CITY OF POWELL
Ordinance 2019-25
Exhibit A

Note:
The plan as shown is conceptual in nature and is provided to illustrate the desired layout and quality of the project. Final layout and landscaping are subject to change based upon final zoning approval and engineering.
Final design of the library by others.

Middlebury Crossing - Illustrative Plan

City of Powell, Ohio 05.07.2019

0 50 150 N

Real Property Design and Development

G2 Planning Urban Design Landscape Architecture
Planning + Design
Ph: 614.583.9230
Web: www.g2planning.com

MIDDLEBURY CROSSING

FINAL DEVELOPMENT PLAN

CITY OF POWELL, OHIO

APRIL 2019

For: **Home Steitz LLC**
267 N. Liberty Street
Powell, Ohio 43065
614-323-7800

TABLE OF CONTENTS

CITY OF POWELL

PLANNING AND ZONING COMMISSION (P&Z)

FINAL DEVELOPMENT PLAN APPLICATION

ALL ITEMS ON THIS APPLICATION MUST BE COMPLETED.

Application Fee: $700.00 + $100.00 per acre
Per Fee Ordinance 2018-48

Applicant: Home Steitz LLC

Address/City/State/Zip: c/o John Wicks; 267 N. Liberty St., Powell, OH 43065

Email Address: john.wicks@rpddllc.com

Phone No: 614-323-7800 Cell Phone No: _____ Fax No: _____

Property Owner: TLK Development, LLC, c/o Kim Kelsik

Address/City/State/Zip: 5751 Kolb Rd., Tuscon, AZ 85750

Email Address: kelsik@hotmail.com

Phone No: 614-260-0649 Cell Phone No: _____ Fax No: _____

Architect/Designer for Applicant: G2 Planning and Design, c/o Gary Smith

Address/City/State/Zip: 720 E. Broad St., Suite 200, Columbus, OH 43215

Email Address: gsmith@g2planning.com

Phone No: 614-390-6149 Cell Phone No: _____ Fax No: _____

Property Address: 0 Home Road, Powell, OH 43065

Lot Number/Subdivision: N/A Existing Use: Agriculture Proposed Use: Planned Commercial

Reason for Administrative Review (attach necessary documents): Final Development Plan Review/Approval
SEE SUPPORTING DOCUMENTS ATTACHED TO THIS APPLICATION

Checklist:

- ☐ Preliminary Plan requirements set forth in Section 1143.11(c) and Final Plan requirements set forth in Section 1143.11(i).
- ☐ Provide any other information that may be useful to the Planning and Zoning Commission or City Staff in the space below or attach additional pages.
- ☐ **5 copies** of all drawings, text, any other items, and application.
- ☐ **1 digital copy** (CD, USB, Email) of the complete application packet.
- ☐ Attach the required fee - $700.00 + $100.00 per acre. $1,855.50
- ☐ Post a public notice sign at least (10) days prior to a public hearing or public meeting, pursuant to ordinance 1107.035 Public notice sign details found here.

(See Over)

APPROVAL SHALL EXPIRE AND MAY BE REVOKED IF CONSTRUCTION DOES NOT BEGIN WITHIN TWO (2) YEARS FROM THE DATE OF ISSUANCE OF APPROVAL.

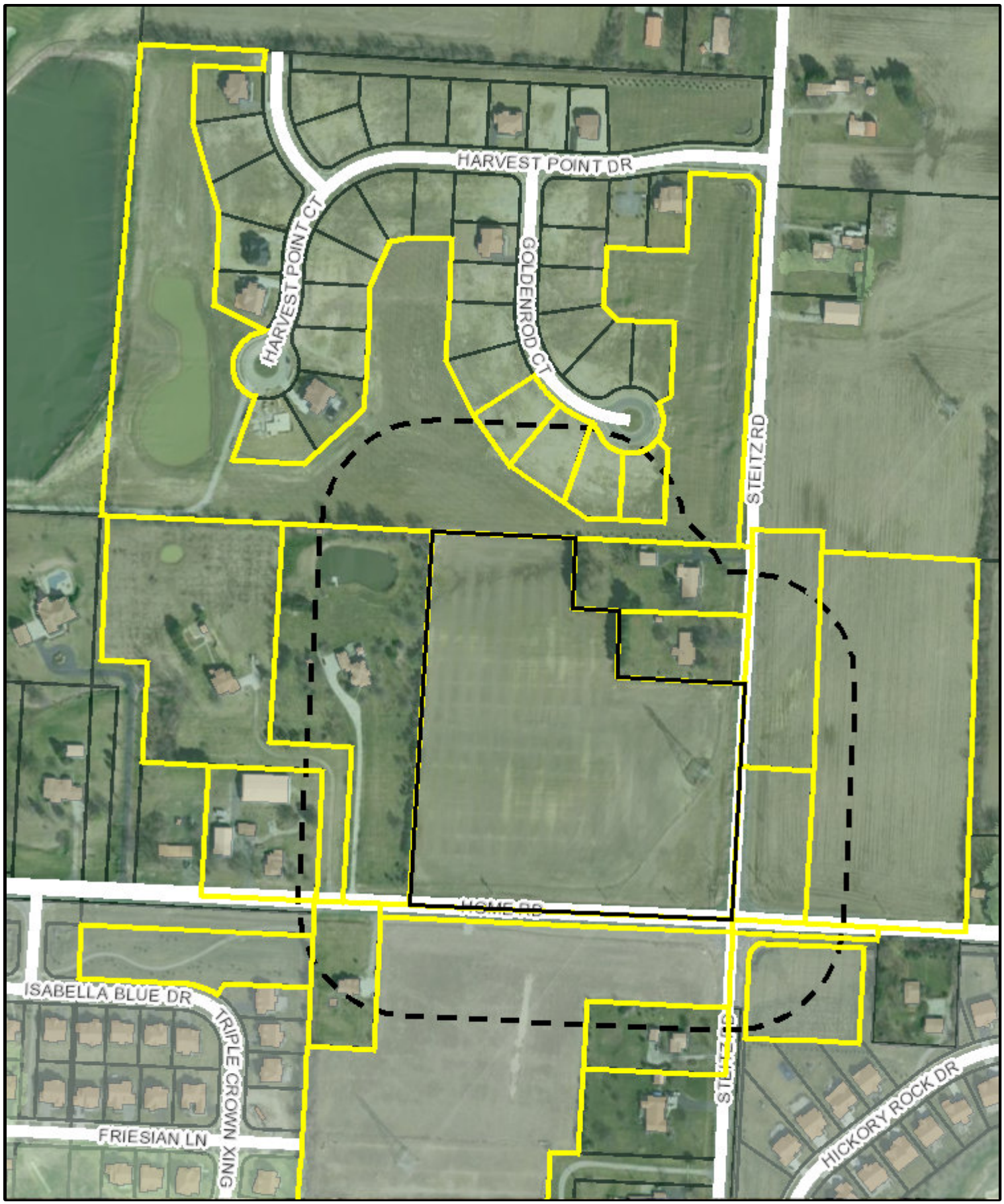
I agree to grant the City Staff, the Commission, Board or Council considering this application access to the property that is the subject of this application for the purposes of reviewing this application and posting public notice for this application.

Signature of Applicant: _____ Date: 4/23/19

Office Use	Office Use
Received	Type/Date: _____ Base Fee: $700.00 Per Acre: $100.00X ( ) = Total: _____ Prepared by: _____ Reviewed by: _____ PAYOR: _____ RECIEPT # _____

City of Powell · 47 Hall Street · Powell, Ohio 43065 · (614) 885-5380 · (614) 885-5339 fax · www.cityofpowell.us

Parcel Number	Owner Name	Address	Market Value	Conveyance Date	Year Built	Bedrooms	Baths	Finished Sq Ft	Acreage
31923001002000	CONRAD JEANNE BRAD	7344 STEITZ RD; POWELL; 43065	194800	6/27/2002	1978	3	2	1450	1
31922027010000	CROWN RIDGE INVESTMENTS LLC	7340 GOLDENROD CT; POWELL; 43065	89100	3/10/2016					0.37
31922027012000	CROWN RIDGE INVESTMENTS LLC	7312 GOLDENROD CT; POWELL; 43065	81000	3/10/2016					0.482
31922027011000	CROWN RIDGE INVESTMENTS LLC	7326 GOLDENROD CT; POWELL; 43065	89100	3/10/2016					0.434
31923002120000	DOODAN JOSEPH E	7514 STEITZ RD; POWELL; 43065	144900	10/27/1997	1901	3	1	1508	1.103
31924010006000	GOLF VILLAGE PROPERTY OWNERS ASSOCIATION		7700	12/17/2013					1.276
31924001041005	HOMEWOOD CORPORATION		0	4/11/2013					0.228
31923002001002	HORSEPOWER FARMS LLC		0	1/31/2019					0.549
31923002001000	HORSEPOWER FARMS LLC	4301 HOME RD; POWELL; 43065	230000	1/31/2019					9.458
31923002001001	JENKINS TRACIE A	4319 HOME RD; POWELL; 43065	264300	4/21/2008	1995	3	2	2258	1.136
31922027013000	KAUFMAN JOHN J & KELLY	7300 GOLDENROD CT; POWELL; 43065	81000	9/28/2018					0.43
31924001039000	PEARL DAVID R @3		26600	8/15/2018					1.28
31924001040000	PEARL DAVID R @3		45200	8/15/2018					2
31924001036000	PEARL DAVID R @3		128600	8/15/2018					7.09
31923001004000	PETZ JONATHAN A & STACEY A	4320 HOME RD; POWELL; 43065	450000	11/15/2013	1992	4	2	3126	5
31923001006000	POWELL AUTO CLUB LLC	4346 HOME RD; POWELL; 43065	211000	11/8/2016	1901	3	1	2291	1.72
31923001001000	PRICE JACK A EULA GAY	7294 STEITZ RD; POWELL; 43065	181900	7/30/2001	1962	3	1	1371	1.5
31923025002000	RESERVE AT SCIOTO GLENN LLC THE		8800	8/28/2014					1.463
31923001005000	ROSI PAOLO GIOVANNI I & CYNTHIA A K	4330 HOME RD; POWELL; 43065	423900	9/28/2018	1994	4	3	3523	5.01
31922027001000	SCIOTO RESERVE MASTER ASSOCIATION INC	0; POWELL; 43065	87000	10/27/2017					14.501
31923001003000	TLK DEVELOPMENT LLC		146200	6/21/1999					11.74



2. Adjacent Property Owners Map

Information contained within this map may be used to generally locate, identify and inventory land parcels within Delaware County.
Delaware County cannot warrant or guarantee the information contained herein, including, but not limited to its accuracy
or completeness. The map parcel lines shown are approximate and this information cannot be constructed or used as a "legal description" of a parcel.
Flood Plain information is obtained from FEMA and is administered by the Delaware County Building Department (740-833-2201).
Please report any errors or omissions to the Delaware County Auditor's office at delcogis@co.delaware.oh.us.
Prepared by: Delaware County Auditor's GIS Office

Printed on 4/23/2019

Delaware County Auditor
George Kaitsa

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W E
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ft

MIDDLEBURY CROSSING
City of Powell, Ohio
Site Narrative

April 2019

The subject property located at the northwest corner of Home Road and Steitz Road in Liberty Township, Delaware County, Ohio, is approximately 11.74 gross acres in size and is currently used as agricultural/farm ground. The parcel has approximately 710 feet of frontage along Home Road to the south and 508 feet of frontage along Steitz Road to the east. A high-tension power line and associated 150-foot wide easement traverse the southeast corner of the tract, occupying approximately 1.84 acres. An existing Del-Co Water raw water line was recently installed within this easement area as well.

Utilities

Public sewer is available on the north side of the property. Del-Co Water public water lines exist along both Home Road and Steitz Road. Electric, natural gas, telephone and cable services are available to the site.

Land Use

While much of the surrounding land in this area has developed over the past 25 years, this property as well as the surrounding properties to the north and east has remained undeveloped because sanitary sewer service was not available. In 2015 sewer was finally extended east of Scioto Reserve to service the Harvest Point project as well as this property. Because this site is situated at the signalized intersection of two major roadways, and because of the high-tension powerline and tower on the parcel, a single-family residential use is not the recommended use for the property. Accordingly, a mixed – use planned commercial project with institutional and multi-family residential components is being proposed for this site.

Proposed Project

This planned mixed-use project is proposed to provide neighborhood services to benefit the local residents of Powell and Liberty Township. The anchor of the project will be a new 25,000+/- square foot Delaware County District Library branch in Subarea A. Subarea B contains up to 14,400 square feet of retail and/or office space along the Home Road frontage to serve the community. Subarea C is a rental residential community of 30 townhomes and 32 garden apartments to provide quality housing options for those residents who choose to rent instead of own. Landscaped mounds are proposed around the perimeter of the property for screening from the adjacent residential properties. The retail and residential components of this project will comingle well with and will provide support for the library branch.

DEVELOPMENT TEXT

for

MIDDLEBURY CROSSING

April 2019

(1) Name, address, and phone number of applicant;

Applicant/Developer
John C. Wicks
Home Steitz, LLC
267 N. Liberty Street
Powell, OH 43065
614-323-7800
john.wicks@rpddllc.com

(2) Name, address, and phone number of registered surveyor, registered engineer and/or urban planner assisting in the preparation of the preliminary development plan;

Planning Professional
Gary B. Smith RLA/CLARB
G2 Planning and Design
720 E. Broad Street, Ste. 200
Columbus, OH 43215
614-390-6149

Engineering Professional
Tom Warner, P.E.
Advanced Civil Design
422 Beecher Road
Gahanna, OH 43230
614-428-7750

Surveying Professional
Douglas R. Hock, P.S.
Advanced Civil Design
422 Beecher Road
Gahanna, OH 43230
614-428-7750

Architectural Professional (Retail and Garden Apartments)
Pete Scott, AIA/CDT
Meyers & Associates
232 N. Third Street, Ste. 300
Columbus, OH 43215
614-221-9433

Architectural Professional (Townhomes)
Joe Sullivan, AIA
Sullivan Bruck Architects, Inc.
8 South Grant Avenue
Columbus, OH 43215
614-464-9800

(3) A list containing the names and mailing addresses of all owners of property contiguous to, directly across the street from and within 250 feet of the property in question. ***see Adjacent Property Owners***

(4) Legal description of the property; ***see Annexation/Boundary Survey and Legal Description***

(5) A description of present use(s) on and of the land; ***The property is presently being farmed with no other uses.***

(6) Draft of a proposed Ordinance, prepared with the advice and counsel of the Director Law, establishing this specific Development Plan as an additional effective zoning control over the land in question, consistent with the continuing authorities of the current Planned District zoning in these areas provided for elsewhere in this Zoning Ordinance. ***Will be submitted by the City of Powell***

(7) A vicinity map at a scale approved by the Zoning Inspector showing all property lines, existing streets and alleys, approved future streets and land uses on adjacent Planned District areas, transportation and land use elements of the Municipality's adopted Comprehensive Plan, current zoning classifications and boundaries, and current land uses on the site of the proposed Planned District development and in the surrounding areas to the physical extent deemed necessary by the Zoning Inspector, but no less than 250 feet beyond the limits of the proposed Planned District Development Plan. ***See Development Plan***

(8) A final development plan at a scale approved by the Zoning Administrator illustrating: ***See Development Plan***

A. The property line definition and dimensions of the perimeter of the site;
B. Right-of-ways and paving widths of all existing, currently platted, and previously approved Planned District streets and alleys adjacent to, on, or abutting the site;
C. The area of the site and its subareas in acres;
D. The topography of the site and abutting areas at no more than five foot contour intervals;
E. Existing surface drainageways and surface sheet flow patterns;
F. Flood plain areas, ravine-bottom areas, and areas of ground slope in excess of six percent;
G. Existing vegetation on the site with specific tree spots for all trees six inches in diameter or greater, measured 24 inches from the ground.
H. Existing easements on the site with notations as to their type, extent, and nature;
I. The location and dimensions of existing utilities on and adjacent to the site, including the nearest sanitary sewer, with manhole invert elevations;
J. Calculation of the maximum residential units permitted on the site under the terms of this Zoning Ordinance, including delineation of the subdistricts of the site upon which these calculations have been made;
K. A final plan for the first, or next, phase of site development illustrating:
    1. New street centerlines, right-of-ways, and street classification types;
    2. Names of existing and proposed streets;

3. Generalized lot and block layouts, indicating and illustrating property lines, minimum lot areas, minimum building setbacks and yards, location and extent of major off-street parking areas, etc.;
4. Subareas of the site to be developed, by land use type, housing types, and housing densities, including subarea statistics;
5. All proposed structures shall be located showing square footage, tenant or user types, and expected entranceways and service or loading areas;
6. Common open areas, public lands, and natural scenic easements, including the area of each;
7. Proposed landscape treatment of the site;
8. Proposed utility patterns and provisions, including sanitary sewer, individual waste disposal systems, storm sewer, trash collection systems, outdoor lighting, and water supply, including relevant easements and engineering feasibility studies or other evidences of reasonableness;
9. Provisions for accommodating surface drainage runoff;
10. Proposed architectural design criteria;
11. Proposed pedestrian/jogging/bicycle pathways and equestrian paths, including locations, dimensions, landscape and construction, including relationships of such pathways to existing and proposed future pathways on surrounding property;
12. Overall site development statistics comparing this plan for development with requirements of this Zoning Ordinance and with the comprehensive plan and indicating that all requirements of this Zoning Ordinance and the comprehensive plan have been met in this preliminary plan and will be met in final development.

L. Projected development schedule by subareas of the entire planned development site, and for the first, or next, phase of development, including land uses, public areas, natural and scenic reserves, streets, buildings, utilities, and other facilities, indicating the relationship of the proposed development to existing and probable uses of surrounding areas during the development timetable***; Below is the anticipated schedule for the planning, design and construction of Subareas B and C of the proposed development. Building construction will begin as close to the completion of infrastructure construction as possible.***

FDP/Zoning Approval	***Spring 2019***
Final Engineering Approval	***Summer 2019***
Begin Site Construction	***Summer/Fall 2019***
Complete Site Construction	***Fall/Winter 2019/2020***
Begin Building Construction	***Spring 2020***

Subarea A will be submitted as a separate FDP by a different Applicant.

M. An overall traffic scheme, illustrating points of access, parking areas, including the number of parking spaces and indicating visitor, employee and service traffic flow, illustrating calculated peak hour traffic use for residents and employees as well as deliveries and other transport and the effect of this traffic on the community traffic ways. ***see Traffic Impact Study***

N. If to be developed in phases, the entire site development shall be described in outline and diagrammatic plan form, and in a complementing detailed text in a manner calculated to assure City officials that Planned Development requirements and other requirements of this Zoning Ordinance shall be met in the detailed development of the phases to follow, and that the entire Planned Development area will meet all of the requirements of this Zoning Ordinance, such diagrams and descriptive texts being accepted with, and becoming a part of the extended zoning plan for the entire site; ***See Development Plan***

(9) Evidences of the ability of the applicant to carry forth its plan by control of the land and the engineering feasibility of the plan, and that the applicant has sufficient control over the land and financing to initiate the proposed development plan phase within two (2) years. ***See Agency Letter for evidence of control over the property. Applicant shall provide financing evidence to City of Powell prior to the approval of Final Engineering.***

(10) Evidence of the applicant's ability to post a bond if the plan is approved. ***Applicant shall provide financing evidence to City of Powell prior to the approval of Final Engineering.***

(11) Verification by the owner of the property that all the information in the application is true and correct to the best of his knowledge. ***The Landowner and Applicant have reviewed the included information in the FDP submittal and believe it to be true and accurate to the best of their knowledge.***

(12) A statement of the character and nature of the development including the cost range or rent levels for housing in residential development and the general types of business or industrial and commercial developments. ***Developer's intended use of the Property is a neighborhood commercial development including but not limited to the following uses: Retail Sales; Convenience Business; Commercial Establishments; Civic Facilities including public library; Office Uses; General Business; Office Type Business; Office Research Centers; Services Business; Personal Services; Child Daycare; Agriculture; Restaurants; Medical or Dental Office Facilities; Hospitals and Clinics; Multi-family Residential housing.***

The following uses shall be prohibited: Nuisance or hazardous materials of any kind whatsoever; Automotive Fuel, Repair or Service Stations; Automotive Sales, New or Used as a primary business; Nightclubs; Adult Entertainment or Bookstores; Storage facilities.

Residential rents are projected to be between $1,050 and $1,600 per month

Retail rents are projected to be between $22 and $28 per square foot.

All rents are subject to market conditions and construction costs.

(13) A statement of the general impact the development will have on the infrastructure, municipality and schools including projected demographics, a traffic impact study and a fiscal impact analysis may be required by the Planning and Zoning Commission. ***The Traffic Impact Study (TIS) outlines the public road improvements required for this this project. The impact to schools from multifamily residential homes at 0.15 students per unit is significantly less than the impact from single family residential homes at approximately 1.0 students per unit. This development would likely generate 9 to 10 students based on this formula.***

(14) A fee as established by ordinance. ***A check in the amount of $1,855.50 has been submitted with this application***

Below are the Divergence Requests for deviations from zoning district standards which were approved with the Preliminary Development Plan:

The proposed Middlebury Crossing is a neighborhood mixed-use development which contains three different uses within one zoning application. As such, the project does not fully comply with the Planned Commercial (PC) development standards. The following Divergences to the PC standards are being requested in order to provide the different uses proposed with Middlebury Crossing.

1. ***Rear Yard Setback. The PC code requires a minimum 30' rear yard setback. This project proposes a 25' perimeter setback for all residential buildings. The 25' setback is necessary due to the geometric restrictions of the site. Dense landscaping within the setback is proposed within the setback for maximum screening to adjacent properties.***
2. ***Building Separation. The PC code requires a minimum of 50' between structures. The Planned Residential (PR) code requires a minimum of 30' between structures. This project proposes 20' between the townhome buildings in 2 locations due to the geometric restrictions of the site. The 20' provided is greater than the minimum 10' distance required by the Ohio Fire Code and is a customary building separation within multi-family developments. The retail buildings are proposed to be constructed as one structure with a continuous roof with breezeway, so no building separation divergence is requested.***
3. ***Sign Setbacks. Per the zoning code, Joint Identification Signs (JIS) are required to be located 25' behind the right-of-way, and Freestanding Signs (FS) are required to be located 15' behind the right-of-way. This project proposes that the "Primary" JIS located at the intersection of Home and Steitz Roads to be 18' from the right-of-way, and the remaining signs on Home Road to be located 5' from the right-of-way. Considering Home Road's 100' right-of-way designation, combined with the fact that the centerline of the pavement is located south of the centerline of the right-of-way, the distance between the edge of pavement and the signs would be much greater than typical, making the signs difficult to see. The reduced sign setbacks will locate the signs approximately 40 feet from the edge of pavement which falls well outside the safety clear-zone requirements and places them in a more conventional location with respect to the road.***
4. ***Parking in Front of Retail Buildings. The intent of the PC district is to place buildings close to the front setback providing parking in the rear. Due to the 150' overhead powerline easement, placing the retail buildings closer to Home Road is impractical and would create internal traffic circulation problems. With the site layout as proposed, the approved access locations function very well, providing excellent internal traffic circulation and cross-access between the different uses within the project.***

Annexation Description
11.555 Acres
North side of Home Road (C.R. 124)
West side of Steitz Road (C.R. 125)
-1-

Situated in the State of Ohio, County of Delaware, Township of Liberty, Farm Lots 15 and 16, Quarter 2, Township 3, Range 19, being a 11.555 acre tract, said 11.555 acre tract being part of Parcel No. 2 as conveyed to TLK Development, LLC of record in Official Record 666, Page 198 and part of a 10.006 acre tract conveyed to Howard R. Vance of record in Official Record 1491, Page 2826 and more particularly described as follows:

Beginning at a northeasterly corner of said Parcel No. 2, being the northwesterly corner of a tract of land conveyed to Jack A Price and Eula Gay Price of record in Official Record 243, Page 481, being in the northerly line of Farm Lot 16 and the southerly line of Farm Lot 30;

Thence **S 03° 26' 31" W,** along an easterly line of said Parcel No. 2, **160.00 feet** to a northeasterly corner thereof;

Thence **S 87° 01' 02" E,** along a northerly line of said Parcel No. 2, **109.50 feet** to a northeasterly corner thereof;

Thence **S 03° 22' 58" W,** along an easterly line of said Parcel No. 2, **150.05 feet** to a northeasterly corner thereof;

Thence **S 87° 00' 57" E,** along a northerly line of said Parcel No. 2, **245.30 feet** to a point, said point being in the westerly right-of-way line of Steitz Road as shown on (Del. C.R. 124-2.77) state Right-of-Way plans;

Thence across said Parcel No. 2 and along said westerly right-of-way line, the following four (4) courses;

S 03° 27' 51" W, 81.77 feet;

S 07° 16' 41" W, 150.34 feet;

S 03° 27' 51" W, 199.99 feet;

S 27° 31' 34" W, 60.83 feet to a point in the northerly right-of-way line of said Home Road as shown on (Del. C.R. 124-2.77);

Thence **S 03° 04' 35" W**, across said Parcel No. 2, across said 10.006 acre tract and across said Home Road, **75.00 feet** to a City of Powell Annexation Line (O.R. 826, Pg. 1463, Ord. No. 2007-58)

Thence **N 86° 55' 25" W,** across said 10.006 acre tract, with the northerly line of said City of Powell Annexation line, **715.53 feet** to a point in the westerly line of said 10.006 acre tract;

Thence **N 04° 02' 05" E,** along the westerly line of said 10.006 acre tract, **30.00 feet** to a northwesterly corner thereof, to the centerline of said Home Road and a common line of said Farm Lot 14 and said Farm Lot 15;

Thence **S 86° 55' 25" E,** along the center line of said Home Road and the common line of said Farm Lot 14 and said Farm Lot 15, **59.27 feet** to a point;

Thence **N 03° 26' 18" E,** across said 10.006 acre tract, across said Home Road and along the westerly line of said Parcel No. 2, **841.02 feet** to a northwesterly corner thereof, being in the northerly line of said Farm Lot 16 and the southerly line of Farm Lot 30;

Annexation Description
11.555 Acres
North side of Home Road (C.R. 124)
West side of Steitz Road (C.R. 125)
-2-

Thence **S 87° 00' 57" E,** along a northerly line of said Parcel No. 2 and along the common line of said Farm Lot 16 and Farm Lot 30, **335.57 feet** to the **True Point of Beginning,** and containing **11.555 acres**, more or less.

Subject, however, to all legal highways, easements, and restrictions. The above description was prepared by Advanced Civil Design, Inc. on April 23, 2018 and is based on existing records from the Delaware County Auditor's and Recorder's Office. A drawing of the above description is attached hereto and made a part thereof.

This description is to be used for annexation purposes only and not to be used in the transfer of land.

The total length of the annexation perimeter is 3214.17 feet, of which 715.53 feet are contiguous with existing City of Powell Corporation lines, being 22% contiguous.

This annexation does not create any islands of township property.

All references used in this description can be found at the Recorder's Office, Delaware County, Ohio.

ADVANCED CIVIL DESIGN, INC.

Douglas R. Hock, P.S. 7661 Date: 5/9/18

Z:\17-0005-579\survey\11.555 ac annexation desc (rev 04-23-18).doc

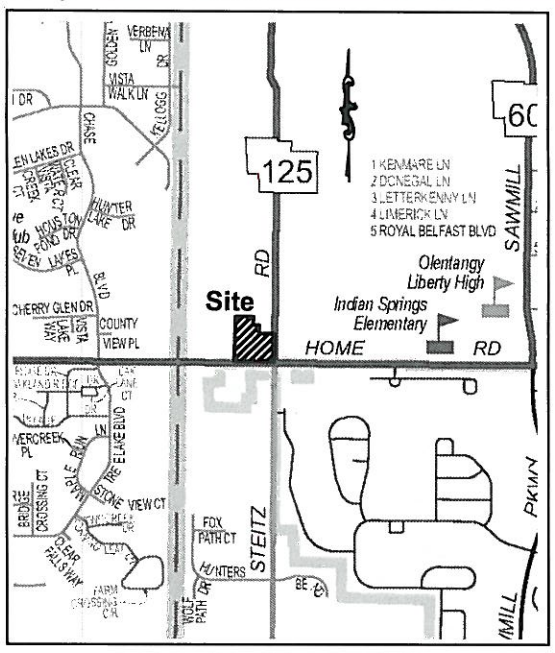
STATE OF OHIO
DOUGLAS R. HOCK S-7661 REGISTERED
PROFESSIONAL SURVEYOR

County Engineer
Delaware County, Ohio

I hereby certify the within to be a true copy of the document that is on file in the Map Department.

CHRIS E. BAUSERMAN, P.E., P.S.
County Engineer

By _____, Date 5/29/18



Location Map – NTS

Map of Territory to be
Annexed to the City of Powell

11.555 ACRE ANNEXATION TO THE CITY OF POWELL FROM TOWNSHIP OF LIBERTY EXPEDITED TYPE II ANNEXATION UNDER ORC §709.021 AND §709.023

Township of Liberty, Delaware County, Ohio
Farm Lots 15 & 16, Section 2,
Township 3, Range 19,
United States Military District

LEGEND

Area to be Annexed

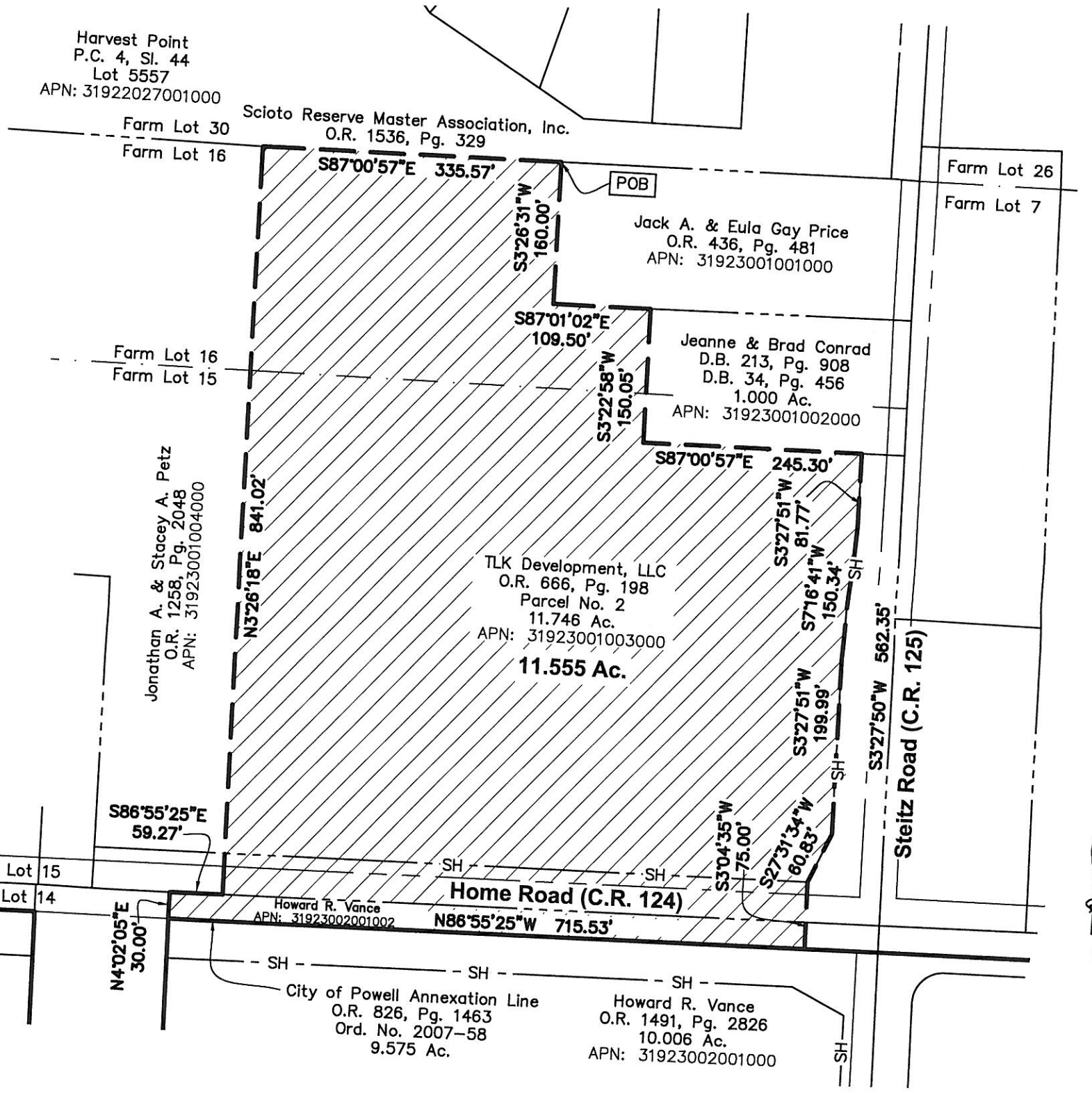
Existing Corp Line

Proposed Corp Line

GRAPHIC SCALE

0 75 150 300

1 inch = 150 feet



Notes:

1.) The number of owners in the territory sought to be annexed is one.
2.) TLK Development LLC, C/O Kim E. Kelsik is located at 5751 Kolb Road, Tucson, Arizona, 85750 and is the petitioner for said proposed annexation.
3.) No islands of unincorporated areas are created by this annexation as defined in ORC 709.023(E)(5).
4.) 715.53' of lineal feet of Home Road (C.R. 124) will be annexed into the City of Powell.

Bearings are based on the Ohio State Plane Coordinate System, North Zone, NAD83 (NSRS2007). Said bearings were derived from GPS observation and determine a portion of the existing centerline of Home Road as having a bearing of N86°55'25"W.

This drawing is based on the existing records from the Delaware County Auditor's office and Delaware County Recorder's office and an actual field survey by Advanced Civil Design, Inc. in April of 2018. A boundary survey for this property has been approved and is on file in the Delaware County Map Department's office.

Length of Contiguity: 715.53 feet
Total Length of Perimeter: 3214.17 feet
Percentage of Contiguity : 22%

STATE OF OHIO
DOUGLAS R. HOCK
S-7661
REGISTERED
PROFESSIONAL SURVEYOR

5/9/18

Douglas R. Hock, P.S. 7661
Advanced Civil Design, Inc
422 Beecher Road
Gahanna, OH 43230
Phone 614-428-7750 Job No.: 17-0005-579 Date: 04/23/2018

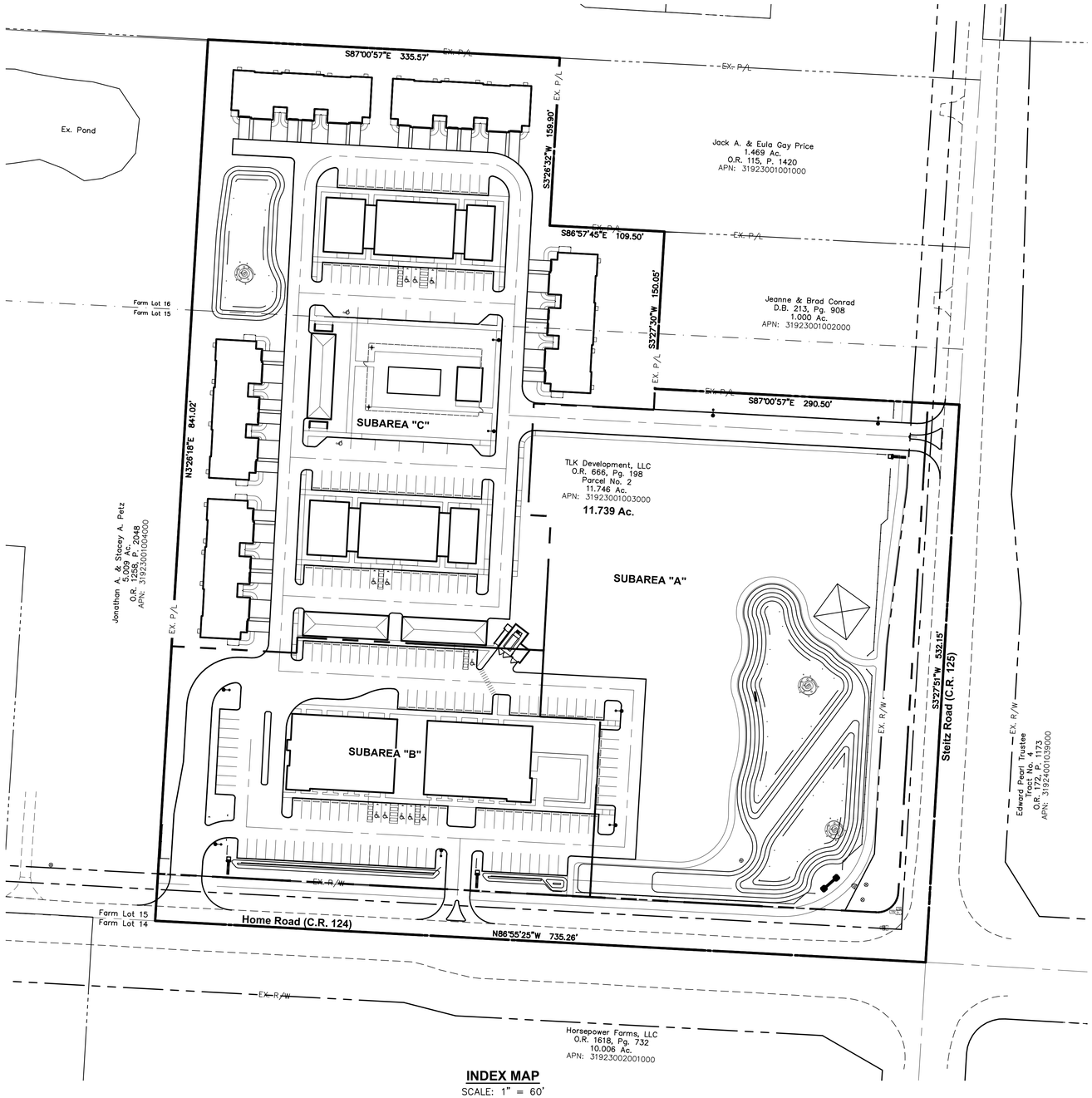
DELAWARE COUNTY ENGINEER
Map Department

I hereby certify the within to be a true copy of the original on file in the Map Department

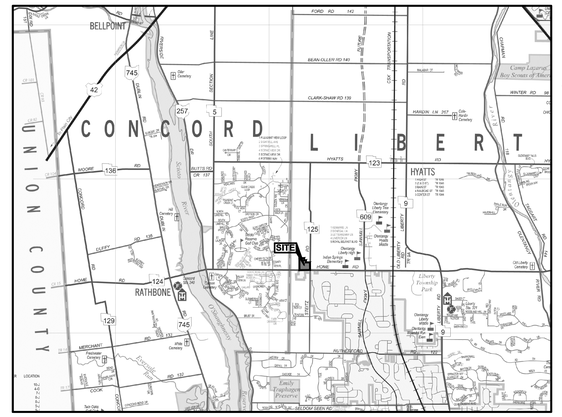
Chris E. Bauserman, P.E., P.S.,
County Engineer

Supervisor , 5/29/18 Date

FINAL DEVELOPMENT PLAN
FOR
MIDDLEBURY CROSSING
CITY OF POWELL, DELAWARE COUNTY, OHIO
2019



INDEX MAP
SCALE: 1" = 60'



LOCATION MAP
SCALE: 1" = 3500'

GRAPHIC SCALE
0 30 60 120
1 inch = 60 feet

SHEET INDEX

DEVELOPER

HOME STEITZ LLC
C/O JOHN WICKS
267 N. LIBERTY STREET
POWELL, OH 43065
PHONE: 614-323-7800
JOHN.WICKS@RPDDLLC.COM

OWNER

TKL DEVELOPMENT, LLC
C/O LIM KELSIK
5751 KOLB ROAD
TUSCON, AZ 85750
PHONE: 614-260-0649
KELSIK@HOTMAIL.COM

LANDSCAPE ARCHITECT

G2 PLANNING AND DESIGN
C/O GARY SMITH
720 E. BROAD STREET, SUITE 200
COLUMBUS, OH 43215
PHONE: 614-390-6149
GSMITH@G2PLANNING.COM

ENGINEER/SURVEYOR

ADVANCED CIVIL DESIGN, INC.
C/O TOM WARNER
422 BEECHER ROAD
GAHANNA, OHIO 43230
PHONE: 614-428-7750
TWARNER@ADVANCEDCIVILDESIGN.COM

SITE STATISTICS

SITE LOCATION: HOME ROAD & STEITZ ROAD, DELAWARE COUNTY, OHIO
PARCEL NUMBER: 040-0055551-00 & 040-005555-00
GROSS ACREAGE: ±11.75 AC.
RIGHT-OF-WAY: ±1.20 AC.
NET ACREAGE: ±10.55 AC.

SUBAREA "A" – FUTURE DELAWARE COUNTY LIBRARY BRANCH
NET ACREAGE: ±3.71 AC.

SUBAREA "B" – COMMERCIAL ESTABLISHMENTS OR OFFICE
NET ACREAGE: ±2.07 AC.

SUBAREA "C" – MULTI-FAMILY RESIDENCES
NET ACREAGE: ±4.86 AC.
62 DWELLING UNITS

THIS IS TO CERTIFY THAT GOOD ENGINEERING PRACTICES HAVE BEEN UTILIZED IN THE DESIGN OF THIS PROJECT AND THAT ALL OF THE MINIMUM STANDARDS AS DELINEATED IN THE GROVE CITY DESIGN, CONSTRUCTION AND SURVEYING STANDARDS MANUAL HAVE BEEN MET, INCLUDING THOSE STANDARDS GREATER THAN MINIMUM WHERE, IN MY OPINION, THEY ARE NEEDED TO PROTECT THE SAFETY OF THE PUBLIC. ANY VARIANCES TO THE ABOVE STANDARDS ARE CONSISTENT WITH SOUND ENGINEERING PRACTICE AND ARE NOT DETRIMENTAL TO THE PUBLIC SAFETY AND CONVENIENCE.

ADVANCED CIVIL DESIGN, INC.
422 BEECHER ROAD
GAHANNA, OH 43230
V: 614.428.7750
F: 614.428.7755

REGISTERED ENGINEER _____ DATE _____

OHIO Utilities Protection SERVICE
Call Before You Dig
800-362-2764 or 8-1-1
www.oups.org

PLAN PREPARED BY:
ADVANCED CIVIL DESIGN
ENGINEERS SURVEYORS
422 Beecher Road
Gahanna, Ohio 43230
ph. 614.428.7750
fax. 614.428.7755

PLAN PREPARED FOR:
HOME STEITZ LLC
267 N. LIBERTY STREET
POWELL, OHIO 43065
CONTACT: JOHN WICKS
PHONE: 614.323.7800
EMAIL: JOHN.WICKS@RPDDLLC.COM

GROVE OF POWELL, DELAWARE COUNTY, OHIO

FINAL DEVELOPMENT PLAN FOR
MIDDLEBURY CROSSING
MIXED USE DEVELOPMENT

TITLE

No.	Revision	Date	Approved

Date: 04/22/2019
Scale: AS NOTED

Drawn By:	Checked By:
CLE	DDD

Project Number:
19-0009-579

Drawing Number:
1 / 7

GENERAL NOTES

1. THE REGULATIONS AND CONSTRUCTION STANDARDS OF THE CITY OF POWELL, TOGETHER WITH THE CURRENT CONSTRUCTION AND MATERIAL SPECIFICATIONS OF THE CITY OF COLUMBUS (COLS) AND THE OHIO DEPARTMENT OF TRANSPORTATION (ODOT), INCLUDING ALL SUPPLEMENTS THERETO, SHALL GOVERN ALL CONSTRUCTION ITEMS THAT ARE A PART OF THIS PLAN UNLESS OTHERWISE NOTED.

2. THE CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE WILL MAKE INSPECTION OF THE WORK. THE CITY ENGINEER WILL REQUIRE AT LEAST 48 HOURS WRITTEN NOTICE BEFORE ANY WORK TAKES PLACE. FAILURE TO REQUEST THE NECESSARY INSPECTION MAY RESULT IN THE REJECTION OF THE WORK AND THE PROJECT.

3. IT IS THE INTENTION OF THE PLANS TO PROVIDE AND REQUIRE A COMPLETED PROJECT READY FOR OPERATION. ANY WORK ITEMS OMITTED FROM THE PLANS, WHICH ARE CLEARLY NECESSARY FOR COMPLETION OF THE WORK, AND ITS APPURTENANCES SHALL BE CONSIDERED A PART OF SUCH WORK, THOUGH NOT DIRECTLY SPECIFIED OR CALLED FOR IN THE PLANS. THIS INCLUDES, BUT IS NOT LIMITED TO SUCH INCIDENTAL ITEMS AS RELOCATION OF MAILBOXES, SAW CUTTING, AND REMOVAL AND/OR RELOCATION OF SIGNS, SPRINKLERS, OR OTHER MISCELLANEOUS ITEMS.

4. ALL ITEMS OF WORK CALLED FOR ON THE PLANS FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS PROVIDED SHALL BE PERFORMED BY THE CONTRACTOR WITH THE COST TO BE INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS RELATED ITEMS.

5. THE CONTRACTOR OR DEVELOPER SHALL DEPOSIT THE TOTAL ESTIMATED COST FOR INSPECTIONS, AS DETERMINED BY THE CITY ENGINEER, WITH THE CITY OF POWELL PRIOR TO THE START OF CONSTRUCTION.

6. THE CONTRACTOR SHALL PROVIDE THE CITY OF POWELL, A SURETY, ACCEPTABLE TO THE CITY OF POWELL, EQUAL TO 100% OF CONSTRUCTION COSTS. THE SURETY SHALL GUARANTEE THE WORK FOR ONE YEAR AFTER ACCEPTANCE BY THE CITY.

7. THE CITY ENGINEER WILL NOT BE RESPONSIBLE FOR MEANS, METHODS, PROCEDURES, TECHNIQUES, OR SEQUENCES OF CONSTRUCTION THAT ARE NOT SPECIFIED HEREIN. THE CITY ENGINEER WILL NOT BE RESPONSIBLE FOR SAFETY ON THE WORK SITE, OR THE FAILURE BY THE CONTRACTOR TO PERFORM WORK ACCORDING TO PLANS.

8. APPROVAL OF THESE PLANS IS CONTINGENT UPON ALL EASEMENTS REQUIRED FOR CONSTRUCTION OF THE WORK BEING SECURED AND SUBMITTED TO THE CITY OF POWELL FOR RECORDING PRIOR TO COMMENCEMENT OF WORK. NO WORK, WHICH REQUIRES AN EASEMENT, WILL BE ALLOWED TO PROCEED UNTIL THIS IS DONE.

9. THE CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL SAFETY REQUIREMENTS INCLUDING THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970. THE CONTRACTOR SHALL EXERCISE PRECAUTION ALWAYS FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT SHALL ALSO BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTION AND PROGRAMS IN CONNECTION WITH THE WORK, INCLUDING THE REQUIREMENTS FOR CONFINED SPACES PER 29 CFR 1910.146.

10. THE CONTRACTOR/DEVELOPER SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS.

11. THE CONTRACTOR SHALL CONFINE HIS ACTIVITIES TO THE PROJECT SITE, EXISTING RIGHT-OF-WAYS, TEMPORARY AND PERMANENT EASEMENTS, AND SHALL NOT ENTER UPON OTHER PROPERTIES WITHOUT WRITTEN PERMISSION OF THE OWNER. IF THE PROPOSED WORK REQUIRES ENTERING EASEMENTS UPON OTHER PROPERTIES, THE CONTRACTOR SHALL NOTIFY THE OWNER(S) IN WRITING NO LESS THAN 72 HOURS IN ADVANCE OF THE COMMENCEMENT OF THE WORK, AND COPY THE CITY ON ALL CORRESPONDENCE. FAILURE TO NOTIFY AFFECTED PROPERTY OWNERS MAY SUBJECT THE CONTRACTOR TO THE PENALTIES ASSOCIATED WITH THE VIOLATION OF POWELL CITY CODE, SECTION 541.05, CRIMINAL TRESPASS.

12. THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCHMARKS, PROPERTY CORNERS, REFERENCE POINTS, STAKES AND OTHER SURVEY REFERENCE MONUMENTS OR MARKERS. IN CASES OF WILLFUL OR CARELESS DESTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE. RESETTING THE MARKERS SHALL BE PERFORMED BY AN OHIO PROFESSIONAL SURVEYOR AS APPROVED BY THE CITY ENGINEER AT THE CONTRACTOR'S EXPENSE.

13. PROPERTY BOUNDARIES, INCLUDING PROPERTY LINES AND ROAD RIGHT-OF-WAY, ARE SHOWN FROM THE BEST INFORMATION AVAILABLE AND ARE NOT NECESSARILY COMPLETE OR CORRECT.

14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE FINISHED WORK CONFORM TO THE LINES, GRADES, ELEVATIONS AND DIMENSIONS CALLED FOR ON THE DRAWINGS AND TYPICAL SECTIONS.

15. ANY DEVICE SHALL NOT BE OPERATED AT ANY TIME IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT. PURSUANT TO POWELL CITY CODE, SECTION 509.08, CONSTRUCTION ACTIVITY IS ONLY PERMITTED BETWEEN THE HOURS OF 7:30 A.M. AND 7:00 P.M. ANY CONSTRUCTION ACTIVITY BEYOND THESE HOURS REQUIRES A WRITTEN REQUEST TO THE DIRECTOR OF PUBLIC SERVICE MEETING THE REQUIREMENTS OF POWELL CITY CODE, SECTION 509.08(B).

16. PAVEMENTS SHALL BE CUT IN NEAT, STRAIGHT LINES THE FULL DEPTH OF THE EXISTING PAVEMENT OR AS REQUIRED BY THE CITY ENGINEER.

17. ALL SOIL SUBGRADE SHALL BE PREPARED AND COMPACTED IN ACCORDANCE WITH ITEM 204 TO A DEPTH OF 12 INCHES BELOW THE SUBGRADE SURFACE. SUBGRADE SHALL BE SCARIFIED AND CONTAIN SUFFICIENT MOISTURE TO MEET ITEM 203 COMPACTION REQUIREMENTS.

18. THE CONTRACTOR IS NOT PERMITTED TO USE ANY RECLAIMED MATERIALS IN ITEM 304.

19. NON-RUBBER TIRED VEHICLES SHALL NOT BE MOVED ON OR ACROSS PUBLIC STREETS OR HIGHWAYS WITHOUT THE WRITTEN PERMISSION OF THE CITY ENGINEER.

20. TRACKING OR SPILLING MUD, DIRT, OR DEBRIS UPON STREETS, RESIDENTIAL OR COMMERCIAL DRIVES, SIDEWALKS OR BIKE PATHS IS PROHIBITED PER POWELL CITY CODE, SECTION 905.12 AND ANY SUCH OCCURRENCE SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR. IF THE CONTRACTOR FAILS TO REMOVE SAID MUD, DIRT, DEBRIS, OR SPILLAGE, THE CITY OF POWELL RESERVES THE RIGHT TO REMOVE THESE MATERIALS AND CLEAN AFFECTED AREAS, THE COST OF WHICH SHALL BE PAID BY THE CONTRACTOR/DEVELOPER PER POWELL CITY CODE, SECTION 905.13.

21. DURING CONSTRUCTION THE CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE AND PROPER SOIL EROSION CONTROL MEASURES FOR PROTECTION OF ALL ADJACENT ROADS AND LANDS, PER COLS ITEM 207.

22. THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO EQUAL OR BETTER THAN EXISTED BEFORE CONSTRUCTION. DRAINAGE DITCHES OR WATERCOURSES THAT ARE DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO THE GRADES AND CROSS-SECTIONS THAT EXISTED BEFORE CONSTRUCTION.

23. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO MAINTAIN AT ALL TIMES SEWER, DRAIN, AND DITCH FLOWS THROUGH EXISTING FACILITIES TO REMAIN IN PLACE AND THROUGH EXISTING FACILITIES TO BE REPLACED UNTIL NEW FACILITIES ARE COMPLETED AND PUT INTO SERVICE. THE CONTRACTOR, TO A CONDITION SATISFACTORY TO THE CITY ENGINEER, SHALL RESTORE THE FLOW OF ALL SEWERS, DRAINS, AND OTHER WATERCOURSES DISTURBED DURING THE PROSECUTION OF THE WORK.

24. ANY MODIFICATION OF THE WORK AS SHOWN ON THESE DRAWINGS MUST HAVE PRIOR WRITTEN APPROVAL BY THE POWELL CITY ENGINEER.

25. THE CONTRACTOR SHALL CALL TOLL FREE, THE OHIO UTILITIES PROTECTION SERVICE (OUPS) AT 1-800-362-2764 SEVENTY-TWO (72) HOURS IN ADVANCE OF THE ANTICIPATED START OF CONSTRUCTION, AND SHALL NOTIFY ALL UTILITY COMPANIES AT LEAST FORTH-EIGHT (48) HOURS PRIOR TO WORK IN THE VICINITY OF THEIR LINES.

UTILITY	OWNER	TELEPHONE
TELEPHONE	AT&T 111 NORTH FRONT STREET COLUMBUS, OH 43215 CONTACT: RON C HARRISON	(614) 223-6790
ELECTRIC	AMERICAN ELECTRIC POWER 850 TECH CENTER DRIVE GAHANNA, OH 43230-6605 CONTACT: ANDY WAINWRIGHT	(614) 883-6821
GAS	COLUMBIA GAS 920 WEST GOODALE BLVD. COLUMBUS, OH 43215 CONTACT: JODY BEAVER	(614) 460-5400
CABLE TELEVISION	TIME WARNER CABLE 1266 DUBLIN ROAD P.O. BOX 2553 COLUMBUS, OH 43216-2553 CONTACT: GREG MILLER	(614) 348-1539

26. EXISTING UTILITIES SHOWN ON THE PLAN ARE FROM THE BEST AVAILABLE RECORDS AND FIELD INVESTIGATION AND ARE NOT NECESSARILY COMPLETE OR CORRECT. THE CONTRACTOR IS RESPONSIBLE FOR THE INVESTIGATION, LOCATION, SUPPORT, PROTECTION AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES WHETHER SHOWN OR NOT.

27. THE CONTRACTOR SHALL EXPOSE AND VERIFY THE LOCATION AND ELEVATION OF ANY UTILITIES WITHIN THE LIMITS OF THE PROPOSED CONDUIT PATH, PRIOR TO STARTING ANY EXCAVATION. IN CASE OF CONFLICT, ADJUSTMENTS IN LOCATION AND ELEVATION OF THE PROPOSED UTILITIES MAY BE MADE IF APPROVED PER GENERAL NOTE #24, OR ARRANGEMENTS SHALL BE MADE TO MOVE THE EXISTING UTILITY TO PROVIDE ADEQUATE CLEARANCE.

