Canal Winchester

Town Hall
10 North High Street
Canal Winchester, OH 43110

Meeting Agenda

August 6, 2018

6:15 p.m.

PUBLIC HEARING

City Council

Bruce Jarvis - President
Mike Walker – Vice-President
Jill Amos
Will Bennett
Bob Clark
Mike Coolman
Patrick Lynch

A. Call To Order

B. Roll Call

C. Purpose of Public Hearing

ORD-18-029
Development

An Ordinance To Amend Part 11 Of The Codified Ordinances And The Zoning Map Of The City Of Canal Winchester, Rezoning An Approximately 11.954 Acre Tract Of Land From Exceptional Use (EU) To Planned Residential District (PRD), Owned By The Dwight A. Imler Revocable Living Trust, Located On The Southeast Corner Of The Intersection Of Hayes Road And Lithopolis Road And Consisting Of Parcel Number PID 184-002994, And To Adopt A Preliminary Development Plan And Development Text For A Proposed 79.5 Acre Planned Residential Development (Middletown Farms) (Ex. A, Ex. B)

Ordinance Attachments: Planning and Zoning Recommendation

D. Staff Report

18-085 Middletown Farms Staff Report

E. Public Comments – Five Minute Limit Per Person

F. Council Discussion and Recommendation

G. Adjournment

ORDINANCE NO. 18-029

AN ORDINANCE TO AMEND PART 11 OF THE CODIFIED ORDINANCES AND THE ZONING MAP OF THE CITY OF CANAL WINCHESTER, REZONING AN APPROXIMATELY 11.954 ACRE TRACT OF LAND FROM EXCEPTIONAL USE (EU) TO PLANNED RESIDENTIAL DISTRICT (PRD), OWNED BY THE DWIGHT A. IMLER REVOCABLE LIVING TRUST, LOCATED ON THE SOUTHEAST CORNER OF THE INTERSECTION OF HAYES ROAD AND LITHOPOLIS ROAD AND CONSISTING OF PARCEL NUMBER PID 184-002994, AND TO ADOPT A PRELIMINARY DEVELOPMENT PLAN AND DEVELOPMENT TEXT FOR A PROPOSED 79.5 ACRE PLANNED RESIDENTIAL DEVELOPMENT (MIDDLETOWN FARMS)

WHEREAS, the rezoning of a 11.954 acre tract of land hereinafter described from Exceptional Use (EU) to Planned Residential District (PRD) has been proposed to the Council of the City of Canal Winchester by the owner, the Dwight A. Imler Revocable Living Trust ("Imler Trust"); and

WHEREAS, such 11.954 acre tract is contiguous to an approximately 67.55 acre tract of land also owned by the Imler Trust and currently zoned Planned Residential District ("PRD"); and

WHEREAS, an accompanying Planned Residential District preliminary development plan and development text has been submitted for the combined 79.5 acre tract for approval; and

WHEREAS, a public hearing has been held by the Planning and Zoning Commission of the City of Canal Winchester, and the Planning and Zoning Commission has recommended that the rezoning, the preliminary plan, and the development text not be approved by City Council; and

WHEREAS, notice of a public hearing has been duly advertised and the public hearing has been held before the Council of the City of Canal Winchester;

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF CANAL WINCHESTER, OHIO:

Section 1. That Part 11 of the Codified Ordinances and the Zoning Map of the City of Canal Winchester, Ohio, which is a part thereof, be and hereby is amended as follows:

That approximately 11.954 acres, located at the southeast corner of the intersection of Hayes Road and Lithopolis Road and being a part of PID 184-002994, owned by The Dwight A. Imler Revocable Living Trust, as fully set forth in the description attached hereto as Exhibit A and incorporated herein by reference, is rezoned from Exceptional Use (EU) to Planned Residential District (PRD).

Section 2. That the preliminary development plan and development text of the proposed Middletown Farms as depicted in Exhibit B, attached hereto and made a part of hereof, be and hereby is accepted and approved.

Section 3. That all other provisions of Part 11 of the Codified Ordinances and accompanying zoning map shall remain in full force and effect.

Section 4. That this ordinance shall take effect and be in force from and after the earliest period allowed by law.

DATE PASSED:_____ _____
PRESIDENT OF COUNCIL

ATTEST: _____ _____
CLERK OF COUNCIL MAYOR

DATE APPROVED:_____

APPROVED AS TO FORM:

_____
LEGAL COUNCIL

I hereby certify that the ordinance as set forth above was published for a period of not less than fifteen days after passage by the Council, by posting a copy thereof in not less than three (3) public places in the municipal corporation, as determined by Council and as set forth in the Canal Winchester Charter.

_____
Finance Director/Clerk of Council

ORD-18-029
Exhibit A

11.954 ACRES

Situated in the State of Ohio, County of Franklin, City of Canal Winchester, in Section 1, Township 10, Range 21, Congress Lands, being part of that 70.797 acre tract of land conveyed to The Dwight A. Imler Revocable Living Trust by deed of record in Instrument Number 201607050085266, (all references are to the records of the Recorder's Office, Franklin County, Ohio) and more particularly bounded and described as follows:

BEGINNING at the centerline intersection of Hayes Road and Lithopolis Road;

Thence South 53° 02' 57" East, with the centerline of said Lithopolis Road, a distance of 406.78 feet to the northwesterly corner of that 8.000 acre tract conveyed to Roger E. Sisler II by deed of record in Instrument Number 201604150045988;

Thence South 36° 43' 38" West, with the westerly line of said 8.000 acre tract, a distance of 721.31 feet to a point;

Thence North 53° 02' 48" West, crossing said 70.797 acre tract, a distance of 666.89 feet to a point in the easterly line of that 5.001 acre tract conveyed as Parcel III to The Dwight A. Imler Revocable Living Trust by deed of record in Instrument Number 201607050085266;

Thence North 00° 27' 50" East, with said easterly line, a distance of 419.95 feet to a point in the centerline of said Hayes Road;

Thence North 89° 50' 16" East, with said centerline, a distance of 635.80 feet to the POINT OF BEGINNING, containing 11.954 acres of land, more or less;

This description is to be used for zoning purposes only, not for transfer.

EVANS, MECHWART, HAMBLETON & TILTON, INC.

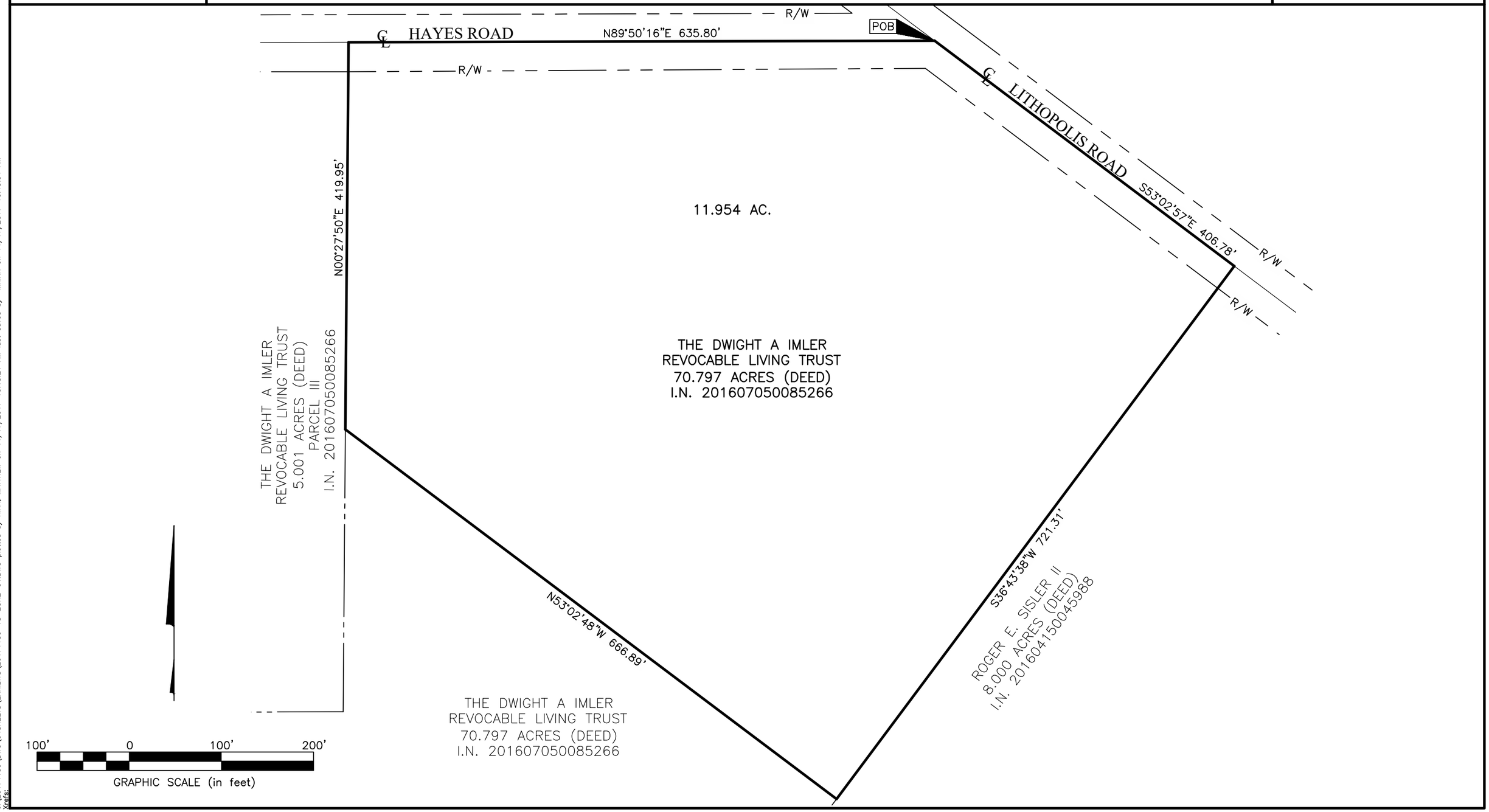
MAK:iep
11.954 ac 20171159-VS-ZONE-01.doc

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

ZONING EXHIBIT

SECTION 1, TOWNSHIP 10, RANGE 21
CONGRESS LANDS
CITY OF CANAL WINCHESTER, COUNTY OF FRANKLIN, STATE OF OHIO

Date:	November 16, 2017
Scale:	1" = 100'
Job No:	2017-1159



J:\20171159\DWG\04SHEETS\EXHIBITS\20171159-VS-ZONE-01.DWG plotted by KIRK, MATTHEW on 11/17/2017 10:13:21 AM last saved by MKIRK on 11/17/2017 10:13:04 AM
Xrefs:

ORD-18-029
Exhibit B

Middletown Farms

Preliminary Development Plan

Hayes and Oregon Roads

Canal Winchester, Ohio

January 22, 2018
Revised: April 23, 2018

WESTPORT HOMES

TABLE OF CONTENTS

Development Plan: Planned Residential District (PRD)

- Application
- Development Plan Text
- Exhibits
  - Exhibit “A-1” Adjacent Owners and Addresses
  - Exhibit “B-1” Zoning Descriptions and Plat
  - Exhibit “B-2” Preliminary Development Plan Description and Plat
  - Exhibit “C-1” Existing Conditions Plan
  - Exhibit “D-1” Site Plan and Location Map
  - Illustrative Development Plan
  - Exhibit “D-2” Sub-Area Plan
  - Exhibit “D-3” Phasing Plan
  - Exhibit “D-4” Open Space and Pedestrian Connectivity Plan
  - Exhibit “E-1” Overall Landscape Plan
  - Exhibit “E-2” Open Space Landscape Enlargement Plans
  - Exhibit “E-3” Buffer Landscape Enlargement Plans
  - Exhibit “E-4” Entry Landscape Enlargement Plans
  - Exhibit “E-5” Landscape Details
  - Exhibit “F-1” Utility Plan
  - Exhibit “G-1” Architectural Elevations
  - Exhibit “H-1” Sample Declaration of Covenant / Deed Restrictions
  - Exhibit “I-1” Wetland Report
  - Exhibit “J-1” Traffic Impact Study

Developer / Builder:

Westport Homes
507 Executive Campus Drive, Suite 100
Westerville, Ohio 43081
Phone: (614) 365-0066

Attorney:

Tom Hart, Attorney
isaac wiles
Two Miranova Place, Suite 700
Columbus, Ohio 43215
Phone: (614) 340-7415

Engineer, Planner & Landscape Architect:

EMH&T
5500 New Albany Road
Columbus, Ohio43054
Phone: (614) 775-4500

CANAL WINCHESTER
Established 1828

City of Canal Winchester

36 South High Street
Canal Winchester, Ohio 43110
Development Department
Phone (614) 837-7501 Fax (614) 837-0145

ZONING CODE AND MAP AMENDMENT APPLICATION

rev. 9/24/2013

PROPERTY OWNER

Name Dwight A Imler Revocable Living Trust

Address 20526 River Road, Circleville OH 43113

Daytime Phone _____ Email _____

APPLICANT

Name Westport Homes

Address 507 Executive Campus Dr, Ste. 100, Westerville OH 43081

Daytime Phone (614) 365-0066 Email TerryA@westport-home.com

Address or Location of Subject Property 7847 Lithopolis Rd, Canal Winchester
Parcel No. 184-002998-00; 184-003001-00; 184-002994-00

Requested Rezone 11.954 Acres from EU to PRD

Attach a current survey (within 2 years) and legal description along with supporting materials required per Section 1143.02 (c) (see attachment). Additional information may be required by the Planning & Zoning Administrator, the Planning & Zoning Commission or Village Council.

I certify that the information provided with this application is correct and accurate to the best of my ability.

X [signature] 12/18/17

Property Owner's or Authorize Agent's Signature — Date

Dwight A Imler

DO NOT WRITE BELOW THIS LINE

Date Received: 12/18/17 Fee: $ 423.85 Paid ☐ Tracking Number: ZA - 17-007

P&Z Public Hearing: 1/8/17
Recommendation ____ Approval ____ Denial

Council Public Hearing: ___/___/____
Action ____ Approval ____ Denial

Expiration Date: ___/___/____

Council Ordinance No.: _____

CANAL WINCHESTER
Established 1828

City of Canal Winchester

36 South High Street
Canal Winchester, Ohio 43110
Development Department
Phone (614) 837-7501 Fax (614) 837-0145

DEVELOPMENT PLAN APPLICATION

✓ Preliminary _____ Final

rev. 09/24/2013

PROPERTY OWNER

Name Dwight A. Imler Revocable Living Trust
Dwight

Address 20526 River Rd., Circleville, OH 43113

Daytime Phone _____ Email _____

APPLICANT

Name Westport Homes

Address 507 Executive Campus Drive, Ste. 100, Westerville, OH 43081

Daytime Phone 614 365 0066 Email TerryA@westport-home.com

Address/Location of Subject Property 7847 Lithopolis Rd, Canal Winchester

Tax Parcel ID 184-002998-00; 184-003001-00; 184-002994-00 Current Zoning EU & PRD Acreage 79.5+/- ac

Attach a current survey (within 2 years) of the subject property and all supporting materials as required by Chapter 1141 and Chapter 1173 as applicable (see attachment). Additional information may be required by the Planning and Zoning Administrator or the Planning and Zoning Commission.

I certify that the information provided with this application is correct and accurate to the best of my ability.

X Dwight A Imler Trustee 12/18/17

Property Owner's or Authorize Agent's Signature **Date**

Dwight A Imler

DO NOT WRITE BELOW THIS LINE

Date Received: 12/18/17 Fee: $1570.00 Paid ☐ Historic District: ___ Yes ✓ No
Preservation District: ___ Yes ✓ No

Date of Action: ___/___/_____

Application ___ No
Approved: ___ Yes
___ Yes, with conditions

Expiration Date: ___/___/_____

Tracking Number: PDP - 17-003

Zoning Code and Map Amendment Application Attachment

Section 1143.02(c)
January 22, 2018 re-submittal update

6. A statement of the relationship of the proposed change or amendment to the general welfare of the community, to appropriate plans for the area and to the changed or changing conditions behind the request to rezone.

Westport's proposed development plan and partial rezoning of the subject property includes several community and area benefits as follows:

Value, Architectural Commitments and Updated Designs: According to the Multiple Listing Service,(MLS) published by the Columbus Board of Realtors, all homes sold in 2016 (new and existing) in the Canal Winchester City School District brought an average sales price of $191,173. Updated for the partial 2017 selling year, through October the average sales price was $208,004. In depth analysis of the home transactions over the previous 12 months in the City of Canal Winchester only (that is – not including other areas within the Canal Winchester School District), documented 145 closings of homes with at least four bedrooms. The average closing price of these 145, four bedroom homes in the City was $233,000. At the Middletown Farms community, Westport expects to sell its traditional single family homes at $315,000 and its empty nester homes at $265,000. These values will continue to support positive appreciation in home values for homes in the immediate adjacent area to this site, as well as the Canal Winchester as a whole. Westport's commitment to four-sided architecture, upgraded architectural garage doors on each home and updated interior house designs are all features that will create housing value, produce a high value to square foot ratio and are desired by today's homebuyers.

As City documentation of building permits and zoning approvals evidence, very few new housing developments have been approved in Canal Winchester in the last decade. When measured against existing owner-occupied housing (3,091 in 2106 according to US Census) the average number of single family homes permitted since 2010 through mid-2017 of 33 units per year in the City represents about a 1% increase in new single family housing stock. (See new housing units data) Census data also reports 1999 as the median year for houses/condos built in Canal Winchester. This means that for the most part existing Canal Winchester housing stock lacks the updates that come with newly designed homes.

In particular, standard home designs since the "Great Recession" emphasize transition rooms (mud rooms and utility rooms) between the garage and the balance of the living space, updated fire safety features, better energy efficiency and more electronic component compatibility.

Canal Winchester home values have experienced value appreciation in the last several years. Some residents would undoubtedly like the opportunity to take advantage of that appreciation by selling but may also want the option to stay in their own community and purchase a new house. Supply conditions need to reach a greater balance for such opportunities to occur. As with any housing market, to remain dynamic and positive, Canal Winchester needs a healthy level of new development to continue to upgrade its housing stock with updated homes, attract buyers into its market for new homes and resales, provide both "downsizing" and "move-up" housing options for its existing residents, and to protect the values of its existing housing stock. Westport's product

offerings hit these marks and provide existing residents with the opportunity to buy several choices of new homes that are very limited in the current market.

Housing Diversity, More Open Space, Less Density: The overwhelming majority of the City's owner occupied housing is traditional single family housing, and with subdivisions designs targeting buyer preferences from a different era, including the preference for larger lots. There is still market demand for moderate lot and home sizes, but as the attached MORPC 2050 Report documents, many of today's buyers prefer smaller lots and even smaller overall home square footages. This is driven by both the values of millennial buyers and the needs of many downsizing Baby-Boomers. The MORPC data also documents the shrinking demand for the predominance of large-lot, and even "mega-lot" traditional single family housing in many Columbus suburbs.

The mix of housing options offered by Westport, with both updated traditional single family homes and "Lifestyle" empty nester homes, has several advantages. First, mixed residential developments offering several product choices and different lot configurations helps meet the demands of future buyers and mitigates the existing large lot dominance. This is important to diversify existing housing stock. Second, adding empty nester housing as a component to this development balances the competition for sales with the existing traditional single family housing in the area. Mixing products, lot sizes and differentiating sales to different buyers means absorption will occur faster than it otherwise would with one uniform housing type, shortening the construction process. Too many large-lot, large square footage single family homes coming on the market at once would mean such homes would compete with each other and existing resales of similar homes. Third, Westport's proposed lot configurations have the advantage of producing more open space and less density than code requirements by focusing on market driven preferences. The compactness of more moderate lot designs and mixing traditional single family with empty nester housing, as well as emphasizing quality also results in higher overall values.

See the development text and exhibit plans addressing the balance of requirements under 1143.02 (c).

Local Market Update – October 2017

A RESEARCH TOOL PROVIDED BY THE COLUMBUS REALTORS®
BASED ON RESIDENTIAL LISTING DATA ONLY

COLUMBUS REALTORS

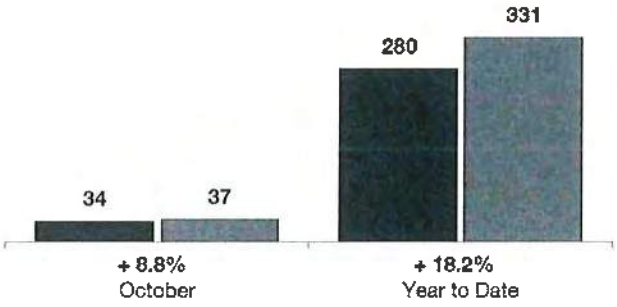
Canal Winchester City School District

Franklin and Fairfield Counties

	October			Year to Date		
	2016	2017	+ / –	2016	2017	+ / –
Closed Sales	34	37	+ 8.8%	280	331	+ 18.2%
In Contracts	--	36	--	--	368	--
Average Sales Price	$193,923	$201,764	+ 4.0%	$189,272	$208,004	+ 9.9%
Median Sales Price**	$171,500	$185,000	+ 7.9%	$170,550	$185,000	+ 8.5%
Average Price per Square Foot**	$102.43	$115.24	+ 12.5%	$100.84	$107.77	+ 6.9%
Percent of Original List Price Received**	98.9%	97.6%	- 1.3%	97.8%	98.5%	+ 0.7%
Percent of Last List Price Received**	99.9%	98.8%	- 1.1%	98.9%	99.1%	+ 0.2%
Days on Market Until Sale	26	23	- 11.5%	37	26	- 29.7%
New Listings	29	34	+ 17.2%	330	410	+ 24.2%
Median List Price of New Listings	$189,000	$190,950	+ 1.0%	$175,000	$189,900	+ 8.5%
Median List Price at Time of Sale	$179,900	$189,900	+ 5.6%	$173,900	$189,000	+ 8.7%
Inventory of Homes for Sale	--	40	--	--	--	--
Months Supply of Inventory	--	1.2	--	--	--	--

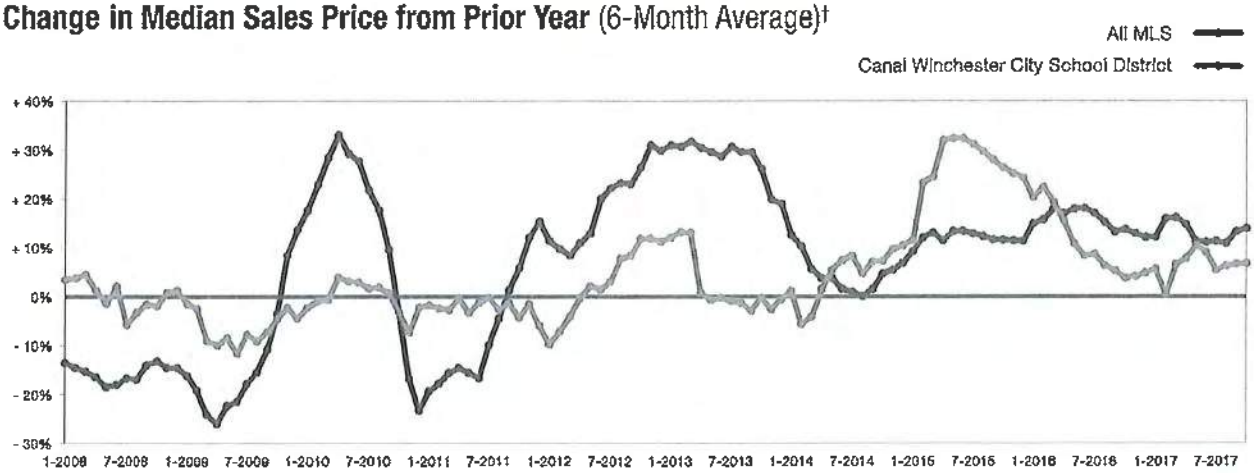
** Does not account for seller concessions

Closed Sales



Median Sales Price

Change in Median Sales Price from Prior Year (6-Month Average)†



† Each dot represents the change in median sales price from the prior year using a 6-month weighted average. This means that each of the 6 months used in a dot are proportioned according to their share of sales during that period. | Current as of November 13, 2017. All data from Columbus REALTORS® Multiple Listing Service (MLS). | Report © 2017 ShowingTime. | Page 1 of 2

Local Market Update – October 2017

A RESEARCH TOOL PROVIDED BY THE COLUMBUS REALTORS®
BASED ON RESIDENTIAL LISTING DATA ONLY

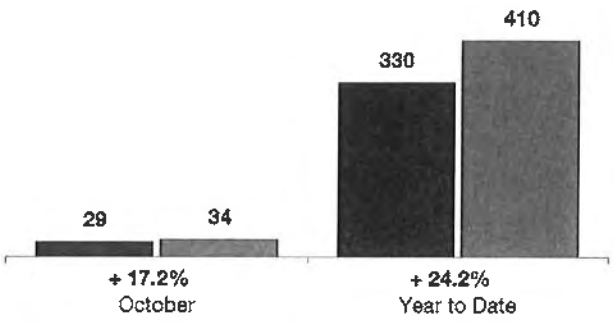
COLUMBUS REALTORS®

Canal Winchester City School District

Franklin and Fairfield Counties

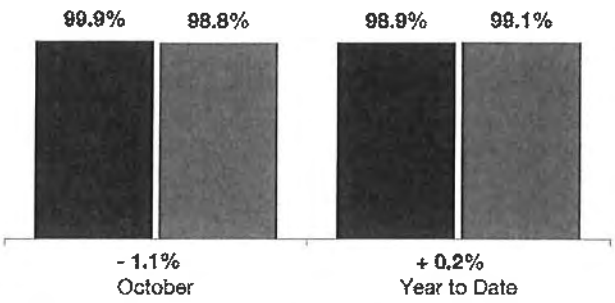
New Listings

■2016 ■2017



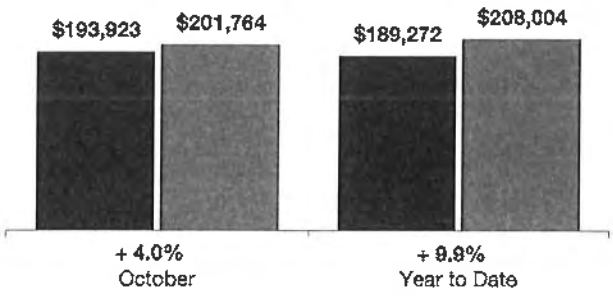
Pct of Last List Price Received

■2016 ■2017



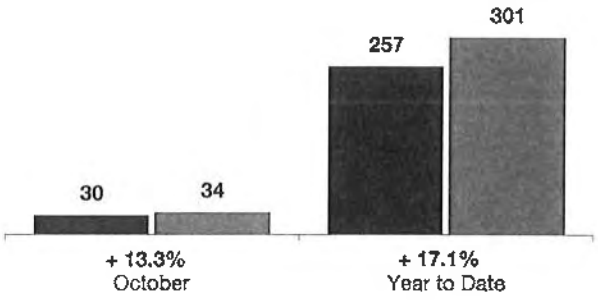
Average Sales Price

■2016 ■2017



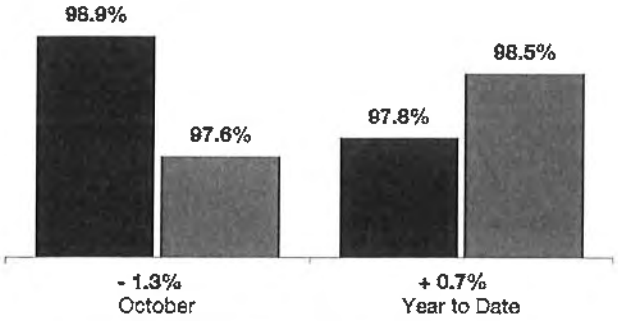
Single Family Sales

■2016 ■2017



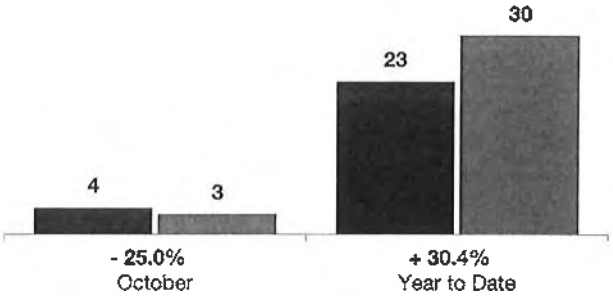
Pct. of Orig. List Price Received

■2016 ■2017



Condo Sales

■2016 ■2017



New Housing Units City of Canal Winchester

Year	Single Family Franklin	Single Family Fairfield	Multi family Franklin	Multi Family Fairfield	Total Units	
2010	49	2	0	0	51	
2011	36	4	3	0	43	
2012	21	2	0	0	23	
2013	16	2	0	0	18	
2014	14	7	0	79	100	
2015	17	6	0	27	50	
2016	27	21	0	45	93	
2017	15	9	0	41	65	Through 9/8/2017
Totals	195	53	3	192	443	

Summary of Subdivision Densities

Subdivision	Rezoning Ordinance	Started Sales	Lots / Units	Acres	Density	Open Space
Ashbrook Village	#102-93; #103-93 8/2/1993	Feb-95	433	226.10	1.92	13.8
	# -- 96 8/28/1996		474	226.10	2.10	10.0
Canal Cove	#16-95; #17-95 2/6/1995	Jun-03	241	85.00 9.00 76.00	 Franklin Cty Fairfield Cty	10.8
Canal Villas	#55-94 4/18/1994	May-98	64	11.95	5.36	
Charleston Lake	NA	Aug-03	112	21.73	5.15	
Cherry Landing	#49-03 9/2/2003	Apr-05	180	53.60	3.36	17.0
Duckworth (Fortin)						
Eagle Ridge	NA	Jul-04	60	10.10	5.94	
Greengate (Pifer)						
Villages at Westchester	#59-90 8/28/1990	Apr-95	1,202	743.00	1.62	6.0
	Condo SF Commercial School Golf Course		268 934	44.00 322.00 28.00 20.00 323.00	6.09 2.90	
	#17-01 4/2/2001					
Greensview Condos		4/1/2001	42	7.00	6.00	
Greensview Villas Condos		9/1/2003	42	8.79	4.78	
Villiers Property	#33-05 4/4/2005		76	21.80	3.49	
Winchester Ridge	#23-13		192	29.00	6.62	

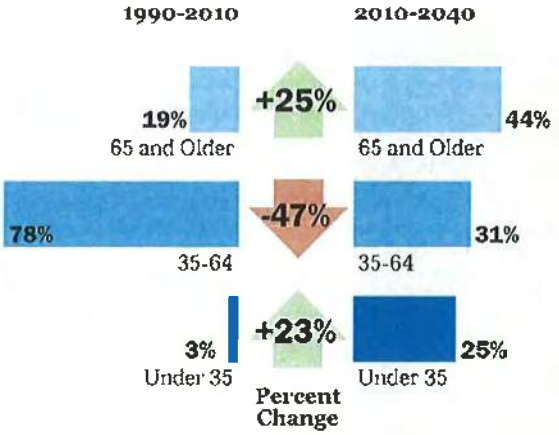
The Changing Profile of Central Ohio's Growth

Who is Central Ohio now and who will it be in the future?

The past 40 years have seen Central Ohio communities grow by more than 675,000 people, enough to fill Ohio Stadium more than six times. More than 400,000 housing units were constructed and more than 625,000 jobs were added by our region's employers. While Columbus and other historic downtowns have remained vital, growth over the past decades has been characterized, for the most part, by single family residential growth outside the outerbelt, and new suburban employment concentrations. Most growth was designed around automobile access and investments in a robust highway and roadway network. This form of growth accelerated as the Baby Boomers entered their peak wage-earning and family-raising years. Local plans and policies, and regional infrastructure investments, pivoted towards supporting this generation's demand for larger-lot single family homes and suburban lifestyles. With some ebbs and flows, the region has been fairly prosperous through the past 30 to 40 years.

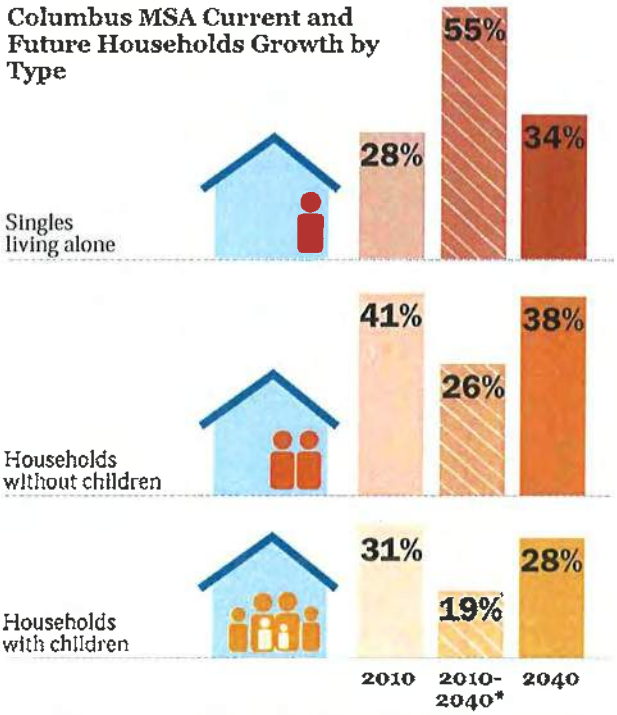
Over the next 40 years, Central Ohio, like most other regions and states across the United States, will be experiencing dramatic changes related to demographics and the shifting preferences of existing and future residents and workers. Nearly 80% of the growth in the last two decades (1990 to 2010) was among 35 to 64 year olds. Over the next decades, this same group will account for only 31% of growth. Aging baby boomers will make up nearly 45% of growth and those under 35 will account for more than 25%. Households with children will account for less than 20% of growth over the next decades, and the region will be more diverse; racial and ethnic minorities are expected to account for a majority of the region's growth by 2050. These significant shifts have implications for the kinds of homes and communities needed and preferred by existing and future residents of Central Ohio.

Columbus MSA Current and Future Household Growth Share by Householder Age



Source: Arthur C. Nelson, COLUMBUS, OHIO Metropolitan Area trends, Preferences, and opportunities: 2010 to 2030 and to 2040 (NRDC)

Columbus MSA Current and Future Households Growth by Type



*Refers to households added from 2010-2040, excluding households that existed prior to 2010.

Source: US Census Bureau, American Community Survey 2012

Scenario Drivers

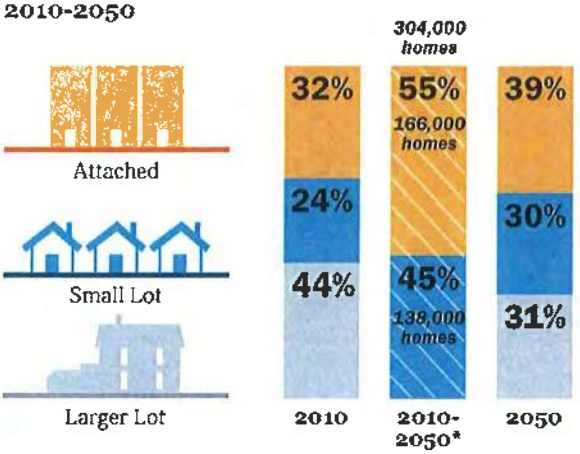
Evolving Housing Needs

What kinds of communities and housing do residents need now & into the future?

Recent studies by the National Association of Realtors (NAR), Urban Land Institute, and other organizations across the country are pointing towards increasing preferences for walkable, complete communities where daily needs are within close proximity to homes and jobs. NAR's 2013 Community Preference Survey points out that "Americans prefer walkable, mixed-use neighborhoods and shorter commutes." More than 60 percent of respondents "favor a neighborhood with a mix of houses and stores and other businesses that are easy to walk to, rather than neighborhoods that require more driving between home, work and recreation."

These trends and changing preferences raise important questions about the vitality and competitiveness of our region and communities over the coming decades. What types of places will attract the skilled labor forces our businesses require? Are today's land use plans and development regulations aligned with the goal of attracting residents and businesses, helping communities to remain competitive and improve their tax bases? Are private developers able to respond to these emerging market trends? A recent study of regional housing demand commissioned by the Urban Land Institute provides a look at the housing demand profile of our changing population. It lays out a shrinking demand for larger-lot single family homes (those on lots greater than 7,200 square feet), and an increasing demand for well-located smaller-lot detached homes, attached/townhome products, and multifamily housing. With more than 330,000 larger-lot homes on the ground now, demand is for an additional 140,000 smaller-lot detached single family homes, and 166,000 attached units. Through 2050, this represents a broader choice in housing products, with just over 60% of homes on single family detached lots in 2050 (compared to 67% in 2010) and just under 40% in townhomes and multifamily products. The Insight2050 scenarios are designed in part to test the impacts of meeting this projected demand, compared to maintaining a trend-based housing profile, or building out the housing profile of the local jurisdictions' current plans and policies.

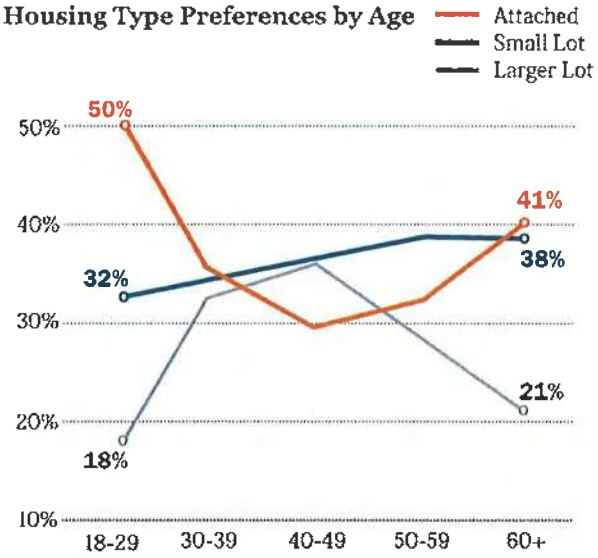
Columbus MSA Housing Needs by Home Type 2010-2050



*Refers to households added from 2010-2050, excluding households that existed prior to 2010.

Source: Arthur C. Nelson, COLUMBUS, OHIO Metropolitan Area trends, Preferences, and opportunities: 2010 to 2030 and to 2040 (NRDC)

Housing Type Preferences by Age

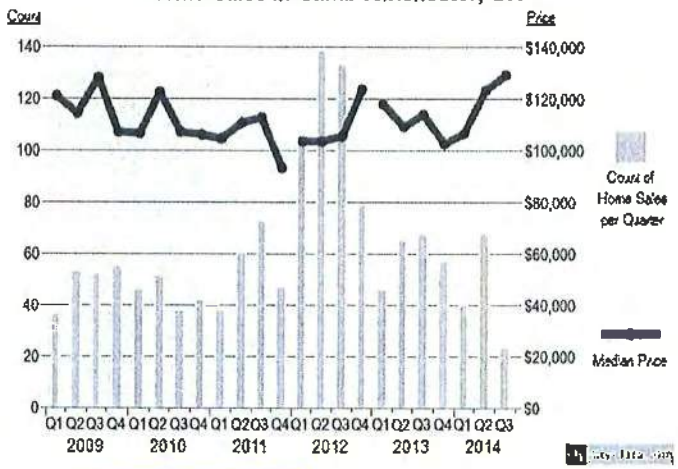


Source: National Association of Realtors (2011)

Canal Winchester, OH (Ohio) Houses and Residents

Today's Mortgage Rate
3.04%
APR 15 Year Fixed
Select Loan Amount
$225,000
lendingtree
Calculate Payment >

Home Sales in Canal Winchester, OH



Total population: 7,704 (Urban population: 4,348, Rural population: 164 (all nonfarm))

Houses: 3,091 (2,847 occupied: 2,618 owner occupied, 332 renter occupied)

85%

% of renters here: 11%

State: 35%

Housing density: 485 houses/condos per square mile

Median price asked for vacant for-sale houses and condos in 2016: $144,104.

Median contract rent in 2016: $485 (lower quartile is $415, upper quartile is $643)

Median rent asked for vacant for-rent units in 2016: $768

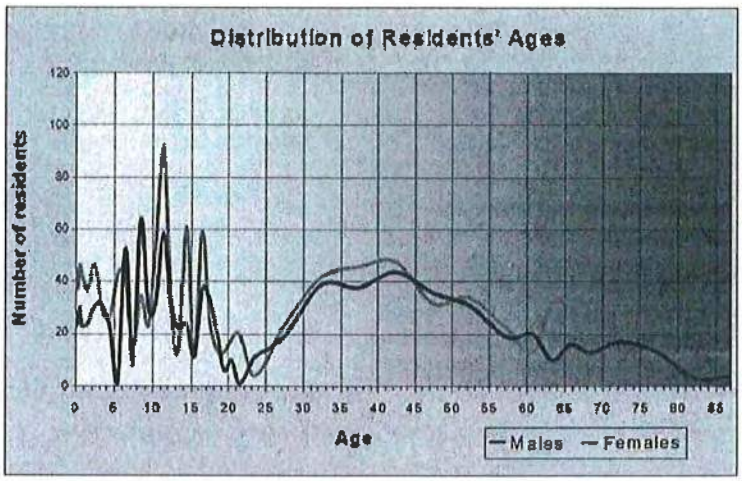
Median gross rent in Canal Winchester, OH in 2016: $589
Housing units in Canal Winchester with a mortgage: 2,187 (82 second mortgage, 277 home equity loan, 91 both second mortgage and home equity loan)
Houses without a mortgage: 415

Median household income for houses/condos with a mortgage: $96,501

Median household income for apartments without a mortgage: $59,302

Median monthly housing costs: $1,420

Data: Median house or condo value ($) | Most recent value | Options
City, State, County or Zip Code | Get link | % change since 2k



Estimated median house or condo value in 2016: $187,321 (it was $139,600 in 2000)
Canal Winchester: $187,321
Ohio: $140,100
Lower value quartile - upper value quartile: $141,287 - $264,777

Mean price in 2016:

Detached houses: $198,867
Here: $198,867
State: $180,767

Townhouses or other attached units: $120,542
Here: $120,542
State: $157,588

In 2-unit structures: $344,911
Here: $344,911
State: $135,691

In 3-to-4-unit structures: $84,276
Here: $84,276
State: $122,936

Median year house/condo built: 1999

Median year apartment built: 1985

Household type by relationship:

Households: 7,799

- In family households: 6,839 (1,091 male householders, 1,065 female householders)

  1,794 spouses, 2,544 children (2,421 natural, 39 adopted, 85 stepchildren), 113 grandchildren, 16 brothers or sisters, 49 parents, 41 other relatives, 41 non-relatives

- In nonfamily households: 772 (300 male householders (225 living alone)), 388 female householders (391 living alone)), 81 nonrelatives
- In group quarters: 188

Size of family households: 1,048 2-persons, 442 3-persons, 316 4-persons, 265 5-persons, 66 6-persons.

Development Plan Text

MIDDLETOWN FARMS PRD DEVELOPMENT TEXT

(IMLER TRACT)
CITY OF CANAL WINCHESTER, FRANKLIN COUNTY, OHIO

April 23, 2018

I. General

Applicant:	Westport Homes 507 Executive Campus Drive, Ste. 100 Westerville, OH 43081 (614) 365-0066
Property Owner:	The Dwight A. Imler Revocable Living Trust 20526 River Road Circleville, OH 43113
Property:	7847 Lithopolis Road, Canal Winchester, OH 43110 Approximate Site Total: 79.5+/- acres
Tax Parcel Number(s):	184-002998-00 184-003001-00 184-002994-00
Project Developer:	Westport Homes 507 Executive Campus Drive, Ste. 100 Westerville, OH 40381 (614) 365-0066 Contact: Terry Andrews Email: TerryA@westport-home.com
Engineer/Planner:	EMH&T 5500 New Albany Road Columbus, OH 43054 (614) 775-4500 Jeff Strung, PLA
Proposed Application:	Planned Residential District (PRD) for single family homes
Existing Zoning:	Exceptional Use and PRD

II. Project Narrative:

The project site consists of approximately 79.5+/- acres located south of Hayes Road and west of Oregon Road. It is currently zoned Planned Residential District (PRD) and Exceptional Use District (EU). The site is currently comprised of vacant/farm land.

Currently located around the proposed development to the:

- North of the property is single family homes and a golf course across Lithopolis Road
- South of the property is farm land.
- East of the property is Oregon Road and vacant/farm land.
- West of the property is farm land/residence.

The applicant is requesting to rezone the property from Exceptional Use (EU), +/-11.954 acres, and the existing Planned Residential District, +/- 67.546 acres, to one uniform Planned Residential District (PRD). The proposed development will consist of traditional single family homes (117 lots); and detached lifestyle homes marketed to empty nesters (58 lots) for a total of 175 dwelling units and lots. Westport's plan for this site attempts to meet the demands of a maturing housing market that has become more sophisticated in serving differentiated demographic components. The different mix of housing stock, home sizes and lot sizes will serve the growing need for specific housing market segments. The need for innovative housing, flexibility and a mixture of housing stock as proposed by Westport is recognized in section 1173.01, which encourages, "…imaginative architectural design and layout, flexibility in building styles and types…". Middletown Farms has the advantage that the different housing options presented are complimentary, create less competition for the same buyers, and do not overload the market with the same type of product at the same time. This housing mix also moderates competition with existing, large lot single-family housing districts, which represent the predominant development pattern in the area. The more moderate lot sizes in Middletown Farms are favored in today's market, offer less maintenance time and cost for homeowners and produce more common open space. Westport's commitment to higher architectural and material quality standards than code minimums insure higher price points than average city housing values and help protect and enhance such values.

III. Permitted and Prohibited Uses:

A. Dwelling Units and Related Uses

1. Traditional single-family homes, and detached empty nester lifestyle homes owned in fee-simple and all related appurtenances, such as attached garages, porches, patios, entry features, storm water systems, ponds, open space, a playground as depicted in development plan exhibits, street and utilities structures typically associated with such housing shall be permitted in this PRD. Home occupations in accordance with Chapter 1187 shall be permitted in this PRD.

B. Ancillary Structures and Uses

1. No improvements or structures of a temporary character, shed, trailer, shack, garage, barn, or other temporary outbuilding shall be used or erected on any Lot after the permanent residence on each Lot has been completed. Temporary structures to support development and/or construction activity shall be allowed as permitted under city code. Outdoor storage of inoperable, unlicensed, or unused motor vehicles for more than seven (7) days shall be prohibited. No boats, no motor homes, no equipment and no trailer unrelated to the initial development or home construction shall be parked in front of any parcel in this PRD for more than twenty-four (24) hours. No motor home, mobile home or camper may be occupied by a guest of the resident owner for more than seven (7) days. Unless specifically authorized by this PRD text or the development standards provided herein, or city code and procedures, other uses shall be prohibited.

C. Conditional Uses

Those permitted under 1157.03 of the city code – Conditional Uses shall be approvable under this PRD as provided by city code and code procedures.

D. Parking

1. All lots shall provide a minimum of two (2) off-street parking spaces in front of the garage, exclusive of garages. No parking spaces, streets, or driveways nor any other part of the common areas nor any lot upon which a dwelling unit is constructed shall be used for parking of any trailer, truck, boat, or anything other than operative automobiles, motorcycles, or scooters, except while loading, unloading, or cleaning which shall not exceed forty-eight (48) hours. Any of such vehicles may, however, be stored or parked in an enclosed garage.

2. All dwelling units shall contain a two (2) car garage as a minimum requirement; carports shall not be permitted.

E. Other Prohibited Uses

1. No decks shall be permitted on any lot. No above-ground pools shall be permitted erected, placed, or remain on any lot.

2. In Subarea 1 fences are limited to no more than 48 inches in height from the finished grade and restricted by style to; a) wrought iron or high quality aluminum in a wrought iron style; b) three-rail split rail made of wood. Dark coated mesh (not chicken wire) may be installed on the inside of the permitted split rail fence for safety and security function.

3. In subarea 2, fences are prohibited.

IV. Utilities/Public Services:

A. All utilities shall be underground, whenever possible, except for telephone and cable pedestals and electric transformers.

1. Waterline: There is an existing twelve (12) inch water main located on the north side of Lithopolis Road approximately 530 feet west of the intersection of Lithopolis and Hayes Roads. It will be extended east to service the site.

2. Sanitary: The development will connect to the existing lift station located west of the site north of Lithopolis Road with a twenty-four (24) inch gravity sewer. The tentative alignment of the sewer is along the south side of Lithopolis Road.

