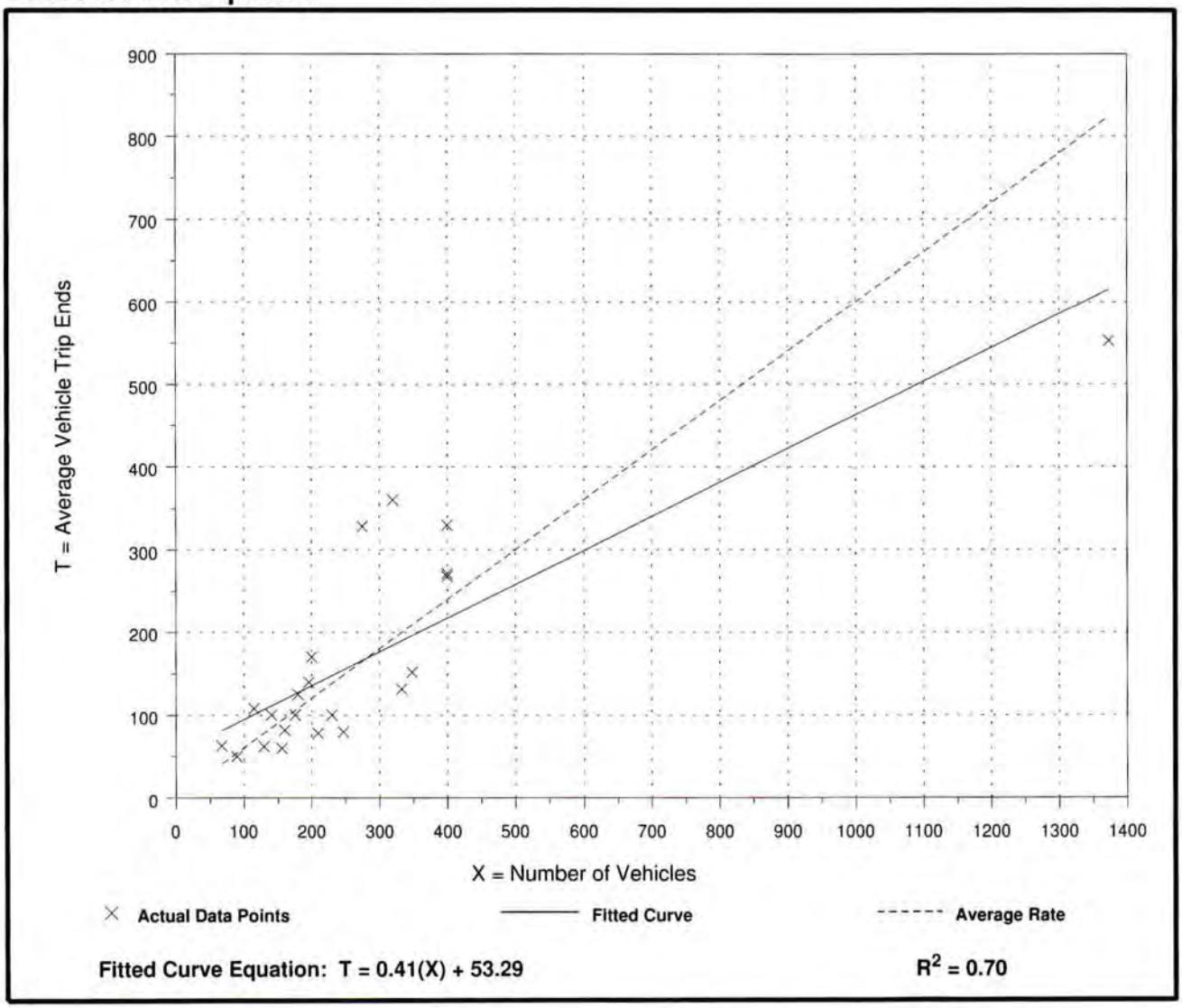
Average Vehicle Trip Ends vs: Vehicles
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 23
Average Number of Vehicles: 275
Directional Distribution: Not available

Trip Generation per Vehicle

Average Rate	Range of Rates	Standard Deviation
0.60	0.32 - 1.19	0.81

Data Plot and Equation



Fitted Curve Equation: T = 0.41(X) + 53.29

R^2 = 0.70

Apartment
(220)

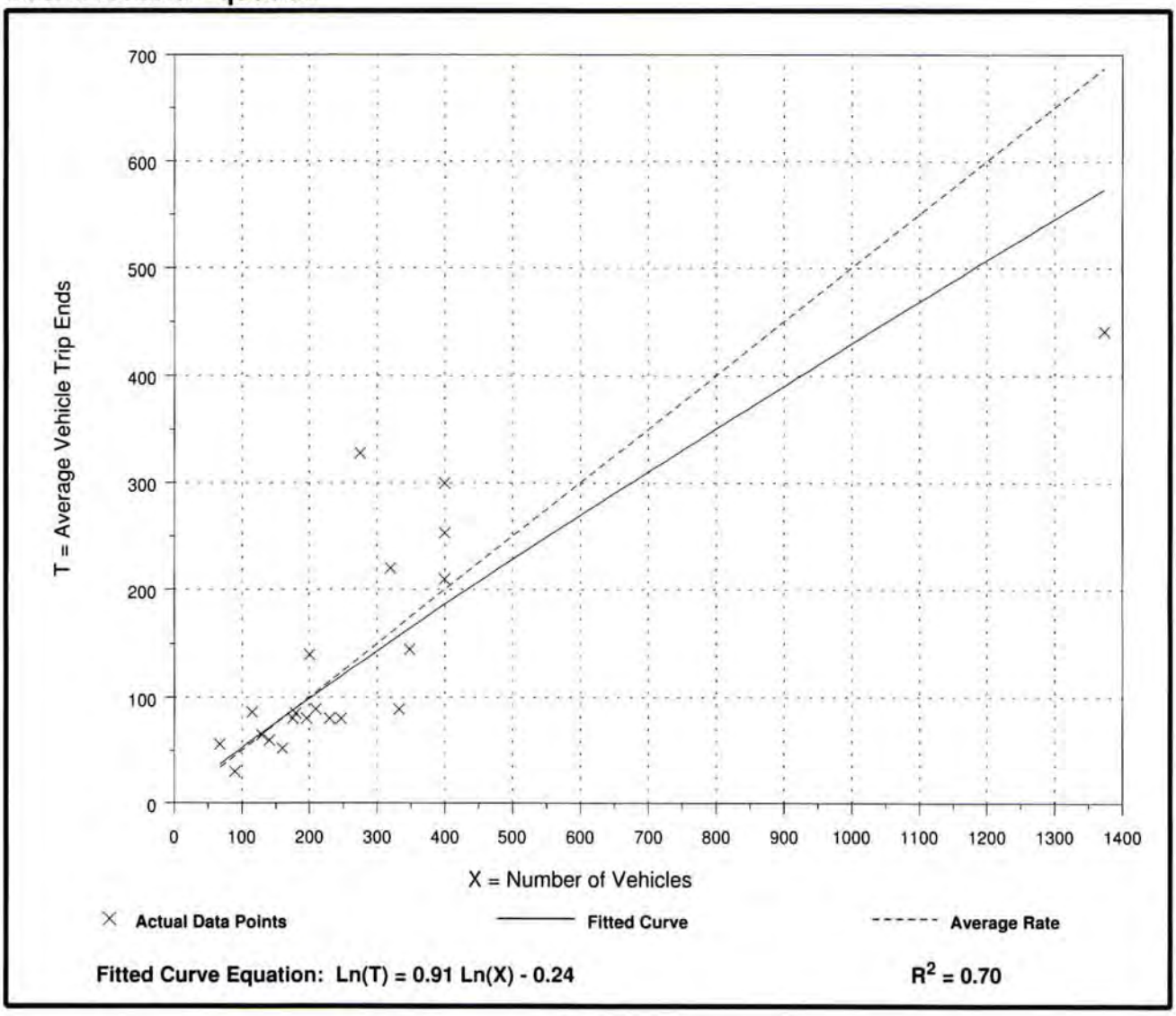
Average Vehicle Trip Ends vs: Vehicles
On a: Weekday,
A.M. Peak Hour of Generator

Number of Studies: 21
Average Number of Vehicles: 285
Directional Distribution: Not available

Trip Generation per Vehicle

Average Rate	Range of Rates	Standard Deviation
0.50	0.27 - 1.19	0.74

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.91 Ln(X) - 0.24

R^2 = 0.70

Apartment
(220)

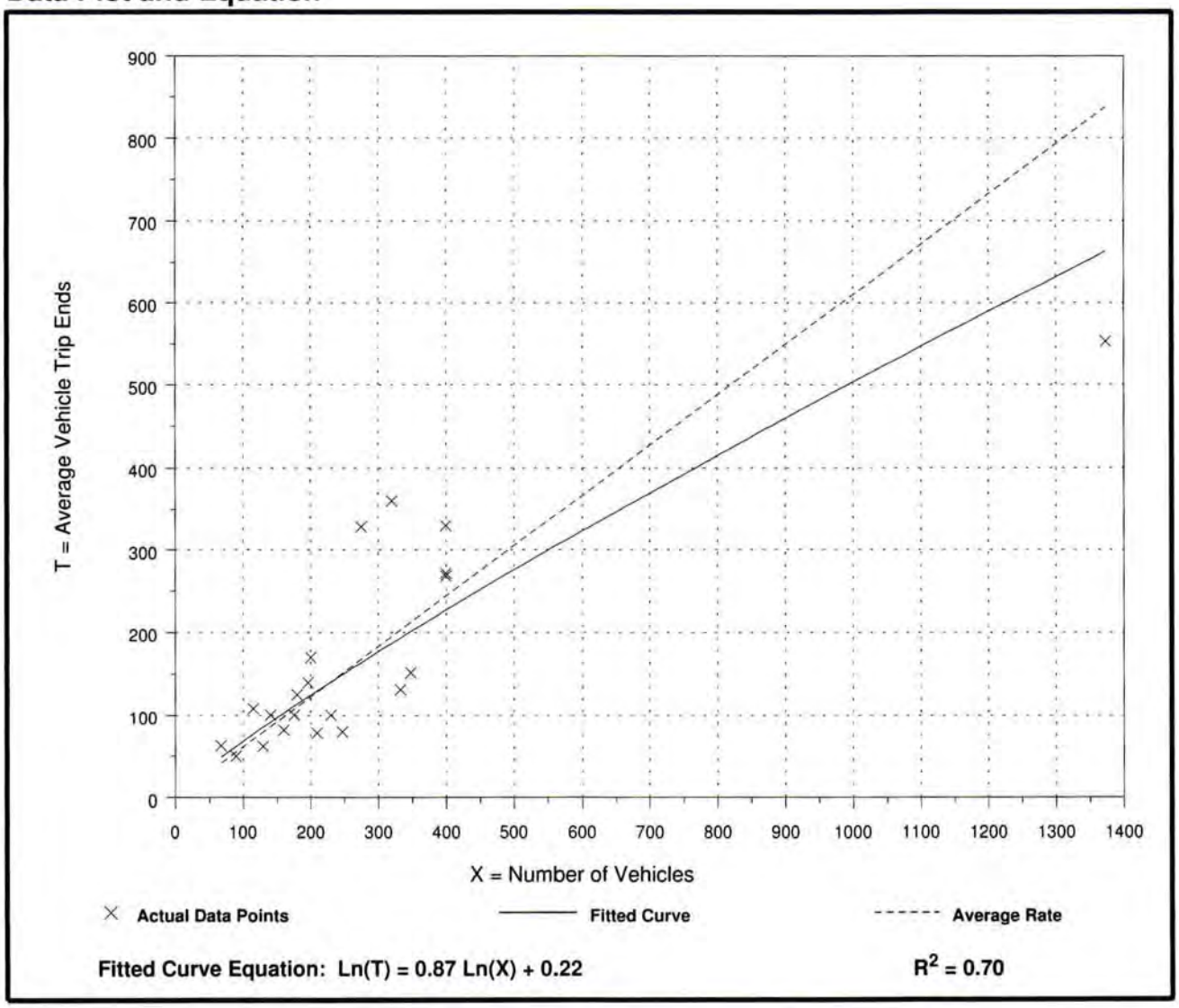
Average Vehicle Trip Ends vs: Vehicles
On a: Weekday,
P.M. Peak Hour of Generator

Number of Studies: 22
Average Number of Vehicles: 280
Directional Distribution: Not available

Trip Generation per Vehicle

Average Rate	Range of Rates	Standard Deviation
0.61	0.32 - 1.19	0.82

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.87 Ln(X) + 0.22

R^2 = 0.70

Apartment
(220)

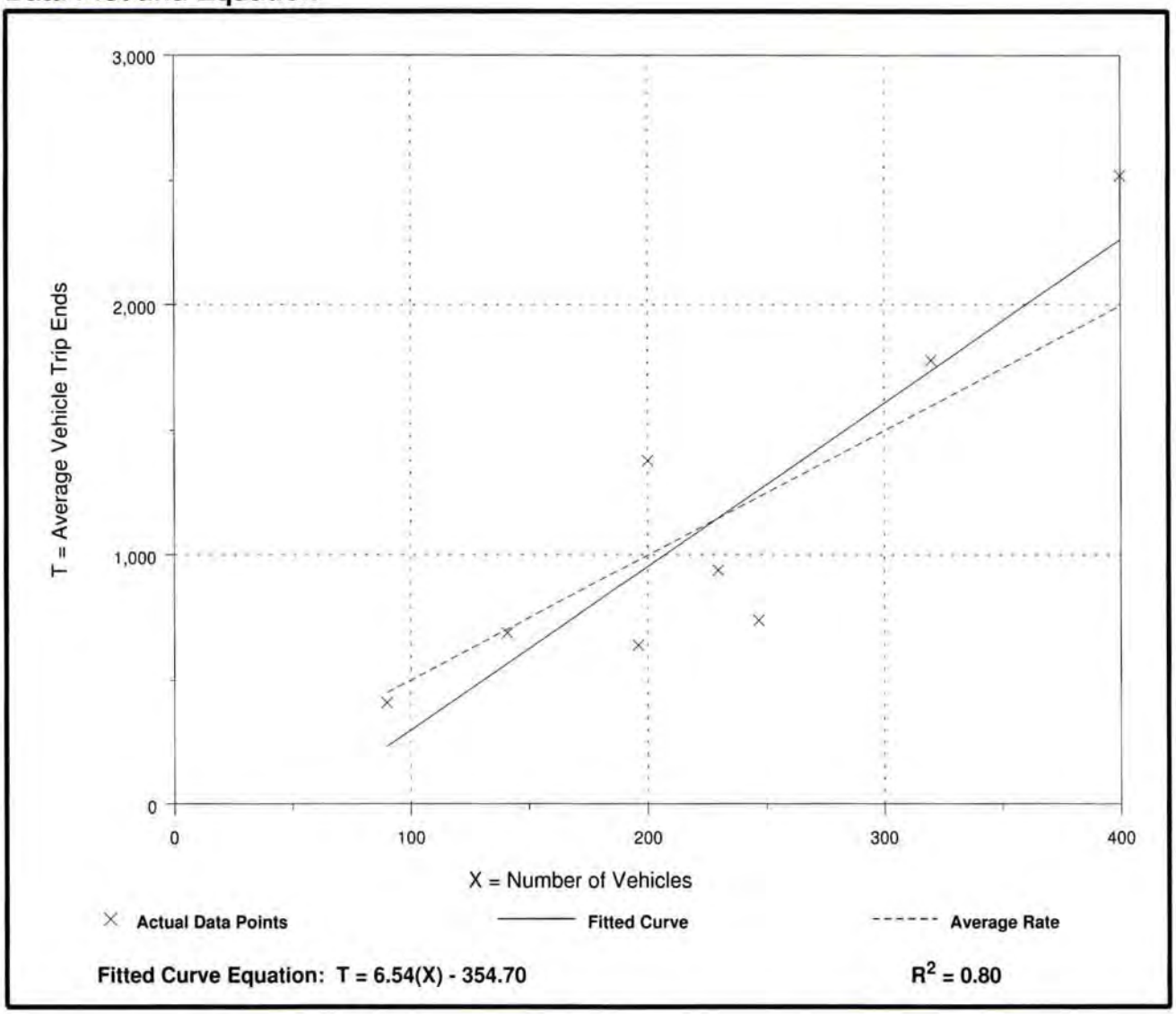
Average Vehicle Trip Ends vs: Vehicles
On a: Saturday