28. MAINTAIN THREE (3) FEET HORIZONTAL AND ONE (1) FOOT VERTICAL SEPARATION FROM ALL SEWER AND WATER LINES.

29. EXISTING DRAIN TILES ENCOUNTERED DURING CONSTRUCTION SHALL BE RECONNECTED OR CONNECTED TO THE STORM SEWER SYSTEM BY THE CONTRACTOR, AS APPROVED BY THE CITY ENGINEER. THE COST OF SAID WORK TO BE INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS RELATED ITEMS.

30. ALL TRENCHES WITHIN PAVEMENT, BERM, AND SHOULDER LIMITS SHALL BE BACKFILLED OR SECURELY PLATED DURING NON-WORKING HOURS.

31. ACCESS TO ALL ADJOINING PROPERTIES SHALL BE MAINTAINED AT ALL TIMES. AREAS WITH MULTIPLE DRIVES SHALL HAVE AT LEAST HALF OF THE DRIVES OPEN AT ALL TIMES. PROPERTIES WITH A SINGLE ACCESS WILL REQUIRE STAGED CONSTRUCTION; SHORT-TERM FULL CLOSURE OF A SINGLE ACCESS WILL BE PERMITTED WITH THE PROPERTY OWNER AND/OR TENANT'S AGREEMENT. SUCH FULL CLOSURES SHALL BE SCHEDULED AND COORDINATED WITH THE PROPERTY OWNER/TENANT.

32. AT ALL UTILITY CROSSINGS THE TRENCH BACKFILL SHALL CONSIST OF COMPACTED GRANULAR MATERIAL, COLS ITEM 912, BETWEEN THE DEEPER AND SHALLOWER PIPE.

33. COMPACTED GRANULAR MATERIAL, COLS ITEM 912 SHALL CONSIST OF NATURAL, BROKEN OR CRUSHED STONE, CRUSHED GRAVEL, OR CRUSHED SLAG. SYNTHETIC OR MAN-MADE MATERIALS ARE UNACCEPTABLE.

34. BACKFILL FOR TRENCHES UNDER PAVEMENT AND WITHIN THE RIGHT-OF-WAY SHALL BE COMPACTED GRANULAR MATERIAL, COLS ITEM 912, TO THE PAVEMENT SUBGRADE. WHERE TRENCHES CROSS THE PAVEMENT, COLS ITEM 912 SHALL EXTEND THE FULL WIDTH OF THE RIGHT-OF-WAY, AND TO WITHIN 6 INCHES OF FINISHED GRADE WHERE NOT UNDER PAVEMENT.

35. BACKFILL FOR TRENCHES PARALLEL TO THE PAVEMENT AND WITHIN THE RIGHT-OF-WAY, WITH THE TOP OF THE TRENCH 3 FEET OR CLOSER TO THE BACK OF CURB OR EDGE OF PAVEMENT OR LOCATED UNDER A PEDESTRIAN PATHWAY, SHALL BE COMPACTED GRANULAR MATERIAL, COLS ITEM 912, TO WITHIN 6 INCHES OF FINISHED GRADE. BACKFILL FOR ALL OTHER TRENCHES WITHIN THE RIGHT-OF-WAY PARALLEL TO THE PAVEMENT, SHALL BE SHALL BE COMPACTED BACKFILL, COLS ITEM 911, EXCEPT THAT COMPACTION SHALL BE TO MINIMUM 9 PERCENT MAXIMUM DRY DENSITY. PRIOR TO CONSTRUCTION OF THE STREETS, THE CITY ENGINEER MAY REQUIRE SOIL TESTS ON THE BACKFILL. WHERE TEST RESULTS INDICATE THAT THE BACKFILL DOES NOT MEET COMPACTION REQUIREMENTS THE BACKFILL SHALL BE REMOVED, REPLACED, AND RE-TESTED UNTIL MEETING THOSE REQUIREMENTS.

36. THE CONTRACTOR SHALL INSTALL STREET LIGHTS AT THE LOCATIONS SHOWN ON THE PLANS, INCLUDING ALL WIRING AND DISCONNECTS AND PROVIDE A COMPLETE OPERATING LIGHTING SYSTEM THAT COMPLIES WITH THE CITY OF POWELL SPECIFICATIONS.

37. ALL AREAS FOR UNDERGROUND ELECTRIC AND STREET LIGHTING ELECTRIC, TELEPHONE, AND CABLE TV INSTALLATIONS SHALL BE BROUGHT TO FINISHED GRADE, AS SHOWN ON THE GRADING PLAN, PRIOR TO THEIR BEING INSTALLED. ALL FILL REQUIRED SHALL BE COMPACTED IN ACCORDANCE WITH COLS ITEM 203.12, CONDITION 1. THIS WORK SHALL BE PERFORMED AS PART OF THIS PLAN AND THE COST SHALL BE INCLUDED UNDER ITEM 203.

38. ALL SEEDING SHALL BE APPLIED AT THE RATE OF 8 POUNDS (LB.) PER 1,000 SQUARE FEET (SF) AND SHALL USE THE FOLLOWING SEED MIXTURE:

40% TITIAN TALL FESCUE
40% TARHEEL TALL FESCUE
10% DENIM KENTUCKY BLUEGRASS
10% RENAISSANCE PERENNIAL RYE GRASS

39. COMMERCIAL-GRADE COMPLETE FERTILIZER OF NEUTRAL CHARACTER, CONSISTING OF FAST, AND SLOW RELEASE NITROGEN, 50% DERIVED FROM NATURAL ORGANIC SOURCES OF UREA-FORM, PHOSPHOROUS, AND POTASSIUM AND WITH THE FOLLOWING COMPOSITION SHALL BE APPLIED:

COMPOSITION: 13% NITROGEN, 26% PHOSPHOROUS, AND 12% POTASSIUM BY WEIGHT

FERTILIZER SHOULD BE APPLIED AT THE RATE OF 6 POUNDS (LB.) PER 1,000 SQUARE FEET (SF).

40. ALL SIGNS, LANDSCAPING, STRUCTURES OR OTHER APPURTENANCES DISTURBED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED OR REPAIRED TO THE SATISFACTION OF THE CITY ENGINEER. THE CONTRACTOR SHALL PAY FOR THE COST OF THIS WORK.

GENERAL NOTES FOR STORM SEWERS

1. ANY MODIFICATION OF THE WORK AS SHOWN ON THESE DRAWINGS MUST HAVE PRIOR WRITTEN APPROVAL BY THE POWELL CITY ENGINEER.

2. THE PROPOSED SANITARY SEWERS AND SERVICES ARE TO BE CONSTRUCTED UNDER PLAN P PRIOR TO STREET IMPROVEMENTS.

3. BEFORE THE CONTRACTOR STARTS ANY WORK ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE OF ANY WORK, REPRESENTATIVES OF THE CITY AND THE CONTRACTOR SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS THAT ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. THE CITY SHALL KEEP RECORDS OF THE INSPECTION IN WRITING.

4. ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. THE CONTRACTOR, TO THE SATISFACTION OF THE CITY ENGINEER, SHALL CORRECT ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS.

5. PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT CONTRACT ITEMS.

6. ALL STORM SEWERS CONSTRUCTED UNDER THIS PLAN SHALL MEET THE REQUIREMENTS OF COLS ITEM 901,WITH A MINIMUM INSIDE DIAMETER OF 12 INCHES.

7. ALL NEW CONDUITS, CATCH BASINS AND MANHOLES CONSTRUCTED, AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEANED CONDITION BEFORE THE CITY WILL ACCEPT THE PROJECT.

8. ALL INLETS, CATCH BASINS, AND MANHOLES SHALL BE CHANNELIZED.

9. ROADWAY UNDERDRAINS SHALL BE DISCHARGED INTO THE NEAREST STORM STRUCTURE AVAILABLE ALONG THE LINE OF FLOW UNLESS SHOWN OTHERWISE ON THE PLANS.

10. THE CONTRACTOR SHALL ADJUST ALL EXISTING AND PROPOSED CASTINGS TO MATCH THE SURROUNDING FINISHED GRADE. THE COST OF ALL CASTING ADJUSTMENTS SHALL BE INCLUDED IN THE VARIOUS SEWER ITEMS.

11. ALL DRAINAGE SWALES ALONG REAR LOT LINES, SHOWN ON THE GRADING PLAN, SHALL BE CONSTRUCTED TO FINISHED GRADE AS PART OF THIS PLAN AND THE COST SHALL BE INCLUDED UNDER COLS ITEM 203.

12. ALL STORM WATER DETENTION/RETENTION AREAS SHOWN ON THE GRADING PLAN SHALL BE CONSTRUCTED TO FINISHED GRADE PER COLS ITEM 203, HYDRO-SEEDED, AND HYDRO-MULCHED PER COLS ITEM 659, AS PART OF THIS PLAN. THE COST SHALL BE INCLUDED AS A LUMP SUM UNDER SPECIAL, DETENTION/RETENTION AREA CONSTRUCTION.

13. THE CONTRACTOR SHALL PROVIDE TWO ROOF DRAIN OPENINGS IN THE CURB FOR EACH LOT, LOCATED AS DIRECTED BY THE OWNER.

14. ALL CATCH BASINS ARE TO BE EQUIPPED WITH EAST JORDAN #5110, TYPE M3 GRATES, OR APPROVED EQUAL.

15. UPON COMPLETION OF CONSTRUCTION FOR EACH PHASE OF STORM SEWER WORK, THE DEVELOPER, THROUGH ITS ENGINEER, SHALL FURNISH THE CITY ENGINEER A TABULATION OF STRUCTURE NUMBERS, THE ELEVATION OF THE TOP OF CASTING AS PROPOSED ON THE PLANS, AND THE ELEVATION OF THE TOP OF CASTING, AS BUILT. FURTHER, A TABULATION OF STATIONING AND TOP OF CURB ELEVATION, AS BUILT, AT THE ENDS OF ALL STREETS, THAT ARE TO BE EXTENDED IN THE FUTURE, SHALL BE SUBMITTED. THE CITY ENGINEER WILL DETERMINE ADJUSTMENTS, IF ANY, THAT ARE NECESSARY AND ALL NECESSARY ADJUSTMENTS SHALL BE DONE PRIOR TO SUBMITTAL OF "AS BUILT" DRAWINGS.

16. THE ORIGINAL TRACINGS, REVISED "AS BUILT", AND TWO SETS OF PRINTS SHALL BE GIVEN TO THE CITY PRIOR TO ANY TAP PERMITS BEING ISSUED, OR ACCEPTANCE BY THE CITY FOR THE ONE YEAR MAINTENANCE PERIOD. THE INFORMATION SHOWN ON THE "AS BUILT" PLANS SHALL BE FROM FIELD MEASUREMENTS. WATER SERVICES AND MAIN LINE VALVES SHALL BE LOCATED BY STREET STATIONING. TOP OF CASTING ELEVATIONS FOR ALL STORM SEWER STRUCTURES AND ANY VARIANCE IN THE HORIZONTAL LOCATION OF THE UTILITIES FROM THAT SHOWN ON THE APPROVED PLANS, SHALL BE SHOWN.

DEL-CO WATER COMPANY
GENERAL NOTES FOR WATER LINE CONSTRUCTION **REVISED: MAY 3, 2016**

1. GENERAL NOTES AS MODIFIED BY DEL-CO AND SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS SHALL SUPERSEDE THE REQUIREMENTS OF THE DEL-CO WATER COMPANY CONSTRUCTION STANDARDS MANUAL WHEREVER DISCREPANCIES OCCUR.

2. STANDARD GENERAL NOTES:

A. WATER LINE DESIGN, MATERIALS, AND INSTALLATION METHODS SHALL CONFORM TO APPLICABLE SECTIONS OF RECOMMENDED STANDARDS FOR WATER WORKS (TEN STATES STANDARDS), AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS, AND THE DEL-CO WATER COMPANY CONSTRUCTION STANDARDS MANUAL. CONTRACTOR SHALL OBTAIN A COPY OF THE STANDARDS AND HAVE IN THEIR POSSESSION AT ALL TIMES DURING CONSTRUCTION. COORDINATE WORK WITH DEL-CO WATER (740) 548-7746.

B. DEL-CO.'S SIGNATURE ON THIS PLAN SIGNIFIES ONLY CONCURRENCE WITH THE GENERAL PURPOSE AND LOCATION OF THE PROPOSED WATER LINE IMPROVEMENTS. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER WHO PREPARED AND CERTIFIED THESE PLANS. DEL-CO WATER COMPANY TAKES NO RESPONSIBILITY, FINANCIAL OR OTHERWISE, REGARDING ERRORS IN THIS PLAN.

C. CORRECTION OF ERRORS SHALL BE TO THE APPLICABLE DEL-CO WATER COMPANY STANDARD, AND THE SOLE RESPONSIBILITY OF THE DEVELOPER. ALL CORRECTIONS, OR REVISIONS THAT AFFECT DEL-CO.'S WATER LINE PLANS, DIRECTLY OR INDIRECTLY SHALL BE SUBMITTED TO, AND APPROVED BY DEL-CO WATER COMPANY PRIOR TO REVISIONS BEING ISSUED.

D. GPS COORDINATES SHALL BE PROVIDED TO DEL-CO WATER AT THE COMPLETION OF THE WATERLINE INSTALLATION. THESE COORDINATES SHALL INCLUDE ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO OBTAIN HORIZONTAL AND VERTICAL (NORTHING, EASTING AND ELEVATION) SURVEY COORDINATES FOR THE WATER MAIN IMPROVEMENTS. THE SURVEY COORDINATES SHALL BE OBTAINED AT THE COMPLETION OF THE WATER MAIN INSTALLATION AND SHALL INCLUDE ALL VALVES, TEES, FIRE HYDRANTS, BENDS, PLUGS, REDUCERS, TAPPED TEES, CURB STOPS, AIR RELEASES, 2" END OF LINE FIRE HYDRANTS, ENDS OF CASING PIPE, SERVICE SADDLES AND CORPORATIONS. ADDITIONAL GPS COORDINATES ARE REQUIRED ON THE WATER MAIN EVERY 200' WHERE NO FITTINGS OR SERVICE SADDLES ARE TO BE INSTALLED.

I. GPS COORDINATES SHALL BE REFERENCED TO THE APPLICABLE COUNTY ENGINEER'S MONUMENTS AND SHALL BE BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD 83) WITH THE NSRS2007 ADJUSTMENT, WITH FURTHER REFERENCE MADE TO THE OHIO STATE PLANE NORTH COORDINATE SYSTEM, NORTH ZONE, WITH ELEVATIONS BASED ON NAVD 88 DATUM. ALL COORDINATES (NORTHING, EASTING AND ELEVATION) SHALL BE REFERENCED TO THE NEAREST HUNDREDTH. ALL SURVEY COORDINATES SHALL BE ACCURATE TO WITHIN 0.6 FOOT OR LESS HORIZONTAL AND VERTICAL.

II. THE GPS COORDINATES SHALL BE SUBMITTED TO THE DEL-CO WATER ENGINEERING DEPARTMENT IN DIGITAL SPREADSHEET FORM AND SHALL INCLUDE THE APPLICABLE ITEM, STATION, NORTHING, EASTING AND ELEVATION COORDINATES. THE ABOVE LISTED GPS COORDINATE INFORMATION SHALL BE SUBMITTED TO THE DEL-CO WATER ENGINEERING DEPARTMENT AS PART OF THE AS-BUILT DRAWING SUBMITTAL.

E. AS-BUILT DRAWINGS ARE REQUIRED FOLLOWING THE COMPLETION OF CONSTRUCTION. ONE SET OF DRAWINGS MARKED "AS-BUILT" SHALL BE SUBMITTED BY THE DEVELOPER TO DEL-CO'S INSPECTION DEPARTMENT FOR REVIEW AND APPROVAL. WATER MAINS CANNOT RECEIVE A FINAL ACCEPTANCE UNTIL AS-BUILT DRAWINGS HAVE BEEN APPROVED. PLEASE NOTE: TAPS MAY NOT BE PURCHASED NOR INSTALLED UNTIL WATER LINES HAVE RECEIVED A FINAL ACCEPTANCE.

F. WATER MAINS SHALL BECOME THE OWNERSHIP OF DEL-CO WATER UPON FINAL ACCEPTANCE.

G. WATER LINE CONSTRUCTION PLANS ARE APPROVED FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE APPROVAL LETTER OR SIGNED PLANS. IF CONSTRUCTION HAS NOT STARTED WITHIN ONE YEAR OF THE DATE OF APPROVAL, PLANS SHALL BE RESUBMITTED TO DEL-CO WATER COMPANY FOR APPROVAL.

3. WATER LINE CONSTRUCTION:

A. WATER LINES SHALL BE NSF 61 APPROVED, AND COMPLIANT WITH ASTM D2241 & OHIO EPA ENG-08-001 STANDARDS.

B. USE THE FOLLOWING TYPE AND CLASS OF PIPE UNLESS OTHERWISE INDICATED ON THE DRAWINGS:
I. 2-INCH WATER LINE PIPE: CLASS 200 SDR 21 YELOMINE PVC (RESTRAINED JOINT).
II. 4-INCH WATER LINE PIPE: CLASS 200 SDR 21 PVC.
III. 6-INCH WATER LINE PIPE: CLASS 200 SDR 21 PVC.
IV. 8-INCH TO 12-INCH WATER LINE PIPE: CLASS 160 SDR 26 PVC.
V. 16-INCH AND LARGER WATER LINE PIPE: AWWA C151 CLASS 52 DIP.
VI. 4-INCH PIPE AND LARGER USED FOR FIRE SERVICE: AWWA C900 DR 18 (150 PSI) PVC.
VII. ALL SIZES OF DEL-CO-OWNED WATER LINES USED ON MASTER METER PROJECTS: CLASS 200 SDR 21 PVC.

C. ALL FITTINGS SHALL BE MECHANICAL JOINT CONFORMING TO AWWA C153.

D. CROSSES SHALL NOT BE USED WITHOUT APPROVAL OF DEL-CO WATER COMPANY.

E. ALL VALVES SHALL BE MECHANICAL JOINT CONFORMING TO AWWA WITH AISI 304 STAINLESS STEEL EXTERNAL HARDWARE. VALVES 12-INCH AND SMALLER SHALL BE RESILIENT-SEATED GATE VALVES PER AWWA C509 AND VALVES 16-INCH AND LARGER SHALL BE PRATT GROUNDHOG BUTTERFLY VALVES PER AWWA C504.

F. PROVIDE HEAVY-DUTY VALVE BOXES ON ALL HOT-TAPS AND AT VALVES LOCATED UNDER GRAVEL OR PAVEMENT SURFACES.

G. TOP OF VALVE BOX SHALL BE FLUSH WITH FINISHED GRADE IN PAVED AREAS, AND 4 INCHES ABOVE FINISHED GRADE IN NON-PAVED AREAS.

H. MAINTAIN A MINIMUM 10-FOOT HORIZONTAL AND 1.5-FOOT VERTICAL SEPARATION BETWEEN WATER LINES AND SANITARY AND STORM SEWERS.

I. ALL OTHER BURIED UTILITIES SHALL MAINTAIN A MINIMUM 5-FOOT HORIZONTAL SEPARATION, AND 2-FOOT VERTICAL SEPARATION FROM THE CENTERLINE OF WATER LINES AS FINALLY LAID AND CONSTRUCTED.

J. PROVIDE CONCRETE THRUST BLOCKING FOR ALL FITTINGS, VALVES, ANCHOR TEES, AND HYDRANTS.

K. BURY WATER LINES A MINIMUM DEPTH OF 48-INCHES TO THE TOP OF PIPE.

L. ALL ENGINEERED FILL TO BE PLACED OVER OR UNDER DEL-CO WATER LINES SHALL BE IN PLACE PRIOR TO THE CONSTRUCTION OF THE WATER LINES.

M. PLACE A 5-FOOT STEEL FENCE POST OR 4"X4" WOOD POST AT VALVES AND THE ENDS OF LINES. PAINT BLUE.

N. TRACER WIRE:
I. INSTALL COPPERHEAD® OR EQUAL 12-GAUGE HIGH STRENGTH 452LB BREAK STRENGTH 30 MIL HDPE JACKET, COPPER-CLAD, STEEL REINFORCED TRACER WIRE ON ALL WATER MAIN AND SERVICE LINES INSTALLED BY TRENCHING METHODS.

II. INSTALL COPPERHEAD® OR EQUAL 12-GAUGE EXTRA HIGH STRENGTH 1150LB BREAK STRENGTH 45 MIL HDPE JACKET, COPPER-CLAD, STEEL REINFORCED TRACER WIRE ON ALL WATER MAIN AND SERVICE LINES INSTALLED BY BORING METHODS.

III. FASTEN WIRE TO PIPE IN TWO PLACES PER PIPE SECTION. EXTEND TRACER WIRE TO GROUND SURFACE AT ALL VALVES AND HYDRANTS AS SHOWN IN THE DEL-CO STANDARD DETAIL. SPLICE WIRES USING BURNDY COPPER SPLIT BOLT KS-15. THOROUGHLY WRAP THE CONNECTOR AND BARE WIRES WITH 3M TEMFLEX 2155 RUBBER SPLICING TAPE, COVER ENTIRE CONNECTION WITH SCOTCH SUPER 88 HEAVY DUTY GRADE ELECTRICAL TAPE.

IV. CONNECT ALL SERVICE LINE WIRES TO MAIN LINE WIRES USING BURNDY COPPER SPLIT BOLT KS-15. THOROUGHLY WRAP THE CONNECTOR AND BARE WIRES WITH 3M TEMFLEX 2155 RUBBER SPLICING TAPE, COVER ENTIRE CONNECTION WITH SCOTCH SUPER 88 HEAVY DUTY GRADE ELECTRICAL TAPE.

CONTRACTOR SHALL TEST THE CONTINUITY OF ALL WIRE USING A THIRD-PARTY TESTER.

PLAN PREPARED BY:
ADVANCED CIVIL DESIGN ENGINEERS SURVEYORS
422 Beecher Road
Gahanna, Ohio 43230
ph 614.428.7750
fax 614.428.7755

PLAN PREPARED FOR:
HOME STEITZ LLC
267 N. LIBERTY STREET
POWELL, OHIO 43065
CONTACT: JOHN WICKS
PHONE: 614.323.7800
EMAIL:JOHN.WICKS@RPDDLLC.COM

GROVE OF POWELL, DELAWARE COUNTY, OHIO

FINAL DEVELOPMENT PLAN FOR
MIDDLEBURY CROSSING
MIXED USE DEVELOPMENT

GENERAL NOTES

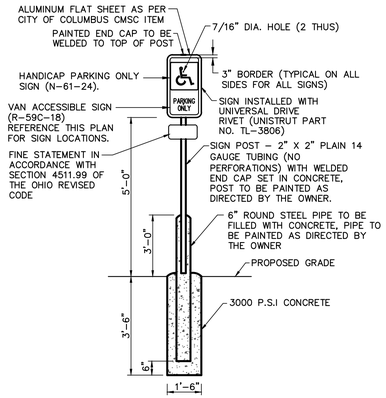
No.	Revision	Date	Approved

Date: 04/22/2019
Scale: AS NOTED

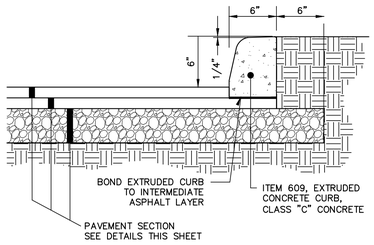
Drawn By: CLE
Checked By: DDD

Project Number:
19-0009-579

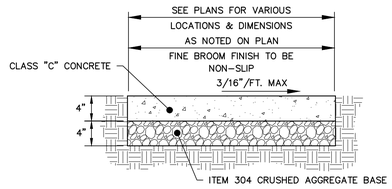
Drawing Number:
2 / 7



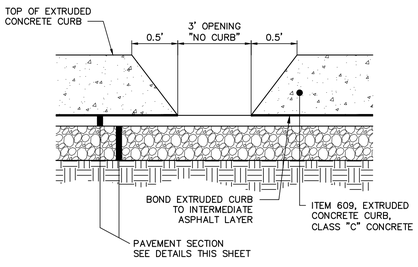
ACCESSIBLE PARKING SIGN DETAIL
NO SCALE



EXTRUDED CONCRETE CURB
NO SCALE

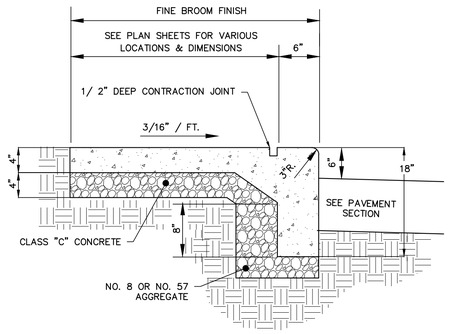


CONCRETE SIDEWALK SECTION
NO SCALE

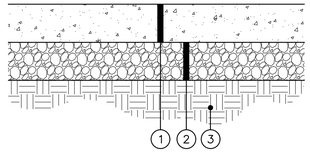


CURB OPENING DETAIL
NO SCALE

SIDEWALK JOINTS SHALL BE IN ACCORDANCE WITH THE ARCHITECTURAL SPECIFICATIONS.



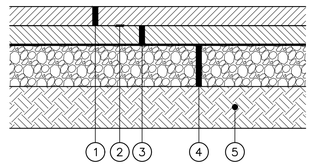
COMBINED CURB AND WALK
NO SCALE



1. ITEM 451, 8" REINFORCED P.C. CONCRETE PAVEMENT (CLASS C)
2. ITEM 304, 6" CRUSHED AGGREGATE BASE
3. ITEM 204, SUBGRADE COMPACTION

NOTES:
1. ALL PAVEMENT MATERIAL SHALL CONFORM TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS.
2. THE PAVEMENT SECTIONS ARE A RECOMMENDATION ASSUMING SUITABLE SOIL CONDITIONS. ACD RECOMMENDS THAT A GEOTECHINCAL ENGINEER REVIEWS THE SOIL CONDITIONS AND MAKES A FINAL RECOMMENDATION FOR THE SUBGRADE AND PAVEMENT SECTION.

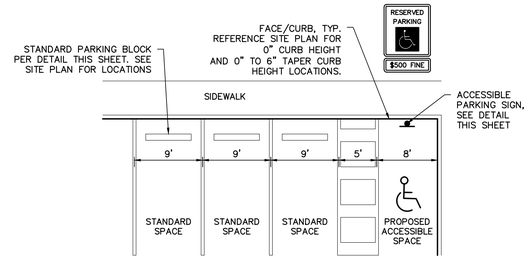
CONCRETE DUMPSTER PAD SECTION
NO SCALE



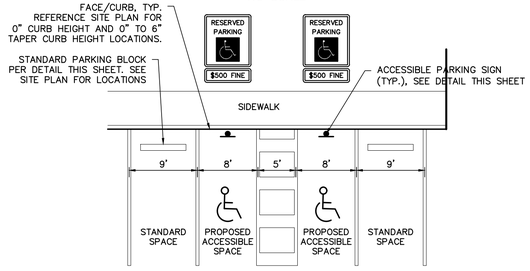
	LIGHT DUTY (LD)	HEAVY DUTY (HD)
1	ITEM 441, 1-1/2" ASPHALT CONCRETE SURFACE COURSE, MEDIUM TRAFFIC, PG64-22	ITEM 441, 1-1/2" ASPHALT CONCRETE SURFACE COURSE, MEDIUM TRAFFIC, PG64-22
2	ITEM 407, TACK COAT (0.15-0.20 GAL/SQ. YD.)	ITEM 407, TACK COAT (0.15-0.20 GAL/SQ. YD.)
3	ITEM 441, 1-1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, MEDIUM TRAFFIC, PG64-22	ITEM 441, 2-1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, MEDIUM TRAFFIC, PG64-22
4	ITEM 304, 8" CRUSHED AGGREGATE BASE	ITEM 304, 10" CRUSHED AGGREGATE BASE
5	ITEM 204, SUBGRADE COMPACTION	ITEM 204, SUBGRADE COMPACTION

NOTES:
1. THE TACK COAT MAY BE ELIMINATED IF THE INTERMEDIATE COURSE IS CLEAN AND THE SURFACE IS PLACED IMMEDIATELY FOLLOWING THE PLACEMENT OF THE INTERMEDIATE COURSE.
2. ALL PAVEMENT MATERIAL SHALL CONFORM TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS.
3. THE PAVEMENT SECTIONS ARE A RECOMMENDATION ASSUMING SUITABLE SOIL CONDITIONS. ACD RECOMMENDS THAT A GEOTECHINCAL ENGINEER REVIEWS THE SOIL CONDITIONS AND MAKES A FINAL RECOMMENDATION FOR THE SUBGRADE AND PAVEMENT SECTION.

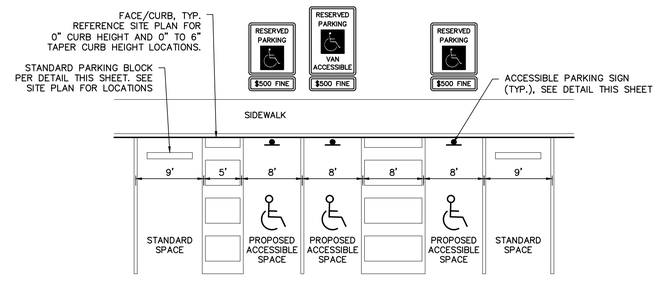
PAVEMENT SECTION
NO SCALE



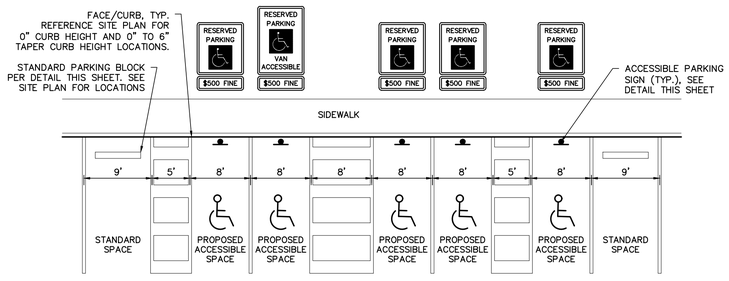
ACCESSIBLE PARKING DETAIL, TYPICAL OF 1
NO SCALE



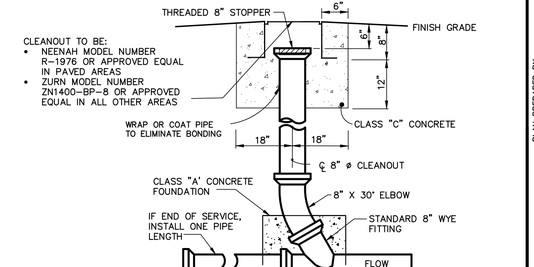
ACCESSIBLE PARKING DETAIL, TYPICAL OF 2
NO SCALE



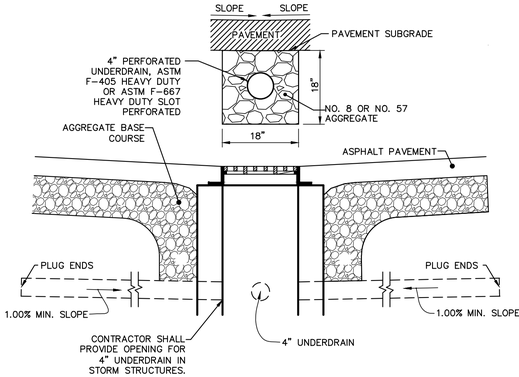
ACCESSIBLE PARKING DETAIL, TYPICAL OF 3
NO SCALE



ACCESSIBLE PARKING DETAIL, TYPICAL OF 5
NO SCALE



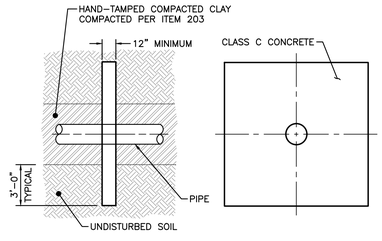
SEWER CLEANOUT
NO SCALE



THE PERFORATED PIPE SHALL BE PROTECTED FROM HEAVY TRAFFIC AFTER INSTALLATION PRIOR TO PLACEMENT OF PROPOSED PAVING.

UNDERDRAIN SHALL BE INSTALLED IN ALL DIRECTIONS FOR THE SHORTEST OF THE THREE CONDITIONS BELOW:
1. FOR A LENGTH OF 20'
2. TO THE END OF PAVEMENT
3. TO THE PAVEMENT HIGH POINT

4" UNDERDRAIN AT CATCH BASIN DETAIL
NO SCALE

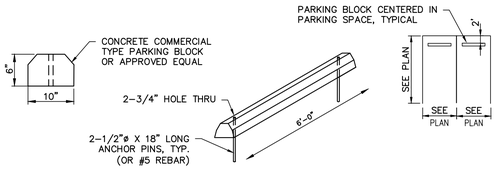


NOTES:
SPACING BETWEEN ADJACENT COLLARS SHALL BE A MINIMUM OF 5 FEET WITH THE FIRST COLLAR BEING A MINIMUM OF 5 FEET FROM THE INLET.

FURNISH A MINIMUM OF 2 COLLARS PER OUTLET CONDUIT.

ALL ANTI-SEEP COLLARS AND THEIR CONNECTIONS SHALL BE WATERTIGHT.

ANTI-SEEP CONCRETE COLLAR DETAIL
NO SCALE



STANDARD PARKING BLOCK DETAIL
NO SCALE

PLAN PREPARED BY:
ADVANCED CIVIL DESIGN ENGINEERS SURVEYORS
422 Beecher Road
Gahanna, Ohio 43230
ph. 614.428.7750
fax. 614.428.7755

PLAN PREPARED FOR:
HOME STEITZ LLC
267 N. LIBERTY STREET
POWELL, OHIO 43065
CONTACT: JOHN WICKS
PHONE: 614.323.7800
EMAIL:JOHN.WICKS@RPDDLLC.COM

GROVE OF POWELL, DELAWARE COUNTY, OHIO

FINAL DEVELOPMENT PLAN FOR MIDDLEBURY CROSSING MIXED USE DEVELOPMENT

DETAILS

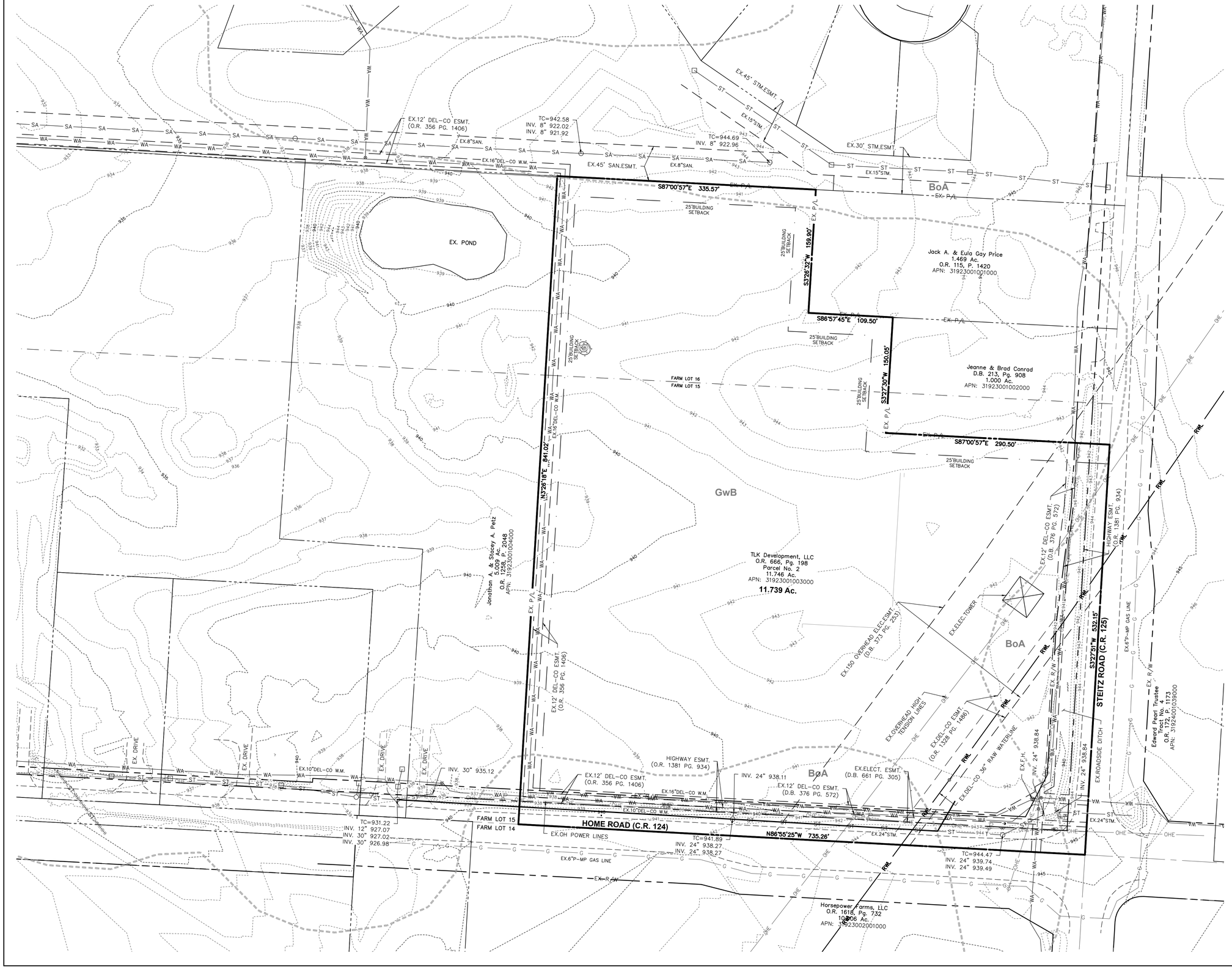
No.	Revision	Date	Approved

Date: 04/22/2019
Scale: AS NOTED

Drawn By:	Checked By:
CLE	DDD

Project Number:
19-0009-579

Drawing Number:
3 / 7



MAP UNIT LEGEND

MAP UNIT SYMBOL	SOIL NAME / HYDROLOGIC SOIL GROUP
BoA	BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES, D
GwB	GLYNWOOD SILT LOAM, GROUND MORAINE, 2 TO 6 PERCENT SLOPES, D

FLOODPLAIN

THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) SHOWS THAT THE SUBJECT PROPERTY IS LOCATED WITHIN AN AREA DESIGNATED AS ZONE X. ZONE X IS DEFINED AS: AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FLOOD INSURANCE RATE MAPS (FIRM); DELAWARE COUNTY, OHIO, PANEL 39041C0230K, EFFECTIVE DATE: APRIL 15, 2009.

REFERENCES

1. SOILS INFORMATION IS PER USDA WEB SOIL SURVEY, ACCESSED MARCH 28, 2019.
2. EXISTING UTILITIES SHOWN ARE BASED OFF RECORD PLANS PROVIDED BY DELAWARE COUNTY ENGINEER'S OFFICE, DEL-CO WATER COMPANY, GIS & AERIAL MAPS PROVIDED BY UTILITY COMPANIES AND TOPOGRAPHIC FIELD SURVEY.

A REVIEW OF DELAWARE COUNTY SOIL AND WATER CONSERVATION DISTRICT RECORDS REVEALED NO EVIDENCE OF FIELD TILES OR OTHER DRAINAGE IMPROVEMENTS ON THE SUBJECT PROPERTY.

PLAN PREPARED BY:

ADVANCED CIVIL DESIGN
ENGINEERS | SURVEYORS
422 Beecher Road
Gahanna, Ohio 43230
ph. 614.428.7750
fax. 614.428.7755

PLAN PREPARED FOR:

HOME STEITZ LLC
267 N. LIBERTY STREET
POWELL, OHIO 43065
CONTACT: JOHN WICKS
PHONE: 614.323.7800
EMAIL: JOHN.WICKS@RPDDLLC.COM

GROVE OF POWELL, DELAWARE COUNTY, OHIO

FINAL DEVELOPMENT PLAN FOR MIDDLEBURY CROSSING MIXED USE DEVELOPMENT

EXISTING CONDITIONS

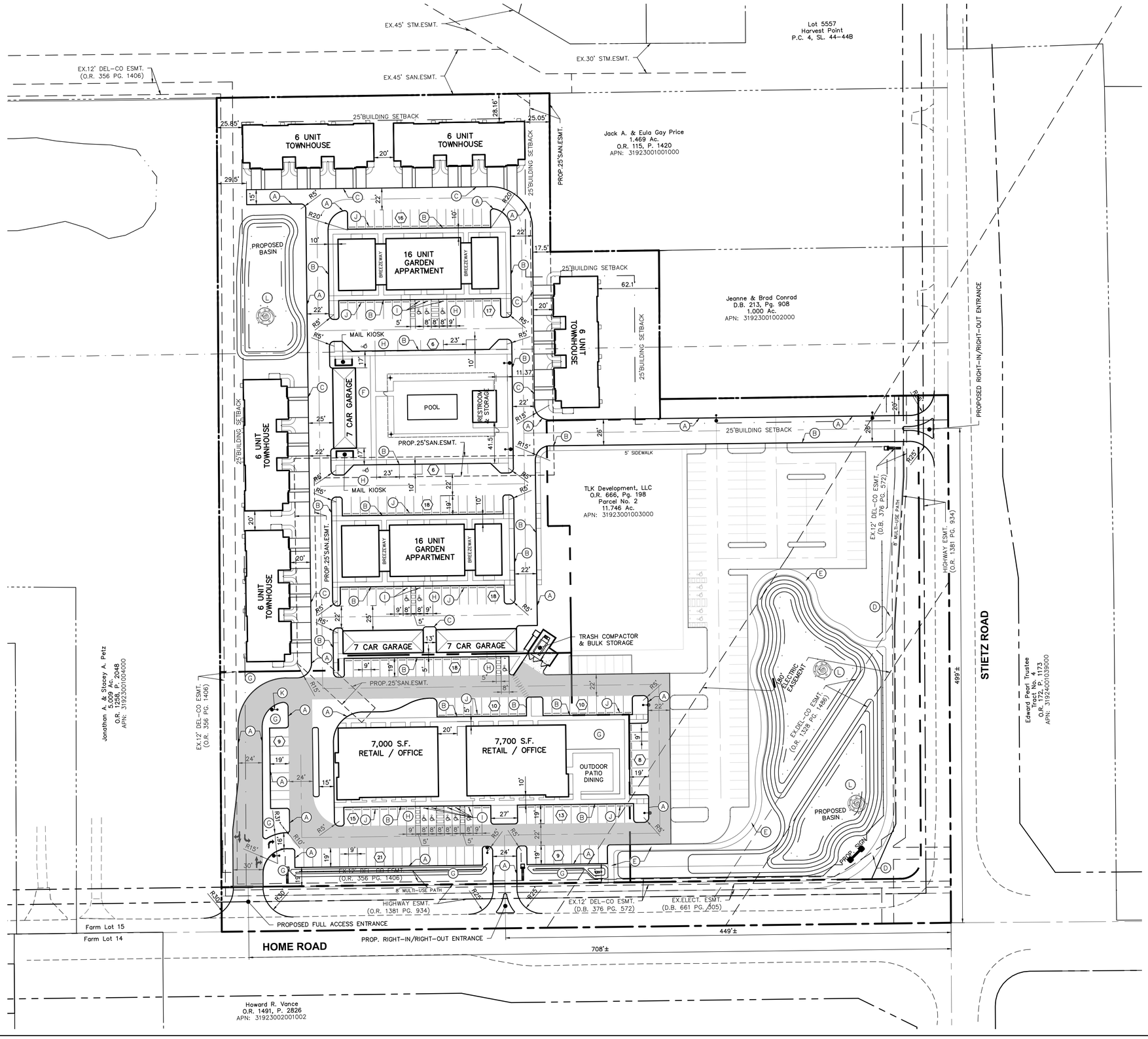
No.	Revision	Date	Approved

Date: 04/22/2019
Scale: 1"=60'

Drawn By: CLE
Checked By: DDD

Project Number: 19-0009-579

Drawing Number: 4 / 7



GRAPHIC SCALE

0 25 50 100

1 inch = 50 feet

SITE NOTES

1. ALL DIMENSIONS AND RADII ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
2. ALL PRIVATE PAVEMENT MARKINGS SHALL BE WHITE UNLESS OTHERWISE NOTED.
3. ALL DISTURBED AREAS ARE TO RECEIVE FOUR INCHES OF TOPSOIL, SEED, MULCH AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
4. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL COUNTY REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
5. CURB RADII NOT LABELED ARE 3' UNLESS OTHERWISE SHOWN OR ONE-HALF THE WIDTH OF CURB ISLAND.

LEGEND

- LIGHT DUTY PAVEMENT SECTION, SEE DETAIL SHEET 3 (3" ASPHALT, 8" AGGREGATE BASE)
- HEAVY DUTY PAVEMENT SECTION, SEE DETAIL SHEET 3 (4" ASPHALT, 10" AGGREGATE BASE)
- CONCRETE PAVEMENT SECTION, SEE DETAIL SHEET 3 (DUMPSTER PAD - ITEM 451)

SITE STATISTICS

SITE LOCATION:	HOME ROAD & STEITZ ROAD, DELAWARE COUNTY, OHIO
PARCEL NUMBER:	040-0055551-00 & 040-005555-00
GROSS ACREAGE:	±11.75 AC.
RIGHT-OF-WAY:	±1.20 AC.
NET ACREAGE:	±10.55 AC.

SUB-AREA 'A' - FUTURE DELAWARE COUNTY LIBRARY BRANCH

NET ACREAGE:	±3.71 AC.
OPEN SPACE:	±1.90 AC.
IMPERVIOUS COVER:	±1.81 AC.
PARKING REQUIRED:	10 SPACES PLUS 1 SPACE FOR EACH 300 S.F. IN EXCESS OF 2,000 S.F. PLUS 1 SPACES FOR EACH EMPLOYEE 25,000 S.F. - 2,000 S.F. = 23,000 S.F. 23,000 S.F. / 300 = 77 SPACES + 10 SPACES = 87
PARKING PROVIDED:	120 SPACES INCLUDES 5 ACCESSIBLE SPACES (1 VAN ACCESSIBLE)

SUB-AREA 'B' - COMMERCIAL ESTABLISHMENTS OR OFFICE

NET ACREAGE:	±2.07 AC.
OPEN SPACE:	±0.47 AC.
IMPERVIOUS COVER:	±1.60 AC.
PARKING REQUIRED:	5 SPACES PLUS 1 SPACE FOR EACH 400 S.F. 14,700 S.F. / 400 = 37 SPACES + 5 SPACES = 42
PARKING PROVIDED:	113 SPACES INCLUDES 6 ACCESSIBLE SPACES (1 VAN ACCESSIBLE)

SUB-AREA 'C' - MULTI-FAMILY RESIDENCES

NET ACREAGE:	±4.86 AC.
OPEN SPACE:	±1.78 AC.
IMPERVIOUS COVER:	±3.08 AC.
ZONING ORDINANCE:	9 D.U./AC.
TOTAL ACREAGE:	±8.64 AC. (INCLUDES SUB-AREA A & B OPEN SPACE/PUBLIC USE)
UNITS ALLOWED:	±8.64 AC. / 9 D.U. PER AC. = 78 D.U.
ACTUAL DWELLING UNITS:	62 UNITS
2 STORY TOWNHOME:	30 UNITS
2 STORY GARDEN:	32 UNITS
UNIT DENSITY:	±7.18 D.U./AC.
PARKING REQUIRED:	3 SPACES PER DWELLING UNIT (3 x 62 = 186)
PARKING PROVIDED:	182 SPACES (2.93/D.U.) INCLUDES 7 ACCESSIBLE SPACES (1 VAN ACCESSIBLE) • 40 TOWNHOME GARAGE SPACES • 40 TOWNHOME DRIVEWAY SPACES • 21 DETACHED GARAGE SPACES • 81 SURFACE SPACES

CODED NOTES

- (A) EXTRUDED CURB, SEE DETAIL SHEET 3
- (B) COMBINED CURB AND WALK, SEE DETAIL SHEET 3
- (C) NO CURB
- (D) 8' MULTI-USE PATH
- (E) 6' MULTI-USE PATH
- (F) CONCRETE SIDEWALK, SEE DETAIL SHEET 3
- (G) LANDSCAPE/OPEN SPACE, SEE LANDSCAPE PLANS
- (H) ACCESSIBLE PARKING SIGN, SEE DETAIL SHEET 3
- (I) ACCESSIBLE PARKING SPACE, SEE DETAILS SHEET 3
- (J) PARKING BLOCK, SEE DETAIL SHEET 3
- (K) SITE LIGHTING FIXTURE, SEE PHOTOMETRIC PLAN FOR DETAILS
- (L) POND AERATOR, SEE LANDSCAPE PLAN FOR DETAILS

PLAN PREPARED BY:
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422 Beecher Road
Gahanna, Ohio 43230
ph. 614.428.7750
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POWELL, OHIO 43065
CONTACT: JOHN WICKS
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GROVE OF POWELL, DELAWARE COUNTY, OHIO

FINAL DEVELOPMENT PLAN FOR MIDDLEBURY CROSSING MIXED USE DEVELOPMENT

SITE DIMENSION PLAN

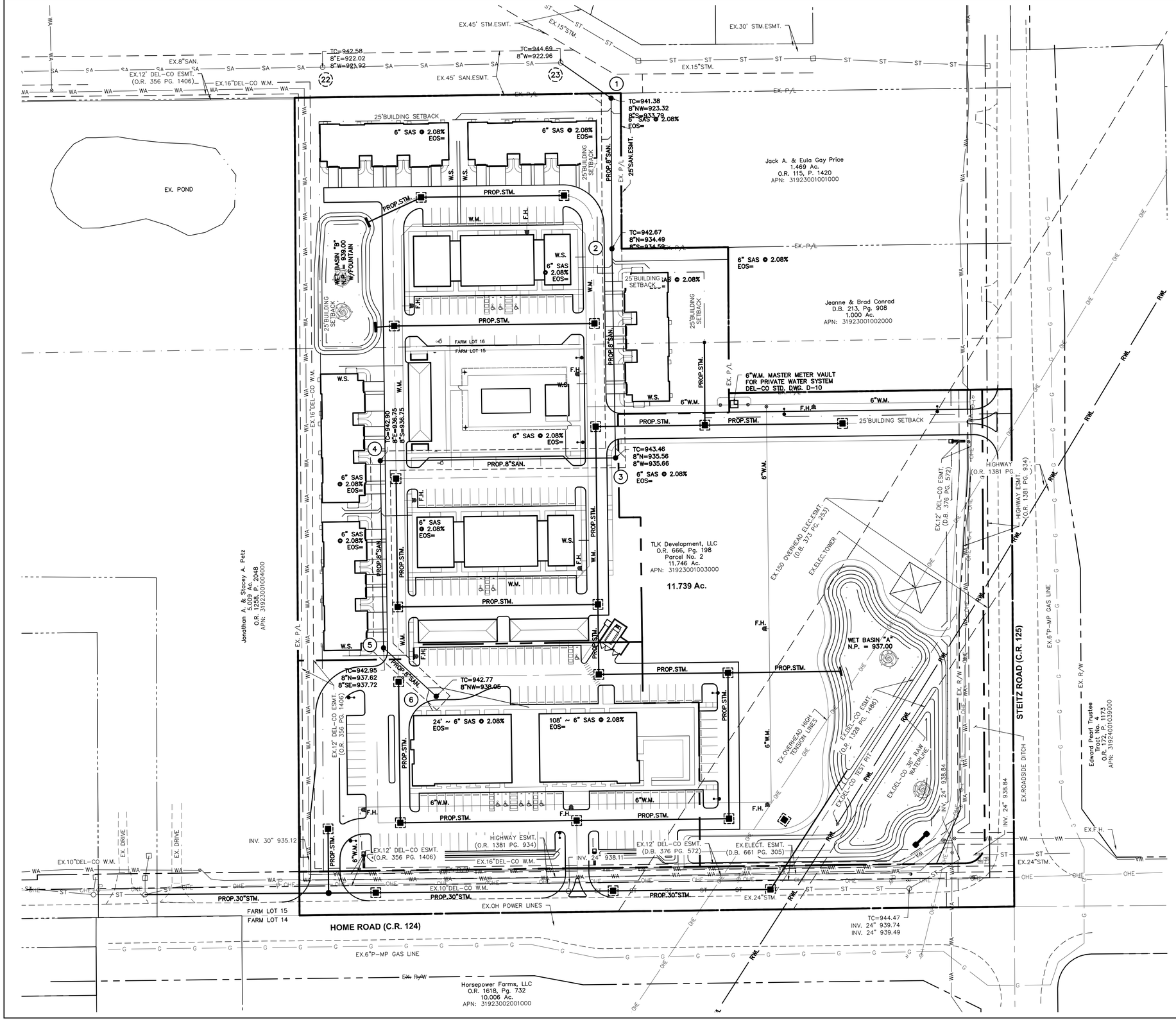
No.	Revision	Date	Approved

Date: 04/22/2019
Scale: 1"=50'

Drawn By: CLE
Checked By: DDD

Project Number: 19-0009-579

Drawing Number: 5 / 7



GRAPHIC SCALE

0 25 50 100

1 inch = 50 feet

UTILITY NOTES

1. THE PROPOSED SANITARY SERVICE TO BE INSTALLED PER C.O.C. STD. DWG. AA-S160. CONTRACTOR SHALL EXTEND SERVICE TO LOCATION SHOWN ON PLANS UNLESS OTHERWISE DIRECTED BY THE OWNER. CONTRACTOR SHALL USE COMPACTED BACKFILL PER ITEM 911, COMPACTED TO 98% OF MAXIMUM DRY WEIGHT AT OPTIMUM MOISTURE (± 2%) UNLESS OTHERWISE NOTED.
2. UTILITY LAYOUTS SHOWN HEREON ARE PRELIMINARY ONLY AND SUBJECT TO MODIFICATION DURING FINAL ENGINEERING.
3. UTILITY EASEMENTS TO BE DEFINED DURING FINAL ENGINEERING.