3. Drainage: The northern portion of the development drains south to the existing drainage swale in the middle of the property and the south portion drains north to the same drainage swale. The northern portion of the site anticipates three (3) retention basins located along the drainage swale and Lithopolis Road and the southern portion of the development also incorporates two (2) retention basins located along the south side of drainage swale.

V. Traffic:

Traffic improvements are subject to the traffic study dated December 12, 2017, attached to this application and submitted to the City, as well as modifications/amendments to the original traffic study based on an updated traffic Memorandum of Understanding (MOU) dated April 11, 2018 and submitted to the City. Both the original traffic study and the updated MOU are subject to City review and approval.

VI. Residential Development Standards:

The following are the development standards for the subdivision, provided, however, in the event a standard, provision or requirement is not specified in this text or the attached plans, the standards, provisions and requirements set forth in the City of Canal Winchester Planning and Zoning Code shall apply.

A. General Standards

Site Acreage:	79.5+/- Ac.
Net Area	63.8+/- Ac. (Excluding R/W)
Net Developable Area	50.84+/- Ac.(Excluding R/W and Required Open Space)
Number of Lots:	175
Open Space Percentage:	22.2+/- Ac, 34.7% (Based on net area) (Code is 20% or 12.76+/- acres open space)
Gross Density	2.2 Lots / Ac
Net Developable Density:	3.44 Lots/Ac (Based on net developable area)

B. **Building, Setback and Height Restrictions**

1. Subarea 1 – Traditional Detached Single Family Homes

Number of Lots:	117
Typical Lot Areas:	9,375 sf (75 and 80 ft wide x 125 ft deep)
Minimum Front Yard Setback:	25 ft.
Minimum Side Yard Setback:	8 ft. per side (16 ft. total)
Minimum Rear Yard Setback:	30 ft.
Typical Lot Frontage	
at Setback:	70 ft. to 75 ft.
at R/W:	40 Ft.
Maximum Building Height:	35 ft.
Maximum Lot Coverage:	35%

Single-story/ranch	1,400 sf
Two-story	1,800 sf
Split-level/multi-level	1,800 sf

2. Subarea 2 – Lifestyle Detached Single Family (Age Targeted)

Number of Lots:	58
Minimum Lot Area:	6,250 sf
Minimum Front Yard Setback:	25 ft.
Minimum Side Yard Setback:	5 ft. per side (10 ft. total)
Minimum Rear Yard Setback:	30 ft.
Typical Lot Frontage	
at Setback:	50 ft.
at R/W:	40 ft.
Maximum Building Height:	35 ft.

Single-story/ranch: 1,400 sf

C. **Architectural and Design Standards**

1. The community shall comply with the following: Code sections 1130.03 Chimneys, 1130.04 Driveways, 1130.05 Four-Sided Architecture, 1130.06 Twenty (20)% Garage side-loading, Landscaping 1130.10, and Parks 1130.12. The homes shall comply with the intent and purpose of Section 1130.01 Diversity, with the following addition: As the same model of home can be constructed and altered with multiple different elevations, the following diversity standard shall be met - The same house ***elevation*** shall not be directly across the street and a minimum 2-lot separation shall be required between the same house ***elevation*** on the same side of the street or diagonal from each other.

2. Each home shall have a driveway that consists of concrete or brick pavers. All driveway aprons shall be concrete.

3. Each home shall include four sided architecture design elements as permitted in Chapter 1130.05. In addition, Middletown Farms shall comply with the following architectural commitments:

   a. In both subareas, each home shall have cementitious board siding on all front elevations, the majority of which shall match the profile of the siding on other elevations of the home. If stone, faced stone, stucco stone or brick are used on the front of the homes, it shall be used as an accent material and limited to no more than 20% of the area of all front elevations.
   b. All homes will include a covered porch.
   c. Garage doors on all front elevations will be of a premium architectural style to compliment the architecture of the home. (ie: craftsman, farmhouse or carriage house styles). No flat panel or plain panel garage doors or garage doors without architectural features will be permitted.
   d. On all garages, a light fixture shall be placed at each side of the garage door in the top one-third of the vertical structure.

4. Utility meters may not be located on the front of any lot but shall be located on the side or rear of the structure.

5. Exterior finish materials:

   - Stone, stucco stone, brick veneer, stucco, cementitious siding, vinyl siding of at least .44 mills

   - Metal and vinyl soffit material

- Metal gutters and downspouts
- Metal flashing and accents
- Natural wood, composite and vinyl trim material
- Thirty-year dimensional shingles

Exterior Colors

- White, buff, beige, earth tones, grays, light blues, light greens, light yellows that are non-high chroma colors.
- Accent colors for doors and shutters are: black, blue, green, red, burnt red, or they can match the trim of the house.

6. The main roof pitch of the two-story and split level homes shall be 6/12. Single-story units shall have a 5/12 pitch for the main roof. Roofs may be of natural or synthetic slate, fiberglass asphalt dimensional shingles. Roof pitches shall be appropriate to the architecture of the house.

7. Each Dwelling Unit shall have an attached garage which can accommodate not less than two (2) cars. All homes shall have a minimum of four (4) parking spaces on each lot, which includes two (2) enclosed by the garage and two (2) spaces in front of the garage located between the garage and the street.

    a) There will be a mix of front loaded and side loaded garages. Subarea 1 (the traditional single-family homes) shall meet the code standard for side entrance garages of twenty percent (20%). (Twenty-three (23) lots in subarea 1 shall be side-loaded.) For side loaded garages on corner lots, the garage may be oriented towards any street classification within the community but not external streets. Front load garage doors shall be located no more than four (4) feet in front of the most front facing architectural element of the home. Such architectural elements shall include but may not be limited to roof projections, porches with roofs or other appropriate architectural projections. In addition, all garage doors in both subareas shall be “architectural” in design in a manner that integrates the door as a design element with the balance of the home. Architectural garage door elements shall include but shall not be limited to windows, raised panels, board and batten elements, aesthetic hinges and/or other hardware or other similar elements, as offered by the builder and chosen by customers. No flat panel, plain panel garage doors, or garage doors without architectural features are permitted in either subarea.

8. Lifestyle Homes backing Hayes Road – The architectural diversity requirement in the code at section 1130.01 and the inherent variation of designs of the Lifestyle home series offered by Westport means that the rear building lines of the homes backing Hayes Road in Subarea 2 will differ in a manner that will break up the view from outside the community. In addition, to increased architectural interest and variation in the location of structures visible from Hayes Road, not less than one-third (1/3) of the rear elevations of these homes shall include architectural/structural projections, such as covered porches, sunrooms, screened porches or three-season rooms, or other architectural projections. Such architectural/structural projections shall be consistent or compatible with the architectural design and materials used on the balance of the homes.

D. <u>Pedestrian Requirements</u>

1. A minimum three (3) foot wide concrete sidewalk shall be constructed from the driveway of the house to the front door/stoop of each house/lot.

2. A four (4) foot wide concrete sidewalk(s) shall be installed along two sides of the streets, with curb ramps at all corners as required by code.

3. The development has an eight (8) foot wide asphalt path along the south side of Hayes Road and Lithopolis Road frontage and on the west side of the Oregon Road frontage. There will also be a six (6) foot wide compacted limestone path that will connect the open spaces in the northern portion of the development to the southern portion as depicted in site plan exhibits.

E. <u>Residential HOA Responsibilities</u>

1. Homeowners Association: All residential property owners located within Middletown Farms will be required to join and maintain membership in a forced and funded homeowners association (the “Association”), which will be formed prior to any lots being sold.

2. Reserve areas and landscaping of those reserve areas are to be maintained by the Association.

3. A separate homeowners’ association or sub-associations will be established for the empty nester detached homes in Subarea 2, with required membership and funding of dues per deed restrictions. Weekly mowings and weeding and bi-annual mulching and pruning services will be provided to each empty nester home, with such services subject to adjustment by the HOA board in its discretion.

F. Landscaping and/or Screening Commitments

The development shall comply with all landscape regulations set forth in Chapter 1191 and 1130.10 of the Code, except as noted herein.

Evergreen trees shall be measured by height under this PRD text as such measurement is generally accepted. A minimum evergreen tree of five (5) feet in height shall be the standard for replacement under this PRD. The code standard that earthen mounds require no more than 50% of the mound to be turf is also modified/eliminated in this PRD text as turf is an acceptable and effective manner to stabilize mounds.

Westport shall meet the standard for tree replacement under section 1191.06 (e), with two (2) inch caliper trees replacing any impacted tree over four (4) inches in caliper, for the limited number of trees being disturbed on site.

The final quantity of trees to be removed and replaced shall be determined during final development plan review in coordination with city staff. Please see Landscape Plans for preliminary tree removal and replacement quantities and locations.

G. Street Trees

Chapter 1191.07 (k), pertaining to the City's Street Tree Fund shall be complied with.

H. Parks

Chapter 1130.12

The applicant will construct a tot lot to be located on the southern portion of the development within the open space as depicted on the exhibits. The tot lot will be connected by a six (6) foot wide compacted limestone path that will extend across the drainage swale to the northern portion of the development. The open space is intended to be passive in nature and there will be several benches located along the path.

VII. Additional Regulations

A. Signs

1. No permanent sign shall be permitted on any lot or building in the Subdivision. All signage shall meet Code standards.

   One (1) post and arm mounted sign shall be located at the eastern entrance of Hayes Road and one (1) post and arm mounted sign shall be located at the northern entrance on Oregon Road within this PRD as depicted in exhibits.

B. Fencing

1. All fencing shall meet Code standards. Three (3) rail fencing shall be installed along the entire frontage of Hayes, Lithopolis and Oregon Roads as a part of the proposed landscaping/streetscape. See specific fence uses and prohibitions for individual lots in the Permitted/Prohibited Uses section above.

C. Lighting

1. Street lighting shall comply with the Code standards.

2. Landscape lighting for Dwelling Units shall be low-voltage. Outdoor lighting fixtures for safety, security and ingress and egress purposes and shall be fixtures with the light source shielded to eliminate off-lot light spillage (cut off fixtures only).

VIII. PRD Comparisons/Modifications from Base Code Standards

The Planned Residential District section of the city code, Section 1173.01, Purpose and Intent, encourages flexibility, and invites innovation and imagination in both housing design and sensitivity to the natural environment. Planned districts are by their nature considered alternatives to straight zoning codes as the standards under such straight zones are typically fixed, rigid and less likely to accommodate market demands, creativity in site design and changes in housing preferences over time. No code section written a decade early or greater can anticipate today's housing market, economic challenges and buyer preferences. The requested modifications and comparisons to straight code standards are presented here with the purpose and intent of planned districts in mind. By allowing a mixture of homes styles, sizes and lot configurations, today's market demands are met and more open space and less density than code requirements and greater protection natural areas result.

In addition, Middletown Farms offers a housing mix that takes pressure off one housing style – traditional single family. According to U.S. Census data, single family, owner occupied housing represents the dominant housing pattern of Canal Winchester, at nearly 85%. Much of this is traditional family housing built in the 1990s and early 2000s. With the lack of new homes developed in Canal Winchester over the last decade, the market will support updated, newly designed family homes on more moderate sized lots. However, too much new and updated traditional single family housing in uniform developments and coming to the market at the same time, would directly compete with existing housing stock, most of which is more than a decade old. To help balance and diversify its development and the Canal Winchester market in general, Westport is presenting another housing option – empty nester housing – that meets surging market demand for the downsizing Baby-Boomer demographic, including Canal Winchester residents. Empty nester housing creates less peak hour traffic, and represents less

intense daily living. The resulting diversity provides housing choices for residents, while moderating the impact on existing home values.

There is growing recognition in today's market that housing value does not result simply from large square footages or large lot sizes. Architectural quality, modern design approaches and interior finishes define the value proposition. There is more clarity from both homeowners and local governments that larger lot and yard sizes are more costly and time intensive to maintain. Large lots create more pavement and sidewalk lengths, greater utility runs and use up land faster than more efficient development patterns. Many of the modifications identified in this PRD, including lot coverages, setback changes, and garage configurations related to the need to modify lot and yard standards written under pre-recession conditions. The "mega-lots" of the past are simply not favored by many home buyers and are an economic challenge to maintain over time. Westport's commitment to architectural standards, a housing mix and a more efficient development pattern combine to produce a community that is organized around natural features, less dense and provides more open space than code standards. A more valuable community is the result.

<u>Comparsions to Base Code</u>:

1. The applicant proposes modification from Chapter 1130.09 and 1130.11 for lot sizes, square setbacks, square footage minimums and lot coverages as follows:

   a. Subarea 1 – Traditional Detached Single Family

      - Minimum Lot Area from 14,400 sf to 9,375 sf
      - Minimum Front Yard Setback from 30 ft. to 25 ft.
      - Minimum Side Yard Setback from 10 ft. per side (20 ft. total) to 8 ft. per side (16 ft. total)
      - Minimum Lot Frontage at Setback from 90 ft. to typically 75, 80 and 85 ft., with some variation for "pie-shaped" lots.
      - Typical Lot Frontage at R/W from 50 ft. to 40 ft.
      - Maximum Lot Coverage from 30% to 35%
      - Single-story/ranch from 1,650 sf to 1,400 sf
      - Split-level/multi-level from 1,650 sf to 1,800 sf

   b. Subarea 2 – Detached Lifestyle Homes (Age targeted)

      - Maximum Lot Area from 14,400 sf to 6,250 sf
      - Minimum Front Yard Setback from 30 ft. to 25 ft.
      - Minimum Side Yard Setback from 10 ft. per side (20 ft. total) to 5 ft. per side (10 ft. total)

- Minimum Lot Frontage at Setback from 90 ft. to typically 50 ft.
- Typical Lot Frontage at R/W from 50 ft. to 40 ft.
- Maximum Lot Coverage from 30% to as depicted on the final building plans for each lot (plot plans submitted with building permits) and subject to setback standards established herein.
- Single-story ranch from 1,650 to 1,400 sf

Comparisons to Code Section 1130.09 and 1130.11 and Rationale

Development Standards – Subarea 1- Traditional Single Family Homes

1. Minimum Lot Area – 9,375 sf proposed modified to 14,400 sf under R-3 zoning requirements.

   Rationale – Buyer preferences have shifted away from overly large lots and the time and expense of routine work to maintain them. The most precious commodity of most busy families and new home buyers is time, and yard maintenance is not their most preferred activity. 9,375 sf equates to lot sizes that are approximately 75’ and 80’ x 125’ for most lots. This is a common and adequate lot size by today’s single family home standards and appropriate based on market conditions that are driving demand for more moderate lot sizes. Such lot sizes save perimeter and common open space, and provide greater flexibility in land planning to protect existing natural areas. By contrast the code’s standard R-3 lot equates to lot size that is 120’x120’, which creates a very inefficient land use pattern, puts pressure on open space, and raises infrastructure and utility construction, service and maintenance costs, especially over time when more of the infrastructure is dedicated. With more moderate and more compact lot sizes, the Westport plan will produce 34.7% net open space vs. the code minimum of 20% and will create buffering between natural areas to be protected and developed areas. This benefits the livability of the site for residents and the community. It is also noteworthy that Westport’s plan and approach to moderate lot sizes achieves a community density of 3.44 net developable acres that is lower than the maximum net developable density requirements of the code of less than 4.0 du/ac.

2. Minimum Front Yard Setback – 25 ft. proposed compared to 30 ft. under R-3 zoning standards.
   Rationale – Same as minimum lot area modification above.

3. Minimum Side Yard Setback – 8 ft. proposed compared to 10 ft. under R-3 zoning standards.
   Rationale – Same as minimum lot area comparison above.

4. Typical Lot Frontage at Setback/Right of Way – 75 ft./40 ft. compared to 90 ft./50 ft.
   Rationale – This modification allows more market-preferred reasonable lot sizes and the use of “wedge” or “pie-shaped” lots which allow more flexibility in land planning to accommodate street patterns and lot lay-outs to reflect the contour and pattern of natural areas and open space on the property. Allowing more moderate minimum lot frontages is also supported by the same reasoning as outlined under the minimum lot area modification request.

5. Maximum Lot Coverage – 35% proposed compared to 30%

   Rationale – Along with the minimum lot area modification, this modification request would allow home sizes driven by market demands to be placed on reasonably sized lots. The 30% limitation is a dated standard for typical and traditional two-story homes where living space is divided vertically. Demographic changes and consumer preferences are driving demand for more flexibility in building envelop and lot coverage standards to fit different home designs and chosen lifestyles. As more residents want to “age in place” more home buyers desire ranch homes with larger ground footprints and limited vertical space, driving the need to adjust lot coverages. As stated, this will also support open space set aside on the balance of the site in a percentage that exceeds minimum standards and will allow natural areas to remain largely intact as they exist.

6. Comparisons to R-3 Home Square Footage Minimum Requirements

   For single story/ranch from 1,650 sf under R-3 standards to proposed 1,400 sf.

   For two-story from 2,100 sf under R-3 standards to proposed 1,800 sf.

   For split level/multi-level from 1,650 sf under R-3 standards to 1,800 sf.

   Rationale – Although Westport expects average square footage sizes for their homes to be 1,850 sf for ranches, 2,500 sf for two stories, and 2,500 sf for split level/multi-level respectively, there is greater demand for smaller square footage homes in today’s housing market based on value concerns, and energy efficiency and home heating and cooling standards. Westport proposes to offer slightly smaller homes than the pre-determined code minimums under the R-3 standards so that homebuyers have more say in their purchase and where/how to spend their resources. (Regarding value, smaller homes with more finished material and architectural upgrades are more favored by today’s buyers than more gross square footage.) In this regard, it

is notable that Westport projects significantly more cost per square foot for its new homes as compared to existing housing stock because updated building code requirements, newer fire safety standards and the cost of the most popular interior finishes that drive new home prices more significantly than the cost of raw interior square footage.

[Note: Westport's projected average home values are $315,000 for traditional single family and $265,000 for empty nester units in Middletown Farms. This compares favorably with average sales of all homes in the Canal Winchester City School District for 2017 at $208,004, (through October 2017) and documented sales/closings of 145 four bedroom homes over the last 12 months in Canal Winchester City only at an average closing price of $233,000.]

Development Standards Subarea 2 – Aged Targeted, Detached Lifestyle Homes

1. Minimum Lot Area – 6,250 sf proposed compared to 14,400 sf under R-3 zoning requirements.

Rationale – As written and applied the R-3 standards do not support age targeted, empty nester and active adult detached single family homes. This product is surging in the market as the Baby-Boom generation downsizes from their traditional single family homes and seeks alternative housing arrangements as documented by numerous third party sources, including MORPC. (See MORPC 2050 report selected sheets on housing attached.) The proposed 6,250 sf lot size equates to an average lot of 50'x125'. This supports the desired lifestyle of this age-demographic, which is low maintenance, with the efficient provision of lawn, street and utility services many empty nesters seek. This modification will allow the offering of the most popular, first floor living, empty nester homes to accommodate those long term community residents who want to downsize but stay in Canal Winchester in a new home that fits their lifestyle. Such lot sizes also save perimeter and common open space, and provide greater flexibility in land planning to protect existing natural areas. Much of the same rationale applies to the efficiency of land use and open space maximization points as stated in the traditional single family lot size modification above, as well as how most downsizing, empty nesters want to spend their time, (ie: not working on or paying for large yard maintenance).

Finally, there is a benefit to introducing this product into a community that also includes traditional single family homes. The benefit is the product mix helps absorption and means all the homes do not compete against each other, either during initial sales or at resale.

2. Minimum Front Yard Setback – 25 ft. proposed compared to 30 ft. under R-3 zoning standards.

Rationale – Same as minimum lot area comparison above.

3. Minimum Side Yard Setback – 5 ft. proposed compared to 10 ft. under R-3 zoning standards.

Rationale – Same as minimum lot area modification above.

4. Typical Lot Frontage at Setback/Right of Way – 50 ft./40 ft. compared to 90 ft./ 50 ft.

Rationale – This standard allows smaller lots that are in favor for the empty nester market segment. The use of “wedge” or “pie-shaped” lots also allows more flexibility in land planning to accommodate street patterns and lot lay-outs to reflect the contour and pattern of natural areas and open space on the property. Allowing more moderate minimum lot frontages is also supported by the same reasoning as outlined under the minimum lot area modification above - the creation of more green space and lessen of development pressure on natural areas.

5. Maximum Lot Coverage – Proposed to be as depicted on the final building plans for each lot and subject setback standards as compared to 30%.

Rationale – The 30% limitation is a standard designed to regulate traditional single family housing that does not support empty nester home developments, and the limited yard maintenance and home styles desired by such homebuyers. The goals of Westport’s Lifestyle housing is to provide mainly first floor living, with adequate square footage, and limited yard areas, while setting aside common open space outside of development areas. Flexibility in lot coverage and setback standards is needed to meet such goals and to meet changing housing preferences. As more residents want to “age in place” more home buyers desire ranch homes with larger footprints and more limited vertical space. The “clustering” of empty nester homes supports open space set aside on the balance of the site in a percentage that significantly exceeds typical code standards and will allow natural areas to remain largely intact as they exist. In addition, allowing flexibility in this standard will allow Westport to offer its customers additional desirable architectural elements such as screened porches, sunrooms and three season rooms. This allows Westport to commit to variation of rear elevations in key visibility areas, which benefits the aesthetics of the community and creates a better development.

6. Comparison to R-3 Home Square Footage Minimum Requirements

For single story/ranch from 1,650 sf under R-3 standards to proposed 1,400 sf.

Rationale – Although Westport expects average square footage sizes for their age targeted, lifestyles homes to be 1,700, there is more demand for smaller square footage homes in today’s housing market for this buying segment based on the desire to age-in-

place, limit the living footprint and downsize from the previous housing choice. Energy efficiency and home heating and cooling standards also drive such home size preferences. Home pricing is expected to remain robust in terms of cost per square foot for this market segment as empty nesters tend to have more resources and spend more money on interior finishes. These homes have the added advantage of producing less peak hour traffic and fewer children than traditional single family housing based on the commuting patterns of the occupants and mainly first floor living design of the homes. The inclusion of this housing option represents less intensity of use compared with a community of all traditional single family homes and reduces the impact of the development on the community overall.

Other Comparisons to Base Code Chapter 1130 Standards:

1. Section 1130.07 (a) standards require that garages be located a minimum four (4) feet behind the front line of the livable area of the home. This standard is modified so that front load garage doors shall be located no more than four (4) feet in front of the most front facing architectural element of the home. Such architectural elements shall include roof projections, porches or other appropriate architectural projections.

Rationale: Entry to the home from the garage has replaced the front door as the primary access to many new homes. Thus, transitional spaces between the garage and the balance of the home are critically important in the market and represent a more updated home design compared to homes from a decade ago. Such transition areas include “mud rooms”, laundry, storage, closet spaces or other utility areas. Some reasonable garage projection is necessary to accommodate this more updated and desirable interior design and livability element offering to city residents. The developer has mitigated the base code standard by requiring that all homes in the community include architectural garage doors that are integrated with the overall design of the home. In addition, porches are required for each home. The porch requirement appropriately projects the house elevation with a roof line and provides architectural definition and mass beyond the living space of the homes. Along with the fact that Westport has provided architectural garage doors on all homes, such market driven needs and architectural treatment of the front elevations should be considered when evaluating the impact of the garage on the streetscape.

2. Modification from 1130.07 (b) that garage doors shall not exceed 50% of the house width frontage. This standard is modified to allow garage doors to exceed the code percentage for the both traditional single family and Lifestyle homes on applicable models as presented in elevation exhibits.

Rationale: The developer has mitigated the impact of this modification by requiring that all homes in both subareas include architectural garage doors that are integrated with

the overall design of the home. The commitment to architectural garage doors that appears in the text is consolidated here as follows:

a. All garage doors on all front elevations in the community shall be of a premium architectural style to compliment the architecture of the home. (ie: craftsman, farmhouse or carriage house style elements required). All front facing garage doors shall integrate the door as a design element with the balance of the home design. Architectural garage door elements shall include but may not be limited to board and batten elements, aesthetic hinges and/or other hardware or other similar design elements consistent with or complementary to the home design, as offered by the builder and chosen by customers.

b. No flat panel or plain panel garage doors or garage doors without architectural features will be permitted.

c. On all garages, light fixtures shall be placed at each side of the garage door in the top one-third of the vertical structure.

4274335.1 : 06918 00034

Exhibit “A-1”

Adjacent Owners and Addresses

Property Owners (within 250 feet)

John J and Donna L Gallick
8121 Oregon Road
Canal Winchester, Ohio 43110
Parcel # 181-000178-00

Betty L Klamfoth Trustee
8278 Oregon Road
Canal Winchester, Ohio 43110
Parcel # 181-000063-00

Lois M and Jerry L Tomlison Sr.
5593 Hayes Road
Canal Winchester, Ohio 43110
Parcel # 181-000039-00

Ritta M and Leland E Watkins Trustee
1313 S Fox Drive
New Palestine, Indiana 46163
Parcel # 180-000147-00
180-004955-00

Kelly A Coggins
5714 Hayes Road
Groveport, Ohio 43125
Parcel # 180-004199-00

John W, Joyce L, Paul R and Mark E Brewer
5726 Hayes Road
Groveport, Ohio 43215
Parcel # 180-004198-00

Hillary J and Joseph K Lutz
5742hayes Road
Groveport, Ohio 43125
Parcel # 180-004197-00

Kathryn L and Harold H Watkins
6100 Hayes Road
Groveport, Ohio 43125
Parcel # 180-004196-00

Judith A and William C Myers Trustees
5770 Hayes Road
Groveport, Ohio 43125
Parcel # 180-004195-00

Kristopher R Muncy Trustee
5786 Hayes Road
Groveport, Ohio 43125
Parcel # 180-004194-00

Brian D and Douglas P Kinney
5800 Hayes Road
Groveport, Ohio 43125
Parcel # 180-004193-00

Janet M and Mark W Wall
5840 Hayes Road
Groveport, Ohio 43125
Parcel # 189-000003-00
189-000002-00

Brenda R Gayheart
7525 Lithopolis Road
Groveport, Ohio 43125
Parcel # 180-004200-00

Shelley D Hanning
7515 Lithopolis Road
Groveport, Ohio 43125
Parcel # 180-004201-00

Patricia A and Steven R Lance
7574 Lithopolis Road
Groveport, Ohio 43125
Parcel # 184-001075-00

Dianna K and Bruce E Kelly
7586 Lithopolis Road
Groveport, Ohio 43125
Parcel # 184-001076-00

Property Owners (within 250 feet)

Darci A and John P Roberts
7600 Lithopolis Road
Groveport, Ohio 43125
Parcel # 184-001077-00

Susan l and Michael D quick
7614 Lithopolis Road
Canal Winchester, Ohio 43110
Parcel # 184-001078-00

Valerie M Wilde and Brandon J Scott
7646 Lithopolis Road
Canal Winchester, Ohio 43110
Parcel # 184-001079-00

Lorraine H Phillips
7808 Lithopolis Road
Canal Winchester, Ohio 43110
Parcel # 181-000158-00

Eleanor J Nunley
7844 Lithopolis Road
Canal Winchester, Ohio 43110
Parcel # 181-000301-00

Sue M and roger E II Sisler
5015 Lancaster Circleville Road SW
Lancaster, Ohio 43130
Parcel # 184-003245-00

William P Edwards
1750 Creek Road SW
Amanda, Ohio 43102
Parcel # 184-002993-00
184-003003-00
184-003002-00

South Central Power Co.
Director of Accounting
PO Box 250
Lancaster, Ohio 43130
Parcel # 184-003224-00

Betty L Klamfoth Trustee
8278 Oregon Road
Canal Winchester, Ohio 43110
Parcel # 181-000130-00

Exhibit “B-1”

Zoning Description and Plat

11.954 ACRES

Situated in the State of Ohio, County of Franklin, City of Canal Winchester, in Section 1, Township 10, Range 21, Congress Lands, being part of that 70.797 acre tract of land conveyed to The Dwight A. Imler Revocable Living Trust by deed of record in Instrument Number 201607050085266, (all references are to the records of the Recorder's Office, Franklin County, Ohio) and more particularly bounded and described as follows:

BEGINNING at the centerline intersection of Hayes Road and Lithopolis Road;

Thence South 53° 02' 57" East, with the centerline of said Lithopolis Road, a distance of 406.78 feet to the northwesterly corner of that 8.000 acre tract conveyed to Roger E. Sisler II by deed of record in Instrument Number 201604150045988;

Thence South 36° 43' 38" West, with the westerly line of said 8.000 acre tract, a distance of 721.31 feet to a point;

Thence North 53° 02' 48" West, crossing said 70.797 acre tract, a distance of 666.89 feet to a point in the easterly line of that 5.001 acre tract conveyed as Parcel III to The Dwight A. Imler Revocable Living Trust by deed of record in Instrument Number 201607050085266;

Thence North 00° 27' 50" East, with said easterly line, a distance of 419.95 feet to a point in the centerline of said Hayes Road;

Thence North 89° 50' 16" East, with said centerline, a distance of 635.80 feet to the POINT OF BEGINNING, containing 11.954 acres of land, more or less;

This description is to be used for zoning purposes only, not for transfer.

EVANS, MECHWART, HAMBLETON & TILTON, INC.

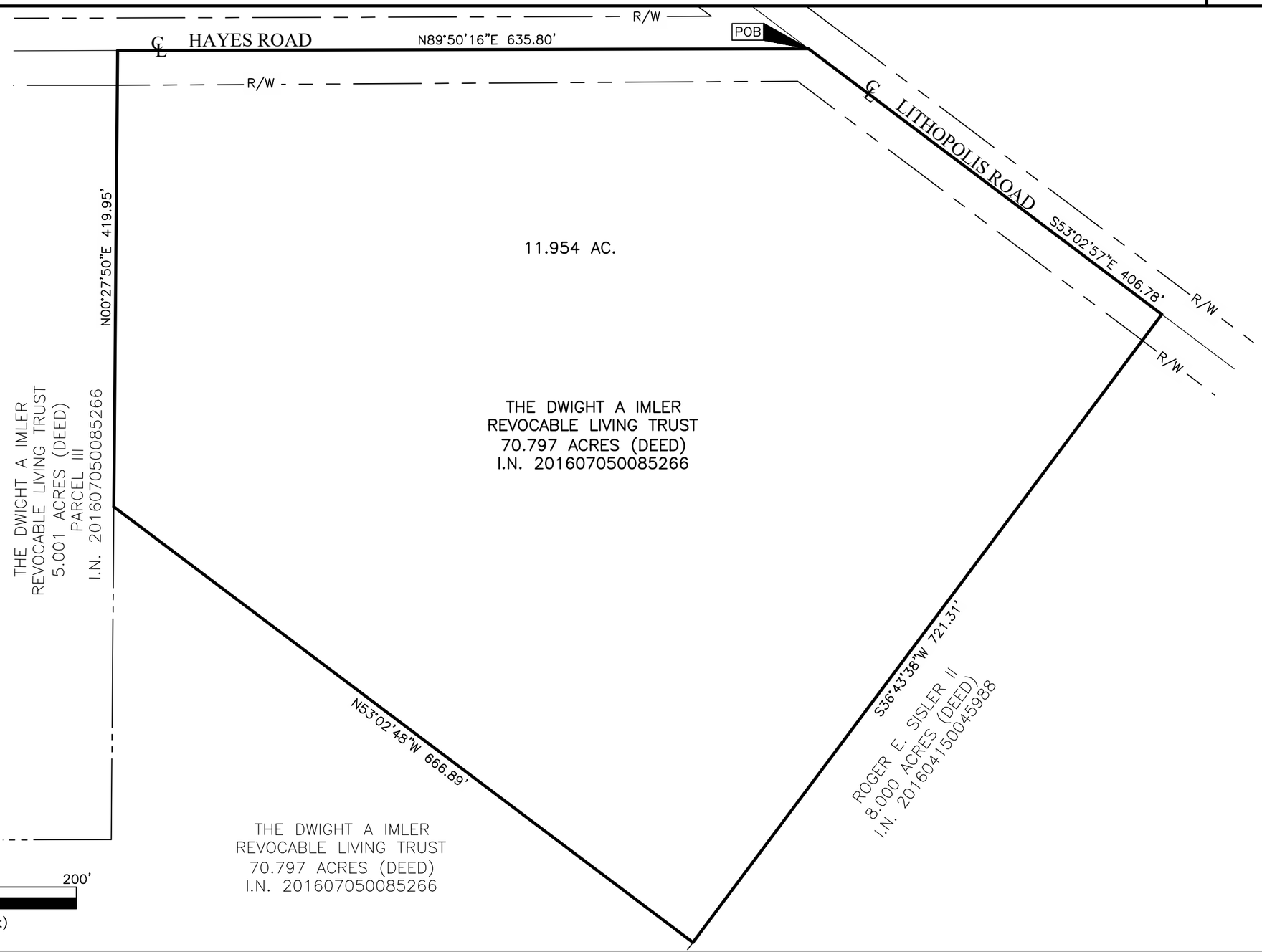
MAK:iep
11.954 ac 20171159-VS-ZONE-01.doc

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

ZONING EXHIBIT

SECTION 1, TOWNSHIP 10, RANGE 21
CONGRESS LANDS
CITY OF CANAL WINCHESTER, COUNTY OF FRANKLIN, STATE OF OHIO

Date:	November 16, 2017
Scale:	1" = 100'
Job No:	2017-1159



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Xrefs:

Exhibit “B-2”

Preliminary Development Plan
Description and Plat

79.488 ACRES

Situated in the State of Ohio, County of Franklin, City of Canal Winchester, in Section 1, Township 10, Range 21, Congress Lands, being all of those tracts of land conveyed to The Dwight A. Imler Revocable Living Trust by deed of record in Instrument Number 201607050085266, (all references are to the records of the Recorder's Office, Franklin County, Ohio) and more particularly bounded and described as follows:

BEGINNING at the centerline intersection of Hayes Road and Lithopolis Road;

Thence South 53° 02' 57" East, with the centerline of said Lithopolis Road, a distance of 406.78 feet to the northwesterly corner of that 8.000 acre tract conveyed to Roger E. Sisler II by deed of record in Instrument Number 201604150045988;

Thence South 36° 43' 38" West, with the westerly line of said 8.000 acre tract, a distance of 994.45 feet to a point;

Thence South 54° 38' 32" East, with the southerly line of said 8.000 acre tract, a distance of 869.10 feet to a point in the centerline of Oregon Road;

Thence South 35° 47' 33" West, with said centerline, a distance of 1324.26 feet to a point of curvature to the left;

Thence with said centerline and with the arc of said curve, having a central angle of 05° 11' 57", a radius of 573.63 feet, an arc length of 52.05 feet, a chord bearing of South 33° 11' 35" West and a chord length of 52.03 feet to the northeasterly corner of that 5.0254 acre tract conveyed to John J. Gallick by deed of record in Instrument Number 200111210270678;

Thence South 89° 51' 07" West, with said northerly line and with the northerly line of that 28.364 acre tract conveyed to Betty L. Klamfoth, Trustee by deed of record in Instrument Number 199812150323256, a distance of 893.55 feet to the southeasterly corner of that 47 acre tract conveyed to Jerry L. Tomlinson, Sr. and Lois M. Tomlinson by deed of record in Official Record 06626E05;

Thence North 00° 27' 50" East, with the easterly line of said 47 acre tract, a distance of 2661.11 feet to a point in the centerline of said Hayes Road;

Thence North 89° 50' 16" East, with said centerline, a distance of 1235.80 feet to the POINT OF BEGINNING, containing 79.488 acres of land, more or less;

EVANS, MECHWART, HAMBLETON & TILTON, INC.

MAK:iep
79.488 ac 20171159-VS-RCRD.doc

RECORD SURVEY

SECTION 1, TOWNSHIP 10, RANGE 21
CONGRESS LANDS
CITY OF CANAL WINCHESTER, COUNTY OF FRANKLIN, STATE OF OHIO

LOCATION MAP AND BACKGROUND DRAWING
NOT TO SCALE

R/W
N89°50'16"E 1235.80'
℄ HAYES ROAD
POB
Telephone Easement
D.B. 1001, Pg. 104
Item 15
10' Electric Easement
I.N. 199705150000289
℄ LITHOPOLIS ROAD
S53°02'57"E 406.78'

THE DWIGHT A IMLER
REVOCABLE LIVING TRUST
5.001 ACRES (DEED)
PARCEL III
I.N. 201607050085266

THE DWIGHT A IMLER
REVOCABLE LIVING TRUST
5.001 ACRES (DEED)
PARCEL II
I.N. 201607050085266

S36°43'38"W 994.45'

ROGER E. SISLER II
8.000 ACRES (DEED)
I.N. 201604150045988

20' Telephone Easement
D.B. 1033, Pg. 91

S54°38'32"E 869.10'

JERRY L. TOMLISON, SR. AND
LOIS M. TOMLISON
47 ACRES (DEED)
O.R. 06626E05

N00°27'50"E 2661.11'

THE DWIGHT A IMLER
REVOCABLE LIVING TRUST
70.797 ACRES (DEED)
I.N. 201607050085266

79.488 Ac.

S35°47'33"W 1324.26'
℄ OREGON ROAD

Δ=5°11'57" R=573.63'
Arc=52.05'
ChBrg=S33°11'35"W
Ch=52.03'

S89°51'07"W 893.55'

BETTY L. KLAMFOTH, TRUSTEE
28.364 ACRES (DEED)
I.N. 199812150323256

JOHN J. GALLICK
5.0254 ACRES (DEED)
I.N. 200111210270678

Schedule B Items from File No. C20170814 issued by Citizens Land Title Agency with an effective date of August 8, 2017 at 8:00 A.M.

Items 1-14 NOT A SURVEY RELATED ITEMS.

Item 15 Easement to South Central Power Company filed in Instrument Number 199705150000289, Franklin County records. 10' ELECTRIC EASEMENT IS LOCATED ON THE SUBJECT TRACT AS SHOWN HEREON.

EASEMENTS NOT LOCATED IN FILE NO. C20170814 BUT ARE LOCATED ON THE SUBJECT TRACT.

20' Telephone Easement of record in Deed Book 1033, Page 91 is located on the subject tract.

Telephone Easement is not located on the subject tract but is shown for reference.

100 0 100 200
GRAPHIC SCALE (in feet)

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

Date:	December 8, 2017
Scale:	1" = 100'
Job No:	2017–1159
Sheet:	1 of 1

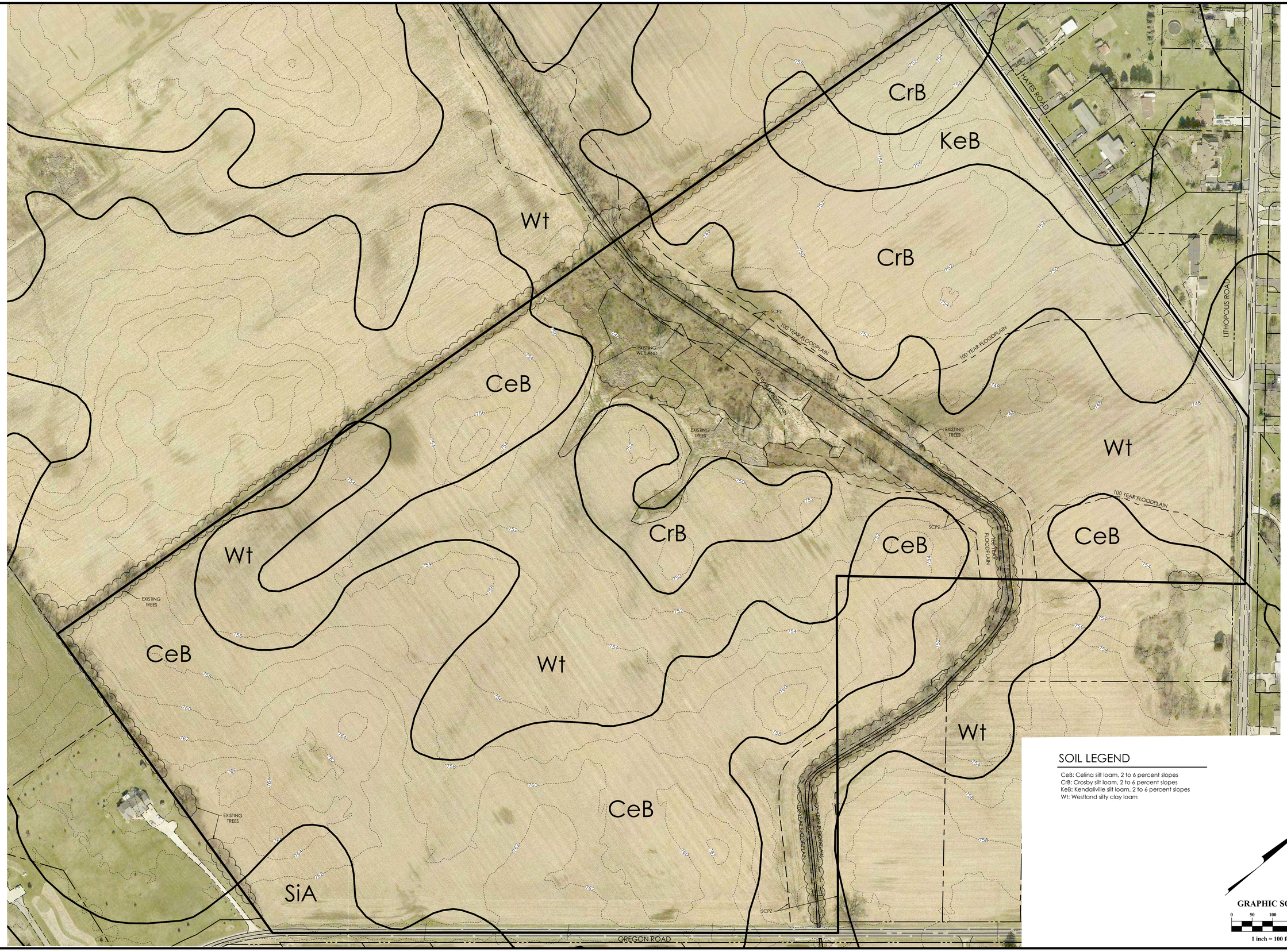
REVISIONS

MARK	DATE	DESCRIPTION

J:\20171159\DWG\04SHEETS\EXHIBITS\20171159-VS-RCRD.DWG plotted by PRITCHARD, IAN on 12/8/2017 3:08:58 PM last saved by PRITCHARD on 12/8/2017 2:15:16 PM
Xrefs:

Exhibit “C-1”

Existing Conditions Plan



REVISIONS		
MARK	DATE	DESCRIPTION
	1/22/18	REVISED PER STAFF COMMENTS
	4/23/18	REVISED PER STAFF COMMENTS

WESTPORT HOMES
507 Executive Campus Drive, Suite 100
Westerville, Ohio 43081
Phone: (614) 268-8066

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
DEVELOPMENT PLAN
FOR
MIDDLETOWN FARMS
EXISTING CONDITIONS PLAN

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 866.775.5368
emht.com

DATE
DECEMBER 18, 2017

SCALE
1" = 100'

JOB NO.
20171159

EXHIBIT
C-1

\\CMHDATA01\PROJECT\20171159\DWG\SHEETS\DEVELOPMENT PLAN\C-1 EXISTING CONDITIONS PLAN.DWG plotted by TILCK, ANDREW on 4/20/2018 9:46:42 AM last saved by ATILCK on 4/16/2018 8:01:20 AM

Exhibit “D-1”

Site Plan and Location Map

LOCATION MAP
NO SCALE

SITE STATISTICS:

TOTAL ACREAGE:	±79.5 ACRES
NET ACREAGE:	±63.8 ACRES (EXCLUDING R/W)
NET DEVELOPABLE AREA:	±50.84 ACRES (EXCLUDING R/W AND REQUIRED OPEN SPACE)
TOTAL NUMBER OF LOTS:	175
TRADITIONAL:	117
LIFESTYLE:	58
TOTAL GROSS DENSITY:	±2.2 LOTS/ACRE
NET DEVELOPABLE DENSITY:	±3.44 LOTS/ACRE (BASED ON NET DEVELOPABLE AREA)
OPEN SPACE REQUIRED:	±12.76 ACRES, 20% (BASED ON NET ACREAGE)
TOTAL OPEN SPACE PROVIDED:	±22.2 ACRES, 34.7% (BASED ON NET ACREAGE)
RESERVE "A":	±0.2 ACRES
RESERVE "B":	±0.3 ACRES
RESERVE "C":	±18.9 ACRES
RESERVE "D":	±2.1 ACRES
RESERVE "E":	±0.5 ACRES
RESERVE "F":	±0.2 ACRES

NOTES:

NOTE "A":
ALL OF MIDDLETOWN FARMS IS IN THE FLOOD HAZARD ZONE X AND ZONE AE AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP NUMBER 39045C0125G, EFFECTIVE DATE JANUARY 6, 2012.

NOTE "B":
4' SIDEWALKS SHALL BE PROVIDED PARALLEL AND ON BOTH SIDES OF THE ROADS WITHIN THE PROPOSED RIGHT OF WAY.

NOTE "C":
RESERVES "A"-"F" ARE OPEN SPACES WITHIN THE DEVELOPMENT AND THEY SHALL BE OWNED AND MAINTAINED BY THE MIDDLETOWN FARMS HOMEOWNERS ASSOCIATION.