Number of Studies: 8
Average Number of Vehicles: 228
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Vehicle

Average Rate	Range of Rates	Standard Deviation
4.99	3.00 - 6.90	2.60

Data Plot and Equation



Fitted Curve Equation: T = 6.54(X) - 354.70

R^2 = 0.80

Apartment
(220)

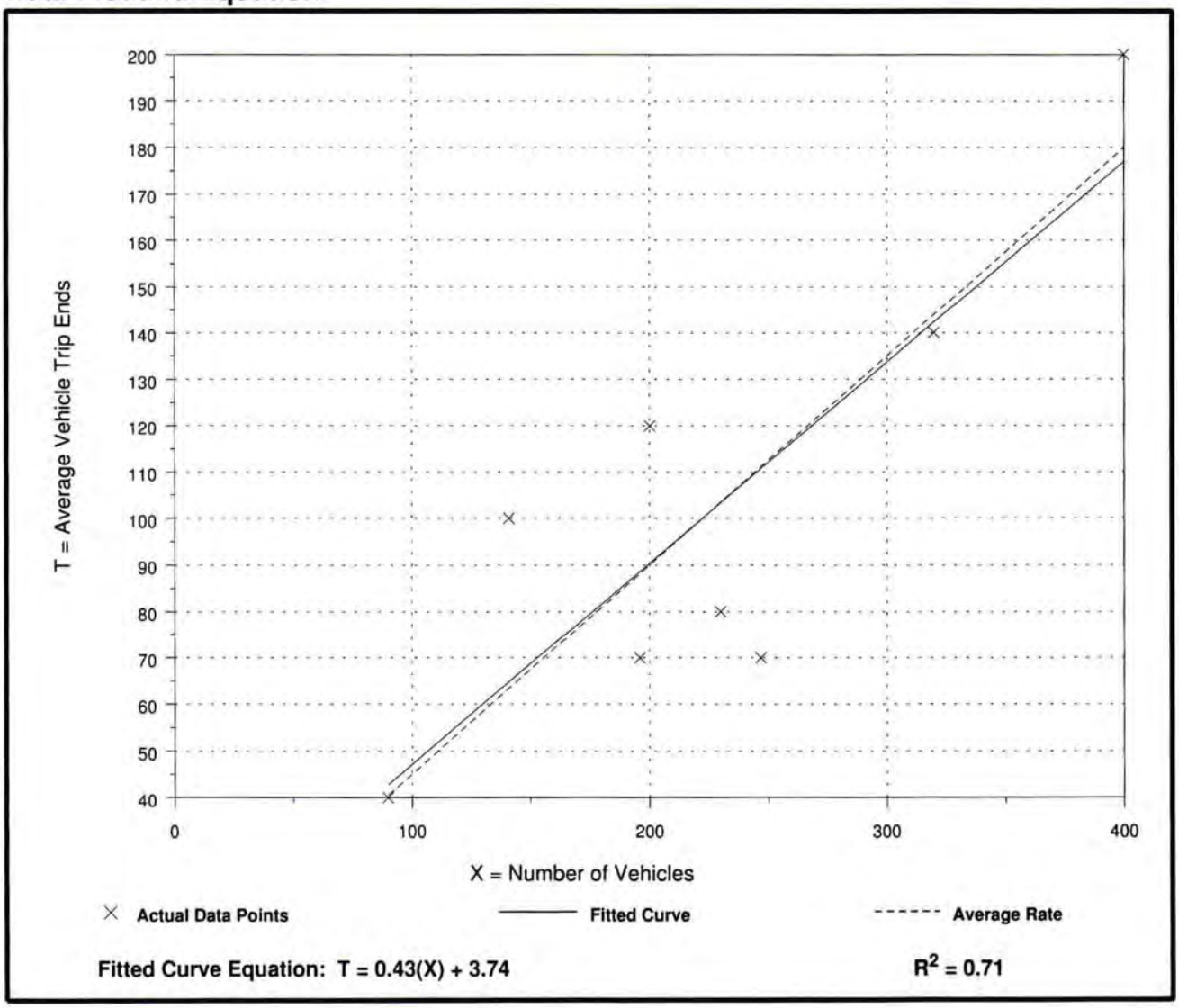
Average Vehicle Trip Ends vs: Vehicles
On a: Saturday,
Peak Hour of Generator

Number of Studies: 8
Average Number of Vehicles: 228
Directional Distribution: Not available

Trip Generation per Vehicle

Average Rate	Range of Rates	Standard Deviation
0.45	0.28 - 0.71	0.68

Data Plot and Equation



Fitted Curve Equation: T = 0.43(X) + 3.74

R^2 = 0.71

Apartment
(220)

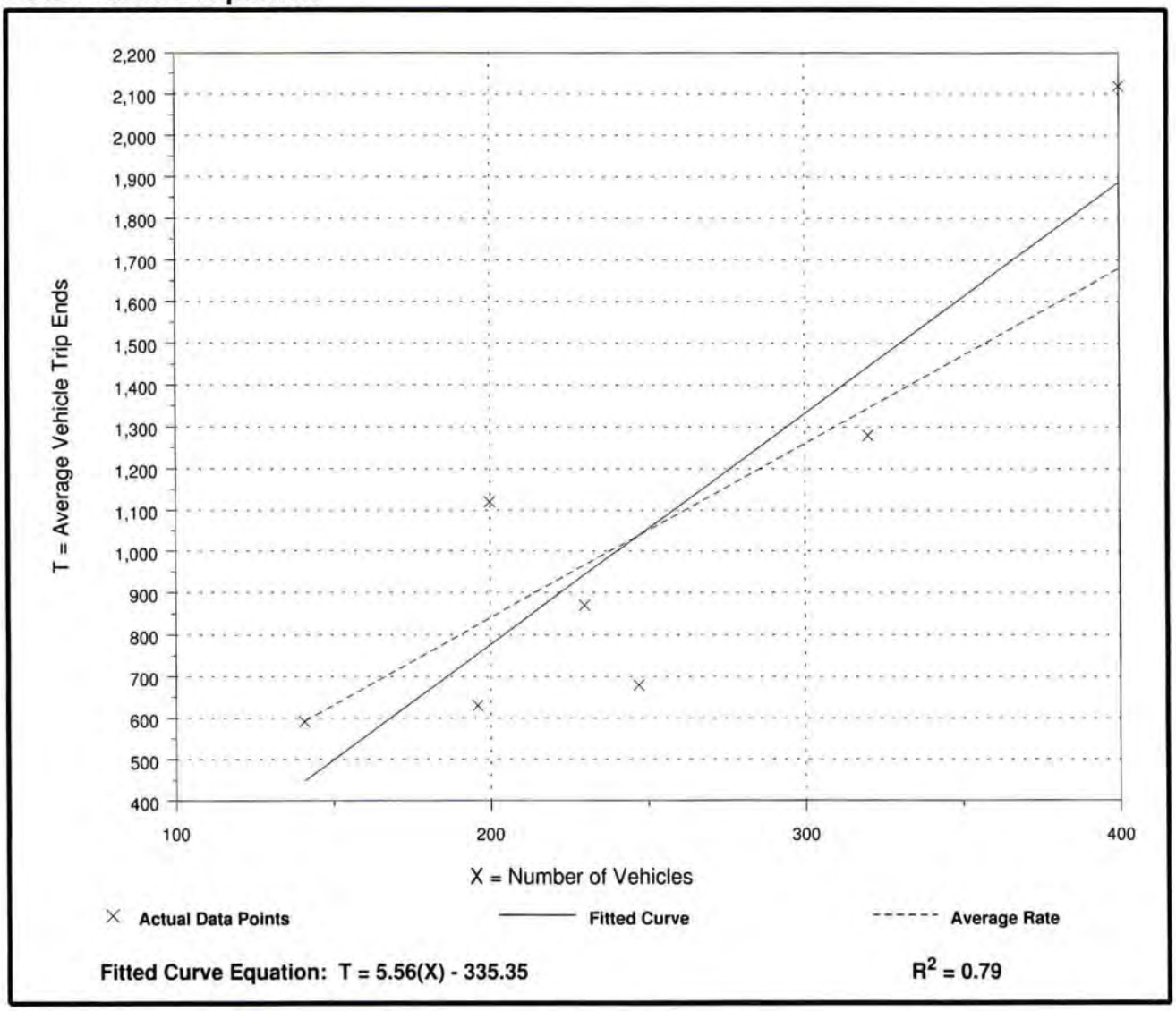
Average Vehicle Trip Ends vs: Vehicles
On a: Sunday

Number of Studies: 7
Average Number of Vehicles: 248
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Vehicle

Average Rate	Range of Rates	Standard Deviation
4.20	2.75 - 5.60	2.27

Data Plot and Equation



Fitted Curve Equation: T = 5.56(X) - 335.35

R^2 = 0.79

Apartment
(220)

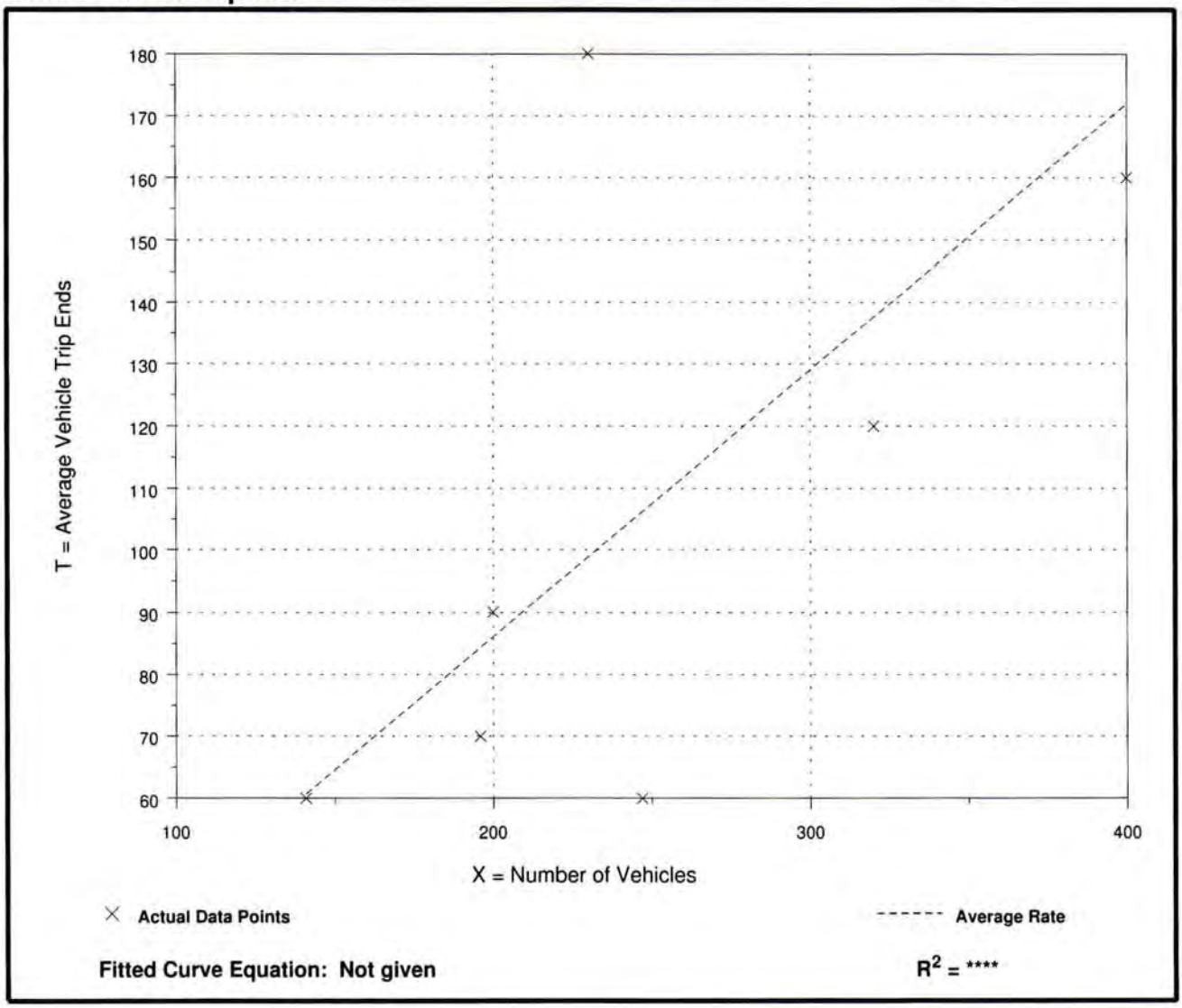
Average Vehicle Trip Ends vs: Vehicles
On a: Sunday,
Peak Hour of Generator

Number of Studies: 7
Average Number of Vehicles: 248
Directional Distribution: Not available