LEGEND

- PROPOSED STORM SEWER (Catch Basin, Manhole)
- SANITARY SEWER (Short Service (Typ.), Manhole)
- WATER MAIN (Prop. Service, Prop. Hydrant, Valve)
- EXISTING STORM SEWER (Catch Basin ST, Manhole)
- EXISTING SANITARY SEWER (SA, Manhole)
- EXISTING WATER MAIN (Prop. Hydrant, WA, Valve)
- EXISTING GAS MAIN (G)
- EXISTING OVERHEAD ELECTRIC (OHE)

PLAN PREPARED BY:
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422 Beecher Road
Gahanna, Ohio 43230
ph. 614.428.7750
fax. 614.428.7755

PLAN PREPARED FOR:
HOME STEITZ LLC
267 N. LIBERTY STREET
POWELL, OHIO 43065
CONTACT: JOHN WICKS
PHONE: 614.323.7800
EMAIL:JOHN.WICKS@RPDDLLC.COM

GROVE OF POWELL, DELAWARE COUNTY, OHIO

FINAL DEVELOPMENT PLAN FOR MIDDLEBURY CROSSING MIXED USE DEVELOPMENT

COMPOSITE UTILITY PLAN

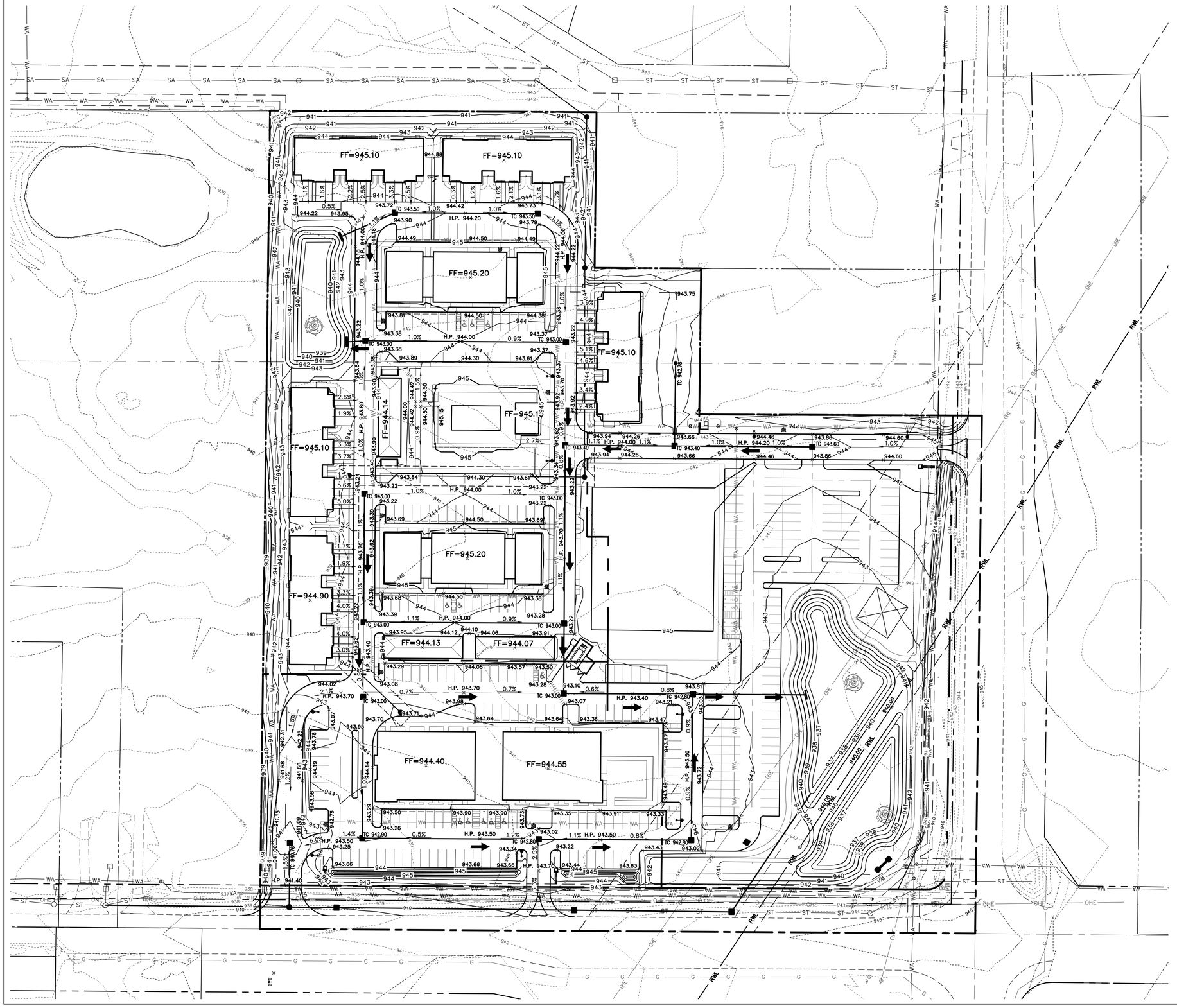
No.	Revision	Date	Approved

Date: 04/22/2019
Scale: 1"=50'

Drawn By: CLE
Checked By: DDD

Project Number: 19-0009-579

Drawing Number: **6 / 7**



LEGEND

940	EXISTING CONTOUR
913	PROPOSED CONTOUR
TC=795.20	TOP OF CASTING ELEVATION
X TC 795.20	TOP OF CURB ELEVATION
X 795.20	TOP OF PAVEMENT OR GROUND SURFACE
x 795.20 Ex	EXISTING TOP OF PAVEMENT OR GROUND SURFACE
15" ST	PROPOSED STORM SEWER
SA	PROPOSED SANITARY SERVICE
WA	PROPOSED WATER SERVICE
	SURFACE FLOW ARROW
	MAJOR FLOOD ROUTING PATH (GREATER THAN 100 YR EVENT)

SITE GRADING NOTES

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 ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.

STORM PIPE SHALL BE AS SPECIFIED IN THE GENERAL NOTES.

EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED. EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.

EXISTING GRADE CONTOURS SHOWN AT 1 FOOT INTERVALS.

PROPOSED GRADE CONTOURS SHOWN AT 1 FOOT INTERVALS.

ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.

ALL STORM SEWER STRUCTURES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. LIDS SHALL BE LABELED "STORM SEWER".

CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.

CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.

CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.

ELEVATIONS SHOWN HEREIN ARE BASED ON NORTH AMERICAN VERTICAL DATUM (NAVD) 1988.

ALL SPOT ELEVATIONS SHOWN ARE FINISHED GRADE/TOP OF PAVEMENT UNLESS OTHERWISE NOTED. TOP OF CURB ELEVATIONS DENOTED AS TC XX.X

STORMWATER CONTROL NARRATIVE

SITE SUMMARY:
THE SUBJECT PROJECT CONSISTS OF A SINGLE PARCEL (31943202010012) TO BE DEVELOPED INTO A MIXED USE, COMMERCIAL/RETAIL, MULTI-FAMILY RESIDENTIAL AND PUBLIC USE WITH ASSOCIATED PARKING. THE SITE IS BOUND BY SINGLE FAMILY RESIDENTIAL TO THE NORTH , STEITZ ROAD TO THE EAST, HOME ROAD TO THE SOUTH, AND SINGLE FAMILY TO THE WEST. THE SITE IS APPROXIMATELY 1.507 ACRES CONSISTING OF AGRICULTURAL LAND.

EXISTING CONDITIONS:
EXISTING DRAINAGE CONDITIONS WERE EVALUATED USING A COMBINATION OF AERIAL PHOTOGRAPHS, SURVEYED TOPOGRAPHY, SOIL MAPS, AND SITE PHOTOS. THE NATURAL RESOURCE CONSERVATION SERVICE WEB SOIL SURVEY IDENTIFIES THE PREDOMINANT ON-SITE SOILS AS BLOUNT SILT-LOAM AND GLYNWOOD SILT-LOAM. THESE SOILS ARE CLASSIFIED WITHIN HYDROLOGIC GROUP 'D'.

THE EXISTING SITE PREDOMINATELY DRAINS TO THE WEST VIA SHEET FLOW ONTO THE RESIDENTIAL PROPERTY TO THE WEST AND INTO THE DITCH ALONG THE NORTH SIDE OF HOME ROAD. ALL DRAINAGE FROM THE SITE IS CONVEYED INTO EXISTING DRAINAGE CHANNELS THAT ARE PART OF THE DELAWARE COUNTY DRAINAGE SYSTEMS. SITE RUNOFF IS TRIBUTARY TO AN UNNAMED TRIBUTARY OF O'SHAUGHNESSY RESERVOIR.

ALLOWABLE RELEASE RATE:
SINCE THE SITE IS TRIBUTARY TO DELAWARE COUNTY DRAINAGE SYSTEM THE SITE WILL FOLLOW THE STORMWATER MANAGEMENT REQUIREMENTS OF THE DELAWARE COUNTY ENGINEER'S OFFICE. PER THE DELAWARE COUNTY ENGINEER'S DESIGN, CONSTRUCTION AND SURVEYING STANDARDS, SUPPLEMENTAL SPECIFICATIONS, ARTICLE IX, SECTION 904, PART G; BASED ON A COMMERCIAL DEVELOPMENT THE ALLOWABLE RELEASE RATE FROM THE SITE IS DETERMINED AS THE POST-DEVELOPMENT 100-YR PEAK RATE OF RUNOFF SHALL NOT BE GREATER THAN THAT OF THE A PRE-DEVELOPMENT 2-YR STORM EVENT RATE OF RUNOFF.

STORM WATER QUANTITY CONTROL:
FREQUENT POST-DEVELOPMENT STORM EVENTS WILL BE COLLECTED AND CONVEYED BY ON-SITE STORM SEWERS TO TWO RETENTION BASINS ON-SITE. OVERLAND FLOOD ROUTING WILL CONVEY LESS FREQUENT STORM EVENTS TO EACH OF THE PROPOSED BASINS. EACH BASIN WILL RELEASE RUNOFF AT OR BELOW THE ALLOWABLE RELEASE RATES CALCULATED FOR EACH RELEASE POINT. THE EXISTING SUBAREA IN THE MIDDLE OF THE SITE WILL BE RE-DIRECTED INTO THE SOUTHERN DRAINAGE BASIN AND WILL BE OVER DETAINED TO THE DRAINAGE OUTLETS EXISTING ALLOWABLE RELEASE RATES.

STORM WATER QUALITY CONTROL:
PER THE OHIO EPA GENERAL CONSTRUCTION PERMIT, A STORMWATER BEST MANAGEMENT PRACTICE (BMP) IS REQUIRED TO TREAT THE FIRST FLUSH RUNOFF VOLUME PRODUCED BY A 0.9" RAINFALL EVENT. THE WQ TREATMENT WILL BE ACCOMPLISHED UTILIZING DRAWDOWN WITHIN EACH OF THE DETENTION BASINS, RELEASING NOT MORE THAN HALF THE VOLUME IN ONE THIRD THE DRAWDOWN TIME.

CONCLUSION:
THE PROPOSED DEVELOPMENT WILL PROVIDE SURFACE AND SUBSURFACE STORMWATER CONVEYANCES TO CARRY RUNOFF SAFELY THOUGH THE SITE TOWARDS THE ONSITE DETENTION AND WATER QUALITY TREATMENT FACILITY. OUTLET STRUCTURES WITHIN THE SYSTEM PROVIDE PEAK FLOW CONTROL AND TREATMENT OF CAPTURED WATER TO COMPLY WITH DELAWARE COUNTY ENGINEER'S OFFICE PEAK FLOW CONTROL REQUIREMENTS AND OHIO EPA WATER QUALITY REGULATIONS.

PLAN PREPARED BY:

ADVANCED CIVIL DESIGN
ENGINEERS | SURVEYORS
422 Beecher Road
Gahanna, Ohio 43230
ph. 614.428.7750
fax. 614.428.7755

PLAN PREPARED FOR:

HOME STEITZ LLC
267 N. LIBERTY STREET
POWELL, OHIO 43065
CONTACT: JOHN WICKS
PHONE: 614.323.7800
EMAIL: JOHN.WICKS@RPDDLLC.COM

GROVE OF POWELL, DELAWARE COUNTY, OHIO

FINAL DEVELOPMENT PLAN FOR MIDDLEBURY CROSSING MIXED USE DEVELOPMENT

GRADING PLAN

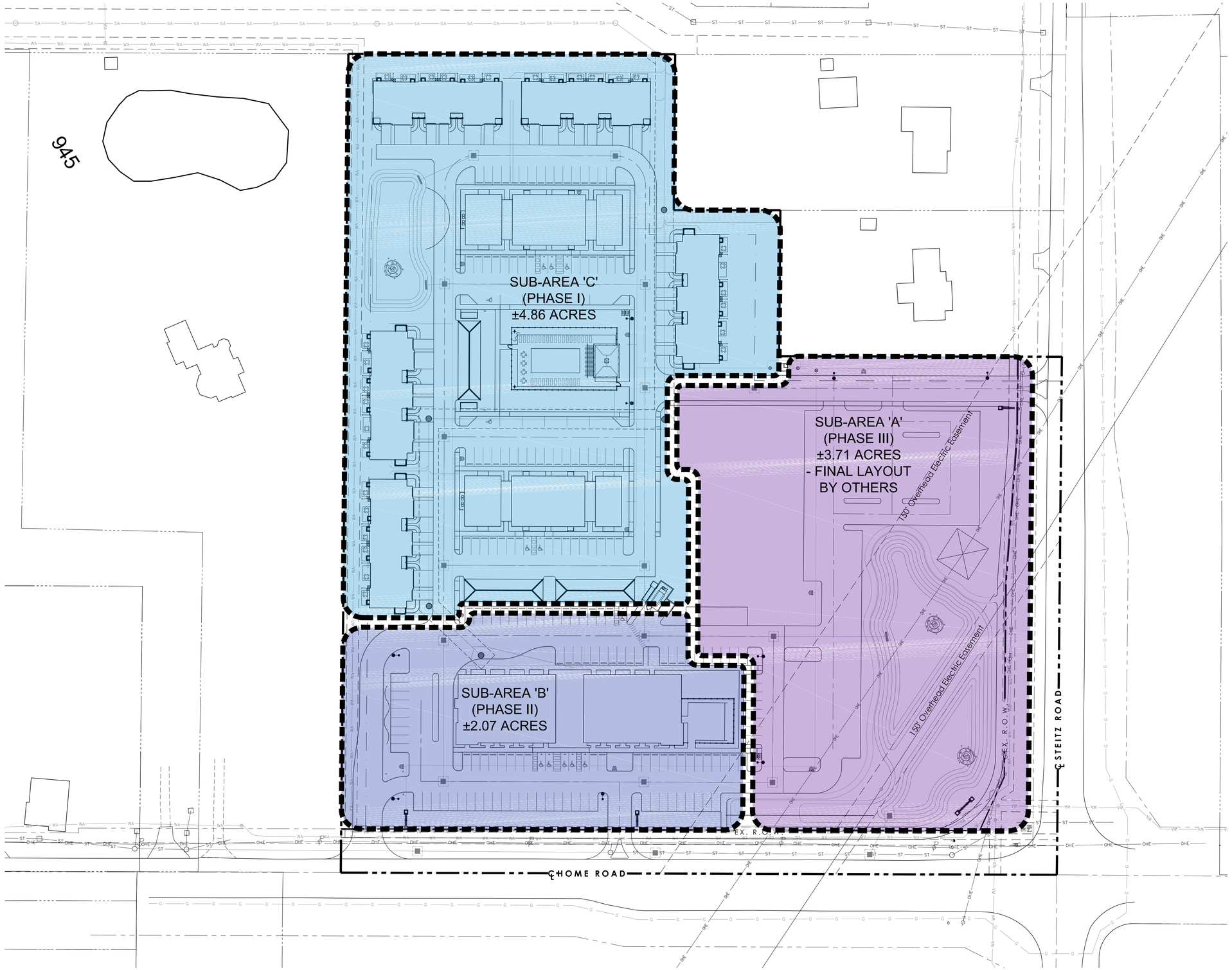
No.	Revision	Date	Approved

Date: 04/22/2019
Scale: 1"=40'

Drawn By:	Checked By:
CLE	DDD

Project Number: 19-0009-579

Drawing Number: 7 / 7



SITE DATA

Planned Commercial District Sub-Areas

Sub-Area 'A' - Future Delaware County Library Branch

	± 3.71Acres

Sub-Area 'B' - Commercial Establishments or Office

	± 2.07 Acres

Sub-Area 'C' - Multi-Family Residences

	± 4.86 Acres
	62 Dwelling Units

Residential Density per 1143.09(c)(10)(C)

Dwelling Units	62 D.U.
Total Acreage Sub-Area C acreage (4.86 Ac.) + Sub-Area A&B Open Space/Public Use (3.78 Ac.)	± 8.64 Acres
	± 7.18 D.U./Acre

Residential Units Permitted by Zoning Ordinance

Maximum dwelling units per acre	9 D.U.
Total Acreage Sub-Area C acreage (4.86 Ac.) + Sub-Area A&B Open Space/Public Use (3.78 Ac.)	± 8.64 Acres
	78 D.U.

Note:
The plan as shown is conceptual in nature and is provided to illustrate the desired layout and quality of the project. Final layout and landscaping are subject to change based upon final zoning approval and engineering. Final design of the library by others.

0 50 150 N

Middlebury Crossing - Exhibit B: Sub-Area Plan

City of Powell, Ohio 04.23.2019

Real Property Design and Development

G2 Planning Urban Design Landscape Architecture
Planning + Design
Ph: 614.583.9230
Web: www.g2planning.com

PLANT LIST (Contractor is responsible for all plant material shown on plan)

QTY:	CODE	BOT. NAME/COMMON NAME	SIZE	COND.	SPACING	NOTES
		DECIDUOUS SHADE TREES / STREET TREES				
10	AC WB	Acer saccharum 'Wright Brothers' Wright Brothers Sugar Maple	2.5" CAL.	B&B	AS SHOWN	Match Form
5	LI SS	Liquidambar styraciflua 'Slender Silhouette' Slender Silhouette Sweetgum	2.5" CAL.	B&B	AS SHOWN	Match Form
21	PL AC	Platanus xacerfolia 'Bloodgood' Bloodgood London Planetree	2.5" CAL.	B&B	AS SHOWN	Match Form
3	QU CO	Quercus coccinea Scarlet Oak	2.5" CAL.	B&B	AS SHOWN	Match Form
3	TA DI	Taxodium distichum Bald Cypress	2.5" CAL.	B&B	AS SHOWN	Match Form
1	TI CO	Tilia cordata 'Greenspire' Greenspire Linden	2.5" CAL.	B&B	AS SHOWN	Match Form
39	ZE GV	Zelkova serrata 'Green Vase' Green Vase Zelkova	2.5" CAL.	B&B	AS SHOWN	Match Form
		SMALL / ORNAMENTAL TREES				
19	AM CA	Amelanchier canadensis 'Glenn Form' Rainbow Pillar Serviceberry	1.5" CAL.	B&B	AS SHOWN	Tree Form
10	CE CA	Cercis canadensis Eastern Redbud	1.5" CAL.	B&B	AS SHOWN	Tree Form
18	CR WK	Crataegus viridis 'Winter King' Winter King Hawthorn	1.5" CAL.	B&B	AS SHOWN	Tree Form
		EVERGREEN TREES (SCREENING/BUFFERING)				
141*	AB CO	Abies concolor White Fir	6' HT.	B&B	PER PLAN	*Use a minimum of 4 different species from the plant list. Maximum of 7 consecutive of same species. No single species shall constitute more than 33% of total planting in buffer. See detail 'A', this sheet for more information
	PI AB	Picea abies Norway Spruce	6' HT.	B&B	PER PLAN	
	PI DE	Picea glauca 'Densata' Black Hills Spruce	6' HT.	B&B	PER PLAN	
	PI OM	Picea omorika Serbian Spruce	6' HT.	B&B	PER PLAN	
	PI ST	Pinus Strobus White Pine	6' HT.	B&B	PER PLAN	
		GRASSES, PERENNIALS, GROUNDCOVERS, & VINES				
	MI GR	Miscanthus sinensis 'Gracillimus' Gracillimus Maiden Grass	-	#3 Cont.	Plant @ 42" O.C.	As needed for transformer screen See detail 'B', this sheet

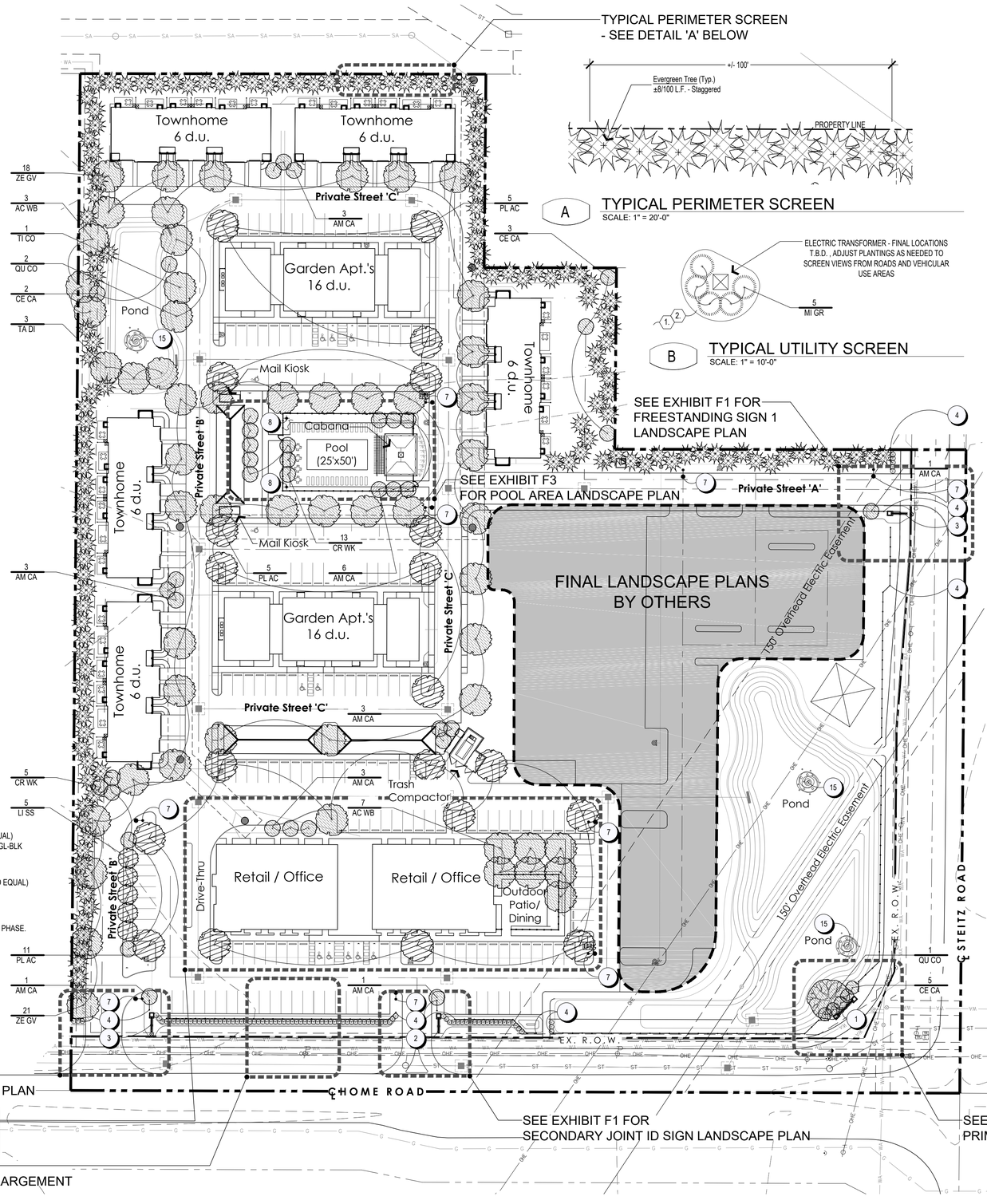
PLANT LABEL KEY: 1 / XX XX (QUANTITY / CODE)

NOTE: FIELD VERIFY LOCATION AND DEPTHS OF ALL UTILITIES. HAND EXCAVATE ALL PLANTING PITS.

ADDITIONAL PLANTING NOTES
1. ALL GROUNDCOVERS AND PERENNIALS TO BE PLANTED DURING THE SPRING PLANTING WINDOW. FALL GROUNDCOVER AND PERENNIAL PLANTINGS WILL NOT BE ACCEPTED. COORDINATE PLANTING TIMES WITH OWNERS REPRESENTATIVE TO INCREASE SUCCESS OF GROUNDCOVER AND PERENNIAL PLANTINGS

CODED LAYOUT & MATERIALS NOTES

KEY	ITEM	REFERENCE	NOTES
1	PRIMARY JOINT ID SIGN	B / EX. G1	MATCH STONE VENEER TO BUILDING ELEVATIONS
2	SECONDARY JOINT ID SIGN	A / EX. G1	MATCH STONE VENEER TO BUILDING ELEVATIONS
3	FREESTANDING SIGN	A / EX. G1	MATCH STONE VENEER TO BUILDING ELEVATIONS
4	3-RAIL FENCE	D / EX. G1	SEE DETAIL D, EXHIBIT G1
5	8x8 END POST	D / EX. G1	SEE DETAIL D, EXHIBIT G1
6	FOUNTAIN	X / XX-XX	FINAL SELECTION BY OWNER
7	AREA LIGHT	C / EX. G2	NLS LIGHTING MILAN LUMINAIRE (OR OWNER-APPROVED EQUAL) FIXTURE: #MIL-1-T5-48L-7-30K-UNV-AM-BLK-LED ARM: A1-L-SGL-BLK 18' POLE: #RSAP-18'-R5-250-12BC-ND-BLK-CBC. AVAILABLE FROM LIGHTING UNLIMITED (614.487.1487)
8	POOL LIGHT	D / EX. G2	LIGHTWAY #TRZP-21-LED-U-19W-2-B1 (OR OWNER-APPROVED EQUAL) 15' DIRECT BURY POLE (10' EXPOSED): LIGHTWAY POLE 193 AVAILABLE FROM LIGHTING UNLIMITED (614.487.1487)
15	POND AERATOR	X / XX XX	FOUNTAIN: AQUAMASTER "WIDE GEYSER" (OR OWNER-APPROVED EQUAL.) 2 HP, 240 VOLT, 60 HERTZ, 1 PHASE. AVAILABLE THROUGH FOUNTECH,1-614-539-4670.



A TYPICAL PERIMETER SCREEN
SCALE: 1" = 20'-0"

B TYPICAL UTILITY SCREEN
SCALE: 1" = 10'-0"

Note:
The plan as shown is conceptual in nature and is provided to illustrate the desired layout and quality of the project. Final layout and landscaping are subject to change based upon final zoning approval and engineering. Final design of the library by others.

LANDSCAPE CODE REQUIREMENTS

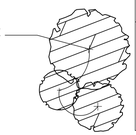
Minimum Required Trees - 1145.30

1145.30 COVERAGE TREE

(a) MINIMUM TREES	REQUIRED	PROVIDED
THE FOLLOWING MINIMUMS ARE REQUIRED, BASED UPON TOTAL COVERAGE SQUARE FOOTAGE.		
(1) ALL RESIDENCES AND RESIDENTIAL LAND USES, PER DWELLING UNIT: 1/2" IN TRUNK DIAMETER FOR EVERY 150 S.F. OR FRACTION THEREOF OF BUILDING GROUND COVERAGE.	A TOTAL OF 149.5" FOR +/-44,727 S.F. OF GROUND COVERAGE (SUB-AREA 'C')	A TOTAL OF 149.5" IN TRUNK DIAMETER ACHIEVED WITH 43 TREES @ 2.5" CAL., AND 28 TREES @ 1.5" CAL.
(2) ALL COMMERICAL STRUCTURES, INCLUDING COMMERCIAL-RELATED PARKING, LOADING AND TRASH STORAGE AREAS: C. OVER 50,000 S.F.: A TOTAL TRUNK DIA. OF 53", PLUS 2" OF TRUNK DIAMETER FOR EVERY 4,000 S.F. OVER 50,000 S.F. OR FRACTION THEREOF	A TOTAL OF 59" FOR +/-59,854 S.F. OF GROUND COVERAGE (SUB-AREA 'B')	A TOTAL OF 59" IN TRUNK DIAMETER ACHIEVED WITH 14 TREES @ 2.5" CAL., AND 16 TREES @1.5" CAL.

Parking Area Landscaping - 1145.31

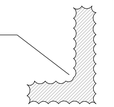
1143.31 PARKING LOT TREE



PARKING LOT PLANTING BAYS/TREES	REQUIRED	PROVIDED
IN ALL PARKING AREAS IN WHICH MORE THAN TEN PARKING SPACES ARE REQUIRED, THERE SHALL BE ONE PARKING BAY (SPACE) LEFT UNPAVED, BUT CONCRETE CURBED, FILLED WITH SODDED GRASS, AND CONTAINING NO LESS THAN ONE DECIDUOUS TREE OF ONE AND ONE-HALF INCH TRUNK DIAMETER OR MORE, MEASURED 24 INCHES FROM THE GROUND, FOR EVERY EIGHT PARKING SPACES, OR PORTION THEREOF, PROVIDED.	37 TREES @ 1 ½" CAL. FOR 295 PARKING SPACES (DOES NOT INCLUDE SUB-AREA 'A')	20 TREES @ 2 ½" CAL., AND 5 TREES @ 1.5" CAL. FOR 272 PARKING SPACES (+2" ABOVE REQ'D)

Building Foundation Landscaping - 1145.32

BUILDING FOUNDATION LANDSCAPING



REQUIRED LANDSCAPING AROUND BUILDING FOUNDATIONS	REQUIRED	PROVIDED (SUB-AREA 'B')
IN ALL COMMERCIAL, OFFICE AND INDUSTRIAL ZONING DISTRICT, AS WELL AS NONRESIDENTIAL BUILDINGS IN RESIDENTIAL ZONING DISTRICTS; AT LEAST 70 PERCENT OF THE LINEAL FOOTAGE AROUND THE PERIMETER OF A STRUCTURE SHALL BE LANDSCAPED. A MINIMUM OF FIVE SHRUBS SHALL BE PLANTED IN EVERY 40 FEET OF LINEAL BUILDING PERIMETER. A MINIMUM OF TEN PERENNIAL OR ANNUAL PLANTS AND/OR FLOWERS SHALL BE PLANTED IN EVERY 40 FEET OF LINEAL BUILDING PERIMETER.	MINIMUM: 70% PLANTED 5 SHRUBS/40 L.F. PERIMETER 10 PERENNIALS OR ANNUALS/40 L.F. PERIMETER	MINIMUM: 70% PLANTED MIN. 85 SHRUBS FOR 650 L.F. MIN. 170 PERENNIALS OR ANNUALS FOR 650 L.F.

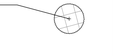
Screening - 1145.33

1145.33 SCREENING TREE

SCREENING OR BUFFERING	REQUIRED	PROVIDED
(a) FOR ANY PERMITTED OR CONDITIONALLY PERMITTED NON-RESIDENTIAL USES WHICH ABUT ANY RESIDENTIAL DISTRICT, OR CURRENT RESIDENCE, IN ADDITION TO SETBACK AND YARD REQUIREMENTS PROVIDED ELSEWHERE IN THE ORDINANCE. (1) SCREENING SHALL BE PROVIDED FOR ONE OR MORE OF THE FOLLOWING PURPOSES: A. A VISUAL BARRIER TO PARTIALLY OR COMPLETELY OBSTRUCT THE VIEW OF STRUCTURES OR ACTIVITIES. B. AN ACOUSTIC SCREEN TO AID IN ABSORBING OR DEFLECTING NOISE. C. A PHYSICAL BARRIER TO CONTAIN DEBRIS AND LITTER	VISUAL SCREENING WALLS, FENCES, PLANTINGS, MOUNDS OR A COMBINATION OF THESE ELEMENTS SHALL BE A MINIMUM OF FIVE AND ONE-HALF FEET HIGH IN ORDER TO ACCOMPLISH THE DESIRED SCREENING EFFECT. PLANTINGS SHALL BE A MINIMUM OF FOUR FEET IN HEIGHT AT THE TIME OF PLANTING.	6' HT. AT INSTALLATION EVERGREEN TREES

PC - Planned Commercial District - 1143.15

1143.15(b)(10) PARKING AREA SCREEN SHRUB



(b) SUPPLEMENTAL REGULATIONS FOR THE PLANNED COMMERCIAL DISTRICT	REQUIRED	PROVIDED
(10)ALL PARKING AREAS ARE TO BE INTERIOR TO BUILDING GROUPS, OR BEHIND THREE-OR-FOUR RAIL NATURAL SPLIT-RAIL FENCES, OR THREE-OR-FOUR RAIL WHITE OR BLACK BOARD FENCES, OR OTHERWISE HIDDEN BY EARTH MOUNDING, SCREEN WALLS, OR DENSE SHRUBBERY FROM SIGHT FROM ADJACENT SITES AND FROM NEARBY PUBLIC ROADS, AND DESIGNED AND LOCATED FOR MINIMUM IMPACT ON ADJACENT RESIDENTIAL AREAS.	VISUAL SCREENING WALLS, FENCES, PLANTINGS, MOUNDS OR A COMBINATION OF THESE ELEMENTS.	COMBINATION OF +/- 2' HT. EARTH MOUND, 2-3' HT. EVERGREEN HEDGE, 3-RAIL BOARD FENCE, & ORNAMENTAL GRASSES,

Middlebury Crossing - Exhibit E: Site Landscape Plan

City of Powell, Ohio 04.23.2019

Real Property Design and Development

0 50 150 N

G2 Planning Urban Design Landscape Architecture
Planning + Design
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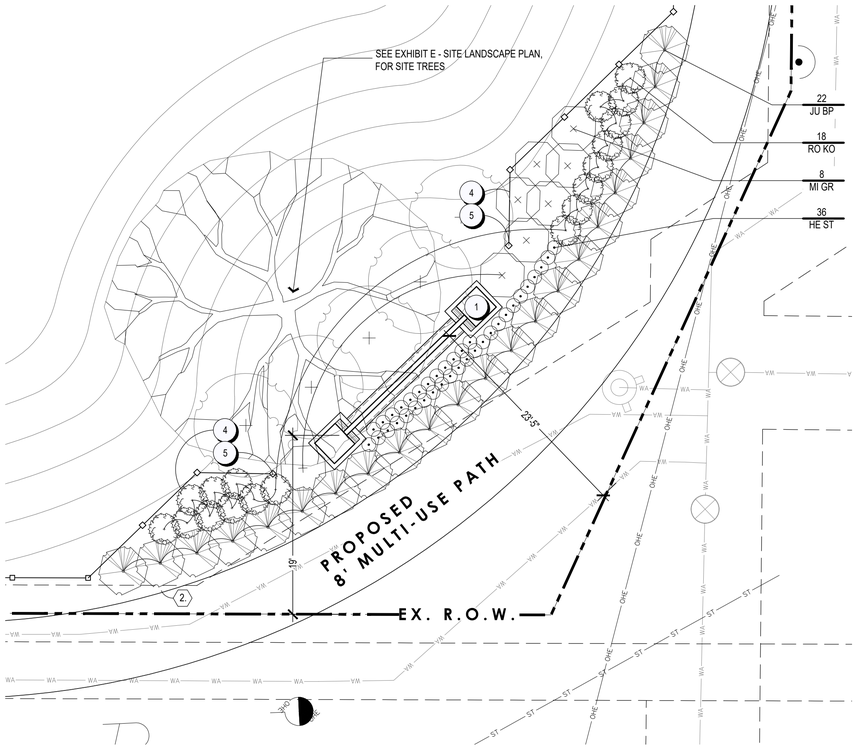
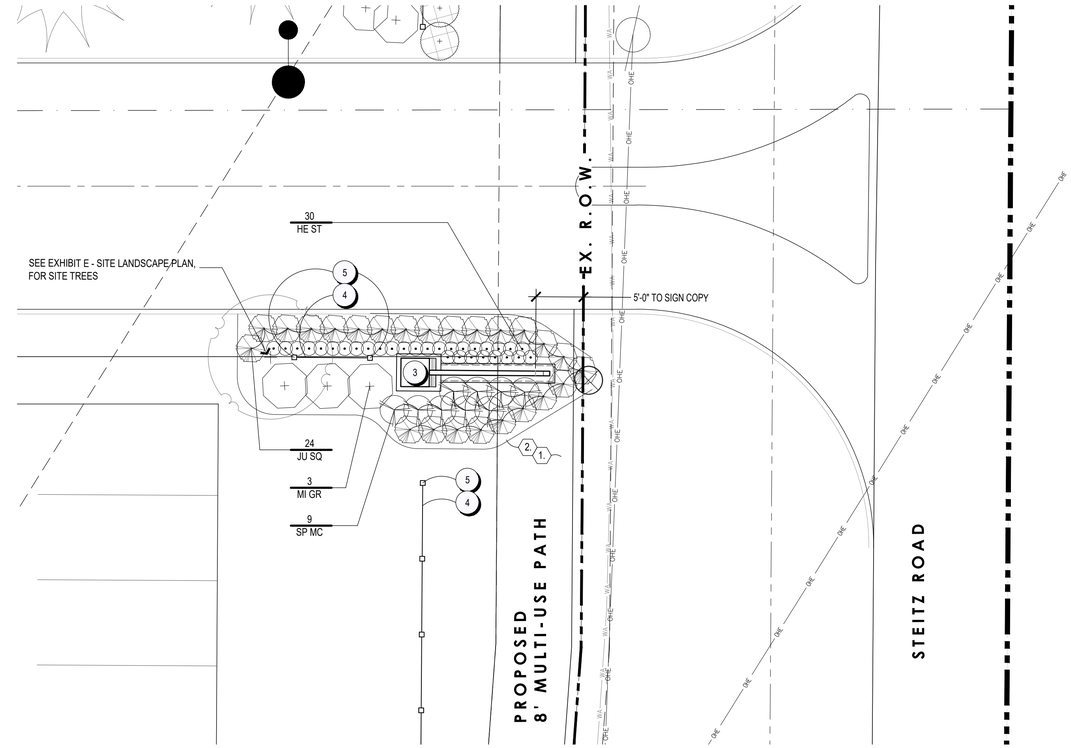
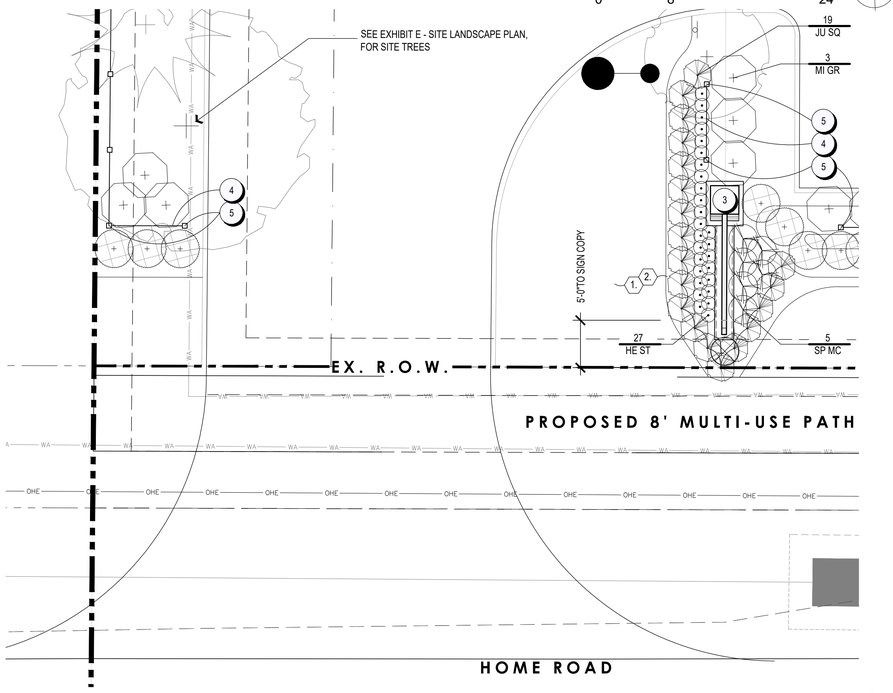


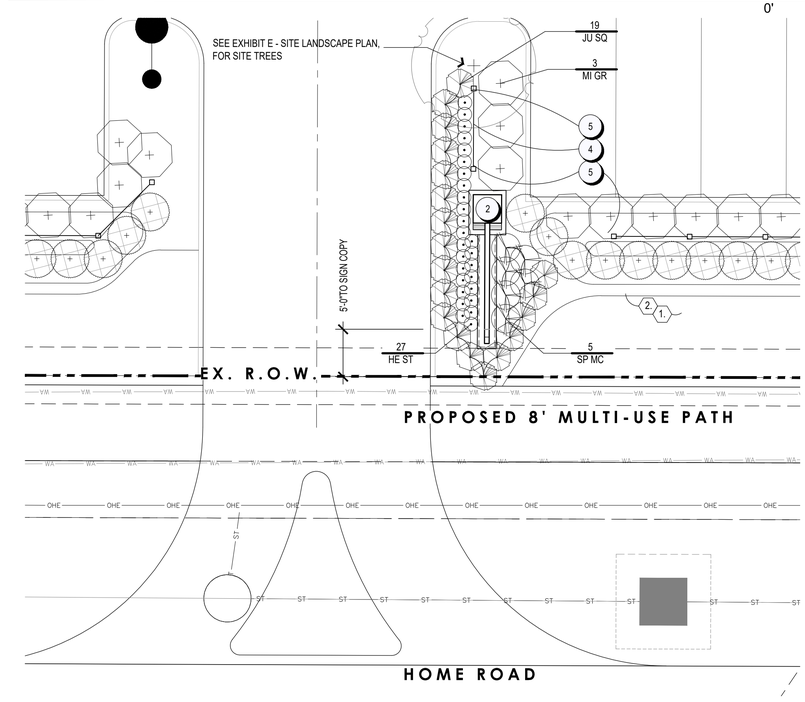
PRIMARY JOINT IDENTIFICATION SIGN (NW CORNER OF HOME & STEITZ) - LANDSCAPE PLAN



FREESTANDING SIGN 1 (STEITZ ROAD RIGHT-IN/RIGHT-OUT) - LANDSCAPE PLAN



FREESTANDING SIGN 2 (HOME ROAD FULL ACCESS) - LANDSCAPE PLAN



SECONDARY JOINT IDENTIFICATION SIGN (HOME ROAD RIGHT-IN/RIGHT-OUT) - LANDSCAPE PLAN

PLANT LIST (Contractor is responsible for all plant material shown on plan)

QTY.	CODE	BOT. NAME/COMMON NAME	SIZE	COND.	SPACING	NOTES
FLOWERING / DECIDUOUS SHRUBS						
18	RO KO	Rosa x 'Radtko' Double Knock Out Rose	24" HT.	#3 Cont.	PER PLAN	
19	SP MC	Spirea japonica 'Walbuma' Magic Carpet Spirea	24" SPRD.	#3 Cont.	PER PLAN	
EVERGREEN SHRUBS						
22	JU BP	Juniperus conferta 'Blue Pacific' Blue Pacific Juniper	24" SPRD.	B&B	PER PLAN	
62	JU SQ	Juniperus Squamata 'Blue Star' Blue Star Juniper	24" SPRD.	B&B	PER PLAN	
GRASSES, PERENNIALS, GROUNDCOVERS, & VINES						
84	HE ST	Hemerocallis 'Stella d'Oro' Stella d'Oro Daylily	-	#1 Cont.	PER PLAN	
17	MI GR	Miscanthus sinensis 'Gracillimus' Maiden Grass	-	#3 Cont.	Plant @ 48" O.C.	

PLANT LABEL KEY: 1 / XX.XX (QUANTITY / CODE)

NOTE: FIELD VERIFY LOCATION AND DEPTHS OF ALL UTILITIES. HAND EXCAVATE ALL PLANTING PITS.

ADDITIONAL PLANTING NOTES
1. ALL GROUNDCOVERS AND PERENNIALS TO BE PLANTED DURING THE SPRING PLANTING WINDOW. FALL GROUNDCOVER AND PERENNIAL PLANTINGS WILL NOT BE ACCEPTED. COORDINATE PLANTING TIMES WITH OWNERS REPRESENTATIVE TO INCREASE SUCCESS OF GROUNDCOVER AND PERENNIAL PLANTINGS

NOTE:
THE PLAN AS SHOWN IS CONCEPTUAL IN NATURE AND IS PROVIDED TO ILLUSTRATE THE DESIRED LAYOUT AND QUALITY OF THE PROJECT. FINAL LAYOUT AND LANDSCAPING ARE SUBJECT TO CHANGE BASED UPON FINAL ENGINEERING AND HOMEOWNER SELECTIONS.

CODED LANDSCAPE NOTES

1. TURF
2. LANDSCAPE BED - PROVIDE 3" DEPTH HARDWOOD MULCH, POSITIVE DRAINAGE IN ALL DIRECTIONS. HAND SPADE EDGE.

CODED LAYOUT & MATERIALS NOTES

KEY	ITEM	REFERENCE	NOTES
1	PRIMARY JOINT ID SIGN	B / EX. G1	MATCH STONE VENEER TO BUILDING ELEVATIONS
2	SECONDARY JOINT ID SIGN	A / EX. G1	MATCH STONE VENEER TO BUILDING ELEVATIONS
3	FREESTANDING SIGN	A / EX. G1	MATCH STONE VENEER TO BUILDING ELEVATIONS
4	3-RAIL FENCE	D / EX. G1	SEE DETAIL D, EXHIBIT G1
5	8x8 END POST	D / EX. G1	SEE DETAIL D, EXHIBIT G1

Middlebury Crossing - Exhibit F1: Entry Sign Plan Enlargements

City of Powell, Ohio 04.23.2019

Real Property Design and Development

G2 Planning Urban Design Landscape Architecture
Planning + Design
Ph: 614.583.9230
Web: www.g2planning.com

PLANT LABEL KEY: 1 / XX XX (QUANTITY / CODE)

NOTE: FIELD VERIFY LOCATION AND DEPTHS OF ALL UTILITIES. HAND EXCAVATE ALL PLANTING PITS.

ADDITIONAL PLANTING NOTES
1. ALL GROUNDCOVERS AND PERENNIALS TO BE PLANTED DURING THE SPRING PLANTING WINDOW. FALL GROUNDCOVER AND PERENNIAL PLANTINGS WILL NOT BE ACCEPTED. COORDINATE PLANTING TIMES WITH OWNERS REPRESENTATIVE TO INCREASE SUCCESS OF GROUNDCOVER AND PERENNIAL PLANTINGS

CODED LANDSCAPE NOTES

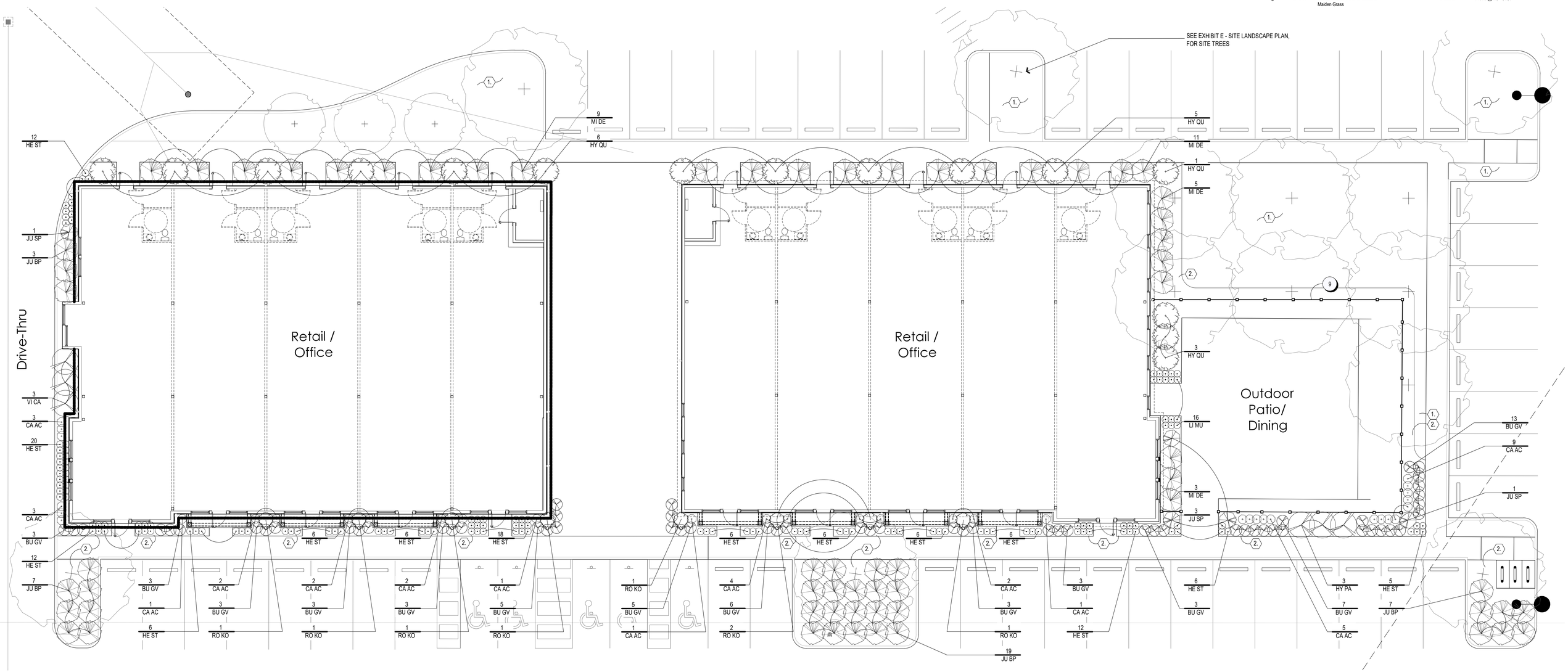
1. TURF
2. LANDSCAPE BED - PROVIDE 3" DEPTH HARDWOOD MULCH, POSITIVE DRAINAGE IN ALL DIRECTIONS. HAND SPADE EDGE.

CODED LAYOUT & MATERIALS NOTES

KEY	ITEM	REFERENCE	NOTES
9	4' HT. ALUMINUM PATIO FENCE	D EX. G3	COLOR BLACK (OR OWNER-APPROVED)

PLANT LIST (Contractor is responsible for all plant material shown on plan)

QTY.	CODE	BOT. NAME/COMMON NAME	SIZE	COND.	SPACING	NOTES
FLOWERING / DECIDUOUS SHRUBS						
7	RO KO	Rosa x 'Radtko' Double Knock Out Rose	24" HT.	#3 Cont.	PER PLAN	
3	HY PA	Hydrangea paniculata 'Limelight' Limelight Hydrangea	36" HT.	#5 Cont.	PER PLAN	
15	HY QU	Hydrangea quercifolia 'Snow Queen' Snow Queen Oakleaf Hydrangea	36" HT.	#5 Cont.	PER PLAN	
3	VI CA	Viburnum carlesii Koreanspice Viburnum	36" HT.	#5 Cont.	PER PLAN	
EVERGREEN SHRUBS						
60	BU GV	Buxus x 'Green Velvet' Green Velvet Boxwood	18" HT.	#3 Cont.	36" O.C.	
36	JU BP	Juniperus conferta 'Blue Pacific' Blue Pacific Juniper	24" SPRD.	B&B	PER PLAN	
5	JU SP	Juniperus chinensis 'Spartan' Spartan Juniper	5' HT.	B&B	PER PLAN	
28	MI DE	Microbiota decussata 'Celtic Pride' Celtic Pride Siberian Cypress	24" SPRD.	B&B	PER PLAN	
GRASSES, PERENNIALS, GROUNDCOVERS, & VINES						
36	CA AC	Calamagrostis xacutiflora 'Karl Foerster' Karl Foerster Feather Reed Grass	-	#2 Cont.	Plant @ 20" O.C.	
129	HE ST	Hemerocallis 'Stella d'Oro' Stella d'Oro Daylily	-	#1 Cont.	PER PLAN	
16	LI MU	Liriope muscari 'Big Blue' Big Blue Liriope	-	#1 Cont.	Plant @ 15" O.C.	
8	MI GR	Miscanthus sinensis 'Gracillimus' Maiden Grass	-	#3 Cont.	Plant @ 48" O.C.	



Middlebury Crossing - Exhibit F2: Sub-Area 'B' Landscape Plan

City of Powell, Ohio 04.23.2019

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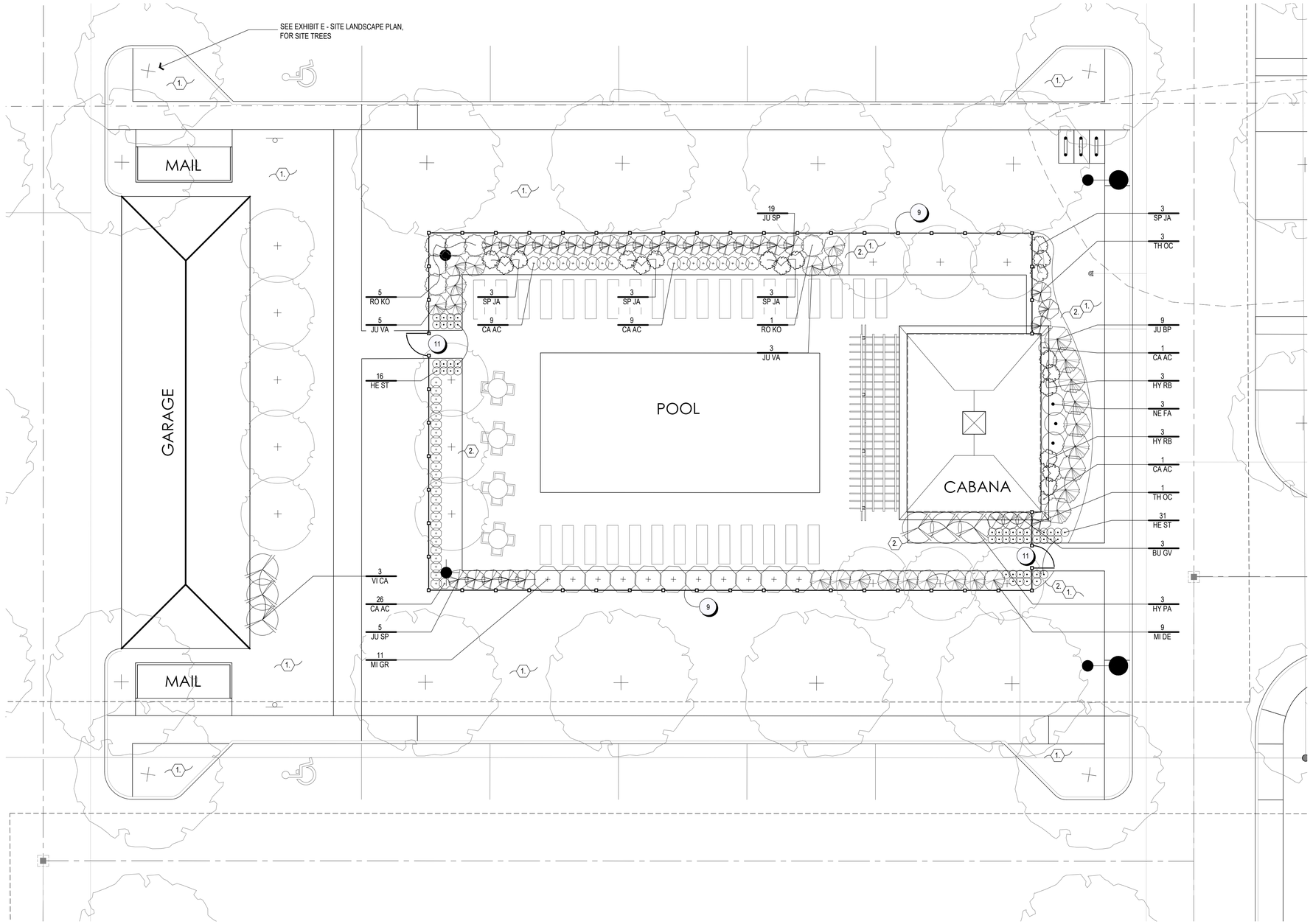

PLANT LIST (Contractor is responsible for all plant material shown on plan)

QTY.	CODE	BOT. NAME/COMMON NAME	SIZE	COND.	SPACING	NOTES
FLOWERING / DECIDUOUS SHRUBS						
6	RO KO	Rosa x 'Radtko' Double Knock Out Rose	24" HT.	#3 Cont.	PER PLAN	
6	HY PA	Hydrangea paniculata 'Limelight' Limelight Hydrangea	36" HT.	#5 Cont.	PER PLAN	
18	HY RB	Hydrangea quercifolia 'Ruby Slippers' Ruby Slippers Hydrangea	24" HT.	#3 Cont.	PER PLAN	
3	VI CA	Viburnum carlesii Koreanspice Viburnum	36" HT.	#5 Cont.	PER PLAN	
12	SP JA	Spirea japonica 'Goldmound' Goldmound Spirea	24" HT.	#3 Cont.	Plant @ 24" O.C.	
EVERGREEN SHRUBS						
3	BU GV	Buxus x 'Green Velvet' Green Velvet Boxwood	18" HT.	#3 Cont.	36" O.C.	
9	JU BP	Juniperus conferta 'Blue Pacific' Blue Pacific Juniper	24" SPRD.	B&B	PER PLAN	
24	JU SP	Juniperus chinensis 'Spartan' Spartan Juniper	5' HT.	B&B	PER PLAN	
8	JU VA	Juniperus virginiana 'Grey Owl' Grey Owl Juniper	18" HT.	#3 Cont.	PER PLAN	
9	MI DE	Microbiota decussata 'Celtic Pride' Celtic Pride Siberian Cypress	24" SPRD.	B&B	PER PLAN	
4	TH OC	Thuja occidentalis 'Smaragd' Emerald Green Arborvitae	5' HT.	B&B	PER PLAN	
GRASSES, PERENNIALS, GROUNDCOVERS, & VINES						
46	CA AC	Calamagrostis xacutiflora 'Karl Foerster' Karl Foerster Feather Reed Grass	-	#2 Cont.	Plant @ 20" O.C.	
47	HE ST	Hemerocallis 'Stella d'Oro' Stella d'Oro Daylily	-	#1 Cont.	PER PLAN	
11	MI GR	Miscanthus sinensis 'Gracillimus' Maiden Grass	-	#3 Cont.	Plant @ 48" O.C.	
3	NE FA	Nepeta xfaassenii 'Walker's Low' Walker's Low Catmint	-	#1 Cont.	Plant @ 30" O.C.	