GRAPHIC SCALE
0 50 100 200
1 inch = 100 feet

REVISIONS

MARK	DATE	DESCRIPTION
	1/22/18	REVISED PER STAFF COMMENTS
	4/23/18	REVISED PER STAFF COMMENTS

WESTPORT HOMES
507 Executive Campus Drive, Suite 100
Westerville, Ohio 43081
Phone: (614) 865-8086

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
DEVELOPMENT PLAN
FOR
MIDDLETOWN FARMS
SITE PLAN

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
DECEMBER 18, 2017

SCALE
1" = 100'

JOB NO.
20171159

EXHIBIT
D-1

\\CMHDATA\PROJECTS\20171159\DWG\SHEETS\DEVELOPMENT PLAN\D-1 SITE PLAN.DWG plotted by FLOW, ANDREW on 4/20/2018 9:46:50 AM last saved by ATLOW on 4/20/2018 8:11:51 AM

REVISIONS

MARK	DATE	DESCRIPTION
	1/22/18	REVISED PER STAFF COMMENTS
	4/23/18	REVISED PER STAFF COMMENTS

WESTPORT HOMES
507 Executive Campus Drive, Suite 100
Westerville, Ohio 43081
Phone: (614) 568-8086

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
DEVELOPMENT PLAN
FOR
MIDDLETOWN FARMS
ILLUSTRATIVE SITE PLAN

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 866.775.5648
emht.com

DATE
DECEMBER 18, 2017

SCALE

JOB NO.
20171159

EXHIBIT

\\CMHDATA01\PROJECTS\20171159\DWG\04SHEETS\DEVELOPMENT PLAN\ILLUSTRATIVE SITE PLAN.DWG plotted by FILICK, ANDREW on 11/20/2017 9:37:14 AM last saved by AFILICK on 4/23/2018 7:43:37 AM

Exhibit “D-2”

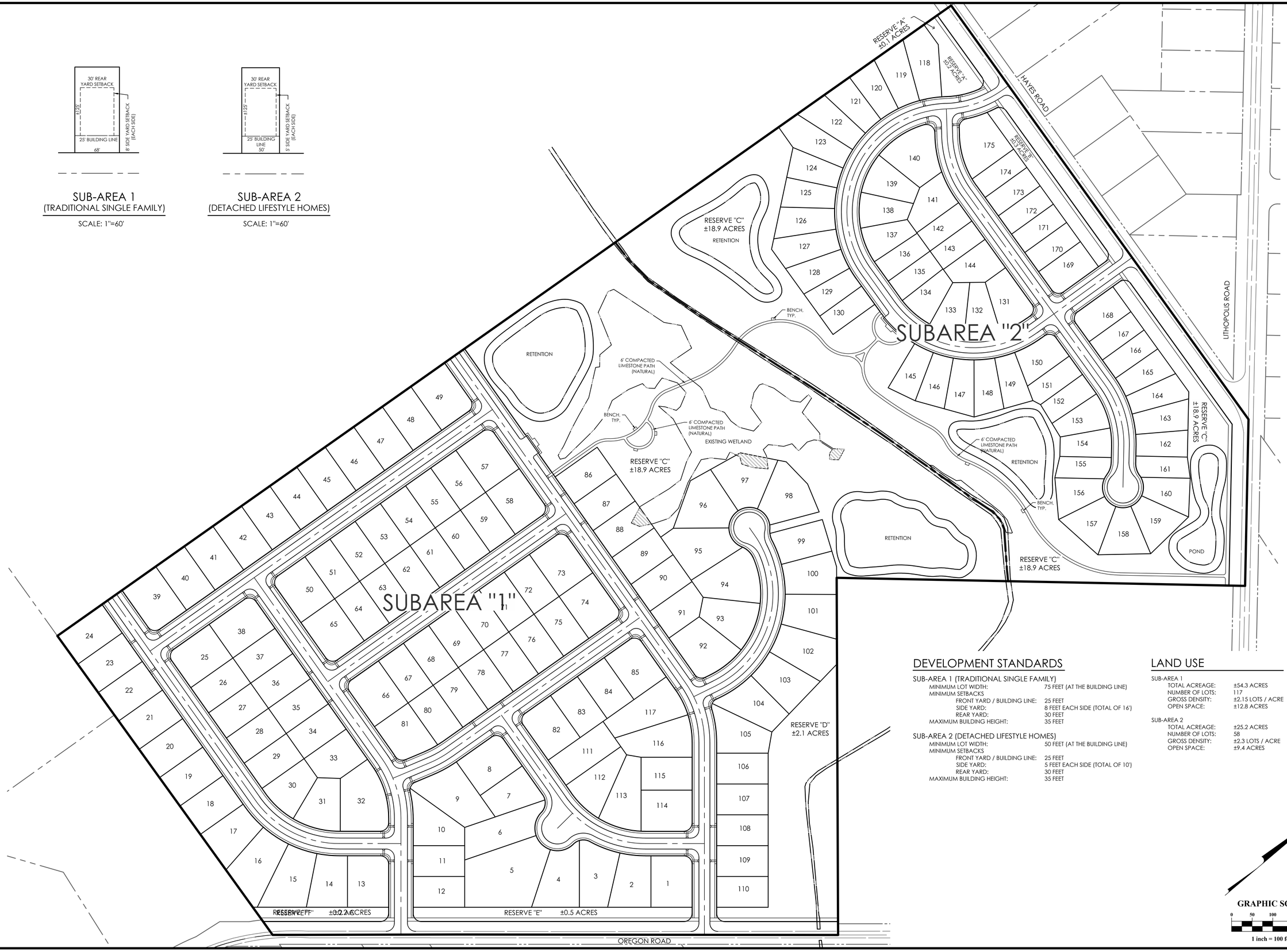
Sub-Area Plan

SUB-AREA 1
(TRADITIONAL SINGLE FAMILY)

SCALE: 1"=60'

SUB-AREA 2
(DETACHED LIFESTYLE HOMES)

SCALE: 1"=60'



DEVELOPMENT STANDARDS

SUB-AREA 1 (TRADITIONAL SINGLE FAMILY)

MINIMUM LOT WIDTH:	75 FEET (AT THE BUILDING LINE)
MINIMUM SETBACKS	
FRONT YARD / BUILDING LINE:	25 FEET
SIDE YARD:	8 FEET EACH SIDE (TOTAL OF 16')
REAR YARD:	30 FEET
MAXIMUM BUILDING HEIGHT:	35 FEET

SUB-AREA 2 (DETACHED LIFESTYLE HOMES)

MINIMUM LOT WIDTH:	50 FEET (AT THE BUILDING LINE)
MINIMUM SETBACKS	
FRONT YARD / BUILDING LINE:	25 FEET
SIDE YARD:	5 FEET EACH SIDE (TOTAL OF 10')
REAR YARD:	30 FEET
MAXIMUM BUILDING HEIGHT:	35 FEET

LAND USE

SUB-AREA 1

TOTAL ACREAGE:	±54.3 ACRES
NUMBER OF LOTS:	117
GROSS DENSITY:	±2.15 LOTS / ACRE
OPEN SPACE:	±12.8 ACRES

SUB-AREA 2

TOTAL ACREAGE:	±25.2 ACRES
NUMBER OF LOTS:	58
GROSS DENSITY:	±2.3 LOTS / ACRE
OPEN SPACE:	±9.4 ACRES

GRAPHIC SCALE

0 50 100 200

1 inch = 100 feet

REVISIONS

MARK	DATE	DESCRIPTION
	1/22/18	REVISED PER STAFF COMMENTS
	4/23/18	REVISED PER STAFF COMMENTS

WESTPORT HOMES
507 Executive Campus Drive, Suite 100
Westerville, Ohio 43081
Phone: (614)365-8086

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
DEVELOPMENT PLAN
FOR
MIDDLETOWN FARMS
SUBAREA PLAN

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
DECEMBER 18, 2017

SCALE
1" = 100'

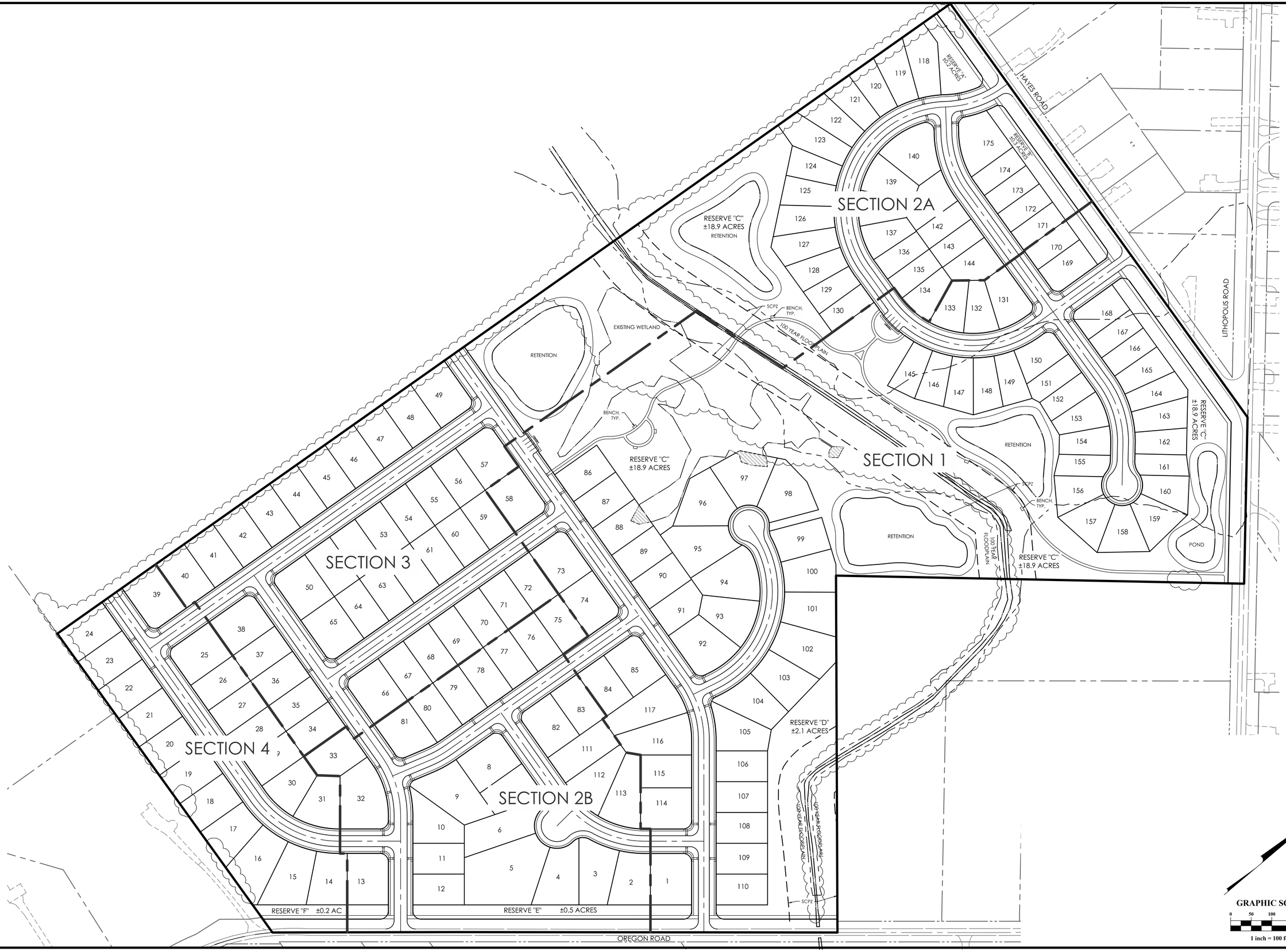
JOB NO.
20171159

EXHIBIT
D-2

\\CMHDATA01\PROJECT01\20171159\DWG\04SHEETS\DEVELOPMENT PLAN\D-2 SUBAREA PLAN.DWG plotted by FLICK, ANDREW on 4/20/2018 9:46:55 AM last saved by ATLICK on 4/20/2018 8:15:42 AM

Exhibit “D-3”

Phasing Plan



GRAPHIC SCALE

0 50 100 200

1 inch = 100 feet

REVISIONS

MARK	DATE	DESCRIPTION
	1/22/18	REVISED PER STAFF COMMENTS
	4/23/18	REVISED PER STAFF COMMENTS

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507 Executive Campus Drive, Suite 100
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CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
DEVELOPMENT PLAN
FOR
MIDDLETOWN FARMS
PHASING PLAN

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DATE
DECEMBER 18, 2017

SCALE
1" = 100'

JOB NO.
20171159

EXHIBIT
D-3

\\CMHDATA01\PROJECT\20171159\DWG\24SHEETS\DEVELOPMENT PLAN\D-3 PHASING PLAN.DWG plotted by FLICK, ANDREW on 4/20/2018 9:47:02 AM last saved by ATLICK on 4/16/2018 4:10:50 PM

Exhibit “D-4”

Open Space and Pedestrian
Connectivity Plan

REVISIONS

MARK	DATE	DESCRIPTION
	1/2/18	REVISED PER STAFF COMMENTS
	4/23/18	REVISED PER STAFF COMMENTS

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CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
DEVELOPMENT PLAN
FOR
MIDDLETOWN FARMS
OPEN SPACE & PEDESTRIAN CONNECTIVITY PLAN

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DATE
DECEMBER 18, 2017

SCALE
1" = 100'

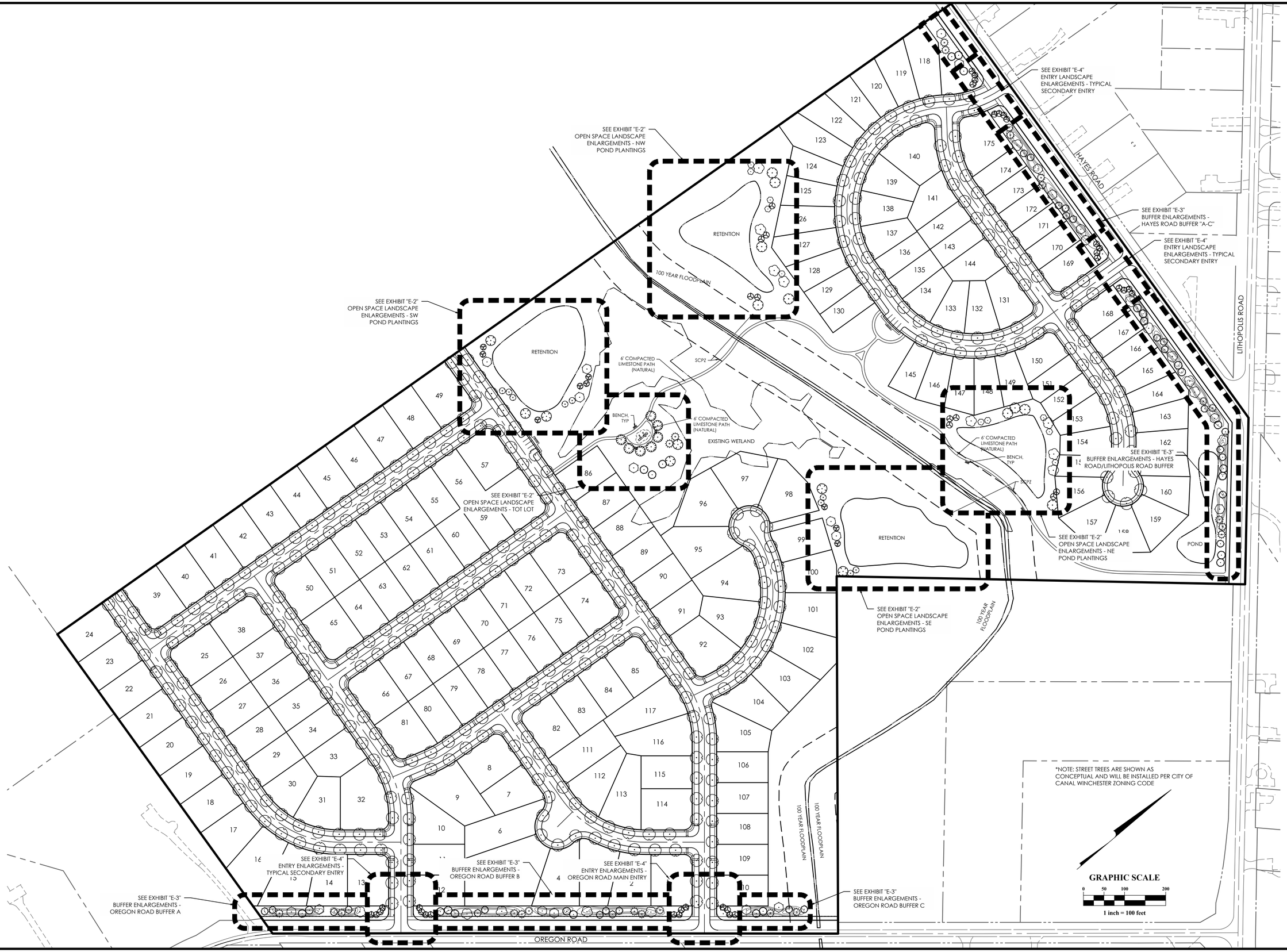
JOB NO.
20171159

EXHIBIT
D-4

\\DMROFAG1\PROJECTS1\20171159\DWG\SHEETS\DEVELOPMENT PLAN\D-4 OPEN SPACE PLAN.DWG plotted by FLICK, ANDREW on 4/20/2018 9:47:08 AM last saved by AFLICK on 4/20/2018 8:24:09 AM

Exhibit “E-1”

Overall Landscape Plan



REVISIONS		
MARK	DATE	DESCRIPTION
	1/22/18	REVISED PER STAFF COMMENTS
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CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
DEVELOPMENT PLAN
FOR
MIDDLETOWN FARMS
OVERALL LANDSCAPE PLAN

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DATE
DECEMBER 18, 2017

SCALE
1" = 100'

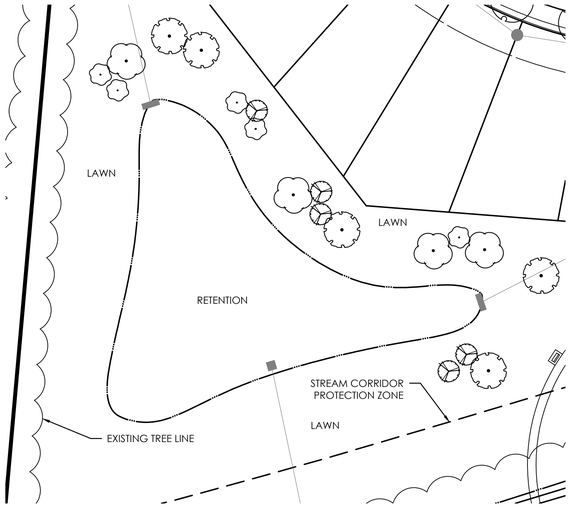
JOB NO.
20171159

EXHIBIT
E-1

\\DAVIDATA01\PROJECTS\20171159\DWG\SHEETS\DEVELOPMENT PLAN\E-1 OVERALL LANDSCAPE PLAN.DWG plotted by FLICK, ANDREW on 4/20/2018 9:47:15 AM last saved by APFLDW on 4/20/2018 8:35:06 AM

Exhibit “E-2”

Open Space Landscape Enlargement Plans



NW Pond Landscape
Scale: 1" = 50'

GRAPHIC SCALE
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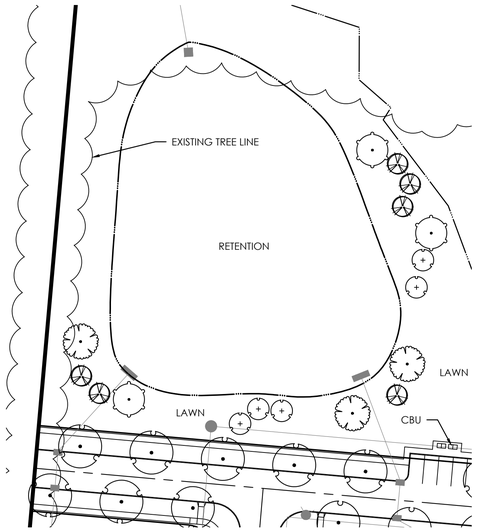
1 inch = 50 feet



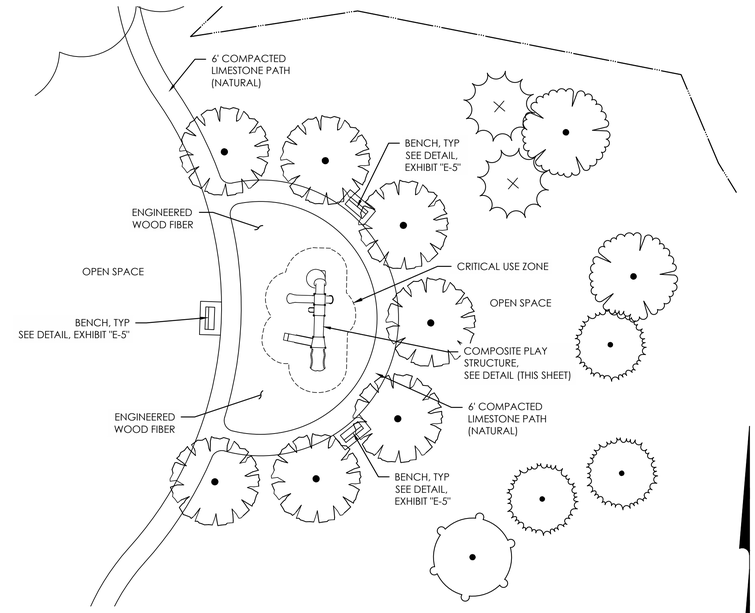
SW Pond 'B' Landscape
Scale: 1" = 50'

PLANT SCHEDULE NW POND LANDSCAPE

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
	5	Liquidambar styraciflua	American Sweet Gum	2.5" Cal.	B&B
	4	Quercus rubra	Red Oak	2.5" Cal.	B&B
ORNAMENTAL TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**CONDITION**
	5	Amelanchier laevis 'Lustre'	Lustre Allegheny Serviceberry	1.5" Cal.	B&B
	5	Prunus x 'Snow Goose'	Snow Goose Cherry	1.5" Cal.	B&B

PLANT SCHEDULE SW POND LANDSCAPE

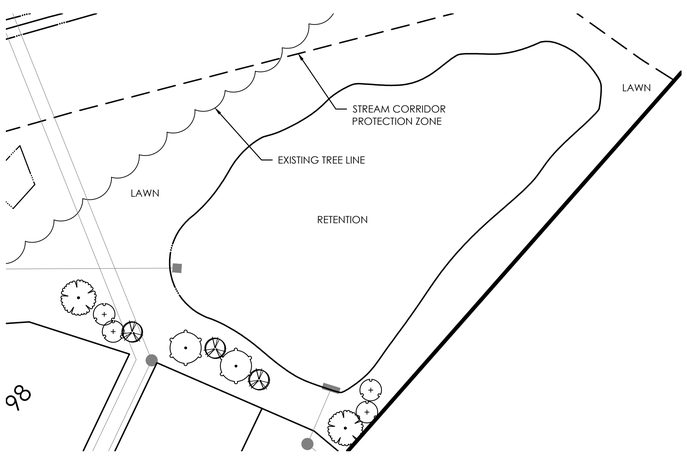
TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
	3	Platanus occidentalis	American Sycamore	2.5" Cal.	B&B
	3	Quercus shumardii	Shumard Red Oak	2.5" Cal.	B&B
ORNAMENTAL TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**CONDITION**
	5	Cercis canadensis 'Appalachian Red'	Appalachian Red Redbud	1.5" Cal.	B&B
	6	Malus x 'Spring Snow'	Spring Snow Crab Apple	1.5" Cal.	B&B



Tot Lot
Scale: 1" = 20'

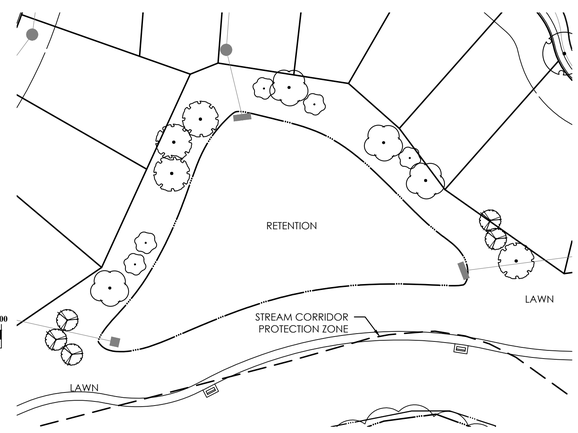
PLANT SCHEDULE TOT LOT LANDSCAPE

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
	7	Acer rubrum	Red Maple	2.5" Cal.	B&B
	1	Platanus occidentalis	American Sycamore	2.5" Cal.	B&B
	2	Quercus shumardii	Shumard Red Oak	2.5" Cal.	B&B
EVERGREEN TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**CONDITION**
	3	Picea abies	Norway Spruce	6' Ht.	B&B
	2	Picea glauca	White Spruce	6' Ht.	B&B



SE Pond Landscape
Scale: 1" = 50'

GRAPHIC SCALE
0 25 50 100
1 inch = 50 feet



NE Pond Landscape
Scale: 1" = 50'

Composite Play Structure
No Scale

Composite Play Structure
No Scale

PLANT SCHEDULE SE POND LANDSCAPE

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
	2	Platanus occidentalis	American Sycamore	2.5" Cal.	B&B
	2	Quercus shumardii	Shumard Red Oak	2.5" Cal.	B&B
ORNAMENTAL TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**CONDITION**
	4	Cercis canadensis 'Appalachian Red'	Appalachian Red Redbud	1.5" Cal.	B&B
	3	Malus x 'Spring Snow'	Spring Snow Crab Apple	1.5" Cal.	B&B

PLANT SCHEDULE NE POND LANDSCAPE

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
	4	Liquidambar styraciflua	American Sweet Gum	2.5" Cal.	B&B
	4	Quercus rubra	Red Oak	2.5" Cal.	B&B
ORNAMENTAL TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**CONDITION**
	5	Amelanchier laevis 'Lustre'	Lustre Allegheny Serviceberry	1.5" Cal.	B&B
	5	Prunus x 'Snow Goose'	Snow Goose Cherry	1.5" Cal.	B&B

REVISIONS

MARK	DATE	DESCRIPTION
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CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
DEVELOPMENT PLAN
FOR
MIDDLETOWN FARMS
OPEN SPACE ENLARGEMENTS

DATE
DECEMBER 18, 2017

SCALE
As Noted

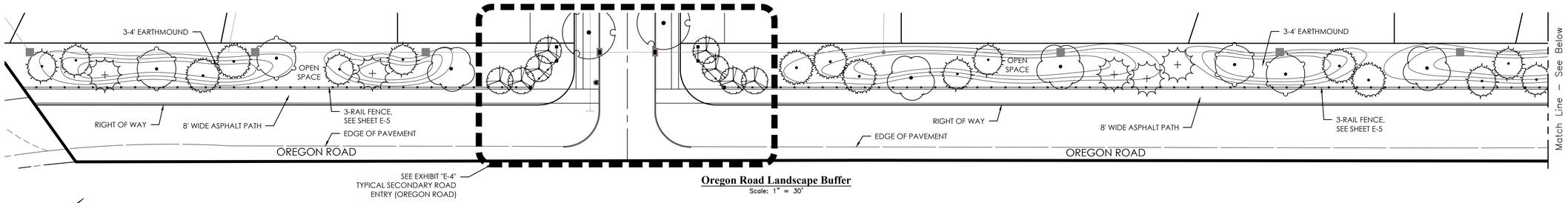
JOB NO.
20171159

EXHIBIT
E-2

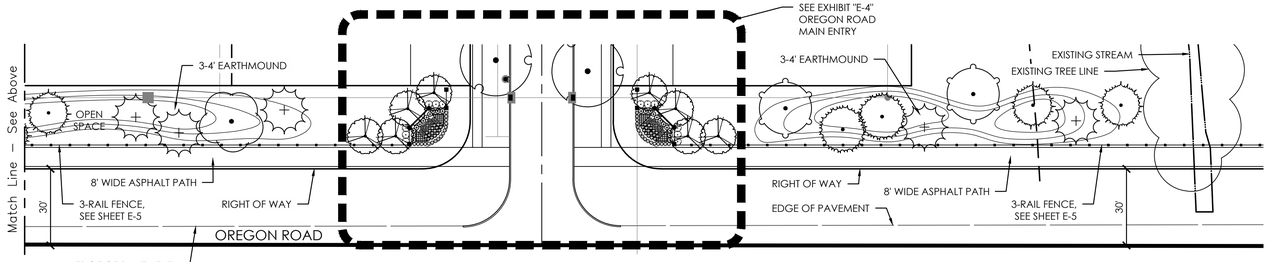
\\CMHDATA01\PROJECTS\20171159\DWG\SHEETS\DEVELOPMENT PLAN\E-1 OVERALL LANDSCAPE PLAN.DWG plotted by FLEck, ANDREW on 4/20/2018 9:47:17 AM last saved by FLEck on 4/20/2018 9:35:50 AM

Exhibit “E-3”

Buffer Landscape Enlargement Plan



Oregon Road Landscape Buffer
Scale: 1" = 30'

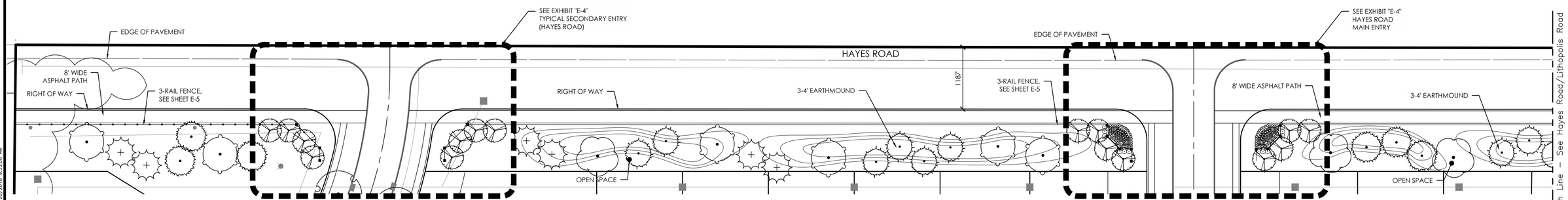


Oregon Road Landscape Buffer
Scale: 1" = 30'

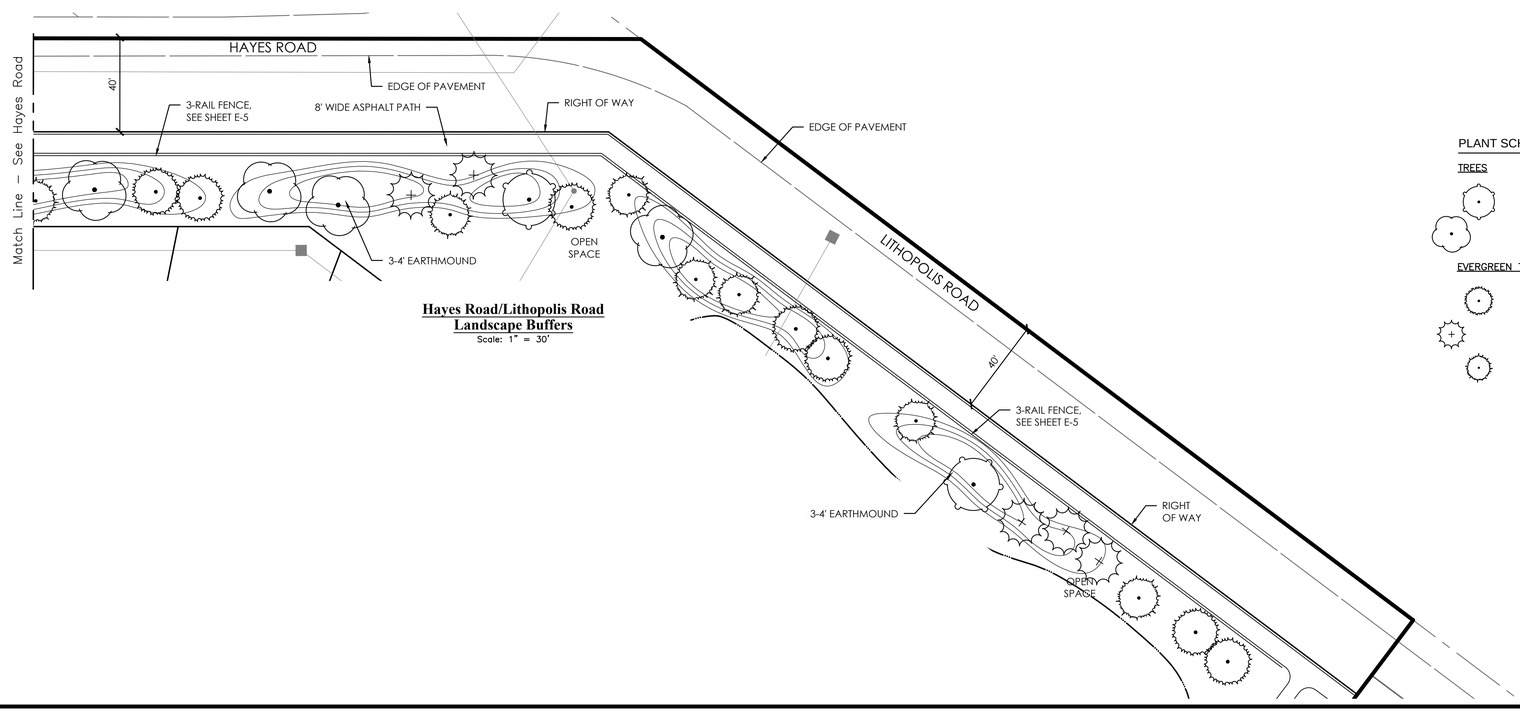
GRAPHIC SCALE
0 15 30 60
1 inch = 30 feet

PLANT SCHEDULE OREGON ROAD LANDSCAPE BUFFER

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
	6	Platanus occidentalis	American Sycamore	2.5" Cal.	B&B
	5	Quercus rubra	Red Oak	2.5" Cal.	B&B
EVERGREEN TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**CONDITION**
	9	Picea abies	Norway Spruce	6' Ht.	B&B
	10	Picea glauca	White Spruce	6' Ht.	B&B
	12	Picea pungens	Colorado Spruce	6' Ht.	B&B



Hayes Road Landscape Buffer
Scale: 1" = 30'



Hayes Road/Lithopolis Road Landscape Buffers
Scale: 1" = 30'

GRAPHIC SCALE
0 15 30 60
1 inch = 30 feet

PLANT SCHEDULE HAYES ROAD/LITHOPOLIS ROAD LANDSCAPE BUFFER

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
	8	Platanus occidentalis	American Sycamore	2.5" Cal.	B&B
	7	Quercus rubra	Red Oak	2.5" Cal.	B&B
EVERGREEN TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**CONDITION**
	13	Picea abies	Norway Spruce	6' Ht.	B&B
	11	Picea glauca	White Spruce	6' Ht.	B&B
	15	Picea pungens	Colorado Spruce	6' Ht.	B&B

REVISIONS

MARK	DATE	DESCRIPTION
	1/22/18	REVISED PER STAFF COMMENTS
	4/23/18	REVISED PER STAFF COMMENTS

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SCALE
1" = 100'

JOB NO.
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EXHIBIT
E-3

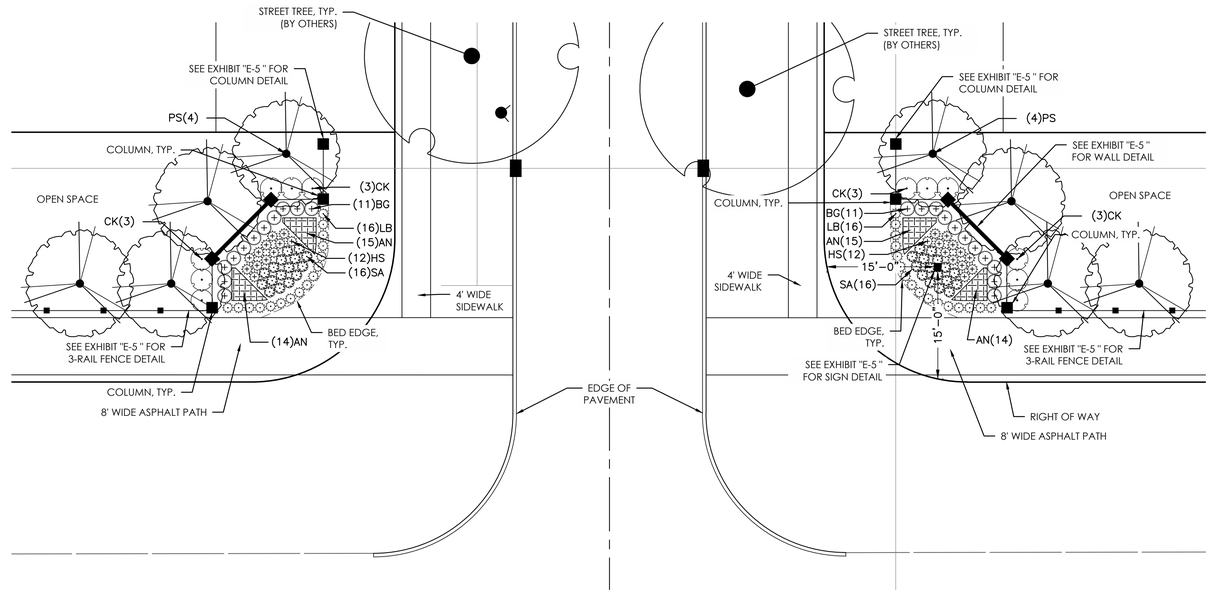
\\CMHDATA01\PROJECTS\20171159\DWG\04-SHEETS\DEVELOPMENT PLAN\E-1 OVERALL LANDSCAPE PLAN.DWG plotted by FLICK, ANDREW on 4/20/2018 9:47:20 AM last saved by AFLICK on 4/20/2018 9:35:06 AM

Exhibit “E-4”

Entry Landscape Enlargement Plans

PLANT SCHEDULE TYPICAL MAIN ENTRY (OREGON ROAD NORTH ENTRY & HAYES ROAD EAST ENTRY)

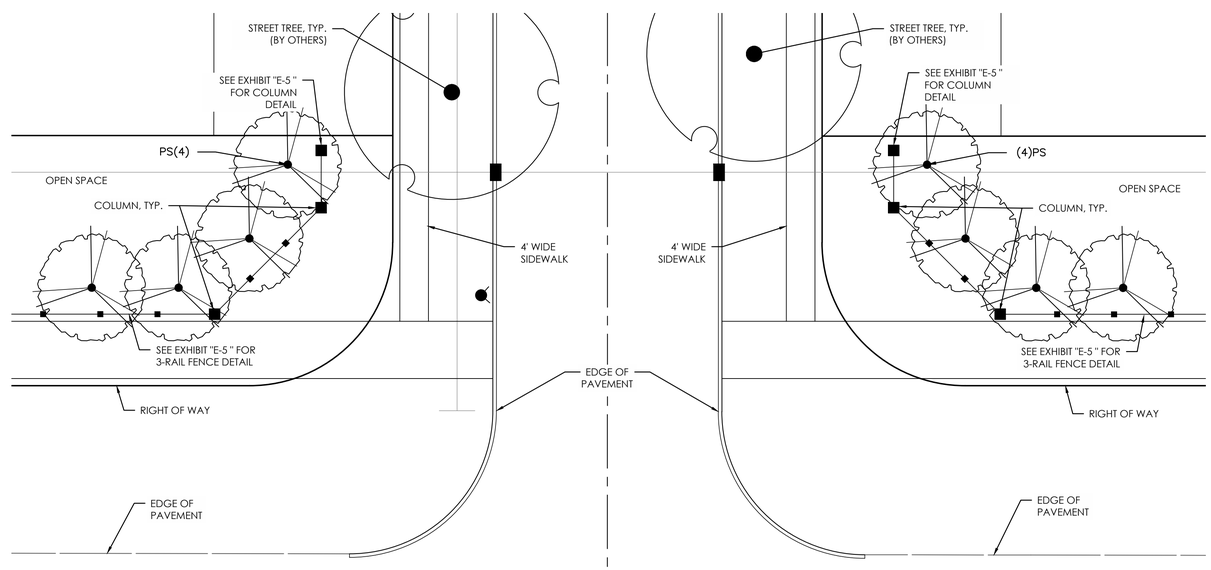
ORNAMENTAL TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	
PS	8	Prunus x 'Snow Goose'	Snow Goose Cherry	1.5" Cal.	B&B	
SHRUBS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**CONDITION**	
BG	22	Buxus x 'Green Gem'	Green Gem Boxwood	24" Ht.	Cont.	
GRASSES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**CONDITION**	
CK	12	Calamagrostis x acutiflora 'Karl Foerster'	Feather Reed Grass	#2	Cont.	
HS	24	Hemerocallis x 'Stella de Oro'	Stella de Oro Daylily	#1	Cont.	
LB	32	Liriope muscari 'Big Blue'	Big Blue Liriope	#1	Cont.	
PERENNIALS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**CONDITION**	
SA	32	Sedum x 'Autumn Joy'	Autumn Joy Sedum	#1	Cont.	
GROUND COVERS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**CONDITION**	**SPACING**
AN	58	Annual Color		Annual		12" o.c.



Typical Main Entry
(Oregon Road North Entry & Hayes Road East Entry)
Scale: 1" = 10'

PLANT SCHEDULE TYPICAL SECONDARY ENTRY (OREGON ROAD & HAYES ROAD)

ORNAMENTAL TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
PS	8	Prunus x 'Snow Goose'	Snow Goose Cherry	1.5" Cal.	B&B



Typical Secondary Entry
(Oregon Road & Hayes Roads)
Scale: 1" = 10'

GRAPHIC SCALE
0 50 100 200
1 inch = 100 feet

REVISIONS

MARK	DATE	DESCRIPTION
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	4/23/18	REVISED PER STAFF COMMENTS

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DEVELOPMENT PLAN
FOR
MIDDLETOWN FARMS
ENTRY ENLARGEMENTS

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SCALE
1" = 100'

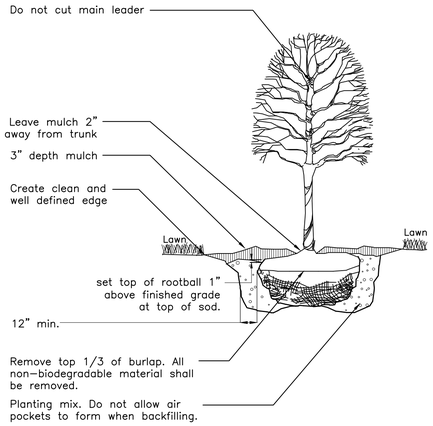
JOB NO.
20171159

EXHIBIT
E-4

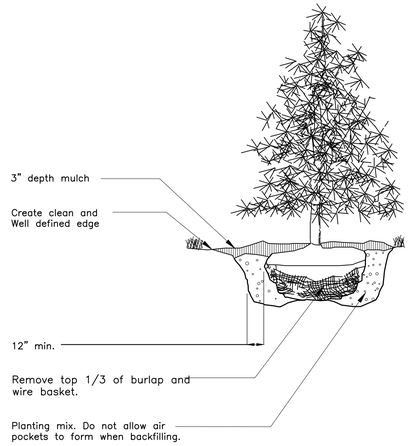
\\CMHDATA01\PROJECTS\20171159\DWG\SHEETS\DEVELOPMENT PLAN\E-1 OVERALL LANDSCAPE PLAN.DWG plotted by FLICK, ANDREW on 4/20/2018 9:47:22 AM last saved by AFLICK on 4/20/2018 9:35:56 AM

Exhibit “E-5”

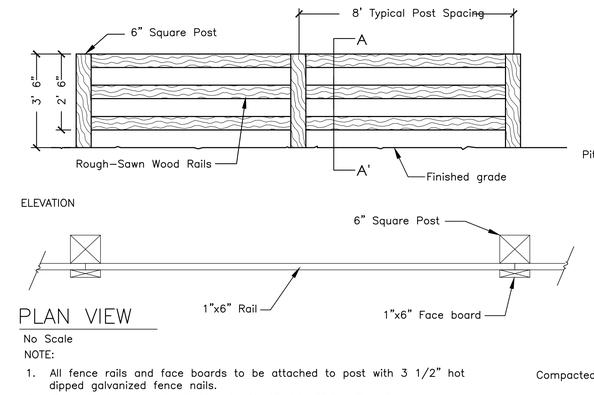
Landscape Details



Deciduous Tree Planting
No Scale

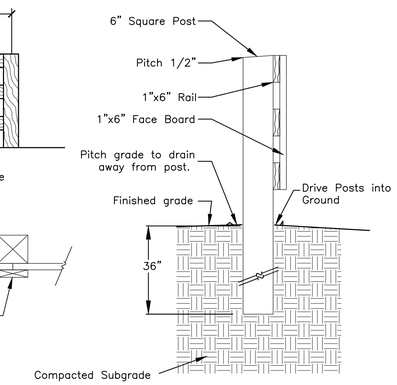


Evergreen Tree Planting
No Scale

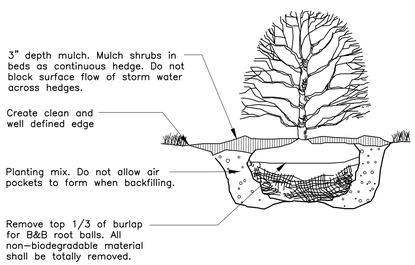


No Scale
NOTE:
1. All fence rails and face boards to be attached to post with 3 1/2" hot dipped galvanized fence nails.
2. Fence to be sprayed with Cabots Old Virginia White oil stain.