Trip Generation per Vehicle

Average Rate	Range of Rates	Standard Deviation
0.43	0.24 - 0.78	0.67

Data Plot and Equation



Fitted Curve Equation: Not given

R^2 = ****

CENSUS DATA

Mode Choice	Block Group 1, Census Tract 8449.01, DuPage County, Illinois		Block Group 2, Census Tract 8449.01, DuPage County, Illinois		Block Group 1, Census Tract 8449.02, DuPage County, Illinois		Block Group 2, Census Tract 8449.02, DuPage County, Illinois		Block Group 3, Census Tract 8449.02, DuPage County, Illinois		Total	% Total
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error		
Car, truck, or van:	616	+/-176	706	+/-161	311	+/-114	440	+/-126	400	+/-122	2473	69%
Motorcycle	0	+/-11	0	+/-11	0	+/-11	0	+/-11	0	+/-11	0	0%
Taxicab	0	+/-11	0	+/-11	0	+/-11	0	+/-11	32	+/-50	32	1%
Public transportation (excluding taxicab):	155	+/-65	100	+/-62	92	+/-55	156	+/-69	216	+/-95	719	20%
Bicycle	0	+/-11	0	+/-11	8	+/-13	0	+/-11	18	+/-27	26	1%
Walked	8	+/-13	33	+/-38	18	+/-26	28	+/-26	32	+/-32	119	3%
Other means	11	+/-18	15	+/-24	11	+/-18	10	+/-16	0	+/-11	47	1%
Worked at home	46	+/-31	43	+/-40	10	+/-19	38	+/-33	29	+/-39	166	5%
Total:	836	+/-189	897	+/-172	450	+/-114	672	+/-142	727	+/-171	3582	100%

TRAFFIC COUNT DATA

Study Name Maple Ave. & Washington St.
Start Date Saturday, April 16, 2016 11:00 AM
End Date Tuesday, April 19, 2016 6:15 PM

Report Summary

		Eastbound						Westbound						Northbound						Southbound							Crosswalk		
Time Period	Class.	U	L	T	R	I	O	U	L	T	R	I	O	U	L	T	R	I	O	U	L	T	R	I	O	Total		s on Cr	destria	Total
Midday Peak Hour	Lights	0	170	232	7	409	390	0	14	235	51	300	295	0	7	83	14	104	95	0	49	74	148	271	304	1084	W	0	17	17
Peak Period	%	0%	100%	100%	100%	100%	99%	0%	100%	98%	100%	99%	99%	0%	100%	100%	100%	100%	100%	0%	98%	100%	99%	99%	100%	99%		0%	100%	
11:00 AM - 1:00 PM	Mediums	0	0	1	0	1	4	0	0	3	0	3	2	0	0	0	0	0	0	0	1	0	1	2	0	6	E	0	17	17
Peak Hour	%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	2%	0%	1%	1%	0%	1%		0%	100%	
11:15 AM - 12:15 PM	ticulated Truc	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	S	0	6	6
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	100%	
	Total	**0**	**170**	**233**	**7**	**410**	**395**	**0**	**14**	**239**	**51**	**304**	**297**	**0**	**7**	**83**	**14**	**104**	**95**	**0**	**50**	**74**	**149**	**273**	**304**	**1091**	N	0	1	1
	PHF	0	0.87	0.9	0.58	0.97	0.87	0	0.58	0.79	0.75	0.8	0.88	0	0.44	0.8	0.5	0.79	0.95	0	0.74	0.97	0.91	0.95	0.88	0.92		0%	100%	
	% HV	0%	0%	0%	0%	0%	1%	0%	0%	2%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	2%	0%	1%	1%	0%	1%		**0**	**41**	**41**

Study Name Maple Ave. & Washington St.
Start Date Saturday, April 16, 2016 11:00 AM
End Date Tuesday, April 19, 2016 6:15 PM

Report Summary

		Eastbound						Westbound						Northbound						Southbound								Crosswalk		
Time Period	Class.	U	L	T	R	I	O	U	L	T	R	I	O	U	L	T	R	I	O	U	L	T	R	I	O	Total		s on Cr	destria	Total
AM Peak Hour	Lights	0	265	405	7	677	194	0	8	114	47	169	472	0	13	207	45	265	51	0	22	36	67	125	519	1236	W	0	15	15
Peak Period	%	0%	100%	98%	100%	98%	98%	0%	100%	98%	98%	98%	97%	0%	93%	98%	98%	97%	100%	0%	85%	100%	100%	97%	99%	98%		0%	100%	
7:00 AM - 9:00 AM	Mediums	0	1	8	0	9	3	0	0	2	0	2	13	0	1	5	1	7	0	0	4	0	0	4	6	22	E	0	20	20
Peak Hour	%	0%	0%	2%	0%	1%	2%	0%	0%	2%	0%	1%	3%	0%	7%	2%	2%	3%	0%	0%	15%	0%	0%	3%	1%	2%		0%	100%	
7:15 AM - 8:15 AM	ticulated Truc	0	0	2	0	2	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	1	3	S	0	6	6
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	100%	
	Total	**0**	**266**	**415**	**7**	**688**	**197**	**0**	**8**	**116**	**48**	**172**	**487**	**0**	**14**	**212**	**46**	**272**	**51**	**0**	**26**	**36**	**67**	**129**	**526**	**1261**	N	0	2	2
	PHF	0	0.89	0.92	0.58	0.95	0.9	0	0.67	0.81	0.67	0.88	0.94	0	0.7	0.67	0.88	0.73	0.71	0	0.81	0.6	0.8	0.92	0.79	0.88		0%	100%	
	% HV	0%	0%	2%	0%	2%	2%	0%	0%	2%	2%	2%	3%	0%	7%	2%	2%	3%	0%	0%	15%	0%	0%	3%	1%	2%		**0**	**43**	**43**
PM Peak Hour	Lights	0	103	229	13	345	713	0	12	413	43	468	323	0	7	81	14	102	178	0	80	153	293	526	227	1441	W	1	11	12
Peak Period	%	0%	96%	98%	100%	98%	100%	0%	100%	100%	100%	100%	98%	0%	100%	98%	93%	97%	100%	0%	99%	100%	100%	100%	97%	99%		8%	92%	
4:00 PM - 6:00 PM	Mediums	0	4	4	0	8	2	0	0	2	0	2	6	0	0	2	1	3	0	0	1	0	0	1	6	14	E	0	8	8
Peak Hour	%	0%	4%	2%	0%	2%	0%	0%	0%	0%	0%	0%	2%	0%	0%	2%	7%	3%	0%	0%	1%	0%	0%	0%	3%	1%		0%	100%	
4:30 PM - 5:30 PM	ticulated Truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	4	4
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	100%	
	Total	**0**	**107**	**233**	**13**	**353**	**715**	**0**	**12**	**415**	**43**	**470**	**329**	**0**	**7**	**83**	**15**	**105**	**178**	**0**	**81**	**153**	**293**	**527**	**233**	**1455**	N	0	1	1
	PHF	0	0.92	0.9	0.65	0.9	0.88	0	0.6	0.93	0.72	0.96	0.81	0	0.88	0.94	0.75	0.91	0.67	0	0.61	0.64	0.76	0.69	0.9	0.85		0%	100%	
	% HV	0%	4%	2%	0%	2%	0%	0%	0%	0%	0%	0%	2%	0%	0%	2%	7%	3%	0%	0%	1%	0%	0%	0%	3%	1%		**1**	**24**	**25**

Study Name Maple Ave. & Washington St.
Start Date Saturday, April 16, 2016 11:00 AM
End Date Tuesday, April 19, 2016 6:15 PM

Road Volumes

TMV	Movement																				
	Eastbound				Eastbound To	Westbound				Westbound To	Northbound				Northbound To	Southbound				Southbound To	Grand Total
Interval	U	L	T	R		U	L	T	R		U	L	T	R		U	L	T	R		
4/16/2016 11:00	0	39	46	0	85	0	5	49	16	70	0	1	18	1	20	0	7	19	39	65	240
Lights	0	39	46	0	85	0	5	48	16	69	0	1	18	1	20	0	7	18	39	64	238
Mediums	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/16/2016 11:15	0	43	52	0	95	0	6	60	13	79	0	2	20	1	23	0	15	18	36	69	266
Lights	0	43	51	0	94	0	6	57	13	76	0	2	20	1	23	0	15	18	35	68	261
Mediums	0	0	1	0	1	0	0	2	0	2	0	0	0	0	0	0	0	0	1	1	4
Articulated Trucks	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
4/16/2016 11:30	0	49	54	2	105	0	2	62	11	75	0	0	26	7	33	0	12	19	41	72	285
Lights	0	49	54	2	105	0	2	62	11	75	0	0	26	7	33	0	12	19	41	72	285
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/16/2016 11:45	0	39	65	2	106	0	2	76	17	95	0	4	19	2	25	0	17	19	33	69	295
Lights	0	39	65	2	106	0	2	76	17	95	0	4	19	2	25	0	17	19	33	69	295
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/16/2016 12:00	0	39	62	3	104	0	4	41	10	55	0	1	18	4	23	0	6	18	39	63	245
Lights	0	39	62	3	104	0	4	40	10	54	0	1	18	4	23	0	5	18	39	62	243
Mediums	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/16/2016 12:15	0	32	58	2	92	0	3	62	14	79	0	3	17	3	23	0	9	20	38	67	261
Lights	0	32	58	2	92	0	3	62	14	79	0	3	17	2	22	0	9	19	38	66	259
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	1	2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/16/2016 12:30	0	27	54	2	83	0	4	54	13	71	0	2	21	2	25	0	16	17	36	69	248
Lights	0	27	53	2	82	0	4	54	13	71	0	2	21	2	25	0	16	17	36	69	247
Mediums	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/16/2016 12:45	0	24	47	1	72	0	4	68	12	84	0	1	14	1	16	0	11	10	32	53	225
Lights	0	24	46	1	71	0	4	68	12	84	0	1	14	1	16	0	11	10	32	53	224
Mediums	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/16/2016 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 7:00	0	61	89	1	151	0	0	19	9	28	0	1	33	4	38	0	7	6	7	20	237
Lights	0	59	88	1	148	0	0	17	9	26	0	1	32	4	37	0	7	4	6	17	228
Mediums	0	2	1	0	3	0	0	2	0	2	0	0	1	0	1	0	0	2	1	3	9
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 7:15	0	75	101	3	179	0	2	25	9	36	0	2	54	10	66	0	6	4	20	30	311
Lights	0	75	100	3	178	0	2	24	9	35	0	1	52	10	63	0	5	4	20	29	305
Mediums	0	0	1	0	1	0	0	1	0	1	0	1	2	0	3	0	1	0	0	1	6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 7:30	0	69	113	0	182	0	1	30	18	49	0	4	79	10	93	0	6	7	21	34	358
Lights	0	69	108	0	177	0	1	30	18	49	0	4	78	10	92	0	5	7	21	33	351
Mediums	0	0	5	0	5	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	7
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 7:45	0	71	104	1	176	0	2	25	13	40	0	3	52	13	68	0	8	15	12	35	319
Lights	0	70	101	1	172	0	2	25	12	39	0	3	50	13	66	0	8	15	12	35	312
Mediums	0	1	2	0	3	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	5
Articulated Trucks	0	0	1	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
4/19/2016 8:00	0	51	97	3	151	0	3	36	8	47	0	5	27	13	45	0	6	10	14	30	273
Lights	0	51	96	3	150	0	3	35	8	46	0	5	27	12	44	0	4	10	14	28	268

Mediums	0	0	0	0	0	0	0	1	0	1	0	0	0	1	1	0	2	0	0	2	4
Articulated Trucks	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4/19/2016 8:15	0	39	106	7	152	0	7	52	7	66	0	3	22	7	32	0	7	11	21	39	289
Lights	0	39	103	7	149	0	7	50	7	64	0	3	22	7	32	0	7	11	21	39	284
Mediums	0	0	3	0	3	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	5
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 8:30	0	45	87	1	133	0	5	48	5	58	0	7	19	3	29	0	1	10	22	33	253
Lights	0	45	83	1	129	0	5	46	5	56	0	7	19	3	29	0	1	9	21	31	245
Mediums	0	0	4	0	4	0	0	2	0	2	0	0	0	0	0	0	0	1	1	2	8
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 8:45	0	39	77	13	129	0	5	55	10	70	0	7	21	4	32	0	6	5	30	41	272
Lights	0	39	75	12	126	0	5	52	10	67	0	7	21	4	32	0	6	5	30	41	266
Mediums	0	0	2	1	3	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 16:00	0	29	54	1	84	0	5	79	11	95	0	2	14	4	20	0	13	13	53	79	278
Lights	0	29	53	1	83	0	5	79	11	95	0	2	14	4	20	0	13	13	51	77	275
Mediums	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	3
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 16:15	0	29	47	1	77	0	4	93	17	114	0	2	16	2	20	0	10	22	42	74	285
Lights	0	29	47	1	77	0	4	91	17	112	0	2	16	2	20	0	10	22	42	74	283
Mediums	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 16:30	0	20	52	1	73	0	2	111	9	122	0	2	21	3	26	0	13	33	70	116	337
Lights	0	19	52	1	72	0	2	111	9	122	0	2	21	3	26	0	12	33	70	115	335
Mediums	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 16:45	0	29	62	3	94	0	5	97	15	117	0	1	21	3	25	0	13	24	49	86	322
Lights	0	29	59	3	91	0	5	96	15	116	0	1	21	2	24	0	13	24	49	86	317
Mediums	0	0	3	0	3	0	0	1	0	1	0	0	0	1	1	0	0	0	0	0	5
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 17:00	0	29	54	5	88	0	3	103	10	116	0	2	22	5	29	0	22	36	77	135	368
Lights	0	27	53	5	85	0	3	102	10	115	0	2	20	5	27	0	22	36	77	135	362
Mediums	0	2	1	0	3	0	0	1	0	1	0	0	2	0	2	0	0	0	0	0	6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 17:15	0	29	65	4	98	0	2	104	9	115	0	2	19	4	25	0	33	60	97	190	428
Lights	0	28	65	4	97	0	2	104	9	115	0	2	19	4	25	0	33	60	97	190	427
Mediums	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 17:30	0	17	70	9	96	0	4	98	18	120	0	4	15	2	21	0	24	40	66	130	367
Lights	0	16	69	9	94	0	4	98	18	120	0	4	14	2	20	0	24	40	66	130	364
Mediums	0	1	1	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 17:45	0	22	46	4	72	0	1	73	10	84	0	4	25	7	36	0	19	30	80	129	321
Lights	0	22	43	4	69	0	1	73	10	84	0	4	23	7	34	0	19	30	80	129	316
Mediums	0	0	3	0	3	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	5
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 18:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
Lights	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	946	1662	69	2677	0	81	1521	284	1886	0	65	613	115	793	0	287	466	975	1728	7084

Crosswalk Volumes

Movement	Eastbound		Eastbound To	Westbound		Westbound To	Northbound		Northbound To	Southbound		Southbound To	Grand Total
Interval	PCCW	PCW		PCCW	PCW		PCCW	PCW		PCCW	PCW		
11:00 AM	4	0	4	0	0	0	2	0	2	1	3	4	10
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	1	1	1