PLANT LABEL KEY: 1 / XX XX (QUANTITY / CODE)

NOTE: FIELD VERIFY LOCATION AND DEPTHS OF ALL UTILITIES. HAND EXCAVATE ALL PLANTING PITS.

ADDITIONAL PLANTING NOTES
1. ALL GROUNDCOVERS AND PERENNIALS TO BE PLANTED DURING THE SPRING PLANTING WINDOW. FALL GROUNDCOVER AND PERENNIAL PLANTINGS WILL NOT BE ACCEPTED. COORDINATE PLANTING TIMES WITH OWNERS REPRESENTATIVE TO INCREASE SUCCESS OF GROUNDCOVER AND PERENNIAL PLANTINGS

NOTE:
THE PLAN AS SHOWN IS CONCEPTUAL IN NATURE AND IS PROVIDED TO ILLUSTRATE THE DESIRED LAYOUT AND QUALITY OF THE PROJECT. FINAL LAYOUT AND LANDSCAPING ARE SUBJECT TO CHANGE BASED UPON FINAL ENGINEERING AND HOMEOWNER SELECTIONS.

CODED LANDSCAPE NOTES

1. TURF

2. LANDSCAPE BED - PROVIDE 3" DEPTH HARDWOOD MULCH, POSITIVE DRAINAGE IN ALL DIRECTIONS. HAND SPADE EDGE.

CODED LAYOUT & MATERIALS NOTES

KEY	ITEM	REFERENCE	NOTES
4	3-RAIL FENCE	D / EX. G1	SEE DETAIL D, EXHIBIT G1
9	4' HT. ALUMINUM PATIO FENCE	D / EX. G3	COLOR BLACK (OR OWNER-APPROVED)
10	5' HT. ALUMINUM POOL FENCE	C / EX. G3	COLOR BLACK (OR OWNER-APPROVED)
11	SELF-CLOSING POOL GATE	C / EX. G3	COLOR BLACK (OR OWNER-APPROVED) PROVIDE SELF-CLOSING HINGES AND MAGNETIC LATCH
12	VINYL PRIVACY FENCE	C / EX. G1	COLOR WHITE (OR OWNER-APPROVED)

Middlebury Crossing - Exhibit F3: Pool Area Landscape Plan

City of Powell, Ohio 04.23.2019

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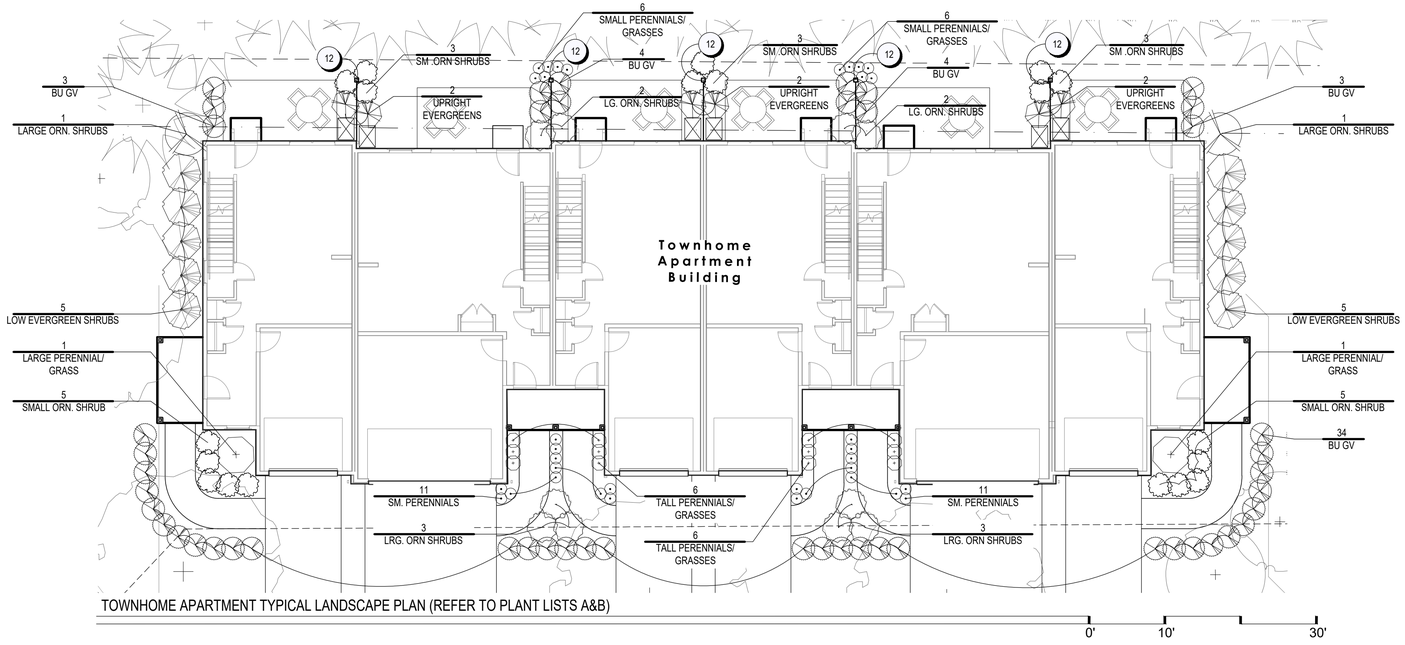


TOWNHOME APARTMENT TYPICAL LANDSCAPE PLAN (REFER TO PLANT LISTS A&B)

CODED LANDSCAPE NOTES

1. TURF
2. LANDSCAPE BED - PROVIDE 3" DEPTH HARDWOOD MULCH, POSITIVE DRAINAGE IN ALL DIRECTIONS. HAND SPADE EDGE.

BUILDING TYPICAL PLANT LIST A (Southern and Western Exposures)

CODE	BOT. NAME/COMMON NAME	SIZE	COND.	SPACING	NOTES
UPRIGHT EVERGREENS					
	Juniperus chinensis 'Spartan' Spartan Juniper	30" HT.	B&B	PER PLAN	
LARGE EVERGREEN SHRUBS					
	Juniperus chinensis 'Sea Green' Sea Green Juniper	36" HT.	B&B	PER PLAN	
MEDIUM EVERGREEN SHRUBS					
BU GV	Buxus x'Green Velvet' Green Velvet Boxwood	18" HT.	B&B	PER PLAN	
	Thuja occidentalis 'Bobozam' Mr. Bowling Ball Arborvitae	24" HT.	B&B	PER PLAN	
JU SS	Juniperus chinensis 'Sea Spray' Sea Spray Juniper	18" HT.	#3 Cont.	Plant @ 42" O.C.	DO NOT SUBSTITUTE 'SEA GREEN'
LOW EVERGREEN SHRUBS					
	Juniperus conferta 'Blue Pacific' Blue Pacific Juniper	24" SPRD.	B&B	PER PLAN	
LARGE ORNAMENTAL / DECIDUOUS SHRUBS					
	Viburnum carlesii Koreanspice Viburnum	36" HT.	B&B	PER PLAN	
SMALL ORNAMENTAL / DECIDUOUS SHRUBS					
	Rosa x 'Radtko' Double Knock Out Rose	30" HT.	#3 Cont.	PER PLAN	
	Spiraea japonica 'Goldmound' Goldmound Spirea	30" HT.	#3 Cont.	PER PLAN	
TALL GRASSES & PERENNIALS					
	Calamagrostis acutiflora 'Karl Foerster' Karl Foerster Feather Reed Grass	-	#2 Cont.	Plant @ 18" O.C.	
	Echinacea purpurea 'Magnus' Magnus Coneflower	-	#2 Cont.	Plant @ 18" O.C.	
LARGE GRASSES & PERENNIALS					
MI GR	Miscanthus sinensis 'Gracillimus' Maiden Grass	-	#3 Cont.	Plant @ 4.5' O.C.	
	Perovskia atriplicifolia 'Little Spire' Little Spire Russian Sage	-	#3 Cont.	Plant @ 30" O.C.	
SMALL GRASSES, PERENNIALS, GROUNDCOVERS, & VINES					
	Hemerocallis 'Tuscawilla Tigress' Tuscawilla Tigress Daylily	-	#1 Cont.	Plant @ 18" O.C.	
	Pennisetum alopecuroides 'Hameln' Hameln Dwarf Fountain Grass	-	#1 Cont.	Plant @ 18" O.C.	

NOTE:
THE PLAN AS SHOWN IS CONCEPTUAL IN NATURE AND IS PROVIDED TO ILLUSTRATE THE DESIRED LAYOUT AND QUALITY OF THE PROJECT.

FIELD VERIFY LOCATION AND DEPTHS OF ALL UTILITIES. HAND EXCAVATE ALL PLANTING PITS.

PLANTING NOTES
1. ALL GROUNDCOVERS AND PERENNIALS TO BE PLANTED DURING THE SPRING PLANTING WINDOW. FALL GROUNDCOVER AND PERENNIAL PLANTINGS WILL NOT BE ACCEPTED. COORDINATE PLANTING TIMES WITH OWNERS REPRESENTATIVE TO INCREASE SUCCESS OF GROUNDCOVER AND PERENNIAL PLANTINGS

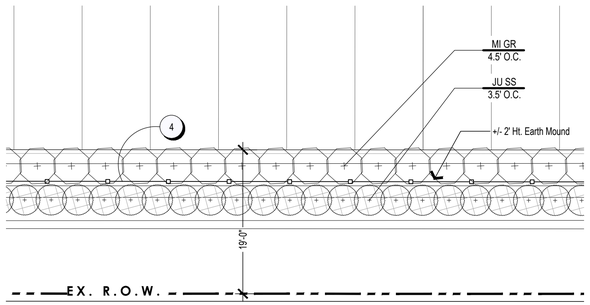
PLANT LABEL KEY: 1 / XX XX (QUANTITY / CODE)

BUILDING TYPICAL PLANT LIST B (Northern and Eastern Exposures)

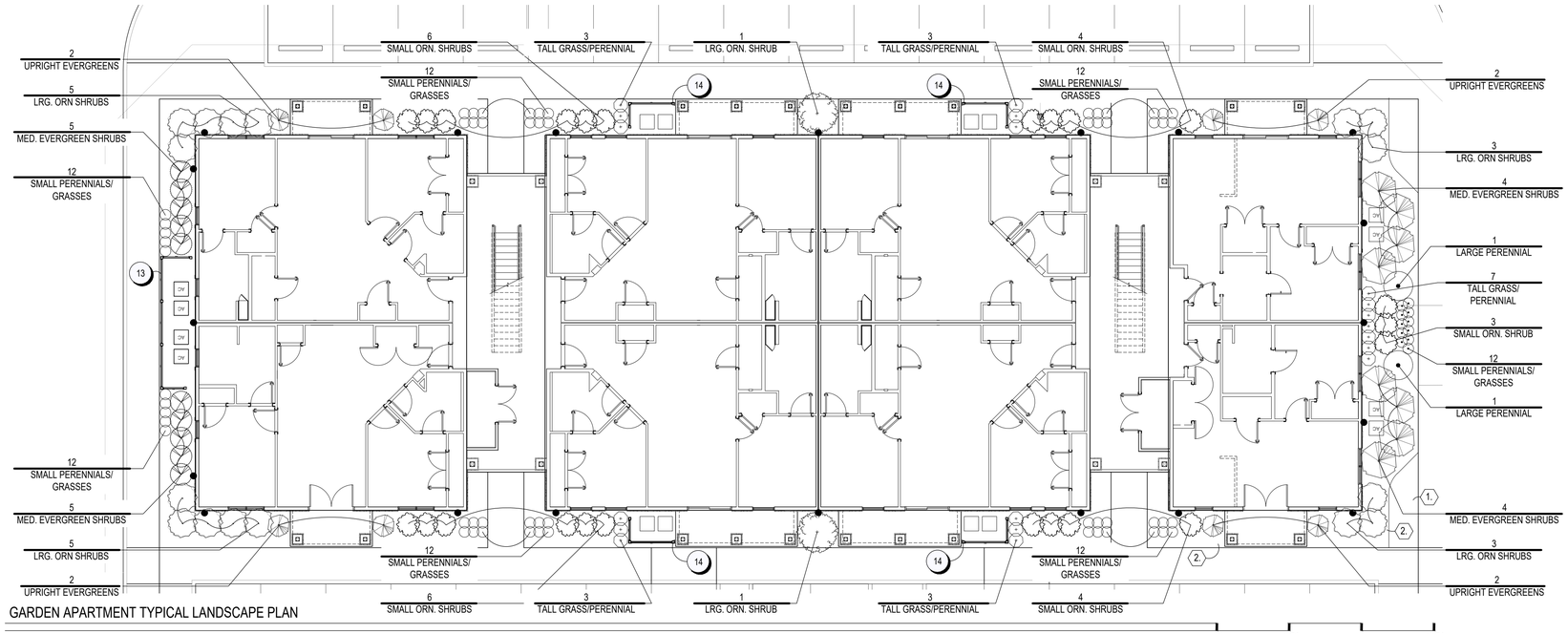
CODE	BOT. NAME/COMMON NAME	SIZE	COND.	SPACING	NOTES
UPRIGHT EVERGREENS					
	Thuja occidentalis 'Holmstrup' Holmstrup Eastern Arborvitae	30" HT.	B&B	PER PLAN	
MEDIUM EVERGREEN SHRUBS					
BU GV	Buxus x'Green Velvet' Green Velvet Boxwood	18" HT.	B&B	PER PLAN	
TA DE	Taxus x media 'Densiformis' Dense Yew	24" HT.	B&B	PER PLAN	
LOW EVERGREEN SHRUBS					
	Microbiota decussata 'Celtic Pride' Celtic Pride Siberian Cypress	24" SPRD.	B&B	PER PLAN	
LARGE ORNAMENTAL / DECIDUOUS SHRUBS					
	Hydrangea quercifolia 'Snow Queen' Snow Queen Hydrangea	36" HT.	#5 Cont.	PER PLAN	
SMALL ORNAMENTAL / DECIDUOUS SHRUBS					
	Fothergilla x 'Mount Airy' Mount Airy Fothergilla	24" HT.	#3 Cont.	PER PLAN	
	Hydrangea quercifolia 'Ruby Slippers' Ruby Slippers Hydrangea	24" HT.	#3 Cont.	PER PLAN	
TALL GRASSES & PERENNIALS					
	Calamagrostis acutiflora 'Karl Foerster' Karl Foerster Feather Reed Grass	-	#2 Cont.	Plant @ 18" O.C.	
	Polygonatum multiflorum Solomon's Seal		#2 Cont.	Plant @ 18" O.C.	
LARGE GRASSES & PERENNIALS					
	Hosta 'Sun Power' Sun Power Hosta	-	#3 Cont.	Plant @ 36" O.C.	
	Osmundastrum cinnamomeum Cinnamon Fern	-	#3 Cont.	Plant @ 36" O.C.	
SMALL GRASSES, PERENNIALS, GROUNDCOVERS, & VINES					
	Heucherella 'Sweet Tea' Sweet Tea Foamy Bells	-	#1 Cont.	Plant @ 18" O.C.	
	Liriope muscari 'Big Blue' Big Blue Liriope	-	#1 Cont.	Plant @ 15" O.C.	

CODED LAYOUT & MATERIALS NOTES

KEY	ITEM	REFERENCE	NOTES
4	3-RAIL FENCE	D / EX. G1	SEE DETAIL D, EXHIBIT G1
12	VINYL PRIVACY FENCE	C / EX. G1	COLOR WHITE (OR OWNER-APPROVED)
13	AC CONDENSER SCREEN FENCE 'A'	A / EX. G3	OPAQUE STAIN TO MATCH BUILDING TRIM - PROVIDE SAMPLES FOR OWNER APPROVAL.
14	AC CONDENSER SCREEN FENCE 'B'	B / EX. G3	OPAQUE STAIN TO MATCH BUILDING TRIM - PROVIDE SAMPLES FOR OWNER APPROVAL.



TYPICAL PARKING LOT SCREEN ON PUBLIC STREET FRONTAGE
(REFER TO EXHIBIT E FOR FULL EXENTS)
0' 10' 30'



GARDEN APARTMENT TYPICAL LANDSCAPE PLAN
0' 10' 30'

Middlebury Crossing - Exhibit F4: Typical Landscape Plans

City of Powell, Ohio 04.23.2019

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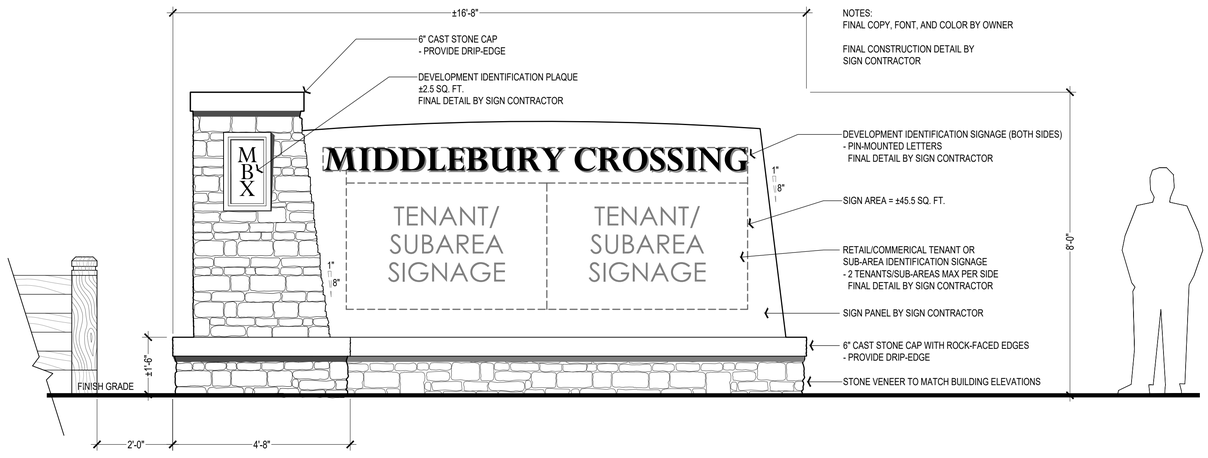
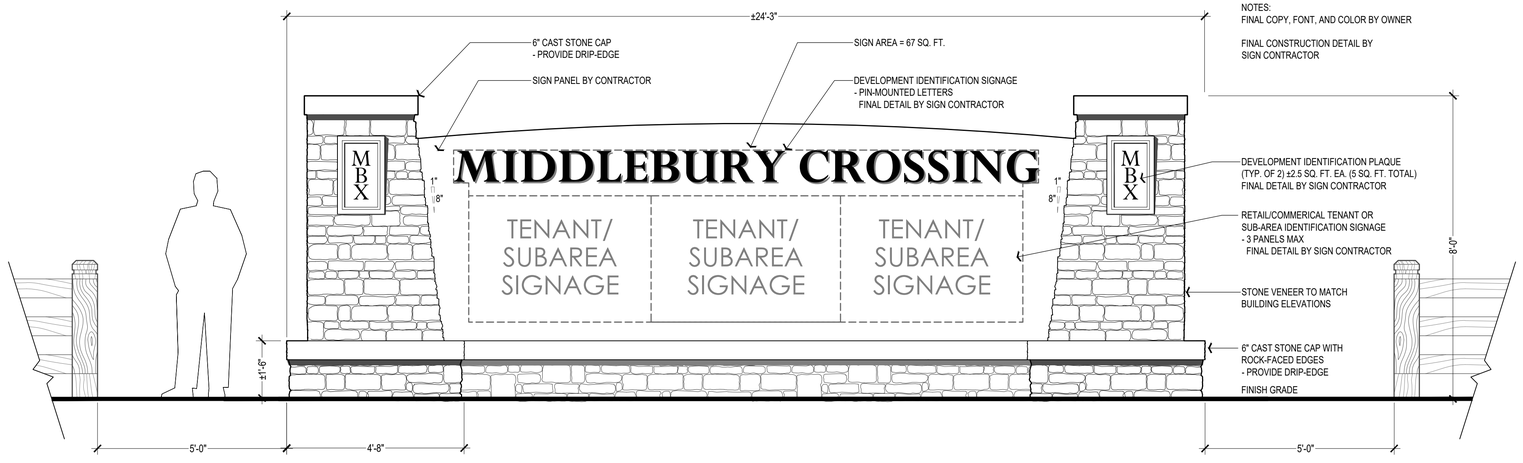
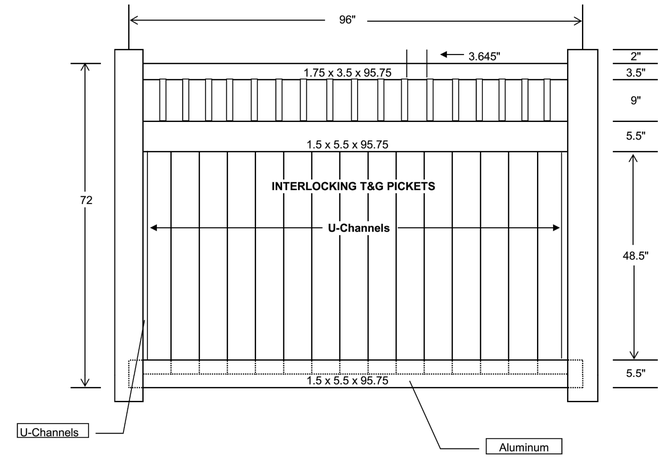


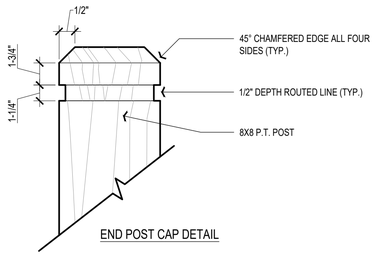
A DOUBLE-SIDED SECONDARY JOINT IDENTIFICATION SIGN/FREESTANDING SIGN
SCALE: 1/2" = 1'-0"



B PRIMARY JOINT IDENTIFICATION SIGN
SCALE: 1/2" = 1'-0"



C VINYL PRIVACY FENCE
SCALE: 1" = 2'-0"



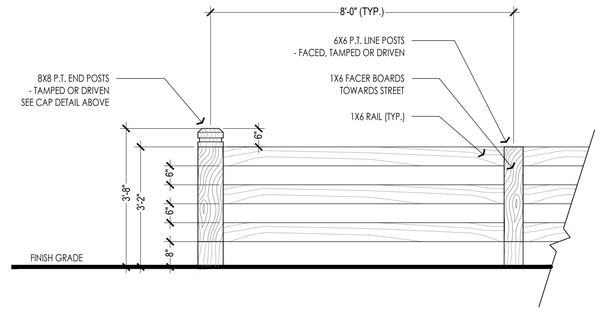
END POST CAP DETAIL

NOTES:
POSTS SHALL BE SOUND, STRAIGHT AND FREE FROM KNOTS, SPLITS, AND SHAKES, AND PEELED THEIR ENTIRE LENGTH. BOTH ENDS SHALL BE DOUBLE TRIMMED AND SAWED SQUARE

FENCE BOARDS
BOARDS SHALL BE 1" X 6" X 16' POPLAR, PRESSURE TREATED. THE BOARDS SHALL BE SOUND, STRAIGHT AND FREE OF KNOTS AND SHAKES

PAINT
CUSTOM PAINT/ STAIN COMBO COLOR TO BE DURON PAINTS "SCIOTO RESERVE GREEN" FLOOD SEMI-TRANSPARENT DECK STAIN.

FASTENERS
NAILS-10D PLAIN SHANK BOX GALVANIZED



D 3-RAIL BOARD FENCE
SCALE: 1/2" = 1'-0"

Middlebury Crossing - Exhibit G1: Landscape Details

City of Powell, Ohio 04.23.2019

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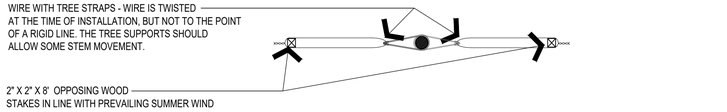
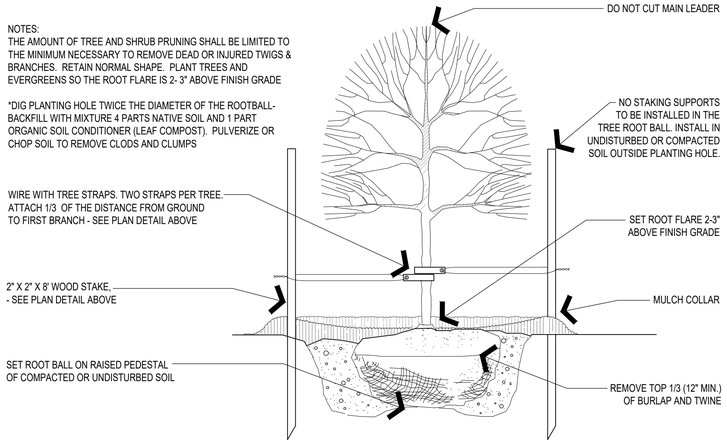
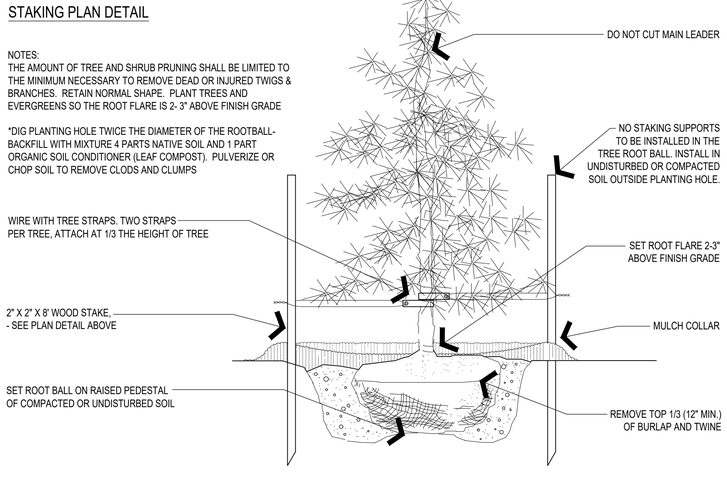


STAKING PLAN DETAIL

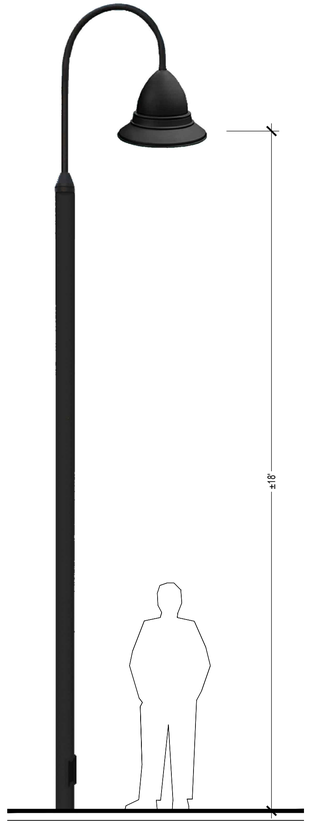


A DECIDUOUS TREE
SCALE: 1/2" = 1'-0"

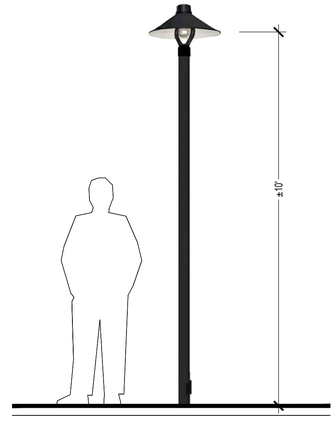


STAKING PLAN DETAIL

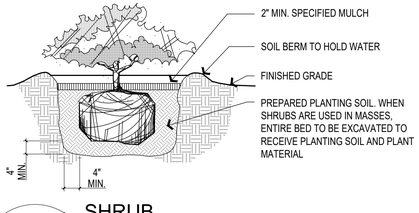
B EVERGREEN TREE
SCALE: 1/2" = 1'-0"



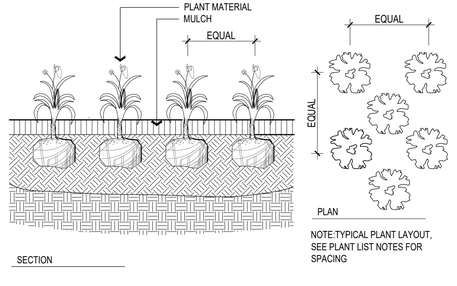
C AREA LIGHT: MILAN BY NLS
OR OWNER-APPROVED EQUAL WITH SIMILAR LIGHT OUTPUT, DISTRIBUTION, AND COLOR TEMPERATURE



D POOL LIGHT: TRZP-LED BY LIGHTWAY
OR OWNER-APPROVED EQUAL WITH SIMILAR LIGHT OUTPUT, DISTRIBUTION, AND COLOR TEMPERATURE



E SHRUB
SCALE: 1/2" = 1'-0"



F PERENNIALS & GROUNDCOVERS
SCALE: 1" = 1'-0"

Middlebury Crossing - Exhibit G2: Landscape Details

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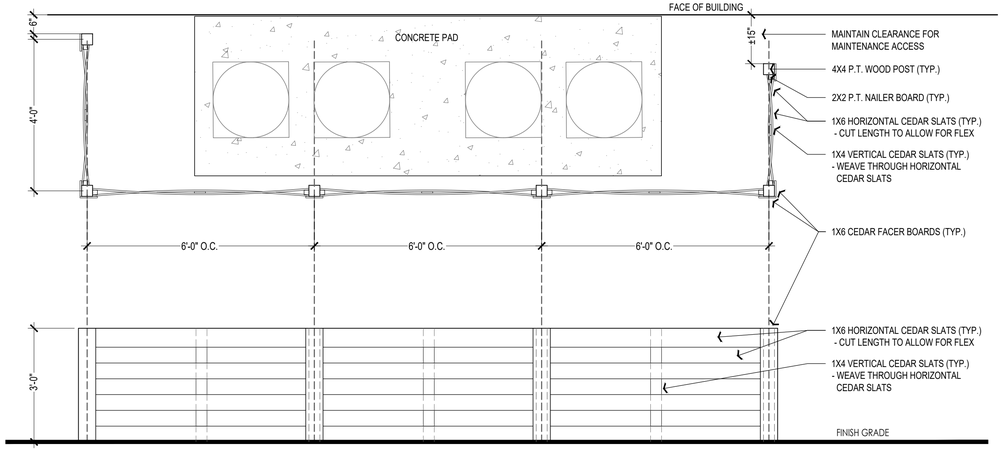
NOTES:
POSTS SHALL BE SOUND, STRAIGHT AND FREE FROM KNOTS, SPLITS, AND SHAKES, AND PEELED THEIR ENTIRE LENGTH. BOTH ENDS SHALL BE DOUBLE TRIMMED AND SAWED SQUARE

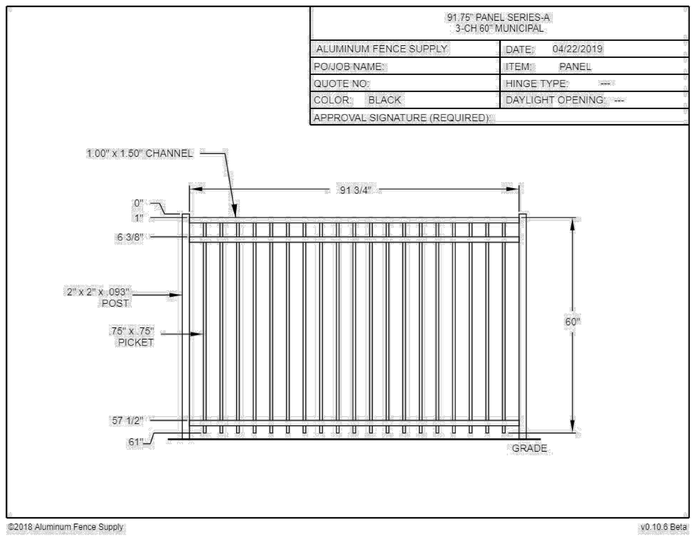
FENCE BOARDS
BOARDS SHALL BE 1" X 6" X 16' POPLAR, PRESSURE TREATED. THE BOARDS SHALL BE SOUND, STRAIGHT AND FREE OF KNOTS AND SHAKES

PAINT
OPAQUE STAIN TO MATCH BUILDING TRIM - PROVIDE SAMPLES FOR OWNER APPROVAL.

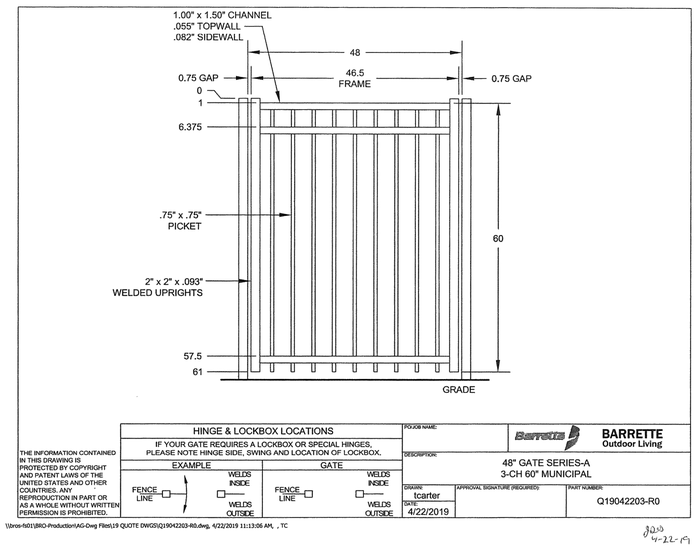
FASTENERS
NAILS-10D PLAIN SHANK BOX GALVANIZED

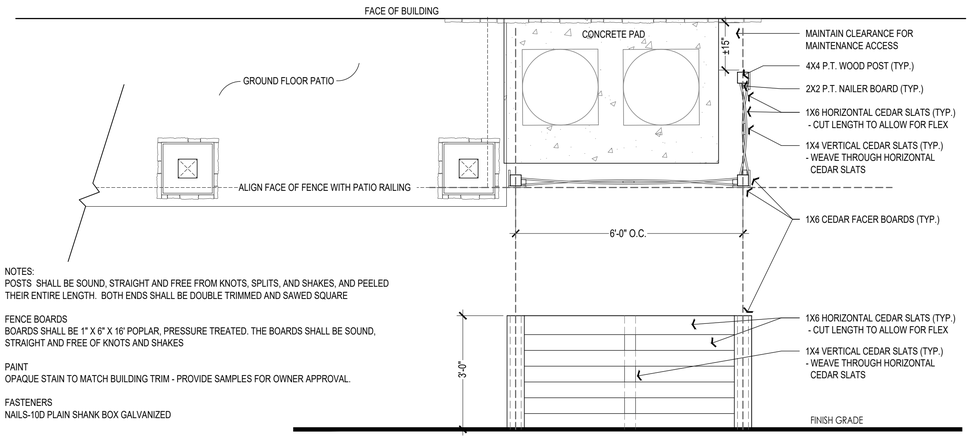


A AC CONDENSER SCREEN FENCE 'A'
SCALE: 1/2" = 1'-0"

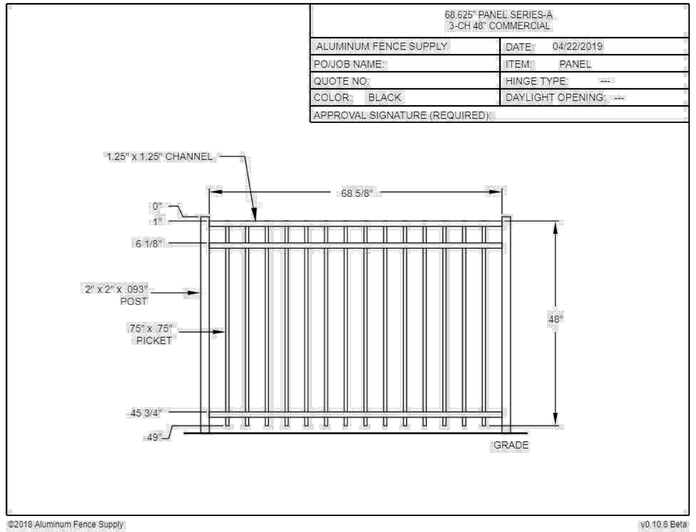


C ALUMINUM POOL FENCE (OR OWNER- APPROVED EQUAL)
SCALE: N.T.S.





B AC CONDENSER SCREEN FENCE 'B'
SCALE: 1/2" = 1'-0"



D ALUMINUM PATIO FENCE (OR OWNER- APPROVED EQUAL)
SCALE: N.T.S.

Middlebury Crossing - Exhibit G3: Landscape Details

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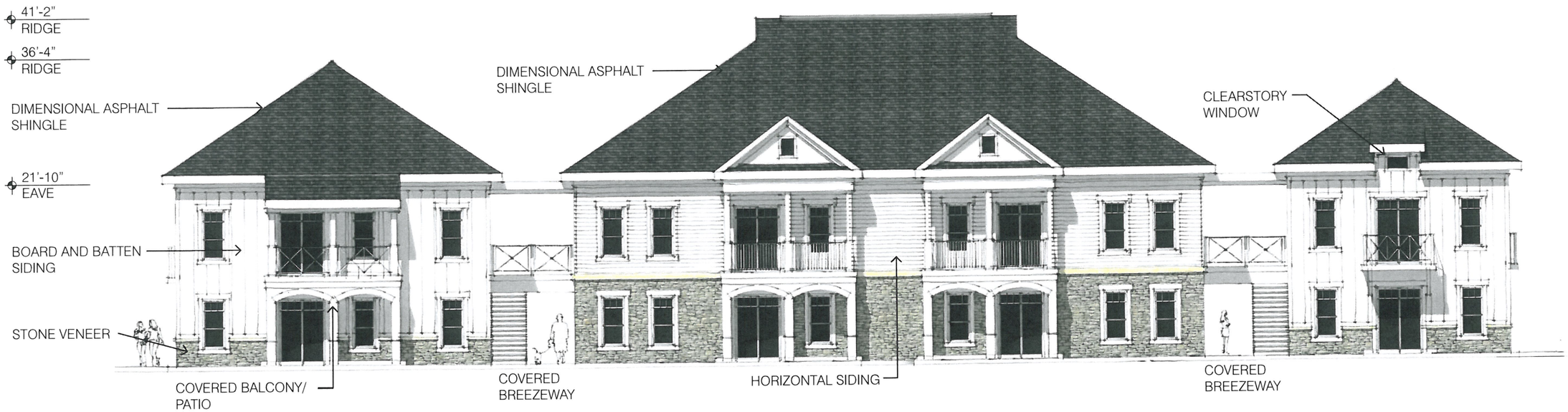
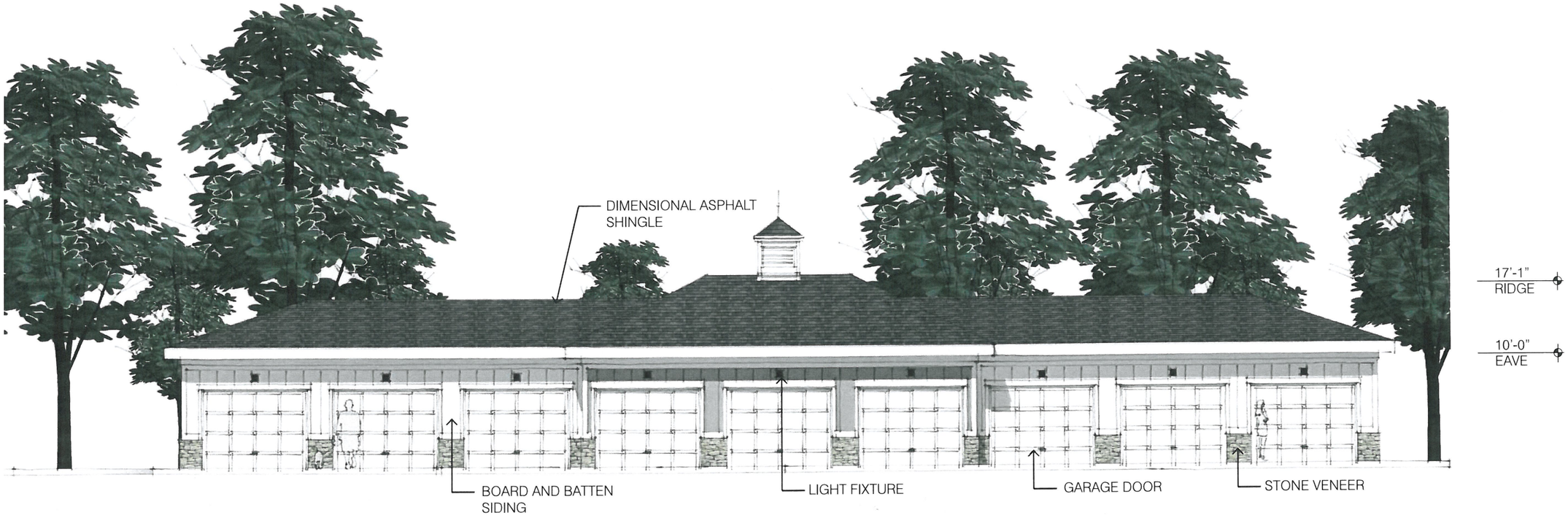


16- UNIT GARDEN APARTMENT BUILDING
MIDDLEBURY CROSSING



EXAMPLE GARAGE UNITS
MIDDLEBURY CROSSING

Middlebury Crossing - Retail Building Concept Design April 18, 2019

meyers+associates
ARCHITECTURE
232 n third st, 300, columbus, oh 43215

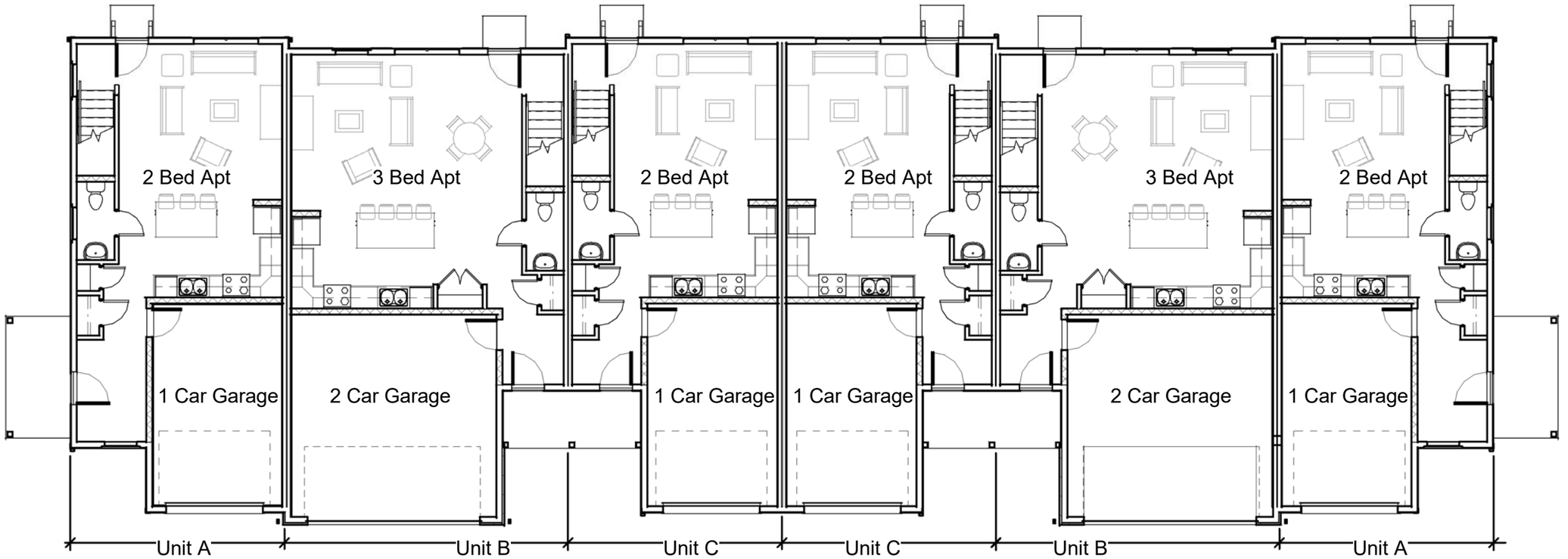
Color Scheme		
Material	**Manufacturer**	**Color**
Horizontal Siding	Cementitious 6" Lap Siding	Anew Grey
Shake Siding	Cementitious Shake	Backdrop
Board and Batten Siding	Cementitious Board and Batten	Pure White
Stone	Prestige	Grandview Limestone
Entry Doors	Sherwin Williams	Rockwood Red
Overhead Garage Doors	Sherwin Williams	Pure White
All Exterior Cementitious Trim	Sherwin Williams	Pure White
All Trim Aluminum Wrapped	Aluminum	White
Soffits	Cementitious	White
Gutters & Downspouts	Aluminum	White
Roof Shingles	Certainteed	Weather Wood

Middlebury Crossing

City of Powell, Ohio 04-23-2019

Color Scheme

SULLIVAN BRUCK ARCHITECTS



First Floor Plan

3/32" = 1'-0"

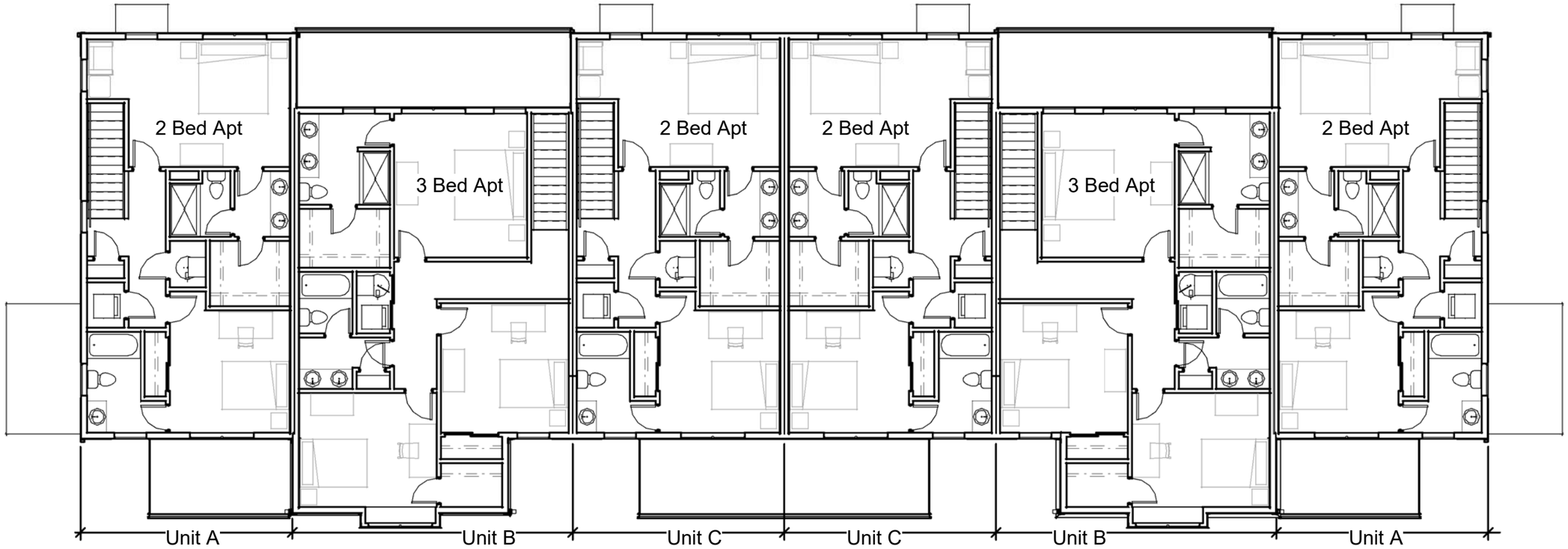
Unit A		Unit B		Unit C	
First Floor sf	594	First Floor sf	690	First Floor sf	549
Second Floor sf	721	Second Floor sf	909	Second Floor sf	716
Total sf	1315	Total sf	1518	Total sf	1265

Middlebury Crossing

Town House Plans

City of Powell, Ohio 04/23/2019

SULLIVAN BRUCK ARCHITECTS



Second Floor Plan

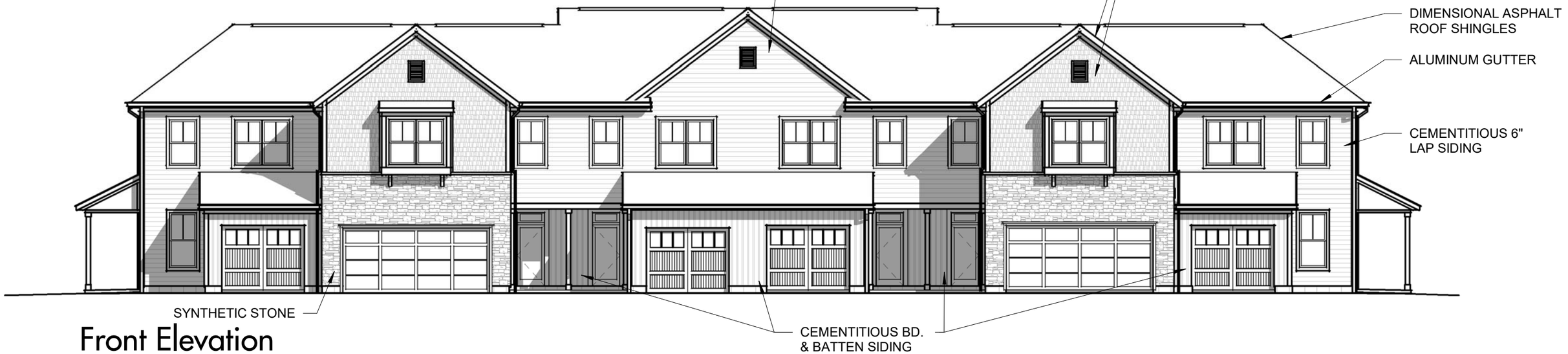
3/32" = 1'-0"

Middlebury Crossing

City of Powell, Ohio 04/23/2019

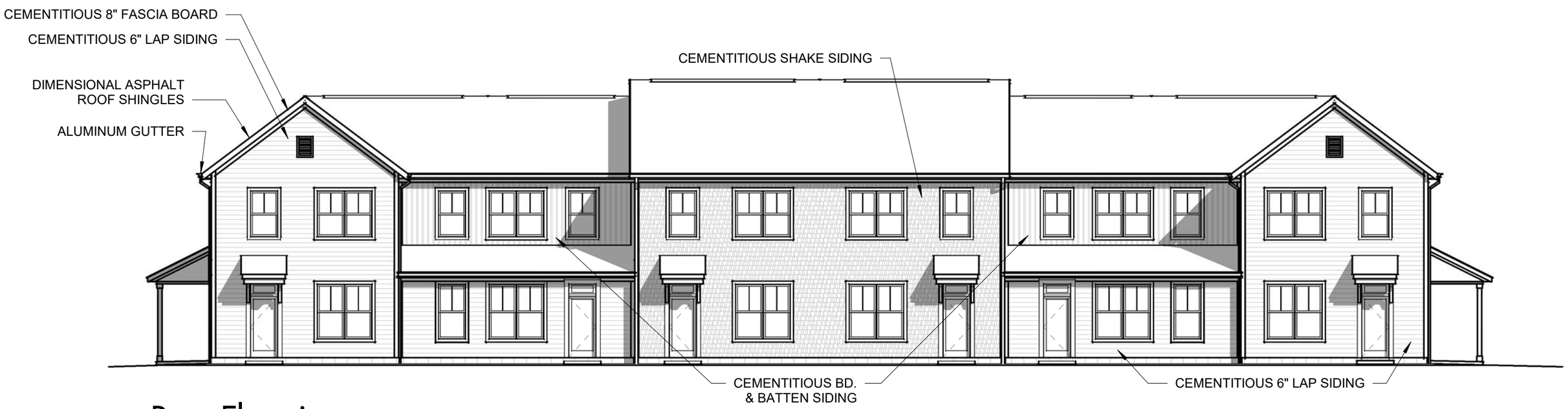
Town House Plans

SULLIVAN BRUCK ARCHITECTS



Front Elevation

3/32" = 1'-0"