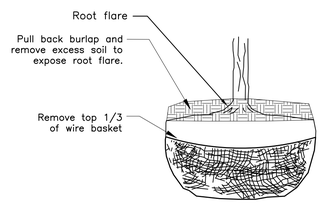
3-Rail Fence Detail
No Scale



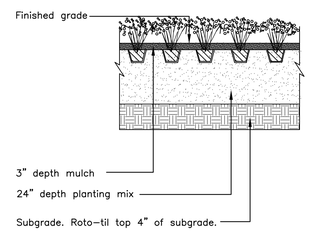
Section A-A'



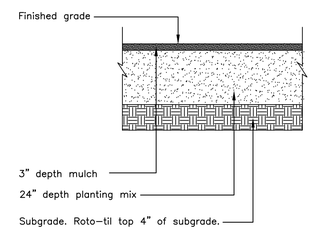
Shrub Planting
No Scale



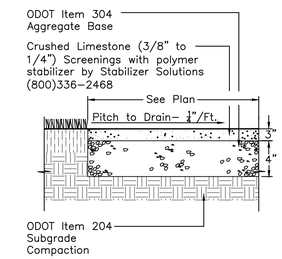
Rootball Preparation
No Scale



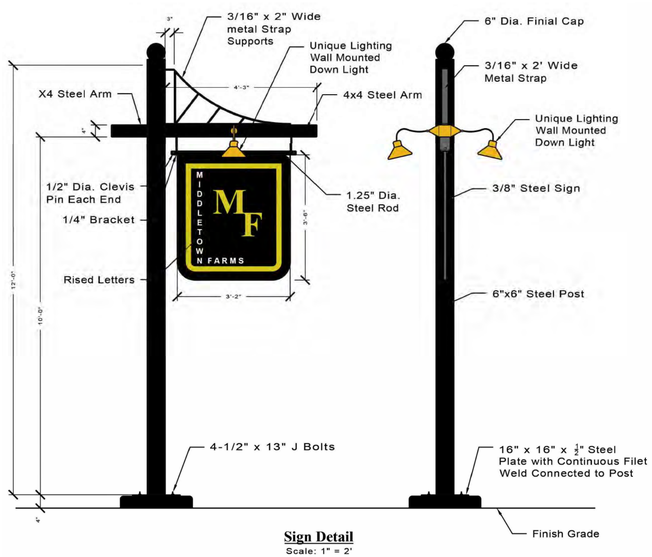
Perennial & Groundcover Planting
No Scale



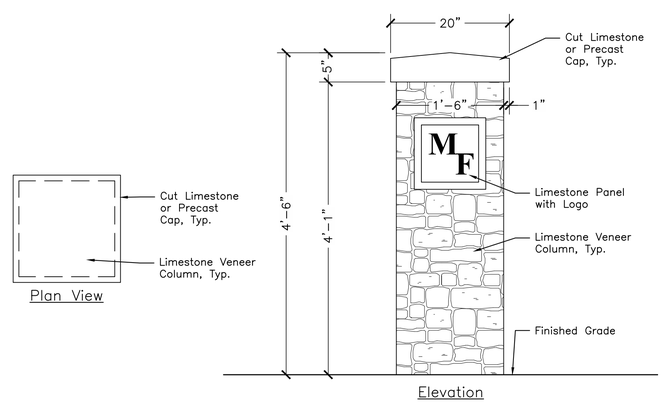
Planting Area Establishment
No Scale



Stabilized Crushed Limestone Path
No Scale

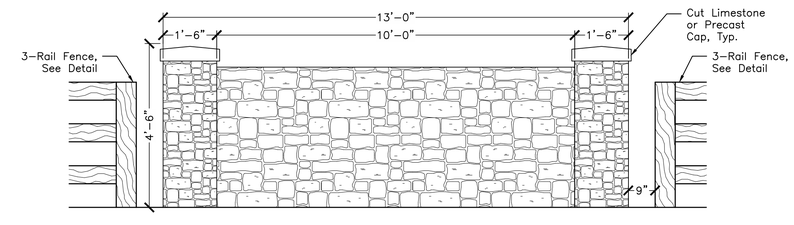


Sign Detail
Scale: 1" = 2'



Typical Entry Column Detail
Scale: 1" = 1'

Typical Bench
No Scale



Main Entry Feature Wall
Scale: 1" = 2'

REVISIONS			
MARK	DATE	DESCRIPTION	
	1/22/18	REVISED PER STAFF COMMENTS	
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MIDDLETOWN FARMS
LANDSCAPE DETAILS

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SCALE
As Noted

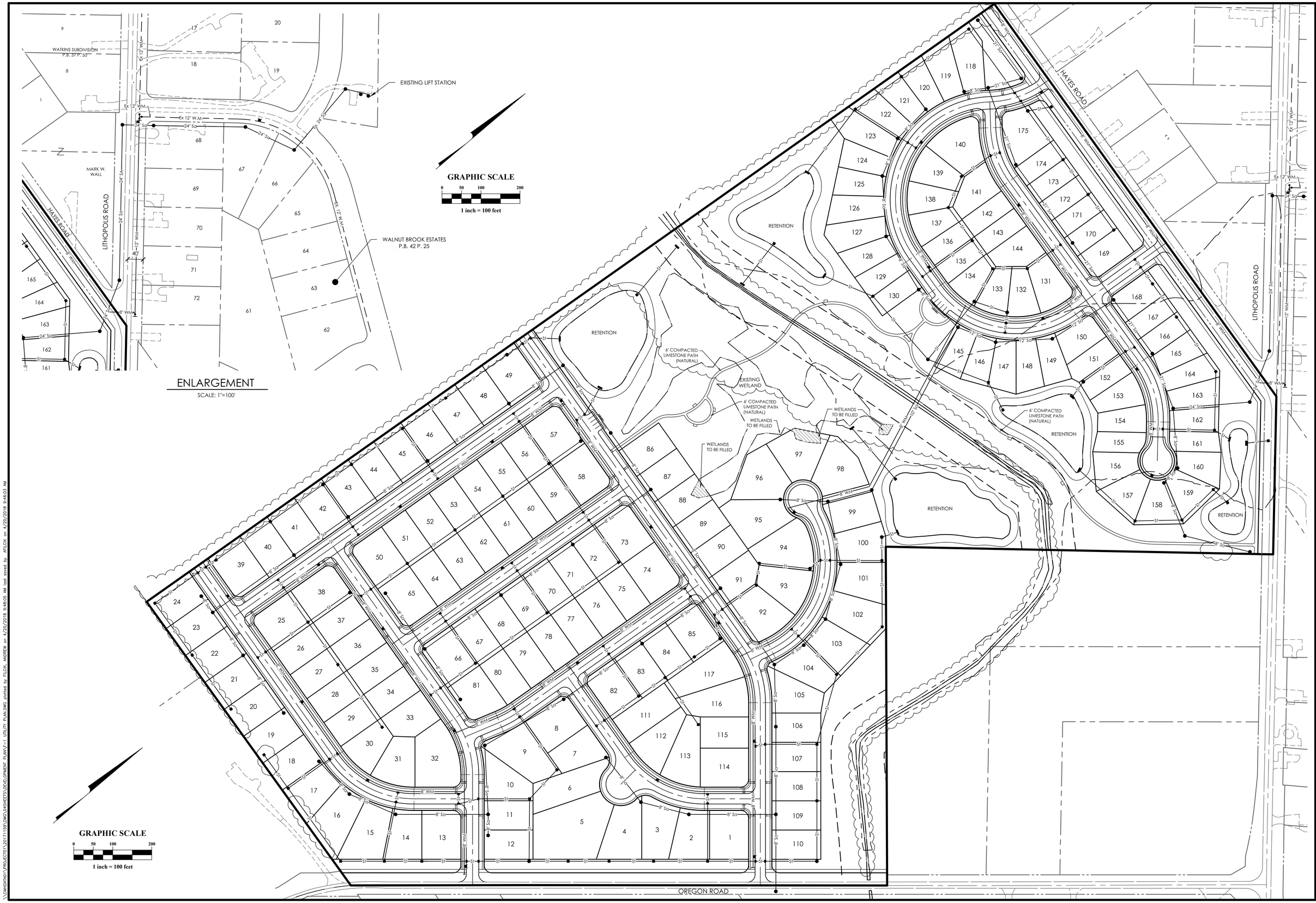
JOB NO.
20171159

EXHIBIT
E-5

\\CWIDATA01\PROJECTS\20171159\DWG\SHEETS\DEVELOPMENT PLAN\E-5 LANDSCAPE DETAILS.DWG plotted by FLOW, ANDREW on 4/20/2018 9:47:28 AM last saved by AFLOW on 1/19/2018 4:09:53 PM

Exhibit “F-1”

Utility Plan



REVISIONS

MARK	DATE	DESCRIPTION
	1/22/18	REVISED PER STAFF COMMENTS
	4/23/18	REVISED PER STAFF COMMENTS

WESTPORT HOMES
507 Executive Campus Drive, Suite 100
Westerville, Ohio 43081
Phone: (614) 890-8086

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
DEVELOPMENT PLAN
FOR

MIDDLETOWN FARMS
UTILITY PLAN

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Fax: 614.775.4800
Toll Free: 888.775.3648
emht.com

DATE
DECEMBER 18, 2017

SCALE
1" = 100'

JOB NO.
20171159

EXHIBIT
F-1

\\OWHDATA01\PROJECT01\20171159\DWG\04SHEETS\DEVELOPMENT PLAN\F-1 UTILITY PLAN.DWG plotted by FLOCK, ANDREW on 4/20/2018 9:48:05 AM last saved by FFLOCK on 4/20/2018 9:46:03 AM

Exhibit “G-1”

Architectural Elevations

Architectural Elevations

Traditional Single Family
Subarea 1

THE ASCOTT

Elevation 'B' (with optional stone)

Elevation 'D' (with optional brick)

Elevation 'A'

Elevation 'B' (with optional bonus room or 4th bedroom)

Elevation 'C' (with optional stone)

WESTPORT HOMES

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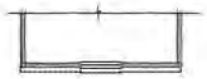
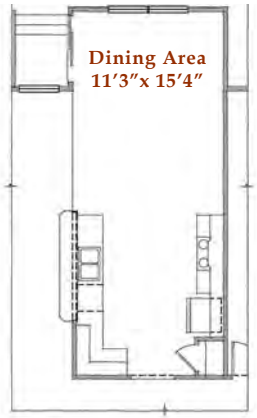
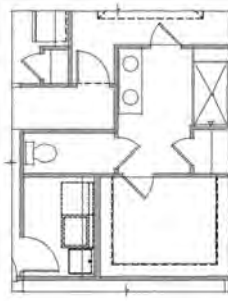
THE ASCOTT



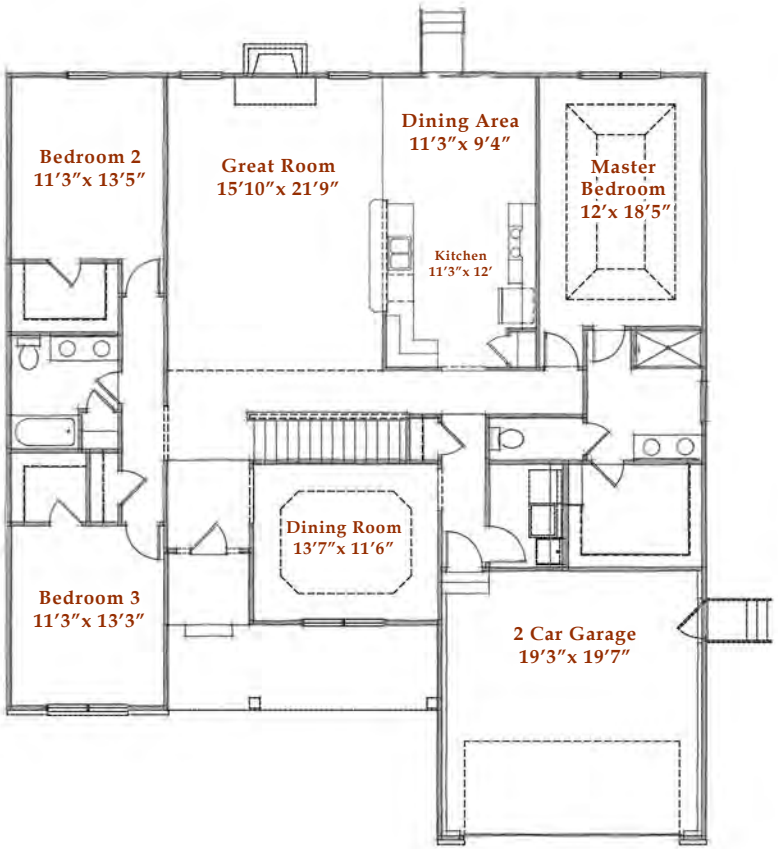
Bedroom 3 w/ Elevation "B"
(optional)



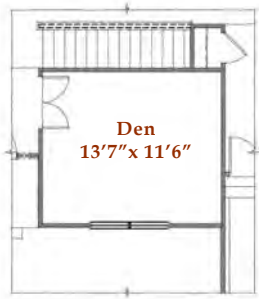
Dining Area w/ 6′ Extention
(optional)



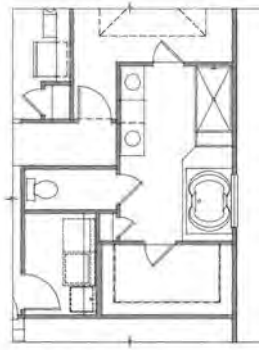
Master Bath 5′ Shower w/ Seat
(optional)



First Floor

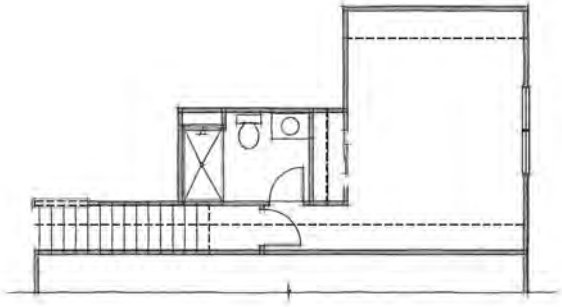


Den I.L.O. Dining Room
(optional)

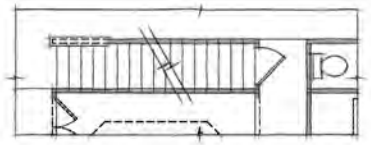


Deluxe Master Bath
(optional)

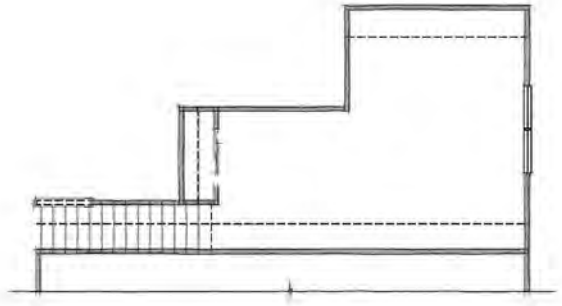
Master Bedroom
12′0″ x 17′1″



4th Bedroom w/ Private Bath
12′x 16′5″



Stairs to 2nd Floor Bonus Room
or 4th Bedroom w/ Private Bath



Bonus Room
21′x 16′5″

Second Floor

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THE ASCOTT II

Elevation 'B' (with optional stone)

Elevation 'D' (with optional brick)

Elevation 'A'

Elevation 'B' (with optional bonus room or 4th bedroom)

Elevation 'C' (with optional stone)

WESTPORT HOMES

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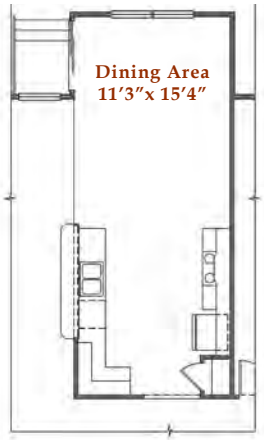
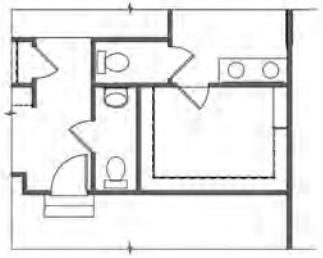
THE ASCOTT II

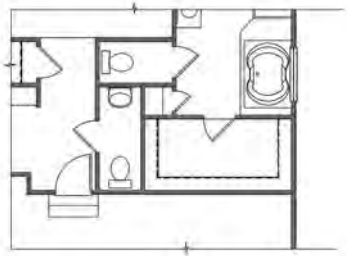
Bedroom 3 w/ Elevation "B"
(optional)



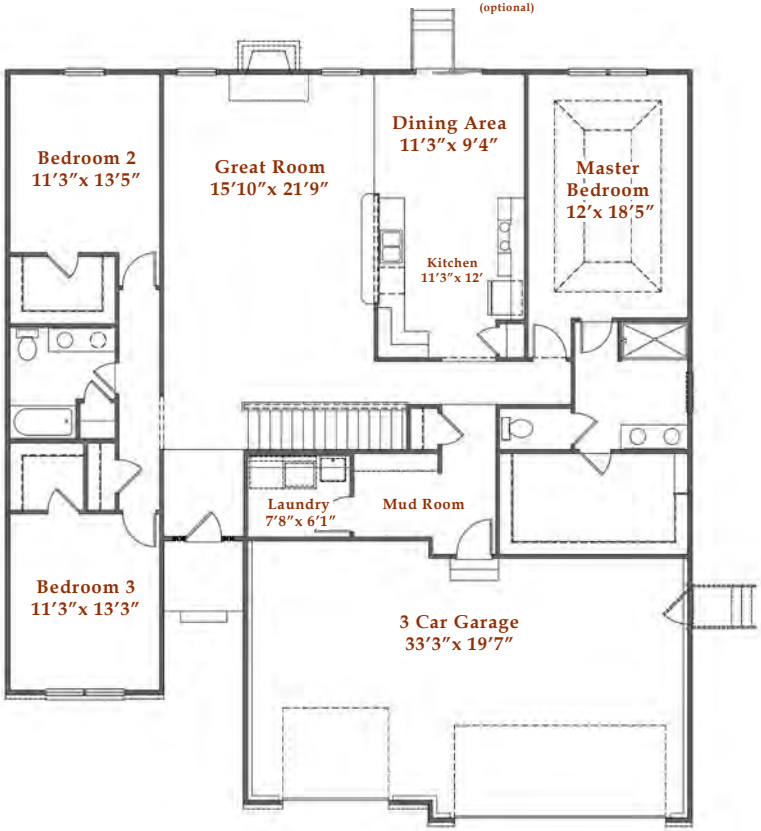
Dining Area w/ 6' Extention
(optional)

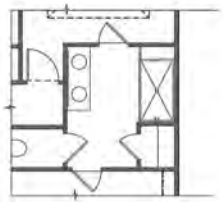


Half Bath & Standard
Master Bath
(optional)

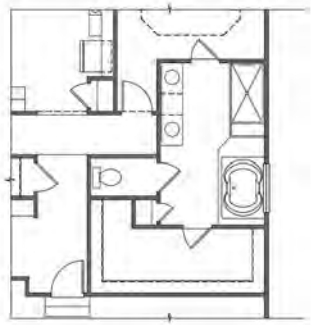


Half Bath & Deluxe
Master Bath
(optional)





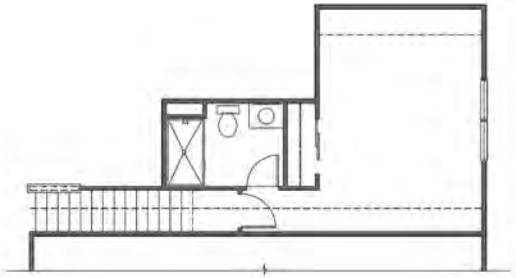
Master 5' Shower
w/ Seat
(optional)



Deluxe Master Bath
(optional)

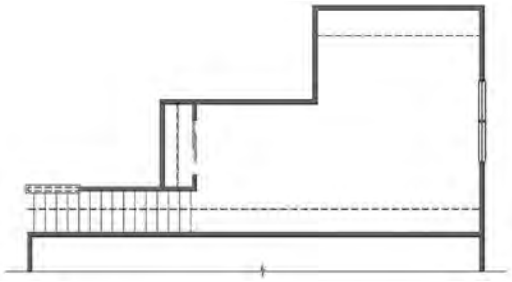
Master Bedroom
12'0" x 17'1"

First Floor



4th Bedroom w/ Private Bath
12'x 16'5"

Stairs to 2nd Floor Bonus Room
or 4th Bedroom w/ Private Bath



Bonus Room
21'x 16'5"

Second Floor

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THE ASHFORD

Elevation 'B' (with optional brick front and full front porch)

Elevation 'A'

Elevation 'C' (with optional stone front)

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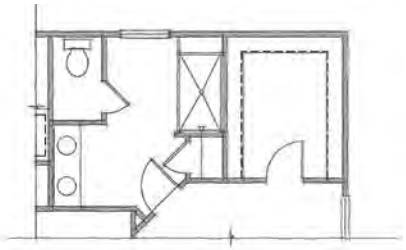
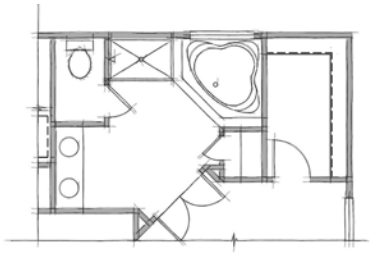
THE ASHFORD



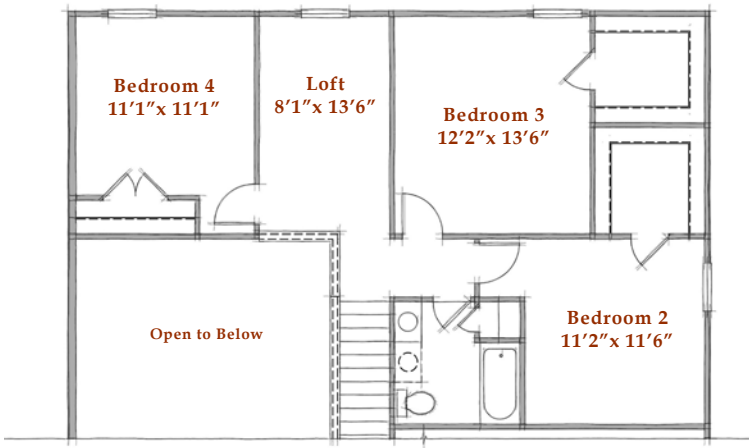
Master Bath with 5′ Shower

(optional)



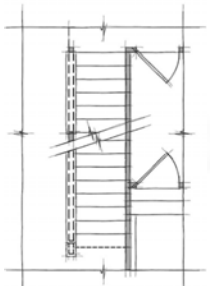
Deluxe Master Bath

(optional)



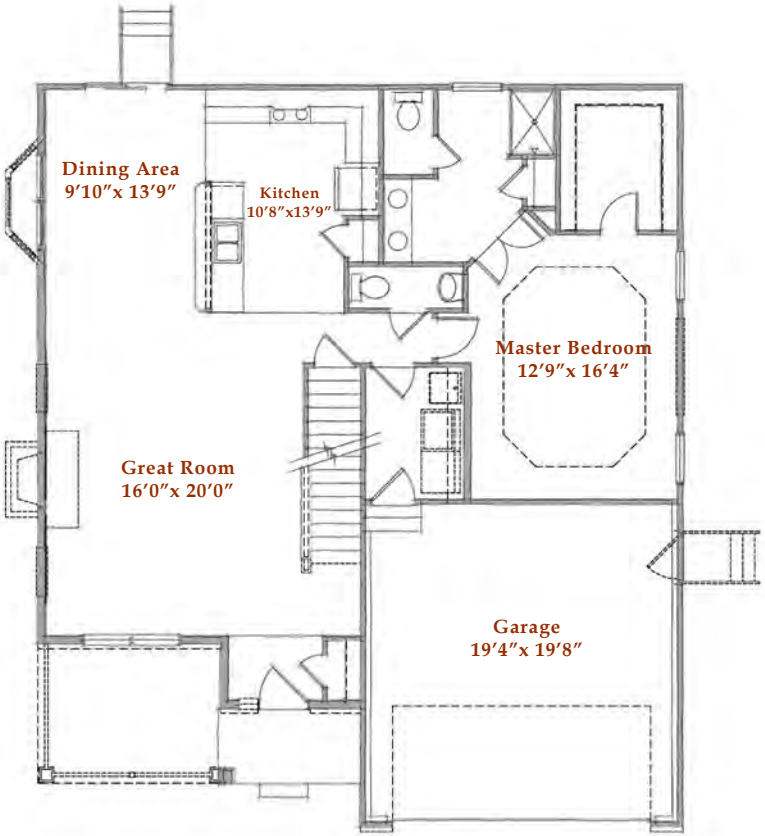
Optional 4th Bedroom

(optional)

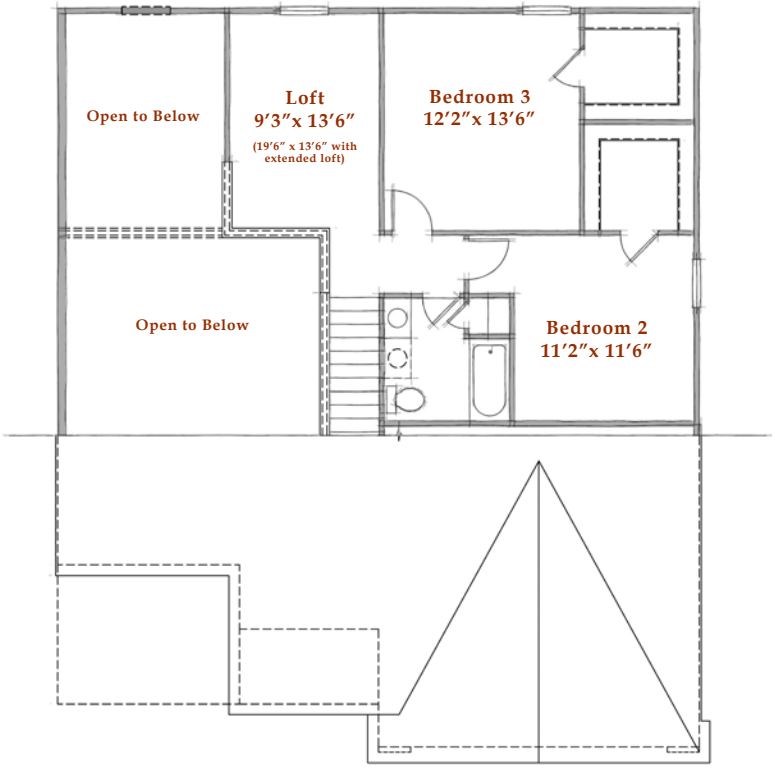


Open Stairs to Basement

(optional)



First Floor



Second Floor

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THE BAXLEY

Elevation 'C' (with optional stone front)

Elevation 'A' (with optional brick front)

Elevation 'B' (with optional stone front)

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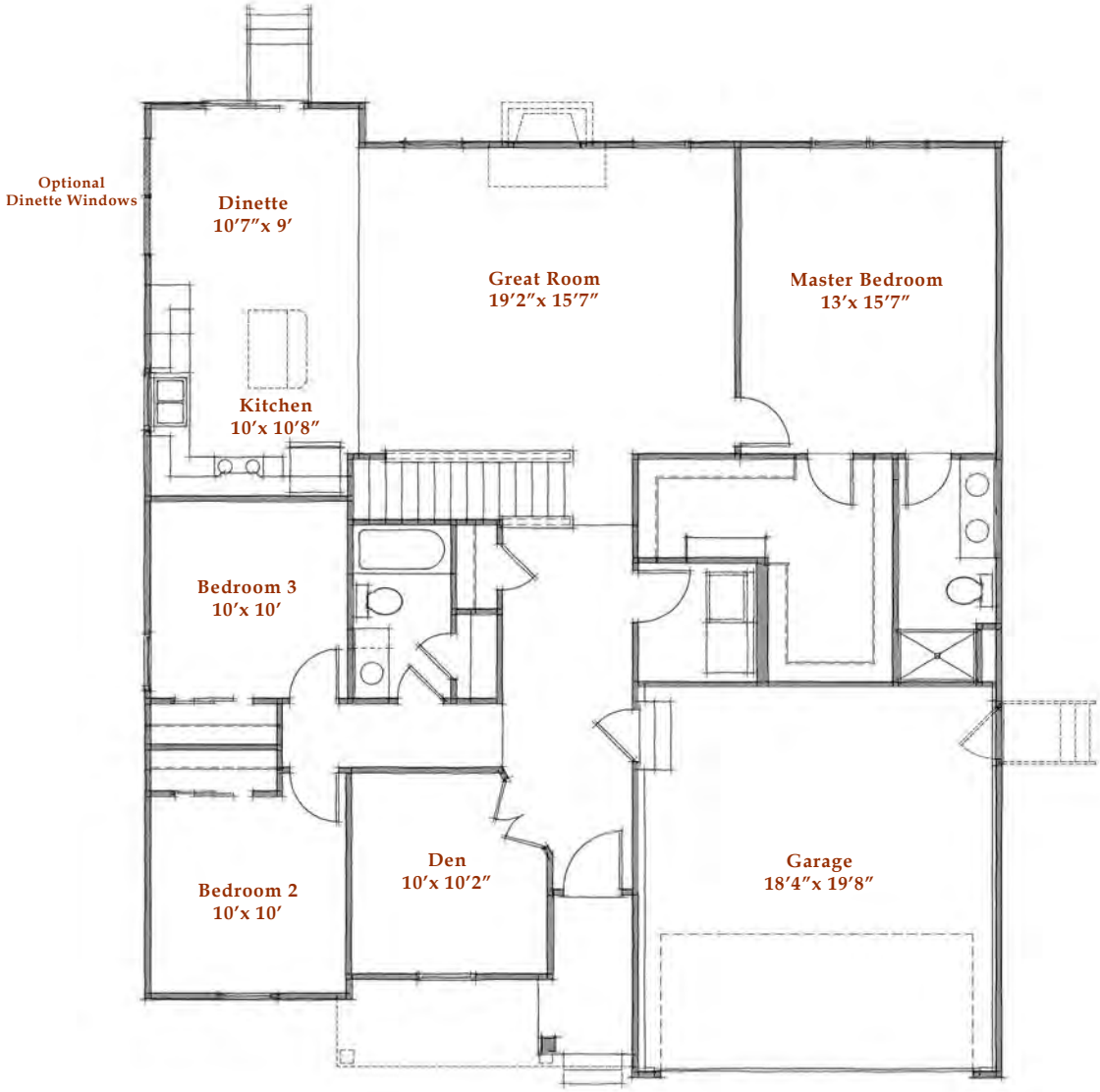
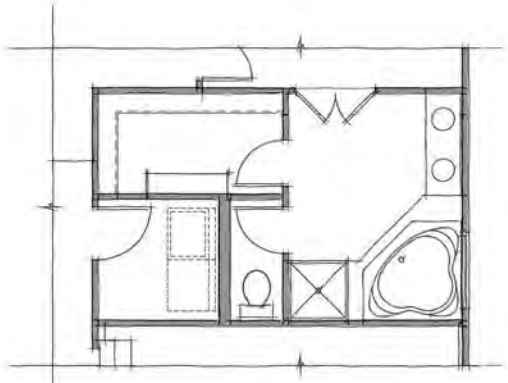
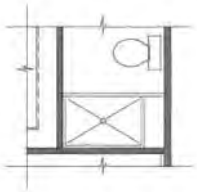
THE BAXLEY



First Floor



Deluxe Master Bath
(optional)



Master Bath
4′ Shower w/ Seat
(optional)

WESTPORT HOMES

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THE BAXLEY II

Elevation 'C' (with optional stone front)

Elevation 'A' (with optional brick front)

Elevation 'B' (with optional stone front)

Elevation 'D'

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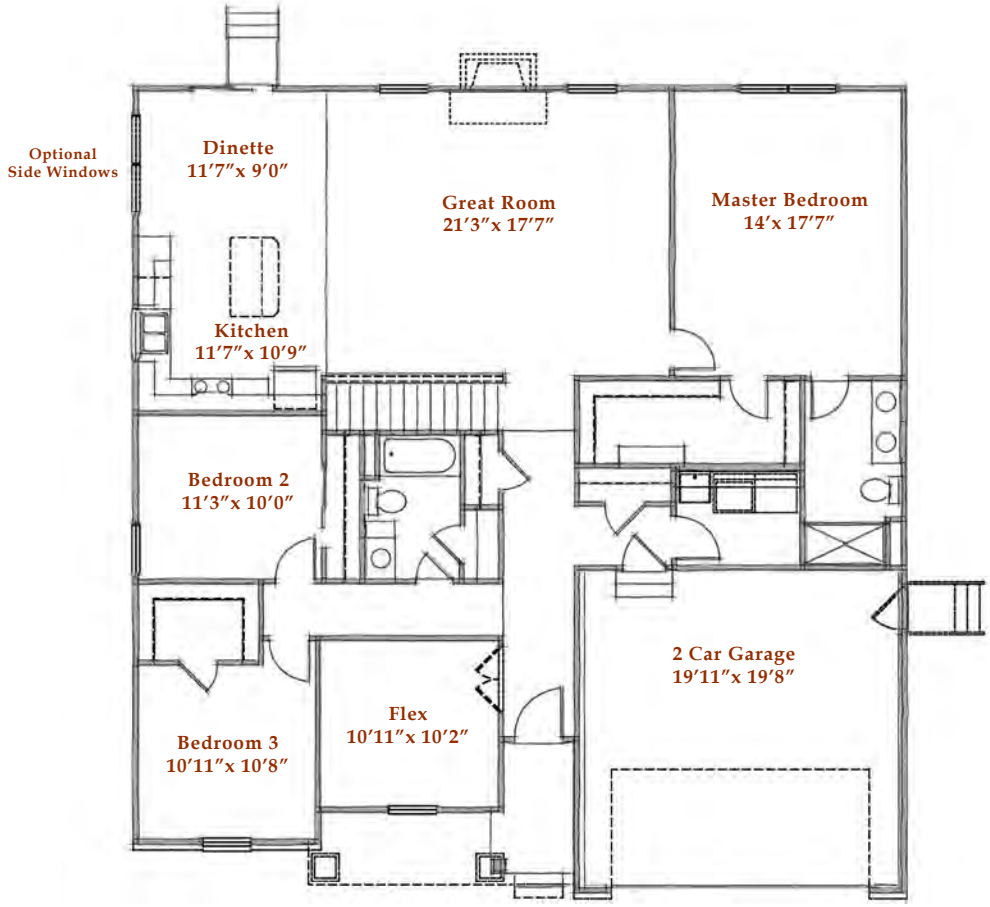
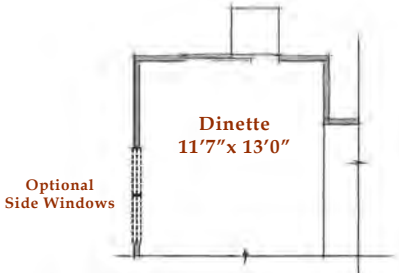
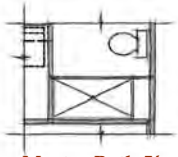
THE BAXLEY II



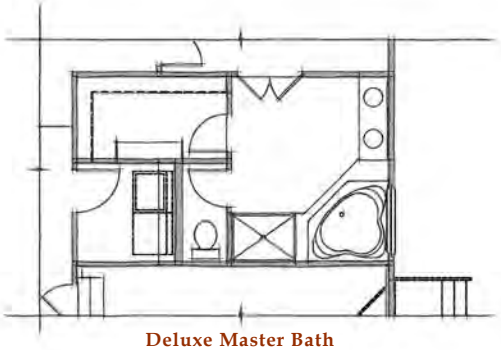
First Floor



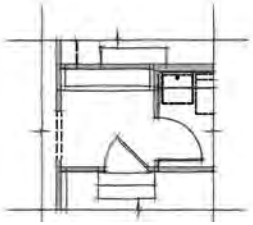
4′ Kitchen Extension
(optional)



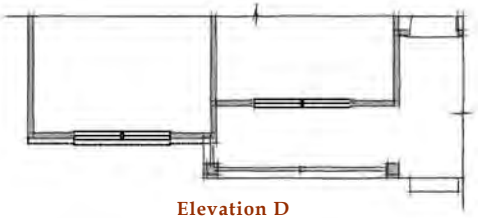
Master Bath 5′
Shower w/ Seat
(optional)



Deluxe Master Bath
(optional)



Mud Room w/ Bench
I.L.O. Closet
(optional)



Elevation D

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THE BELMONT

Elevation 'C' (with optional stone front)

Elevation 'A' (with optional stone brick)

Elevation 'B' (with optional stone front)

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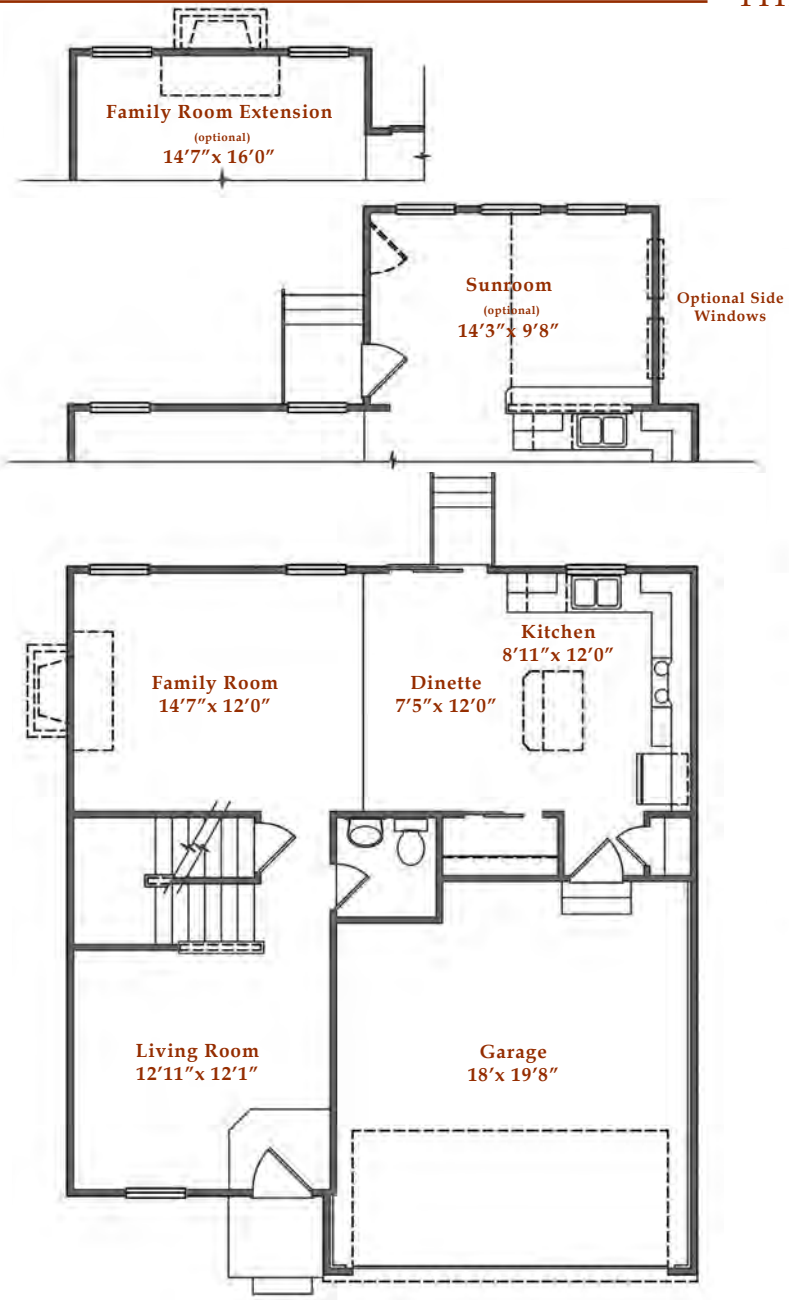
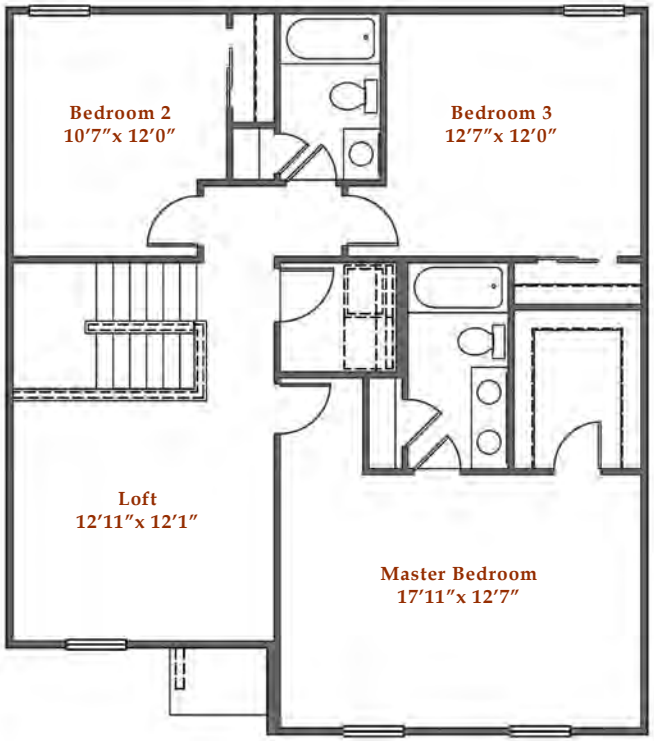
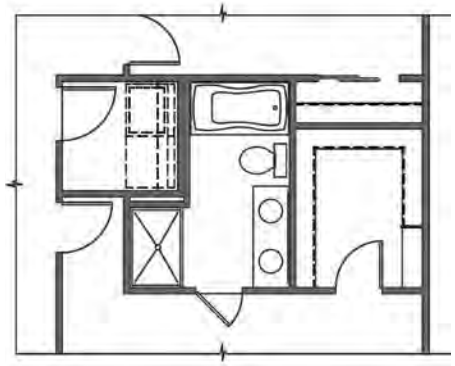
THE BELMONT

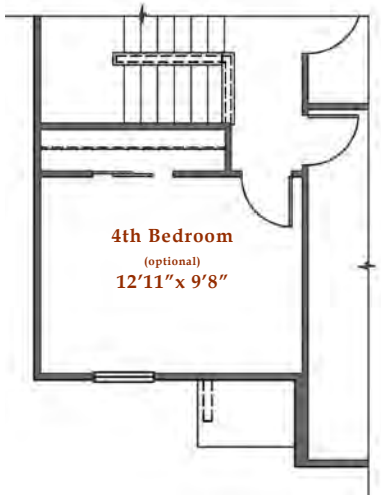


First Floor





Deluxe Master Bath
(optional)



Second Floor

WESTPORT HOMES

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THE BELMONT II

Elevation 'B' (with optional stone front)

Elevation 'A'

Elevation 'A' (with optional brick front)

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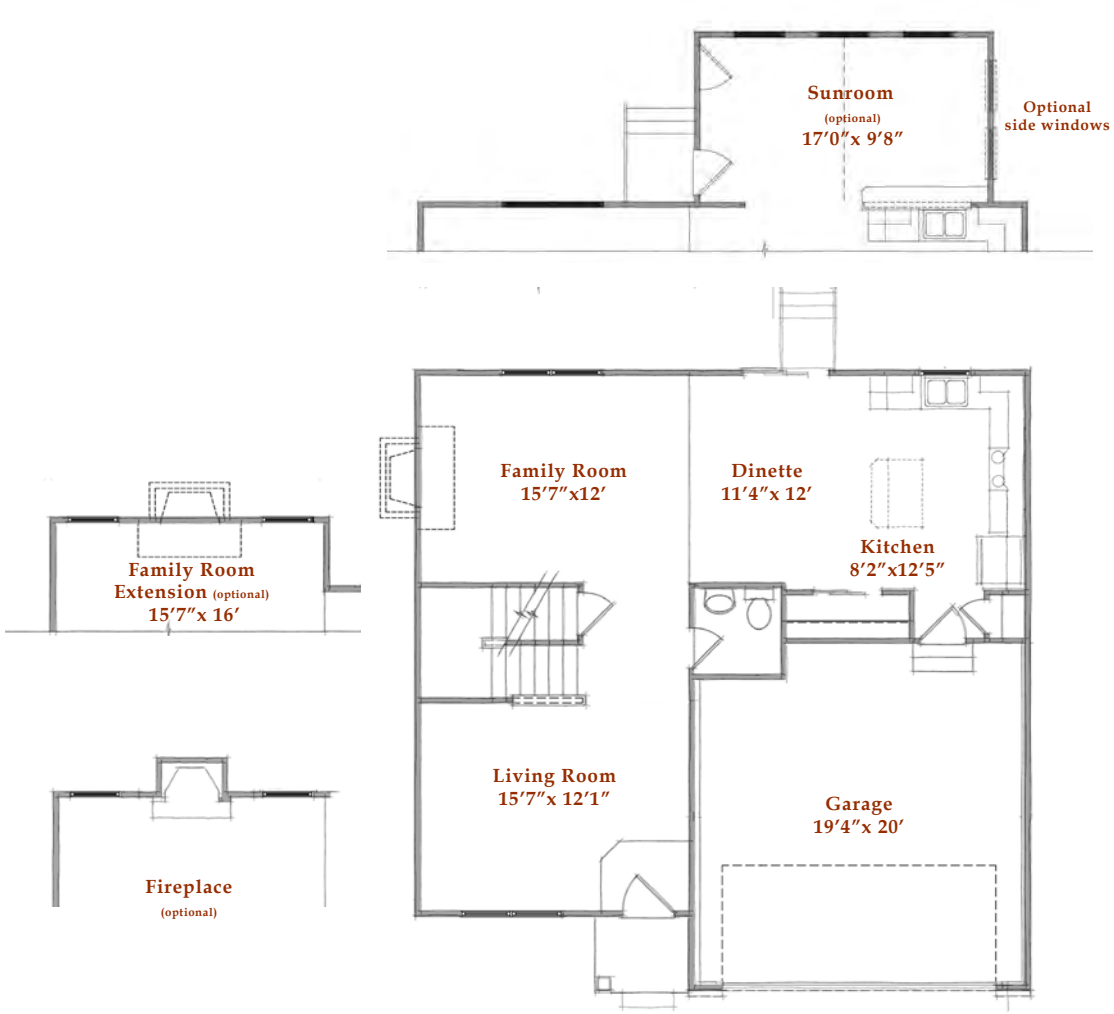
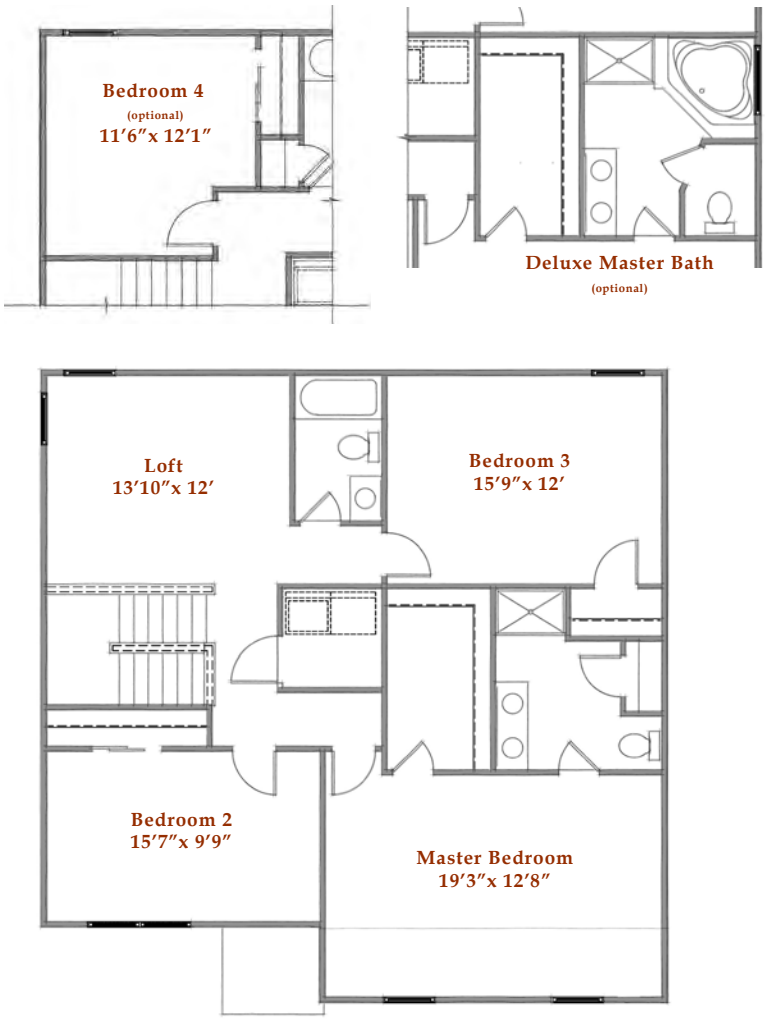
THE BELMONT II



First Floor



Second Floor

WESTPORT HOMES

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THE BRISTOL

Elevation 'C' (with optional brick front)

Elevation 'A' (with optional stone front)

Elevation 'B' (with optional brick front)

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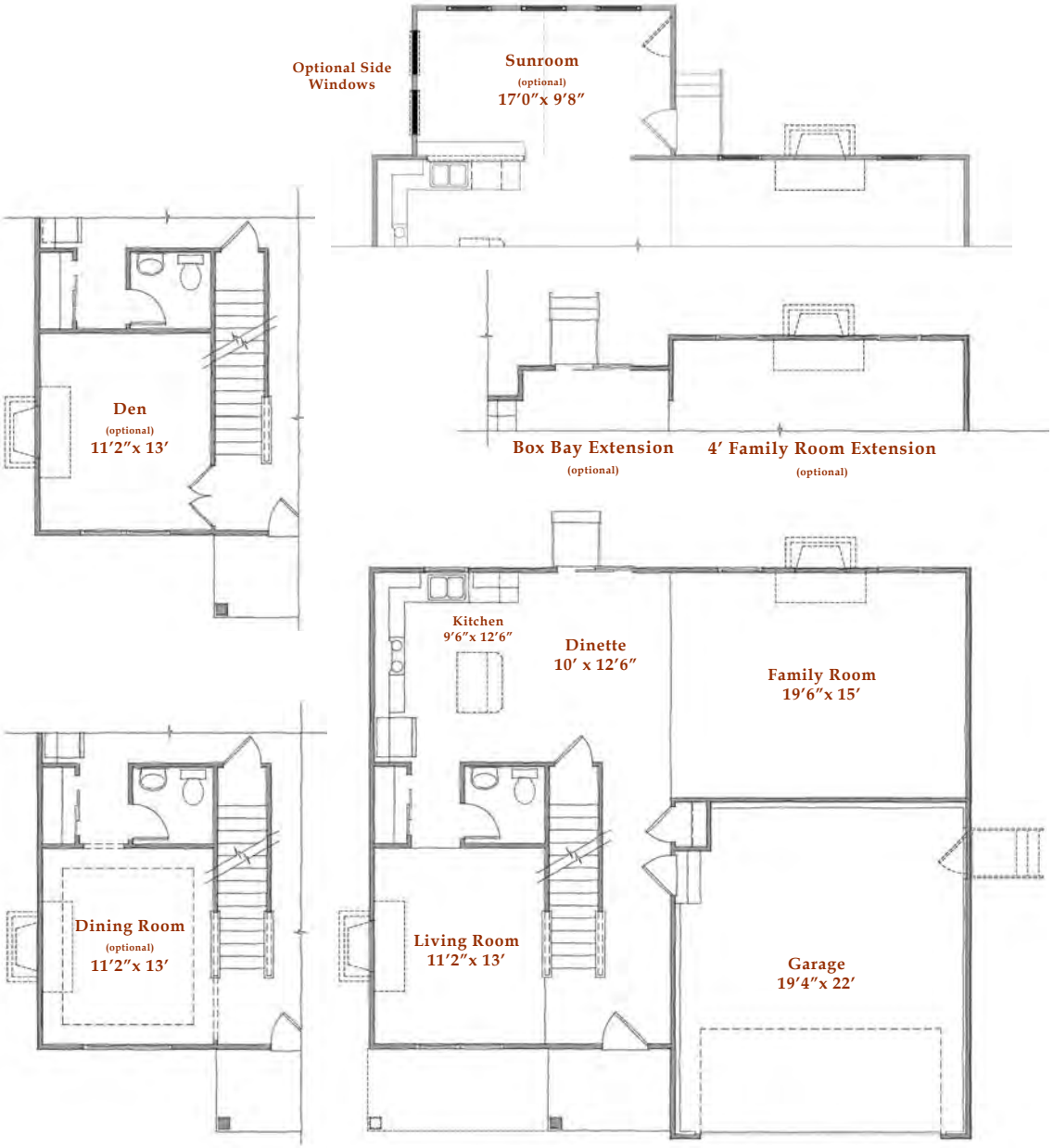
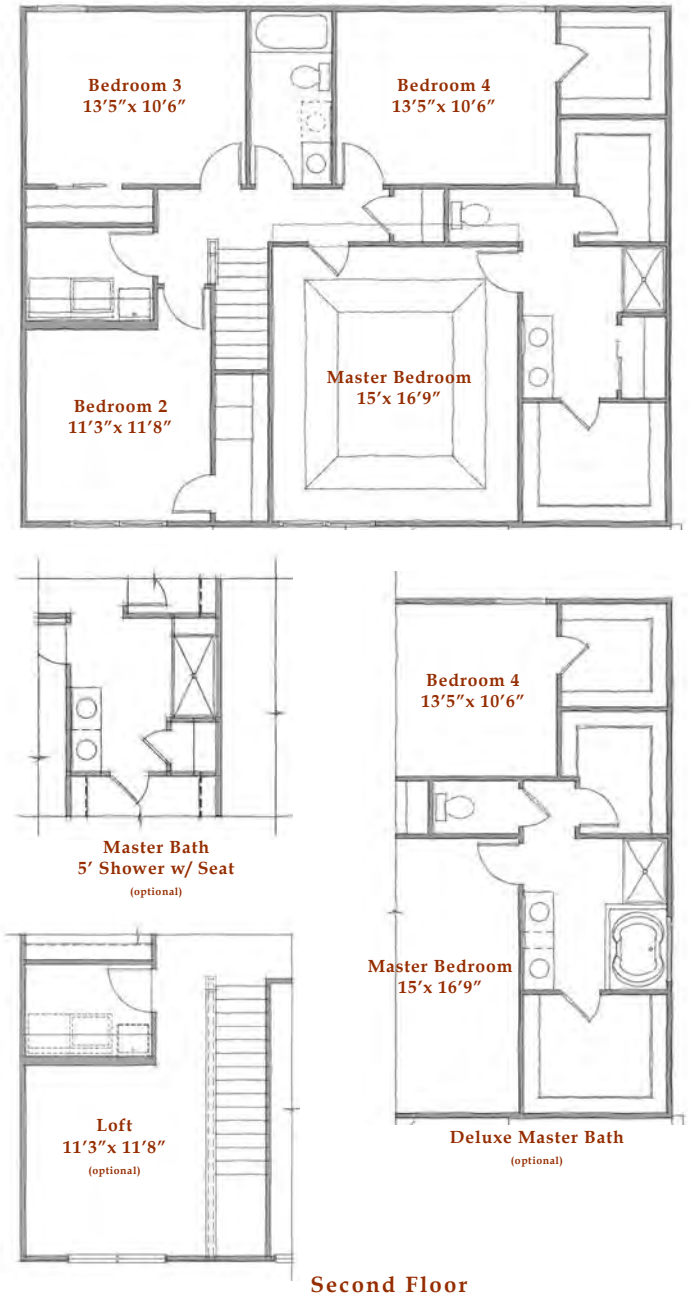
THE BRISTOL