Pedestrians	4	0	4	0	0	0	2	0	2	1	2	3	9
11:15 AM	2	0	2	4	0	4	1	2	3	0	0	0	9
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	2	0	2	4	0	4	1	2	3	0	0	0	9
11:30 AM	2	4	6	7	0	7	0	2	2	0	0	0	15
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	2	4	6	7	0	7	0	2	2	0	0	0	15
11:45 AM	6	3	9	0	1	1	0	0	0	0	1	1	11
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	6	3	9	0	1	1	0	0	0	0	1	1	11
12:00 PM	0	0	0	4	1	5	1	0	1	0	0	0	6
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	4	1	5	1	0	1	0	0	0	6
12:15 PM	1	2	3	1	0	1	2	2	4	0	1	1	9
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	1	2	3	1	0	1	2	2	4	0	1	1	9
12:30 PM	6	0	6	4	2	6	0	1	1	2	0	2	15
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	6	0	6	4	2	6	0	1	1	2	0	2	15
12:45 PM	0	2	2	7	1	8	0	1	1	1	2	3	14
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	2	2	7	1	8	0	1	1	1	2	3	14
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	1	0	1	1	0	1	0	0	0	0	0	0	2
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	1	0	1	1	0	1	0	0	0	0	0	0	2
7:15 AM	1	1	2	4	0	4	2	0	2	0	0	0	8
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	1	1	2	4	0	4	2	0	2	0	0	0	8
7:30 AM	7	1	8	7	1	8	0	1	1	0	0	0	17
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	7	1	8	7	1	8	0	1	1	0	0	0	17
7:45 AM	1	1	2	8	0	8	0	0	0	0	0	0	10
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	1	1	2	8	0	8	0	0	0	0	0	0	10
8:00 AM	3	0	3	0	0	0	1	2	3	0	2	2	8
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	3	0	3	0	0	0	1	2	3	0	2	2	8
8:15 AM	5	1	6	0	1	1	0	3	3	0	0	0	10
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	5	1	6	0	1	1	0	3	3	0	0	0	10
8:30 AM	3	3	6	0	0	0	0	0	0	0	0	0	6
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	3	3	6	0	0	0	0	0	0	0	0	0	6
8:45 AM	3	0	3	0	0	0	0	0	0	0	1	1	4
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	3	0	3	0	0	0	0	0	0	0	1	1	4
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	1	2	0	0	0	1	0	1	0	0	0	3
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	1	1	2	0	0	0	1	0	1	0	0	0	3
4:15 PM	1	0	1	0	0	0	0	0	0	0	0	0	1
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	1	0	1	0	0	0	0	0	0	0	0	0	1
4:30 PM	2	0	2	1	1	2	1	0	1	0	1	1	6
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	2	0	2	1	1	2	1	0	1	0	1	1	6
4:45 PM	6	0	6	0	0	0	1	1	2	0	0	0	8
Bicycles on Crosswa	1	0	1	0	0	0	0	0	0	0	0	0	1
Pedestrians	5	0	5	0	0	0	1	1	2	0	0	0	7

5:00 PM	1	0	1	1	4	5	1	0	1	0	0	0	7
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	1	0	1	1	4	5	1	0	1	0	0	0	7
5:15 PM	1	2	3	0	1	1	0	0	0	0	0	0	4
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	1	2	3	0	1	1	0	0	0	0	0	0	4
5:30 PM	3	1	4	0	3	3	0	0	0	0	0	0	7
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	3	1	4	0	3	3	0	0	0	0	0	0	7
5:45 PM	0	0	0	0	6	6	0	1	1	0	0	0	7
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	6	6	0	1	1	0	0	0	7
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	60	22	82	49	22	71	13	16	29	4	11	15	197

Study Name Main St. & Maple Ave.
Start Date Saturday, April 16, 2016 11:00 AM
End Date Tuesday, April 19, 2016 6:15 PM

Report Summary

		Eastbound						Westbound						Northbound						Southbound								Crosswalk		
Time Period	Class.	U	L	T	R	I	O	U	L	T	R	I	O	U	L	T	R	I	O	U	L	T	R	I	O	Total		s on Cr	destria	Total
Midday Peak Hour	Lights	0	68	174	30	272	300	0	147	211	39	397	429	0	25	404	204	633	594	0	51	417	64	532	511	1834	W	0	3	3
Peak Period	%	0%	100%	100%	100%	100%	99%	0%	99%	99%	100%	99%	100%	0%	100%	99%	100%	99%	99%	0%	100%	99%	100%	99%	99%	99%		0%	100%	
11:00 AM - 1:00 PM	Mediums	0	0	0	0	0	3	0	1	3	0	4	0	0	0	3	0	3	6	0	0	5	0	5	3	12	E	0	14	14
Peak Hour	%	0%	0%	0%	0%	0%	1%	0%	1%	1%	0%	1%	0%	0%	0%	1%	0%	0%	1%	0%	0%	1%	0%	1%	1%	1%		0%	100%	
11:15 AM - 12:15 PM	ticulated Truc	0	0	0	0	0	0	0	1	0	0	1	0	0	0	3	0	3	2	0	0	1	0	1	3	5	S	0	5	5
	%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%		0%	100%	
	Total	**0**	**68**	**174**	**30**	**272**	**303**	**0**	**149**	**214**	**39**	**402**	**429**	**0**	**25**	**410**	**204**	**639**	**602**	**0**	**51**	**423**	**64**	**538**	**517**	**1851**	N	0	16	16
	PHF	0	0.81	0.81	0.62	0.88	0.85	0	0.78	0.91	0.81	0.92	0.94	0	0.45	0.88	0.84	0.93	0.89	0	0.8	0.82	0.76	0.87	0.9	0.92		0%	100%	
	% HV	0%	0%	0%	0%	0%	1%	0%	1%	1%	0%	1%	0%	0%	0%	1%	0%	1%	1%	0%	0%	1%	0%	1%	1%	1%		**0**	**38**	**38**

Study Name Main St. & Maple Ave.
Start Date Saturday, April 16, 2016 11:00 AM
End Date Tuesday, April 19, 2016 6:15 PM

Report Summary

		Eastbound						Westbound						Northbound						Southbound								Crosswalk		
Time Period	Class.	U	L	T	R	I	O	U	L	T	R	I	O	U	L	T	R	I	O	U	L	T	R	I	O	Total		s on Cr	destria	Total
PM Peak Hour	Lights	0	36	168	22	226	392	0	341	327	34	702	356	0	0	290	148	438	872	0	40	509	65	614	360	1980	W	0	3	3
Peak Period	%	0%	97%	98%	100%	98%	99%	0%	100%	100%	100%	100%	98%	0%	0%	99%	97%	98%	99%	0%	98%	98%	94%	98%	99%	99%		0%	100%	
4:00 PM - 6:00 PM	Mediums	0	1	3	0	4	5	0	1	1	0	2	8	0	0	3	4	7	10	0	1	9	4	14	4	27	E	0	13	13
Peak Hour	%	0%	3%	2%	0%	2%	1%	0%	0%	0%	0%	0%	2%	0%	0%	1%	3%	2%	1%	0%	2%	2%	6%	2%	1%	1%		0%	100%	
4:30 PM - 5:30 PM	ticulated Truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	
	Total	**0**	**37**	**171**	**22**	**230**	**397**	**0**	**342**	**328**	**34**	**704**	**364**	**0**	**0**	**293**	**152**	**445**	**882**	**0**	**41**	**518**	**69**	**628**	**364**	**2007**	N	1	12	13
	PHF	0	0.77	0.97	0.42	0.83	0.83	0	0.9	0.91	0.77	0.92	0.88	0	0	0.93	0.81	0.89	0.89	0	0.79	0.84	0.56	0.87	0.93	0.9		8%	92%	
	% HV	0%	3%	2%	0%	2%	1%	0%	0%	0%	0%	0%	2%	0%	0%	1%	3%	2%	1%	0%	2%	2%	6%	2%	1%	1%		**1**	**28**	**29**
AM Peak Hour	Lights	0	30	214	10	254	134	0	63	113	12	188	683	0	1	369	453	823	296	0	16	223	20	259	411	1524	W	1	1	2
Peak Period	%	0%	100%	97%	91%	97%	97%	0%	98%	98%	80%	97%	98%	0%	100%	97%	99%	98%	94%	0%	70%	93%	91%	91%	97%	97%		50%	50%	
7:00 AM - 9:00 AM	Mediums	0	0	5	1	6	3	0	0	1	3	4	11	0	0	10	1	11	18	0	5	17	2	24	13	45	E	0	6	6
Peak Hour	%	0%	0%	2%	9%	2%	2%	0%	0%	1%	20%	2%	2%	0%	0%	3%	0%	1%	6%	0%	22%	7%	9%	8%	3%	3%		0%	100%	
7:15 AM - 8:15 AM	ticulated Truc	0	0	1	0	1	1	0	1	1	0	2	5	0	0	1	2	3	1	0	2	0	0	2	1	8	S	0	2	2
	%	0%	0%	0%	0%	0%	1%	0%	2%	1%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	9%	0%	0%	1%	0%	1%		0%	100%	
	Total	**0**	**30**	**220**	**11**	**261**	**138**	**0**	**64**	**115**	**15**	**194**	**699**	**0**	**1**	**380**	**456**	**837**	**315**	**0**	**23**	**240**	**22**	**285**	**425**	**1577**	N	2	1	3
	PHF	0	0.62	0.74	0.69	0.81	0.84	0	0.89	0.9	0.75	0.9	0.91	0	0.25	0.91	0.95	0.95	0.88	0	0.64	0.8	0.61	0.87	0.92	0.92		67%	33%	
	% HV	0%	0%	3%	9%	3%	3%	0%	2%	2%	20%	3%	2%	0%	0%	3%	1%	2%	6%	0%	30%	7%	9%	9%	3%	3%		**3**	**10**	**13**

Study Name Main St. & Maple Ave.
Start Date Saturday, April 16, 2016 11:00 AM
End Date Tuesday, April 19, 2016 6:00 PM

Road Volumes

TMV	Movement																				
	Eastbound				Eastbound To	Westbound				Westbound To	Northbound				Northbound To	Southbound				Southbound To	Grand Total
Interval	U	L	T	R		U	L	T	R		U	L	T	R		U	L	T	R		
4/16/2016 11:00	0	17	32	5	54	0	38	49	8	95	0	3	109	38	150	0	11	86	21	118	417
Lights	0	17	32	5	54	0	38	48	8	94	0	3	107	38	148	0	11	85	21	117	413
Mediums	0	0	0	0	0	0	0	1	0	1	0	0	2	0	2	0	0	1	0	1	4
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/16/2016 11:15	0	21	48	5	74	0	34	59	9	102	0	2	114	42	158	0	12	92	16	120	454
Lights	0	21	48	5	74	0	32	57	9	98	0	2	113	42	157	0	12	90	16	118	447
Mediums	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0	0	0	2	0	2	5
Articulated Trucks	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	2
4/16/2016 11:30	0	16	36	12	64	0	36	58	7	101	0	14	96	61	171	0	9	88	17	114	450
Lights	0	16	36	12	64	0	36	58	7	101	0	14	94	61	169	0	9	87	17	113	447
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	1	0	1	3
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/16/2016 11:45	0	15	54	8	77	0	48	50	11	109	0	4	116	46	166	0	14	114	21	149	501
Lights	0	15	54	8	77	0	48	50	11	109	0	4	115	46	165	0	14	113	21	148	499
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
4/16/2016 12:00	0	16	36	5	57	0	31	47	12	90	0	5	84	55	144	0	16	129	10	155	446
Lights	0	16	36	5	57	0	31	46	12	89	0	5	82	55	142	0	16	127	10	153	441
Mediums	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2	3
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	2
4/16/2016 12:15	0	17	41	3	61	0	43	58	8	109	0	2	95	44	141	0	10	93	14	117	428
Lights	0	17	41	3	61	0	43	58	8	109	0	2	94	44	140	0	10	91	14	115	425
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	0	2	3
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/16/2016 12:30	0	10	44	2	56	0	31	49	12	92	0	7	91	32	130	0	15	104	24	143	421
Lights	0	10	44	2	56	0	31	49	12	92	0	7	89	32	128	0	14	102	24	140	416
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	1	2	0	3	5
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/16/2016 12:45	0	14	30	4	48	0	45	44	15	104	0	2	93	34	129	0	11	104	12	127	408
Lights	0	13	29	4	46	0	45	44	15	104	0	2	91	33	126	0	11	104	12	127	403
Mediums	0	1	1	0	2	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	5
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/16/2016 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 7:00	0	9	62	1	72	0	12	13	2	27	0	0	87	92	179	0	0	38	7	45	323
Lights	0	8	59	1	68	0	10	12	2	24	0	0	84	92	176	0	0	38	6	44	312
Mediums	0	1	3	0	4	0	2	1	0	3	0	0	2	0	2	0	0	0	1	1	10
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
4/19/2016 7:15	0	12	57	1	70	0	18	24	4	46	0	0	100	120	220	0	4	53	5	62	398
Lights	0	12	56	1	69	0	18	23	2	43	0	0	97	120	217	0	2	49	5	56	385
Mediums	0	0	1	0	1	0	0	1	2	3	0	0	2	0	2	0	2	4	0	6	12
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
4/19/2016 7:30	0	4	74	3	81	0	18	32	4	54	0	0	104	113	217	0	6	61	9	76	428
Lights	0	4	71	3	78	0	18	32	4	54	0	0	101	112	213	0	3	57	9	69	414
Mediums	0	0	3	0	3	0	0	0	0	0	0	0	3	0	3	0	3	4	0	7	13
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
4/19/2016 7:45	0	9	53	4	66	0	10	28	2	40	0	0	95	120	215	0	4	75	3	82	403
Lights	0	9	52	4	65	0	9	28	2	39	0	0	91	118	209	0	3	67	2	72	385
Mediums	0	0	1	0	1	0	0	0	0	0	0	0	4	1	5	0	0	8	1	9	15
Articulated Trucks	0	0	0	0	0	0	1	0	0	1	0	0	0	1	1	0	1	0	0	1	3
4/19/2016 8:00	0	5	36	3	44	0	18	31	5	54	0	1	81	103	185	0	9	51	5	65	348
Lights	0	5	35	2	42	0	18	30	4	52	0	1	80	103	184	0	8	50	4	62	340