Rear Elevation

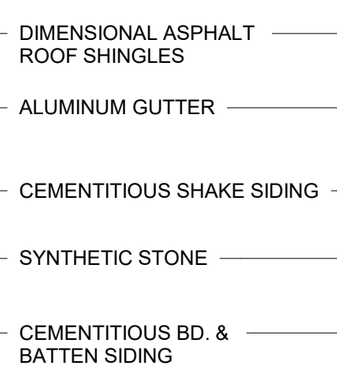
3/32" = 1'-0"

Middlebury Crossing

Town House Elevations

City of Powell, Ohio 04/23/2019

SULLIVAN BRUCK ARCHITECTS



Left Side Elevation

3/32" = 1'-0"

Right Side Elevation

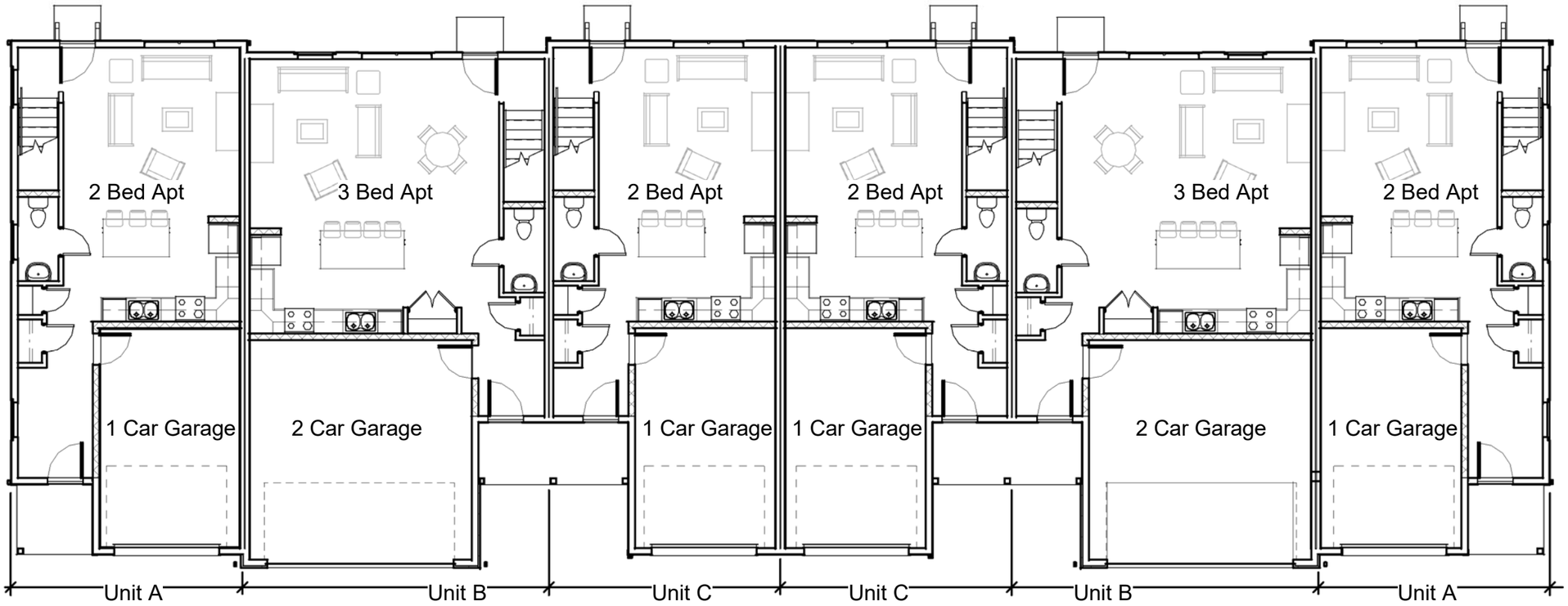
3/32" = 1'-0"

Middlebury Crossing

City of Powell, Ohio 04/23/2019

Town House Elevations

SULLIVAN BRUCK ARCHITECTS



First Floor Plan Option 2

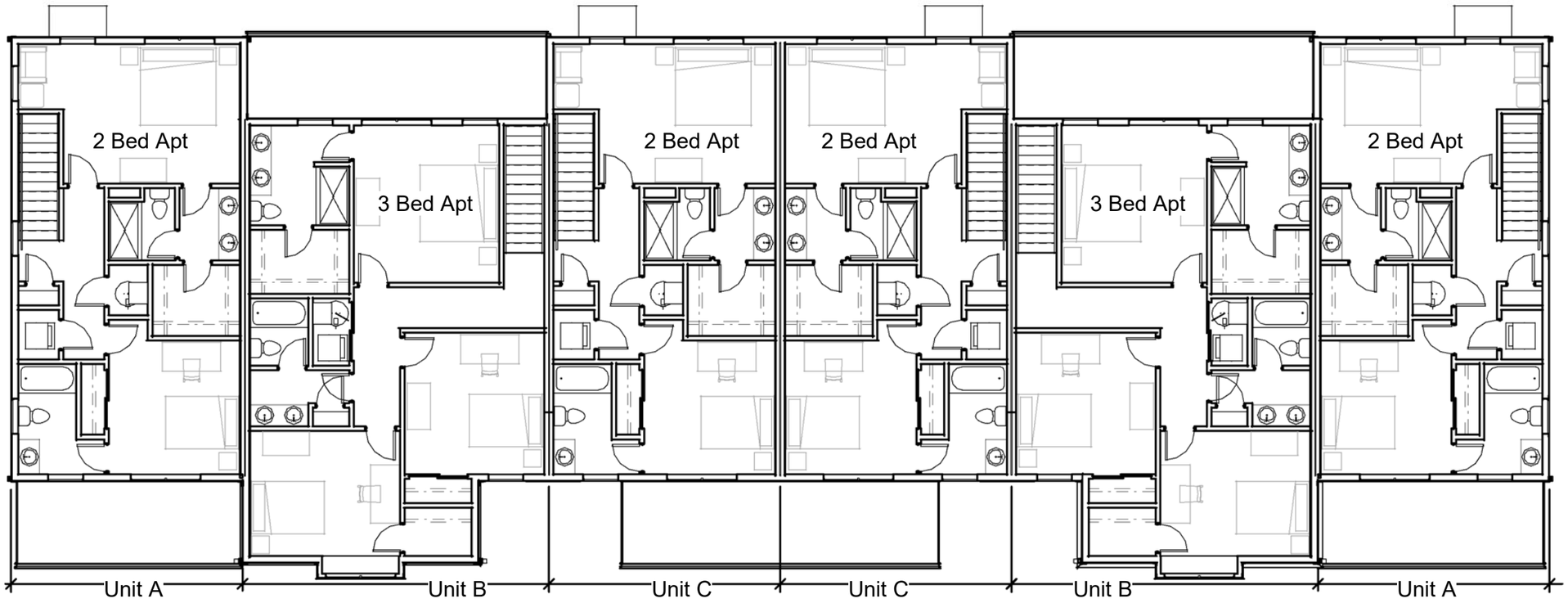
3/32" = 1'-0"

Middlebury Crossing

Town House Plans

City of Powell, Ohio 04/23/2019

SULLIVAN BRUCK ARCHITECTS



Second Floor Plan Option 2

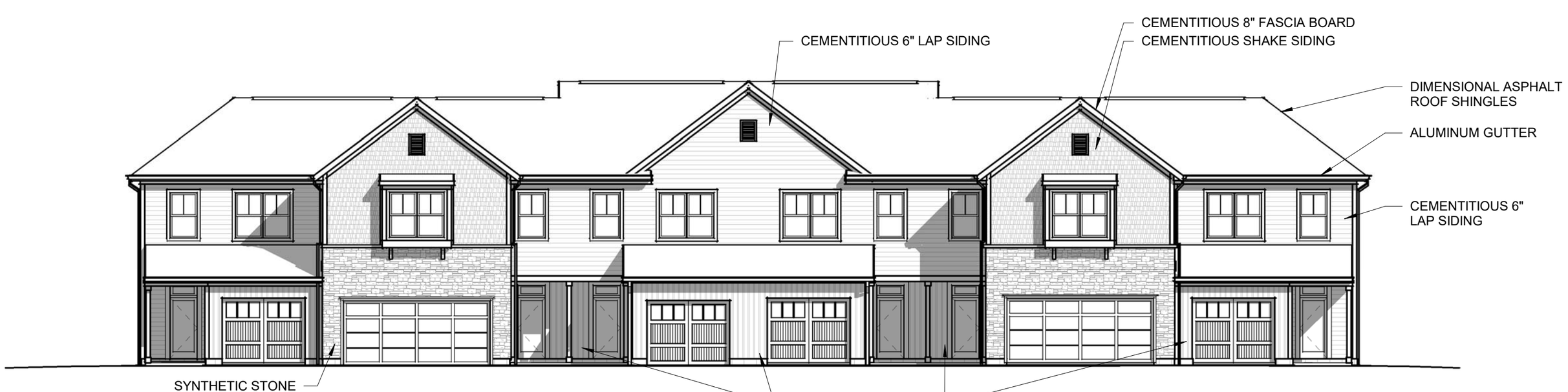
3/32" = 1'-0"

Middlebury Crossing

Town House Plans

City of Powell, Ohio 04/23/2019

SULLIVAN BRUCK ARCHITECTS



Front Elevation Option 2

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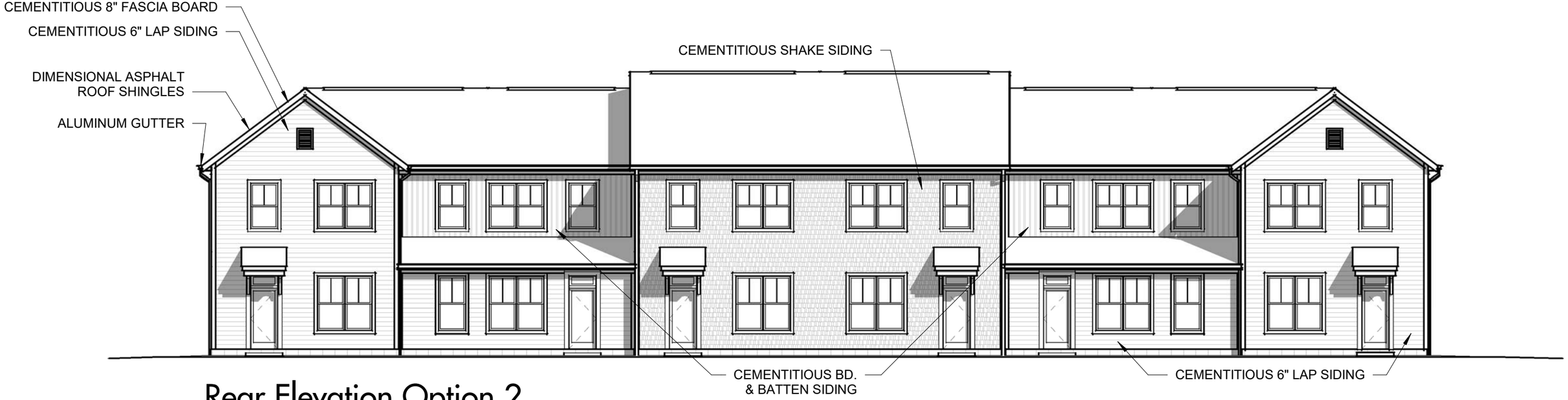

Rear Elevation Option 2

3/32" = 1'-0"

Middlebury Crossing

Town House Elevations

City of Powell, Ohio 04/23/2019

SULLIVAN BRUCK ARCHITECTS

Left Side Elevation Option 2

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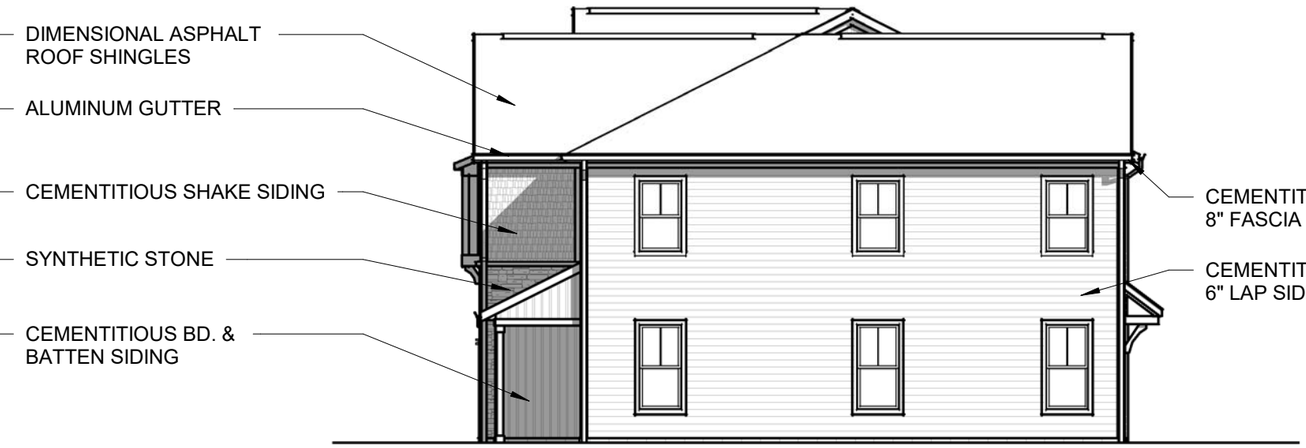


Right Side Elevation Option 2

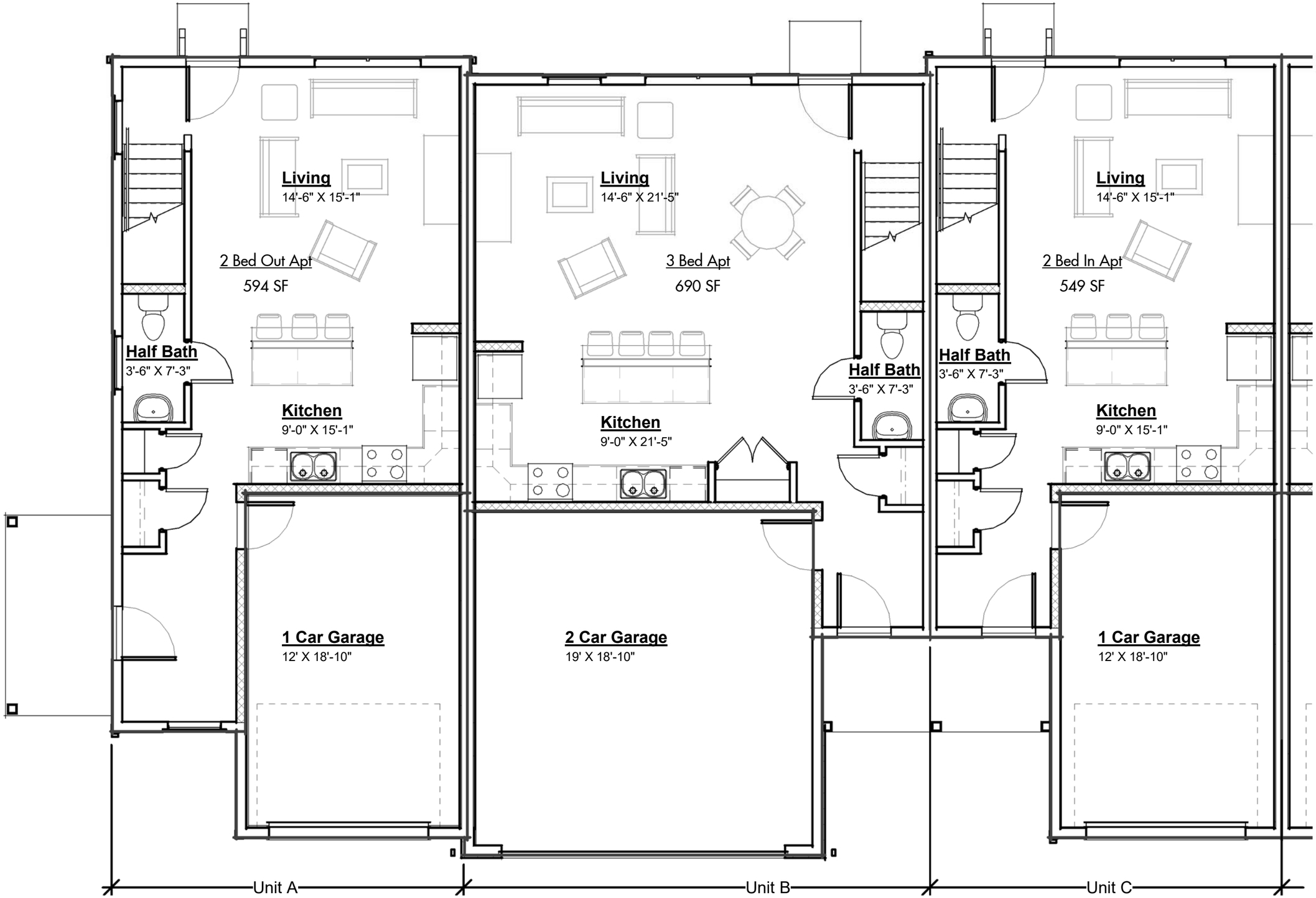
3/32" = 1'-0"

Middlebury Crossing

City of Powell, Ohio 04/23/2019

Town House Elevations

SULLIVAN BRUCK ARCHITECTS



Middlebury Crossing

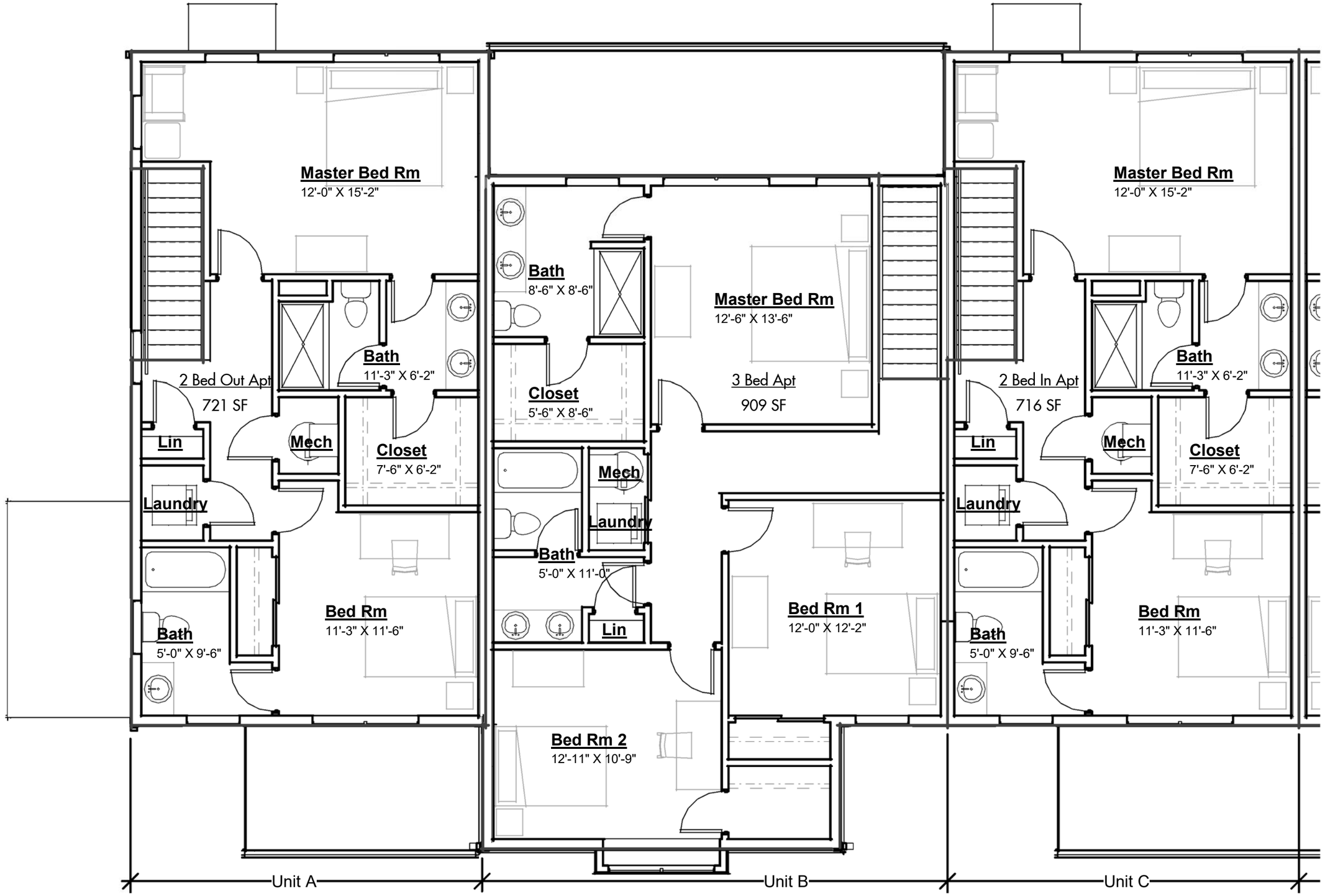
Floor 1 Unit Plans

3/16" = 1'-0"

Town House Plans

City of Powell, Ohio 04/23/2019

SULLIVAN BRUCK ARCHITECTS



Middlebury Crossing

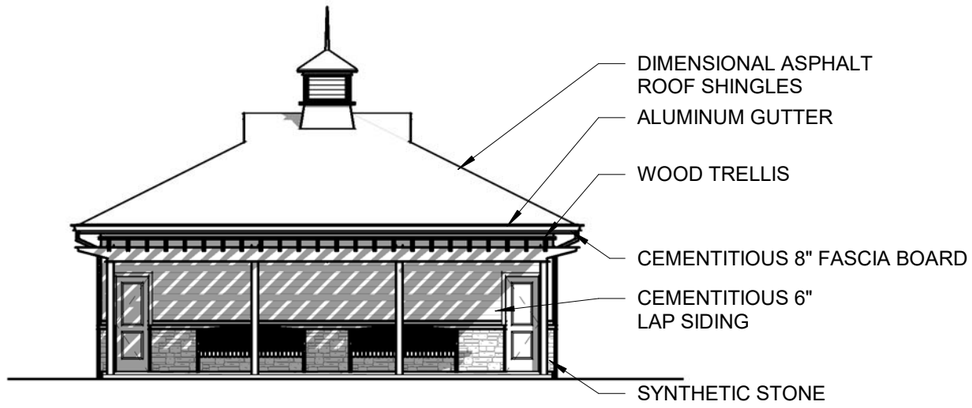
City of Powell, Ohio 04/23/2019

Floor 2 Unit Plans

3/16" = 1'-0"

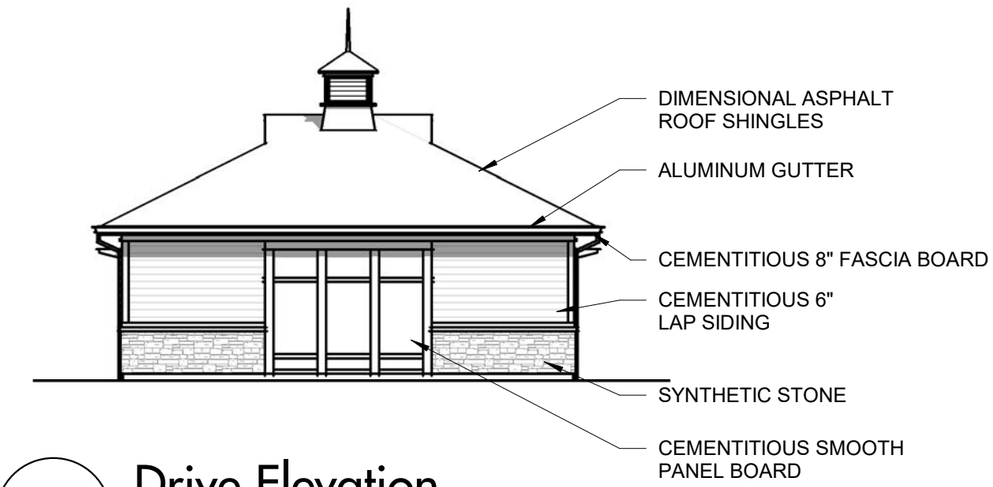
Town House Plans

SULLIVAN BRUCK ARCHITECTS



2 Pool Elevation

3/32" = 1'-0"



3 Drive Elevation

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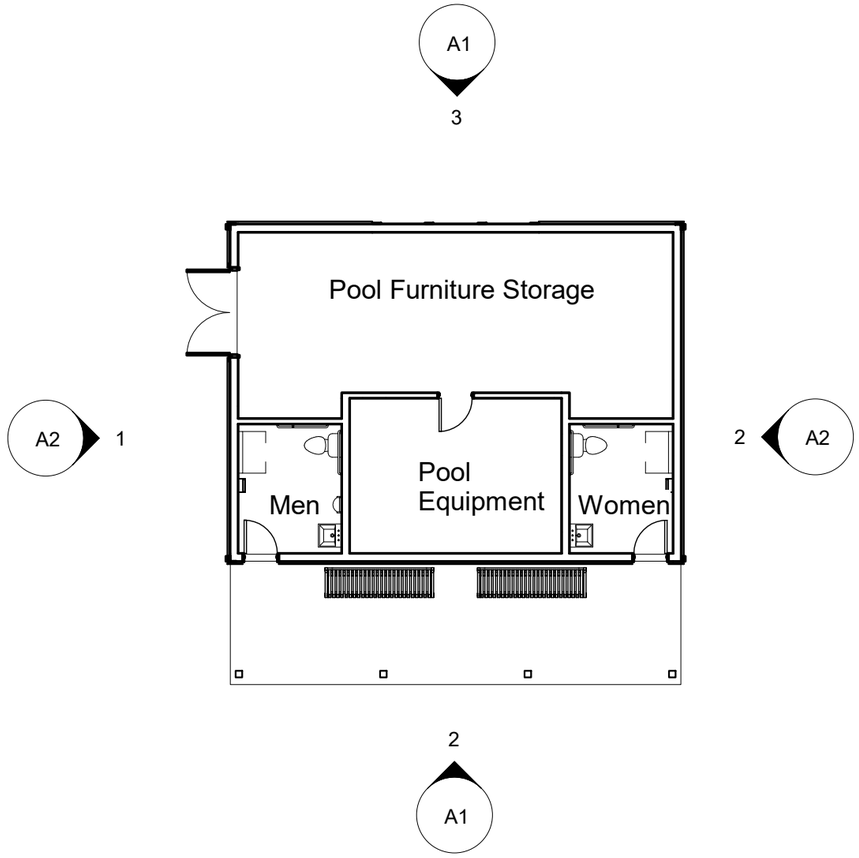


1 Floor 1 Plan

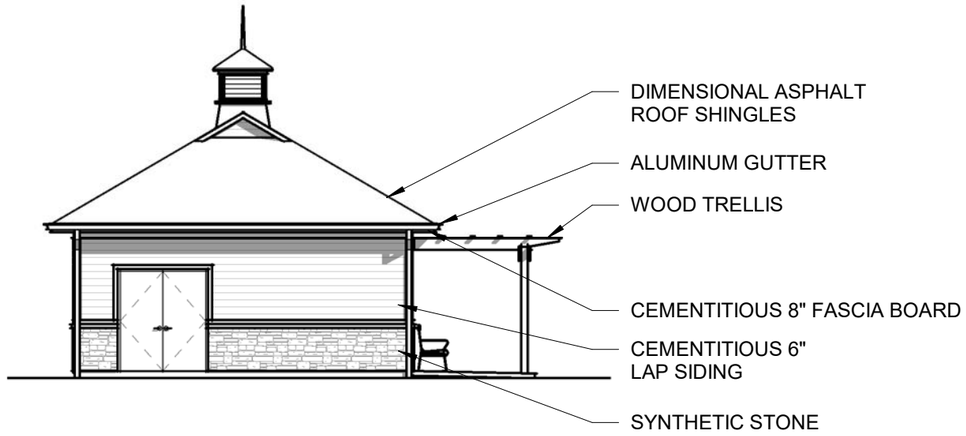
3/32" = 1'-0"

Middlebury Crossing

Pool House

City of Powell, Ohio 04/18/2019

SULLIVAN BRUCK ARCHITECTS



1 Left Elevation

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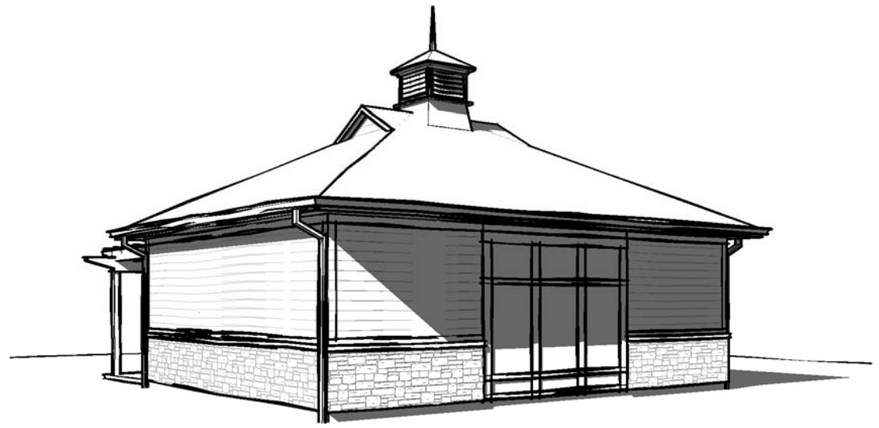
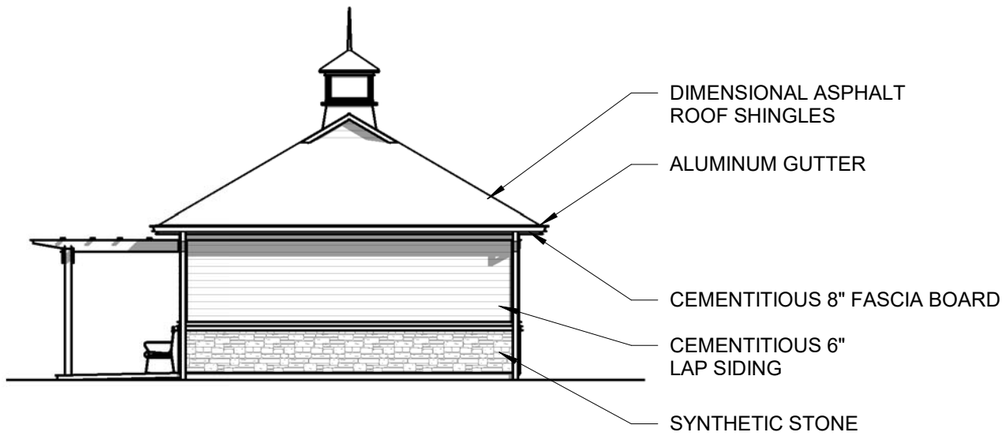


3 3D View 1



2 Right Elevation

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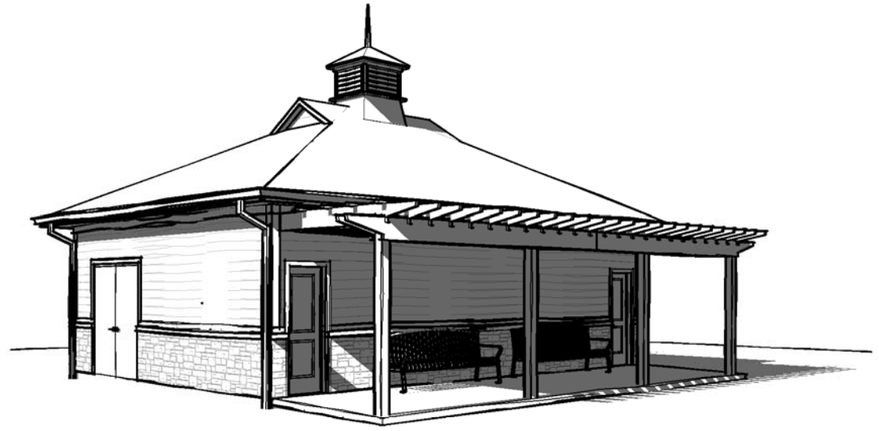


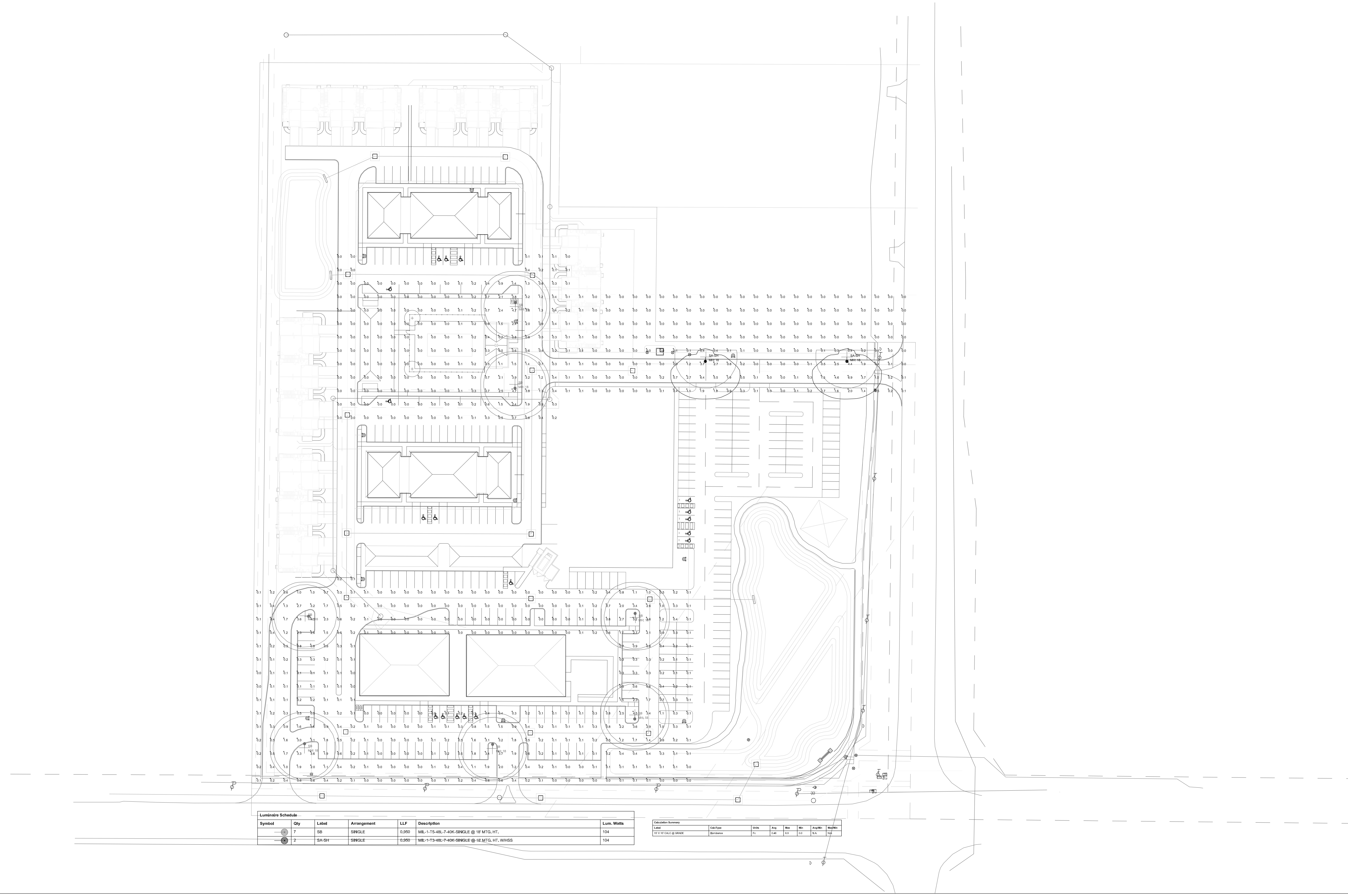
4 3D View 2

Middlebury Crossing

Pool House

City of Powell, Ohio 04/18/2019

SULLIVAN BRUCK ARCHITECTS



Luminaire Schedule						
Symbol	Qty	Label	Arrangement	LLF	Description	Lum. Watts
	7	SB	SINGLE	0.950	MIL-1-T5-48L-7-40K-SINGLE @ 18' MTG. HT.	104
	2	SA-SH	SINGLE	0.950	MIL-1-T3-48L-7-40K-SINGLE @ 18' MTG. HT. W/HSS	104

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
15' X 15' CALC @ GRADE	Illuminance	Fc	0.46	6.9	0.0	N.A.	N.A.

Calculations are provided using industry recognized software and are provided for estimation purposes only. Input data for the calculations corresponds to the information provided to us (assumptions may be made for information that is not provided). It is the responsibility of those using this service to verify that our input data is consistent with expected field conditions. Results of the lighting calculations accurately reflect the input data. However, actual lighting levels will vary depending on field conditions such as room characteristics, temperature, voltage and lamp/ballast output and other factors. Calculations are also subject to the limitations of the software. Due to the above considerations, NLS LIGHTING cannot guaranty that actual light levels measured in the field will match our initial calculations.

Project Name:MIDDLEBURY CROSSING
Location: CITY OF POWELL, OHIO

Company:LIGHTING UNLIMITED

Applications Department:
www.nlslighting.com
applications@nlslighting.com
phone: 310/341-2037
fax: 310/218-0070

Scale: 3/16"=1'-0"

Date: 04/27/19
Dwg No: R2

NLS LIGHTING
701 Kingshill Place
Carson, CA. 90746
Ph: 310-341-2037

EXHIBIT H1

CARPENTER MARTY transportation

Home & Steitz Mixed-Use

Real Property Design & Development
Traffic Impact Study

April 22, 2019

6612 Singletree Drive
Columbus, OH 43229
614.656.2424
www.cmtran.com

Table of Contents

List of Tables

List of Figures

I. Purpose of Report & Study Objectives

The purpose of this traffic analysis and report is to document the potential traffic impacts of the proposed Home and Steitz Mixed-Use Development on the northwest quadrant of the intersection of Home Road and Steitz Road in Delaware County, Ohio. This analysis and report are being required by City of Powell and Delaware County as part of the development approval process. A Memorandum of Understanding (MOU) was provided to the City of Powell and Delaware County via email. This MOU and comments on said MOU can be seen in **Appendix A**.

II. Proposed Development

A. Off-Site Developments

The study area is located north of the current City of Powell limits in Delaware County, but the site is being annexed into the City limits. The surrounding area includes residential communities and land planned for future development.

B. On-Site Development

Location

The site is located on the northwest quadrant of the intersection of Home Road and Steitz Road in Delaware County, Ohio. **Figure 1** shows the location of the proposed site in central Ohio and **Figure 2** shows the study area.

Figure 1 – Location in Central Ohio

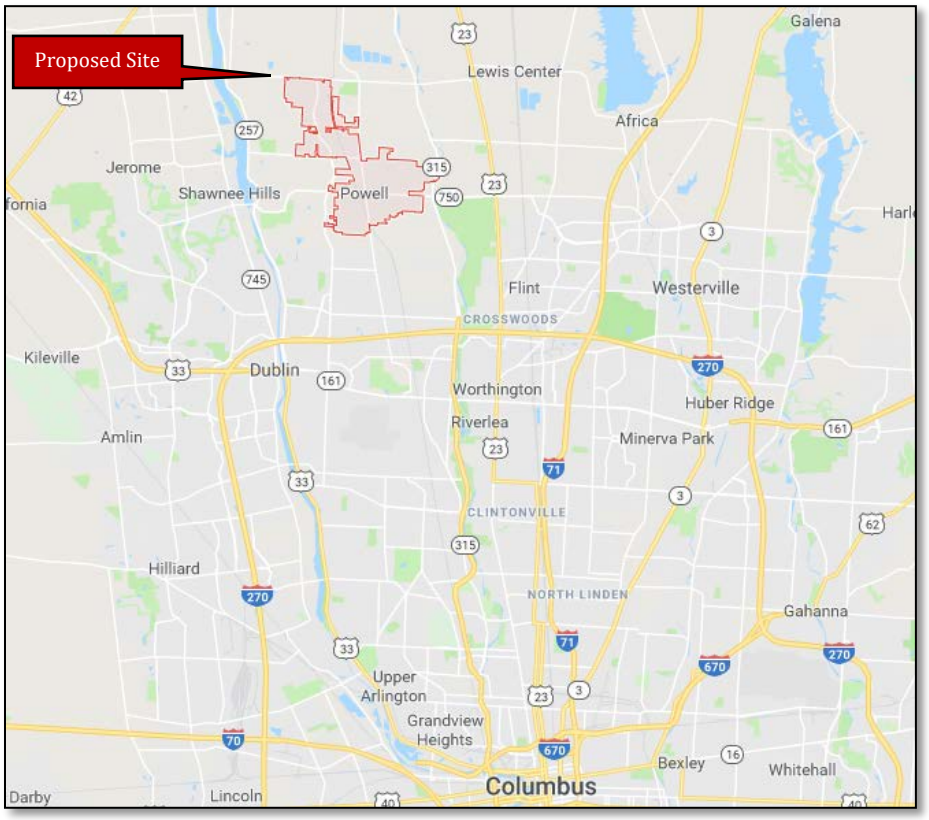
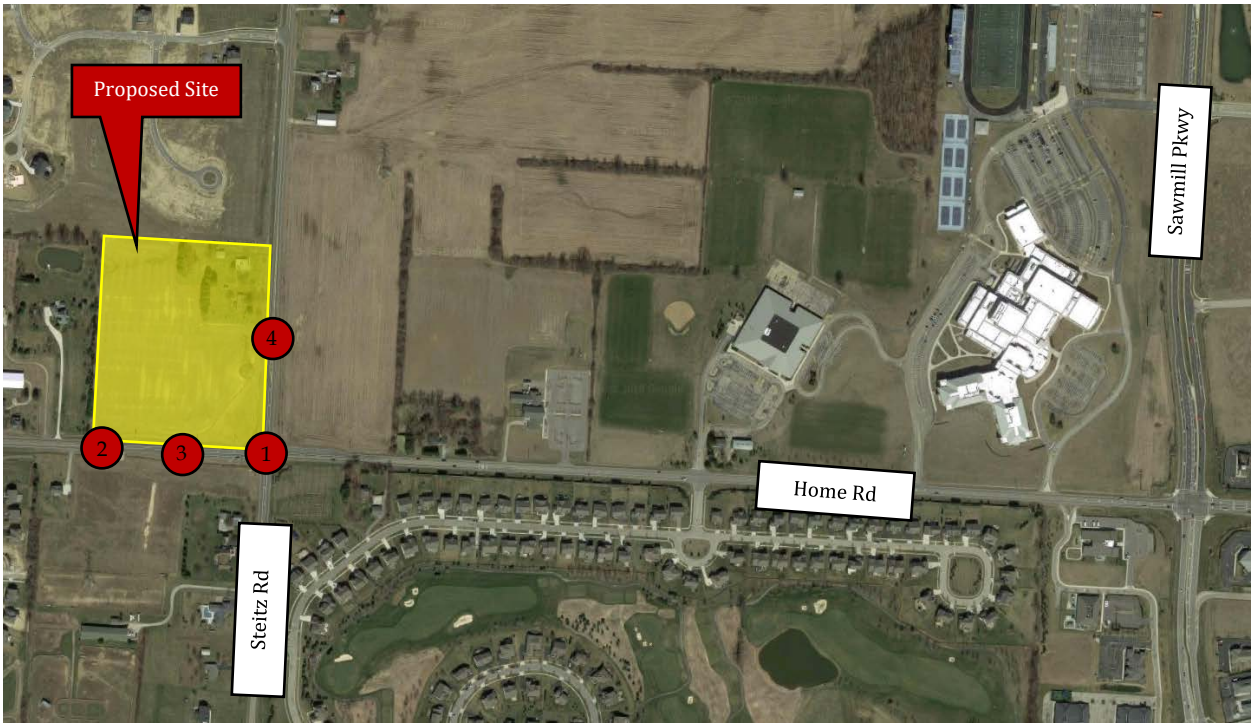


Figure 2 – Location of Proposed Development (Yellow), Site Drives, & Study Intersections



Land Use & Intensity

The site is currently undeveloped, agricultural land.

The site is proposed to develop as a mixed-use development containing a 25,000 SF library, two office buildings with approximate sizes of 7,000 SF and 7,700 SF for a total of 14,700 SF, and 62 multifamily residential units.

Site Plan

There are two proposed access points along Home Road and one proposed access point on Steitz Road. The westernmost access on Home Road is proposed as full access. The east access on Home Road is proposed as a right-in/right-out and the access on Steitz Road is proposed as a right-in/left-out/right-out. A full site plan can be found in **Appendix A**.

III. Area Conditions

A. Area of Influence

The intersections under study are the following (numbers correspond to **Figure 2**):

1. Home Road & Steitz Road
2. Home Road & Site Drive 1 (Full Access)
3. Home Road & Site Drive 2 (Right-In, Right-Out)
4. Home Road & Site Drive 3 (Right-In, Left-Out, Right-Out)

B. Jurisdictions

The proposed site currently resides in Delaware County, but will be annexed into the City of Powell. The traffic study will be reviewed by both agencies.

C. Traffic Volumes & Conditions

AM and PM Peak Hour turning movement counts were collected at the intersection of Home Road & Stietz Road from 7-9 AM and 4-6 PM on a typical weekday in January of 2019. This count data can be found in **Appendix B**.

IV. Projected Traffic

A. Background Traffic

For analysis, the Opening Year of the development is 2019 and the two Design or Horizon Years are 2029 and 2039 (Powell requires a 10-year Horizon and Delaware County requires a 20-year Horizon). In order to project the count data to the Horizon Years, growth rates were obtained from Mid-Ohio Regional Planning Commission (MORPC). The linear, annual growth rates can be seen in **Table 1**.

Table 1 – MORPC Growth Rates

Location	Linear Annual Growth Rate
Home Road e/o Steitz Road	2.50%
Steitz Road n/o Home Road	2.00%
Home Road w/o Steitz Road	2.50%
Steitz Road s/o Home Road	2.00%

Growth rates were applied to the count data to produce Background or No Build traffic for the Opening (2019) and Horizon (2029 and 2039) Years. MORPC correspondence can be seen in **Appendix B**.

B. Site Traffic

Trip Generation

Trips for the proposed site development were generated using standard Institute of Transportation Engineers (ITE) practices and the *Trip Generation Manual*, 10th edition, data via the OTISS program[1]. Land Use Codes (*LUC*) *220 – Multi-Family Housing (Low Rise), 590 – Library,* and 710 – *General Office Building* were used to generate trips for the proposed development. Pass-by and internal capture rates do not apply to this development. **Table 2** shows the trip generation of the proposed development. The full trip generation details can be found in **Appendix C.**

[1] Online Traffic Impact Study Software developed by ITE and Transoft Solutions.

Table 2 – Proposed Site Trip Generation Summary

Land Use	Size	AM Peak		PM Peak	
		Entry	Exit	Entry	Exit
220 – Multi-Family Housing (Low Rise)	62 Dwelling Units	7	23	24	14
Non-Pass-By		7	23	24	14
590 – Library	25,000 SF Gross Floor Area	21	8	104	112
Non-Pass-By		21	8	104	112
710 – General Office Building	7,000 SF Gross Floor Area	28	5	1	8
Non-Pass-By		28	5	1	8
710 – General Office Building	7,700 SF Gross Floor Area	29	5	2	8
Non-Pass-By		29	5	2	8
TOTAL		**85**	**41**	**131**	**142**
Non-Pass-By		**85**	**41**	**131**	**142**

Trip Distribution & Traffic Volumes

Site traffic was distributed to/from the site based on the count data, knowledge of the surrounding area, and engineering judgment. Site traffic was added to No Build traffic to produce Build traffic for the proposed development. The full volume calculations can be found in **Appendix D.**

V. Traffic Analysis

A. Turn Lane Warrant Analysis

Turn lane warrant analyses were conducted at all site drives using standard Ohio Department of Transportation (ODOT) turn lane warrant graphs. If a turn lane was warranted in any particular scenario, the length was calculated using methodologies in the ODOT Location and Design (L&D) Manual. Warranted turn lanes are represented in the capacity analysis.

B. Capacity Analysis

The Highway Capacity Manual (HCM) module of Synchro Version 10 software was used to analyze capacity at all study intersections shown in **Figure 2**. A minimum Level of Service (LOS) of D for the overall intersection and LOS D for each individual movement during peak traffic hours was considered acceptable at each intersection. If an intersection fell below these criteria, mitigation strategies were developed to bring each movement back to an acceptable LOS.

VI. Results

A. Turn Lane Warrant Analysis

Based on the results of the turn lane warrant analysis, the intersection of Home Road & Site Drive 1 warrants 345' left and right turn lanes in all Build scenarios. The intersection of Home Road & Site Drive 2 also warrants a 345' right turn lane in all Build scenarios. All turn lanes are inclusive of a 50' diverging taper. The turn lane warrant graphs leading to these results can be seen in **Appendix E**.

B. Capacity Analysis

Results of the baseline capacity analysis for the study intersections are provided in **Table 3**. Baseline capacity analysis assumes existing geometry plus warranted turn lanes. The total delay for stop-controlled intersections is represented by the worst approach LOS. The full capacity analysis can be found in **Appendix F**.

Table 3 – Baseline Capacity Analysis Summary

Intersection	Approach	2019				2029				2039			
		AM No Build	AM Build	PM No Build	PM Build	AM No Build	AM Build	PM No Build	PM Build	AM No Build	AM Build	PM No Build	PM Build
Home Road & Steitz Road	EB	B/13.5	B/15.4	B/11.9	B/13.5	B/13.9	B/12.9	B/12.5	B/11.9	B/12.4	B/12.3	B/10.5	B/10.0
	WB	B/12.3	B/14.2	B/14.7	B/17.4	B/12.8	B/11.9	B/16.2	B/16.2	B/11.5	B/11.5	B/14.5	B/14.5
	NB	A/9.1	A/9.5	A/9.2	B/10.9	B/13.1	B/13.2	B/13.1	B/15.3	B/18.4	B/18.7	B/18.0	C/20.9
	SB	A/8.6	A/9.2	A/8.9	B/10.9	B/12.2	B/12.6	B/12.6	B/15.2	B/16.8	B/17.6	B/17.2	C/20.6
	Total	**B/12.5**	**B/14.0**	**B/13.0**	**B/15.1**	**B/13.4**	**B/12.6**	**B/14.5**	**B/14.5**	**B/12.9**	**B/12.9**	**B/13.3**	**B/13.6**
Home Road & Site Drive 1	EB	---	A/0.5	---	A/1.1	---	A/0.4	---	A/1.0	---	A/0.4	---	A/0.9
	WB	---	A/0.0	---	A/0.0	---	A/0.0	---	A/0.0	---	A/0.0	---	A/0.0
	SB	---	B/14.0	---	C/23.4	---	C/16.7	---	D/34.9	---	C/20.4	---	F/59.2
	Total	---	**B/14.0**	---	**C/23.4**	**---**	**C/16.7**	**---**	**D/34.9**	---	**C/20.4**	---	**F/59.2**
Home Road & Site Drive 2	EB	---	A/0.0	---	A/0.0	---	A/0.0	---	A/0.0	---	A/0.0	---	A/0.0
	WB	---	A/0.0	---	A/0.0	---	A/0.0	---	A/0.0	---	A/0.0	---	A/0.0
	SB	---	B/10.4	---	B/14.2	---	B/10.9	---	C/16.3	---	B/11.6	---	C/19.4
	Total	---	**B/10.4**	---	**B/14.2**	**---**	**B/10.9**	**---**	**C/16.3**	---	**B/11.6**	---	**C/19.4**
Home Road & Site Drive 3	EB	---	A/8.6	---	A/8.7	---	A/8.6	---	A/8.8	---	A/8.7	---	A/8.8
	NB	---	A/0.0	---	A/0.0	---	A/0.0	---	A/0.0	---	A/0.0	---	A/0.0
	SB	---	A/0.0	---	A/0.0	---	A/0.0	---	A/0.0	---	A/0.0	---	A/0.0
	Total	---	**A/8.6**	---	**A/8.7**	**---**	**A/8.6**	**---**	**A/8.8**	---	**A/8.7**	---	**A/8.8**

As seen in **Table 3** above, the southbound movement of Site Drive 1 in the 2039 PM Build is the only scenario with unacceptable LOS. All other intersections have acceptable LOS in all analysis scenarios.

VII. Recommendations and Conclusions

Based on the results of the turn lane warrant and capacity analysis, it is recommended that right turn lanes be provided at both access points along Home Road. Based on the locations of the proposed access points, it is recommended that a 200' westbound right turn lane, inclusive of a 50' diverging taper, be installed along Home Road at Site Drive 1. It is also recommended that a 300' westbound right turn lane, inclusive of a 50' diverging taper, be installed along Home Road at Site Drive 2. It is recommended that the warranted eastbound left turn lane at Site Drive 1 not be installed. There is currently a two-way left turn lane at this location which can sufficiently service the Site Drive 1 access point without negatively affecting surrounding area developments.

No additional improvements are required and thus, none are recommended.

VIII. Appendices

Appendix A - MOU & Site Plan
Appendix B - Count Data & MORPC Correspondence
Appendix C - Trip Generation
Appendix D - Volume Development
Appendix E - Turn Lane Warrant Analysis
Appendix F - Capacity Analysis

Appendix A
MOU & Site Plan

Appendix A

CARPENTER MARTY transportation

From: Gina Balsamo
To: Love, Michael
Cc: David Betz; Drew Laurent; Chris Huber; Piccin, John
Subject: RE: Home & Steitz TIS MOU
Date: Tuesday, January 15, 2019 11:39:22 AM
Attachments: image001.png
TripGeneration.pdf
Home Steitz Site Plan.pdf

Mike,

Thank you for the response, Mike. We have revised the MOU, see table below.

Attached is the site plan and also the trip generation. It looks like we are under 400 trips. The City is requesting a 20-year Horizon, so we will complete a 10-year and 20-year Horizon analysis. We comply with all other comments.

Chris and Mike,

Please respond to this email signifying your concurrence with this MOU or reply with comments if necessary.