First Floor



Second Floor

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WESTPORT HOMES

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THE CAMPTON

Elevation 'C' (with optional stone)

Elevation 'D' (with optional brick)

Elevation 'A'

Elevation 'B' (with optional stone and full porch)

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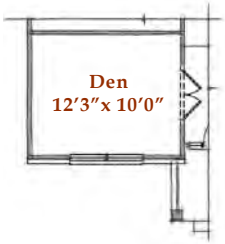
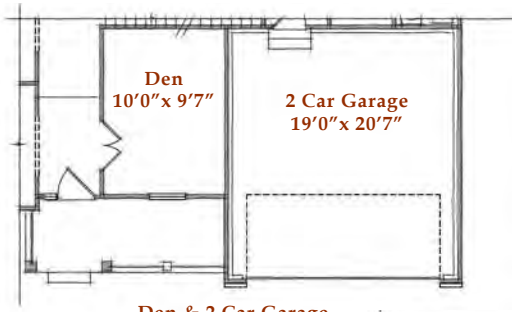
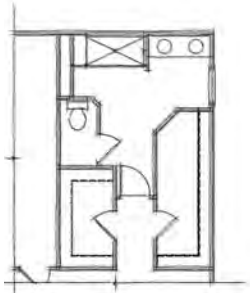
THE CAMPTON

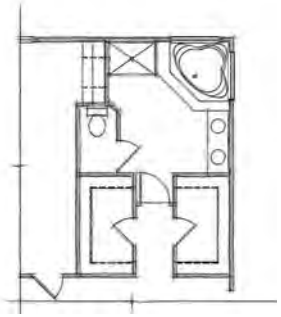




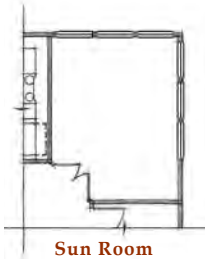
Den & 2 Car Garage
(optional)



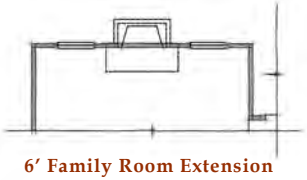
Master Bath
5′ Shower w/ 1′ Seat
(optional)



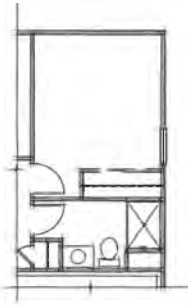
Deluxe Master Bath
(optional)



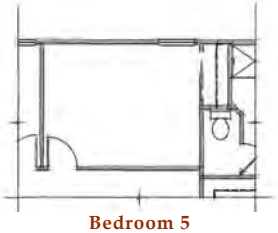
Sun Room
10′5″ x 13′5″
(optional)



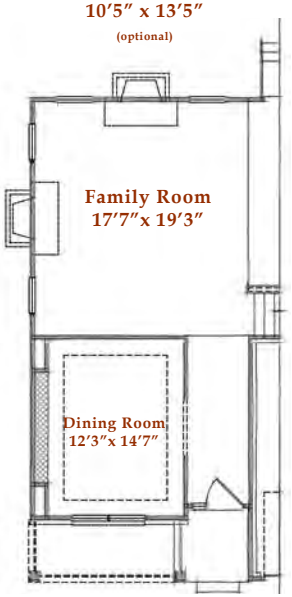
6′ Family Room Extension
(optional)



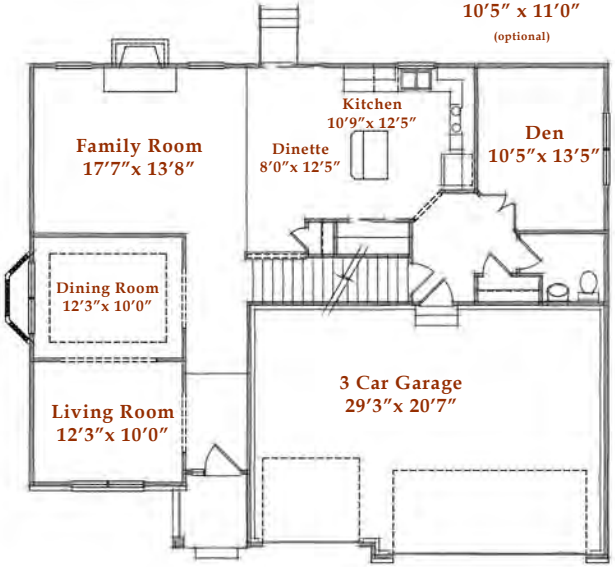
Guest Room with 3/4 Bath
10′5″ x 11′0″
(optional)



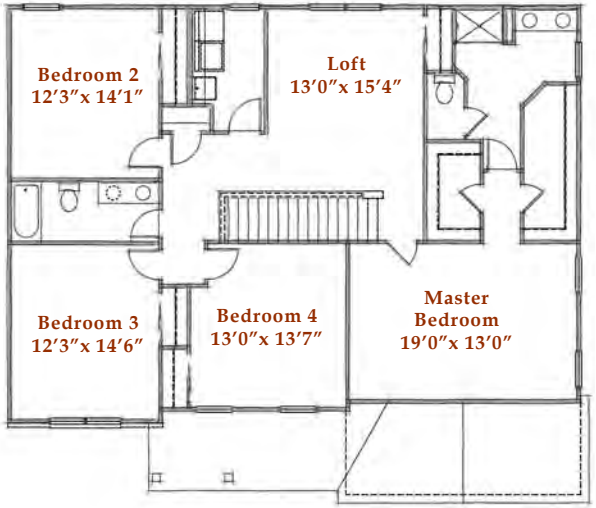
Bedroom 5
(optional)
13′0″x 10′1″



Enlarged Family Room I.L.O.
Living Room
(optional)



First Floor



Sitting Room
(optional)
9′7″x 7′7″

Second Floor

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THE COLUMBIA

Elevation 'B' (with optional brick)

Elevation 'D'

Elevation 'A' (with optional full porch)

Elevation 'C' (with optional stone)

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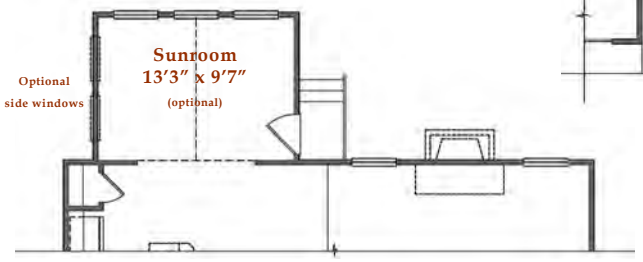
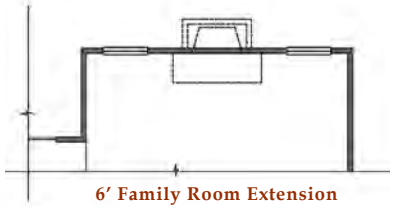
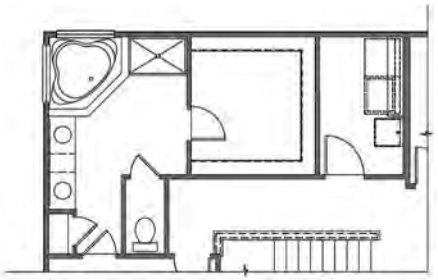
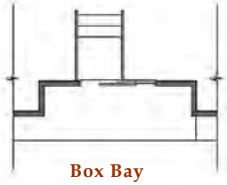
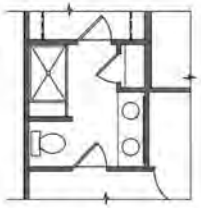
THE COLUMBIA

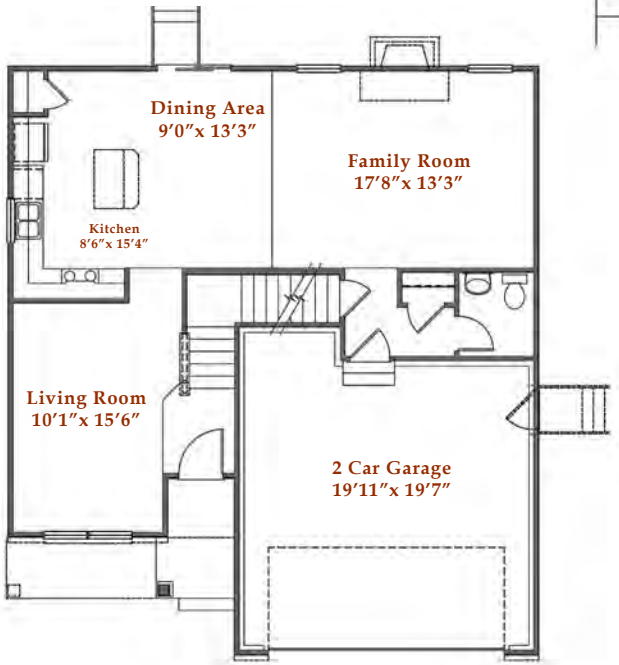




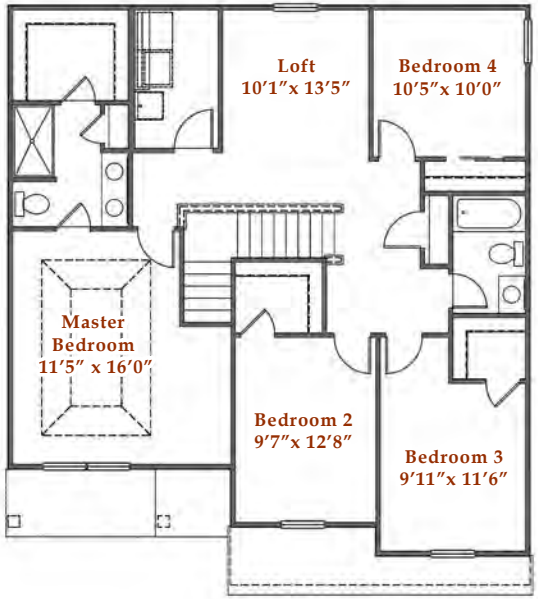


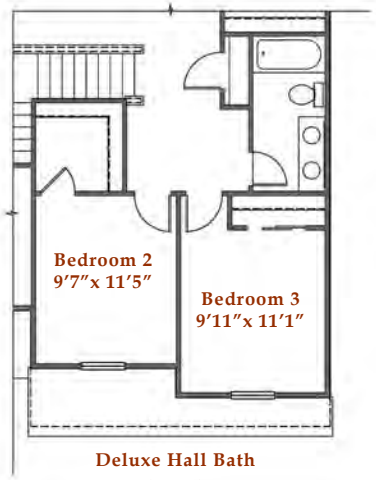






First Floor





Second Floor

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THE CORONADA

Elevation 'B'

Elevation 'A' (with optional brick)

Elevation 'C' (with optional stone)

Elevation 'D'

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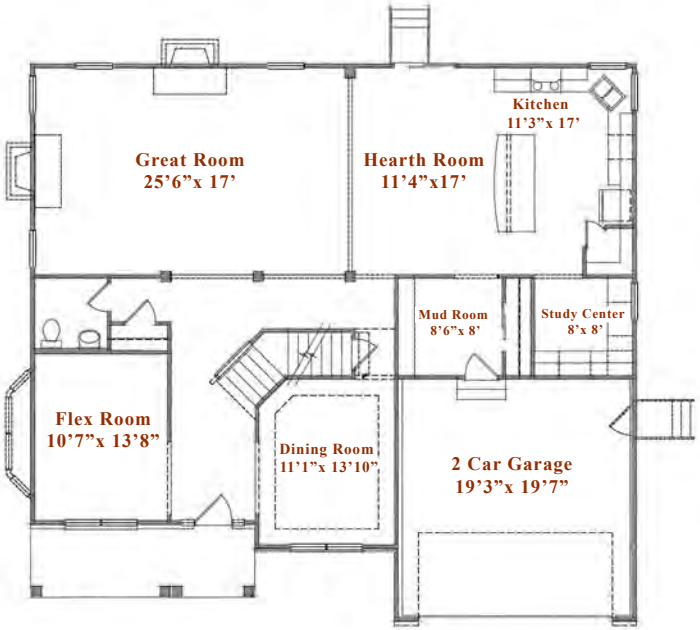
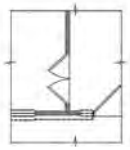
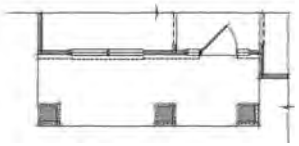
THE CORONADA

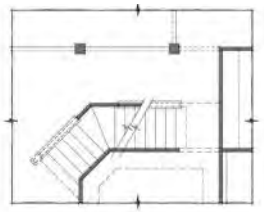




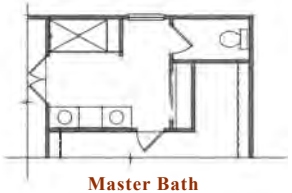
Flex Room
w/ 4’ Doors
(Optional)



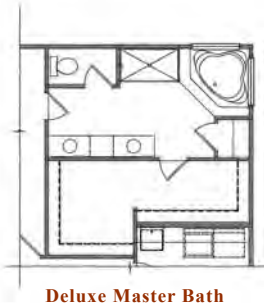
Porch w/ Elevation C



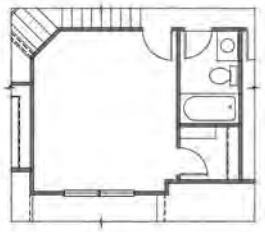
Open Stairs to Basement
(optional)



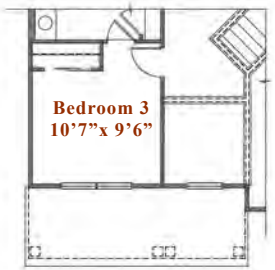
Master Bath
5’ Shower w/ 1’ Seat
(optional)



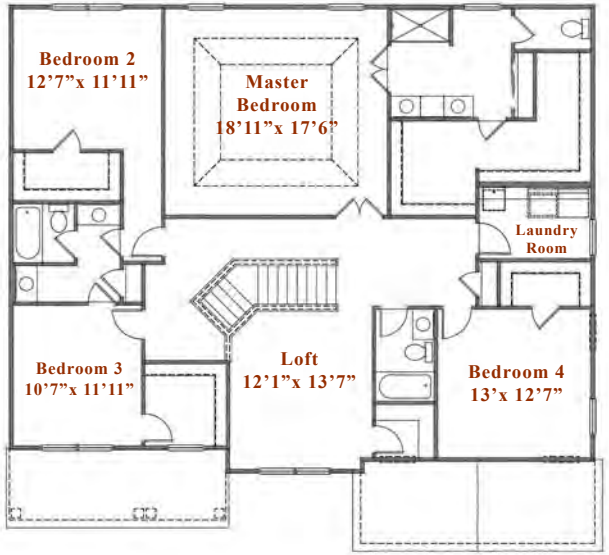
Deluxe Master Bath
(optional)



Bedroom 5 I.L.O. Loft
12’1”x 13’7”
(optional)



Open Foyer
(optional)



First Floor

Second Floor

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THE CORONADA II

Elevation 'B'

Elevation 'A' (with optional brick)

Elevation 'C' (with optional stone)

Elevation 'D'

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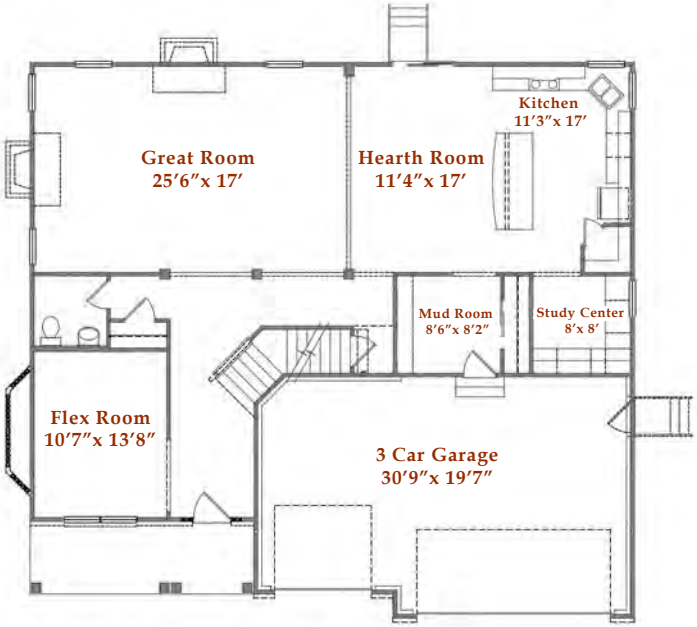
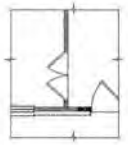
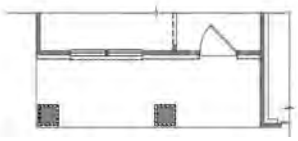
THE CORONADA II

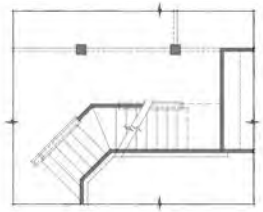




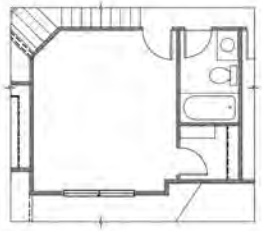
Flex Room
w/ 4′ Doors
(Optional)



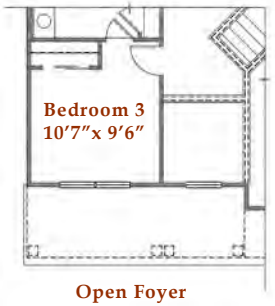
Porch w/ Elevation C



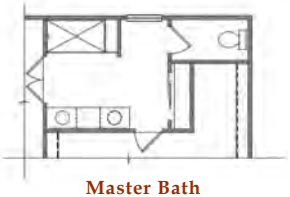
Open Stairs to Basement
(optional)



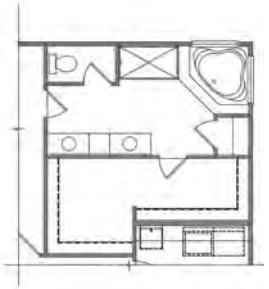
Bedroom 5 I.L.O. Loft
12′1″x 13′7″
(optional)



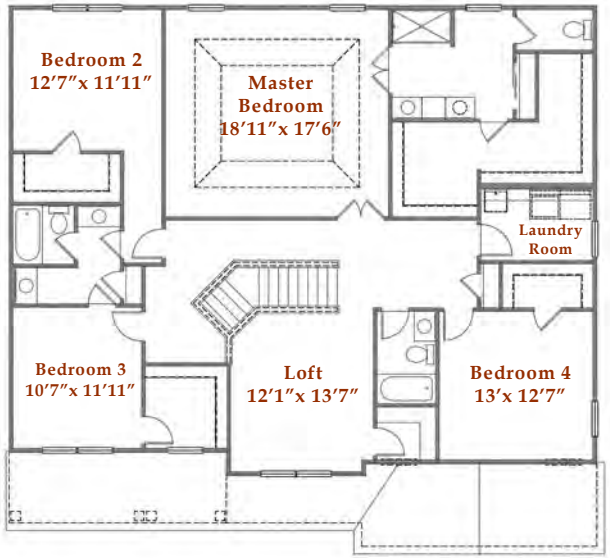
Open Foyer
(optional)



Master Bath
5′ Shower w/ 1′ Seat
(optional)



Deluxe Master Bath
(optional)



First Floor

Second Floor

WESTPORT HOMES

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THE DENALI

Elevation 'C' (with optional stone front)

Elevation 'D'

Elevation 'A'

Elevation 'B' (with optional brick front)

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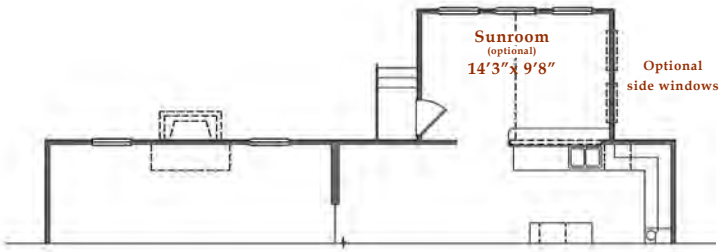
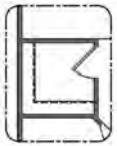
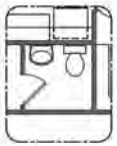
THE DENALI

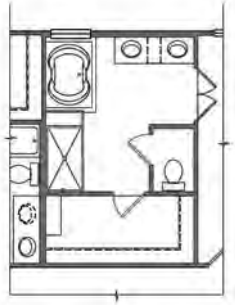




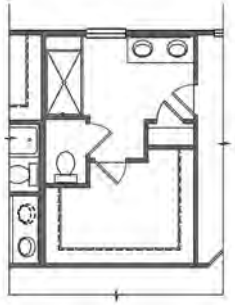
Powder Room / W.I.C.
Exchange
(optional)



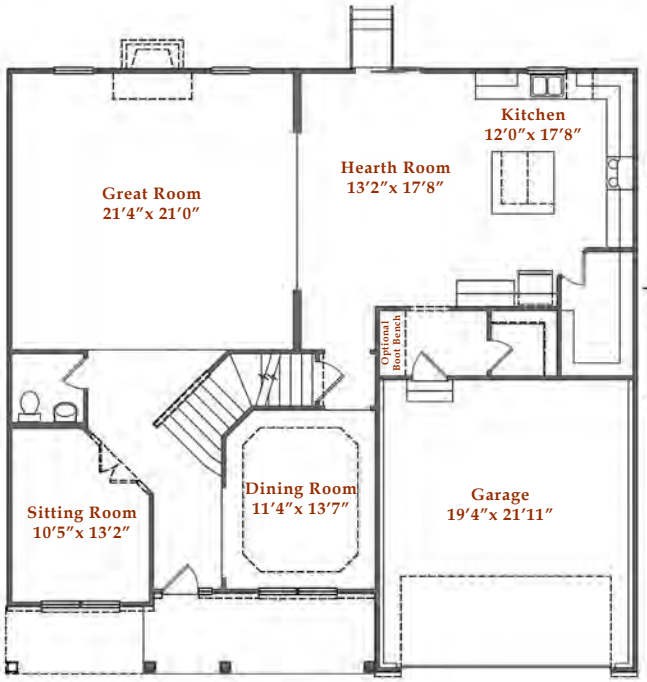
Powder Room / W.I.C.
Exchange
(optional)

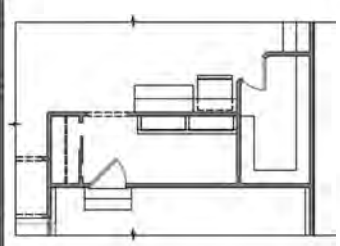


Deluxe Master Bath
(Optional)



Master Bath
5′ Shower w/ Seat
(optional)

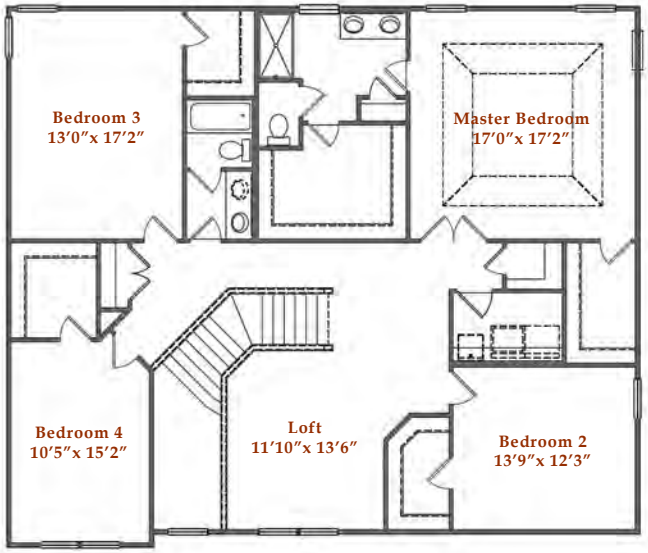


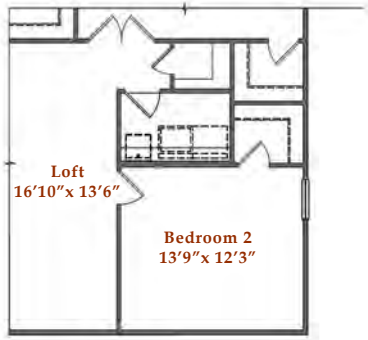


Enlarged Mud Room
w/ Boot Bench
(optional)

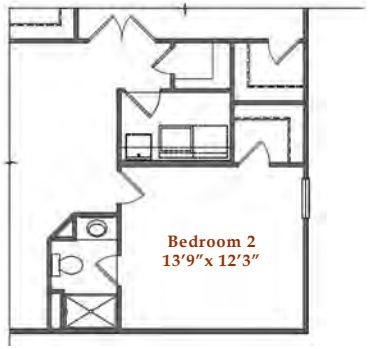
2 Sided Fireplace
(optional)

First Floor





Enlarged Loft
(optional)



Bedroom 2 Private Bath
(optional)

Second Floor

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WESTPORT HOMES

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6.27.17

THE DENALI II

Elevation 'C' (with optional stone front)

Elevation 'D'

Elevation 'A'

Elevation 'B' (with optional brick front)

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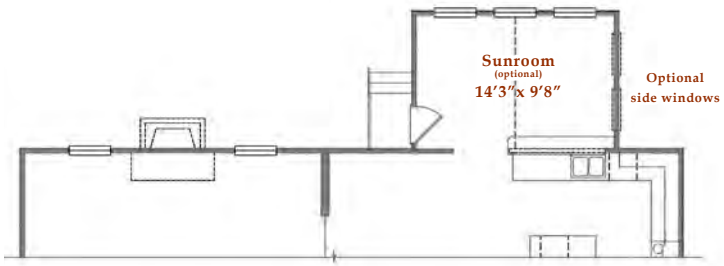
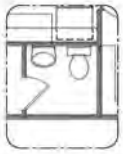
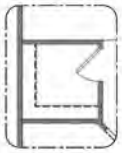
THE DENALI II

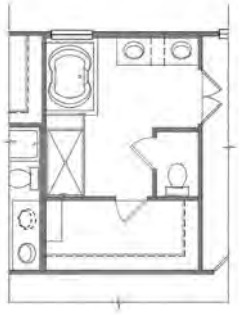




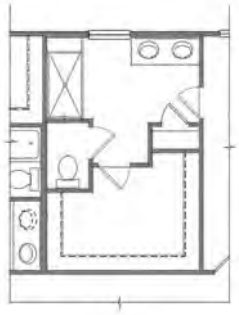
Powder Room / W.I.C.
Exchange
(optional)



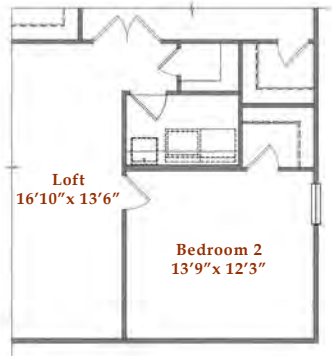
Powder Room / W.I.C.
Exchange
(optional)



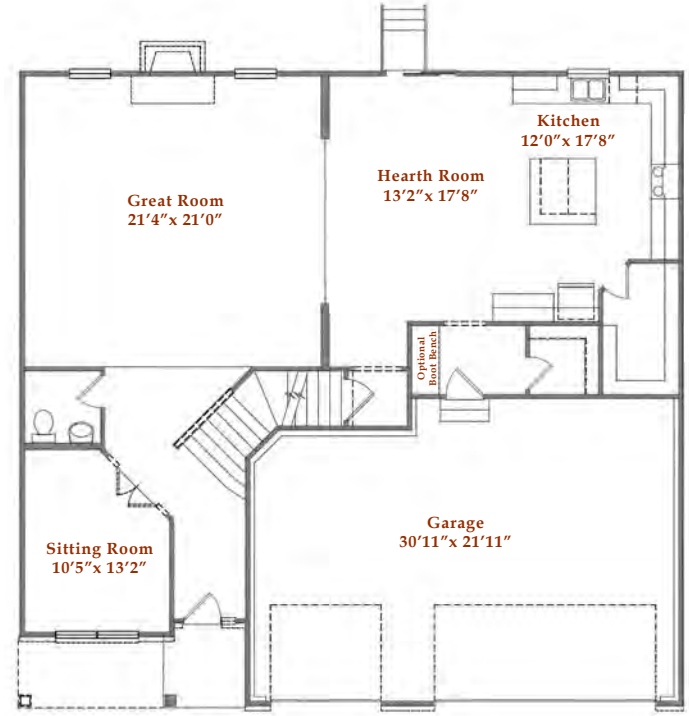
Deluxe Master Bath
(Optional)

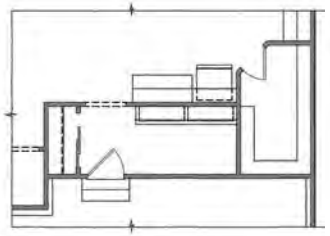


Master Bath
5′ Shower w/ Seat
(optional)

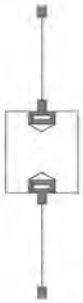


Enlarged Loft
(optional)

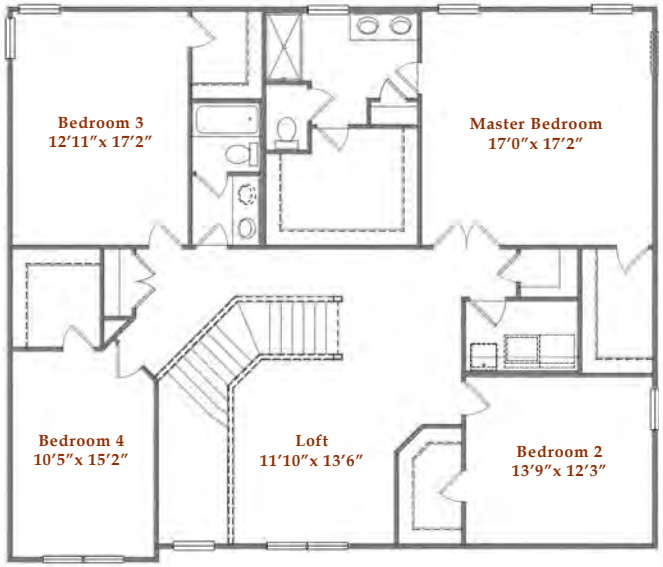


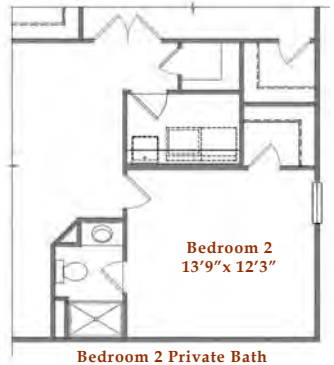


Enlarged Mud Room
w/ Boot Bench
(optional)



2 Sided Fireplace
(optional)





Bedroom 2 Private Bath
(optional)

First Floor

Second Floor

WESTPORT HOMES

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THE HAMPSHIRE

Elevation 'B' (with optional stone)

Elevation 'D'

Elevation 'A' (with optional brick)

Elevation 'C'

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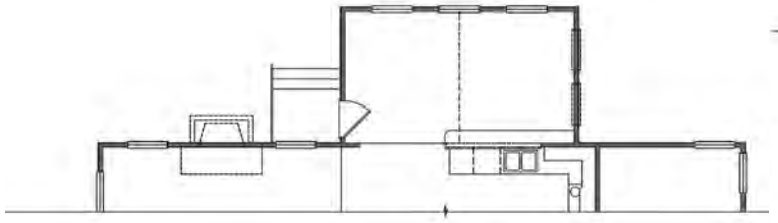
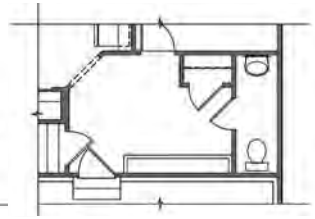
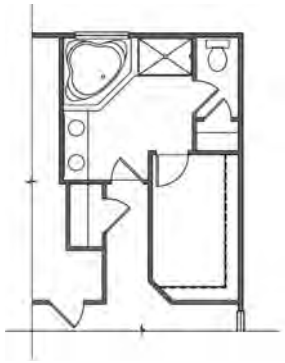
THE HAMPSHIRE



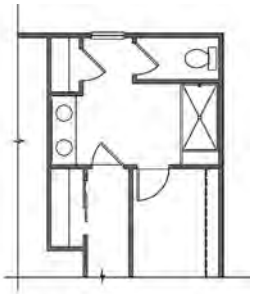
Sunroom off Kitchen
(optional)
16′11″ x 9′7″



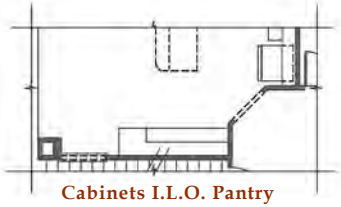
Mud Room w/ Boot Bench
(optional)



Deluxe Master Bath
(optional)

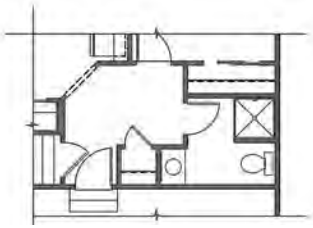


Master Bath
5′ Shower w/ 1′ Seat
(optional)

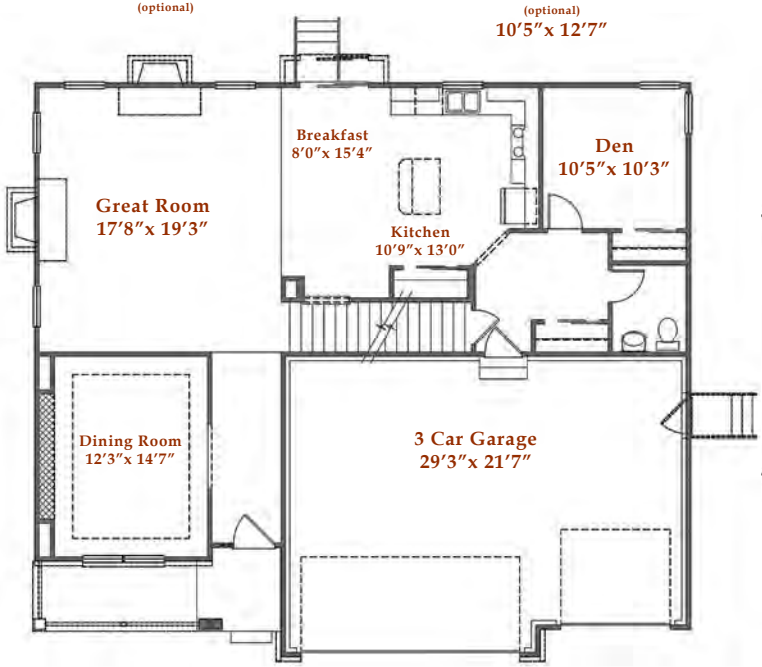


Cabinets I.L.O. Pantry
(optional)

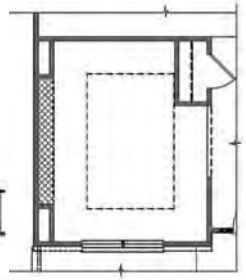
Sunroom I.L.O. Den
(optional)
10′5″x 12′7″



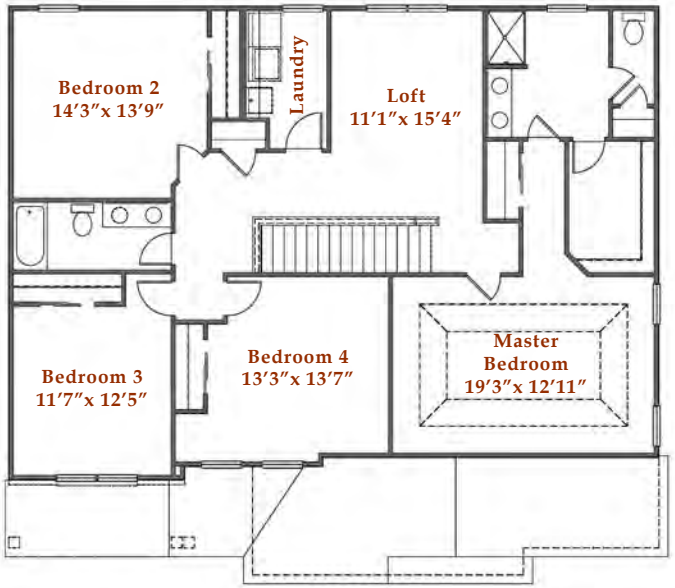
3/4 Bath I.L.O. Powder Room
(optional)



First Floor



Dining Room w/ Foyer
Guest Closet
(optional)
12′3″x 14′7″



Second Floor

WESTPORT HOMES

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THE HAWTHORNE

Elevation 'B' (with optional brick front and bonus room)

Elevation 'A'

Elevation 'C' (with optional stone front)

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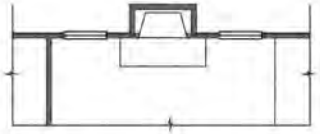
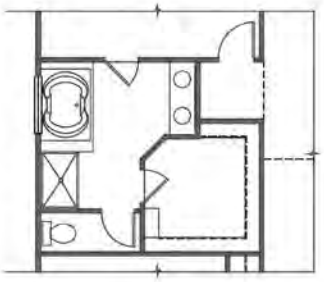
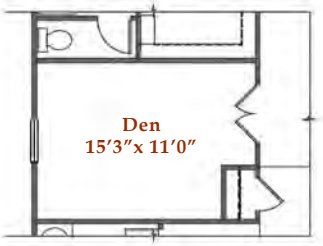
THE HAWTHORNE



Great Room
W/ Direct Vent Fireplace
(optional)



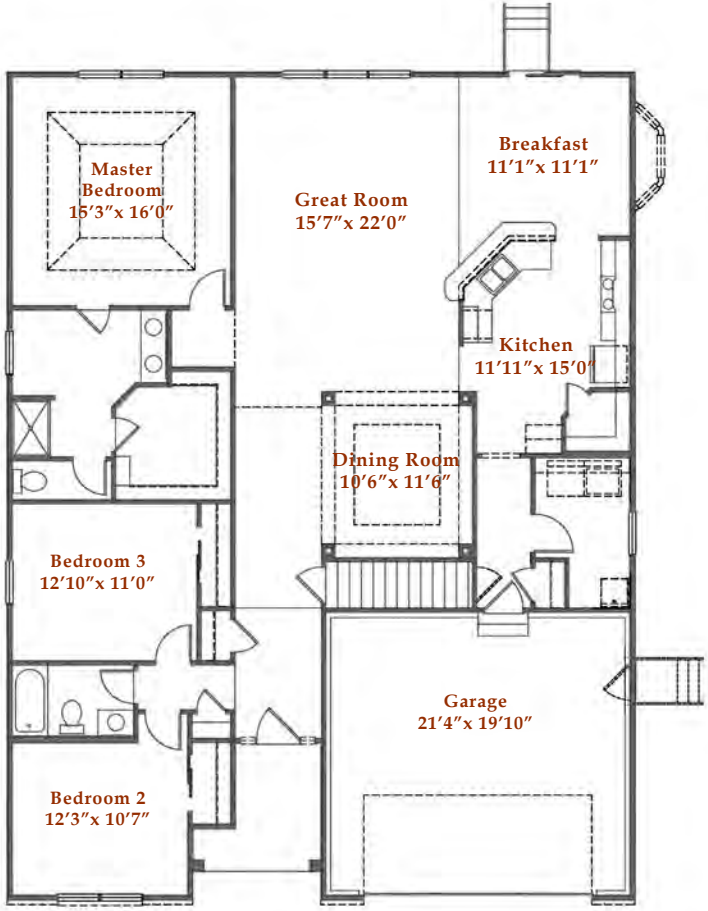
Deluxe Master Bath
(optional)

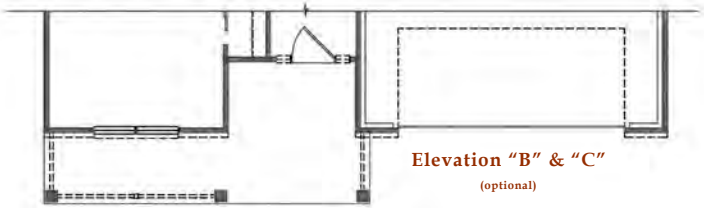


Den
15′3″x 11′0″

Den I.L.O Bedroom 3
(optional)

Open Garage Entry
(optional)

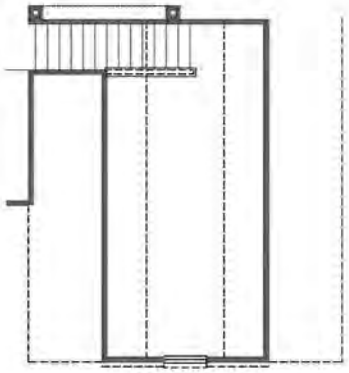




Elevation "B" & "C"
(optional)

First Floor

Master Bath
5′ Shower w/ Seat
(optional)



Bonus Room
(optional)
11′0″x 19′9″

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THE HAWTHORNE II

Elevation 'B' (with optional brick front and bonus room)

Elevation 'A'

Elevation 'C' (with optional stone front)

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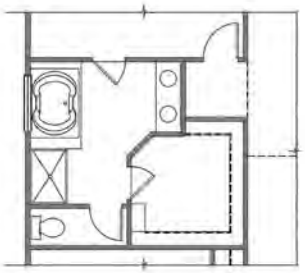
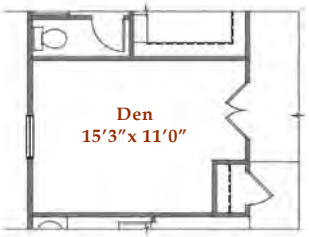
THE HAWTHORNE II

Master Bath
5′ Shower w/ Seat
(optional)

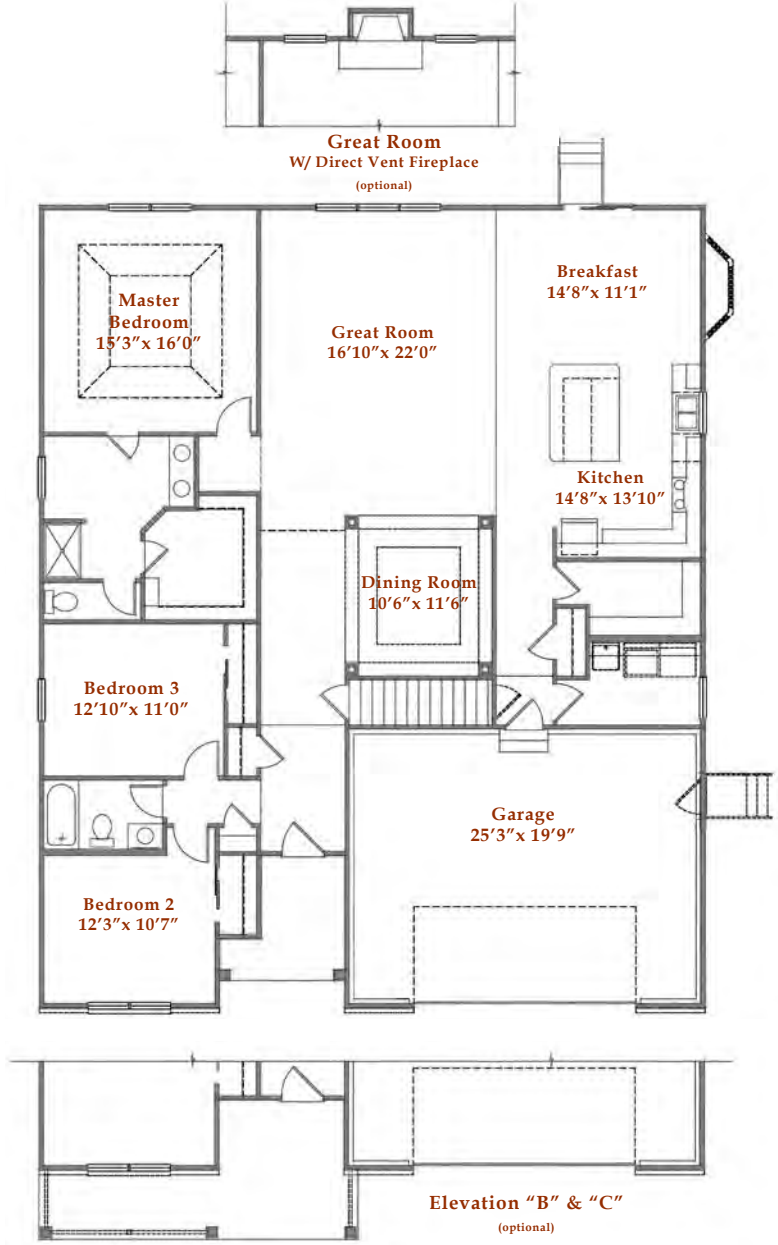


Deluxe Master Bath
(optional)

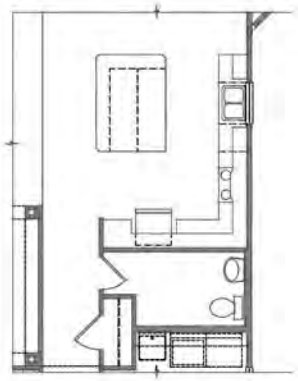


Den
15′3″x 11′0″

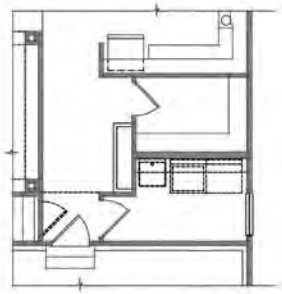
Den I.L.O Bedroom 3
(optional)



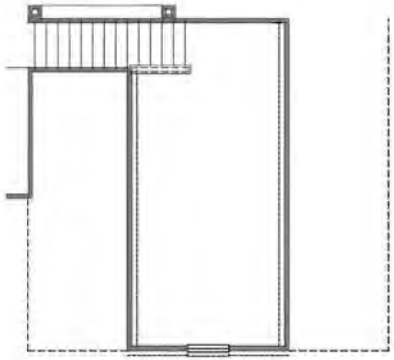
First Floor



Powder Room I.L.O. Pantry
(optional)



Mud Bench
(optional)



Bonus Room
(optional)
11′0″x 19′9″

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THE HEYDEN

Elevation 'A' (with optional dormer and bonus room)

Elevation 'A' (with optional brick watertable)

Elevation 'A' (with optional stone front & watertable)

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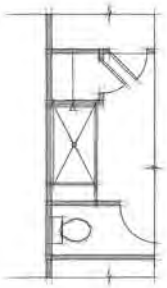
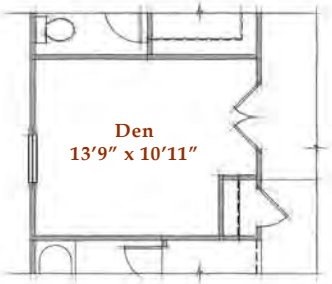
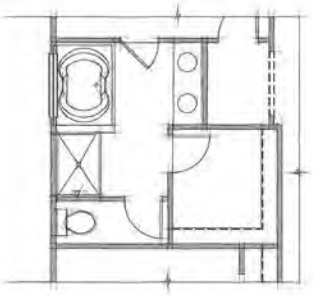
THE HEYDEN