Mediums	0	0	0	1	1	0	0	0	1	1	0	0	1	0	1	0	0	1	1	2	5
Articulated Trucks	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	3
4/19/2016 8:15	0	13	54	3	70	0	31	48	9	88	0	4	70	83	157	0	6	54	6	66	381
Lights	0	13	53	3	69	0	29	47	9	85	0	3	70	83	156	0	5	50	6	61	371
Mediums	0	0	1	0	1	0	2	1	0	3	0	1	0	0	1	0	1	4	0	5	10
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 8:30	0	10	61	7	78	0	21	45	8	74	0	5	84	76	165	0	4	34	6	44	361
Lights	0	10	59	6	75	0	17	44	8	69	0	5	81	76	162	0	4	30	6	40	346
Mediums	0	0	2	1	3	0	4	1	0	5	0	0	2	0	2	0	0	3	0	3	13
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	2
4/19/2016 8:45	0	13	53	4	70	0	48	41	18	107	0	5	84	51	140	0	12	52	14	78	395
Lights	0	13	51	4	68	0	46	41	16	103	0	4	76	50	130	0	12	47	14	73	374
Mediums	0	0	2	0	2	0	2	0	2	4	0	1	7	1	9	0	0	4	0	4	19
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	2
4/19/2016 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 16:00	0	10	41	8	59	0	60	70	8	138	0	0	78	35	113	0	8	104	10	122	432
Lights	0	10	40	8	58	0	59	69	8	136	0	0	75	35	110	0	8	104	10	122	426
Mediums	0	0	1	0	1	0	1	1	0	2	0	0	3	0	3	0	0	0	0	0	6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 16:15	0	4	33	5	42	0	56	73	8	137	0	0	78	40	118	0	6	103	10	119	416
Lights	0	3	33	5	41	0	55	73	7	135	0	0	77	40	117	0	6	102	10	118	411
Mediums	0	1	0	0	1	0	1	0	1	2	0	0	1	0	1	0	0	1	0	1	5
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 16:30	0	10	44	4	58	0	88	84	9	181	0	0	73	28	101	0	12	155	13	180	520
Lights	0	9	44	4	57	0	88	84	9	181	0	0	73	27	100	0	12	153	13	178	516
Mediums	0	1	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	2	0	2	4
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 16:45	0	7	43	4	54	0	75	66	11	152	0	0	79	34	113	0	8	132	12	152	471
Lights	0	7	42	4	53	0	75	65	11	151	0	0	77	33	110	0	7	131	11	149	463
Mediums	0	0	1	0	1	0	0	1	0	1	0	0	2	1	3	0	1	1	1	3	8
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 17:00	0	8	40	1	49	0	84	90	6	180	0	0	63	43	106	0	8	105	13	126	461
Lights	0	8	39	1	48	0	83	90	6	179	0	0	63	41	104	0	8	100	12	120	451
Mediums	0	0	1	0	1	0	1	0	0	1	0	0	0	2	2	0	0	5	1	6	10
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 17:15	0	12	44	13	69	0	95	88	8	191	0	0	78	47	125	0	13	126	31	170	555
Lights	0	12	43	13	68	0	95	88	8	191	0	0	77	47	124	0	13	125	29	167	550
Mediums	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	0	1	2	3	5
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 17:30	0	8	43	9	60	0	74	95	10	179	0	2	53	29	84	0	18	123	26	167	490
Lights	0	8	41	9	58	0	74	95	10	179	0	2	53	28	83	0	18	121	25	164	484
Mediums	0	0	2	0	2	0	0	0	0	0	0	0	0	1	1	0	0	2	1	3	6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 17:45	0	12	32	9	53	0	72	58	9	139	0	0	62	36	98	0	8	92	11	111	401
Lights	0	12	30	9	51	0	72	58	9	139	0	0	60	35	95	0	8	92	11	111	396
Mediums	0	0	1	0	1	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	4
Articulated Trucks	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4/19/2016 18:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Lights	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	272	1091	123	1486	0	1087	1300	203	2590	0	56	2067	1402	3525	0	224	2168	316	2708	10309

Crosswalk Volumes

Movement	Eastbound		Eastbound To	Westbound		Westbound To	Northbound		Northbound To	Southbound		Southbound To	Grand Total
Interval	PCCW	PCW		PCCW	PCW		PCCW	PCW		PCCW	PCW		
11:00 AM	0	0	0	2	0	2	2	0	2	3	3	6	10
Bicycles on Crosswa	0	0	0	0	0	0	2	0	2	0	0	0	2

Pedestrians	0	0	0	2	0	2	0	0	0	3	3	6	8
11:15 AM	2	0	2	2	4	6	0	0	0	0	3	3	11
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	2	0	2	2	4	6	0	0	0	0	3	3	11
11:30 AM	0	0	0	1	0	1	0	2	2	0	0	0	3
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	1	0	1	0	2	2	0	0	0	3
11:45 AM	1	0	1	1	0	1	1	1	2	5	4	9	13
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	1	0	1	1	0	1	1	1	2	5	4	9	13
12:00 PM	0	0	0	1	5	6	1	0	1	3	1	4	11
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	1	5	6	1	0	1	3	1	4	11
12:15 PM	3	21	24	1	0	1	2	2	4	3	2	5	34
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	1	0	1	1
Pedestrians	3	21	24	1	0	1	2	2	4	2	2	4	33
12:30 PM	4	3	7	0	1	1	0	2	2	3	1	4	14
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	2	0	2	2
Pedestrians	4	3	7	0	1	1	0	2	2	1	1	2	12
12:45 PM	1	2	3	1	0	1	1	0	1	2	5	7	12
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	1	1	1
Pedestrians	1	2	3	1	0	1	1	0	1	2	4	6	11
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	1	0	1	0	0	0	1	0	1	2
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	1	0	1	0	0	0	1	0	1	2
7:15 AM	1	0	1	1	0	1	1	0	1	0	0	0	3
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	1	0	1	1	0	1	1	0	1	0	0	0	3
7:30 AM	1	0	1	2	2	4	0	1	1	0	1	1	7
Bicycles on Crosswa	1	0	1	0	0	0	0	0	0	0	1	1	2
Pedestrians	0	0	0	2	2	4	0	1	1	0	0	0	5
7:45 AM	0	0	0	1	0	1	0	0	0	1	0	1	2
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	1	0	1	1
Pedestrians	0	0	0	1	0	1	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	1
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	0	1	1	1
8:15 AM	0	0	0	1	1	2	0	1	1	0	0	0	3
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	1	1	2	0	1	1	0	0	0	3
8:30 AM	0	1	1	0	0	0	0	0	0	1	0	1	2
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	1	1	0	0	0	0	0	0	1	0	1	2
8:45 AM	0	1	1	0	0	0	1	0	1	0	0	0	2
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	1	1	0	0	0	1	0	1	0	0	0	2
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	0	1	2	1	3	0	0	0	0	0	0	4
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	1	0	1	2	1	3	0	0	0	0	0	0	4
4:15 PM	3	0	3	1	2	3	0	0	0	0	1	1	7
Bicycles on Crosswa	3	0	3	1	0	1	0	0	0	0	0	0	4
Pedestrians	0	0	0	0	2	2	0	0	0	0	1	1	3
4:30 PM	0	3	3	0	7	7	0	0	0	3	2	5	15
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	3	3	0	7	7	0	0	0	3	2	5	15
4:45 PM	0	0	0	2	2	4	0	0	0	2	5	7	11
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	1	1	1
Pedestrians	0	0	0	2	2	4	0	0	0	2	4	6	10

5:00 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	1	1	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	1	1	0	0	0	1	0	1	2
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	1	1	0	0	0	1	0	1	2
5:30 PM	0	0	0	2	1	3	0	0	0	0	0	0	3
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	2	1	3	0	0	0	0	0	0	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	1
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	0	1	1	1
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	17	31	48	22	28	50	9	9	18	28	30	58	174

Study Name	Main St. & Grove St.
Start Date	Saturday, April 16, 2016 11:00 AM
End Date	Tuesday, April 19, 2016 6:15 PM

Report Summary

		Eastbound					Northbound					Southbound						Crosswalk		
Time Period	**Class.**	**U**	**L**	**R**	**I**	**O**	**U**	**L**	**T**	**I**	**O**	**U**	**T**	**R**	**I**	**O**	**Total**		**s on Cr**	**destria**	**Total**
AM Peak Hour	Lights	0	1	9	10	62	0	51	365	416	266	0	257	11	268	366	694	W	0	4	4
Peak Period	%	0%	100%	100%	100%	100%	0%	100%	97%	97%	91%	0%	91%	100%	91%	97%	95%		0%	100%	
7:00 AM - 9:00 AM	Mediums	0	0	0	0	0	0	0	12	12	24	0	24	0	24	12	36	S	0	0	0
Peak Hour	%	0%	0%	0%	0%	0%	0%	0%	3%	3%	8%	0%	9%	0%	8%	3%	5%		0%	0%	
7:15 AM - 8:15 AM	ticulated Truc	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	N	0	2	2
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	100%	
	Total	**0**	**1**	**9**	**10**	**62**	**0**	**51**	**377**	**428**	**291**	**0**	**282**	**11**	**293**	**378**	**731**		**0**	**6**	**6**
	PHF	0	0.25	0.56	0.62	0.82	0	0.8	0.93	0.93	0.93	0	0.92	0.69	0.9	0.94	0.96				
	% HV	0%	0%	0%	0%	0%	0%	0%	3%	3%	9%	0%	9%	0%	9%	3%	5%				
PM Peak Hour	Lights	0	5	32	37	73	0	57	308	365	615	0	583	16	599	313	1001	W	2	19	21
Peak Period	%	0%	100%	100%	100%	99%	0%	100%	98%	99%	98%	0%	98%	94%	98%	98%	98%		10%	90%	
4:00 PM - 6:00 PM	Mediums	0	0	0	0	1	0	0	5	5	14	0	14	1	15	5	20	S	0	0	0
Peak Hour	%	0%	0%	0%	0%	1%	0%	0%	2%	1%	2%	0%	2%	6%	2%	2%	2%		0%	0%	
4:30 PM - 5:30 PM	ticulated Truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N	0	34	34
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	100%	
	Total	**0**	**5**	**32**	**37**	**74**	**0**	**57**	**313**	**370**	**629**	**0**	**597**	**17**	**614**	**318**	**1021**		**2**	**53**	**55**
	PHF	0	0.31	0.8	0.77	0.66	0	0.65	0.89	0.88	0.88	0	0.89	0.71	0.88	0.9	0.88				
	% HV	0%	0%	0%	0%	1%	0%	0%	2%	1%	2%	0%	2%	6%	2%	2%	2%				

Study Name	Main St. & Grove St.
Start Date	Saturday, April 16, 2016 11:00 AM
End Date	Tuesday, April 19, 2016 6:15 PM

Report Summary

		Eastbound					Northbound					Southbound						Crosswalk		
Time Period	**Class.**	**U**	**L**	**R**	**I**	**O**	**U**	**L**	**T**	**I**	**O**	**U**	**T**	**R**	**I**	**O**	**Total**		**s on Cr**	**destria**	**Total**
Midday Peak Hour	Lights	0	4	28	32	78	0	48	456	504	528	0	500	30	530	460	1066	W	0	47	47
Peak Period	%	0%	100%	100%	100%	99%	0%	100%	99%	99%	99%	0%	99%	97%	99%	99%	99%		0%	100%	
11:00 AM - 1:00 PM	Mediums	0	0	0	0	1	0	0	3	3	4	0	4	1	5	3	8	S	0	0	0
Peak Hour	%	0%	0%	0%	0%	1%	0%	0%	1%	1%	1%	0%	1%	3%	1%	1%	1%		0%	0%	
11:15 AM - 12:15 PM	ticulated Truc	0	0	0	0	0	0	0	3	3	1	0	1	0	1	3	4	N	0	35	35
	%	0%	0%	0%	0%	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	1%	0%		0%	100%	
	Total	**0**	**4**	**28**	**32**	**79**	**0**	**48**	**462**	**510**	**533**	**0**	**505**	**31**	**536**	**466**	**1078**		**0**	**82**	**82**
	PHF	0	0.33	0.88	0.73	0.9	0	0.71	0.88	0.86	0.87	0	0.86	0.7	0.89	0.88	0.92				
	% HV	0%	0%	0%	0%	1%	0%	0%	1%	1%	1%	0%	1%	3%	1%	1%	1%				

Study Name	Main St. & Grove St.
Start Date	Saturday, April 16, 2016 11:00 AM
End Date	Tuesday, April 19, 2016 6:00 PM

Road Volumes

TMV	Movement												
	Eastbound			Eastbound To	Northbound			Northbound To	Southbound			Southbound To	Grand Total
Interval	U	L	R		U	L	T		U	R	T		
4/16/2016 11:00	0	1	4	5	0	11	128	139	0	3	111	114	258
Lights	0	1	4	5	0	11	126	137	0	3	110	113	255
Mediums	0	0	0	0	0	0	2	2	0	0	1	1	3
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
4/16/2016 11:15	0	0	8	8	0	17	131	148	0	5	114	119	275
Lights	0	0	8	8	0	17	130	147	0	5	112	117	272
Mediums	0	0	0	0	0	0	0	0	0	0	2	2	2
Articulated Trucks	0	0	0	0	0	0	1	1	0	0	0	0	1
4/16/2016 11:30	0	1	5	6	0	11	88	99	0	11	110	121	226
Lights	0	1	5	6	0	11	86	97	0	11	109	120	223
Mediums	0	0	0	0	0	0	2	2	0	0	0	0	2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	1	1
4/16/2016 11:45	0	0	7	7	0	9	132	141	0	10	135	145	293
Lights	0	0	7	7	0	9	131	140	0	9	135	144	291
Mediums	0	0	0	0	0	0	1	1	0	1	0	1	2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
4/16/2016 12:00	0	3	8	11	0	11	111	122	0	5	146	151	284
Lights	0	3	8	11	0	11	109	120	0	5	144	149	280
Mediums	0	0	0	0	0	0	0	0	0	0	2	2	2
Articulated Trucks	0	0	0	0	0	0	2	2	0	0	0	0	2
4/16/2016 12:15	0	0	5	5	0	11	108	119	0	6	120	126	250
Lights	0	0	5	5	0	11	107	118	0	6	118	124	247
Mediums	0	0	0	0	0	0	1	1	0	0	2	2	3
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
4/16/2016 12:30	0	3	7	10	0	9	106	115	0	1	129	130	255
Lights	0	3	7	10	0	9	104	113	0	1	126	127	250
Mediums	0	0	0	0	0	0	2	2	0	0	3	3	5
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
4/16/2016 12:45	0	0	5	5	0	14	109	123	0	3	113	116	244
Lights	0	0	5	5	0	14	106	120	0	3	112	115	240
Mediums	0	0	0	0	0	0	3	3	0	0	1	1	4
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0