Data Collection	Collect 2-hours AM and 2-hours PM Peak hour turning movement count data at the intersection of Home Road & Steitz Road.
Analysis	Generate traffic for the proposed site. Assign traffic to the site drives according to a traffic distribution which will be determined from counts, area knowledge/travel patterns, and engineering judgment.
Analysis	Develop Opening Day (2019) and Horizon Year (2029 & 2039) traffic plates for Build, AM and PM peaks based on growth data (that will be obtained from MORPC or calculated from previous traffic studies or count data) and the traffic distribution developed above.
Analysis	Perform left and right turn lane warrants at the three proposed access points using ODOT and DCEO methodologies. Design lengths for any turn lanes which meet these warrants per ODOT L&D manual.
Analysis	Perform a Synchro unsignalized capacity analysis at all site drive intersections with Home Road & Steitz Road. Perform signalized capacity analysis at the intersection of Home Road & Steitz Road. If acceptable LOS is not obtained under Build or No Build conditions, determine what improvements are necessary to obtain acceptable LOS.
Report	Develop a report that documents what is necessary to satisfy the City of Powell & Delaware County which typically includes analysis, results, conclusions, and recommendations. An evaluation for the need of two site drives on Home Rd and the one site drive on Steitz Rd, the permitted movements at each site drive, and their proximity to each other and the traffic signal/turn lanes will be included.

Gina Balsamo, PE
Carpenter Marty Transportation
614.656.2429

From: Love, Michael <mlove@co.delaware.oh.us>
Sent: Monday, January 14, 2019 8:02 PM
To: Gina Balsamo <gbalsamo@cmtran.com>
Cc: David Betz <DBetz@cityofpowell.us>; Drew Laurent <dlaurent@cmtran.com>; Chris Huber <CHuber@cityofpowell.us>; Piccin, John <jpiccin@co.delaware.oh.us>
Subject: RE: Home & Steitz TIS MOU

Gina

A couple items

1. All development needs to be submitted to John Piccin (he is copied on this email). John is in charge of Development for DCEO. Any submittal to DCEO will need to follow DCEO development process (i.e. Review Submittal Coversheet, fees, electronic files, etc.)
2. If you are under 400 peak hour trips, then a 10 year horizon (build) is required. Over 400 trips requires a 20 year horizon
3. Turn lane warrants shall be as per DCEO standards, Not ODOT standards.
4. Need to include turn lane warrants for right turns and left turns
5. Turn lane lengths shall be per ODOT L&D manual
6. Can you include the current site plan with the MOU?
7. The proposed drive on Steitz Road will need evaluated. In this situation, a RI-RO (or LI-RI-RO) will not work. The location is relative to the signal and the existing turn lane (SB) is critical. The drive cannot be located in any shift taper, so I am not sure where this drive can be located without any pavement widening.

Thanks

Mike

From: Gina Balsamo [mailto:gbalsamo@cmtran.com]
Sent: Monday, January 14, 2019 2:45 PM
To: Chris Huber <CHuber@cityofpowell.us>
Cc: Love, Michael <mlove@co.delaware.oh.us>; David Betz <DBetz@cityofpowell.us>; Drew Laurent <dlaurent@cmtran.com>
Subject: Home & Steitz TIS MOU

Chris/Mike,

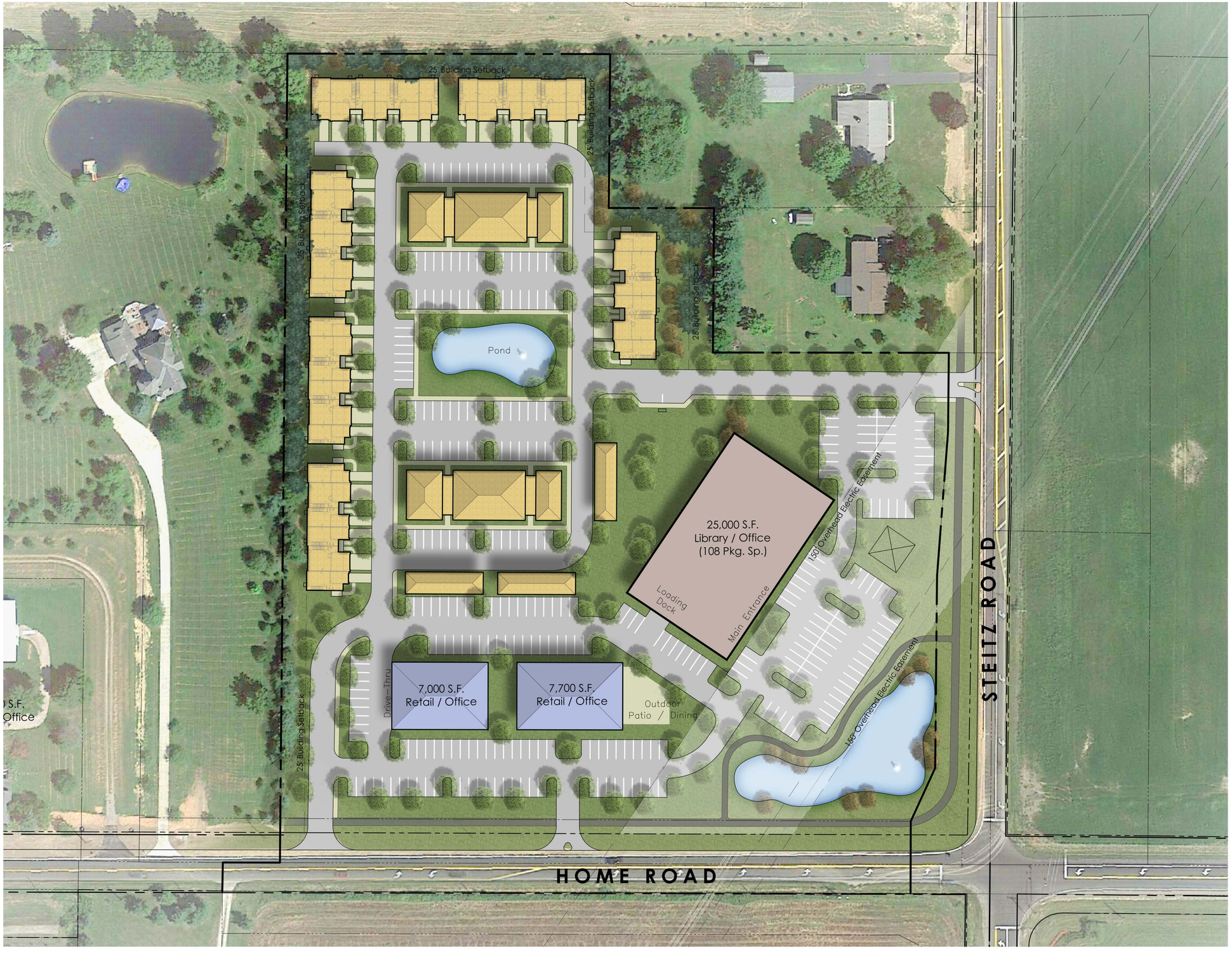
Please see the below email MOU for the traffic impact study for a proposed mixed-use development in the northwest corner of Home Road/Steitz Road. Please respond to this email signifying your concurrence with this MOU or reply with comments if necessary.

Data Collection	Collect 2-hours AM and 2-hours PM Peak hour turning movement count data at the intersection of Home Road & Steitz Road.
Analysis	Generate traffic for the proposed site. Assign traffic to the site drives according to a traffic distribution which will be determined from counts, area knowledge/travel patterns, and engineering judgment.
Analysis	Develop Opening Day (2019) and Horizon Year (2039) traffic plates for Build, AM and PM peaks based on growth data (that will be obtained from MORPC or calculated from previous traffic studies or count data) and the traffic distribution developed above.
Analysis	Perform turn lane warrants at the three proposed access points using ODOT methodologies. Design lengths for any turn lanes which meet these warrants.
Analysis	Perform a Synchro unsignalized capacity analysis at all site drive intersections with Home Road & Steitz Road. Perform signalized capacity analysis at the intersection of Home Road & Steitz Road. If acceptable LOS is not obtained under Build or No Build conditions, determine what improvements are necessary to obtain acceptable LOS.
Report	Develop a report that documents what is necessary to satisfy the City of Powell & Delaware County which typically includes analysis, results, conclusions, and recommendations. An evaluation for the need of two site drives on Home Rd, the permitted movements at each site drive, and their proximity to each other will be included.

Thank you!

Gina Balsamo, PE
Traffic Engineer
CARPENTER MARTY transportation
614.656.2429 | www.cmtran.com

contain confidential information belonging to the sender, or constitute non-public information that is not subject to disclosure under O.R.C. Section 149.43, Ohio's Public Records Act. Additionally, if the sender is an employee of the Delaware County, Ohio Prosecuting Attorney's Office, this e-mail, together with any attachments or files transmitted with it, may contain information that is protected by the attorney-client privilege or other applicable privileges. The information in this e-mail is intended solely for the use of the individual or entity to whom it is addressed. If you are not the named addressee, you should not disseminate, distribute, or copy this e-mail. If you have received this e-mail in error, please immediately notify the sender by e-mail and delete this e-mail from your system. If you are not the intended recipient, do not disclose, copy, distribute, or re-distribute this e-mail or take any action in reliance on the contents of the information contained in this e-mail. Nothing contained in this disclaimer notice by itself exempts, nor should it be interpreted to by itself exempt, this e-mail from disclosure as a public record upon the proper submission of a request for public records pursuant to O.R.C. Section 149.43, Ohio's Public Records Act.



SITE DATA

Gross Acreage: +/- 11.75 Ac

Commercial / Institutiona Uses:

Proposed Library ± 25,000 s.f.
- 108 Parking spaces

Commercial / Office ± 14,700 s.f.
- 104 Parking Spaces

Residential Uses:

(36) 2-story Town-homes Units

(32) 2-Story Garden Units

Home and Steitz Road - Concept Plan

City of Powell, Ohio 10.28.2018

Real Property Design and Development

0 50 150 N

G2 Planning Urban Design Landscape Architecture
Planning + Design
Ph: 614.583.9230
Web: www.g2planning.com

Appendix B
Count Data &
MORPC Correspondence

Appendix B

CARPENTER MARTY transportation

Home Road and Steitz Road - TMC

Tue Jan 29, 2019
Full Length (7AM-9AM, 4PM-6PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 614890, Location: 40.196421, -83.109991

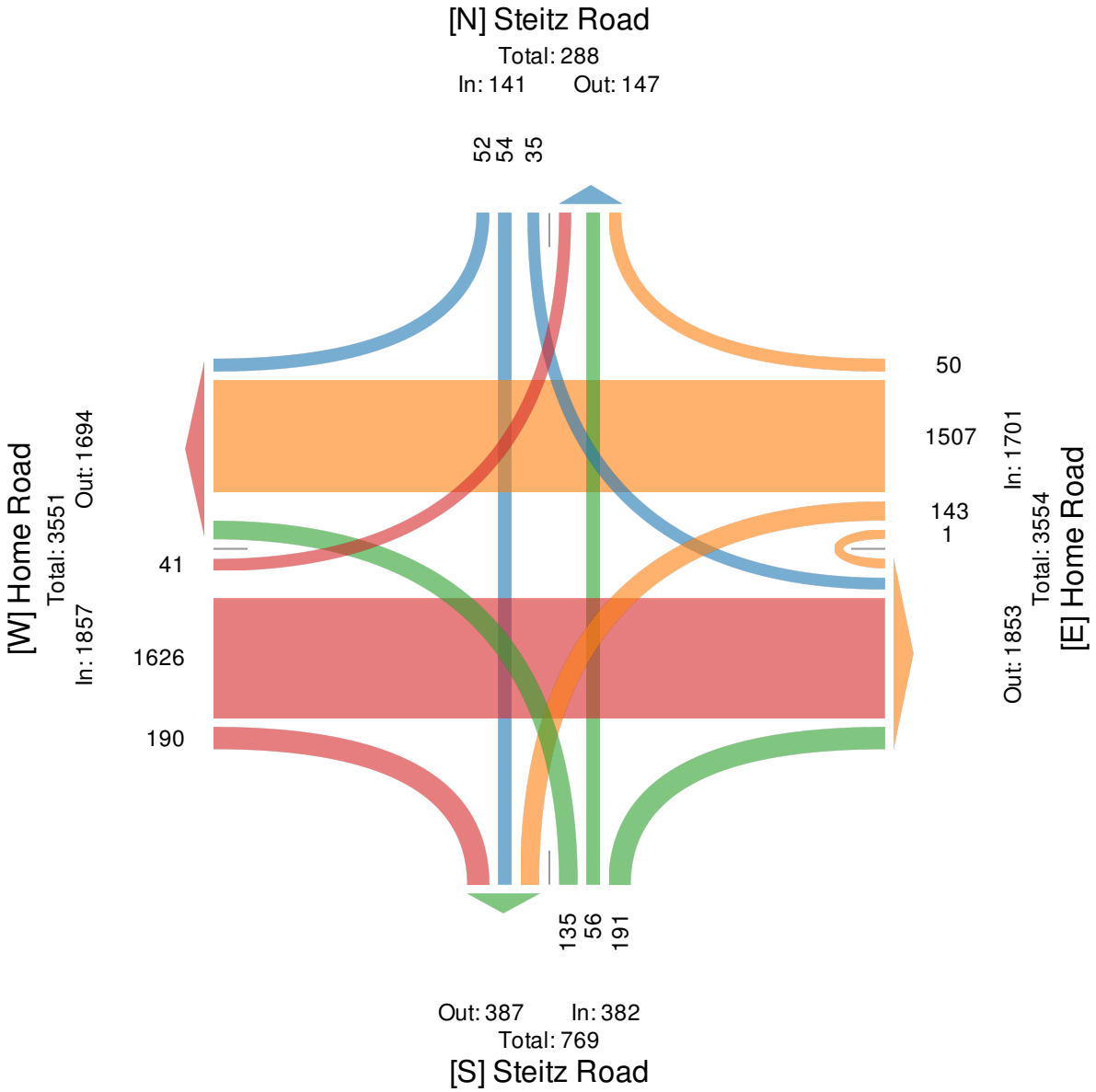
Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

Leg	Home Road					Home Road					Steitz Road					Steitz Road					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	Int
2019-01-29 7:00AM	5	136	11	0	**152**	25	73	2	0	**100**	6	3	45	0	**54**	2	5	4	0	**11**	**317**
7:15AM	1	103	16	0	**120**	19	87	3	0	**109**	2	4	12	0	**18**	0	4	4	0	**8**	**255**
7:30AM	1	107	7	0	**115**	6	55	1	0	**62**	3	6	8	0	**17**	3	6	5	0	**14**	**208**
7:45AM	3	143	12	0	**158**	5	58	3	0	**66**	3	6	16	0	**25**	1	3	4	0	**8**	**257**
Hourly Total	10	489	46	0	**545**	55	273	9	0	**337**	14	19	81	0	**114**	6	18	17	0	**41**	**1037**
8:00AM	0	103	9	0	**112**	4	64	0	0	**68**	4	4	9	0	**17**	2	2	5	0	**9**	**206**
8:15AM	6	77	10	0	**93**	3	58	2	0	**63**	5	2	6	0	**13**	3	6	6	0	**15**	**184**
8:30AM	3	127	9	0	**139**	8	51	3	0	**62**	3	0	22	0	**25**	5	4	3	0	**12**	**238**
8:45AM	3	98	18	0	**119**	8	60	4	1	**73**	5	1	19	0	**25**	4	6	2	0	**12**	**229**
Hourly Total	12	405	46	0	**463**	23	233	9	1	**266**	17	7	56	0	**80**	14	18	16	0	**48**	**857**
9:00AM	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**0**
Hourly Total	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**0**
4:00PM	2	85	11	0	**98**	14	99	2	0	**115**	18	6	4	0	**28**	1	4	1	0	**6**	**247**
4:15PM	0	86	17	0	**103**	7	106	4	0	**117**	12	0	8	0	**20**	1	3	1	0	**5**	**245**
4:30PM	1	89	11	0	**101**	5	114	3	0	**122**	17	3	7	0	**27**	0	2	1	0	**3**	**253**
4:45PM	0	88	11	0	**99**	6	128	2	0	**136**	8	5	12	0	**25**	2	4	1	0	**7**	**267**
Hourly Total	3	348	50	0	**401**	32	447	11	0	**490**	55	14	31	0	**100**	4	13	4	0	**21**	**1012**
5:00PM	5	109	11	0	**125**	15	120	4	0	**139**	15	5	6	0	**26**	3	0	4	0	**7**	**297**
5:15PM	3	89	8	0	**100**	7	158	8	0	**173**	9	4	4	0	**17**	5	1	4	0	**10**	**300**
5:30PM	5	101	14	0	**120**	6	147	6	0	**159**	15	3	4	0	**22**	0	1	5	0	**6**	**307**
5:45PM	3	85	15	0	**103**	5	127	3	0	**135**	10	4	9	0	**23**	3	3	2	0	**8**	**269**
Hourly Total	16	384	48	0	**448**	33	552	21	0	**606**	49	16	23	0	**88**	11	5	15	0	**31**	**1173**
6:00PM	0	0	0	0	**0**	0	2	0	0	**2**	0	0	0	0	**0**	0	0	0	0	**0**	**2**
Hourly Total	0	0	0	0	**0**	0	2	0	0	**2**	0	0	0	0	**0**	0	0	0	0	**0**	**2**
Total	41	1626	190	0	**1857**	143	1507	50	1	**1701**	135	56	191	0	**382**	35	54	52	0	**141**	**4081**
% Approach	2.2%	87.6%	10.2%	0%	-	8.4%	88.6%	2.9%	0.1%	-	35.3%	14.7%	50.0%	0%	-	24.8%	38.3%	36.9%	0%	-	-
% Total	1.0%	39.8%	4.7%	0%	**45.5%**	3.5%	36.9%	1.2%	0%	**41.7%**	3.3%	1.4%	4.7%	0%	**9.4%**	0.9%	1.3%	1.3%	0%	**3.5%**	-
Lights	40	1590	189	0	**1819**	137	1466	45	1	**1649**	133	54	188	0	**375**	34	53	50	0	**137**	3980
% Lights	97.6%	97.8%	99.5%	0%	**98.0%**	95.8%	97.3%	90.0%	100%	**96.9%**	98.5%	96.4%	98.4%	0%	**98.2%**	97.1%	98.1%	96.2%	0%	**97.2%**	97.5%
Articulated Trucks	0	1	0	0	**1**	0	2	2	0	**4**	0	1	0	0	**1**	0	0	0	0	**0**	6
% Articulated Trucks	0%	0.1%	0%	0%	**0.1%**	0%	0.1%	4.0%	0%	**0.2%**	0%	1.8%	0%	0%	**0.3%**	0%	0%	0%	0%	**0%**	0.1%
Buses and Single-Unit Trucks	1	35	1	0	**37**	6	39	3	0	**48**	2	1	3	0	**6**	1	1	2	0	**4**	95
% Buses and Single-Unit Trucks	2.4%	2.2%	0.5%	0%	**2.0%**	4.2%	2.6%	6.0%	0%	**2.8%**	1.5%	1.8%	1.6%	0%	**1.6%**	2.9%	1.9%	3.8%	0%	**2.8%**	2.3%

*L: Left, R: Right, T: Thru, U: U-Turn

Home Road and Steitz Road - TMC
Tue Jan 29, 2019
Full Length (7AM-9AM, 4PM-6PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 614890, Location: 40.196421, -83.109991

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



Home Road and Steitz Road - TMC

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

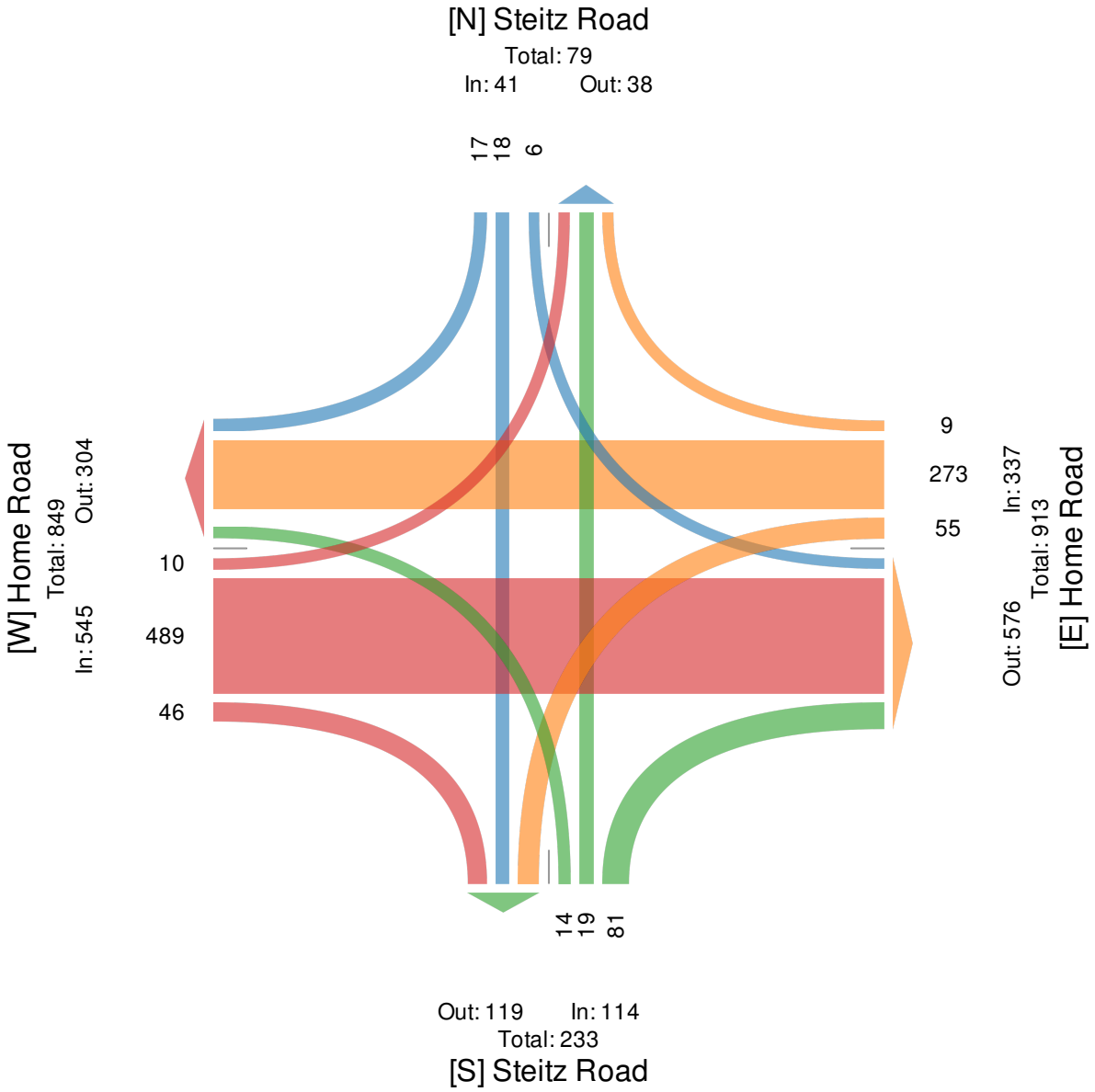
Tue Jan 29, 2019
AM Peak (7AM - 8AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 614890, Location: 40.196421, -83.109991

Leg	Home Road					Home Road					Steitz Road					Steitz Road					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	Int
2019-01-29 7:00AM	5	136	11	0	**152**	25	73	2	0	**100**	6	3	45	0	**54**	2	5	4	0	**11**	**317**
7:15AM	1	103	16	0	**120**	19	87	3	0	**109**	2	4	12	0	**18**	0	4	4	0	**8**	**255**
7:30AM	1	107	7	0	**115**	6	55	1	0	**62**	3	6	8	0	**17**	3	6	5	0	**14**	**208**
7:45AM	3	143	12	0	**158**	5	58	3	0	**66**	3	6	16	0	**25**	1	3	4	0	**8**	**257**
Total	10	489	46	0	**545**	55	273	9	0	**337**	14	19	81	0	**114**	6	18	17	0	**41**	**1037**
% Approach	1.8%	89.7%	8.4%	0%	-	16.3%	81.0%	2.7%	0%	-	12.3%	16.7%	71.1%	0%	-	14.6%	43.9%	41.5%	0%	-	-
% Total	1.0%	47.2%	4.4%	0%	**52.6%**	5.3%	26.3%	0.9%	0%	**32.5%**	1.4%	1.8%	7.8%	0%	**11.0%**	0.6%	1.7%	1.6%	0%	**4.0%**	-
PHF	0.500	0.855	0.719	-	**0.862**	0.550	0.784	0.750	-	**0.773**	0.583	0.792	0.450	-	**0.528**	0.500	0.750	0.850	-	**0.732**	0.818
Lights	10	479	46	0	**535**	49	259	8	0	**316**	13	18	81	0	**112**	6	18	17	0	**41**	1004
% Lights	100%	98.0%	100%	0%	**98.2%**	89.1%	94.9%	88.9%	0%	**93.8%**	92.9%	94.7%	100%	0%	**98.2%**	100%	100%	100%	0%	**100%**	96.8%
Articulated Trucks	0	0	0	0	**0**	0	2	1	0	**3**	0	1	0	0	**1**	0	0	0	0	**0**	4
% Articulated Trucks	0%	0%	0%	0%	**0%**	0%	0.7%	11.1%	0%	**0.9%**	0%	5.3%	0%	0%	**0.9%**	0%	0%	0%	0%	**0%**	0.4%
Buses and Single-Unit Trucks	0	10	0	0	**10**	6	12	0	0	**18**	1	0	0	0	**1**	0	0	0	0	**0**	29
% Buses and Single-Unit Trucks	0%	2.0%	0%	0%	**1.8%**	10.9%	4.4%	0%	0%	**5.3%**	7.1%	0%	0%	0%	**0.9%**	0%	0%	0%	0%	**0%**	2.8%

*L: Left, R: Right, T: Thru, U: U-Turn

Home Road and Steitz Road - TMC
Tue Jan 29, 2019
AM Peak (7AM - 8AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 614890, Location: 40.196421, -83.109991

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



Home Road and Steitz Road - TMC

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

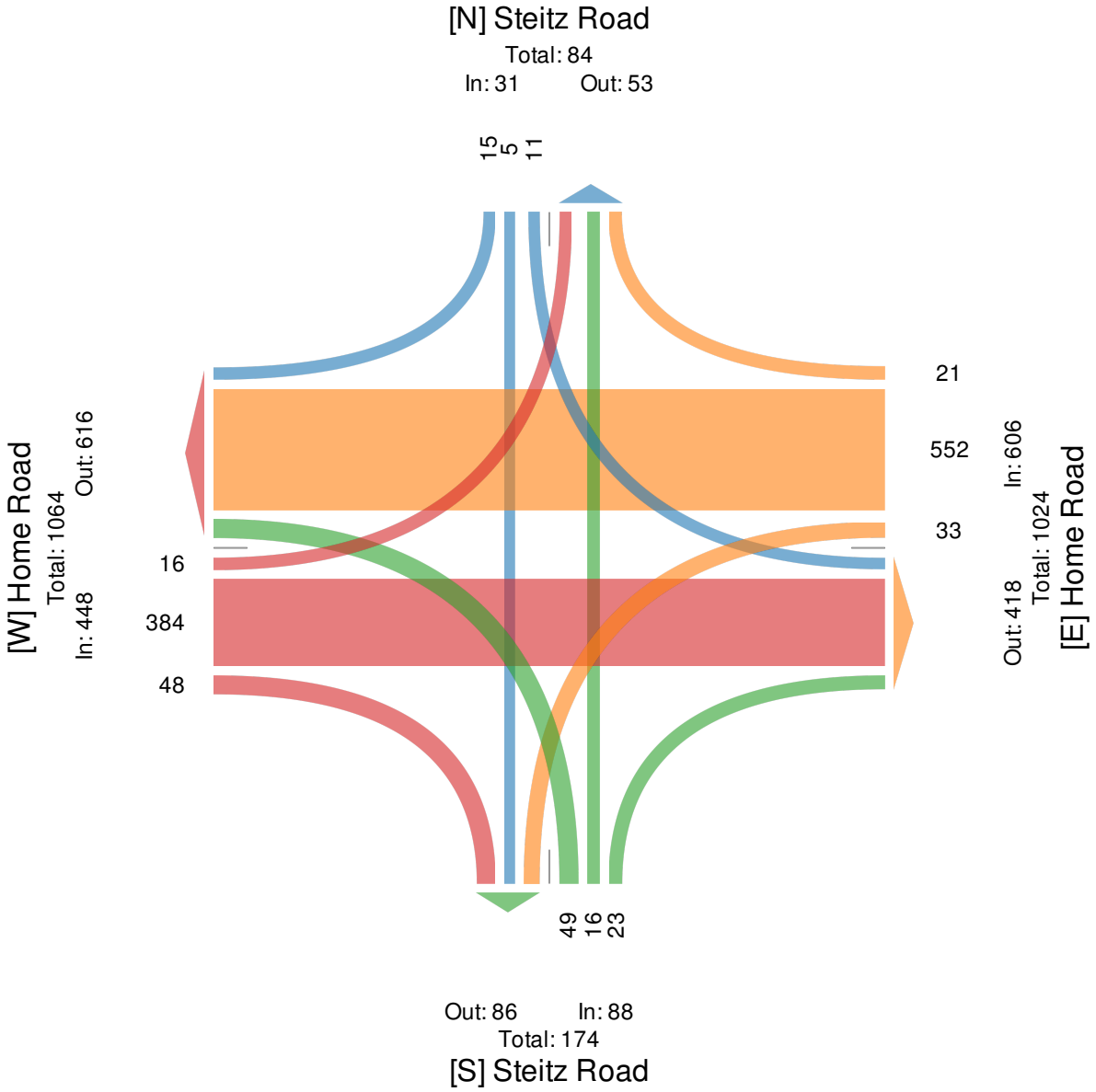
Tue Jan 29, 2019
PM Peak (5PM - 6PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 614890, Location: 40.196421, -83.109991

Leg	Home Road					Home Road					Steitz Road					Steitz Road					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2019-01-29 5:00PM	5	109	11	0	**125**	15	120	4	0	**139**	15	5	6	0	**26**	3	0	4	0	**7**	**297**
5:15PM	3	89	8	0	**100**	7	158	8	0	**173**	9	4	4	0	**17**	5	1	4	0	**10**	**300**
5:30PM	5	101	14	0	**120**	6	147	6	0	**159**	15	3	4	0	**22**	0	1	5	0	**6**	**307**
5:45PM	3	85	15	0	**103**	5	127	3	0	**135**	10	4	9	0	**23**	3	3	2	0	**8**	**269**
Total	16	384	48	0	**448**	33	552	21	0	**606**	49	16	23	0	**88**	11	5	15	0	**31**	**1173**
% Approach	3.6%	85.7%	10.7%	0%	-	5.4%	91.1%	3.5%	0%	-	55.7%	18.2%	26.1%	0%	-	35.5%	16.1%	48.4%	0%	-	-
% Total	1.4%	32.7%	4.1%	0%	**38.2%**	2.8%	47.1%	1.8%	0%	**51.7%**	4.2%	1.4%	2.0%	0%	**7.5%**	0.9%	0.4%	1.3%	0%	**2.6%**	-
PHF	0.800	0.881	0.800	-	**0.896**	0.550	0.873	0.656	-	**0.876**	0.817	0.800	0.639	-	**0.846**	0.550	0.417	0.750	-	**0.775**	0.955
Lights	16	384	48	0	**448**	33	551	20	0	**604**	49	16	23	0	**88**	11	5	15	0	**31**	1171
% Lights	100%	100%	100%	0%	**100%**	100%	99.8%	95.2%	0%	**99.7%**	100%	100%	100%	0%	**100%**	100%	100%	100%	0%	**100%**	99.8%
Articulated Trucks	0	0	0	0	**0**	0	0	1	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**	1
% Articulated Trucks	0%	0%	0%	0%	**0%**	0%	0%	4.8%	0%	**0.2%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0.1%
Buses and Single-Unit Trucks	0	0	0	0	**0**	0	1	0	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**	1
% Buses and Single-Unit Trucks	0%	0%	0%	0%	**0%**	0%	0.2%	0%	0%	**0.2%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0.1%

*L: Left, R: Right, T: Thru, U: U-Turn

Home Road and Steitz Road - TMC
Tue Jan 29, 2019
PM Peak (5PM - 6PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 614890, Location: 40.196421, -83.109991

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



Chelsea Cousins

From: Zhuojun Jiang <zjiang@morpc.org>
Sent: Tuesday, February 19, 2019 4:43 PM
To: Gina Balsamo; Hwashik Jang; Nick Gill
Cc: Chelsea Cousins; Drew Laurent; Ying Su
Subject: RE: Growth Rate Request - Home & Steitz Mixed Use Development TIS

Hello Gina,

Please use the following linear annual growth rates for the intersection in your study.

Home Rd e/o Steitz Rd	2.50%
Steitz Rd n/o Home Rd	2.00%
Home Rd w/o Steitz Rd	2.50%
Steitz Rd s/o Home Rd	2.00%

Note: The above rates were derived based on planning level analysis by using MORPC's regional travel demand model.

If you have any questions regarding the rates, please let us know. Thanks!

Zhuojun

Zhuojun Jiang, Ph.D., P.E.
Manager, Travel Forecasting | **Mid-Ohio Regional Planning Commission**
T: 614.233.4147
111 Liberty Street, Suite 100 | Columbus, OH 43215

MID-OHIO REGIONAL MORPC PLANNING COMMISSION

From: Gina Balsamo [mailto:gbalsamo@cmtran.com]
Sent: Friday, February 1, 2019 1:18 PM
To: Hwashik Jang <hjang@morpc.org>; Nick Gill <ngill@morpc.org>; Zhuojun Jiang <zjiang@morpc.org>
Cc: Chelsea Cousins <ccousins@cmtran.com>; Drew Laurent <dlaurent@cmtran.com>
Subject: Growth Rate Request - Home & Steitz Mixed Use Development TIS

All,

We would like to request growth rates for the Home Road and Steitz Road intersection. We will be conducting a TIS for a site proposed to be a mixed-use development including apartments, office, and retail space. Please see the attached site plan and count data.

The Opening Year is 2019 and the Horizon Year is 2029 and 2039 (analysis will be completed for both Horizon Years).

The reviewing agencies are the City of Powell and Delaware County.

Please let me know if you need additional information.

Thanks,

Gina Balsamo, PE
Traffic Engineer
CARPENTER MARTY transportation
614.656.2429 | www.cmtran.com

Appendix C
Trip Generation

Appendix C

CARPENTER MARTY transportation

Scenario - 2

Scenario Name: AM Peak
User Group:
Dev. phase: 1
Horizon Year: 2019
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method Rate/Equation	Entry Split%	Exit Split%	Total
590 - Library	General Urban/Suburban	1000 Sq. Ft. GFA	25	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LIN)	21	8	29
Data Source: ITE-TGM 10th Edition					T = 1.75(X) + -14.59	71%	29%	
710 - General Office Building	General Urban/Suburban	1000 Sq. Ft. GFA	7	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LIN)	28	5	33
Data Source: ITE-TGM 10th Edition					T = 0.94(X) + 26.49	86%	14%	
710(1) - General Office Building	General Urban/Suburban	1000 Sq. Ft. GFA	7.7	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LIN)	29	5	34
Data Source: ITE-TGM 10th Edition					T = 0.94(X) + 26.49	86%	14%	
220 - Multifamily Housing (Low-Rise)	General Urban/Suburban	Dwelling Units	62	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LOG)	7	23	30
Data Source: ITE-TGM 10th Edition					Ln(T) =0.95Ln(X) + -0.51	23%	77%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
590 - Library	100	100	1	1	71	29
710 - General Office Building	100	100	1	1	86	14
710(1) - General Office Building	100	100	1	1	86	14
220 - Multifamily Housing (Low-Rise)	100	100	1	1	23	77

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
590 - Library	21	8	0	0	21	8
	29		0		29	
710 - General Office Building	28	5	0	0	28	5
	33		0		33	
710(1) - General Office Building	29	5	0	0	29	5
	34		0		34	
220 - Multifamily Housing (Low-Rise)	7	23	0	0	7	23
	30		0		30	

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
590 - Library	21	8	29
710 - General Office Building	28	5	33
710(1) - General Office Building	29	5	34
220 - Multifamily Housing (Low-Rise)	7	23	30

RESULTS

Site Totals	Entry	Exit	Total

Vehicle Trips Before Reduction	85	41	126
External Vehicle Trips	85	41	126
New Vehicle Trips	85	41	126

Scenario - 1

Scenario Name: PM Peak
User Group:
Dev. phase: 1
Horizon Year: 2019
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method Rate/Equation	Entry Split%	Exit Split%	Total
590 - Library	General Urban/Suburban	1000 Sq. Ft. GFA	25	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LIN)	104	112	216
Data Source: ITE-TGM 10th Edition					T = 9.33(X) + -17.13	48%	52%	
710 - General Office Building	General Urban/Suburban	1000 Sq. Ft. GFA	7	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LOG)	1	8	9
Data Source: ITE-TGM 10th Edition					Ln(T) =0.95Ln(X) + 0.36	16%	84%	
710(1) - General Office Building	General Urban/Suburban	1000 Sq. Ft. GFA	7.7	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LOG)	2	8	10
Data Source: ITE-TGM 10th Edition					Ln(T) =0.95Ln(X) + 0.36	16%	84%	
220 - Multifamily Housing (Low-Rise)	General Urban/Suburban	Dwelling Units	62	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LOG)	24	14	38
Data Source: ITE-TGM 10th Edition					Ln(T) =0.89Ln(X) + -0.02	63%	37%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
590 - Library	100	100	1	1	48	52
710 - General Office Building	100	100	1	1	16	84
710(1) - General Office Building	100	100	1	1	16	84
220 - Multifamily Housing (Low-Rise)	100	100	1	1	63	37

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
590 - Library	104	112	0	0	104	112
	216		0		216	
710 - General Office Building	1	8	0	0	1	8
	9		0		9	
710(1) - General Office Building	2	8	0	0	2	8
	10		0		10	
220 - Multifamily Housing (Low-Rise)	24	14	0	0	24	14
	38		0		38	

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
590 - Library	104	112	216
710 - General Office Building	1	8	9
710(1) - General Office Building	2	8	10
220 - Multifamily Housing (Low-Rise)	24	14	38

RESULTS

Site Totals	Entry	Exit	Total

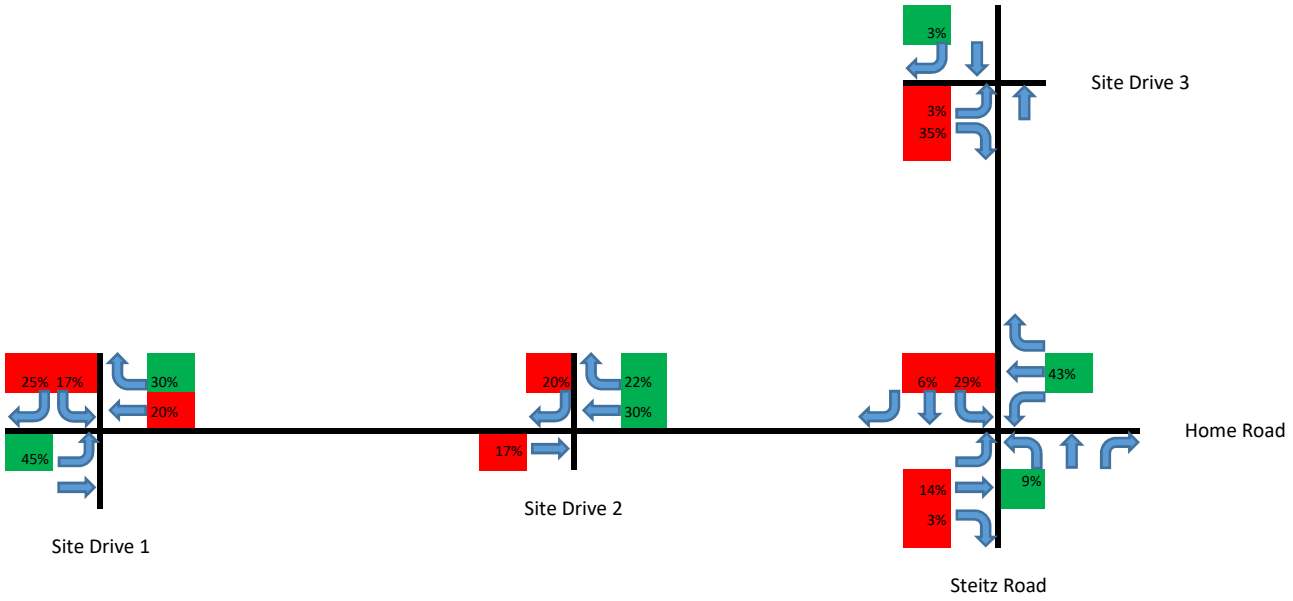
Vehicle Trips Before Reduction	131	142	273
External Vehicle Trips	131	142	273
New Vehicle Trips	131	142	273

Appendix D
Volume Development

CARPENTER MARTY transportation

CARPENTER MARTY transportation	Year	Period	Scenario	Plate
			Distribution	

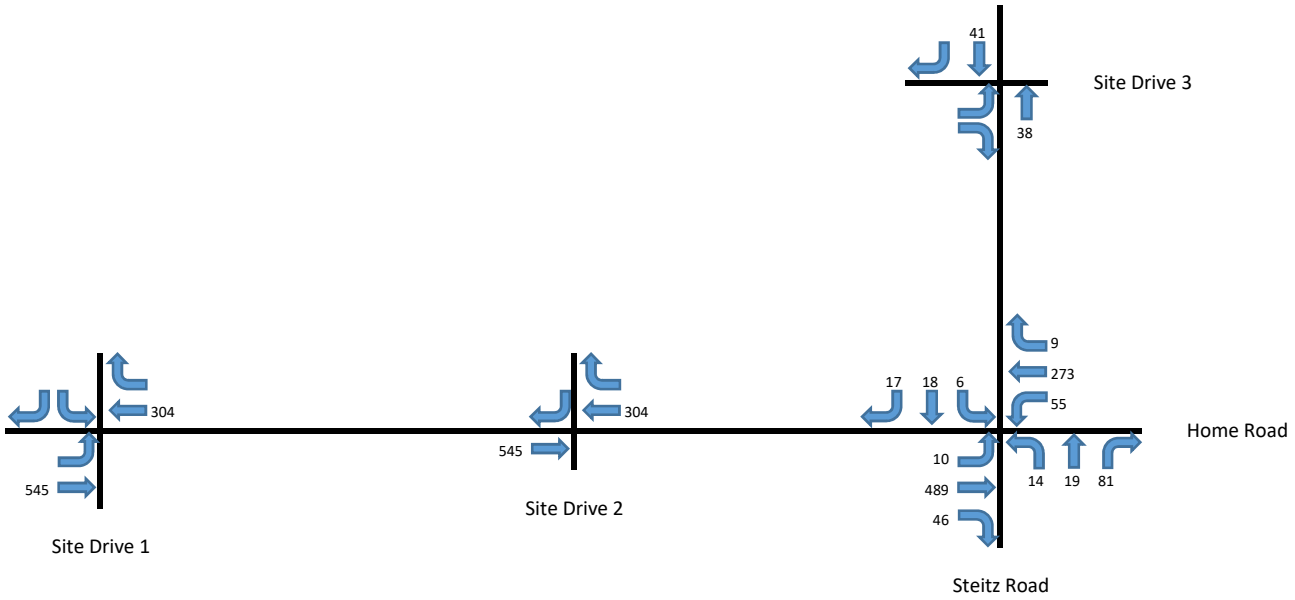
^
N



Home and Steitz Mixed-Use TIS
Traffic Volume Calculations

CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2019	AM	Count	

^
N

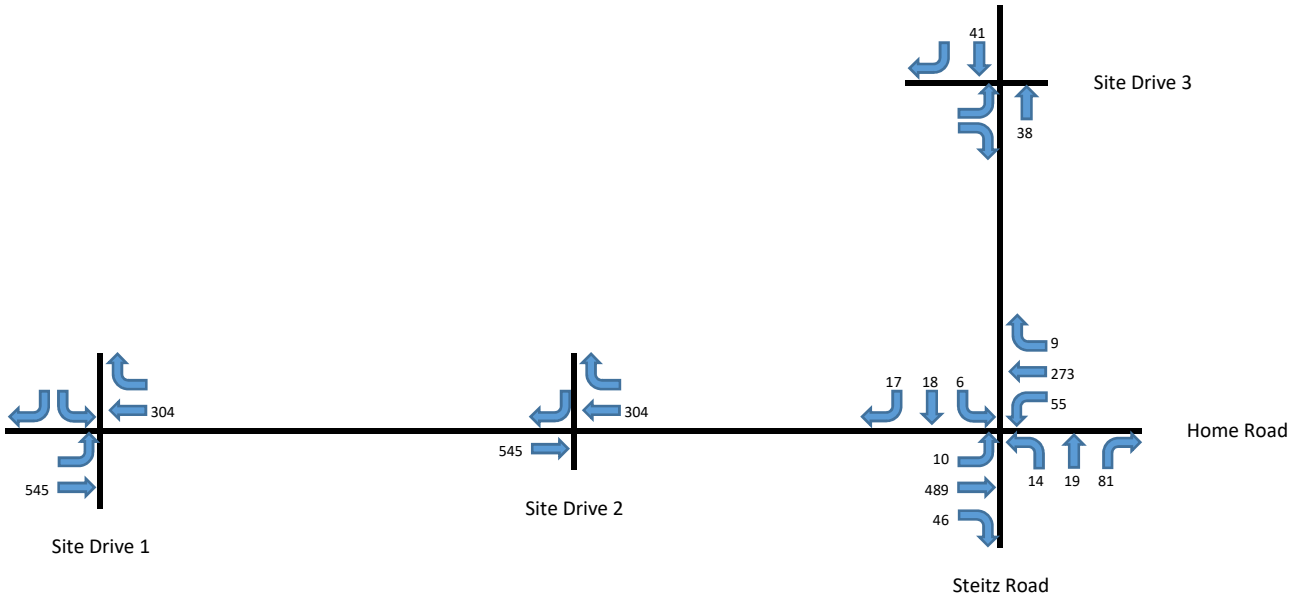


Home and Steitz Mixed-Use TIS
Traffic Volume Calculations

	Year	Period	Scenario	Plate
CARPENTER MARTY transportation	2019	AM	No Build	A1

^
N

Growth Rates	
Home Rd e/o Steitz Rd	2.50%
Steitz Rd n/o Home Rd	2.00%
Home Rd w/o Steitz Rd	2.50%
Steitz Rd s/o Home Rd	2.00%

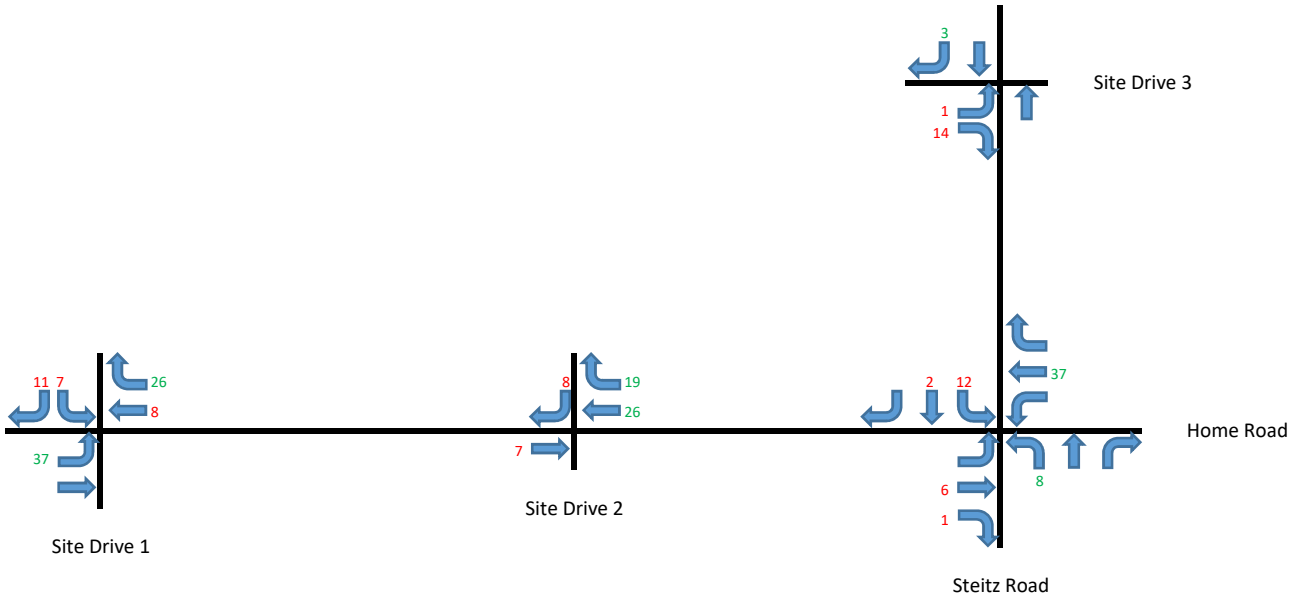


Home and Steitz Mixed-Use TIS
Traffic Volume Calculations

CARPENTER MARTY transportation	Year	Period	Scenario	Plate
		AM	Non-Pass-By	B1

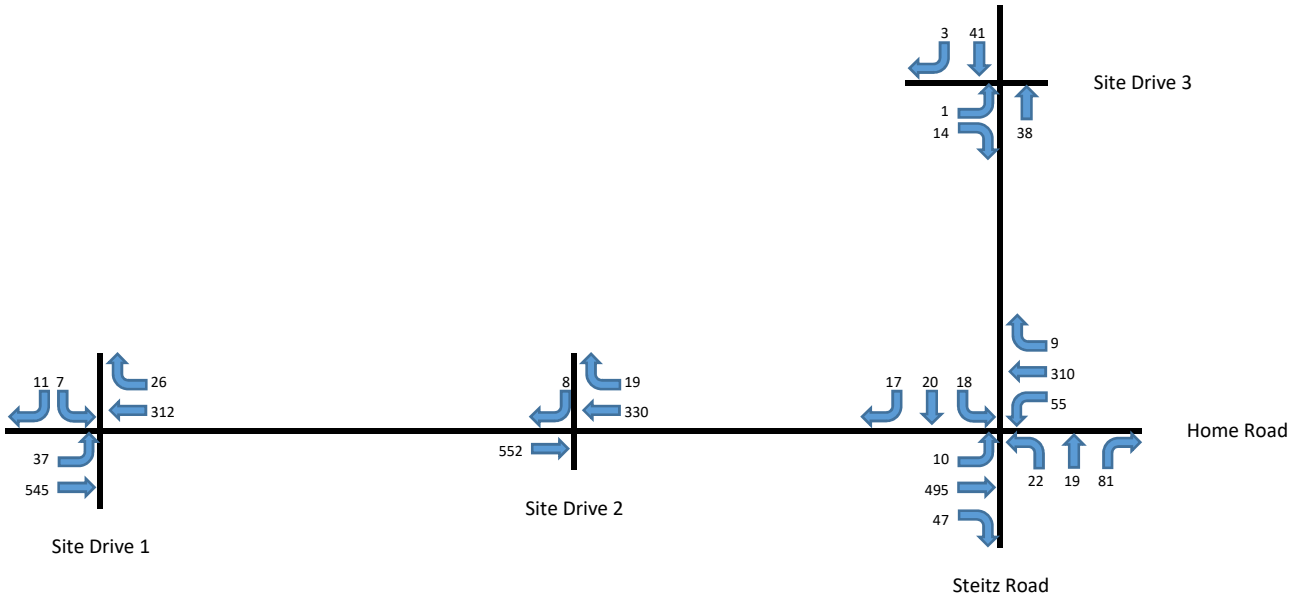
^
N

Entry 85
Exit 41



	Year	Period	Scenario	Plate
CARPENTER MARTY transportation	2019	AM	Build	C1 = A1 + B1

^
N

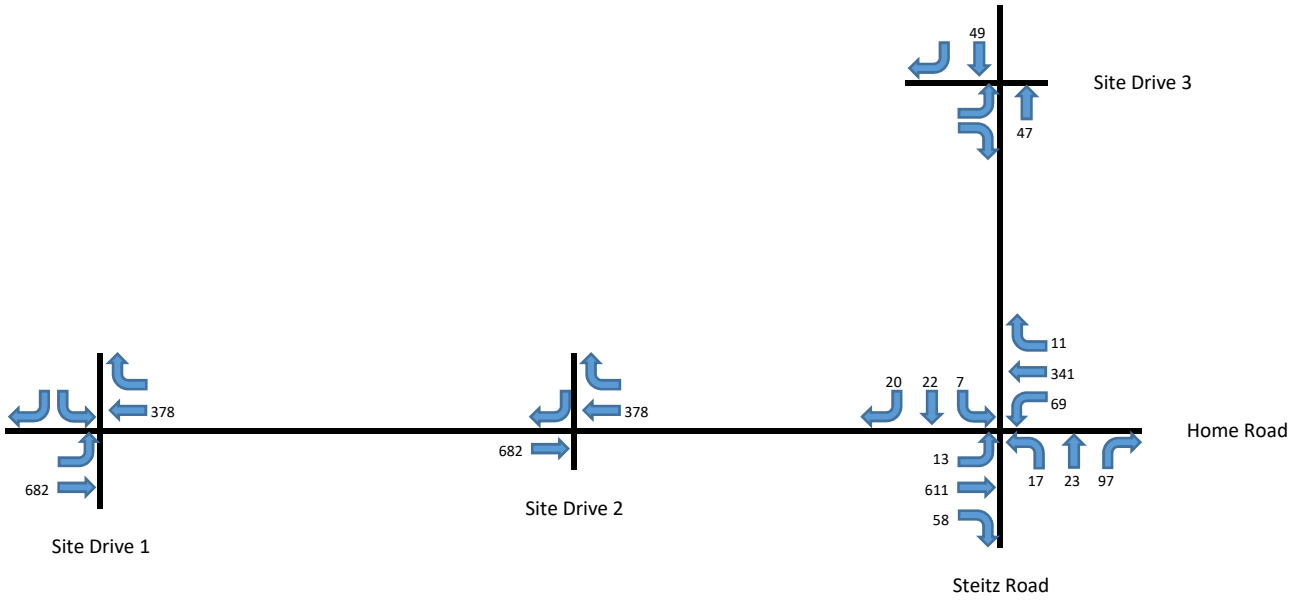


Home and Steitz Mixed-Use TIS
Traffic Volume Calculations

CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2029	AM	No Build	D1

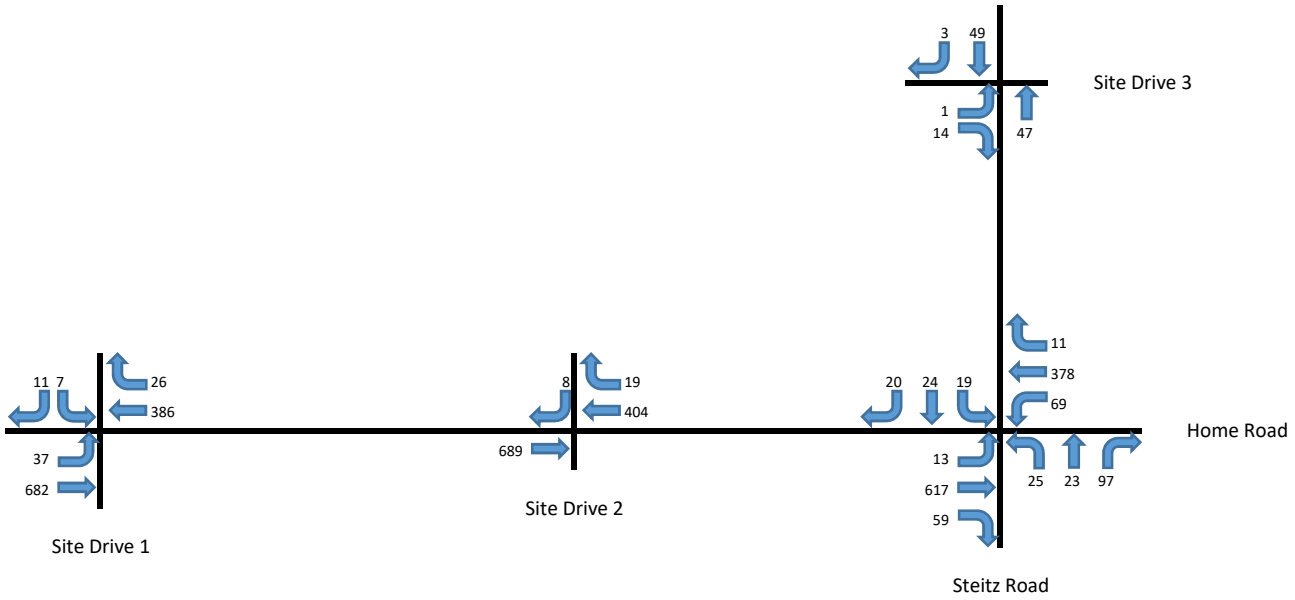
^
N

Growth Rates	
Home Rd e/o Steitz Rd	2.50%
Steitz Rd n/o Home Rd	2.00%
Home Rd w/o Steitz Rd	2.50%
Steitz Rd s/o Home Rd	2.00%