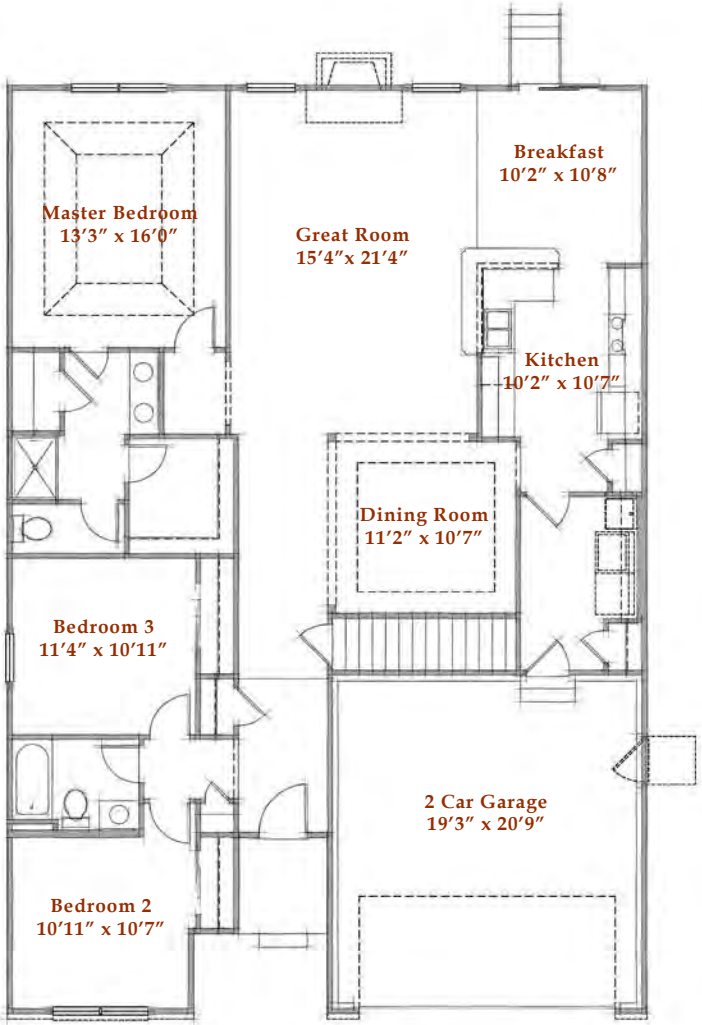
5′ Shower w/ Bench
(optional)



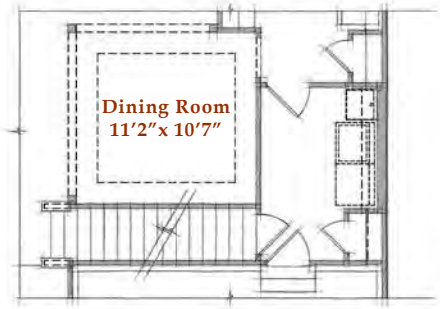
Den I.L.O. Bedroom 3
(optional)



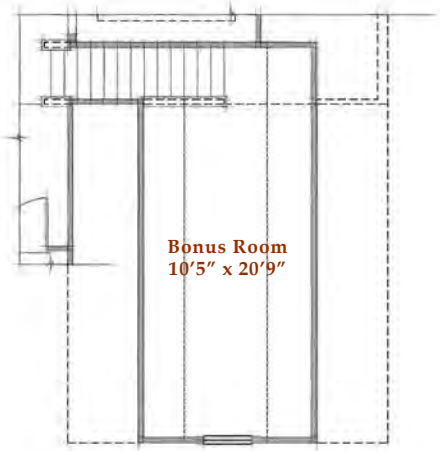
Deluxe Master Bath
(optional)



First Floor



First Floor Plan w/ Bonus Room
(optional)



Second Floor Plan w/
(optional)

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THE HOLLISTER

Elevation 'B' (with optional brick front)

Elevation 'C' (with optional stone front)

Elevation 'A'

Elevation 'D' (with optional brick front)

WESTPORT HOMES

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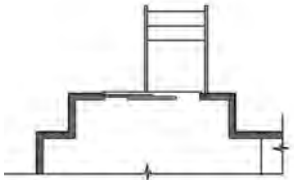
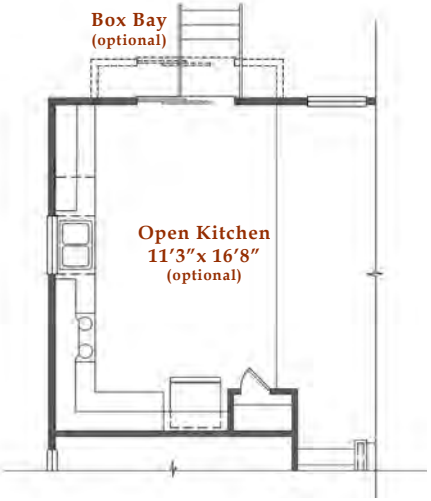
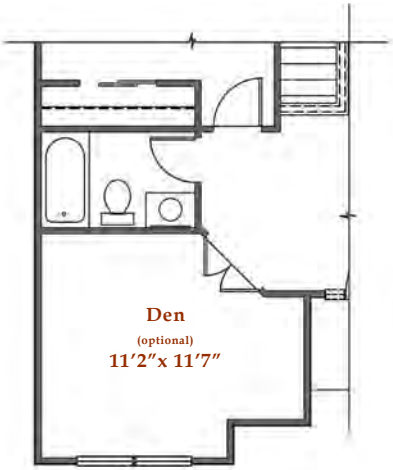
THE HOLLISTER

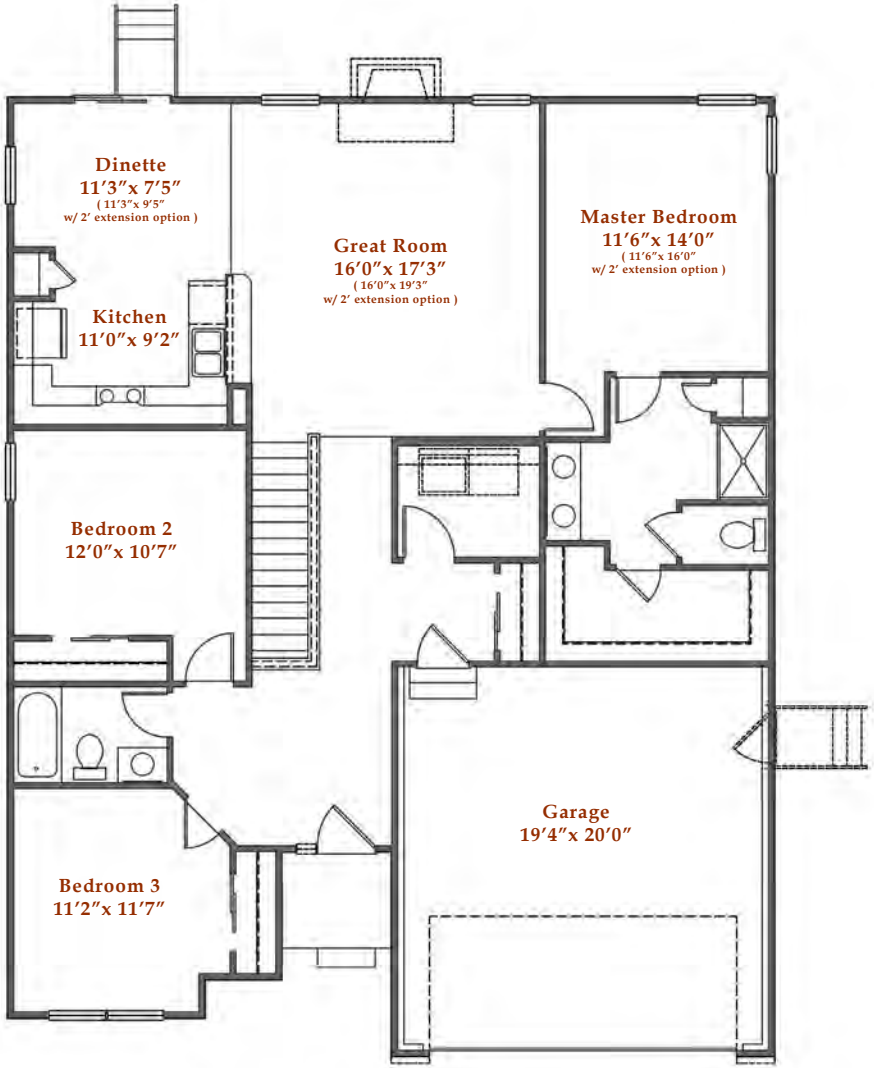


Box Bay
(optional)
11′3″x 9′5″

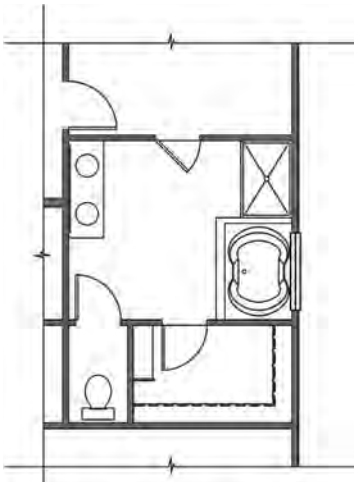




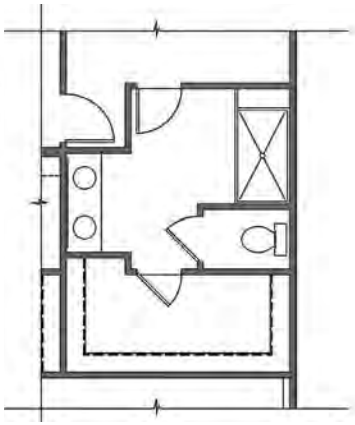
Den I.L.O Bedroom 3
(optional)



First Floor



Deluxe Master Bath
(optional)



Master Bath
5′ Shower w/ Seat
(optional)

WESTPORT HOMES

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THE KENSBROOKE

Elevation 'B' (with optional brick front)

Elevation 'A' (with optional brick front)

Elevation 'C' (with optional stone front)

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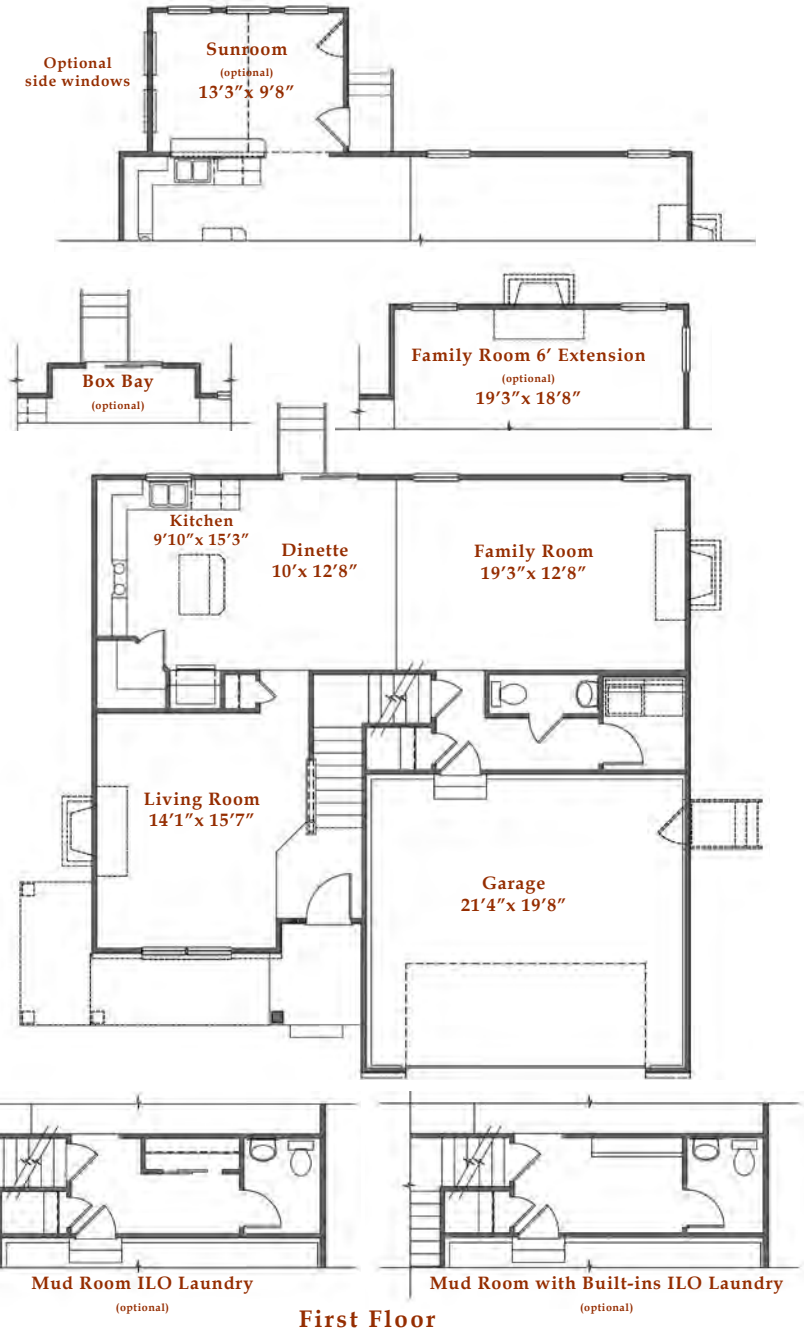
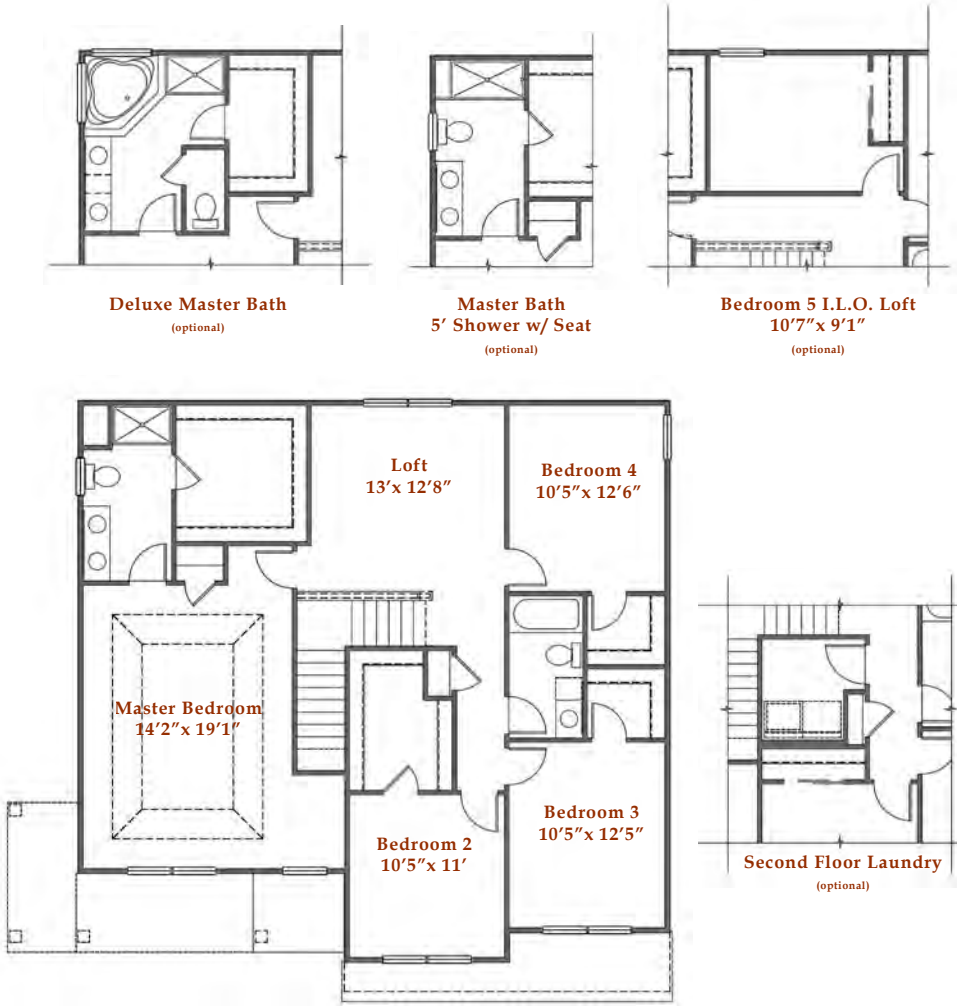
THE KENSBROOKE



First Floor



Second Floor

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THE MONTEREY

Elevation 'B' (with optional brick front)

Elevation 'A'

Elevation 'C' (with optional stone front)

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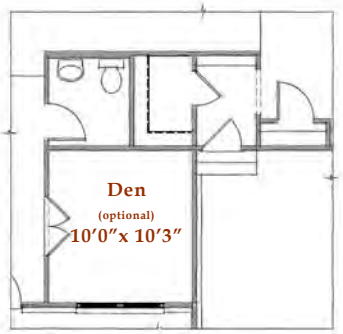
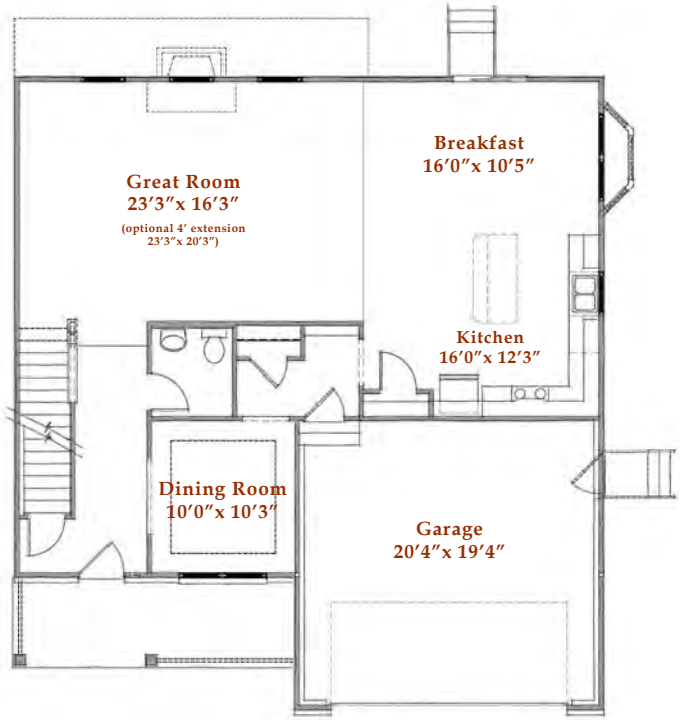
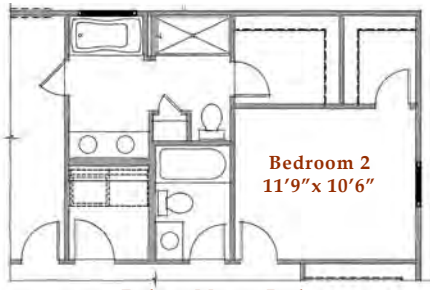
THE MONTEREY

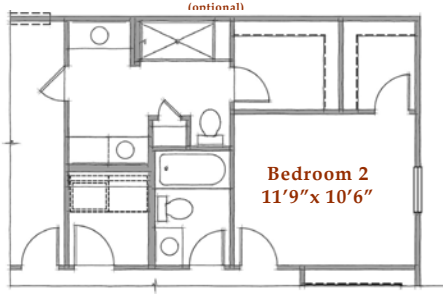




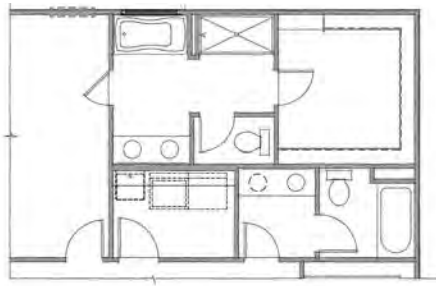
First Floor



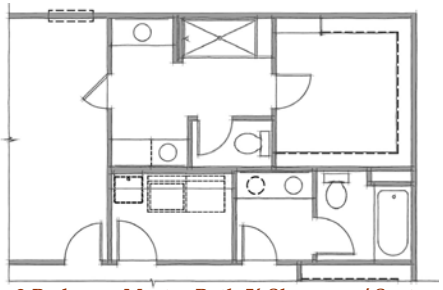
Deluxe Master Bath
(optional)



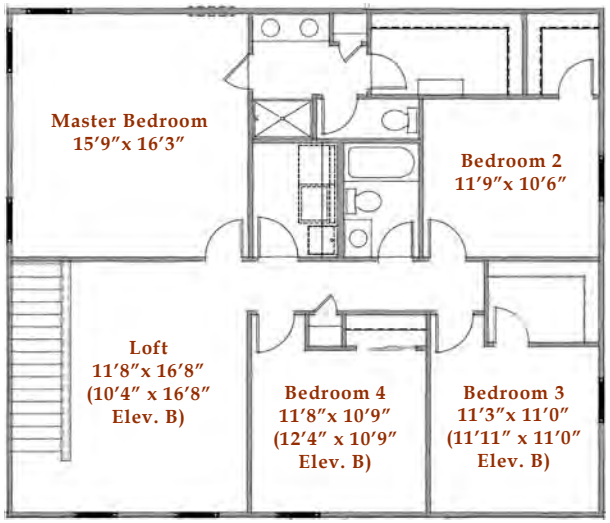
Master Bath 5′ Shower w/ Seat
(optional)



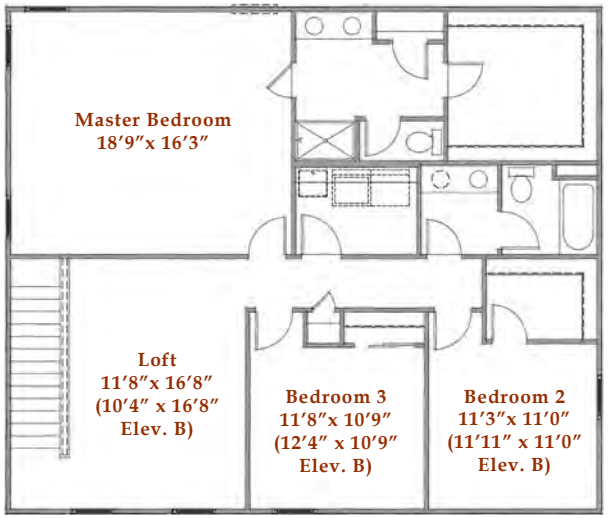
3 Bedroom Deluxe Master Bath
(optional)



3 Bedroom Master Bath 5′ Shower w/ Seat
(optional)



4 Bedroom Second Floor Plan



3 Bedroom Second Floor Plan
(optional)

Second Floor

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THE NEWPORT II

Elevation 'D'

Elevation 'C' (with optional stone front)

Elevation 'A' (with optional brick front)

Elevation 'B' (with optional brick front)

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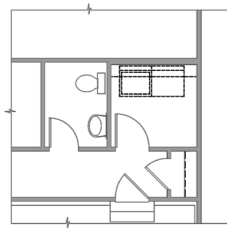
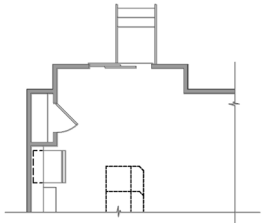
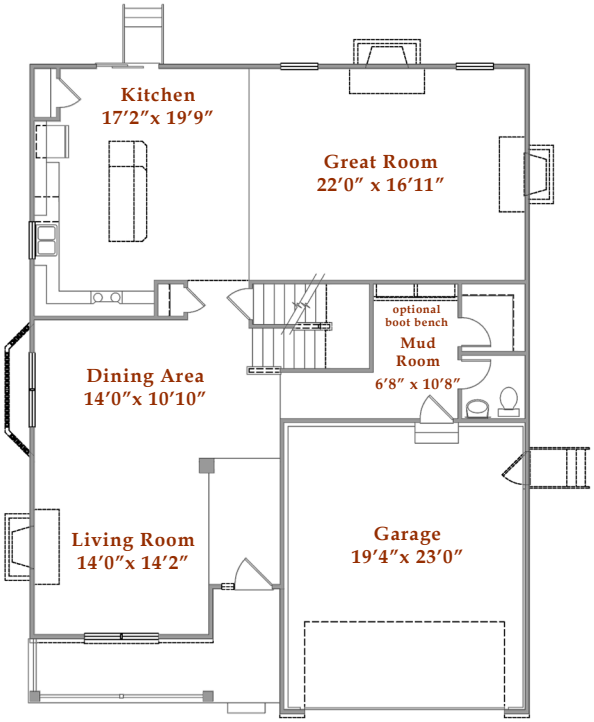
THE NEWPORT II

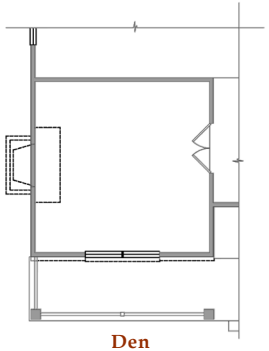


First Floor Laundry
(optional)



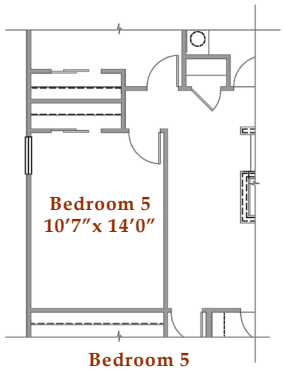
Box Bay Window
(optional)



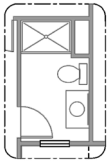


Den
(optional)
14′0″x 13′8″

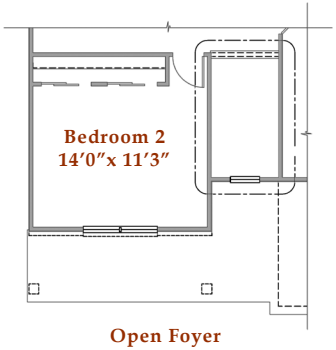
First Floor



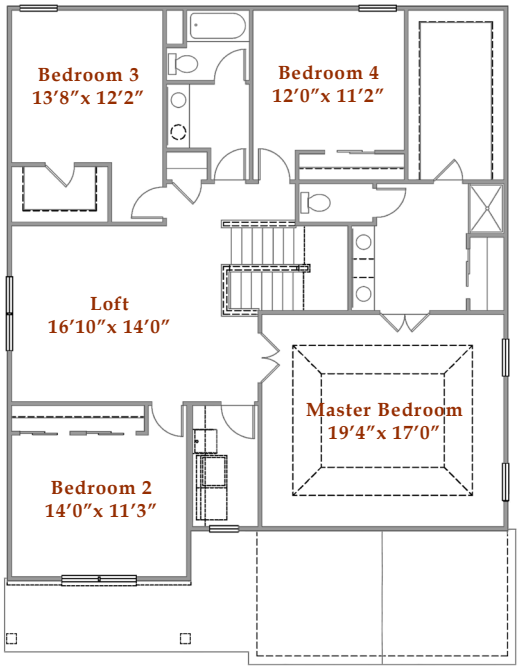
Bedroom 5
(optional)

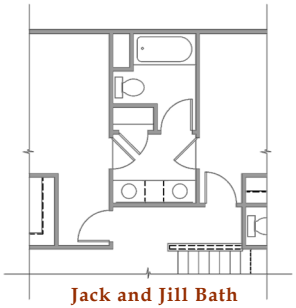


Bedroom 2 Private Bath
(optional)

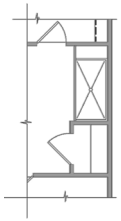


Open Foyer
(optional)

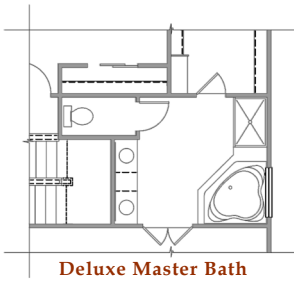




Jack and Jill Bath
(optional)



Master 5′
Shower w/ Seat
(optional)



Deluxe Master Bath
(optional)

Second Floor

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THE REDMOND

Elevation 'B' (with optional stone front)

Elevation 'D' (with optional brick front)

Elevation 'A' (with optional brick front)

Elevation 'C' (with optional stone front)

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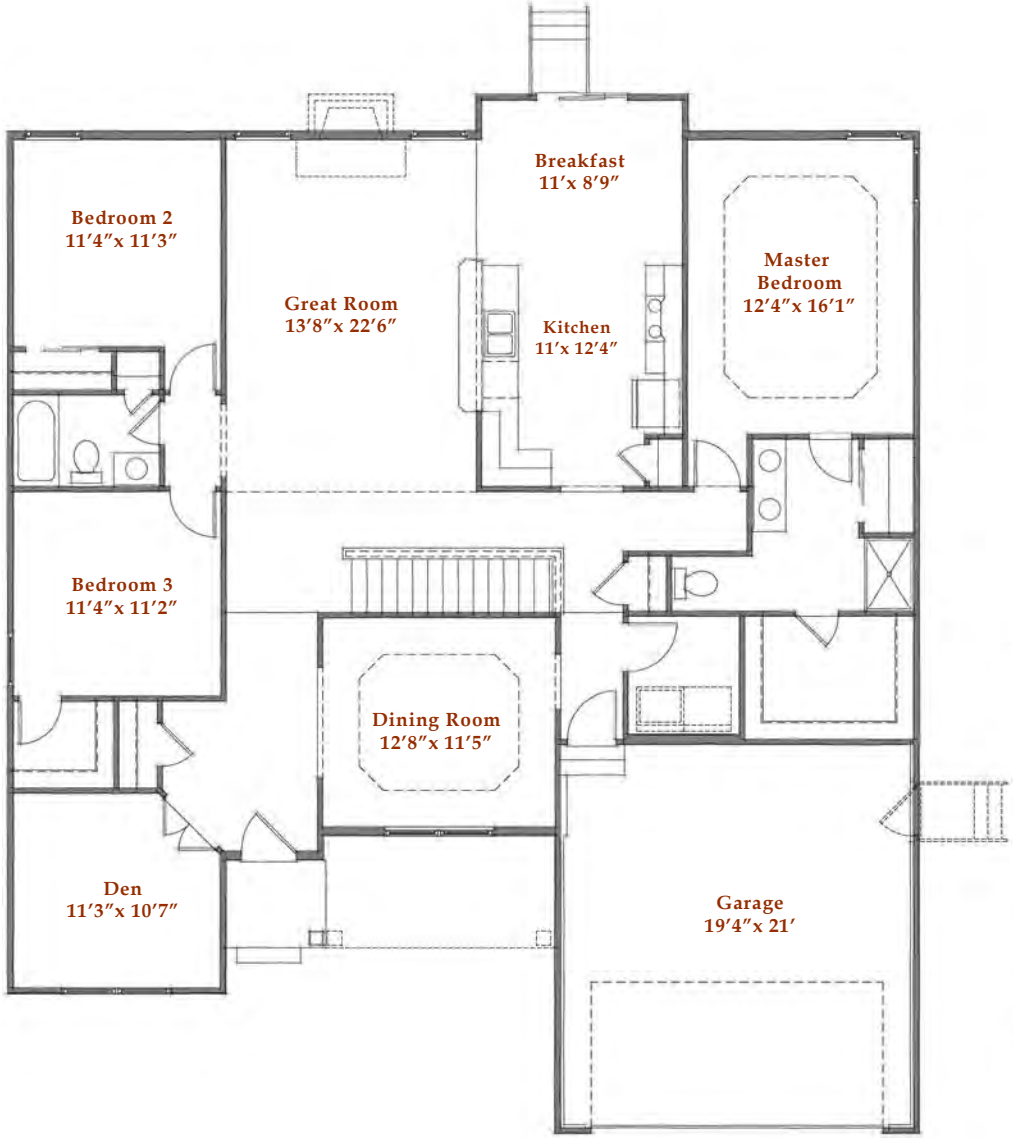
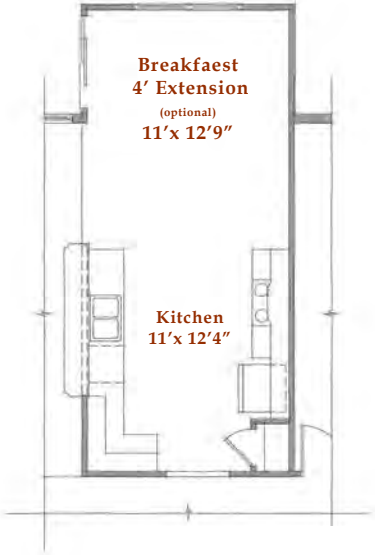
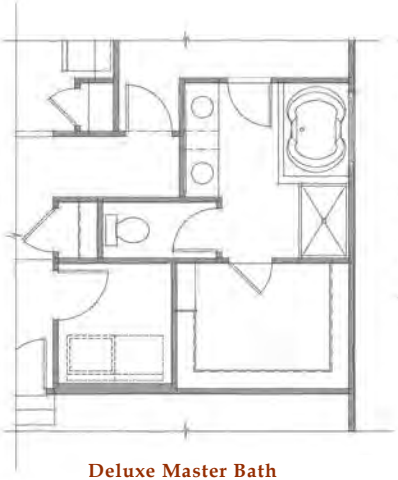
THE REDMOND

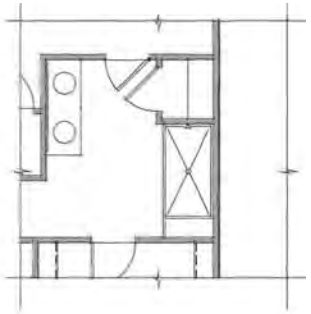


First Floor





Deluxe Master Bath
(optional)



Master Bath
5′ Shower w/ Seat
(optional)

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THE STOCKTON

Elevation 'B' (with optional stone front)

Elevation 'A' (with optional brick front)

Elevation 'C'

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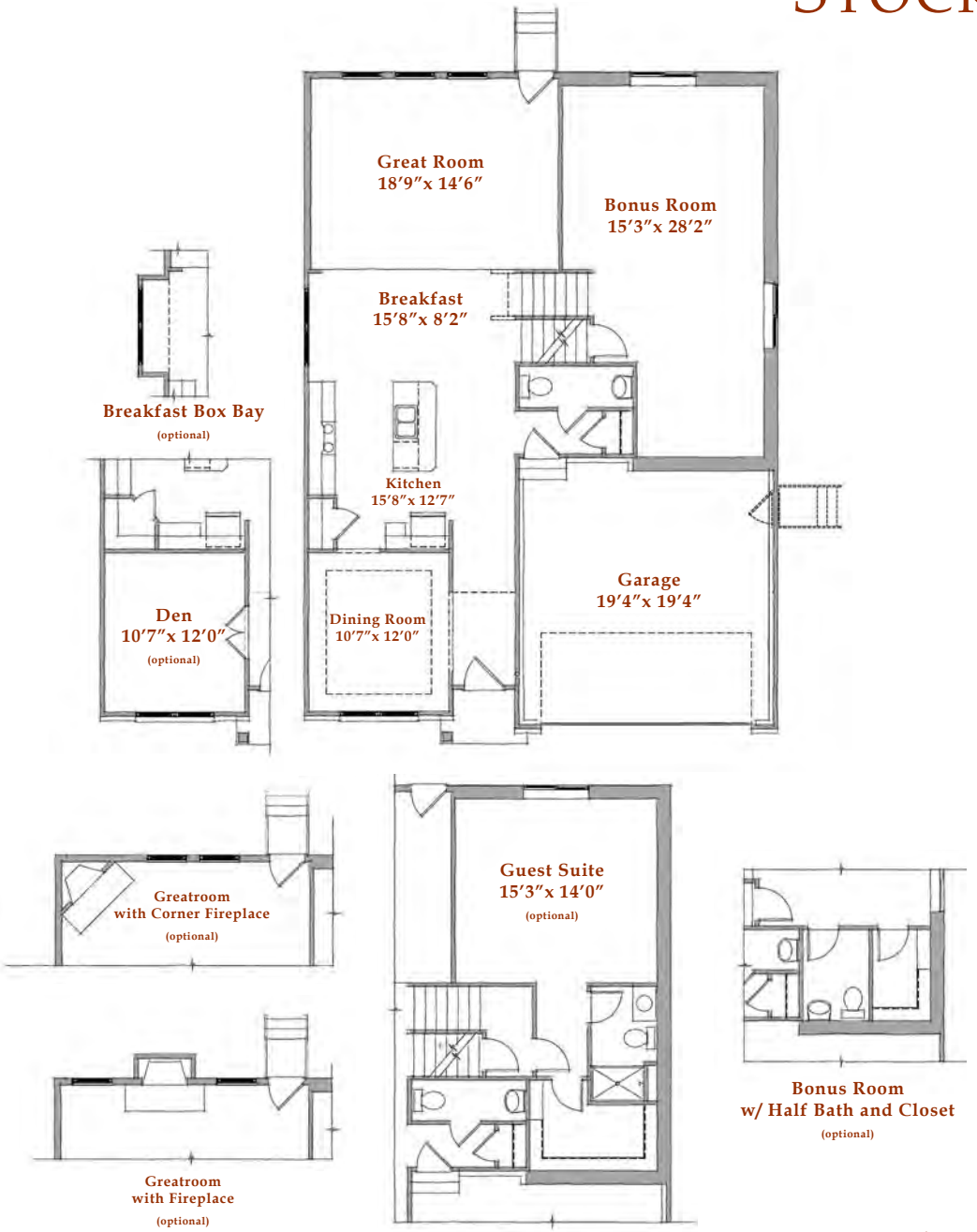
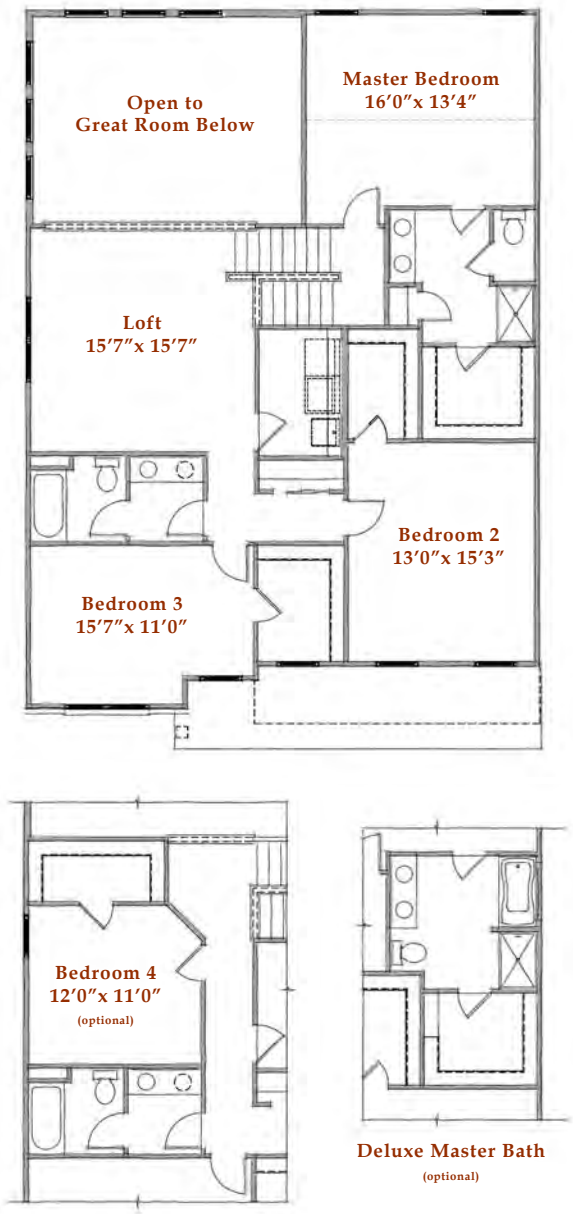
THE STOCKTON



First Floor



Second Floor

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THE SYCAMORE II

Elevation 'B' (with optional brick front)

Elevation 'C' (with optional stone front and metal roof)

Elevation 'A'

Elevation 'D'

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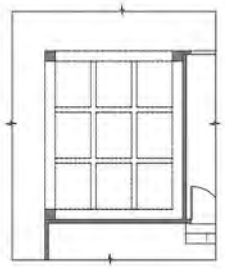
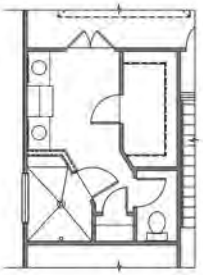
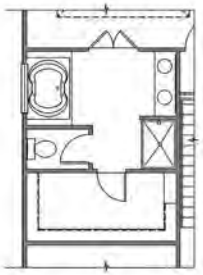
THE SYCAMORE II



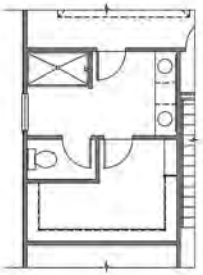
Dining Room Decorative Tray Ceiling
(optional)



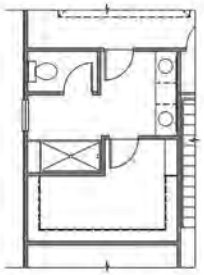
Deluxe Master Shower
(optional)



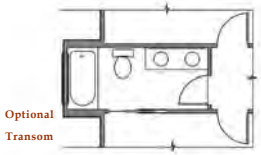
Deluxe Master Bath
(optional)



Master w/ 5′ Shower
(optional)

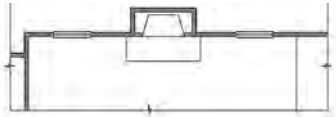


Master w/ 5′ Shower w/ 1′ seat
(optional)

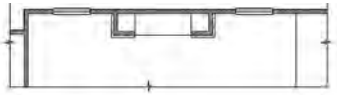


Optional Transom

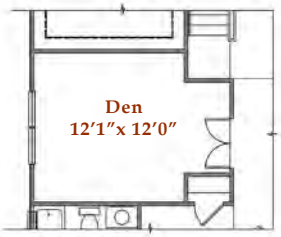
Enlarged Hall Bath
(optional)
(optional pocket door shown)



Direct Vent Fireplace
21′8″ x 22′0″
(optional)

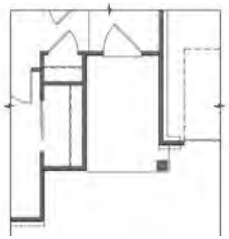


Direct Vent Fireplace - Linear Design
21′8″ x 22′0″
(optional)

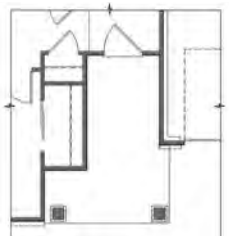


Den
12′1″x 12′0″

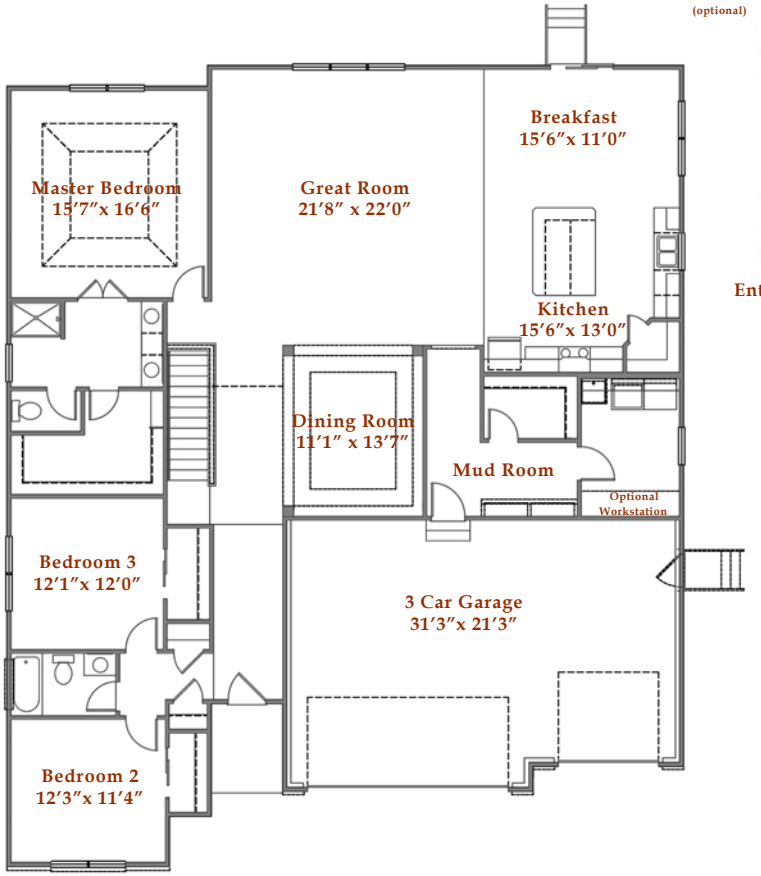
Den I.L.O. Bedroom 3
(optional)



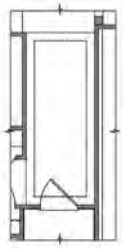
Porch w/ Elevation "B"



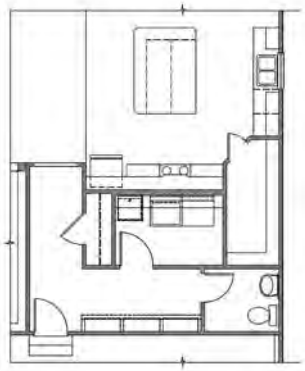
Porch w/ Elevation "C"



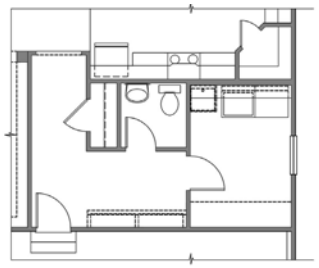
First Floor



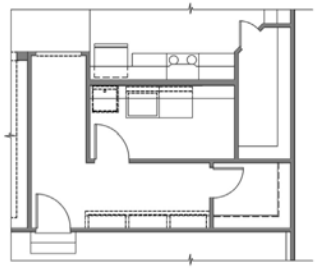
Entry Raised Ceiling
(optional)



Enlarged Pantry & Powder Room
(optional)



Powder Room
(optional)



Enlarged Pantry
(optional)

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THE WATERFORD II

Elevation 'C' (with optional stone front)

Elevation 'A' (with optional stone front)

Elevation 'B' (with optional brick front)