4/16/2016 13:00	0	0	1	1	0	0	0	0	0	0	0	0	1
Lights	0	0	1	1	0	0	0	0	0	0	0	0	1
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 7:00	0	0	2	2	0	11	85	96	0	1	38	39	137
Lights	0	0	2	2	0	11	82	93	0	1	37	38	133
Mediums	0	0	0	0	0	0	3	3	0	0	1	1	4
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 7:15	0	0	4	4	0	14	101	115	0	2	64	66	185
Lights	0	0	4	4	0	14	96	110	0	2	57	59	173
Mediums	0	0	0	0	0	0	5	5	0	0	7	7	12
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 7:30	0	0	2	2	0	16	97	113	0	3	73	76	191
Lights	0	0	2	2	0	16	94	110	0	3	68	71	183
Mediums	0	0	0	0	0	0	3	3	0	0	5	5	8
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 7:45	0	0	1	1	0	12	95	107	0	4	77	81	189
Lights	0	0	1	1	0	12	93	105	0	4	67	71	177
Mediums	0	0	0	0	0	0	2	2	0	0	9	9	11
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	1	1
4/19/2016 8:00	0	1	2	3	0	9	84	93	0	2	68	70	166
Lights	0	1	2	3	0	9	82	91	0	2	65	67	161
Mediums	0	0	0	0	0	0	2	2	0	0	3	3	5
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 8:15	0	2	3	5	0	6	83	89	0	0	69	69	163
Lights	0	2	3	5	0	6	83	89	0	0	63	63	157
Mediums	0	0	0	0	0	0	0	0	0	0	6	6	6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 8:30	0	0	3	3	0	13	87	100	0	3	39	42	145
Lights	0	0	3	3	0	13	83	96	0	3	35	38	137
Mediums	0	0	0	0	0	0	3	3	0	0	4	4	7
Articulated Trucks	0	0	0	0	0	0	1	1	0	0	0	0	1
4/19/2016 8:45	0	4	5	9	0	10	105	115	0	3	77	80	204
Lights	0	4	5	9	0	9	96	105	0	3	71	74	188
Mediums	0	0	0	0	0	1	7	8	0	0	5	5	13
Articulated Trucks	0	0	0	0	0	0	2	2	0	0	1	1	3
4/19/2016 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	0	0	0	0	0	0	0	0	0	0
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 16:00	0	3	5	8	2	14	83	99	0	3	122	125	232
Lights	0	3	5	8	2	14	79	95	0	3	122	125	228

Mediums	0	0	0	0	0	0	4	4	0	0	0	0	4
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 16:15	0	0	6	6	0	11	76	87	0	1	112	113	206
Lights	0	0	6	6	0	10	76	86	0	1	112	113	205
Mediums	0	0	0	0	0	1	0	1	0	0	0	0	1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 16:30	0	0	6	6	0	14	76	90	0	1	168	169	265
Lights	0	0	6	6	0	14	74	88	0	0	165	165	259
Mediums	0	0	0	0	0	0	2	2	0	1	3	4	6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 16:45	0	0	8	8	0	11	88	99	0	6	147	153	260
Lights	0	0	8	8	0	11	86	97	0	6	145	151	256
Mediums	0	0	0	0	0	0	2	2	0	0	2	2	4
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 17:00	0	4	8	12	0	10	66	76	0	4	114	118	206
Lights	0	4	8	12	0	10	66	76	0	4	108	112	200
Mediums	0	0	0	0	0	0	0	0	0	0	6	6	6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 17:15	0	1	10	11	0	22	83	105	0	6	168	174	290
Lights	0	1	10	11	0	22	82	104	0	6	165	171	286
Mediums	0	0	0	0	0	0	1	1	0	0	3	3	4
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 17:30	0	4	7	11	0	11	60	71	0	2	151	153	235
Lights	0	4	7	11	0	11	60	71	0	2	149	151	233
Mediums	0	0	0	0	0	0	0	0	0	0	2	2	2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 17:45	0	0	8	8	0	6	78	84	0	1	103	104	196
Lights	0	0	8	8	0	6	76	82	0	1	103	104	194
Mediums	0	0	0	0	0	0	2	2	0	0	0	0	2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2016 18:00	0	0	0	0	0	1	0	1	0	0	0	0	1
Lights	0	0	0	0	0	1	0	1	0	0	0	0	1
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	27	130	157	2	284	2260	2546	0	86	2568	2654	5357

Crosswalk Volumes

Movement	Eastbound	Eastbound Tot	Northbound	Northbound Tc	Southbound	Southbound Tc	Grand Total

Interval	PCCW	PCW		PCCW	PCW		PCCW	PCW		
11:00 AM	4	3	7	0	2	2	4	2	6	15
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	4	3	7	0	2	2	4	2	6	15
11:15 AM	7	7	14	0	0	0	0	4	4	18
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	7	7	14	0	0	0	0	4	4	18
11:30 AM	5	2	7	0	0	0	6	4	10	17
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	5	2	7	0	0	0	6	4	10	17
11:45 AM	5	9	14	0	0	0	7	4	11	25
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	5	9	14	0	0	0	7	4	11	25
12:00 PM	4	8	12	0	0	0	3	7	10	22
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	4	8	12	0	0	0	3	7	10	22
12:15 PM	12	15	27	0	0	0	8	12	20	47
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	12	15	27	0	0	0	8	12	20	47
12:30 PM	4	15	19	0	0	0	3	9	12	31
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	4	15	19	0	0	0	3	9	12	31
12:45 PM	12	8	20	1	0	1	8	4	12	33
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	12	8	20	1	0	1	8	4	12	33
1:00 PM	0	0	0	0	0	0	0	0	0	0
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	2	2	0	0	0	0	0	0	2
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	2	2	0	0	0	0	0	0	2
7:15 AM	0	1	1	0	0	0	0	0	0	1
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	1	1	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	1	1	1
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	1	1	1
8:00 AM	2	1	3	0	0	0	0	1	1	4
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0

Pedestrians	2	1	3	0	0	0	0	1	1	4
8:15 AM	1	1	2	0	0	0	0	0	0	2
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	1	1	2	0	0	0	0	0	0	2
8:30 AM	0	3	3	0	0	0	0	2	2	5
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	3	3	0	0	0	0	2	2	5
8:45 AM	0	1	1	1	0	1	0	0	0	2
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	1	1	1	0	1	0	0	0	2
9:00 AM	0	0	0	0	0	0	0	0	0	0
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	2	3	0	0	0	3	2	5	8
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	1	2	3	0	0	0	3	2	5	8
4:15 PM	4	1	5	0	0	0	3	2	5	10
Bicycles on Crosswa	2	0	2	0	0	0	0	0	0	2
Pedestrians	2	1	3	0	0	0	3	2	5	8
4:30 PM	2	5	7	0	0	0	5	6	11	18
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	2	5	7	0	0	0	5	6	11	18
4:45 PM	7	2	9	0	0	0	9	2	11	20
Bicycles on Crosswa	1	0	1	0	0	0	0	0	0	1
Pedestrians	6	2	8	0	0	0	9	2	11	19
5:00 PM	0	0	0	0	0	0	1	1	2	2
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	1	1	2	2
5:15 PM	4	1	5	0	0	0	9	1	10	15
Bicycles on Crosswa	0	1	1	0	0	0	0	0	0	1
Pedestrians	4	0	4	0	0	0	9	1	10	14
5:30 PM	9	2	11	0	0	0	5	2	7	18
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	9	2	11	0	0	0	5	2	7	18
5:45 PM	6	2	8	0	0	0	8	11	19	27
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	6	2	8	0	0	0	8	11	19	27
6:00 PM	0	0	0	0	0	0	0	0	0	0
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	0
Grand Total	89	91	180	2	2	4	82	77	159	343

Kimley»Horn
1001 Warrenville Road | Suite 350 | Lisle, IL 60532
630-487-5550

DRAFT

VILLAGE OF DOWNERS GROVE
PLAN COMMISSION MEETING
PUBLIC HEARING

JUNE 6, 2016, 7:00 P.M.

Chairman Rickard called the June 6, 2016 meeting of the Downers Grove Plan Commission to order at 7:00 p.m. and led the Plan Commissioners and public in the recital of the Pledge of Allegiance.

ROLL CALL:

PRESENT: Chairman Rickard, Mr. Cozzo, Ms. Gassen, Ms. Hogstrom, Ms. Johnson, Mr. Quirk, Mrs. Rabatah, Mr. Thoman

ABSENT: Mr. Cronin; ex-officios Mr. Livorsi, Ms. Lupesco, Mr. Menninga

STAFF: Community Development Director Stan Popovich

VISITORS: Grady Hamilton, Johnny Carlson, David Paino, Tim Shogren and Mary Lucas with Trammel Crow Company; Aaron Roseth with ESG Architects; Scott Wilson, Jared Kenyon, and Tom Runkel with Kimley-Horn; John Polivka, 6016 Washington St.; Kathy Nybo, 5253 Blodgett; Julia Miller, 5329 Main St.; Elizabeth Friend; 5239 Main St.; William Hunnewell, 5329 Main St.; Larry Bejnarowicz, 5329 Main St.; Barb Webster, 5223 Carpenter St.; John and Kathleen Tully, 5329 Main St.; Jim and Sandy Blake, 5340 Lane Pl.; Ed and Mary O'Donnell, 5329 Main St.; Jim and Dolores Mulnenn, 5329 Main St.; Michael Hansen, 5329 Main St.; Bob Peterson, 6861 Camden Rd., Geoff Anderman, 5409 Washington; Jim Knight, 1101 Maple Ave., Bob Loizzi, 5329 Main St.; Brad and LuAnn Costell, 5910 Grand Ave.; Rich Kulovany, 6825 Camden Rd.; Michael Drew, 6200 Joliet Rd. Countryside; George Antos, 6200 Joliet Rd., Countryside; Andrew and Johana Graves, 1308 Gilbert Ave.; Don Renner, 1304 Maple Ave.; Dick Muchel, 5239 Main St.; Halley Conners, 1010 Curtiss St.; John LeDonne, 1930 55th Place; Todd Parsons, 417 67th St.; Charlotte Loizzi, 5329 Main St., Gail Bieschke, 5329 Main St.; Lillian and Michael Moats, 1100 Maple Ave.; Tom and Sue Weiler, 709 Maple Ave.; Theresa Schulz, 1307 Maple Ave.; Diane Bach, 5225 Main St.; Shannon Tully, 5413 Main St.; George Zerphy, 5748 Woodward Ave.; Charles Hannon, 940 Maple Ave.; Christine Martin, 701 Maple Ave., Jenny Levine, 5831 Dunham Rd.; Larry Vendor, 5329 Main St.; Jim Knight, 1101 Maple Ave.; Jeff Anderman, 5409 Washington St.; Rayna Gallt, 5439 Carpenter St.

APPROVAL OF MINUTES:

APPROVAL OF MAY 2, 2016 MINUTES – Page 6, under Standard No. 2, Mr. Quirk asked to delete the last sentence relating to increasing the stormwater fees. **MOTION BY MR. THOMAN, SECONDED MR. QUIRK, TO APPROVE THE MINUTES, AS AMENDED. MOTION CARRIED BY VOICE VOTE OF 7-0-1. (MRS. RABATAH ABSTAINS.)**

DRAFT

PUBLIC HEARINGS:

Chairman Rickard explained the protocol for the public hearings and swore in those individuals that would be speaking on the petitions below.

FILE 16-PLC-0023: A petition seeking approval of a Special Use to allow an office use to provide more than 4.5 parking spaces per 1,000 square feet of floor area and a Rezoning from M-1, Light Manufacturing to O-R-M, Office-Research-Manufacturing. The property is located on the northwest corner of Warrenville and Finley Road, commonly known as 2200 Warrenville Road (PINs 08-01-400-004, and -006). Adam Stokes, Agent of Nicolson Porter & List, Inc. and Arbor Vista LLC, Petitioners; Arbor Vista LLC, Owner.

Per the chairman, the applicant has requested to continue the above-referenced public hearing and staff also recommended a continuance.

MOTION BY MR. THOMAN TO CONTINUE FILE 16-PLC-0023 TO A DATE CERTAIN, THAT DATE BEING JUNE 27, 2016. SECONED BY MRS. RABATAH.

MOTION CARRIED UNANIMOUSLY BY VOICE VOTE OF 8-0.

FILE 16-PLC-0021: A petition seeking approval of a Planned Unit Development, a Rezoning from DB (Downtown Business) to DB/PUD (Downtown Business/Planned Unit Development) and a Special Use to construct a mixed-use 115-unit apartment building. The property is located on the northeast corner of Main Street and Maple Avenue, commonly known as 946 Maple Avenue, 1000 Maple Avenue and 5245 Main Street (PINs 09-08-306-017, -018, -019, -020, -027, -028, -029, and -030). Trammell Crow Chicago Development, Inc, Petitioner; Robert E. King and Lynda A. King, Co-Trustees under Declaration of Joint Trust, and Chicago Title Land Trust Co, Trust Number 8002349926, and the Village of Downers Grove, Owners.

Community Development Director Stan Popovich reviewed the applicant's request and referred to the site on the overhead, locating the three properties involved: a village parking lot, a commercial building, and a non-conforming single-family residence. Proposed was a six-story, 115-unit apartment building 70 feet in height with retail on the first floor facing Main Street, with a lobby/common area and a second floor that included a number of amenities. Director Popovich reviewed the site plan for the proposal, noting there would be three levels to the parking garage, eight on-street parallel parking spaces on Maple Avenue with two designated spaces for a loading zone. Further details and amenities of the plan followed. Building elevations were further discussed, with Director Popovich explaining how the village's design guidelines played into the design of the proposed building. Building materials and building planes for the building were described and met the guidelines, as stated by staff.

The engineering site plan was reviewed in detail as well as the on-street parking spaces. A landscape plan was also reviewed.

Director Popovich summarized that an outside consultant was used to review the petitioner's traffic study which found that the intersections of Main/Maple, Main/Grove and Washington/Maple were

currently operating at an acceptable level of service. The only level of service not acceptable was the westbound Maple at Washington intersection, based on the amount of traffic traveling through the village during the evening rush hour. Per staff, the construction of this building and the construction of the Marquis on Maple would have no bearing on the unacceptable level of service. The public works department reviewed the study and had no concerns as well.

Director Popovich explained that the Main/Maple parking lot was constructed immediately prior to the construction of the parking deck to provide additional parking downtown during construction of the deck. He noted the parking lot was always intended to be a temporary parking area and that it would return to a redevelopment site, as identified in various Villlage plans, including a 2003 study, a 2006 RFP for redevelopment and the village's 2011 Comprehensive Plan. The village was not concerned about losing the parking spaces because enough on-street parking and parking deck spaces existed. This was confirmed with the Public Works Director. Staff supported the request to remove the 29 parking spaces.

Staff continued to elaborate on how the site met the village's comprehensive plan, met the village's bulk standards, and met the objectives for a planned unit development. Staff believed the proposal was consistent with the surrounding and existing zoning districts, which called for a mixed-use development, and recommended that the Plan Commission forward a positive recommendation to the village council subject to staff's conditions.

Questions from the commissioners included clarification of who reviewed the parking study on the village's behalf, the height of the Marquis on Maple development, whether proper remediation was done on the site since one of the properties was a prior gas station, and whether the village "relaxed" the lot area per dwelling unit on any prior developments in the village. Director Popovich cited those developments. He further located the three feet of right-of-way that the applicant was dedicating on Maple Avenue and noted the location of the garbage collection area.

Chairman Rickard invited the applicant to speak.

Mr. Grady Hamilton, with Trammel Crow Company, introduced his team and reviewed some of the local developments his company worked on, including a development in Park Ridge. He explained the reasons why the high-end development had to be developed the way it was being proposed, i.e., due to the lifestyle of those who move into such developments.