Year	Period	Scenario	Plate
2029	AM	Build	E1 = B1 + D1

^
N

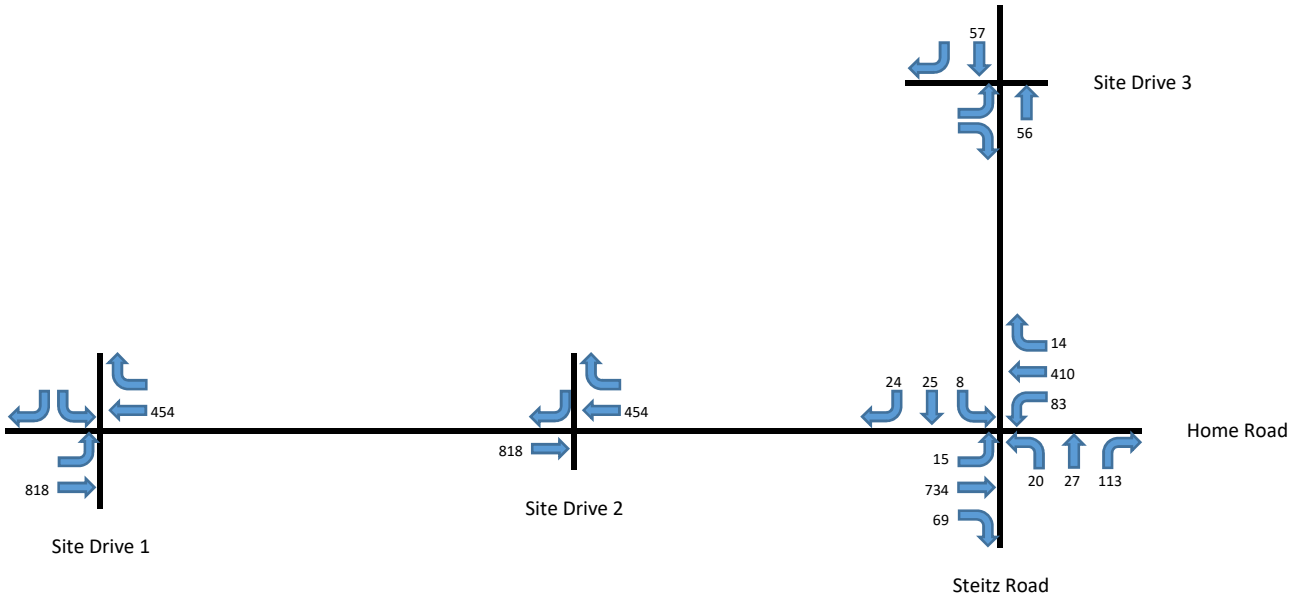


Home and Steitz Mixed-Use TIS
Traffic Volume Calculations

CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2039	AM	No Build	F1

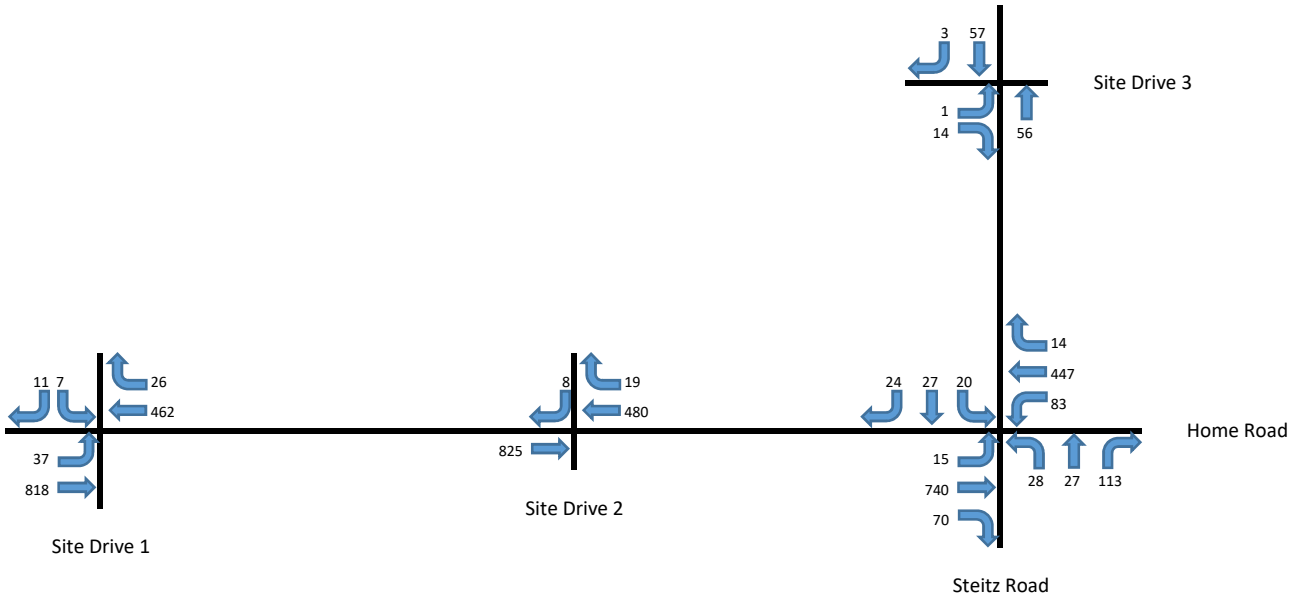
^
N

Growth Rates	
Home Rd e/o Steitz Rd	2.50%
Steitz Rd n/o Home Rd	2.00%
Home Rd w/o Steitz Rd	2.50%
Steitz Rd s/o Home Rd	2.00%



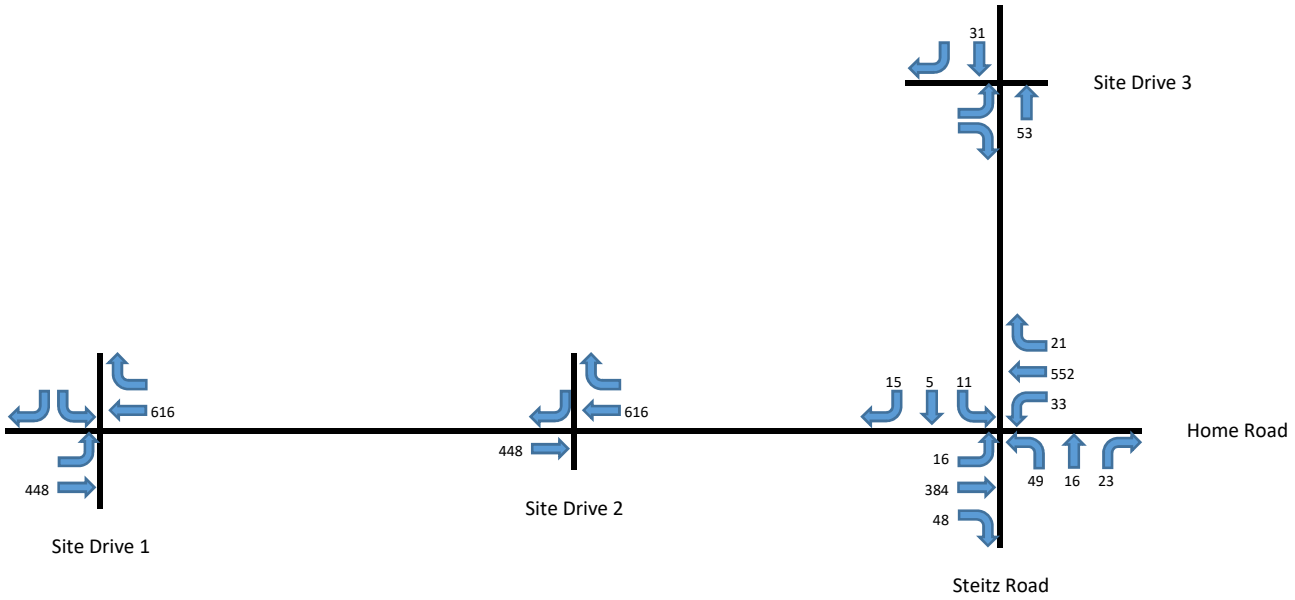
Year	Period	Scenario	Plate
2039	AM	Build	G1 = B1 + F1

^
N



	Year	Period	Scenario	Plate
CARPENTER MARTY transportation	2019	PM	Count	

^
N

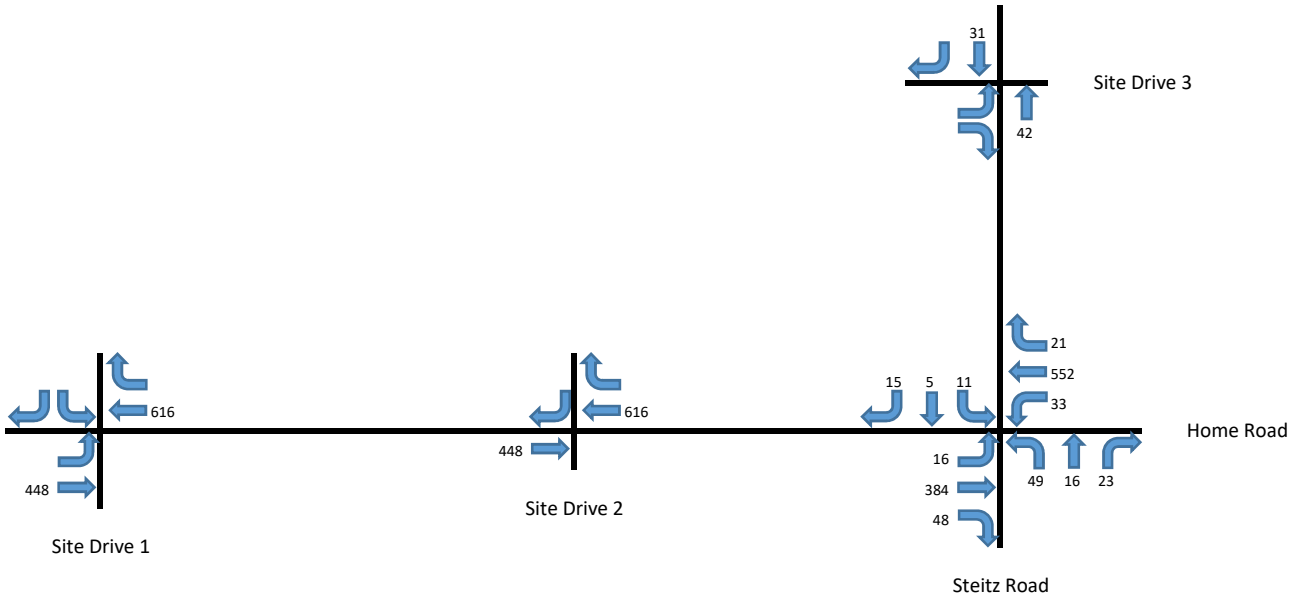


Home and Steitz Mixed-Use TIS
Traffic Volume Calculations

CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2019	PM	No Build	A2

^
N

Growth Rates	
Home Rd e/o Steitz Rd	2.50%
Steitz Rd n/o Home Rd	2.00%
Home Rd w/o Steitz Rd	2.50%
Steitz Rd s/o Home Rd	2.00%

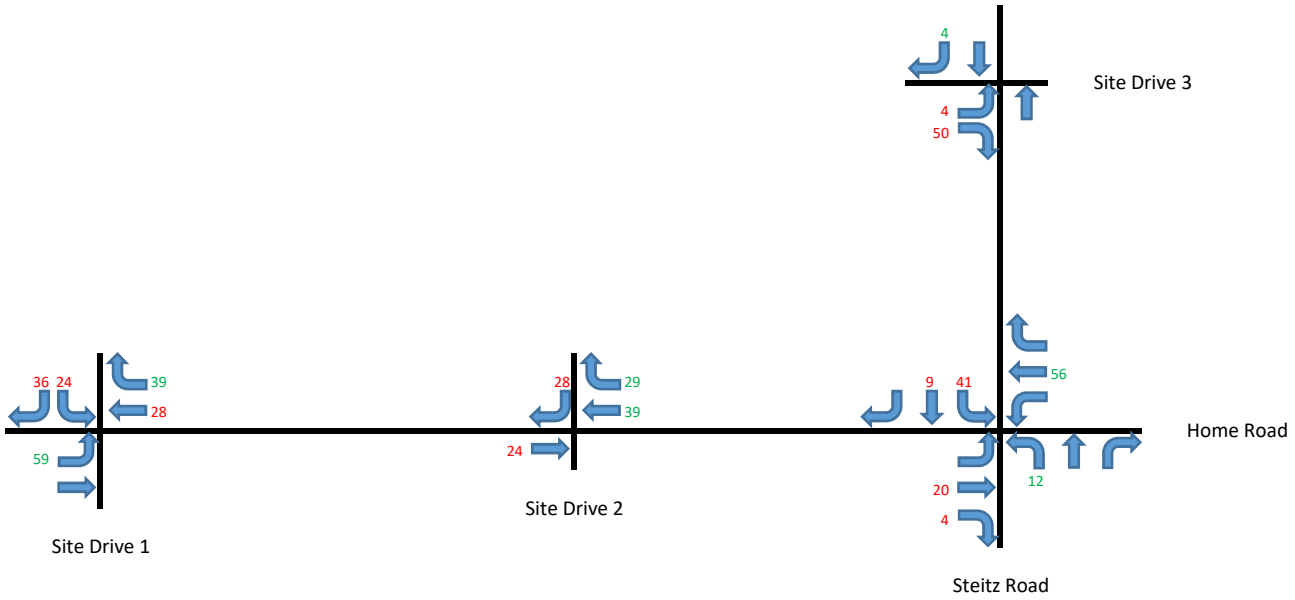


Home and Steitz Mixed-Use TIS
Traffic Volume Calculations

CARPENTER MARTY transportation	Year	Period	Scenario	Plate
		PM	Non-Pass-By	B2

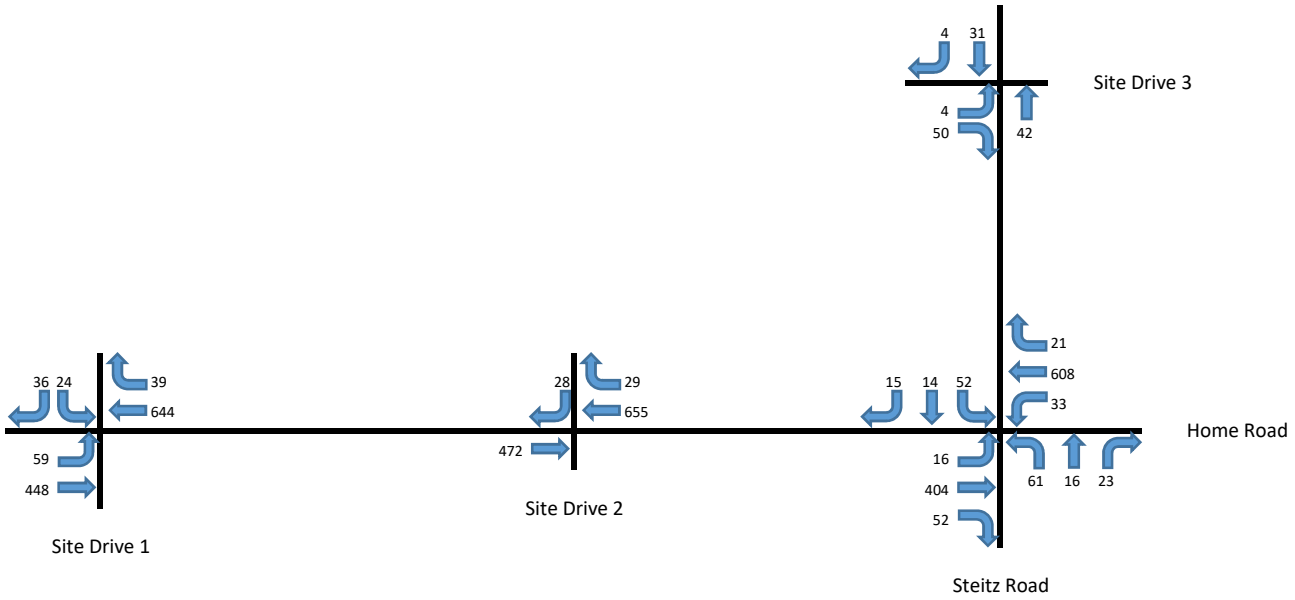
^
N

Entry 131
Exit 142



	Year	Period	Scenario	Plate
CARPENTER MARTY transportation	2019	PM	Build	C2 = A2 + B2

^
N

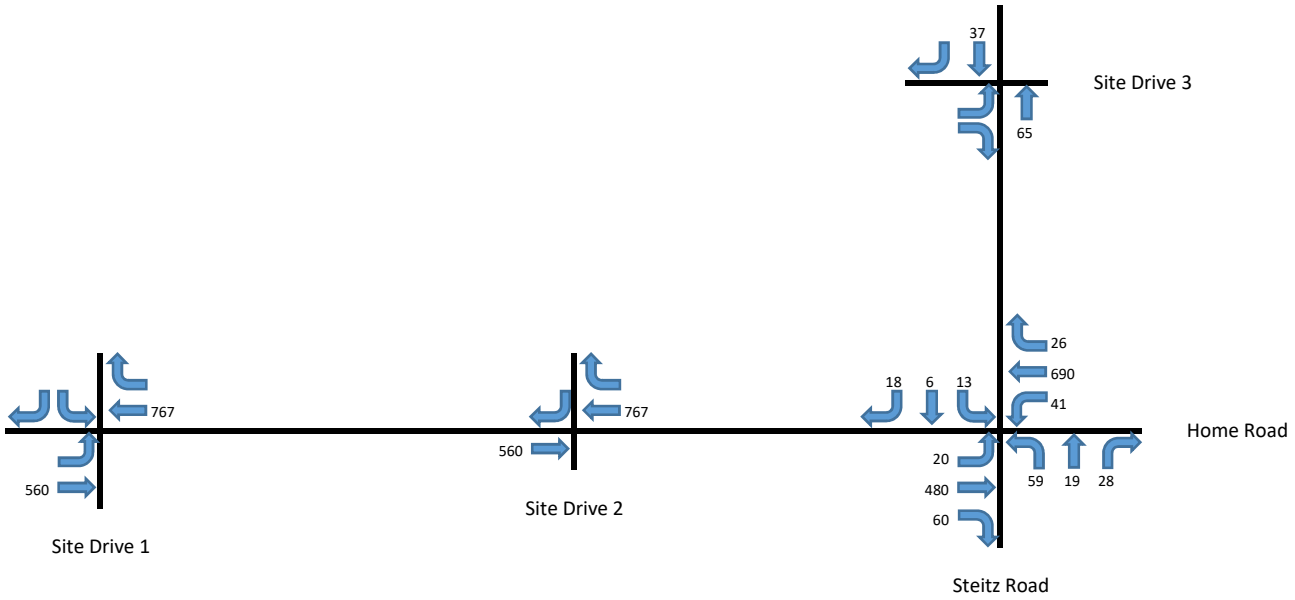


Home and Steitz Mixed-Use TIS
Traffic Volume Calculations

CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2029	PM	No Build	D2

^
N

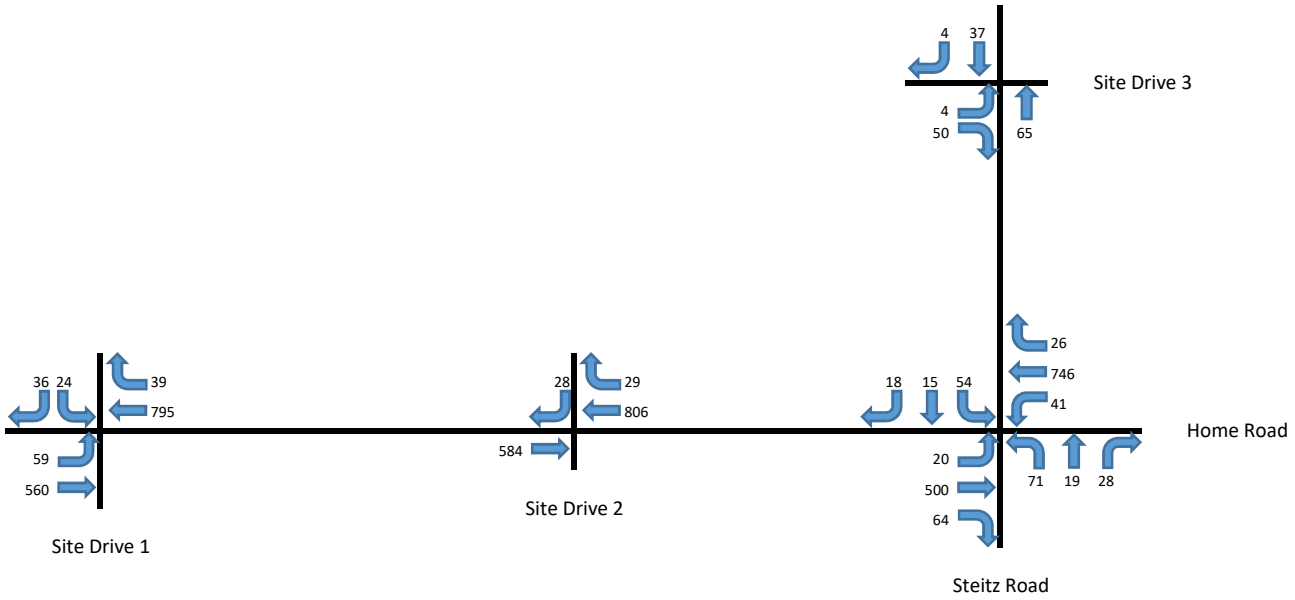
Growth Rates	
Home Rd e/o Steitz Rd	2.50%
Steitz Rd n/o Home Rd	2.00%
Home Rd w/o Steitz Rd	2.50%
Steitz Rd s/o Home Rd	2.00%



Home and Steitz Mixed-Use TIS
Traffic Volume Calculations

CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2029	PM	Build	E2 = B2 + D2

^
N

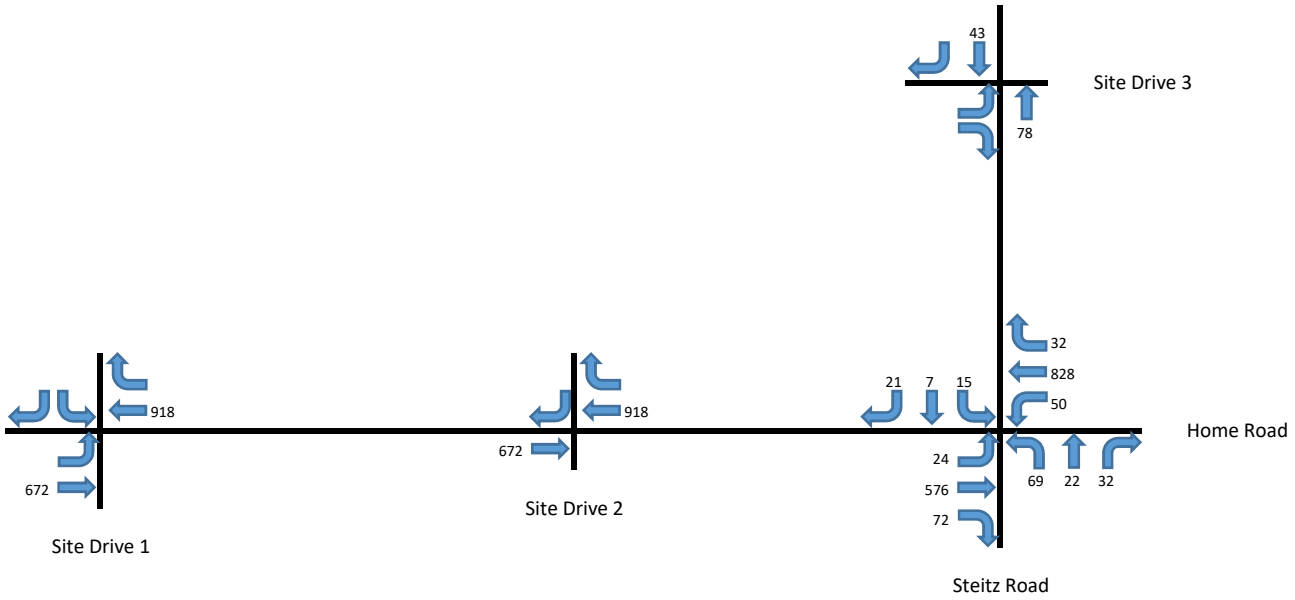


Home and Steitz Mixed-Use TIS
Traffic Volume Calculations

CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2039	PM	No Build	F2

^
N

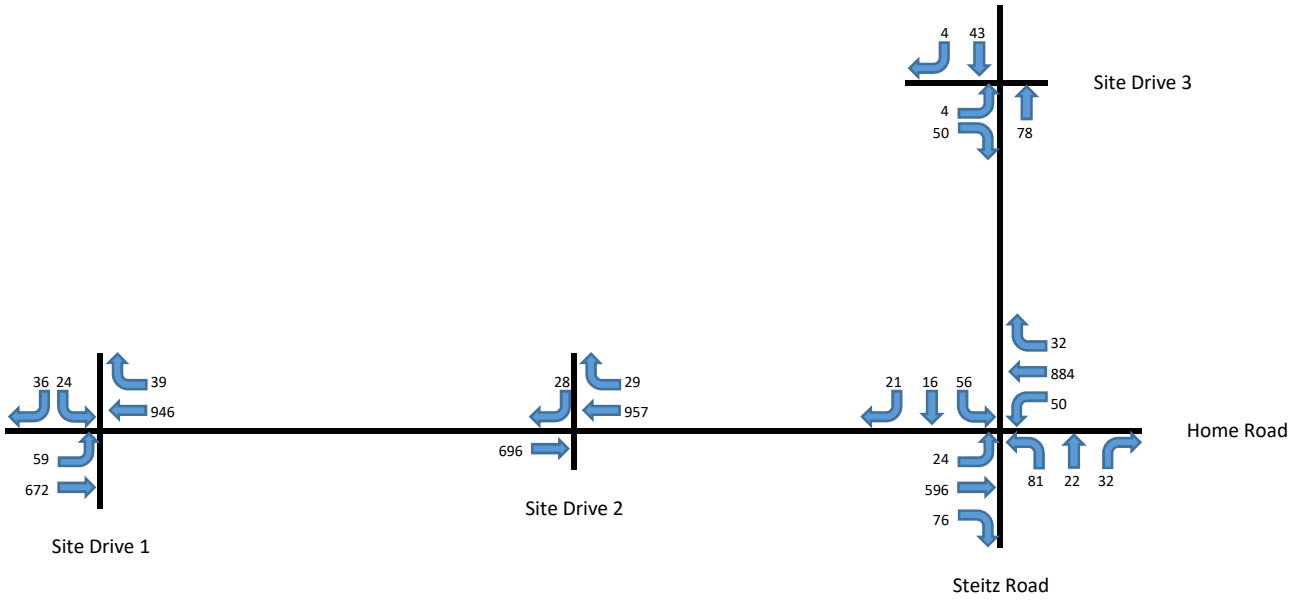
Growth Rates	
Home Rd e/o Steitz Rd	2.50%
Steitz Rd n/o Home Rd	2.00%
Home Rd w/o Steitz Rd	2.50%
Steitz Rd s/o Home Rd	2.00%



Home and Steitz Mixed-Use TIS
Traffic Volume Calculations

CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2039	PM	Build	G2 = B2 + F2

^
N



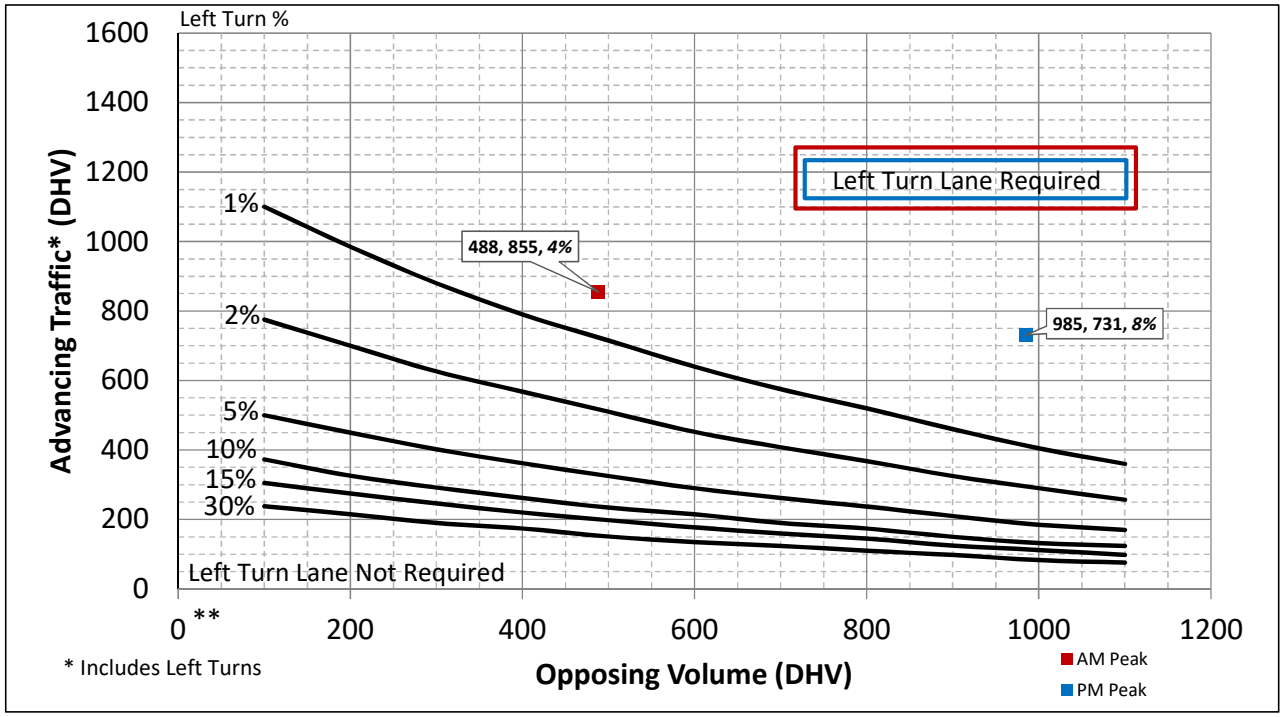
Appendix E
Turn Lane Warrant Analysis

Appendix E

CARPENTER MARTY transportation

2-Lane Highway Left Turn Lane Warrant

(> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

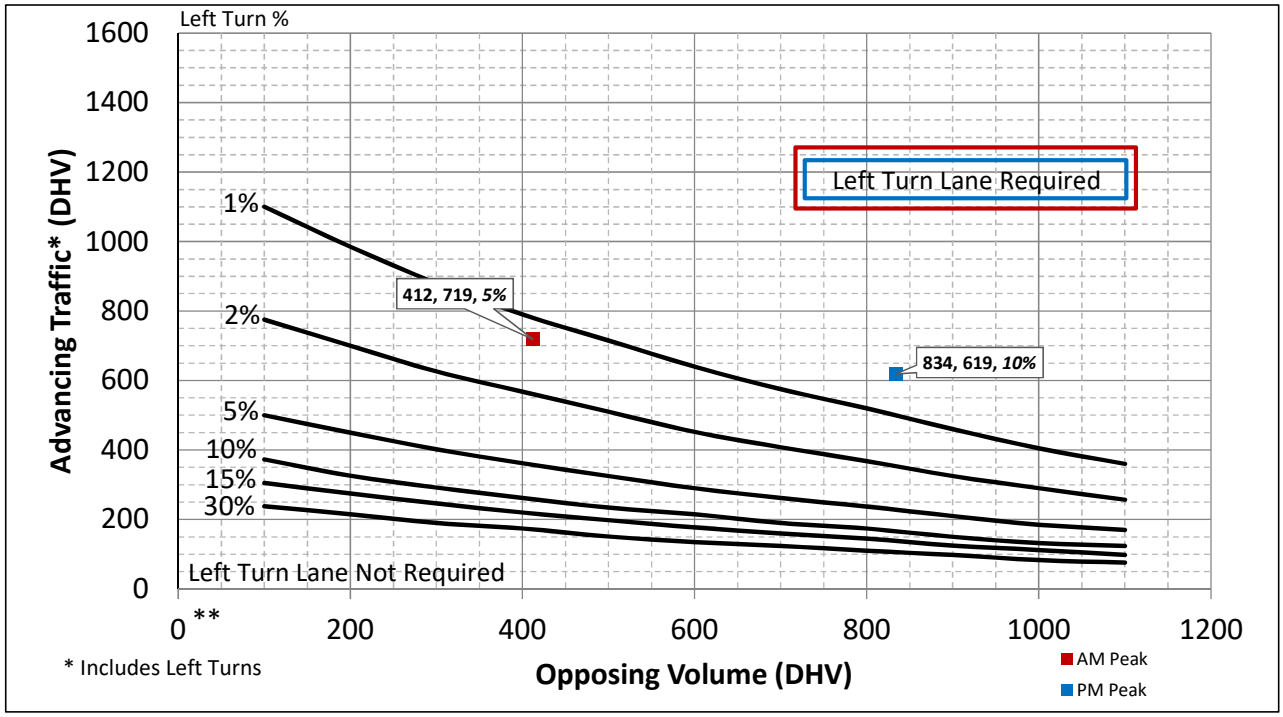
AM Peak	Design Speed	60	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	37	VPH
	Advancing Traffic	855	VPH
	Opposing Volume	488	VPH
	Left Turn Percentage	4%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	345	
	Offset Width	12	
	Approach Taper	720	
PM Peak	Design Speed	60	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	59	VPH
	Advancing Traffic	731	VPH
	Opposing Volume	985	VPH
	Left Turn Percentage	8%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	345	
	Offset Width	12	
	Approach Taper	720	
Is Left Turn Warrant Met		Yes	**See Above**

** Turn Lane Length includes 50 ft diverging taper*

** Turn Lane Length includes 50 ft diverging taper*

2-Lane Highway Left Turn Lane Warrant

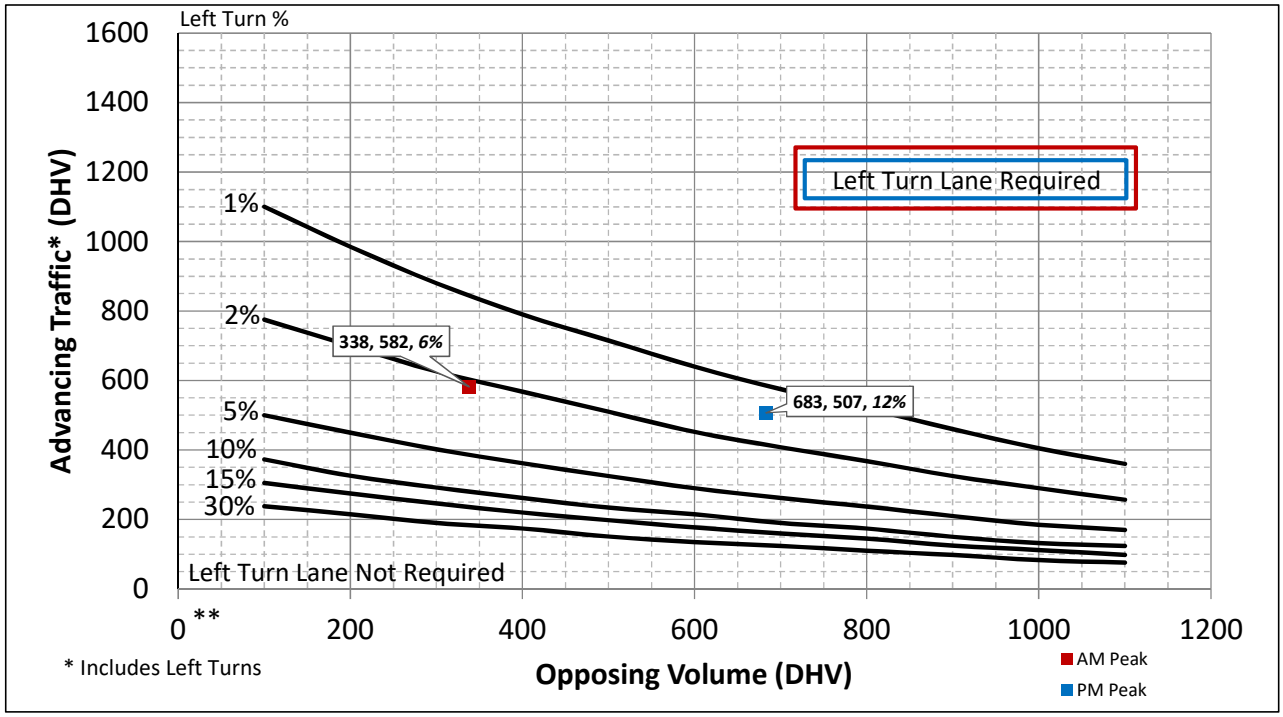
(> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

AM Peak	Design Speed	60	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	37	VPH
	Advancing Traffic	719	VPH
	Opposing Volume	412	VPH
	Left Turn Percentage	5%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	345	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	720	
PM Peak	Design Speed	60	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	59	VPH
	Advancing Traffic	619	VPH
	Opposing Volume	834	VPH
	Left Turn Percentage	10%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	345	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	720	
Is Left Turn Warrant Met		Yes	**See Above**

2-Lane Highway Left Turn Lane Warrant
(> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

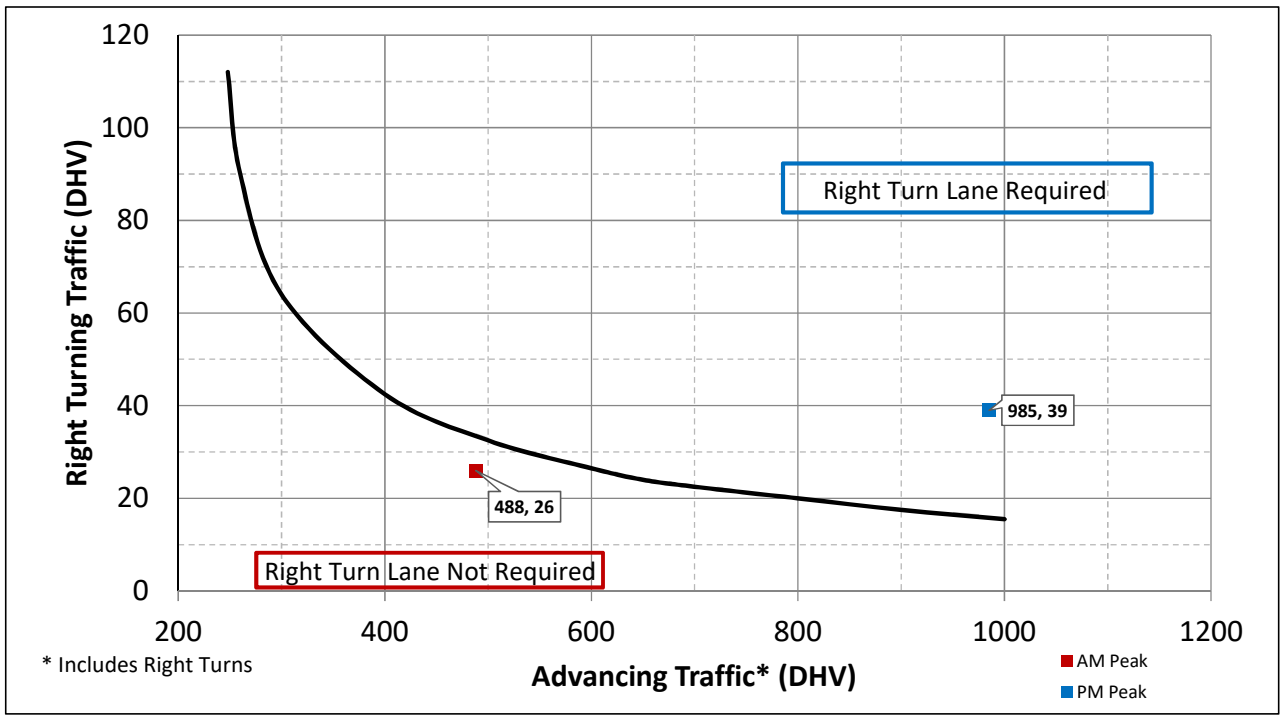
AM Peak	Design Speed	60	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	37	VPH
	Advancing Traffic	582	VPH
	Opposing Volume	338	VPH
	Left Turn Percentage	6%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	345	
	Offset Width	12	
	Approach Taper	720	
PM Peak	Design Speed	60	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	59	VPH
	Advancing Traffic	507	VPH
	Opposing Volume	683	VPH
	Left Turn Percentage	12%	
	Location Type	Through Road	
	Condition	B or C	
	Vehicles/Cycle	1	
	Turn Lane Length	See Column to Right	345
	Offset Width	12	
	Approach Taper	720	
Is Left Turn Warrant Met		Yes	**See Above**

** Turn Lane Length includes 50 ft diverging taper*

** Turn Lane Length includes 50 ft diverging taper*

2-Lane Highway Right Turn Lane Warrant

(> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

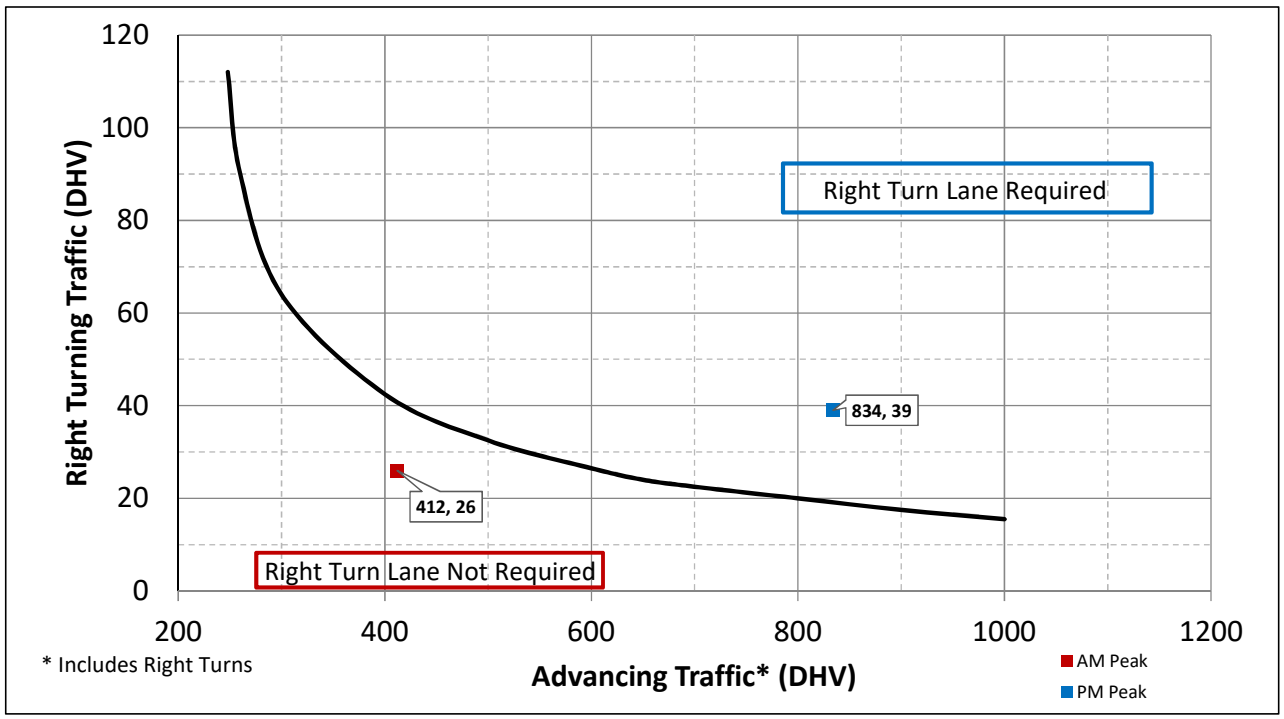
AM Peak	Design Speed	60	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	26	VPH
	Advancing Traffic	488	VPH
	Right Turn Percentage	5%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	345	
PM Peak	Design Speed	60	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	39	VPH
	Advancing Traffic	985	VPH
	Right Turn Percentage	4%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	345	
Is Right Turn Warrant Met		Yes	See Above

** Turn Lane Length includes 50 ft diverging taper*

** Turn Lane Length includes 50 ft diverging taper*

2-Lane Highway Right Turn Lane Warrant

(> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

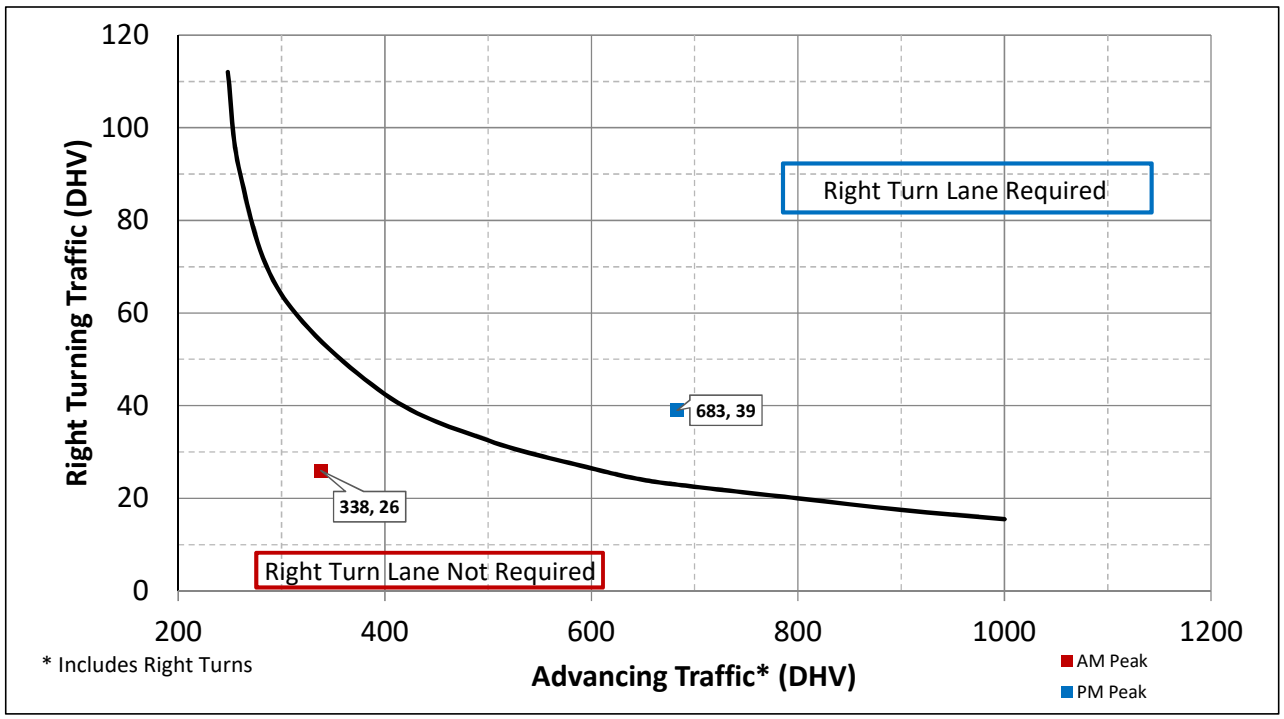
AM Peak	Design Speed	60	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	26	VPH
	Advancing Traffic	412	VPH
	Right Turn Percentage	6%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	345	
PM Peak	Design Speed	60	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	39	VPH
	Advancing Traffic	834	VPH
	Right Turn Percentage	5%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	345	
Is Right Turn Warrant Met		Yes	**See Above**

** Turn Lane Length includes 50 ft diverging taper*

** Turn Lane Length includes 50 ft diverging taper*

2-Lane Highway Right Turn Lane Warrant

(> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

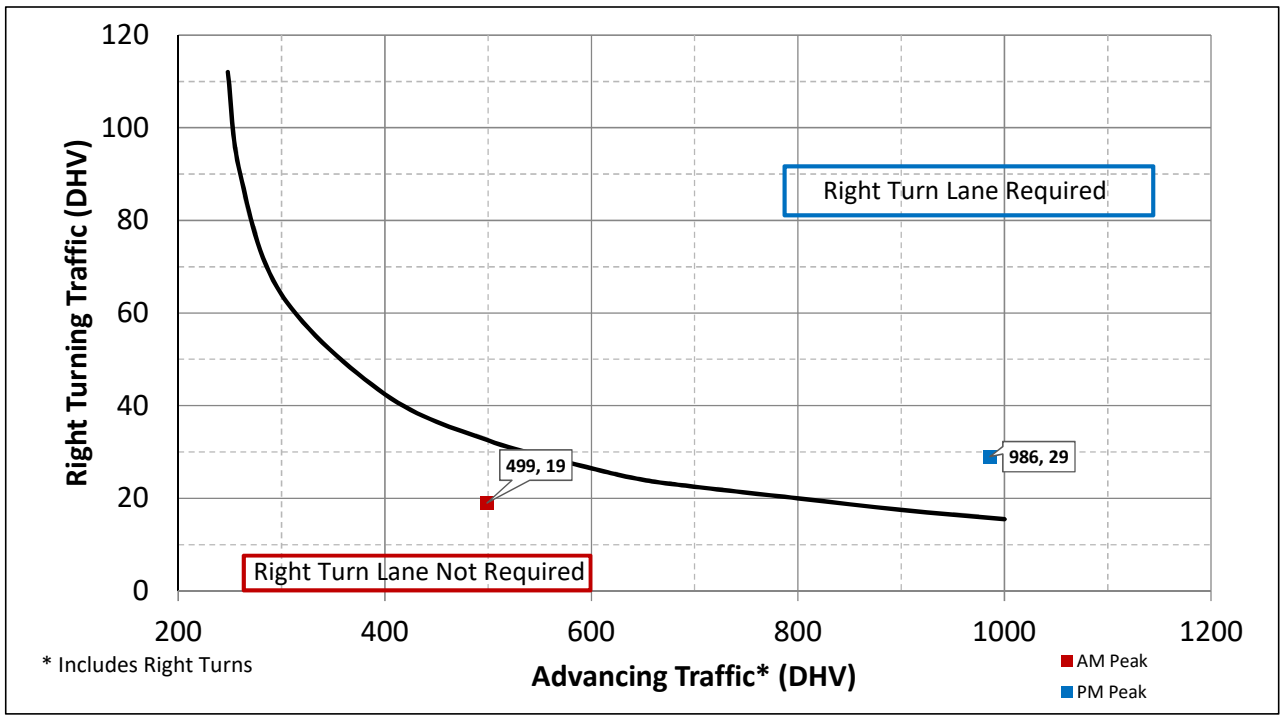
AM Peak	**Design Speed**	60	**mph**
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	***Assume 60***
	Turn Lane Volume	26	**VPH**
	Advancing Traffic	338	**VPH**
	Right Turn Percentage	8%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	345	
PM Peak	**Design Speed**	60	**mph**
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	***Assume 60***
	Turn Lane Volume	39	**VPH**
	Advancing Traffic	683	**VPH**
	Right Turn Percentage	6%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	345	
Is Right Turn Warrant Met		Yes	**See Above**

** Turn Lane Length includes 50 ft diverging taper*

** Turn Lane Length includes 50 ft diverging taper*

2-Lane Highway Right Turn Lane Warrant

(> 40 mph or 70 kph Posted Speed)