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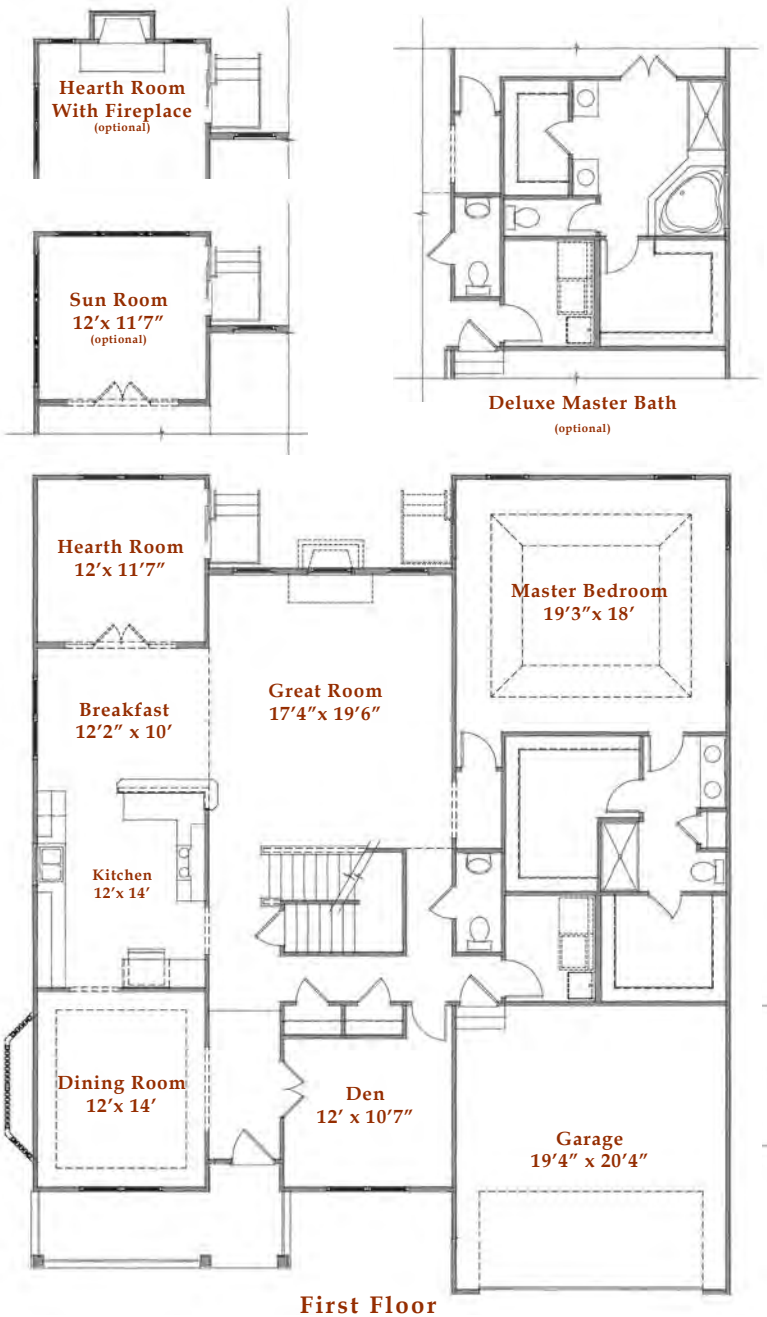
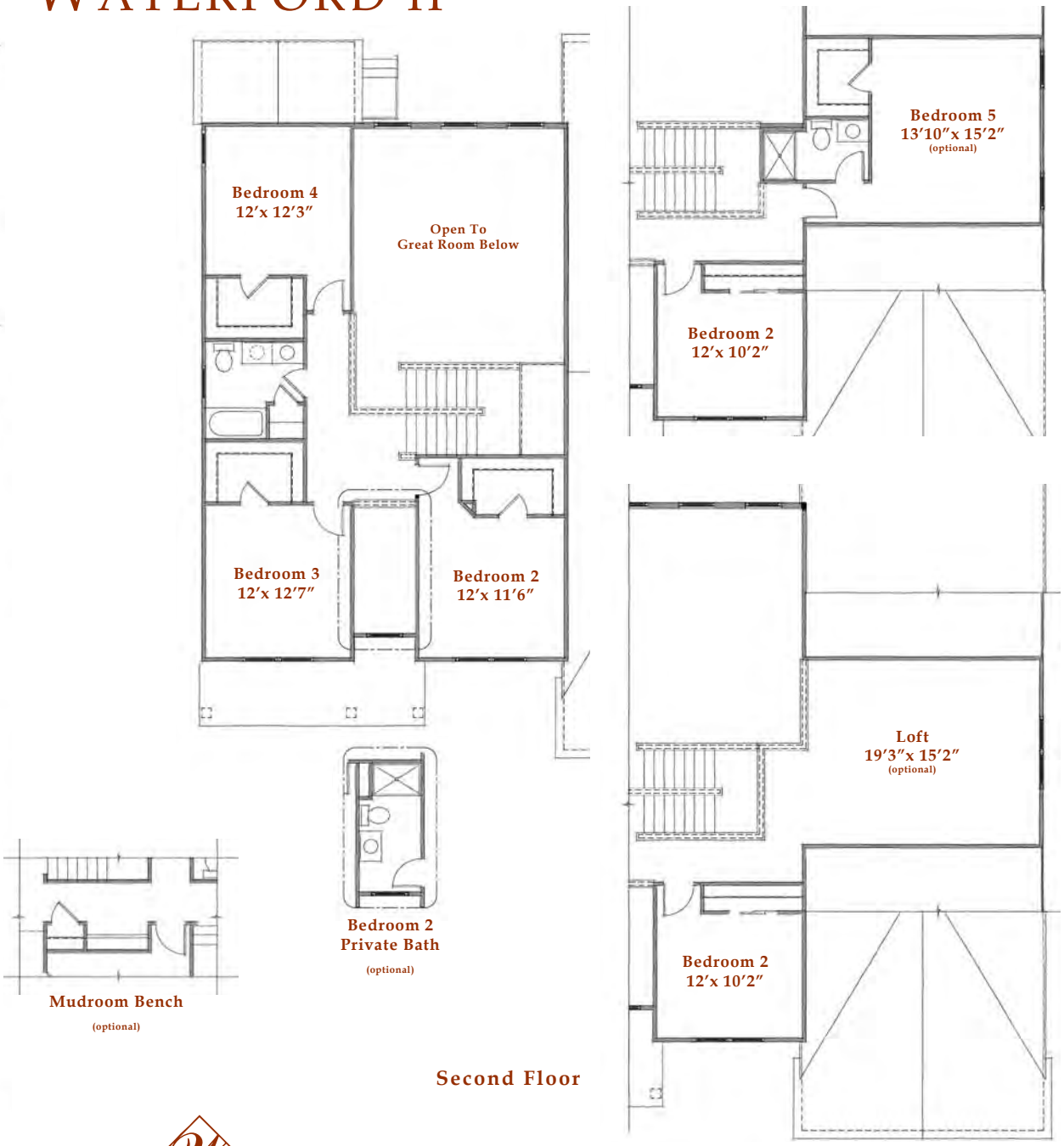
THE WATERFORD II





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THE WEST HAVEN

Elevation 'D' (with optional brick)

Elevation 'A'

Elevation 'B' (with optional brick)

Elevation 'C' (with optional stone)

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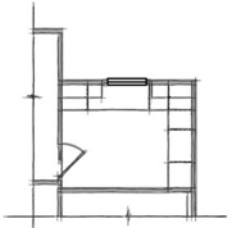
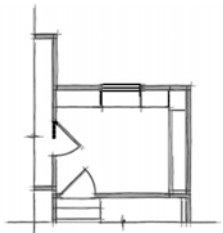
THE WEST HAVEN

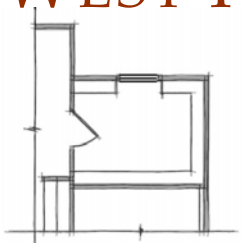


Office
I.L.O. FFL Laundry
(optional)
10′x 8′

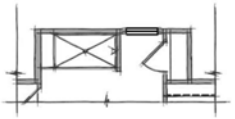
Study Center
I.L.O. FFL Laundry
(optional)
10′x 8′



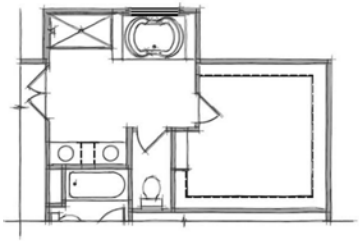
Mud Room
I.L.O. FFL Laundry
(optional)
10′x 8′



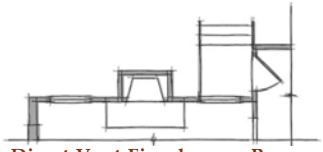
Walk-In Pantry
I.L.O. FFL Laundry
(optional)
10′x 8′



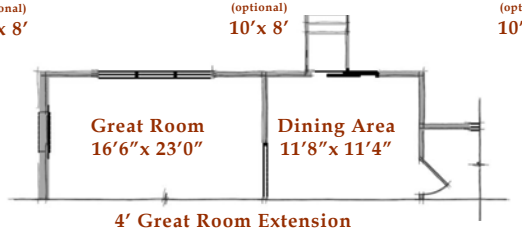
Master Bath
5′ Shower w/ 1′ Seat
(optional)



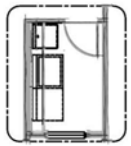
Deluxe Master Bath
(optional)



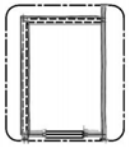
Direct Vent Fireplace on Rear
(optional)



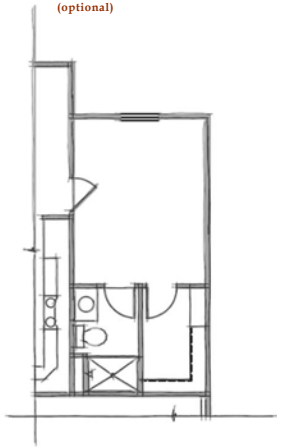
4′ Great Room Extension
(optional)



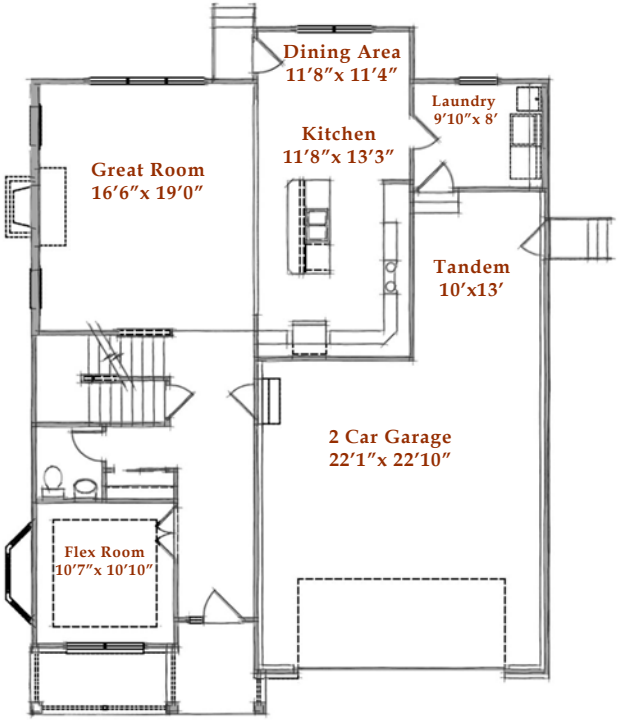
Second Floor Laundry
(optional)
5′8″x 8′7″



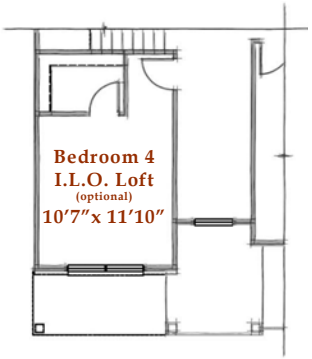
Open Foyer
(optional)

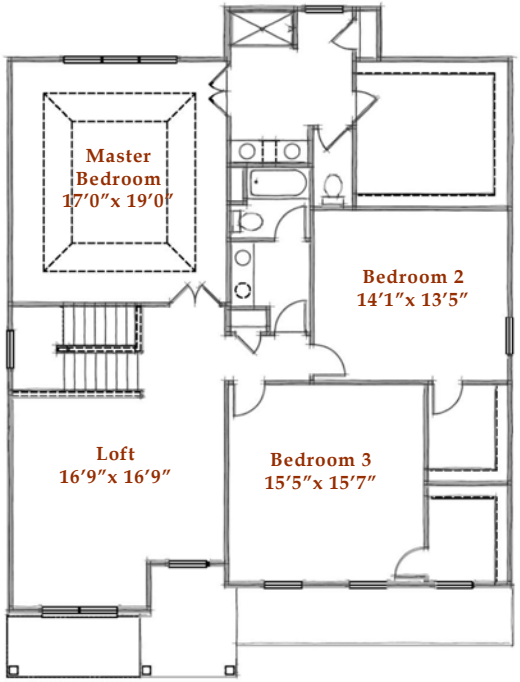


In-Law Suite I.L.O. Tandem
(option)
10′x 12′8″



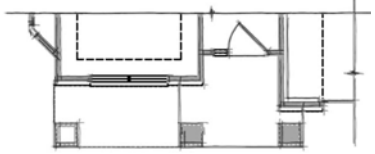
First Floor





Second Floor

Front Porch Elevation C



WESTPORT HOMES

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THE WINCHESTER

Elevation 'B' (with optional brick front)

Elevation 'A'

Elevation 'C' (with optional stone front, study I.L.O. 3rd car garage and metal roof)

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THE WINCHESTER

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WESTPORT HOMES

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3.29.17

Architectural Elevations

Detached Lifestyle Homes
Subarea 2

LIFESTYLE SERIES

THE FAIRMONT

Elevation 'A' (with brick or stone - shown with optional bonus room, which includes window over garage)

Elevation 'B' (with brick or stone - shown with optional dormers)

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LIFESTYLE SERIES

THE HAWTHORNE

Elevation 'A' (with brick or stone - shown with optional bonus room, which includes window over garage)

Elevation 'B' (with brick or stone and optional bonus room)

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LIFESTYLE SERIES

THE HEYDEN

Elevation 'A' (with brick or stone - shown with optional dormer and optional bonus room, which includes window over garage)

Elevation 'B' (with brick or stone - shown with optional bonus room, which includes window over garage)

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LIFESTYLE SERIES

THE HOLLISTER

Elevation 'A' (with brick or stone)

Elevation 'B' (with brick or stone)

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LIFESTYLE SERIES

THE LAFAYETTE

Elevation 'A' (with brick or stone)

Elevation 'B' (with brick or stone)

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LIFESTYLE SERIES

THE BARRYMOOR

ELEVATION 'A' (with brick or stone—shown with optional bonus room, which includes window over garage)

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LIFESTYLE SERIES

THE BAXLEY

ELEVATION 'A' (with brick or stone)

ELEVATION 'B' (with brick or stone)

ELEVATION 'C' (with brick or stone)

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LIFESTYLE SERIES

THE BAXLEY II

ELEVATION ‘A’ (with brick or stone)

ELEVATION ‘B’ (with brick or stone)

ELEVATION ‘C’ (with brick or stone)

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WESTPORT HOMES

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Exhibit “H-1”

Sample Declaration of Covenant / Deed Restrictions

DECLARATION OF COVENANTS, EASEMENTS, CONDITIONS AND RESTRICTIONS

FOR

COLEMAN'S CROSSING SUBDIVISION

THIS DECLARATION OF COVENANTS, EASEMENTS, CONDITIONS AND RESTRICTIONS (the "Declaration") is made as of the _____ day of _____, 201___, by Westport Homes, Inc., an Indiana corporation of 507 Executive Campus Drive, Suite 107, Westerville, Ohio, 43082 (the "Developer").

A. Developer is the owner of the real property more fully described in Exhibit A attached hereto and by this reference incorporated herein (the "Property" as defined hereinafter); and

B. Developer desires to develop the Property into a residential subdivision consisting of two housing types, and to restrict the use and occupancy of the Property for the protection of the Property and the future owners of the Property; and

C. Developer deems it desirable to establish an association consisting of itself and/or future owners of portions of the Property, for the purpose of owning and/or maintaining certain areas at and/or improvements constructed as part of the Subdivision; and

D. Developer declares that all of the Property shall be held, developed, encumbered, leased, occupied, improved, used, and conveyed subject to the following covenants, easements, conditions and restrictions (the "Restrictive Covenants"), which are for the purpose of protecting the value and desirability of, and which shall run with, the Property and be binding on all parties having any right, title or interest in the Property or any part thereof, their heirs, successors and assigns, and shall inure to the benefit of each owner of any portion of the Property.

This Declaration is hereby declared to inure to the benefit of all future owners of any Lot (as hereinafter defined) and all others claiming under or through them ("Owners"); the Developer, its

successors and assigns; and all utility companies or agencies or instrumentalities of local government providing utility services.

It is hereby declared that irreparable harm will result to the Developer and other beneficiaries of this Declaration by reason of violation of the provisions hereof or default in the observance thereof and therefore, each Owner shall be entitled to relief by way of injunction, damages or specific performance to enforce the provisions of this Declaration as well as any other relief available at law or in equity.

NOW, THEREFORE, in pursuance of a general plan for the protection, benefit and mutual advantage of the Property described above and of all persons who now are or may hereafter become owners of any of the Property or plats thereof, the following restrictions, conditions, easements, covenants, obligations, and charges are hereby created, declared and established:

GENERAL PROVISIONS

I. APPLICABILITY

A. This Declaration shall apply to the entire Property as described on the attached Exhibit A. Developer intends to develop the Property into two, different housing types, including individual homes on traditional single-family lots, and detached low maintenance "lifestyle" housing, and the covenants, conditions and restrictions contained herein may apply differently to lots and homes within the areas in which differing housing types are constructed. In addition, if Developer owns, and/or acquires additional parcels adjacent to the Property, intended by Developer for future development, generally consistent with the development types within the Property, Developer may annex said additional parcels to, and declare them to be, subsequent phases of Coleman's Crossing Subdivision. Upon such annexation, Developer shall have the right, but not the obligation, to subject such annexed parcels to the terms and conditions of this Declaration. Developer may subject annexed adjacent parcels to this Declaration without modification, or Developer may supplement and amend this Declaration as it applies to such additional phases of development. As to each development phase of Coleman's Crossing, Developer may re-record this Declaration with an attached exhibit which modifies and/or supplements this Declaration with respect to such phase, or Developer may incorporate this Declaration by reference into a supplemental declaration which establishes the modifications and/or supplemental provisions desired by Developer to be applicable to such phase. The modifications and/or supplemental provisions applicable to different phases of development at Coleman's Crossing may be comparable to, more restrictive or less restrictive than the parallel provisions applicable to other development phases, as determined to be appropriate by Developer in the exercise of its sole discretion. In the event of any inconsistency between the provisions of this Declaration and the provisions of any phase-specific modifications and/or supplements hereto, the terms of the phase-specific document shall control.

B. Developer shall, prior to the transfer of the first Lot (as defined hereinafter) owned by it at Coleman's Crossing, create an association for the purpose of carrying out and performing certain obligations as described herein. As specifically provided herein after, (i) membership in the Association shall be mandatory for all Lot owners; (ii) the Association shall be required to maintain the common areas in Coleman's Crossing, and the funding of such maintenance shall be the legally enforceable obligation of each Lot owner; and (iii) the obligations of the Association and its individual

members shall be enforceable by each Lot owner, by the Developer, the Association and by the City of Pataskala.

II. DEFINITIONS

A. "Annual Assessment" - amount to be paid to the Association by each Owner annually.

B. "Assessments" - collectively referring to all charges made by the Association to an Owner relating to the Association, including but not limited to Annual Assessments, Lot Assessments and Special Assessments as defined herein after.

C. "Association" – the legal entity (and its successors and assigns) formed for the purpose of owning and/or maintaining any portion of the Property on behalf of the owners of two (2) or more Lots in the Subdivision. The Association shall be named Coleman's Crossing Homeowners' Association, Inc. (or similar name), and shall be formed as an Ohio non-profit corporation or other appropriate non-profit entity. Developer reserves the right, in the exercise of its discretion or if required by governmental approval processes, to form a single "Master" Association, with separate "Sub-Associations" for the separate Sub-Areas (as defined below), and if a Master and Sub-Associations are in fact formed, the term "Association" as used herein shall refer collectively and individually, as the context requires, to the Master and/or Sub-Association(s).

D. "Association Documents" – the formative documents of the Association (or each Association, if Sub-Area Associations are formed), consisting of the articles of incorporation, code of regulations, this Declaration (as the same may be amended from time to time), and any and all procedures, rules, regulations or policies adopted by the Association, or comparable formative documents if the Association is not a corporate entity.

E. "Board" - the board of trustees or other management body of the Association.

F. "Common Expenses" - expenses incurred in maintaining the Common Property and operating the Association.

G. "Common Property" - all real and personal property now or hereafter acquired, pursuant to this Declaration or otherwise, and owned by the Association for the common use and the enjoyment of the Owners, or if not owned by the Association, real or personal property for the use and/or maintenance of which the Association is responsible under the terms of this Declaration, applicable zoning regulations, or under any other agreement or instrument to the terms of which the Association is bound.

H. "Developer" – Westport Homes, Inc. and any manager, general partner, shareholder, successor or assignee thereof to which Developer specifically assigns any of its rights under this Declaration. The term "Developer" also includes any home builder constructing homes on the Property if such builder is legally affiliated with the Developer.

I. "Improvements" - all man-made or man-installed alterations to the Property, and items placed on the Property, following the initial erection of a primary residential structure on a Lot, which are visible from the exterior of any primary structure on a Lot, which cause the appearance of the Property to deviate from its condition prior to such alteration(s) and/or placement. The foregoing includes, but is not limited to: buildings, outbuildings and garages and the collective and individual component parts thereof (including but not limited to roofs, walls, windows, doors, awnings and room additions); permanent or temporary banners, signs or sign structures; overhead, aboveground and underground installations, including without limitation, utility facilities and systems, lines, pipes, wires, towers, cables, conduits, poles, antennae and satellite dishes; flagpoles; temporary, seasonal or permanent decorative devices including but not limited to lights; safety lighting; visible components of television, telephone, internet and/or security systems; swimming pools and recreational courts; slope and drainage alterations; roads, driveways, covered or uncovered parking areas and other paved areas; recreational devices and equipment whether fixed in place or movable; fences, trellises, walls, retaining walls, exterior stairs, decks, patios and porches, gazebos, outdoor cooking equipment, playground equipment, structures or equipment used for pets, play houses, walkways, paths, trees, hedges, shrubs and other forms of landscaping, and all structures of every type.

J. "Lot" - a discrete parcel of real property identified upon the recorded subdivision plat of the Property, or recorded re-subdivision thereof and any other discrete parcel of real property designated by Developer, excluding the Common Property and any portion of the Property dedicated for public use. Developer has and reserves the right to split and/or combine currently platted Lots into new platted Lots without the consent or approval of owners of other Lots in the subdivision, as Developer may deem such split or combination to be beneficial to the Property from time to time. Any and all references herein to a “Lot” shall include any such re-platted Lots. Once a split/combination is completed by Developer, the former lots shall cease to be “Lots” for any and all purposes hereunder; Lot combinations obtained by Owners other than Developer shall NOT cause each of the Lots combined to cease being separate Lots for any and all purposes hereunder.

K. "Lot Assessment" an assessment that the Board may levy against one or more (but fewer than all) Lots to reimburse the Association for costs incurred on behalf of those Lot(s), including without limitation, costs associated with making repairs that are the responsibility of the Owner of those Lots; costs of additional insurance premiums specifically allocable to an Owner; costs of any utility expenses chargeable to an Owner but not separately billed by the utility company; fines and related expenses assessed by the Association in connection with the enforcement of the Association’s rights hereunder; and all other charges reasonably determined to be a Lot Assessment by the Board.

L. “Manager” - the person or entity retained by the Board to assist in the management of the Association as set forth in Article VIII, Paragraph F.

M. "Member" - any person or entity entitled to membership in the Association, as provided for in Article VII.

N. "Operating Fund" - the fund established pursuant to Article IX.

O. "Owner" - the record owner, whether one or more persons or entities, of fee simple title to a Lot, including contract sellers, but excluding those having an interest merely as security for performance of an obligation and also excluding the Developer.

P. "Property" - all of the real property described in Exhibit A attached hereto and such additional property as may be annexed by amendment to this Declaration, or that is owned in fee simple by the Association, together with all easements and appurtenances.

Q. "Rules" - the rules and regulations governing use of and activities upon the Property and the Common Property, as may be established by the Board from time to time pursuant to Article VIII.

R. "Special Assessment" - an assessment levied by the Association against all Lots pursuant to Article IX or at a special meeting of the Members of the Association to pay for capital expenditures or interest expense on indebtedness incurred for the purpose of making capital expenditures and not projected to be paid out of the Operating Fund.

S. "State" - the State of Ohio, and, unless the context requires otherwise, any political subdivision thereof exercising governmental jurisdiction over the Property.

T. "Sub-Area" – a portion of the Property on which a distinctly identifiable type of housing (traditional single-family, or lifestyle) is developed and constructed. Within a given Sub-Area, separate standards may exist and unique rules may be adopted and applied according to which the ownership and use of Lots and Improvements within such Sub-Area may be limited and restricted. Separate and distinct associations may be formed with regard to separate Sub-Areas, and such Associations may have obligations to one or more other Associations, including but not limited to a "Master Association" for the Coleman's Crossing community as a whole. Additional and/or different services may be provided by one or more Associations within and/or around various Sub-Areas.

U. "Turnover Date" - the date described in Article VII, Paragraph B.

III. GOALS

The covenants, easements, conditions and restrictions contained in this Declaration are declared to be in furtherance of the following purposes:

A. Compliance with all zoning and similar governmental regulations;

B. Promotion of the health, safety and welfare of all Owners and residents of the Property;

C. Preservation, beautification and maintenance of the Property and all Improvements; and

D Establishment of requirements for the development and use of the Property.

DEVELOPMENT & USE RESTRICTIONS

IV. USE RESTRICTIONS

The following restrictions and covenants concerning the use and occupancy of the Property shall run with the land and be binding upon the Developer and every Owner or occupant, their respective heirs, successors and assigns, as well as their family members, guests, and invitees.

A. Use of Lots. Except as otherwise permitted herein, each Lot shall be occupied and used exclusively for single-family, residential purposes and purposes customarily incidental to a residence. No Improvements may be constructed on any Lot (other than the initial construction of a primary residential structure pursuant to plans approved by Developer) until and unless the plans therefor have been approved by the Design Review Board (or Developer if no Design Review Board has been established) as provided for hereinafter. All Improvements, excepting only landscaping, shall be constructed no nearer the street or streets on which a Lot fronts than the platted setback line(s) for such Lot, unless a variance to permit construction forward of a setback line has been approved by the appropriate governmental entity exercising jurisdiction over the property, and by the Design Review Board. No Improvements may be constructed, erected or installed within any area designated as a "Drainage Easement" on a recorded plat for Coleman's Crossing unless approved by Pataskala, and by the Design Review Board. Front, rear and side yard areas shall consist, primarily, of grassed lawn areas, with a reasonable amount of planting bed, hardscape and other landscape components.

B. Use of Common Property. Any Common Property may be used only in accordance with the purposes for which it is intended and for any reasonable purposes incidental to the residential use of a Lot. All uses of the Common Property shall benefit or promote the health, safety, welfare, convenience, comfort, recreation, and enjoyment of the Owners and occupants, and shall comply with the provisions of this Declaration, the laws of the State, and the Rules.

C. Hazardous Actions or Materials. Nothing shall be done or kept in or on any Lot or in or on any portion of the Common Property that is unlawful or hazardous, that might reasonably be expected to increase the cost of casualty or public liability insurance covering the Common Property or that might unreasonably disturb the quiet occupancy of any person residing on any other Lot. This paragraph shall not be construed so as to prohibit the Developer from construction activities consistent with its residential construction practices.

D. Signs. No signs of any character shall be erected, posted or displayed upon the Property, except: (i) marketing signs installed by the Developer (or by one or more builders with Developer's approval) while marketing the Lots and residences for sale; (ii) street and identification signs installed by the Association or the Developer; (iii) one temporary real estate sign not to exceed six square feet in area advertising that such Lot is for sale or rent; and (iv) for a

reasonable period of time before, and not to exceed three (3) days after a public governmental election in which the Lot Owners are permitted to vote, up to three (3) temporary political signs of not more than six (6) square feet each, expressing support for or opposition against an individual candidate or issue which is the subject of the current election. Political signs containing information or expressing opinions other than simple support for or opposition against a specific candidate or issue may be removed by the Association, and not more than one sign for or against any specific candidate or issue may be posted or displayed on any one Lot. No such signs may be posted in the Common Area without the approval of the Board.

E. Animals. No person may keep, breed, board or raise on any Lot or in or upon any part of the Common Property, any animal, livestock, farm animal (including but not limited to horses, chickens, ducks and pigs regardless of size), reptile, or poultry of any kind, nor any animal for any commercial purpose, unless expressly permitted by the Rules. Common domestic pets (i.e., dogs and cats) and pets that are kept only inside of the residence at all times, are permitted for non-commercial, and non-breeding purposes. All permitted domestic pets shall be properly restrained when outside of the house, and shall not be permitted to roam free or loose on the Property, other than on the Lot of the owner of such pet(s). No animals, including domestic pets, shall be kept on the Property if the number, size, type or characteristics of such animal(s) constitute a nuisance (including unreasonable volume or repetitive barking). Proper Lot maintenance as required elsewhere herein shall include the obligation to regularly remove pet waste from an Owner's Lot. Outdoor dog houses, animal cages, dog runs and other similar objects, whether or not affixed to the ground, are prohibited without the express prior review and approval of the Design Review Board, which may be withheld in the Board's discretion.

F. Nuisances. No noxious or offensive activity or trade shall be permitted on the Property or within any dwelling located on the Property, nor shall any use be made nor condition allowed to exist on any Lot which unreasonably disturbs or interferes with the quiet occupancy of any person residing on any other Lot.

G. Business. No industry, business, trade, occupation or profession of any kind may be conducted, operated or established on the Property, without the prior written approval of the Board. This provision shall not prohibit a "home office" use, in connection with which no non-resident employees are working on the Property, and no customers, employees, subcontractors or other third parties park on the Property.

H. Storage. No open storage of any kind is permitted. No storage buildings or structures of any kind are permitted, including without limitation, sheds or barns.

I. Hotel/Transient Uses; Leases. No Lot may be used for hotel or transient uses, including without limitation, uses in which the occupant is provided customary hotel services such as room service for food and beverage, maid service, furnishing laundry and linen, or similar services, or leases to roomers or boarders. All leases shall be in writing and shall be subject to this Declaration.

J. Vehicles.

1. The Board has the right and power to adopt and enforce reasonable rules concerning the parking of any vehicle permitted on the Property. In addition to its authority to levy Lot Assessments as penalties for the violation of such rules, the Board shall be authorized to cause the removal of any vehicle violating such rules.

2. No commercial vehicles, boats, trailers, campers, buses or mobile homes shall be parked or stored on the street in the Subdivision, or on any Lot (except in an enclosed structure shielded from view), for any time period longer than forty-eight (48) consecutive hours, or ninety-six cumulative hours in any thirty (30) day period, and the burden of establishing that said time periods have not been exceeded is borne by the Owner of the Lot on or in front of which such parking occurs, and/or by the owner of the vehicle. The foregoing notwithstanding, the Board may change the time periods during which vehicles described in this subparagraph may be parked (and where), upon the exercise of the Board's judgment, that different times, locations and types of parking are appropriate and desirable in any given Sub-Area. Nothing contained herein shall prohibit the reasonable use of such vehicles as may be necessary during construction of residences on the Lots. In addition, no automobile or other motorized vehicle of any type or description which is not functionally or legally operable on public highways shall be kept, stored, operated or maintained on or in front of any Lot within the Subdivision for a period longer than seven (7) days (the burden of proving that such time period has not been exceeded in each/any instance is borne by the Owner of the Lot on or in front of which the vehicle is located, and/or the owner of the vehicle), unless the same is entirely contained and shielded from view within a permitted structure. Any vehicle so kept, stored, operated or maintained shall be considered a nuisance, and the Board shall have the right and authority, but not the obligation, to have the same removed at the owner's expense.

   As used herein, the word "trailer" shall include trailer coach, house trailer, mobile home, automobile trailer, camp car, camper or any other vehicle, whether or not self-propelled, constructed or existing in such a manner as would permit occupancy thereof, or the storage or conveyance of machinery, tools or equipment, whether resting on wheels, jacks, tires or other foundation. The word "commercial vehicle" shall include and mean every type of vehicle, whether or not motorized, which is designed for and used exclusively or primarily for other than personal transportation of ten or fewer persons at one time. Vehicles larger than ten-person passenger vans are conclusively presumed to be commercial vehicles, whereas passenger cars, passenger vans (full-sized or mini-vans), pickup trucks, sports-utility vehicles, and motorcycles are presumed to be designed and used for personal transportation. Vehicles which are not conclusively presumed to be commercial by virtue of their size, and which are used by the operator thereof for both business and personal purposes, shall not be considered "commercial vehicles" merely by virtue of advertising information painted or otherwise affixed thereto, but may be deemed to be Commercial Vehicles by virtue of the combination of such factors (i.e., size, amount of advertising information, etc., combined with each other and with other factors as determined by the Board). The Board's determination that a vehicle meets the definition of a "trailer" or "commercial vehicle" (or boat, camper, bus or mobile home) shall be deemed final and conclusive.

K. Trash. Except for the reasonably necessary activities of the Developer during the original development of the Property, no burning or storage of trash of any kind shall be permitted on the Property. All trash shall be deposited in covered, sanitary containers, screened from view and stored either inside of a permitted structure, or to the side or rear of the home constructed on the lot.

L. Antennae; Miscellaneous Improvements. No outside television or radio aerial or antenna, or other aerial or antenna, including satellite receiving dishes, for reception or transmission, shall be maintained on the premises, to the extent permissible under applicable statutes and regulations, including those administered by the Federal Communications Commission, except that this restriction shall not apply to satellite dishes with a diameter less than one (1) meter, erected or installed to minimize visibility from the street which the dwelling fronts. No clothesline or other apparatus designed or intended for use of air drying clothes or other items shall be permitted. No recreational equipment, whether affixed to the Property or free-standing/movable, shall be permitted to be installed or placed on the Property without the prior written approval of the Design Review Board. Holiday decorations celebrating nationally (U.S.) recognized holidays, that do not unreasonably cast light on adjacent lots, and do not cause sound above 50 decibels at the property line before 9:00 a.m. or after sundown, may be installed without Board approval, provided the same are not erected more than 1 week before such holiday, and are removed within 1 week following the holiday, except that (unless otherwise approved by the Design Review Board) Christmas decorations may be erected not earlier than Thanksgiving, and must be removed not later than January 15 of the new year.

M. Utility Lines. All utility lines on the Property shall be underground, subject to the requirements of relevant governmental authorities and utility companies.

N. Tanks. No tanks for the storage of propane gas or fuel oil or other flammable liquid or gas, shall be permitted to be located above or beneath the ground of any Lot except that propane gas in residentially sized containers such as are common for the use of residential gas cooking grills are permitted. The provisions of this subparagraph shall not prohibit the Developer from utilizing propane gas for the heating of homes under construction, or from having one or more model homes that use propane gas as a heating fuel prior to the time that electric or gas furnace hook-ups are available for such model(s). If natural gas is not available, or ceases to be available, as a heating fuel source for Coleman's Crossing, the prohibition against propane and fuel oil tanks shall be deemed removed from this Declaration without the need for further action by the Declarant.

O. Required Trees. Developer may designate one (1) or more species or types of trees as deemed necessary by Developer, and/or as required by governmental authorities having jurisdiction over the Property, to be planted along the street or in the front or side yards of the Lots (the designated locations of such trees may, as determined by Developer or required by local governmental regulation, be in the "tree lawn" located within the road right-of-way, or on the Owner's Lot along the road right-of-way). If Developer determines to designate street tree(s) then the Lot Owners agree to such uniform trees. Each Lot Owner on whose Lot a Required Tree is

located, shall care for, and, if necessary, replace such tree or trees at the Lot Owner's expense with a like type of tree, if and when necessary.

P. Mailbox. If applicable governmental regulations allow for the installation of individual mailboxes for mail delivery to individual homes, then and in such case each Lot shall have a curb side mailbox in the design (size, color, materials, style) specified and depicted in Exhibit C attached hereto, the purpose of which is to give uniformity to the subdivision. A Lot's Owner shall be responsible at his/her/their sole expense, for the maintenance in good appearance and functional condition of the mailbox for such Owner's Lot. If such mailbox is damaged, destroyed or deteriorates, then each Lot Owner, at such Lot Owner's expense, shall repair or replace such mailbox with another matching the design, color, size and materials shown in Exhibit C. An Owner's Mailbox may not be painted, stained, covered, wrapped or otherwise decorated in any manner that causes its appearance to deviate from the uniform appearance depicted on Exhibit C. If applicable governmental regulations result in the installation in the Subdivision of "ganged" or "group" mailboxes, the maintenance of such ganged/grouped facilities shall be the responsibility of the Homeowners' Association.

Q. Yard Lights and Lamp Posts. All yard lights and lamp posts shall conform to the standards set forth by the Developer and Design Review Board and as provided on Exhibit C attached hereto, and as required by applicable statute(s) and/or ordinance(s).

R. Fencing. The Design Review Board shall have the authority to establish standards according to which fencing and walls may be permitted in the Subdivision. Said authority shall include the power to prohibit fencing or walls, or both, entirely, to prohibit or require fencing or walls of certain types, and to prohibit or require fencing or walls of certain types (or entirely) in any given Sub-Area or portion(s) of any Sub-Area(s). All fencing and walls shall meet any applicable requirements (if any) in subpart T below, and shall conform to the standards set forth by the Design Review Board, and must be approved by the Board, in writing, prior to the installation thereof. By way of example, and not limitation, and subject to the provisions of subsection T below, compliance with the following standards shall be considered by the Board in reviewing fence applications:

1. No fencing, except as required by law, shall be erected on any Lot on which a Lifestyle home is located;

2. Where permitted, fences or walls shall be constructed of wood, vinyl, wrought iron (or high quality aluminum or vinyl wrought iron style), stone or brick, as approved by the Design Review Board, and in no event shall chain link or other metal wire fencing be permitted. Chain link and/or wire fencing material may not be used in the construction of any Improvement that is visible from the exterior of a lot;

3. No fence or wall shall be constructed in excess of forty-eight inches (48") above finished grade, provided however that if a governmental agency exercising jurisdiction over the property on which the fence or wall is to be constructed requires a minimum height in excess of 48" for safety reasons (i.e. swimming pool enclosure), such fence or wall may

exceed 48" above finish grade, but only to the extent necessary to meet the governmentally required minimum;

4. Fences or walls shall not be located closer to the street than a line parallel to the street and extending from the rear corners of the home, and in no event shall fences be located closer to any street than the building line shown on the recorded plat (front and side yard building lines on corner lots), except that ornamental railings, walls or fences not exceeding three feet (3') in height which are located on or entirely adjacent to entrance platforms or steps are permitted;

5. Treated wood split rail fences are permitted. Dark painted or coated wire mesh or plastic mesh attached to a split rail fence is permitted, but in no event may uncoated "chicken wire" be used for such purpose;

6. Decorative wood and plastic fencing are permitted only by express, case-by-case approval of the Design Review Board or its assigns; and

6. No fences may be constructed within any area designated on a recorded plat for Coleman's Crossing as a "Drainage Easement," excepting those installed by Declarant.

Nothing contained herein shall be interpreted or construed to permit the use of approved fencing materials to accomplish a purpose or use otherwise prohibited hereunder.

S. Swimming Pools. No above ground swimming pool shall be permitted upon any Lot except that this Article IV, Paragraph S shall not be intended to prohibit the installation of a hot tub or sauna. A swimming pool shall be deemed to be an "above ground" pool if any portion thereof extends twelve inches (12") or more above the surrounding yard elevation that exists prior to the installation/placement of the pool on the Lot, subject to the Design Review Board's power to allow minor grade adjustments for the installation of an in-ground pool if such installation does not negatively impact the routing and management of storm and surface water. Any pool designed or manufactured for use as an above-ground pool shall be and constitute an "above-ground pool," even if less than 12" of such pool extends above the surrounding yard elevation. One "baby pool" which contains less than thirty-six (36) square feet of water surface area and has no filtration system of any kind, and which is conveniently capable of being filled, emptied and moved on a daily basis, is permitted on a Lot.

T. Compliance with Zoning Requirements. Certain provisions of this Declaration may have been included herein as a result of governmental requirements established through the zoning and development plan approval processes in the State, County, City, Township and/or Village in which the Property is located. Compliance with all such governmental requirements, for so long as such requirements are effective and binding, is required by this Declaration. However, in the event the governmental entity(ies) change or agree to a modification of such underlying obligation(s), or if such obligations lapse or for any reason whatsoever become legally unenforceable, this Declaration shall be deemed modified, ipso facto and without the need for further action on the part of the Declarant or any Member, such that this Declaration requires compliance with the obligation as affected by such change or modification. Specifically, requirements so imposed include, but are not limited to the following:

1. TBD during zoning and development plan approval process;

V. ARCHITECTURAL STANDARDS

All Property at any time subject to this Declaration shall be governed and controlled by this Article. Coleman's Crossing is a planned community under Ohio Revised Code Chapter 5312.01 et seq., and Developer requires strict adherence to the design review standards and processes established herein, for the benefit of itself, the community in which the Subdivision is situated, and for the future owners of the individual lots that collectively comprise Coleman's Crossing.

A. Design Review Board. The Design Review Board shall be a board consisting of three (3) persons. Until the Turnover Date, Developer shall have the sole and exclusive right to appoint and remove all three members of the Design Review Board at will, and may elect in the exercise of its sole discretion, to act itself as the Board (or to appoint an agent to act in its place) in lieu of appointing individuals. After the Turnover Date, the Board shall have the right to appoint all three members to the Design Review Board, or to appoint an agent to act in the Board's place, at will. The then current Board of Trustees shall handle the administration of the election, pursuant to which the new Board members are to be elected, each for a term of one year.

The Design Review Board shall have the exclusive authority, at a private or public meeting by action of two or more of the members thereof (if Developer has not elected to act itself or appoint an agent to act, in which case such authority shall be exercised by Developer or its agent) to determine the architectural standards which shall govern the construction of Improvements on the Property, except that Developer shall have and retain in all circumstances and at all times, the right and power to approve or disapprove of the architectural standards for the initial construction of each, any and all primary home structures being erected on each Lot. Each Owner covenants and agrees by acceptance of a deed to a Lot, to comply with, and to cause his/her Lot and any occupant thereof to comply with the standards promulgated by the Design Review Board. No Improvement shall be placed, erected or installed on the Property, no construction (which term shall include in its definition staking, clearing, excavation, grading and other site work) and no plantings or removal of plants, trees or shrubs shall be permitted without, until and unless the Owner first obtains the written approval thereof of the Design Review Board and otherwise complies with the provisions of this Declaration. The power of the Design Review Board to adopt and implement design/architectural standards, may be exercised before or after the Design Review Board's receipt of an application for approval of an Owner's desired modification or installation of Improvements; but architectural/design standards may not be implemented retroactively to cause previously installed Improvements that have been approved by the Design Review Board, to lose their status as 'approved'.

B. Modifications. Except as otherwise provided in this Declaration, the Design Review Board shall have jurisdiction over all construction, modifications, additions or alterations of Improvements on or to the Property. No person shall construct any Improvement on any Lot, including without limitation, alter surfaces of existing Improvements, change paint colors or roofing materials, construct or modify fencing, or install any recreational device, without the prior

written consent of the Design Review Board. Owners shall submit plans and specifications showing the nature, kind, shape, color, size, materials and location of Improvements and alterations to the Design Review Board for its approval. The Design Review Board may charge a nominal fee in connection with processing applications submitted pursuant to this section. Nothing contained herein shall be construed to limit the right of an Owner to remodel or decorate the interior of his/her residence.

C. Variances. To avoid unnecessary hardship and/or to overcome practical difficulties in the application of the provisions of this Declaration, the Design Review Board shall have the authority on a case-by-case basis to grant reasonable variances from the provisions of Article IV, and from the provisions of this Article and from the architectural standards established pursuant to this Article, provided that the activity or condition is not prohibited by applicable law; and provided further that, in its judgment, the variance is in the best interest of the community and is within the spirit of the standards of the Design Review Board. No variance granted pursuant to this Section shall constitute a waiver of any provision of this Declaration as applied to any other person or any other part of the Property. Variances are intended to be able to be granted in circumstances in which the physical attributes of a Lot cause such Lot to be unique or meaningfully distinguishable from the physical attributes of other Lots in the Subdivision, such physical difference(s) giving rise to the above-described unnecessary hardship or practical difficulties. Variances are not intended to be available to enable an Owner to avoid the application of these Restrictions by virtue of such Owner's personal life circumstances or decision-making (i.e., having a dog that can jump more than 48" is NOT a justification for a variance to the 48" maximum fence height limitation; whereas having a Lot that abuts railroad tracks is such a justification).

D. Improvements by Developer. Notwithstanding any of the foregoing to the contrary, all Improvements placed or constructed on the Property, and landscaping installed by the Developer or its affiliates, partners, members or shareholders in connection with the initial construction of a home on a Lot, shall be deemed to comply in all respects with the requirements of the Design Review Board, and separate approval thereof by the Design Review Board is not required.

VI. EASEMENTS AND LICENSES

A. Easement of Access and Enjoyment Over Common Property. Every Owner shall have a right and easement (in common with all other Owners) of enjoyment in, over, and upon the Common Property (if any), and a right of access to and from his/her Lot, which rights shall be appurtenant to, and shall pass with the title to, his/her Lot, subject to the terms and limitations set forth in this Declaration, subject to the Rules. An Owner may delegate his/her rights of access and enjoyment to family members, occupants, guests and invitees. All such easements are limited by such restrictions as may apply to the Common Property affected thereby, and no person shall have the right by virtue of such easements to engage in activities on the Common Property which are not permitted according to these Restrictions, pursuant to the provisions of any applicable plat(s) or under agreements with any governmental entities or other third parties.

B. Right of Entry. The duly authorized agents, officers, contractors, and employees of the Association shall have a right of entry and access to the Property, including without limitation the Lots, for the purpose of performing the Association's rights or obligations set forth in this Declaration, including inspecting areas to confirm compliance and/or non-compliance with this Declaration, which may or may not include taking pictures if deemed necessary or appropriate in the Association's exercise of its judgment. The Association may enter any Lot to remove or correct any violation of this Declaration or the Rules, or to maintain, repair, and replace the Common Property, but only during reasonable hours and after providing seventy-two (72) hours advance notice to the Owner, except in cases of emergency, but no such notice is required for entry onto a Lot for inspection-only purposes. Nothing contained in this paragraph shall act to create an obligation on the part of the Association to enter upon Lots to inspect, or to perform maintenance thereon.

C. Easement for Utilities and Other Purposes. The Board or Developer may convey easements over the Common Property to any entity for the purpose of constructing, installing, maintaining, and operating poles, pipes, conduit, wires, swales, land contours, ducts, cables, and other equipment or conditions necessary to furnish electrical, gas, sanitary or storm sewer, storm water retention or detention, potable water, telephone, cable television, and other similar utility or security services, whether of public or private nature, to the Property and to any entity for such other purposes as the Board or Developer deems appropriate; provided that such equipment or condition(s), or the exercise of such easement rights shall not unreasonably interfere with the Owners' use and enjoyment of the Property. The Board or Developer may grant such easements over all portions of the Property for the benefit of adjacent properties as the Board or Developer deems appropriate; provided that the grant of such easements imposes no undue, unreasonable, or material burden or cost upon the Property; and further provided that the Board or Developer may not convey any easement over a Lot without the prior written consent of the Owner of such Lot (which consent shall not be unreasonably delayed or withheld). Developer shall have the absolute right within (i) areas designated as drainage courses on the recorded plat of the subdivision, (ii) all areas encumbered by general utility or specific storm drainage easements, and (iii) areas determined by sound engineering practice to be necessary to the proper drainage of all or part of the subdivision, to enter upon Lots and perform grading and other construction activities deemed appropriate in the exercise of Developer's judgment to install, modify, alter, remove or otherwise work on storm water drainage facilities and conditions (including both surface grading and subsurface structures). If any such entry and/or work performed by Developer results in damage to other portions of a Lot, or to any improvements thereon, Developer shall be responsible for the restoration of such portions or improvements at Developer's sole cost.

D. Easement for Services. A non-exclusive easement is hereby granted to all public safety personnel including police and fire departments, ambulance operators, mailmen, deliverymen, garbage removal personnel, and all similar persons, and to the local governmental authorities and the Association (but not to the public in general) to enter upon the Lots and Common Property to perform their duties. A specific easement is granted to the State, County, Township, Village and/or City in which the subdivision is located, granting the right but creating no obligation, for the maintenance of any and all improvements or conditions located in areas designated by plat as "Drainage Easements."

E. Reservation of Special Easements. Attached hereto as Exhibit B is a site plan of Coleman's Crossing, upon which certain areas have been "shaded" or "cross-hatched." The areas marked by shading or cross-hatching identify and represent portions of the Property over, across, under and through which the Developer reserves Special Easements for the purpose of constructing Improvements or conveying rights deemed by the Developer to be beneficial to the Property. Unless indicated otherwise on Exhibit B, the Special Easement areas are also No-Build Zones. The Special Easement areas may be parts of individual Lots instead of on Common Property. In such cases, the owner(s) of the Lot(s) affected by the Special Easement(s) shall be and remain responsible for the ordinary care and maintenance of the Special Easement area. If special fencing, landscaping, storm water detention/retention, or community safety or entry features are constructed in a Special Easement area by the Developer, the State or the Association, the responsibilities of the Lot owner on whose Lot such Improvement has been constructed shall not exceed ordinary grass cutting, trimming and watering around such Improvements. Nothing contained in this Section shall require that the Developer reserve or establish Special Easements, and if no areas on Exhibit B have been shaded or cross-hatched, Developer has not reserved any Special Easements.

F. No-Build Zones/Non-Disturbance. Any areas (if any) designated on the recorded plat(s) or re-plats of Coleman's Crossing, in prior deed restrictions, or on Exhibit B, as "No-Build Zones" shall be areas in which no Owner shall have the right to construct or locate any Improvements, including but not limited to fencing. Landscaping may be located in no-build zones, provided that prior approval for such landscaping has been granted by the Design Review Board. In vegetated No-Build Zones, Owners may perform maintenance necessary for the safety of persons and property (i.e. removing noxious and poisonous plants, or removing dead trees which may fall and harm persons or other Improvements). Grassed No-Build Zones shall be mowed, trimmed and watered by the person(s) responsible for the maintenance of the specific area in question according to the other terms hereof. Any areas designated as "Non-Disturbance" zones shall be construed to be No-Build Zones, except that within Non-Disturbance zones, owners may not perform any maintenance without the prior approval of the Developer.