Mr. Aaron Roseth, ESG Architects, Minneapolis, MN, confirmed the many projects his firm was involved with, including Trammel Crow Company. He explained how his company identifies good architecture, good scaling and creates a beautiful sense of place. He further discussed the changing demographics of the renting population to-date and the amenities they look for in detail.
Mr. Roseth pointed out the seven-foot grade difference that exists at Main Street where the building begins and then turns the corner to Maple Avenue, stating the goal was to keep the retail on Main Street as vibrant as possible. Positives about the building's scale, the positioning of the front door on the corner of the building, and the building's interaction with Main Street were mentioned.

Questions for the petitioner included how the building was going to function mechanically (Magic-Pacs positioned in recessed facades, painted to match; some units on roof top); the reason for the synthetic grass, landscaping; and the building material. Mr. Roseth explained the building's first

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two levels would be concrete; the first level lid would be concrete also with the five upper stories being wood frame construction. Sound proofing requirements would exceed village code.

Mr. Roseth described how the building's density was determined, pointing out that smaller units were now the trend because the amenities allowed for it. Square footage of the units were explained as well as how the development related to the overall makeup of the Chicagoland area. Parking stall width was another discussion topic, with Director Popovich confirming that the village's requirement was 9 feet by 18 feet in length. The proposed spaces were 8 feet-six inches due to the spaces being assigned to specific units and the fact that they were allowed to be six inches less on width and length if they were low turnover spaces. The building's security was explained as well as hours of operation for the common area amenities. Snow removal for the pool deck was also addressed.

Asked if young families would be living in the building, Mr. Carlson envisioned there would be some young families living there for 6 months or 12 months, possibly having a home built nearby. The typical demographic was the young professional without older children or the empty nester renting the three-bedroom. Lease renewals were estimated to be about 60%. Outside lighting, to be code compliant, would include lighting scones, lit entryways, signage, and lit pool deck area (per code). Signage would meet village code. As to the type of retail he envisioned, Mr. Carlson stated the Glen Ellyn development included a coffee shop, a high-end yoga studio, and a restaurant. For this development, his goal was to attract a restaurant. As far as adding any awnings, per the village's design guidelines, Mr. Carlson felt there was no need for the awnings, except for the main entrance. Regarding the south elevation, Mr. Carlson confirmed there would be no vehicle headlights coming through the garage façade.

The chairman invited the public to speak.

Mr. John Polivka, 6016 Washington, voiced concern about traffic backup to Summit Street regarding this development and not being able to travel westbound or make a left turn. He suggested removing some of the parking on Maple Avenue and creating a dedicated right-turn lane. He asked if there were projected numbers for those visiting the development.

Ms. Diane Bach, Spice Merchants, 5225 Main Street, voiced concern about losing the 29 parking spaces for her customers and other businesses' customers who travel long distances. She asked how the 10 allotted parking spaces would be accessed, their size, would there be signage for them, and their hours of access, etc. She asked if there were additional traffic studies done after the 2011 parking study. She asked if the recent April study was a one-day study or over a specific time period.

Ms. Kathleen Tully, 5329 Main Street, stated she attended the petitioner's prior presentation at Lincoln Center. Her concern was about water detention after storms, "dangerous" traffic congestion in the immediate vicinity, the amount of rental units on Maple Avenue overall, and the loading/ unloading of garbage. She asked if the village was going to conduct its own traffic study and also asked if the pool could be placed on top of the roof to avoid looking at wet towels hanging over the balcony.

Ms. Shannon Tully, 5413 Main Street, has her business across the street from the proposed development. She supported the development since there was a need for rental units in the village.

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She voiced concern about traffic congestion especially during rush hour, the stacking of cars from the Main/Maple intersection going back toward Washington. She inquired as to how many elevators would be in the building, were there proposed regulations for moving in and out, was there going to be a coded entry to a certain public door. She also suggested relocating the pool to the building's roof top.

Ms. Theresa Schulz, 947 Maple and 1307 Maple (residence), also agreed there was a parking detriment in the village and traffic issues existed, especially going west on Maple. She suggested installing a stop sign at Maple and Brookbank since it was a school bus stop. She voiced concern about moving trucks especially during the first year or two when the residents start moving in. She asked how the 40% of tenants who do move annually be managed.

Mr. Don Renner, 1304 Maple Avenue expressed concern about density, traffic flow, a change in character and the proposal being rental. He voiced concern about how the building would look 20 years from now.

Mr. George Zerphy, 5748 Woodward Ave., said he recently moved from the Main/Maple area after living there for four years. Traffic increased while he lived there and he questioned the feasibility of the 2011 traffic study as a benchmark for today. Since his new home is a short drive away, when he does travel to the downtown area he uses the parking lot because of its ease of access. He believed losing it would be a detriment. He suggested another review of the traffic and parking issues would be in order and that the proposed building belonged in Naperville. He stated the target market for the proposal was in Naperville and not Downers Grove. The building would change the character of the area and the village.

Mr. William Honnewell, 5329 Main Street, president of Morningside Grove Condominium Association, expressed concern about traffic congestion during the rush hours; the safety of pedestrians in the area; water drainage from the building; and not a lot of parking for the businesses.

Mr. Bob Peterson, 6861 Camden Road, 1301 Warren Ave (business), shared his comments about the poor parking situation in the village; the fact that a number of developments were coming in but not providing enough parking; and that architects, when designing their buildings, are not providing adequate elevator space for tenants moving in/out, not creating an area where people can wait for a taxi, and not enough parking space for the moving trucks.

Mr. Charles Hannon, 940 Maple Ave., said while he welcomed the upscale development, he believed the proposed height of the building was an issue since the building would hinder views from his building (Marquis on Maple) and would cause shadow issues. Adding more traffic, parking issues and loading/unloading of trucks to the area, in addition to his building, would also impede traffic. He suggested the commission ask the developer to reduce the number of units to a more "modest" amount, similar to his development, possibly have five floors, and "do the deal" without the parking lot. He questioned the demand for such apartments in the village, in general.

In response, Director Popovich confirmed the development did meet the village's height regulations of 70 feet and the proposal was just under 70 feet.

Mr. Tom Weiler, 709 Maple Avenue, echoed the same objections as Mr. Renner, above, i.e., increased traffic on Maple Avenue, the development's density, and the change in the neighborhood

character. He voiced concern about the quick "domino affect", given that the Marquis on Maple was the only building of its type between Avery-Coonley and the railroad tracks. He did find it ironic that someone from the Marquis voiced concern about the development's scale, height, traffic, and units being obscured when it was the same concerns voiced by the community on his building. He questioned what the village wanted to do with the parking lot. He believed the development should have been zoned to Downtown Transitional versus Downtown Business along Maple Avenue. The area would look like a "canyon."

Ms. Barbara Webster, 5223 Carpenter St., was sworn in by the chairman. Ms. Webster reminded the business owners that the tenants residing in the development would be patronizing their businesses and probably walking to the train and not using their vehicles.

Mr. Jim Weiss, 436 68th Street was sworn in by the chairman. Mr. Weiss said he has noticed that kids walk and shop the downtown stores, usually making small purchases, but he has also seen that in Naperville, where there is more parking available for their downtown. He believes there will be a negative effect with the proposal.

Ms. Kathy Nybo, 5253 Blodgett, emphasized that she wanted to live in the "village" of Downers Grove, where the community is friendly. She did not want to be another City of Aurora or Naperville. She did not understand why the village had to incorporate an under-utilized parking lot into an over-developed proposal, and believed something in-between existed. Height was also an issue and she believed the area would become a "tunnel" due to the tall buildings. She questioned why the village could not have more townhomes that are more in scale to what the town looks like. While the proposal called for a mixed-use development, she pointed out there were only two retail spaces.

She reminded the public that the parking and traffic figures were based on speculation but agreed issues would exist once the developers are "long gone." She supported keeping the Main/Maple parking lot. She also pointed out that the renderings were reflecting seven trees and the developer was only installing two, which was not a good tradeoff for the size and density of the building. Lastly, she reminded the commissioners that the village's motto was a "balance of progress and tradition" and asked that the commissioners keep traditions in mind when making a decision tonight.

Ms. Linda LaLond, business owner at 5226 Main Street, described her business and stated that all of the area's businesses have patrons who utilize the Main/Maple parking lot to run in and purchase their wares/service and do not park at the parking deck to shop their stores. Losing the parking lot would be detrimental to her business and other businesses.

Ms. Christine Martin, 701 Maple Ave., did not support the building and believed the developer would always win. She voiced concern about other developments in the future and the area losing the charm of Downers Grove. She found the proposed building to be sterile, generic, and looked like something found in every other town. She believed the Village of Hinsdale kept its vision by keeping its buildings low. Lastly, she found it disgraceful that the developer of the Marquis on Maple installed a wall up against the older home owners residing next to the Marquis on Maple and never compensated them.

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Ms. Jenny Levine, 5831 Dunham Rd., echoed Ms. Martin's comments. She shopped the downtown area and used the Main/Maple parking frequently to avoid parking on Main Street. If she cannot find a parking space, she will travel to Naperville to shop, which she does not prefer. She asked the village to consider the parking and traffic issues before further developments take place.

Mr. Larry Bernowitz, 5329 Main St., (Morningside building) stated he moved to the village so he could walk the downtown area and he agreed crossing at Main/Maple would become a challenge. Other issues voiced included parking and the fact that if the development had a restaurant, parking would have to be allocated.

Mr. John Tully, 5329 Main St., believed the development should be on a full commercial street and not on Maple Avenue. He voiced concerns of increased traffic, suggested reconsideration of the traffic study after the Marquis development has been completed, the walking of pets and no more car shows.

Mr. Jim Knight, 1101 Maple Ave., moved into his area to specifically walk the downtown area and mingle with people. He discussed how parking has now overflowed into the residential area of Maple Avenue. Concerns included: where would service people park for those tenants who need them, the building was too large, and if this was the village's gateway, then the village should change the zoning because the home on the other side of the Marquis was for sale.

Ms. Rayna Gallt, 5439 Carpenter St., was sworn in by the chairman. Ms. Gallt shared the same concerns as previously mentioned, i.e., the parking, the neighborhood characteristics, the tranquility of the area that drew her to the village. She would like the area to remain as is.

Ms. Julia Miller, 5329 Main St. (Morningside Square) also agreed with the previous statements made regarding traffic, parking, and neighborhood character change. She voiced concern that more green space was being lost in the village resulting in water issues. Also, the intersection of Main/Maple was a safety concern with drivers not paying attention when pedestrians were crossing. Lastly, if children were going to be living in the building, the safety of the children and school bus pickup/drop-offs had to be taken into consideration. She stated that emergency vehicles have also had difficulty maneuvering the intersection with car traffic and train traffic, not to mention the oil tankers coming through the area.

Ms. Sally Conness, 1846 Grant Street and 1010 Curtis (business address) shared the importance of maintaining the character of the downtown but also voiced concern about the traffic and parking, pointing out she had customers who struggle with on-street parking in the area and that not everyone wanted to use the parking garage. To allow more retail, people and vehicles only to remove the parking, did not make sense. She questioned the demand for the demographics.

Mr. Jeff Anderman, 5409 Washington, strongly encouraged the village to do an independent traffic study of the area due to the fact: 1) the study was paid for by the developer; 2) the residents' provided their feedback; 3) there were changes that came with the Marquis building; and 4) the county had traffic changes planned for 55th and Main Streets. Mr. Anderman's understanding was that there was an exception being made as far as density and it raised concern as to whether the villages was being consistent with past practices.

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Mr. Bob Peterson, 6861 Camden Road, stated he assisted the move-in/move-out of the first tenant of Stations Crossing who was told that her building would be sound-proof. Apparently the building was not, as he shared the short story of what that tenant heard one day.

Ms. Johanna Graves, 1308 Gilbert, voiced concern about water run-off from the building and drainage and requested the village conduct a stormwater study as part of the proposal.

(Chairman Rickard called for a five-minute break at 9:40 p.m.; meeting reconvened at 9:45 p.m.)

Chairman Rickard asked the petitioner to respond to the questions/comments raised by the public.

Mr. Grady Hamilton, with Trammel Crow Company, returned to the podium, explaining that the village's comprehensive plan directed his team how to evaluate properties and the zoning ordinance guides the development as to pertains to its bulk standards. Mr. Hamilton discussed the investment that was being made and how the owner would maintain the building long-term.

Traffic engineer, Tim Shogren, with Kimley-Horn, explained the background of his company and the experience his company brought to this project. Acknowledging that traffic was subjective, he explained how the state and federal government require a certain protocol but that the village required something more substantive in its traffic study – including the study of traffic over various days and evenings, pedestrian and bike activity and parking. The third party traffic consultant, he stated, reviewed Kimley-Horn's methodology and approach and concluded that the proposed project would have no material impact on traffic operations in the study area. Details followed. Other nearby developments were taken into consideration, as requested by village staff.

Responding to the question of the 10 on-street parking spaces, Mr. Hamilton stated eight spaces would be located on Maple Avenue with two being marked for periodic loading/unloading while two striped spaces would be located on Main Street. There was no public parking within the development's parking structure. There was also the possibility of having valet parking with the restaurant, if necessary.

Mr. Shogren further explained the methodology used in relation to the traffic traveling westbound on Maple Avenue and its impact on vehicle access to and exit from the proposed building. He stated there were a number of recommendations in the traffic study to address the issue, which he summarized in detail. He further addressed how the spaces for loading/unloading were determined and how they would be managed using on-site management staff. Mr. Hamilton also elaborated on the move-in schedule and the moving trucks that typically are used in such scenarios.

As far as the number of required parking stalls needed, Mr. Hamilton stated 162 parking stalls were being provided for the 115 units and were more than enough spaces for residents, staff and visitors, citing the Park Ridge and Glen Ellyn developments as examples. Residents would have FOB access to the parking garage, as well as their guests, once registered by the tenant.

Mr. Jared Kenyon, civil engineer, addressed how his firm followed the DuPage County's and the village's ordinance requirements for the stormwater and drainage study. Details followed.

Addressing operations, Mr. Hamilton confirmed the proposed building would have two elevators, one of which would be a freight elevator. Garbage would be collected inside the trash enclosure

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within the parking garage and then moved out by the on-site management for the garbage hauler. Regarding HVAC issues, Mr. Hamilton indicated that many of those issues would be handled by the on-site maintenance supervisor and, if necessary, access to the parking garage could be scheduled by the on-site supervisor if additional service visits were required. Regarding the pool area, it would be kept in a first-class manner and towels over railings would not be allowed nor would loud noise. Pets would be walked in the neighborhood and the building would include the pet spa.

Per Mr. Hamilton, long-term ownership of such developments was a major investment by investors, due to the caliber of the project and due to the locations of where they existed. He explained that the demographics of the tenants were desirable and were the type of persons who favored walking over driving to the downtown area. Lastly, Mr. Hamilton shared that security cameras would be positioned throughout the entire development as would on-site management staff.