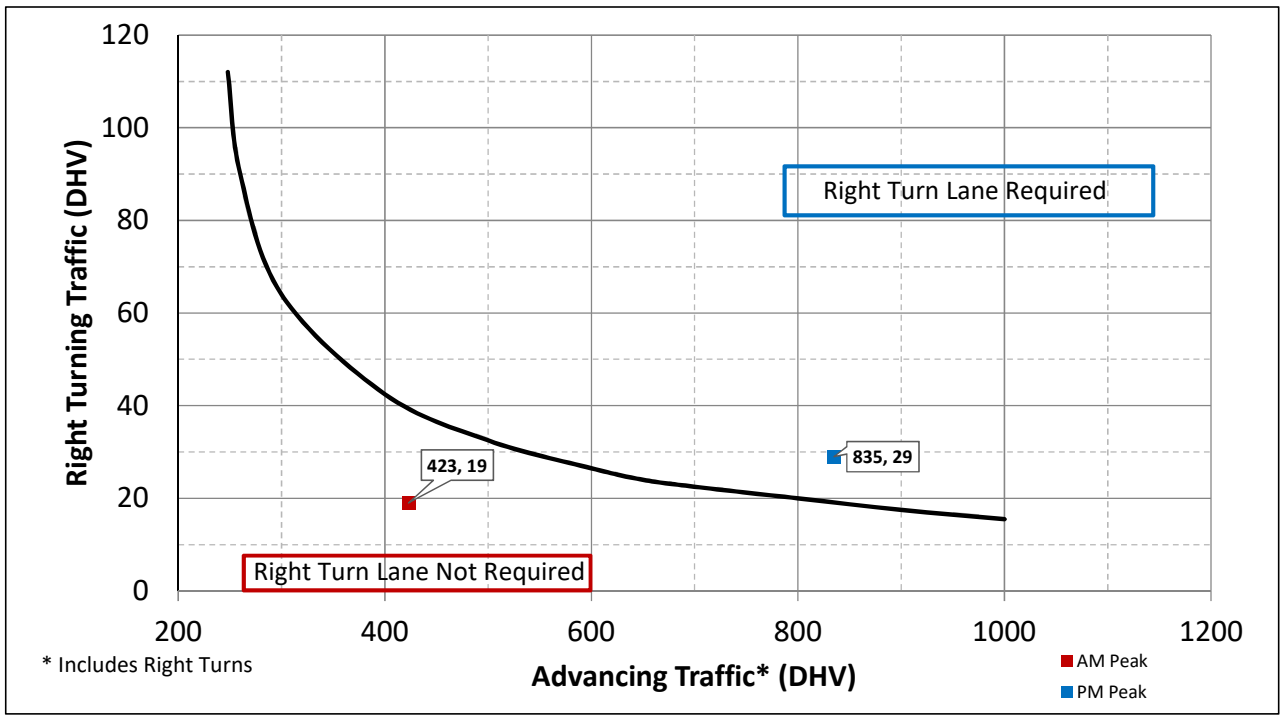


Turn Lane Length Calculations

AM Peak	Design Speed	60	mph	
	Traffic Control	Unsignalized		
	Cycle Length	Unsignalized		
	Cycles Per Hour	60	*Assume 60*	
	Turn Lane Volume	19	VPH	
	Advancing Traffic	499	VPH	
	Right Turn Percentage	4%		
	Location Type	Through Road		
	Condition	B		
	Vehicles/Cycle	1		
	Turn Lane Length	345		* Turn Lane Length includes 50 ft diverging taper
PM Peak	Design Speed	60	mph	
	Traffic Control	Unsignalized		
	Cycle Length	Unsignalized		
	Cycles Per Hour	60	*Assume 60*	
	Turn Lane Volume	29	VPH	
	Advancing Traffic	986	VPH	
	Right Turn Percentage	3%		
	Location Type	Through Road		
	Condition	B		
	Vehicles/Cycle	1		
	Turn Lane Length	345		* Turn Lane Length includes 50 ft diverging taper
Is Right Turn Warrant Met		Yes	See Above	

2-Lane Highway Right Turn Lane Warrant

(> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

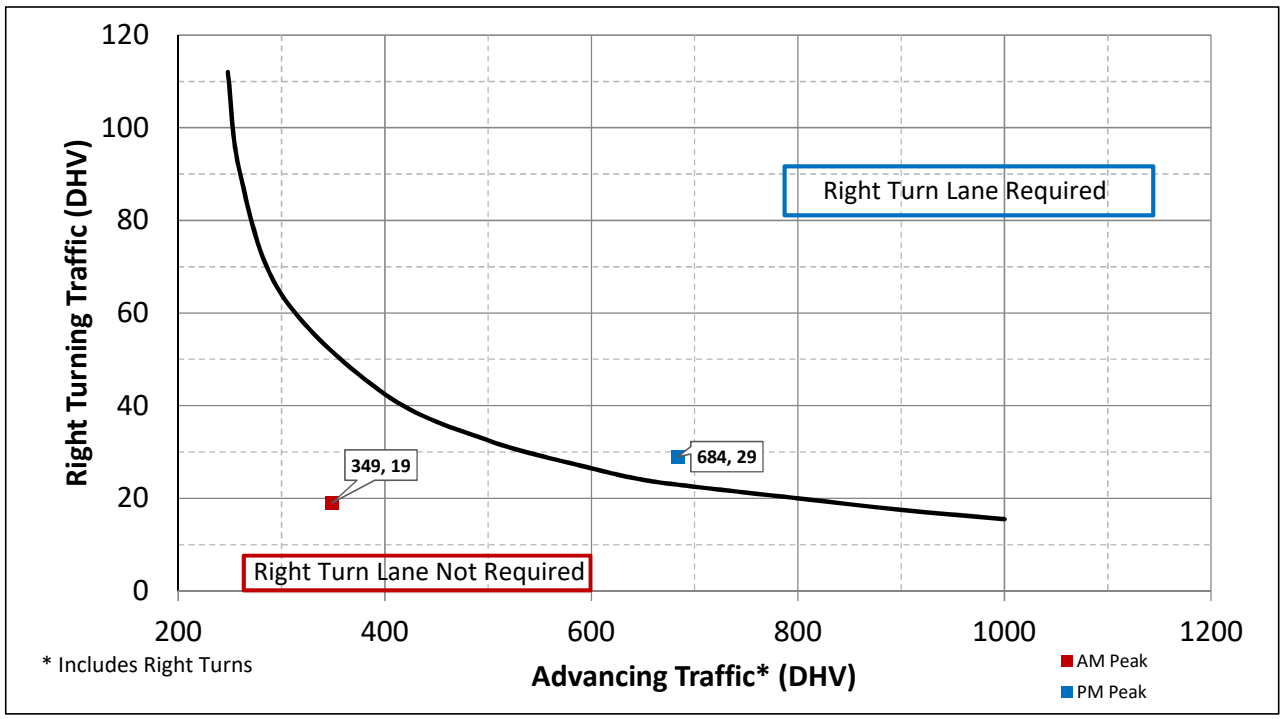
AM Peak	Design Speed	60	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	19	VPH
	Advancing Traffic	423	VPH
	Right Turn Percentage	4%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	345	
PM Peak	Design Speed	60	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	29	VPH
	Advancing Traffic	835	VPH
	Right Turn Percentage	3%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	345	
Is Right Turn Warrant Met		Yes	See Above

** Turn Lane Length includes 50 ft diverging taper*

** Turn Lane Length includes 50 ft diverging taper*

2-Lane Highway Right Turn Lane Warrant

(> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

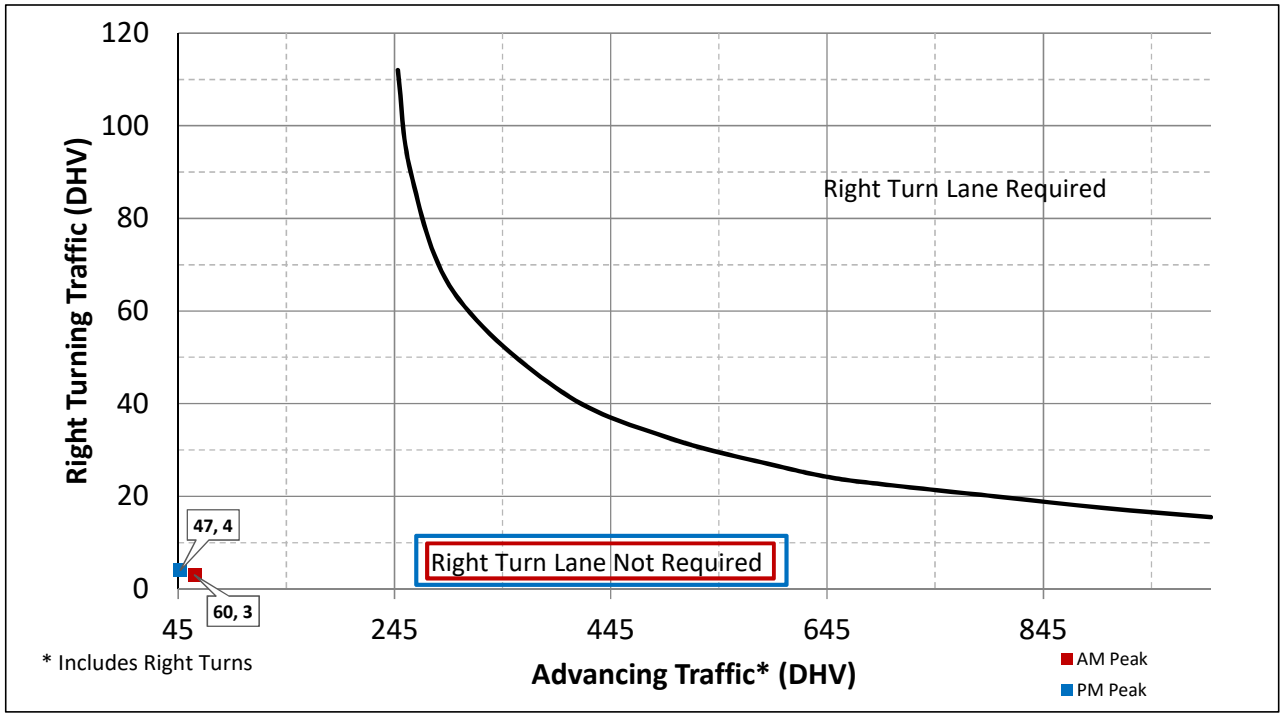
AM Peak	Design Speed	60	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	19	VPH
	Advancing Traffic	349	VPH
	Right Turn Percentage	5%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	345	
PM Peak	Design Speed	60	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	29	VPH
	Advancing Traffic	684	VPH
	Right Turn Percentage	4%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	345	
Is Right Turn Warrant Met		Yes	See Above

** Turn Lane Length includes 50 ft diverging taper*

** Turn Lane Length includes 50 ft diverging taper*

2-Lane Highway Right Turn Lane Warrant

(> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

AM Peak	Design Speed	60	mph	
	Traffic Control	Unsignalized		
	Cycle Length	Unsignalized		
	Cycles Per Hour	60	*Assume 60*	
	Turn Lane Volume	3	VPH	
	Advancing Traffic	60	VPH	
	Right Turn Percentage	5%		
	Location Type	Through Road		
	Condition	B		
	Vehicles/Cycle	1		
	Turn Lane Length	345		* Turn Lane Length includes 50 ft diverging taper
PM Peak	Design Speed	60	mph	
	Traffic Control	Unsignalized		
	Cycle Length	Unsignalized		
	Cycles Per Hour	60	*Assume 60*	
	Turn Lane Volume	4	VPH	
	Advancing Traffic	47	VPH	
	Right Turn Percentage	9%		
	Location Type	Through Road		
	Condition	B		
	Vehicles/Cycle	1		
	Turn Lane Length	345		* Turn Lane Length includes 50 ft diverging taper
Is Right Turn Warrant Met		No	No Right Turn Lane Required	

Appendix F
Capacity Analysis

Appendix F

CARPENTER MARTY transportation

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	489	46	55	273	9	14	19	81	6	18	17
Future Volume (veh/h)	10	489	46	55	273	9	14	19	81	6	18	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	11	532	50	60	297	10	15	21	88	7	20	18
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	444	731	621	272	731	621	707	133	556	636	382	344
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	1068	1863	1583	829	1863	1583	1364	314	1316	1279	905	814
Grp Volume(v), veh/h	11	532	50	60	297	10	15	0	109	7	0	38
Grp Sat Flow(s),veh/h/ln	1068	1863	1583	829	1863	1583	1364	0	1630	1279	0	1719
Q Serve(g_s), s	0.4	11.8	1.0	3.2	5.6	0.2	0.3	0.0	2.0	0.2	0.0	0.6
Cycle Q Clear(g_c), s	6.0	11.8	1.0	15.0	5.6	0.2	1.0	0.0	2.0	2.2	0.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.81	1.00		0.47
Lane Grp Cap(c), veh/h	444	731	621	272	731	621	707	0	688	636	0	726
V/C Ratio(X)	0.02	0.73	0.08	0.22	0.41	0.02	0.02	0.00	0.16	0.01	0.00	0.05
Avail Cap(c_a), veh/h	1356	2321	1973	980	2321	1973	707	0	688	636	0	726
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.8	12.5	9.3	18.9	10.7	9.0	8.6	0.0	8.7	9.4	0.0	8.3
Incr Delay (d2), s/veh	0.0	1.4	0.1	0.4	0.4	0.0	0.1	0.0	0.5	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	6.2	0.4	0.8	2.9	0.1	0.1	0.0	1.0	0.1	0.0	0.3
LnGrp Delay(d),s/veh	12.8	14.0	9.3	19.3	11.0	9.0	8.6	0.0	9.2	9.4	0.0	8.4
LnGrp LOS	B	B	A	B	B	A	A		A	A		A
Approach Vol, veh/h		593			367			124			45	
Approach Delay, s/veh		13.5			12.3			9.1			8.6	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		25.0		23.5		25.0		23.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		20.5		60.5		20.5		60.5
Max Q Clear Time (g_c+I1), s		4.0		13.8		4.2		17.0
Green Ext Time (p_c), s		0.5		3.6		0.1		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.5
HCM 2010 LOS	B

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	None	Max	None
Maximum Split (s)	25	65	25	65
Maximum Split (%)	27.8%	72.2%	27.8%	72.2%
Minimum Split (s)	22.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	25	0	25
End Time (s)	25	0	25	0
Yield/Force Off (s)	20.5	85.5	20.5	85.5
Yield/Force Off 170(s)	9.5	74.5	9.5	74.5
Local Start Time (s)	0	25	0	25
Local Yield (s)	20.5	85.5	20.5	85.5
Local Yield 170(s)	9.5	74.5	9.5	74.5

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	50

Splits and Phases: 3: Steitz Road & Home Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	495	47	55	310	9	22	19	81	18	20	17
Future Volume (veh/h)	10	495	47	55	310	9	22	19	81	18	20	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	11	538	51	60	337	10	24	21	88	20	22	18
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	396	730	620	250	730	620	719	140	586	649	422	345
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	1030	1863	1583	824	1863	1583	1362	314	1316	1279	949	777
Grp Volume(v), veh/h	11	538	51	60	337	10	24	0	109	20	0	40
Grp Sat Flow(s),veh/h/ln	1030	1863	1583	824	1863	1583	1362	0	1630	1279	0	1726
Q Serve(g_s), s	0.4	13.6	1.1	3.7	7.4	0.2	0.6	0.0	2.2	0.5	0.0	0.7
Cycle Q Clear(g_c), s	7.8	13.6	1.1	17.3	7.4	0.2	1.3	0.0	2.2	2.7	0.0	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.81	1.00		0.45
Lane Grp Cap(c), veh/h	396	730	620	250	730	620	719	0	725	649	0	768
V/C Ratio(X)	0.03	0.74	0.08	0.24	0.46	0.02	0.03	0.00	0.15	0.03	0.00	0.05
Avail Cap(c_a), veh/h	1049	1911	1624	772	1911	1624	719	0	725	649	0	768
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.4	14.3	10.5	21.7	12.4	10.3	9.1	0.0	9.1	9.9	0.0	8.7
Incr Delay (d2), s/veh	0.0	1.5	0.1	0.5	0.5	0.0	0.1	0.0	0.4	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	7.2	0.5	0.9	3.8	0.1	0.2	0.0	1.1	0.2	0.0	0.4
LnGrp Delay(d),s/veh	15.4	15.8	10.6	22.2	12.9	10.3	9.1	0.0	9.5	10.0	0.0	8.8
LnGrp LOS	B	B	B	C	B	B	A		A	A		A
Approach Vol, veh/h		600			407			133			60	
Approach Delay, s/veh		15.4			14.2			9.5			9.2	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		29.0		26.1		29.0		26.1
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		24.5		56.5		24.5		56.5
Max Q Clear Time (g_c+I1), s		4.2		15.6		4.7		19.3
Green Ext Time (p_c), s		0.6		3.7		0.2		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	None	Max	None
Maximum Split (s)	29	61	29	61
Maximum Split (%)	32.2%	67.8%	32.2%	67.8%
Minimum Split (s)	22.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	29	0	29
End Time (s)	29	0	29	0
Yield/Force Off (s)	24.5	85.5	24.5	85.5
Yield/Force Off 170(s)	13.5	74.5	13.5	74.5
Local Start Time (s)	0	29	0	29
Local Yield (s)	24.5	85.5	24.5	85.5
Local Yield 170(s)	13.5	74.5	13.5	74.5

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	50

Splits and Phases: 3: Steitz Road & Home Road

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	545	312	26	7	11
Future Vol, veh/h	37	545	312	26	7	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	345	-	-	345	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	592	339	28	8	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	367	0	-	0	1011	339
Stage 1	-	-	-	-	339	-
Stage 2	-	-	-	-	672	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1192	-	-	-	265	703
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	508	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1192	-	-	-	256	703
Mov Cap-2 Maneuver	-	-	-	-	256	-
Stage 1	-	-	-	-	697	-
Stage 2	-	-	-	-	508	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	14
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1192	-	-	-	419
HCM Lane V/C Ratio	0.034	-	-	-	0.047
HCM Control Delay (s)	8.1	-	-	-	14
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	552	330	19	0	8
Future Vol, veh/h	0	552	330	19	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	600	359	21	0	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	370
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	676
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	676
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	676
HCM Lane V/C Ratio	-	-	-	0.013
HCM Control Delay (s)	-	-	-	10.4
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	14	0	38	41	3
Future Vol, veh/h	1	14	0	38	41	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	15	0	41	45	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	88	47	-	0	-	0
Stage 1	47	-	-	-	-	-
Stage 2	41	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	913	1022	0	-	-	-
Stage 1	975	-	0	-	-	-
Stage 2	981	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	913	1022	-	-	-	-
Mov Cap-2 Maneuver	913	-	-	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	981	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	1014	-	-
HCM Lane V/C Ratio	-	0.016	-	-
HCM Control Delay (s)	-	8.6	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	384	48	33	552	21	49	16	23	11	5	15
Future Volume (veh/h)	16	384	48	33	552	21	49	16	23	11	5	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	17	417	52	36	600	23	53	17	25	12	5	16
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	244	757	643	361	757	643	706	281	414	685	161	516
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	798	1863	1583	920	1863	1583	1385	682	1003	1359	391	1251
Grp Volume(v), veh/h	17	417	52	36	600	23	53	0	42	12	0	21
Grp Sat Flow(s),veh/h/ln	798	1863	1583	920	1863	1583	1385	0	1686	1359	0	1642
Q Serve(g_s), s	0.9	8.5	1.0	1.5	14.0	0.4	1.2	0.0	0.7	0.3	0.0	0.4
Cycle Q Clear(g_c), s	15.0	8.5	1.0	10.1	14.0	0.4	1.6	0.0	0.7	1.0	0.0	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.60	1.00		0.76
Lane Grp Cap(c), veh/h	244	757	643	361	757	643	706	0	695	685	0	677
V/C Ratio(X)	0.07	0.55	0.08	0.10	0.79	0.04	0.08	0.00	0.06	0.02	0.00	0.03
Avail Cap(c_a), veh/h	1373	3392	2884	1664	3392	2884	706	0	695	685	0	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.5	11.3	9.1	15.1	12.9	8.9	9.1	0.0	8.8	9.1	0.0	8.7
Incr Delay (d2), s/veh	0.1	0.6	0.1	0.1	1.9	0.0	0.2	0.0	0.2	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	4.4	0.4	0.4	7.6	0.2	0.5	0.0	0.4	0.1	0.0	0.2
LnGrp Delay(d),s/veh	19.6	11.9	9.1	15.2	14.8	8.9	9.4	0.0	9.0	9.1	0.0	8.8
LnGrp LOS	B	B	A	B	B	A	A		A	A		A
Approach Vol, veh/h		486			659			95			33	
Approach Delay, s/veh		11.9			14.7			9.2			8.9	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		25.0		24.7		25.0		24.7
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		20.5		90.5		20.5		90.5
Max Q Clear Time (g_c+I1), s		3.6		17.0		3.0		16.0
Green Ext Time (p_c), s		0.2		2.8		0.1		4.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.0
HCM 2010 LOS	B

Notes

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	None	Max	None
Maximum Split (s)	25	95	25	95
Maximum Split (%)	20.8%	79.2%	20.8%	79.2%
Minimum Split (s)	22.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	25	0	25
End Time (s)	25	0	25	0
Yield/Force Off (s)	20.5	115.5	20.5	115.5
Yield/Force Off 170(s)	9.5	104.5	9.5	104.5
Local Start Time (s)	0	25	0	25
Local Yield (s)	20.5	115.5	20.5	115.5
Local Yield 170(s)	9.5	104.5	9.5	104.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	50

Splits and Phases: 3: Steitz Road & Home Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	404	52	33	608	21	61	16	23	52	14	15
Future Volume (veh/h)	16	404	52	33	608	21	61	16	23	52	14	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	17	439	57	36	661	23	66	17	25	57	15	16
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	204	796	677	345	796	677	686	289	425	675	350	373
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	754	1863	1583	898	1863	1583	1373	682	1003	1359	826	881
Grp Volume(v), veh/h	17	439	57	36	661	23	66	0	42	57	0	31
Grp Sat Flow(s),veh/h/ln	754	1863	1583	898	1863	1583	1373	0	1686	1359	0	1707
Q Serve(g_s), s	1.2	10.6	1.3	1.9	19.0	0.5	1.8	0.0	0.9	1.6	0.0	0.6
Cycle Q Clear(g_c), s	20.2	10.6	1.3	12.5	19.0	0.5	2.4	0.0	0.9	2.4	0.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.60	1.00		0.52
Lane Grp Cap(c), veh/h	204	796	677	345	796	677	686	0	713	675	0	723
V/C Ratio(X)	0.08	0.55	0.08	0.10	0.83	0.03	0.10	0.00	0.06	0.08	0.00	0.04
Avail Cap(c_a), veh/h	952	2643	2247	1235	2643	2247	686	0	713	675	0	723
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.3	12.9	10.2	17.6	15.3	10.0	10.9	0.0	10.3	11.0	0.0	10.2
Incr Delay (d2), s/veh	0.2	0.6	0.1	0.1	2.3	0.0	0.3	0.0	0.2	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	5.5	0.6	0.5	10.1	0.2	0.7	0.0	0.4	0.6	0.0	0.3
LnGrp Delay(d),s/veh	24.5	13.5	10.3	17.7	17.6	10.0	11.2	0.0	10.4	11.2	0.0	10.3
LnGrp LOS	C	B	B	B	B	B	B		B	B		B
Approach Vol, veh/h		513			720			108			88	
Approach Delay, s/veh		13.5			17.4			10.9			10.9	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		30.0		30.3		30.0		30.3
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		25.5		85.5		25.5		85.5
Max Q Clear Time (g_c+I1), s		4.4		22.2		4.4		21.0
Green Ext Time (p_c), s		0.3		3.0		0.2		4.8

Intersection Summary	
HCM 2010 Ctrl Delay	15.1
HCM 2010 LOS	B

Notes

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	None	Max	None
Maximum Split (s)	30	90	30	90
Maximum Split (%)	25.0%	75.0%	25.0%	75.0%
Minimum Split (s)	22.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	30	0	30
End Time (s)	30	0	30	0
Yield/Force Off (s)	25.5	115.5	25.5	115.5
Yield/Force Off 170(s)	14.5	104.5	14.5	104.5
Local Start Time (s)	0	30	0	30
Local Yield (s)	25.5	115.5	25.5	115.5
Local Yield 170(s)	14.5	104.5	14.5	104.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	55

Splits and Phases: 3: Steitz Road & Home Road

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	59	448	644	39	24	36
Future Vol, veh/h	59	448	644	39	24	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	345	-	-	345	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	64	487	700	42	26	39

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	742	0	-	0	1315	700
Stage 1	-	-	-	-	700	-
Stage 2	-	-	-	-	615	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	865	-	-	-	174	439
Stage 1	-	-	-	-	493	-
Stage 2	-	-	-	-	539	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	865	-	-	-	161	439
Mov Cap-2 Maneuver	-	-	-	-	161	-
Stage 1	-	-	-	-	457	-
Stage 2	-	-	-	-	539	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	23.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	865	-	-	-	260
HCM Lane V/C Ratio	0.074	-	-	-	0.251
HCM Control Delay (s)	9.5	-	-	-	23.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	472	655	29	0	28
Future Vol, veh/h	0	472	655	29	0	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	513	712	32	0	30

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	728
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	423
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	423
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.2
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	423
HCM Lane V/C Ratio	-	-	-	0.072
HCM Control Delay (s)	-	-	-	14.2
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	50	0	42	31	4
Future Vol, veh/h	4	50	0	42	31	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	54	0	46	34	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	82	36	-	0	-	0
Stage 1	36	-	-	-	-	-
Stage 2	46	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	920	1037	0	-	-	-
Stage 1	986	-	0	-	-	-
Stage 2	976	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	920	1037	-	-	-	-
Mov Cap-2 Maneuver	920	-	-	-	-	-
Stage 1	986	-	-	-	-	-
Stage 2	976	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	1027	-	-
HCM Lane V/C Ratio	-	0.057	-	-
HCM Control Delay (s)	-	8.7	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	611	58	69	341	11	17	23	97	7	22	20
Future Volume (veh/h)	13	611	58	69	341	11	17	23	97	7	22	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	14	664	63	75	371	12	18	25	105	8	24	22
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	457	873	742	248	873	742	612	119	500	530	340	312
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	996	1863	1583	725	1863	1583	1354	314	1317	1255	896	822
Grp Volume(v), veh/h	14	664	63	75	371	12	18	0	130	8	0	46
Grp Sat Flow(s),veh/h/ln	996	1863	1583	725	1863	1583	1354	0	1630	1255	0	1718
Q Serve(g_s), s	0.6	17.4	1.3	5.7	7.8	0.2	0.5	0.0	3.2	0.3	0.0	1.0
Cycle Q Clear(g_c), s	8.4	17.4	1.3	23.1	7.8	0.2	1.5	0.0	3.2	3.4	0.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.81	1.00		0.48
Lane Grp Cap(c), veh/h	457	873	742	248	873	742	612	0	619	530	0	652
V/C Ratio(X)	0.03	0.76	0.08	0.30	0.42	0.02	0.03	0.00	0.21	0.02	0.00	0.07
Avail Cap(c_a), veh/h	973	1838	1562	623	1838	1562	612	0	619	530	0	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.2	13.0	8.7	22.5	10.4	8.4	12.2	0.0	12.4	13.6	0.0	11.7
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.7	0.3	0.0	0.1	0.0	0.8	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	9.2	0.6	1.2	4.1	0.1	0.2	0.0	1.5	0.1	0.0	0.5
LnGrp Delay(d),s/veh	13.3	14.4	8.8	23.2	10.8	8.4	12.3	0.0	13.2	13.6	0.0	11.9
LnGrp LOS	B	B	A	C	B	A	B		B	B		B
Approach Vol, veh/h		741			458			148			54	
Approach Delay, s/veh		13.9			12.8			13.1			12.2	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		27.0		32.3		27.0		32.3
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		22.5		58.5		22.5		58.5
Max Q Clear Time (g_c+I1), s		5.2		19.4		5.4		25.1
Green Ext Time (p_c), s		0.6		4.9		0.1		2.7

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Notes

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	None	Max	None
Maximum Split (s)	27	63	27	63
Maximum Split (%)	30.0%	70.0%	30.0%	70.0%
Minimum Split (s)	22.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	27	0	27
End Time (s)	27	0	27	0
Yield/Force Off (s)	22.5	85.5	22.5	85.5
Yield/Force Off 170(s)	11.5	74.5	11.5	74.5
Local Start Time (s)	0	27	0	27
Local Yield (s)	22.5	85.5	22.5	85.5
Local Yield 170(s)	11.5	74.5	11.5	74.5

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	55

Splits and Phases: 3: Steitz Road & Home Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	617	59	69	378	11	25	23	97	19	24	20
Future Volume (veh/h)	13	617	59	69	378	11	25	23	97	19	24	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	14	671	64	75	411	12	27	25	105	21	26	22
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	444	890	756	260	890	756	593	114	478	514	339	287
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	960	1863	1583	719	1863	1583	1352	314	1317	1255	933	790
Grp Volume(v), veh/h	14	671	64	75	411	12	27	0	130	21	0	48
Grp Sat Flow(s),veh/h/ln	960	1863	1583	719	1863	1583	1352	0	1630	1255	0	1723
Q Serve(g_s), s	0.6	16.6	1.2	5.4	8.4	0.2	0.8	0.0	3.1	0.7	0.0	1.0
Cycle Q Clear(g_c), s	8.9	16.6	1.2	22.0	8.4	0.2	1.8	0.0	3.1	3.8	0.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.81	1.00		0.46
Lane Grp Cap(c), veh/h	444	890	756	260	890	756	593	0	592	514	0	626
V/C Ratio(X)	0.03	0.75	0.08	0.29	0.46	0.02	0.05	0.00	0.22	0.04	0.00	0.08
Avail Cap(c_a), veh/h	1014	1995	1696	686	1995	1696	593	0	592	514	0	626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.9	12.0	8.0	21.0	9.9	7.8	12.4	0.0	12.5	13.8	0.0	11.8
Incr Delay (d2), s/veh	0.0	1.3	0.0	0.6	0.4	0.0	0.1	0.0	0.9	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	8.7	0.5	1.1	4.3	0.1	0.3	0.0	1.5	0.2	0.0	0.5
LnGrp Delay(d),s/veh	12.9	13.4	8.1	21.6	10.3	7.8	12.5	0.0	13.3	13.9	0.0	12.0
LnGrp LOS	B	B	A	C	B	A	B		B	B		B
Approach Vol, veh/h		749			498			157			69	
Approach Delay, s/veh		12.9			11.9			13.2			12.6	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		25.0		31.5		25.0		31.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		20.5		60.5		20.5		60.5
Max Q Clear Time (g_c+I1), s		5.1		18.6		5.8		24.0
Green Ext Time (p_c), s		0.6		5.0		0.2		3.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

Notes

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	None	Max	None
Maximum Split (s)	25	65	25	65
Maximum Split (%)	27.8%	72.2%	27.8%	72.2%
Minimum Split (s)	22.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	25	0	25
End Time (s)	25	0	25	0
Yield/Force Off (s)	20.5	85.5	20.5	85.5
Yield/Force Off 170(s)	9.5	74.5	9.5	74.5
Local Start Time (s)	0	25	0	25
Local Yield (s)	20.5	85.5	20.5	85.5
Local Yield 170(s)	9.5	74.5	9.5	74.5

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	55

Splits and Phases: 3: Steitz Road & Home Road

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	682	386	26	7	11
Future Vol, veh/h	37	682	386	26	7	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	345	-	-	345	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	741	420	28	8	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	448	0	-	0	1241	420
Stage 1	-	-	-	-	420	-
Stage 2	-	-	-	-	821	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1112	-	-	-	193	633
Stage 1	-	-	-	-	663	-
Stage 2	-	-	-	-	432	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1112	-	-	-	186	633
Mov Cap-2 Maneuver	-	-	-	-	186	-
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	432	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	16.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1112	-	-	-	327
HCM Lane V/C Ratio	0.036	-	-	-	0.06
HCM Control Delay (s)	8.4	-	-	-	16.7
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↱		↱
Traffic Vol, veh/h	0	689	404	19	0	8
Future Vol, veh/h	0	689	404	19	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	345	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	749	439	21	0	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	439
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	618
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	618
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	618
HCM Lane V/C Ratio	-	-	-	0.014
HCM Control Delay (s)	-	-	-	10.9
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	14	0	17	49	3
Future Vol, veh/h	1	14	0	17	49	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	15	0	18	53	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	73	55	-	0	-	0
Stage 1	55	-	-	-	-	-
Stage 2	18	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	931	1012	0	-	-	-
Stage 1	968	-	0	-	-	-
Stage 2	1005	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	931	1012	-	-	-	-
Mov Cap-2 Maneuver	931	-	-	-	-	-
Stage 1	968	-	-	-	-	-
Stage 2	1005	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	1006	-	-
HCM Lane V/C Ratio	-	0.016	-	-
HCM Control Delay (s)	-	8.6	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	480	60	41	690	26	59	19	28	13	6	18
Future Volume (veh/h)	20	480	60	41	690	26	59	19	28	13	6	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	22	522	65	45	750	28	64	21	30	14	7	20
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	203	891	757	343	891	757	621	262	374	598	161	460
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	691	1863	1583	825	1863	1583	1378	695	993	1348	427	1220
Grp Volume(v), veh/h	22	522	65	45	750	28	64	0	51	14	0	27
Grp Sat Flow(s),veh/h/ln	691	1863	1583	825	1863	1583	1378	0	1688	1348	0	1647
Q Serve(g_s), s	1.8	12.7	1.4	2.6	21.9	0.6	1.9	0.0	1.2	0.4	0.0	0.6
Cycle Q Clear(g_c), s	23.7	12.7	1.4	15.3	21.9	0.6	2.6	0.0	1.2	1.6	0.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.59	1.00		0.74
Lane Grp Cap(c), veh/h	203	891	757	343	891	757	621	0	636	598	0	621
V/C Ratio(X)	0.11	0.59	0.09	0.13	0.84	0.04	0.10	0.00	0.08	0.02	0.00	0.04
Avail Cap(c_a), veh/h	843	2616	2223	1107	2616	2223	621	0	636	598	0	621
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.5	11.8	8.8	17.3	14.2	8.6	13.1	0.0	12.5	13.0	0.0	12.3
Incr Delay (d2), s/veh	0.2	0.6	0.0	0.2	2.2	0.0	0.3	0.0	0.2	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	6.5	0.6	0.6	11.6	0.3	0.8	0.0	0.6	0.2	0.0	0.3
LnGrp Delay(d),s/veh	24.8	12.4	8.9	17.5	16.4	8.6	13.4	0.0	12.7	13.1	0.0	12.4
LnGrp LOS	C	B	A	B	B	A	B		B	B		B
Approach Vol, veh/h		609			823			115			41	
Approach Delay, s/veh		12.5			16.2			13.1			12.6	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		28.0		34.3		28.0		34.3
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		23.5		87.5		23.5		87.5
Max Q Clear Time (g_c+I1), s		4.6		25.7		3.6		23.9
Green Ext Time (p_c), s		0.3		3.8		0.1		5.9

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B

Notes

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	None	Max	None
Maximum Split (s)	28	92	28	92
Maximum Split (%)	23.3%	76.7%	23.3%	76.7%
Minimum Split (s)	22.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	28	0	28
End Time (s)	28	0	28	0
Yield/Force Off (s)	23.5	115.5	23.5	115.5
Yield/Force Off 170(s)	12.5	104.5	12.5	104.5
Local Start Time (s)	0	28	0	28
Local Yield (s)	23.5	115.5	23.5	115.5
Local Yield 170(s)	12.5	104.5	12.5	104.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	60

Splits and Phases: 3: Steitz Road & Home Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	500	64	41	746	26	71	19	28	54	15	18
Future Volume (veh/h)	20	500	64	41	746	26	71	19	28	54	15	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	22	543	70	45	811	28	77	21	30	59	16	20
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	194	949	807	357	949	807	574	246	352	560	267	334
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	653	1863	1583	806	1863	1583	1367	695	993	1348	754	942
Grp Volume(v), veh/h	22	543	70	45	811	28	77	0	51	59	0	36
Grp Sat Flow(s),veh/h/ln	653	1863	1583	806	1863	1583	1367	0	1688	1348	0	1696
Q Serve(g_s), s	2.0	13.4	1.5	2.7	25.1	0.6	2.6	0.0	1.3	2.0	0.0	0.9
Cycle Q Clear(g_c), s	27.1	13.4	1.5	16.1	25.1	0.6	3.5	0.0	1.3	3.4	0.0	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.59	1.00		0.56
Lane Grp Cap(c), veh/h	194	949	807	357	949	807	574	0	599	560	0	602
V/C Ratio(X)	0.11	0.57	0.09	0.13	0.85	0.03	0.13	0.00	0.09	0.11	0.00	0.06
Avail Cap(c_a), veh/h	724	2460	2091	1010	2460	2091	574	0	599	560	0	602
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.9	11.2	8.3	16.8	14.1	8.1	15.3	0.0	14.2	15.3	0.0	14.1
Incr Delay (d2), s/veh	0.3	0.5	0.0	0.2	2.3	0.0	0.5	0.0	0.3	0.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	6.9	0.7	0.6	13.2	0.3	1.1	0.0	0.7	0.8	0.0	0.5
LnGrp Delay(d),s/veh	26.1	11.8	8.4	17.0	16.4	8.1	15.7	0.0	14.5	15.7	0.0	14.3
LnGrp LOS	C	B	A	B	B	A	B		B	B		B
Approach Vol, veh/h		635			884			128			95	
Approach Delay, s/veh		11.9			16.2			15.3			15.2	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		28.0		38.3		28.0		38.3
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		23.5		87.5		23.5		87.5
Max Q Clear Time (g_c+I1), s		5.5		29.1		5.4		27.1
Green Ext Time (p_c), s		0.4		4.0		0.3		6.7

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B

Notes

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	None	Max	None
Maximum Split (s)	28	92	28	92
Maximum Split (%)	23.3%	76.7%	23.3%	76.7%
Minimum Split (s)	22.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	28	0	28
End Time (s)	28	0	28	0
Yield/Force Off (s)	23.5	115.5	23.5	115.5
Yield/Force Off 170(s)	12.5	104.5	12.5	104.5
Local Start Time (s)	0	28	0	28
Local Yield (s)	23.5	115.5	23.5	115.5
Local Yield 170(s)	12.5	104.5	12.5	104.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	60

Splits and Phases: 3: Steitz Road & Home Road

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	59	560	795	39	24	36
Future Vol, veh/h	59	560	795	39	24	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	345	-	-	345	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	64	609	864	42	26	39

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	906	0	-	0	1601	864
Stage 1	-	-	-	-	864	-
Stage 2	-	-	-	-	737	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	751	-	-	-	117	354
Stage 1	-	-	-	-	413	-
Stage 2	-	-	-	-	473	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	751	-	-	-	107	354
Mov Cap-2 Maneuver	-	-	-	-	107	-
Stage 1	-	-	-	-	378	-
Stage 2	-	-	-	-	473	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	34.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	751	-	-	-	184
HCM Lane V/C Ratio	0.085	-	-	-	0.354
HCM Control Delay (s)	10.2	-	-	-	34.9
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.3	-	-	-	1.5

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↱		↱
Traffic Vol, veh/h	0	584	806	29	0	28
Future Vol, veh/h	0	584	806	29	0	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	345	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	635	876	32	0	30

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	876
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	348
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	348
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	16.3
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	348
HCM Lane V/C Ratio	-	-	-	0.087
HCM Control Delay (s)	-	-	-	16.3
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	50	0	65	37	4
Future Vol, veh/h	4	50	0	65	37	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	54	0	71	40	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	113	42	-	0	-	0
Stage 1	42	-	-	-	-	-
Stage 2	71	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	884	1029	0	-	-	-
Stage 1	980	-	0	-	-	-
Stage 2	952	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	884	1029	-	-	-	-
Mov Cap-2 Maneuver	884	-	-	-	-	-
Stage 1	980	-	-	-	-	-
Stage 2	952	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	1017	-	-
HCM Lane V/C Ratio	-	0.058	-	-
HCM Control Delay (s)	-	8.8	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	734	69	83	410	14	20	27	113	8	25	24
Future Volume (veh/h)	15	734	69	83	410	14	20	27	113	8	25	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	16	798	75	90	446	15	22	29	123	9	27	26
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	489	1025	871	245	1025	871	501	97	412	407	273	263
Arrive On Green	0.55	0.55	0.55	0.55	0.55	0.55	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	927	1863	1583	632	1863	1583	1346	311	1319	1230	873	841
Grp Volume(v), veh/h	16	798	75	90	446	15	22	0	152	9	0	53
Grp Sat Flow(s),veh/h/ln	927	1863	1583	632	1863	1583	1346	0	1630	1230	0	1714
Q Serve(g_s), s	0.7	22.1	1.5	8.6	9.3	0.3	0.8	0.0	4.6	0.4	0.0	1.4
Cycle Q Clear(g_c), s	10.0	22.1	1.5	30.7	9.3	0.3	2.2	0.0	4.6	5.0	0.0	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.81	1.00		0.49
Lane Grp Cap(c), veh/h	489	1025	871	245	1025	871	501	0	509	407	0	536
V/C Ratio(X)	0.03	0.78	0.09	0.37	0.44	0.02	0.04	0.00	0.30	0.02	0.00	0.10
Avail Cap(c_a), veh/h	833	1718	1460	480	1718	1460	501	0	509	407	0	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.7	11.6	7.0	23.7	8.7	6.7	16.8	0.0	17.1	19.0	0.0	16.0
Incr Delay (d2), s/veh	0.0	1.3	0.0	0.9	0.3	0.0	0.2	0.0	1.5	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	11.5	0.6	1.6	4.8	0.1	0.3	0.0	2.3	0.1	0.0	0.7
LnGrp Delay(d),s/veh	11.7	12.9	7.0	24.6	9.0	6.7	17.0	0.0	18.6	19.1	0.0	16.4
LnGrp LOS	B	B	A	C	A	A	B		B	B		B
Approach Vol, veh/h		889			551			174			62	
Approach Delay, s/veh		12.4			11.5			18.4			16.8	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		25.0		40.6		25.0		40.6
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		20.5		60.5		20.5		60.5
Max Q Clear Time (g_c+I1), s		6.6		24.1		7.0		32.7
Green Ext Time (p_c), s		0.7		6.5		0.2		3.4

Intersection Summary	
HCM 2010 Ctrl Delay	12.9
HCM 2010 LOS	B

Notes

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	None	Max	None
Maximum Split (s)	25	65	25	65
Maximum Split (%)	27.8%	72.2%	27.8%	72.2%
Minimum Split (s)	22.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	25	0	25
End Time (s)	25	0	25	0
Yield/Force Off (s)	20.5	85.5	20.5	85.5
Yield/Force Off 170(s)	9.5	74.5	9.5	74.5
Local Start Time (s)	0	25	0	25
Local Yield (s)	20.5	85.5	20.5	85.5
Local Yield 170(s)	9.5	74.5	9.5	74.5

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	60

Splits and Phases: 3: Steitz Road & Home Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	740	70	83	447	14	28	27	113	20	27	24
Future Volume (veh/h)	15	740	70	83	447	14	28	27	113	20	27	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	16	804	76	90	486	15	30	29	123	22	29	26
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	464	1034	879	245	1034	879	493	96	408	401	280	251
Arrive On Green	0.56	0.56	0.56	0.56	0.56	0.56	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	894	1863	1583	628	1863	1583	1343	311	1319	1230	907	813
Grp Volume(v), veh/h	16	804	76	90	486	15	30	0	152	22	0	55
Grp Sat Flow(s),veh/h/ln	894	1863	1583	628	1863	1583	1343	0	1630	1230	0	1719
Q Serve(g_s), s	0.7	22.4	1.5	8.7	10.4	0.3	1.1	0.0	4.7	0.9	0.0	1.5
Cycle Q Clear(g_c), s	11.1	22.4	1.5	31.1	10.4	0.3	2.6	0.0	4.7	5.6	0.0	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.81	1.00		0.47
Lane Grp Cap(c), veh/h	464	1034	879	245	1034	879	493	0	504	401	0	531
V/C Ratio(X)	0.03	0.78	0.09	0.37	0.47	0.02	0.06	0.00	0.30	0.05	0.00	0.10
Avail Cap(c_a), veh/h	783	1699	1444	469	1699	1444	493	0	504	401	0	531
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.2	11.5	6.9	23.7	8.9	6.6	17.3	0.0	17.5	19.6	0.0	16.3
Incr Delay (d2), s/veh	0.0	1.3	0.0	0.9	0.3	0.0	0.2	0.0	1.5	0.3	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	11.8	0.6	1.6	5.4	0.1	0.4	0.0	2.3	0.3	0.0	0.8
LnGrp Delay(d),s/veh	12.3	12.8	6.9	24.6	9.2	6.6	17.5	0.0	19.0	19.9	0.0	16.7
LnGrp LOS	B	B	A	C	A	A	B		B	B		B
Approach Vol, veh/h		896			591			182			77	
Approach Delay, s/veh		12.3			11.5			18.7			17.6	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		25.0		41.3		25.0		41.3
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		20.5		60.5		20.5		60.5
Max Q Clear Time (g_c+I1), s		6.7		24.4		7.6		33.1
Green Ext Time (p_c), s		0.7		6.5		0.2		3.7

Intersection Summary	
HCM 2010 Ctrl Delay	12.9
HCM 2010 LOS	B

Notes

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	None	Max	None
Maximum Split (s)	25	65	25	65
Maximum Split (%)	27.8%	72.2%	27.8%	72.2%
Minimum Split (s)	22.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	25	0	25
End Time (s)	25	0	25	0
Yield/Force Off (s)	20.5	85.5	20.5	85.5
Yield/Force Off 170(s)	9.5	74.5	9.5	74.5
Local Start Time (s)	0	25	0	25
Local Yield (s)	20.5	85.5	20.5	85.5
Local Yield 170(s)	9.5	74.5	9.5	74.5

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	60

Splits and Phases: 3: Steitz Road & Home Road

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	818	462	26	7	11
Future Vol, veh/h	37	818	462	26	7	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	345	-	-	345	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	889	502	28	8	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	530	0	-	0	1471	502
Stage 1	-	-	-	-	502	-
Stage 2	-	-	-	-	969	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1037	-	-	-	140	569
Stage 1	-	-	-	-	608	-
Stage 2	-	-	-	-	368	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1037	-	-	-	135	569
Mov Cap-2 Maneuver	-	-	-	-	135	-
Stage 1	-	-	-	-	584	-
Stage 2	-	-	-	-	368	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	20.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1037	-	-	-	253
HCM Lane V/C Ratio	0.039	-	-	-	0.077
HCM Control Delay (s)	8.6	-	-	-	20.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↱		↱
Traffic Vol, veh/h	0	825	480	19	0	8
Future Vol, veh/h	0	825	480	19	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	345	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	897	522	21	0	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	522
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	555
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	555
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.6
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	555
HCM Lane V/C Ratio	-	-	-	0.016
HCM Control Delay (s)	-	-	-	11.6
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	14	0	56	57	3
Future Vol, veh/h	1	14	0	56	57	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	15	0	61	62	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	125	64	-	0	-	0
Stage 1	64	-	-	-	-	-
Stage 2	61	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	870	1000	0	-	-	-
Stage 1	959	-	0	-	-	-
Stage 2	962	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	870	1000	-	-	-	-
Mov Cap-2 Maneuver	870	-	-	-	-	-
Stage 1	959	-	-	-	-	-
Stage 2	962	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	990	-	-
HCM Lane V/C Ratio	-	0.016	-	-
HCM Control Delay (s)	-	8.7	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	576	72	50	828	32	69	22	32	15	7	21
Future Volume (veh/h)	24	576	72	50	828	32	69	22	32	15	7	21
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	26	626	78	54	900	35	75	24	35	16	8	23
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	1047	890	359	1047	890	507	209	305	481	129	372
Arrive On Green	0.56	0.56	0.56	0.56	0.56	0.56	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	596	1863	1583	740	1863	1583	1373	686	1000	1338	425	1222
Grp Volume(v), veh/h	26	626	78	54	900	35	75	0	59	16	0	31
Grp Sat Flow(s),veh/h/ln	596	1863	1583	740	1863	1583	1373	0	1686	1338	0	1647
Q Serve(g_s), s	2.6	14.9	1.5	3.5	27.6	0.7	2.8	0.0	1.7	0.6	0.0	0.9
Cycle Q Clear(g_c), s	30.2	14.9	1.5	18.4	27.6	0.7	3.7	0.0	1.7	2.3	0.0	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.59	1.00		0.74
Lane Grp Cap(c), veh/h	198	1047	890	359	1047	890	507	0	513	481	0	502
V/C Ratio(X)	0.13	0.60	0.09	0.15	0.86	0.04	0.15	0.00	0.11	0.03	0.00	0.06
Avail Cap(c_a), veh/h	664	2504	2128	938	2504	2128	507	0	513	481	0	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.3	9.7	6.8	15.8	12.5	6.6	17.9	0.0	16.9	17.7	0.0	16.6
Incr Delay (d2), s/veh	0.3	0.6	0.0	0.2	2.2	0.0	0.6	0.0	0.5	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	7.6	0.7	0.7	14.6	0.3	1.1	0.0	0.9	0.2	0.0	0.4
LnGrp Delay(d),s/veh	25.6	10.3	6.8	16.0	14.7	6.6	18.5	0.0	17.3	17.8	0.0	16.8
LnGrp LOS	C	B	A	B	B	A	B		B	B		B
Approach Vol, veh/h		730			989			134			47	
Approach Delay, s/veh		10.5			14.5			18.0			17.2	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		25.0		42.3		25.0		42.3
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		20.5		90.5		20.5		90.5
Max Q Clear Time (g_c+I1), s		5.7		32.2		4.3		29.6
Green Ext Time (p_c), s		0.4		4.9		0.1		8.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Notes

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	None	Max	None
Maximum Split (s)	25	95	25	95
Maximum Split (%)	20.8%	79.2%	20.8%	79.2%
Minimum Split (s)	22.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	25	0	25
End Time (s)	25	0	25	0
Yield/Force Off (s)	20.5	115.5	20.5	115.5
Yield/Force Off 170(s)	9.5	104.5	9.5	104.5
Local Start Time (s)	0	25	0	25
Local Yield (s)	20.5	115.5	20.5	115.5
Local Yield 170(s)	9.5	104.5	9.5	104.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	60

Splits and Phases: 3: Steitz Road & Home Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	596	76	50	884	32	81	22	32	56	16	21
Future Volume (veh/h)	24	596	76	50	884	32	81	22	32	56	16	21
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	26	648	83	54	961	35	88	24	35	61	17	23
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	188	1102	937	370	1102	937	462	195	284	444	204	276
Arrive On Green	0.59	0.59	0.59	0.59	0.59	0.59	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	563	1863	1583	722	1863	1583	1362	686	1000	1338	719	972
Grp Volume(v), veh/h	26	648	83	54	961	35	88	0	59	61	0	40
Grp Sat Flow(s),veh/h/ln	563	1863	1583	722	1863	1583	1362	0	1686	1338	0	1691
Q Serve(g_s), s	2.9	15.7	1.6	3.7	31.4	0.7	3.7	0.0	1.9	2.6	0.0	1.3
Cycle Q Clear(g_c), s	34.4	15.7	1.6	19.4	31.4	0.7	4.9	0.0	1.9	4.4	0.0	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.59	1.00		0.57
Lane Grp Cap(c), veh/h	188	1102	937	370	1102	937	462	0	478	444	0	480
V/C Ratio(X)	0.14	0.59	0.09	0.15	0.87	0.04	0.19	0.00	0.12	0.14	0.00	0.08
Avail Cap(c_a), veh/h	560	2332	1983	846	2332	1983	462	0	478	444	0	480
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.9	9.2	6.4	15.3	12.4	6.2	20.8	0.0	19.2	20.9	0.0	19.0
Incr Delay (d2), s/veh	0.3	0.5	0.0	0.2	2.3	0.0	0.9	0.0	0.5	0.6	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	8.1	0.7	0.7	16.5	0.3	1.5	0.0	0.9	1.0	0.0	0.6
LnGrp Delay(d),s/veh	27.3	9.7	6.4	15.5	14.7	6.2	21.7	0.0	19.7	21.5	0.0	19.3
LnGrp LOS	C	A	A	B	B	A	C		B	C		B
Approach Vol, veh/h		757			1050			147			101	
Approach Delay, s/veh		10.0			14.5			20.9			20.6	
Approach LOS		A			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		25.0		47.3		25.0		47.3
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		20.5		90.5		20.5		90.5
Max Q Clear Time (g_c+I1), s		6.9		36.4		6.4		33.4
Green Ext Time (p_c), s		0.4		5.2		0.2		9.3

Intersection Summary	
HCM 2010 Ctrl Delay	13.6
HCM 2010 LOS	B

Notes

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	None	Max	None
Maximum Split (s)	25	95	25	95
Maximum Split (%)	20.8%	79.2%	20.8%	79.2%
Minimum Split (s)	22.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	25	0	25
End Time (s)	25	0	25	0
Yield/Force Off (s)	20.5	115.5	20.5	115.5
Yield/Force Off 170(s)	9.5	104.5	9.5	104.5
Local Start Time (s)	0	25	0	25
Local Yield (s)	20.5	115.5	20.5	115.5
Local Yield 170(s)	9.5	104.5	9.5	104.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	65

Splits and Phases: 3: Steitz Road & Home Road

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	59	672	946	39	24	36
Future Vol, veh/h	59	672	946	39	24	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	345	-	-	345	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	64	730	1028	42	26	39

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1070	0	-	0	1886	1028
Stage 1	-	-	-	-	1028	-
Stage 2	-	-	-	-	858	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	651	-	-	-	78	284
Stage 1	-	-	-	-	345	-
Stage 2	-	-	-	-	415	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	651	-	-	-	70	284
Mov Cap-2 Maneuver	-	-	-	-	70	-
Stage 1	-	-	-	-	311	-
Stage 2	-	-	-	-	415	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	59.2
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	651	-	-	-	128
HCM Lane V/C Ratio	0.099	-	-	-	0.51
HCM Control Delay (s)	11.1	-	-	-	59.2
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.3	-	-	-	2.4

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↱		↱
Traffic Vol, veh/h	0	696	957	29	0	28
Future Vol, veh/h	0	696	957	29	0	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	345	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	757	1040	32	0	30

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1040
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	280
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	280
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	280
HCM Lane V/C Ratio	-	-	-	0.109
HCM Control Delay (s)	-	-	-	19.4
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.4

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	50	0	78	43	4
Future Vol, veh/h	4	50	0	78	43	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	54	0	85	47	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	134	49	-	0	-	0
Stage 1	49	-	-	-	-	-
Stage 2	85	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	860	1020	0	-	-	-
Stage 1	973	-	0	-	-	-
Stage 2	938	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	860	1020	-	-	-	-
Mov Cap-2 Maneuver	860	-	-	-	-	-
Stage 1	973	-	-	-	-	-
Stage 2	938	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	1006	-	-
HCM Lane V/C Ratio	-	0.058	-	-
HCM Control Delay (s)	-	8.8	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

December 1, 2018

City of Powell
47 Hall Street
Powell, OH 43065
Attention: Steve Lutz

Dear Mr. Lutz:

Please accept this letter as confirmation of our appointment of John C. Wicks, member of Home Steitz LLC, as our Agent relating to all matters concerning the current and Annexation, Zoning, and Development Plan applications of our property known as Parcel Number 319-230-01-003-000. I hereby give Mr. Wicks the authority to sign relevant zoning applications, annexation applications, forms and other documents on our behalf, as required by the City of Powell or Delaware County, for the current annexation and zoning applications.

Sincerely,

Kim E. Kelsik
Authorized Member
TLK Development LLC

State of AZ County of PIMA

Subscribed and sworn to (or affirmed) before me

this 17th day of DECEMBER, 2018

By JANNA SHEPHERD

Personally known _____ OR produced identification X

Type of identification produced AZ DL

J A Shepherd

Notary Name Here, Notary Public

My Commission Expires APRIL 29, 2022

NOTARY PUBLIC
STATE OF ARIZONA
Pima County
JANNA SHEPHERD
My Commission Expires April 29, 2022