Mr. Popovich reconfirmed that the proposed building's height met the village's bulk regulation; a third-party traffic consultant (KLOA) who did review the traffic study, had some comments, and the study was returned to the developer who was asked to revise its study. Per Director Popovich, there was no required green space for the downtown, which was stated in the ordinance. Valet parking was allowed under the municipal code. Mr. Popovich briefly touched upon the evolution of the village's comprehensive plan (approved in 2011 and currently under review by an ad hoc committee). The development was a catalyst site. The surrounding zoning of the property (Downtown Business) was also explained by Mr. Popovich. Mr. Hamilton also clarified that the proposed development provided code compliant parking, whereas some of the other prior projects were seeking parking and density variances. He added that the investment his firm makes coming into such projects is guided by the village's comprehensive plan and having many discussions with staff to ensure a good project that complies with the village's requirements.

Hearing no further comments, Chairman Rickard closed the public hearing and invited the commissioners to deliberate.

Per Ms. Johnson's question, Director Popovich explained some of the nearby projects that have been approved or were under construction: the Marquis on Maple with 55 condo units, 904-910 Curtiss Street with 48 apartment units, and 5100 Forest with 89 apartment units.

Chairman Rickard agreed there would be some type of traffic impact to the area and asked for staff's interpretation of the traffic study, wherein Director Popovich agreed there would be an increase in vehicles but he also explained that peak times, levels of service and other variables were taken into consideration for the study. Based on that information, he stated that there was no real changes in level of service based on the proposed development nor the Marquis on Maple development, and it was at the "acceptable" level of service. The only issue was the westbound Maple Avenue (at Washington) which was and would continue to operate at a "poor" level of service. Another study variable considered by the consultant, the third party reviewer and staff was including regional growth.

Mr. Quirk brought the discussion back to three considerations: 1) the special use (apartment use); 2) the zoning map modification to overlay the PUD; and 3) the establishment of the planned unit development, each consideration with their respective requirements.

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Reviewing the criteria for the planned unit development, Mr. Thoman agreed with many of the residents' comments regarding the density of the project and its height, stating it was one full story taller than the Marquis project. To him, the commissioners overlooked the community's response to that project, which basically "broke the block" as far as the height of the facade. This development he believed could have had its height stepped down to the Main Street side of the development with a more reasonable facade within a two-block area of downtown. He did not believe the project was consistent with the comprehensive plan, citing page 106-107 of the plan. The density was too high and the business community voiced numerous comments that its patrons relied heavily on the existing parking lot. Mr. Thoman voiced concern about bringing a six-story building onto Main Street. Mr. Thoman noted we are not an urban area; we are a suburban area. He did not support the proposal.

Mr. Quirk appreciated the 'loaf of bread' analogy that Mr. Carlson used earlier. He noted the development could move forward by right with the same size building if the developer lowered the number of units but increased the number of bedrooms with the same size building. He thinks the building is great. He was a bit concerned how it would look relative to other buildings but it isn't a huge issue. Mr. Quirk thought tapering back a small component of the building on the west side to transition better could work. He supported the project but sympathized with the residents regarding the traffic issues. He felt this was a really good project and would complement the direction the Village is going.

Mrs. Rabatah shared her concerns about the traffic study stating it offered no practical aspect to make any decisions, as it was highly numerically oriented. Mr. Popovich noted you could draw conclusions from the numerical approach that all traffic studies are completed by. There is empirical data provided in the highly technical document. Mrs. Rabatah noted traffic concerns were raised not only by the residents but from some of the commissioners. She saw a disconnect between the study and from what the residents and commissioners were saying.

The chairman shared his own experience regarding traffic since he lived on Main Street. He pointed out the proposal could be approved by-right with less units and more bedrooms and that the applicant was not requesting much relief. He agreed that if the density was right and the development was five stories tall it would be more acceptable since that appeared to be the standard for the area. Mr. Popovich proceeded to cite some of the existing buildings in the village that were 70 feet in height.

In general, Mr. Quirk stated that he rarely saw drivers entering or exiting Station Crossing. He stated the area was already congested, in general, and that based on the other multi-family projects in the village, he believed that providing parking for vehicles was not going to increase the overall traffic count that much.

Ms. Johnson noted the amount of everyday traffic and the loss of parking. Ms. Gassen, agreed that reducing the development by one story would help with the density issue and possibly help with the parking. The opportunity would be now.

However, Mr. Popovich, recalled the 7-foot grade difference for the building, noting that on Main Street the height reflected 70 feet while on the Maple Avenue side it was approximately 63 feet. He noted the Marquis on Maple height was about 56 feet without the cornice. The proposal met the village's height regulation.

Mr. Cozzo believed the proposal did meet the comprehensive plan because the corner site was never intended to stay a parking lot and the 29 parking spaces were going to be lost regardless. Instead, the project self-contained the units' parking, it met village code, and it removed 29 parking spaces that were never intended to be parking. However, it also provided 10 parking spaces and it was a catalyst site to the downtown business area. The village's forefathers for the downtown business area also determined that 70 feet in height should be the standard. Mr. Cozzo explained how the development met the village's ordinances and regulations and said the only criteria that was not being met was the density. The congested traffic would always exist. He did not see the proposed development substantially changing the character of the downtown area and supported the proposal. While he preferred the height to be reduced it was not a reason to vote against the proposal.

Ms. Hogstrom also preferred lowering the height by a floor. At the same time, Mr. Thoman pointed out how there was discussion tonight regarding the consistency of density within the downtown area, which was one of the goals in the comprehensive plan. For now the proposed building was not consistent with any other building on Main Street, but he believed it would eventually become consistent on the side of Maple Avenue.

Addressing the standards for the PUD, Item E specifically, Mr. Quirk believed the 29 parking spaces were not the issue and patrons would eventually adjust and find parking to shop. Further dialog followed that the proposal would make an impact, but whether it was negative or not, could not be determined. Mr. Cozzo pointed out that one resident said there was the potential for the businesses to gain another 115 new customers in the downtown area. However, he also pointed out to the commissioners that the proposal did not meet the density requirement and that factor could be an argument for denial if they chose. Mr. Thoman returned to Item D under the PUD and said he did not understand what the public benefit would be if the developer presented their proposal under conventional zoning regulations as opposed to the PUD. It was a moot point if there was only a difference of opinion regarding the density issue.

Turning to the zoning map amendment request, commissioners reviewed each of the seven requirements in detail and had no concerns other than it did not meet the density requirement under the comprehensive plan. Special Use requirements were reviewed with no issues raised.

Mr. Popovich explained the breakout of the impact fees for the development. Mr. Quick asked that breakouts for impact fees be included in future development proposals.

Ms. Gassen asked her fellow commissioners if they wanted to include any additional conditions to address the residents' concerns. Addressing the public, she added that the Plan Commission had no say in what the proposed building should look like. No additional conditions were voiced and again, Ms. Gassen reiterated that she did not know if there was enough argument to deny the project and had wished it was more sensitive to the community. Ms. Hogstrom concurred.

WITH RESPECT TO FILE 16-PLC-0021, MR. COZZO MADE A MOTION THAT THE PLAN COMMISSION FORWARD A POSITIVE RECOMMENDATION TO THE VILLAGE COUNCIL SUBJECT TO THE FOLLOWING STAFF CONDITIONS:

1. **THE SPECIAL USE, PLANNED UNIT DEVELOPMENT AND REZONING SHALL SUBSTANTIALLY CONFORM TO THE STAFF REPORT, RENDERINGS,**

ARCHITECTURE PLANS PREPARED BY ESG ARCHITECTS, INC, DATED MAY 23, 2016, AND ENGINEERING AND LANDSCAPE PLANS PREPARED BY KIMLEY HORN AND ASSOCIATES, INC, MAY 23, 2016, EXCEPT AS SUCH PLANS MAY BE MODIFIED TO CONFORM TO THE VILLAGE CODES AND ORDINANCES.

2. **THE PETITIONER SHALL CONSOLIDATE THE THREE LOTS INTO A SINGLE LOT OF RECORD PURSUANT TO SECTION 20.507 OF THE SUBDIVISION ORDINANCE PRIOR TO THE ISSUANCE OF ANY SITE DEVELOPMENT OR BUILDING PERMITS.**
3. **PRIOR TO ISSUING ANY SITE DEVELOPMENT OR BUILDING PERMITS, THE PETITIONER SHALL MAKE PARK AND SCHOOL DONATIONS IN THE AMOUNT OF $668,116.88 ($604,035.78 TO THE PARK DISTRICT, $47,088.75 TO ELEMENTARY SCHOOL DISTRICT 58, AND $16,992.35 TO HIGH SCHOOL DISTRICT 99).**
4. **THE BUILDING SHALL BE EQUIPPED WITH AN AUTOMATIC SUPPRESSION AND AN AUTOMATIC AND MANUAL FIRE ALARM SYSTEM IN ACCORDANCE WITH THE VILLAGE'S REQUIREMENTS.**
5. **PRIOR TO THE ISSUANCE OF ANY BUILDING OR DEVELOPMENT PERMITS, THE PETITIONER SHALL PAY TO THE VILLAGE A $1,000 FEE-IN-LIEU PER VILLAGE APPROVED PARKWAY TREE SUBJECT TO VERIFICATION BY THE VILLAGE FORRESTER.**

SECONDED BY MR. QUIRK ROLL CALL:

AYE: MR. COZZO, MR. QUIRK, MRS. GASSEN, MRS. HOGSTROM, MRS. JOHNSON, CHAIRMAN RICKARD
NAY: MR. THOMAN, MRS. RABATAH

MOTION CARRIED. VOTE: 6-2

Mr. Thoman explained he voted Nay given the discussion above. While he believed the corner needed to be developed, it needed to be downsized. He was concerned as to what kind of profile it would present to Main Street that was out of character with the rest of Main Street. Mrs. Rabatah echoed Mr. Thoman's comments but also agreed it was beautiful development.

Mr. Popovich provided a quick update for the upcoming June 27th meeting.

THE MEETING WAS ADJOURNED AT 11:20 P.M. ON MOTION BY MR. THOMAN, SECONDED BY MRS. RABATAH. MOTION CARRIED UNANIMOUSLY BY VOICE VOTE OF 8-0.

/s/ Celeste K. Weilandt
Celeste K. Weilandt
(As transcribed by MP-3 audio)

Downers Grove Park District
your chance to play

Administration Office
2455 Warrenville Road
Downers Grove, IL 60515
Phone: 630.960.7500
Fax: 630.963.1543

Recreation and Fitness Center
4500 Belmont Road
Downers Grove, IL 60515
Phone: 630.960.7250
Fax: 630.960.7251

Lincoln Center
935 Maple Avenue
Downers Grove, IL 60515
Phone: 630.963.1300
Fax: 630.963.5884

Golf Course
2420 Haddow Avenue
Downers Grove, IL 60515
Phone: 630.963.1306
Fax: 630.963.9435

Museum
831 Maple Avenue
Downers Grove, IL 60515
Phone: 630.963.1309
Fax: 630.963.0496

William F. Sherman, Jr. Interpretive Center
901 31st Street
Downers Grove, IL 60515
Phone: 630.963.9388
Fax: 630.963.9389

June 10, 2016

Stan Popovich, AICP
Director of Community Development
Village of Downers Grove
801 Burlington Avenue
Downers Grove, IL 60515

Re: Proposed Maple & Main Apartments

Dear Stan,

Thank you for speaking with me this week regarding the proposed Maple & Main Apartments. As we discussed, the Park District would like to voice a few concerns we have related to the proposed development, primarily related to traffic on Maple Avenue and its impact on the Lincoln Community Center. Having reviewed the development proposal, the traffic study prepared by Kimley Horn, and your staff Report to the Plan Commission, we would like to submit the following comments:

The Kimley Horn Traffic Impact & Parking Study uses previous traffic count data for the Lincoln Center driveway collected in 2014 as part of the Marquis on Maple development proposal. This data shows relatively low exit counts onto Maple Avenue during the morning and evening peak hours; however, the Park District is currently developing a Before & After School program at the Lincoln Center, which may contribute to entry and exit count numbers during this time period.

We are also concerned about the potential impact of adding on-street parking spaces along Maple Avenue *on westbound traffic*. In particular, during the evening peak hour, westbound traffic on Maple resulted in the highest traffic counts recorded. The study acknowledges that westbound queues at the Main & Maple intersection may extend beyond the new apartment building entrance drive, but there is no discussion of how cars attempting to park in these on-street spaces will further impact traffic. We are concerned about the overall impact this might have on the ability to turn left out of the Lincoln Center onto Maple Avenue, especially during peak hours.

Please feel free to contact me with any questions.

Sincerely,

Paul Fyle

Paul Fyle, ASLA
Superintendent of Planning

cc: Geoff Penman, Director of Operations & Development
William McAdam, Executive Director

Kimley»Horn

June 15, 2016

Mr. Stan Popovich, AICP
Director of Community Development
Village of Downers Grove
801 Burlington Avenue
Downers Grove, Illinois 60515

RE: Proposed Maple & Main Apartments

Stan,

Per the below, Kimley-Horn has reviewed the June 10th letter provided by the Downers Grove Park District. The letter inquires as to a number of transportation items related to the proposed Main and Maple apartment redevelopment. Kimley-Horn offers the following for consideration:

- **Potential Park District Before & After program:** As the letter provided was our first indication that such a program may be under consideration, the potential transportation impacts associated with implementation of this future initiative were not specifically included in our traffic and parking study. Without more complete information related to the program, hours of operation, age ranges, etc., it would be difficult to specifically state how the Park District project may impact operations along Maple Avenue or the future residents of Main and Maple Apartments. As the proposed redevelopment is not anticipated to have a material impact on corridor operations during the peak hours and does not preclude further development or utilization of the existing Park District facilities, it could be reasonably assumed that the Main and Maple Apartments would not have a significant impact on the operations of the Park District. That said, as details associated with the Park District program are finalized, a traffic study could be performed by the District to more definitively evaluate the specific impacts associated with its implementation.
- **Parking Impact on westbound Maple traffic:** The impact of parking maneuvers associated with the utilization of the eight (8) new proposed parking spaces on the north side of Maple Avenue was not specifically reviewed in our traffic evaluation. That said, activities associated with pedestrians, bicycles, and parking are typical for active downtown areas and are accommodated and encouraged as they reflect the unique characteristics that differentiate these areas from more traditional suburban arterial thoroughfares. Kimley-Horn would not expect the activity associated with these eight spaces to be atypical in this regard nor to have a consistent and material impact on corridor operations on Maple Avenue, including left turns out of the Lincoln Center.

Please advise if we can be of any further assistance as it relates to the above.

Sincerely,
Kimley-Horn and Associates, Inc.

Timothy P. Sjogren, P.E., PTOE

CC: Grady Hamilton, Trammell Crow Company
Johnny Carlson, Trammell Crow Company
David Paino, Trammell Crow Company