G. Tree Preservation Zones. Any areas (if any) designated on the recorded plat(s) or re-plats of Coleman's Crossing, in prior deed restrictions, or on Exhibit B, as "Tree Preservation Zones" shall be areas in which no Owner shall have the right to remove any trees unless they are dead, diseased or pose a threat to the health, safety and welfare of the Lot Owner, provided that the Developer and/or Lot Owner may remove unsightly or unwanted under-story plant material as long as such removal does not negatively affect the health of other trees in the Zone. The foregoing notwithstanding, Developer may do limited grading and tree removal within Tree Preservation Zones for the installation of storm water structures and/or grading and in connection with subdivision infrastructure development.

H. Wetland Buffer. Areas designated as 'wetlands' shall be surrounded by a 'Wetland Buffer' zone, which shall remain undisturbed and left in their natural state, and shall be deemed "Non-Disturbance" zones as described above.

VII. MEMBERSHIP AND VOTING RIGHTS

A. Membership. Every Owner shall be deemed to have a membership in the Association, and by acceptance of a deed to property in Coleman's Crossing such Owner agrees to be and acknowledges being a member of the Association, obligated to pay assessments as described herein after. Membership is a right appurtenant to and inseparable from an Owner's fee simple title in a Lot, and such right of membership shall automatically transfer to any transferee of fee simple title to a Lot at the time such title is conveyed or at such time as a land installment contract is entered for the conveyance of fee simple title. The foregoing is not intended to include persons who hold an interest merely as security for the performance of an obligation, and the giving of a security interest or mortgage shall not terminate an Owner's membership. No Owner, whether one or more persons, shall have more than one membership per Lot owned. In the event an Owner consists of more than one person, such persons collectively shall have one membership in the Association in common.

B. Governance. The Association shall be governed by a Board of Trustees, consisting of three (3) persons. Prior to the date that the Developer elects to transfer control of the Association to the Lot Owners (the "Turnover Date"), the members of the Board shall be appointed by the Developer, or the Developer may elect to act as the Board, or it may appoint a managing agent to act as the Board on its behalf. No members, other than the Developer, shall have voting rights in Association matters until the Turnover Date, nor shall any meetings of the Members be required prior to the Turnover Date. The transfer of control on the Turnover Date shall take place at a meeting which shall occur within approximately six months of the end of the year in which the Developer ceases to own at least one Lot (in any Sub-Area) at the subdivision. If Developer establishes a Master Association and separate Sub-Associations for Sub-Areas, the Turnover of the Master and every Sub-Association shall occur concurrently, after Developer ceases to own any Lots in any Sub-Area. Voting and all other matters regarding the governance and operation of the Association following the Turnover Date shall be set forth in the Association Documents. Nothing contained herein or in the Association Documents shall be interpreted or construed to limit the right of the Developer to cause the Turnover Date to occur any time prior to the time Developer ceases to own lots at the subdivision, in Developer's sole exercise of its discretion.

VIII. RIGHTS AND OBLIGATIONS OF THE ASSOCIATION

A. Common Property. Developer may, from time to time, at Developer's option, obligate the Association to maintain property not owned by the Association, and may convey to the Association for the use and benefit of the Association and the Members, real or personal property, or any interest therein, as part of the Common Property in the nature of an easement appurtenant to the Property. The Association shall accept title to any interest in any real or personal property transferred to it by Developer. The Association, subject to the rights of the Owners set forth in this Declaration and the Association Documents, shall be responsible for the exclusive management and control of the Common Property, if any, and all improvements thereon, and shall keep it in good, clean, attractive, and sanitary condition, order, and repair, in accordance with the terms and conditions of this Declaration. The Developer and Association shall each have the right

to grant easements to third parties over, across, under and/or through the Common Property, including but not limited to easements for the construction, extension and/or expansion of utilities, and conservation easements, all as the Developer and/or Association may be legally obligated or voluntarily disposed to grant.

B. Personal Property and Real Property for Common Use. The Association may acquire, hold, mortgage and dispose of tangible and intangible personal property and real property in addition to that property conveyed to it by Developer.

C. Cost-Sharing Agreements; Sub-Area Maintenance. The Association may enter into cost-sharing agreements with other homeowners' associations pursuant to which the Association agrees to share in the cost of maintaining, repairing and replacing entranceway features, landscaping, storm water retention facilities, mounding, fencing and any other improvements that benefit the Property. Additionally, the Association may provide site maintenance services, such as but not limited to snow removal, yard mowing, and fertilization, in one or more Sub-Areas, and the assessments (as defined and described below) may differ from Sub-Area to Sub-Area as deemed necessary and appropriate by the Association to equitably apportion the costs of such services to the Owners in the Sub-Area(s) receiving the benefits of such services.

D. Rules and Regulations. The Association may make and enforce reasonable rules and regulations governing the use of the Property, and the operations of the Association, which shall be consistent with but which may clarify and/or expand the terms of this Declaration and the other Association Documents. The Association shall have the power to impose sanctions on Owners for violations of the Restrictions, including without limitation: (i) reasonable monetary fines which shall be considered Lot Assessments, (ii) suspension of the right to vote as a Member of the Association, and (iii) suspension of the right to use the Common Property. In addition, the Board shall have the power to seek relief in any court for violations or to abate unreasonable disturbances. If the Board expends funds for attorneys' fees or litigation expenses in connection with enforcing this Declaration, the Association Documents or the Rules against any Owner, tenant, guest or invitee of any Owner, the amount shall be due and payable by such Owner and shall be a Lot Assessment against such Owner's Lot. The provisions of ORC 5212.11 notwithstanding, the Board may, but shall not be required to give prior notice nor appeal/hearing rights to an Owner relative to the imposition of a Lot Assessment, if the Lot Assessment consists of a monetary fine related to non-compliance with the provisions of this Declaration, and further if at least 50% of any such fine is to be waived upon the Owner's taking remedial action relative to such violation within 30 days of the imposition of the fine.

E. Implied Rights. The Association may exercise any other right or privilege given to it expressly by the laws of the State and this Declaration, and every other right or privilege reasonably implied from the existence of any right or privilege granted in this Declaration, or reasonably necessary to effect any such right or privilege.

F. Managing Agent. The Board may retain and employ on behalf of the Association a Manager, which may be the Developer, and may delegate to the Manager such duties as the Board might otherwise be authorized or obligated to perform. As the Association's agent, the Manager (if any) shall have no direct liability for actions taken thereby at the direction of the Board

(but shall be liable for its own malfeasance). The compensation of the Manager shall be a Common Expense, and one or more components of the Manager's compensation may consist of variable amounts payable to the manager directly by Owners as a result of transactions and or occurrences (i.e. the late payment of assessments) involving such individual Owners' Lots/accounts. The term of any management agreement shall not exceed two years (exclusive of possible renewals) and shall allow for termination by either party, without cause, and without penalty, upon no more than 90 days' prior written notice. Part of the Manager's compensation may include an initial lot assessment not to exceed Fifty Dollars ($50.00) per Lot, and miscellaneous fees payable in the event of transfers or other transactions involving the Lots.

G. Insurance.

1. The Association may obtain and maintain property insurance, liability insurance and/or flood insurance covering all or any portion(s) of the Common Property as deemed advisable by the Board, in an amount as is commonly required by prudent institutional mortgage investors. The Association shall carry liability insurance on any and all Retention or Detention Basins for the maintenance of which the Association is responsible. The cost of any such insurance shall be included as a Common Expense for Association budgeting purposes, provided that if specific insurance costs are incurred by the Association relative to the types of construction or services rendered in some, but not all Sub-Areas, then the increased costs thereof shall be paid through the Assessments charged to Owners in such Sub-Area(s).

2. The Association shall acquire and pay the premiums attributable to the types of insurance as is required by law, in amounts required by law or as otherwise deemed necessary and prudent by the Board, and any other insurance the Association deems necessary.

3. In the event of damage or destruction of any portion of the Common Property, the Association shall promptly repair or replace the same, to the extent that insurance proceeds are available. Each Owner hereby appoints the Association as its attorney-in-fact for such purpose. If such proceeds are insufficient to cover the cost of the repair or replacement, then the Association may levy a Special Assessment pursuant to Section IX to cover the additional costs.

H. Condemnation. The Association shall represent the Owners in any condemnation proceedings or in negotiations, settlements and agreements with the condemning authority for acquisition of the Common Property, or any portion thereof. Each Owner hereby appoints the Association as its attorney-in-fact for such purpose. The awards or proceeds of any condemnation action shall be payable to the Association, to be held in trust for the benefit of the Owners.

I. Books, Records. Upon reasonable request of any Member, the Association shall be required to make available for inspection all books, records and financial statements of the Association. Compliance with the foregoing requirement may be achieved, in whole or in part, by making the books and records available electronically. A reasonable fee may be charged to cover

the costs of handling, copying and/or delivering any books and records to a Member who requests the same, and the Association shall not be obligated to provide copies of records containing information of a personal or private nature concerning other Owners' names, account numbers, contact information or similar information; nor unredacted records containing the Association's account numbers.

IX. ASSESSMENTS

A. Operating Fund. The Board shall establish an Operating Fund for financing the operation of the Association, for paying necessary costs and expenses of operating the Association and repairing and maintaining the Common Property. The Operating Fund shall be funded by Member Assessments.

B. Types of Assessments. The Developer, for each Lot owned, covenants and agrees, and each Owner, by accepting a deed to a Lot, is deemed to covenant and agree, to pay to the Association the initial assessment referred to in Article VIII, Section (F) above, and the following assessments: (i) Annual Assessments; (ii) Special Assessments; and (iii) Lot Assessments. If deemed appropriate by the Developer, an initial capital contribution may be assessed upon sales and/or resales of homes in the Subdivision. No Owner may gain exemption from liability for any Assessment by waiving or foregoing the use or enjoyment of any of the Common Property or by abandoning his/her Lot. Annual and Special Assessments shall be fixed at a uniform rate for all Lots, but may change from year to year as provided herein after.

C. Annual Assessments. The Board shall estimate the Common Expenses and the expenses, if any, it expects the Association to incur for the maintenance, operation and management of the Association, and including appropriate amounts to fund Reserves as provided by law, and shall assess each Owner of a Lot an Annual Assessment an equal amount based on such estimated expenses and reserves as divided by the total number of Lots. As part of the estimation process, the Board shall also determine which, if any, of the Association's costs are to be incurred for the benefit of or in the rendering of services to one or more but less than all of the Sub-Areas, and the Annual Assessments chargeable to Owners in such Sub-Areas as receive special benefits or services shall be adjusted to cause such costs to be paid by the Owners in such Sub-Areas. Within any given Sub-Area, all Owners shall be assessed an equal amount based on the combination of the estimated Common Expenses attributable to all Sub-Areas, and the Common Expenses attributable to some but not all Sub-Areas. The Annual Assessments shall be paid in accordance with the procedures set forth in the Rules. Notwithstanding the foregoing, prior to the Turnover Date, Developer may elect to pay the Annual Assessments applicable to Lots owned by Developer or in lieu thereof, not pay such Annual Assessments and pay any deficit incurred in operating the Association.

D. Special Assessments. The Board may levy against the Lots a Special Assessment to pay for capital expenditures or to fund necessary costs and expenditures not projected to be paid out of the Operating Fund; provided that any such assessment proposed after the Turnover Date shall have the assent of two-thirds (2/3) of Members who are voting in person or by proxy at a meeting duly called for this purpose. Written notice of any meeting called for the purpose of

levying a Special Assessment shall be sent to all Members not less than 30 days nor more than 60 days in advance of the meeting. A quorum must be present at any such meeting.

E. Lot Assessments. The Board may levy a Lot Assessment against any Lot(s) and the Owner(s) thereof to reimburse the Association for costs incurred on behalf of the Lot(s), including without limitation, costs associated with making repairs that are the responsibility of the Owner; costs of enforcement (including court costs and the Association's legal fees, if applicable) relative to any deed restriction violation which exists on such Lot(s); costs of additional insurance premiums specifically allocable to an Owner; costs of any utility expenses chargeable to an Owner but not separately billed by the utility company; and all other fines and charges reasonably determined to be a Lot Assessment by the Board. Upon its determination to levy a Lot Assessment, the Board shall give the affected Owner(s) written notice and the right to be heard by the Board or a duly appointed agent or committee thereof in connection with such Lot Assessment, 10 days prior to the effective date of the levy of any Lot Assessment. The foregoing notwithstanding, the Board may levy a Lot Assessment in the nature of a fine reasonably determined by the Board against the Lot of any Owner who violates the Rules, the Association Documents or any provision of this Declaration, or who suffers or permits his/her family members, guests, invitees or tenants to violate such Rules, the Association Documents, or provisions of this Declaration, and no such notice and hearing shall be required if at least 50% of the fine can be avoided by the Owner by taking such actions as are necessary, within 30 days of the date of the imposition of the Lot Assessment, to eliminate or remove the violative condition that gave rise to the Lot Assessment.

F. Remedies.

1. Interest; Late Charge. If any Assessment remains unpaid for 10 days after all or any part thereof shall become due and payable, the Board may charge interest at rate up to the lesser of 12% per annum or the highest rate permitted by law, and the Board, or the Manager, if applicable, may collect an administrative collection charge of $25. Such interest and Late Fees shall not be considered "Lot Assessments" as such term is defined in ORC Chapter 5312.

2. Liability for Unpaid Assessments. Each Assessment or installment of an Assessment, together with interest thereon and any costs of collection, including interest, late fees and reasonable attorneys' fees (none of which shall be considered "Lot Assessments" as such term is defined in ORC Chapter 5312) shall become the personal obligation of the Owner(s) beginning on the date the Assessment or installment thereof becomes due and payable. The Board may authorize the Association to institute an action at law on behalf of the Association against the Owner(s) personally obligated to pay any delinquent assessment. An Owner's personal obligation for a Lot's delinquent Assessments shall also be the personal obligation of his/her successors in title who acquire an interest after any Assessment becomes due and payable and both such Owner and his/her successor in title (regardless of how such successor takes title to the Property) shall be jointly and severally liable therefor. Except as otherwise provided herein, the transfer of an interest in a Lot shall neither impair the Association's lien against that Lot for any delinquent Assessment nor prohibit the Association from foreclosing that lien.

3. Liens. All unpaid Assessments, together with any interest and charges thereon or costs of collection, shall constitute a continuing charge in favor of the Association and a lien on the Lot against which the Assessment was levied. If any Assessment remains unpaid for 10 days after it is due, then the Board may (but shall not be required to) authorize any officer or appointed agent of the Association to file a certificate of lien for all or any part of the unpaid balance of that Assessment, together with interest and costs, with the appropriate governmental office containing a description of the Lot which the lien encumbers, the name(s) of the Owner(s) of that Lot, the amount of the unpaid portion of the Assessment, and such other information as the laws of the State may provide. The certificate may be signed by any officer, authorized agent or Manager of the Association, and is for the purpose of providing public notice of the existence of the lien, it being understood and agreed by an Owner that by taking title to a Lot in the Subdivision, that the lien referred to herein exists at all times, with or without any public record filing, as to any unpaid balance on an account payable to the Association. The Association's continuing right to file a notice of lien shall survive a transfer of title to a Lot unless expressly otherwise provided by applicable law, and said rights and any actually filed lien for Assessments provided for in this Section shall be subordinate to the lien of any bona fide first mortgage on a Lot.

4. Vote on Association Matters; Use of Common Property. If any Assessment remains unpaid for 30 days after it becomes due, then the delinquent Owner's voting rights upon Association matters and privileges to use the Common Property, except for necessary ingress and egress to his/her Lot, shall be suspended until such Assessment is paid.

X. MAINTENANCE

A. Maintenance by Association. Subject to reasonable fiscal limitations and the exercise of the Board's reasonable business judgment, the Association shall maintain and keep in good repair the Common Property. This maintenance shall include, without limitation, maintenance, repair, and replacement of all landscaping and other flora, structures (including entry and similar signage as applicable), and improvements situated upon the Common Property and all personal property used in connection with the operation of the Common Property. The foregoing notwithstanding, the Association may designate portions of the Common Property to be left in their 'natural' condition, without mowing, treatment or other maintenance of any kind. Each Owner by accepting a deed to a Lot (or any portion thereof) in Coleman's Crossing acknowledges that portions of the Common Property are to be left in their natural state, including wetland areas which may, at times, result in mosquitoes, flora and fauna, which to some owners may be undesirable. The Association may also elect to provide certain maintenance services in certain Sub-Areas, and upon such election the Owners in such Sub-Areas are required to pay assessments attributable thereto, and to abide by such election and to refrain from interfering in any way with the Association's provision of such services.

B. Maintenance by Owner. Except as otherwise provided herein, each Owner or occupant shall repair, replace, and maintain in good order and safe and sanitary condition, at his/her expense, his/her Lot, and all portions of, Improvements on and to, structures on, and, equipment and components used in connection with, his/her Lot. On any Lot on which a two-family (or more, if applicable) home is constructed, the obligations and duties described in this subparagraph shall

be shared jointly and severally by each Owner of any portion of the Lot. This maintenance responsibility includes, without limitation, regularly watering and mowing grass during the grass growing season, regularly weeding planting beds, and a duty to maintain an Owner's Lot and house and all Improvements on the Lot in a reasonably neat, clean and well-maintained condition ("well-maintained" being definable from time-to-time by the Board as the average condition of all other Lots in the Subdivision). Each Owner shall promptly furnish all necessary materials and shall perform or cause to be performed at his/her own expense, all maintenance, repairs and replacements on such Owner's Lot that, if omitted, would adversely affect the safety and usefulness of the Common Property, or unreasonably diminish property values in the Subdivision. Each Owner shall maintain those portions of his/her Lot that are adjacent to any portion of the Common Property in accordance with the Rules and the requirements set forth in this Declaration.

C. Right of Association to Repair Lot. If any Owner fails to maintain his/her Lot in the manner required herein, and if the Board determines that any maintenance of that Lot is necessary to ensure public safety, to permit reasonable use or enjoyment of the Common Property by Owners, to prevent damage to or destruction of any other part of the Common Property or to comply with the Rules or the terms of this Declaration, then the Board may authorize its employees or agents to enter the Lot at any reasonable time to complete the necessary maintenance and the Board may levy a Lot Assessment for all reasonable expenses incurred in doing so, including administrative costs for the coordination of such work.

D. Damage to Common Property by Owner or Occupant. If the Common Property is damaged by any Owner or occupant, his/her family, guests, or invitees, then the Board may levy a Lot Assessment against such Owner for the cost of repairing or replacing the damaged property. The Association shall be entitled to enter a Lot to repair or maintain any Common Property adjacent to such Lot.

XI. MISCELLANEOUS

A. Term. This Declaration shall bind and run with the land for a term of 25 years from and after the date that this Declaration is filed for recording with the appropriate governmental office, and may not be terminated without Developer's consent during such time; and thereafter shall automatically renew forever for successive periods of 10 years each, unless earlier terminated by a vote of not less than 75% of the Members.

B. Enforcement; Waiver. This Declaration may be enforced by any proceeding at law or in equity by the Developer, any Owner, the Association, the Design Review Board, the City of Canal Winchester, and their respective heirs, successors and assigns, against any person(s) violating, or attempting to violate, any covenant or restriction, to restrain and/or to enjoin violation, to obtain a decree for specific performance as to removal of any nonconforming Improvement, and to recover all damages, costs of enforcement and any other costs incurred (including without limitation, in the case of an action brought by the Developer or Association, the recovery of reasonable attorneys' fees). Failure of Developer, the Association, the Design Review Board or any Owner to enforce any provision of this Declaration or the Rules in any manner shall not constitute a waiver of any right to enforce any violation of such provision. By accepting a deed to a Lot, each Owner is deemed to waive the defenses of laches and statute of limitations in

connection with the enforcement of this Declaration or the Rules. Any person having the right to enforce these Restrictions may also require that the Association be required to discharge its duties as described herein, but the Association shall not, in any case, be liable for any monetary damages, nor shall an award of attorney's fees be available to a Plaintiff in any such case. If the Association fails to discharge its duties hereunder, the City of Canal Winchester shall have, in addition to the other rights and remedies described herein, the right to perform any maintenance that is the obligation of the Association, and to assess the Lot owners for all costs (including administrative costs and reasonable overhead) incurred by the City in performing such maintenance work.

C. Amendments.

(a) Until the Turnover Date Developer may, in its sole and absolute discretion, unilaterally amend this Declaration at any time and from time to time, without the consent of any other Owners. Any such amendment may modify the provisions hereof, and/or impose covenants, conditions, restrictions and easements upon the Property in addition to those set forth herein including, without limitation, restrictions on use and covenants to pay additional charges with respect to the maintenance and improvement of the Property. After the Turnover Date, Developer may unilaterally amend this Declaration, without the consent of any other Owners, if such amendment is: (a) necessary to bring any provision hereof into compliance with any applicable governmental statute, rule, regulation or judicial order, (b) necessary to enable any reputable title insurance company to issue title insurance coverage on the Lots, (c) necessary to conform to the requirements of United States Federal Housing Administration, or (d) necessary to correct errors; provided, however, any such amendment shall not materially adversely affect the title to any Lot unless the Owner thereof has consented to such amendment in writing. No amendment may remove, revoke, or modify any right or privilege of Developer without the written consent of Developer or the assignee of such right or privilege. Developer shall have the right and power, but neither the duty nor the obligation, in its sole and absolute discretion and by its sole act, to subject additional property to this Declaration at any time and from time to time by executing and recording in the appropriate governmental office an amendment to this Declaration specifying that such additional property is part of the Property. An amendment to this Declaration shall not require the joinder or consent of the Association, other Owners, mortgagees or any other person. In addition, such amendments to the Declaration may contain such supplementary, additional, different, new, varied, revised or amended provisions and memberships as may be necessary or appropriate, as determined by Developer, to reflect and address the different character or intended development of any such additional property; and

(b) After the Turnover Date, and subject to subpart (a) above, this Declaration may be amended only with the consent and approval of at least 75% of the Members of the Association.

D. Developer's Rights to Complete Development. Developer shall have the right to: (a) complete the development, construction, promotion, marketing, sale, resale and leasing of properties; (b) construct or alter Improvements on any property owned by Developer; (c) maintain model homes, offices for construction, sales or leasing purposes, storage areas, construction yards or similar facilities on any property owned by Developer or the Association; or (d) post signs

incidental to the development, construction, promotion, marketing, sale and leasing of property within the Property. Further, Developer or its assignee shall have the right of ingress and egress through the streets, paths and walkways located in the Property for any purpose whatsoever, including, but not limited to, purposes related to the construction, maintenance and operation of Improvements. Nothing contained in this Declaration shall limit the rights of Developer or require Developer or its assignee to obtain approval to: (i) excavate, cut, fill or grade any property owned by Developer, or to construct, alter, remodel, demolish or replace any Improvements on any Common Property or any property owned by Developer as a construction office, model home or real estate sales or leasing office in connection with the sale of any property; or (iii) require Developer to seek or obtain the approval of the Association or the Design Review Board for any such activity or Improvement on any Common Property or any property owned by Developer. Nothing in this Section shall limit or impair the reserved rights of Developer as elsewhere provided in this Declaration.

E. Developer's Rights to Replat Developer's Property. Developer reserves the right, at any time and from time to time, to amend, alter or replat any plat or development plan and to amend any zoning ordinance which affects all or any portion of the Property; provided, however, that only real property owned by Developer and Owners consenting to such amendment, alteration or replatting shall be the subject of any such amendment, alteration or replatting. Each Owner and Member and the Association whose Lot is not altered by such amendment, alteration or replatting, for themselves and their successors and assigns, hereby consents to and approves any such amendment, alteration or replatting and shall be deemed to have joined in the same.

F. Mortgagee Rights. A holder or insurer of a first mortgage upon any Lot, upon written request to the Association (which request shall state the name and address of such holder or insurer and a description of the Lot) shall be entitled to timely written notice of:

(a) any proposed amendment of this Declaration;

(b) any proposed termination of the Association; and

(c) any default under this Declaration which gives rise to a cause of action by the Association against the Owner of the Lot subject to the mortgage of such holder or insurer, where the default has not been cured in 60 days.

Each holder and insurer of a first mortgage on any Lot shall be entitled, upon request and at such mortgagee's expense, to inspect the books and records of the Association during normal business hours.

G. Indemnification. The Association shall indemnify every Board member, officer and trustee of the Association against any and all claims, liabilities, expenses, including attorneys' fees, reasonably incurred by or imposed upon any officer or trustee in connection with any action, suit, or other proceeding (including settlement of any suit or proceeding, if approved by the Board) to which he/she may be a party by reason of being or having been an officer or trustee. The Board members, officers and trustees shall not be liable for any mistake of judgment, negligent or otherwise, except for their own individual willful misconduct, bad faith or gross negligence. The

Board members, officers and trustees of the Association shall have no personal liability with respect to any contract or other commitment made by them, in good faith, on behalf of the Association (except to the extent that such Board members, officers or trustees may also be Members of the Association), and the Association shall indemnify and forever hold each such Board member, officer and trustee free from and harmless against any and all liability to others on account of any such contract or commitment. Any right to indemnification provided herein shall not be exclusive of any other rights to which any Board member, officer or trustee, or former Board member, officer or trustee, may be entitled. The Board may cause the Association to indemnify a third party manager hired by the Board, for losses and liabilities arising from such manager's performance of services in conformity to the directions of the Board.

H. Severability. If any article, section, paragraph, sentence, clause or word in this Declaration is held by a court of competent jurisdiction to be in conflict with any law of the State, then the requirements of such law shall prevail and the conflicting provision or language shall be deemed void in such circumstance; provided that the remaining provisions or language of this Declaration shall continue in full force and effect.

I. Captions. The caption of each Article, section and paragraph of this Declaration is inserted only as a matter of reference and does not define, limit or describe the scope or intent of the provisions of this Declaration.

J. Notices. Notices to an Owner shall be given in writing, by personal delivery, at the Lot, if a residence has been constructed on such Lot, or by depositing such notice in the United States Mail, first class, postage prepaid, to the address of the Owner of the Lot as shown by the records of the Association, or as otherwise designated in writing by the Owner.

IN WITNESS WHEREOF, the Developer has caused the execution this Declaration as of the date first above written.

WESTPORT HOMES, INC.
an Indiana corporation

BY: _____

STATE OF OHIO)
) ss:
COUNTY OF _____)

The foregoing instrument was acknowledged before me, a Notary Public in and for said County and State, this ____ day of _____, 201___, by _____

_____, the _____ of Westport Homes, Inc., on behalf of the corporation.

_____
Notary Public

This Instrument Prepared by David A. Dye, Esq., DAVID A. DYE CO., LPA, P.O. Box 433, Grove City, Ohio 43123

EXHIBIT A

LEGAL DESCRIPTION OF THE PROPERTY

Being Lots numbered ____ through ____, inclusive, of Coleman's Crossing, as the same is numbered and delineated on the recorded plat thereof, of record at Instrument Number _____ _____ of the Franklin County, Ohio Records, Franklin County Recorder's Office.

EXHIBIT B

SPECIAL EASEMENTS SITE PLAN

[ATTACHED]

EXHIBIT C

APPROVED MAILBOX and LAMP POST (YARD LIGHT) DETAIL

[ATTACHED]

Exhibit “I-1”

Wetland Report

EMH&T

Engineers, Surveyors, Planners, Scientists

MEMO

Date: April 18, 2018

To: Steven D. Schehl

From: Douglas C Turney DT

Subject: Middletown Farms Floodplain Fill

Copies: Terry Andrews; Westport Homes

The City of Canal Winchester has a process to complete floodplain fill for development of a site. This process is as follows:

- Complete the Floodplain Development Permit Application (See attached)
- Provided the following in compliance with the above reference permit
  - Endangered Species Act Coordination with the U.S. Fish and Wildlife Service
  - Complete and gain approval of construction drawings to complete fill. This fill must meet the requirements of FEMA Technical Bulletin 10.
- Complete a Letter of Map Revision based on Fill (LOMR-F) which will require an as-built survey of the fill place. This survey will include a metes and bound determination of the area removed from the floodplain

Please note that Canal Winchester does not have a cut and fill requirement per my previous experience working in the City.

Also, please note that the bike path crossing will need to avoid floodway encroachments. However, if this is not possible a Conditional Letter of Map Revision (CLOMR) can be applied for to allow for this crossing.

City of Canal Winchester

36 South High Street
Canal Winchester, Ohio 43110
Development Department
Phone (614) 837-7501 Fax (614) 837-0145

FLOODPLAIN DEVELOPMENT PERMIT APPLICATION

rev. 09/24/2013

PROPERTY OWNER

Name _____

Address _____

Daytime Phone _____ Email _____

APPLICANT

Name _____

Address _____

Daytime Phone _____ Email _____

Address of Subject Property _____ Parcel ID Number _____

An application will not be reviewed until all submittal requirements listed on the attachment have been provided. In addition to the attached requirements, the property owner agrees to submit any additional information required by the Floodplain Administrator in order to determine that the proposed development is compliant with the local and federal flood damage prevention criteria of the National Flood Insurance Program.

I certify that the information provided with this application is correct and accurate to the best of my ability.

_____ _____

Property Owner's or Authorize Agent's Signature **Date**

DO NOT WRITE BELOW THIS LINE

Date Received: ___/___/_____ Fee: $_____ Paid ☐

Historic District: ___ Yes ___ No
Preservation District: ___ Yes ___ No

Date of Action: ___/___/_____

Application ___ No
Approved: ___ Yes
___ Yes, with conditions

Expiration Date: ___/___/_____

Tracking Number: FP - _____

Floodplain Development Permit Application Attachment

Required Materials

The following submittal requirements must be included with a Floodplain Development Application. No application will be reviewed until all submittal requirements listed below, and any other materials required by the Planning and Zoning Administrator, have been provided:

1. A completed Floodplain Development Permit application form and an initial $25 application fee. An additional engineering review fee, if necessary, is also required prior to approval of the application.
2. Site Plan of the proposed project drawn to scale showing (a) the nature, location, dimension and topography of the area in question and (b) the location of existing and/or proposed structures, fill, storage of materials, and drainage facilities.
3. Elevation of the existing, natural ground where structures and/or fill is proposed.
4. Elevation of the lowest floor, including basement, of all proposed structures.
5. Technical analysis conducted by a profession engineer or architect registered in the State of Ohio and submitted with an application for a Floodplain Development Permit where applicable:
    a. For non-residential structures with the lowest floor below the flood protection elevation: A flood proofing certification as required in Section 1177.04(e)(2).
    b. For structures elevated above the flood protection elevation by pilings, columns, posts or walls: Certification from a registered engineer or architect that materials used to elevate the structure are designed to automatically equalize hydrostatic flood forces. See Section 1177.04(d)(5)
    c. For watercourse alteration or relocation: A description of the altercation or relocation of the watercourse, certification that the flood carrying capacity of the watercourse will not be diminished and an account of any necessary maintenance that will be required. See Section 1177.04(i)(3).
    d. In Riverine areas with base flood elevation, but no determined floodway: A hydrologic and hydraulic analysis demonstrating that the cumulative effect of proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood by more than one foot. See Section 1177.04(i)(2).
    e. For development in Floodways: A hydrologic and hydraulic engineering analysis showing the impact of any development on flood heights in an identified floodway as required by Section 1177.04(i)(1).
    f. For map maintenance activities: Technical data prepared in a format required for a Letter of Map Revision by FEMA. See Section 1177.03(j).
6. Post Construction Certificate: A FEMA Elevation Certificate shall be completed by a registered surveyor to record as-built elevation data of new or improved structures.

Floodplain Development Permit Application Attachment

ENGINEERING "NO-RISE" CERTIFICATION

This is to certify that I am a duly qualified engineer licensed to practice in the State of Ohio. It is to further certify that the attached technical data supports the fact that proposed development:_____ in the floodway will
(Name of Development)

not increase the Base Flood Elevations (100-year flood), floodway elevations and the floodway widths on _____ at published sections in
(Name of Stream)

the Flood Insurance Study for _____, dated _____
(Name of Community)

and will not increase the Base Flood Elevations (100-year flood), floodway elevations, and floodway widths at unpublished cross-sections in the vicinity of the proposed development.

Date _____

Signature _____

Phone Number _____ Email _____

Representing _____

Address _____

City_____ State _____ Zip Code _____

CERTIFYING SEAL OR STAMP

EMH&T
Engineers, Surveyors, Planners, Scientists

December 8, 2017

Mr. Terry Andrews
Director of Land Acquisition and Development
Westport Homes
507 Executive Campus Drive, Suite 100
Westerville, Ohio 43082

Subject: Imler Tract – Environmental Compliance

Dear Mr. Andrews,

This letter serves to summarize the environmental conditions associated with the approximately 78-acre property known as the Imler Tract, located west of Oregon Road, and south of Hayes Road and Lithopolis Road, in the City of Canal Winchester, Franklin County, Ohio. The property consists of an active agricultural field bisected by a stream and riparian corridor.

The agricultural field is generally well drained through a subsurface drain tile system. The tiles discharge into an intermittent stream that runs through the northern one third of the site. Approximately 1800 linear feet of stream are located within the property boundaries. Along the southern side of the stream is a riparian corridor that consists of wooded and scrub shrub areas. Approximately 2.25 acres of wetland are located within this riparian area. The wetland extends into the agricultural field in two areas as a result of several drain tile failures. The wetland is a low quality system that would qualify for a Nationwide Permit from the U.S. Army Corps of Engineers (USACE) if there is a need to do so due to wetland encroachment into the proposed developable footprint of the project. A second wetland is located along the north side of the stream. This wetland does not encroach into the development.

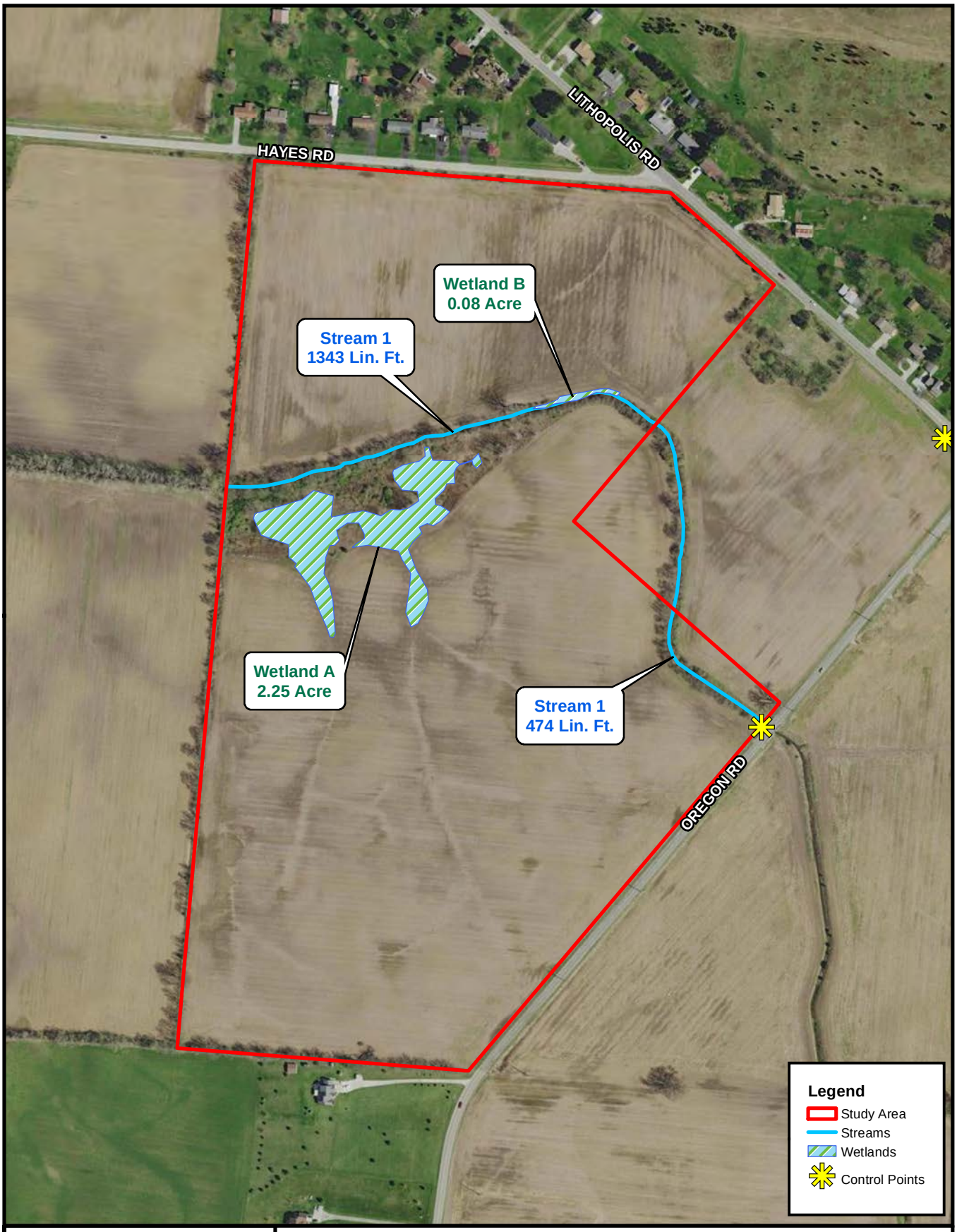
If you have any questions regarding this information or require additional documentation, please do not hesitate to contact me at (614) 775-4515.

Sincerely,

EVANS, MECHWART, HAMBLETON & TILTON, INC.

Robert F. Milligan
Director of Environmental Services
Principal

Cc: Jeff Strung, EMH&T



EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

CITY OF CANAL WINCHESTER, FRANKLIN COUNTY, OHIO

7847 Lithopolis Road (Imler Tract)
Delineation Map
Exhibit 6

SCALE: 1" = 400'

0 200 400 800 Feet

N

Source: NWI Features - FWS, 2016; Aerial - City of Columbus, 2017

Path: J:\20171398\GIS\Exhibit 6 - Delineation.mxd

Exhibit “J-1”

Traffic Impact Study

Engineers, Surveyors, Planners, Scientists

July 19, 2018

Mr. Lucas Haire
Development Director
City of Canal Winchester
36 South High Street
Canal Winchester, Ohio 43110

Subject: Middletown Farms Traffic Impact Study
Canal Winchester, Ohio

Dear Mr. Haire,

This traffic impact study (TIS) has been prepared to identify existing and proposed traffic operations associated with a planned residential development in the City of Canal Winchester. The City and developer negotiated the scope of this study over the course of multiple Memoranda of Understanding (MOU) dated between November 10, 2017 and June 14, 2018. This TIS has been completed in accordance with the methodologies and assumptions described in the MOU dated June 14, 2018. A copy of the MOU attached for reference.

Proposed Development & Site Access Plan

The development site is located in the southwest quadrant of the Hayes Road/Lithopolis Road intersection and extends south to include frontage along Oregon Road. **Figure 1** shows the location of the proposed development. A stream corridor bisects the site to create two separate development areas, one is accessed from Hayes Road and one is accessed from Oregon Road. Proposed site access includes two proposed public roadways accessing Oregon Road, and two public roadways proposed to access Hayes Road. Proposed site development is comprised of 117 traditional single-family homes, and 58 "lifestyle" single-family homes targeted (but not restricted) to age 55 and older buyers. The attached site plan shows the configuration of the 175 proposed dwelling units.

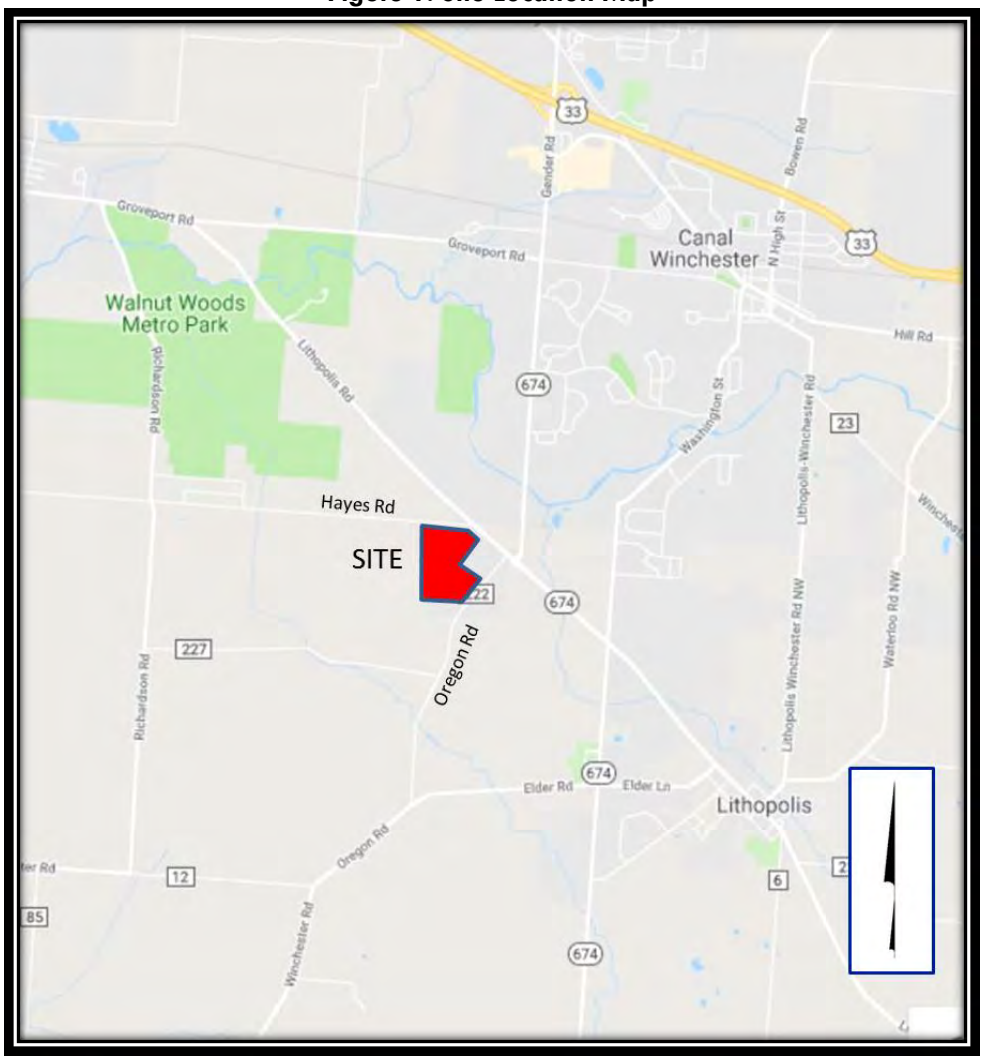
Study Area

The Study Area for this TIS is limited to the following intersections and proposed access points which are labeled Drive A through Drive D:

- Lithopolis Road/SR 674 (Gender Road)
- Lithopolis Road/Oregon Road
- Lithopolis Road/Hayes Road
- Oregon Road/Drive A (northeastern access to Oregon Road)
- Oregon Road/Drive B (southwestern access to Oregon Road)
- Hayes Road/Drive C (western access to Hayes Road)
- Hayes Road/Drive D (eastern access to Hayes Road)

5500 New Albany Road, Columbus, OH 43054 • Phone 614.775.4500 • Fax 614.775.4800
Columbus • Charlotte
emht.com

Figure 1: Site Location Map



Existing Conditions and Data Collection

EMH&T personnel manually counted peak turning-movement volumes at the Lithopolis Road intersections at Oregon Road and Hayes Road on November 14, 2017. A subconsultant used video technology to count the Gender Road (SR 674)/Lithopolis Road roundabout intersection, also on November 14, 2017. The duration of the counts covered morning peak (7-9 am) and afternoon peak (4-6 pm) periods. The count data was supplied to the Mid-Ohio Regional Planning Commission (MORPC), which provided growth rate data for use in completing analyses for this TIS. Growth rates MORPC provided range from 0.7% to 2.3% per year for the Study Area as documented in their email dated on December 5, 2017.

Lithopolis Road, Hayes Road, and Oregon Road are all two-lane roadways measuring approximately 22 feet, 18 feet, and 20 feet in width respectively, not including a 1-2 foot wide shoulder on each side. Gender Road is a 2 lane, 22-foot wide roadway posted at 50 mph north of Lithopolis Road, just inside Canal Winchester City limits. Gender Road and the portion of Lithopolis Road east of Gender Road carry SR 674 from US 33 to points south. The balance of the roadways in the Study Area are former County roadways

annexed into Canal Winchester jurisdiction. Municipal boundaries in the Study Area are documented on a 2004 annexation map attached for reference.

Other than Gender Road, none of the roadways have a speed limit posted in or near the Study Area. Signs on the approach to the Gender Road/Lithopolis Road roundabout carry an advisory speed of 20 mph for the roundabout. By operation of Ohio Revised Code § 4511.21, the legal speed limit on Lithopolis Road, Hayes Road and Oregon Road is 35 mph within the City of Canal Winchester. The legal speed on the portions of those roadways outside a municipal corporation is 55 mph.

The intersection of Lithopolis Road/Hayes Road operates under side-street stop control with no auxiliary lanes. The Lithopolis Road/Oregon Road intersection operates under side-street stop control and a westbound left turn lane exists on Lithopolis Road that is approximately 75 feet long. The Gender Road/Lithopolis Road intersection is controlled by a single-lane, modern roundabout with right turn auxiliary lanes on the southbound and westbound approaches.

Trip Generation

This study used the data and methodology described in the Trip Generation Manual, 10th Edition (Institute of Transportation Engineers, 2017) to project new vehicle trips generated by site development. We calculated site trips based on 175 Single Family-Detached homes (land use #210) and the calculation separated the northern (58 units) and southern (117 units) sections of the development as shown in **Table 1**. The 58 homes in the northern section of the site are age-targeted and intended for age 55 and over buyers which typically generate half or less of the trips associated with traditional single-family residential. These units would more accurately be analyzed as Detached Senior Adult Housing (ITE land use #251) but this study was directed to apply the single family trip rate to all units as a conservative approach.

Table 1: Expected Trip Generation

Land Use	Square Feet or Units	ITE Code	Time Period	ITE Formula	Total Trips	Trips Entering	Trips Exiting
Single Family - Detached	117	210	ADT	Ln(T)=0.92Ln(x)+2.71	1,202	601	601
Traditional Units-Southern Subarea	units		AM Peak	T=0.71(x)+4.80	88	22	66
			PM Peak	Ln(T)=0.96Ln(x)+0.20	118	74	44
Single Family - Detached	58	210	ADT	Ln(T)=0.92Ln(x)+2.71	630	315	315
Lifestyle Units-Northern Subarea	units		AM Peak	T=0.71(x)+4.80	46	12	34
			PM Peak	Ln(T)=0.96Ln(x)+0.20	60	38	22

Trip Distribution

Existing traffic count data at the count locations helped determine an appropriate traffic assignment for site traffic, combined with our knowledge of the surrounding street network. Since the State Route 674 connection north to US 33 provides quick access to a regional route and most of the shopping and schools are to the north, much of the traffic is expected to distribute in that direction. Following review of our recommended trip distribution, City staff directed a change to assign significantly less traffic to/from the north on Gender Road and more to/from Lithopolis Road and Hayes Road, but primarily to/from the east on Lithopolis Road.

Consequently, this study applied following trip distribution to the site generated traffic shown in Table 1:

- 35% to/from the north on Gender Road (SR 674)
- 25% to/from the west on Lithopolis Road
- 15% to/from west on Hayes Road
- 20% to/from the east on Lithopolis Road
- 5% to/from the south on Oregon Road

This study combined site generated traffic volumes with existing traffic volumes observed at each intersection and expected non-site (background) traffic growth to project total traffic volumes for analysis of opening year (2019) and horizon year (2029) conditions for use in traffic analyses. Traffic volume worksheets are attached for reference.

Traffic Analyses

Turn Lane Warrants & Sizing

This study evaluated left and right turn lane warrants at existing Study Area intersections and each planned access point where public street connections are planned for the site. The Location and Design Manual § 400 provides the methodology used to determine whether left or right turn lanes are warranted on the uncontrolled through approach to side-street stop controlled intersections. We calculated the length of any warranted turn lanes in accordance with the Location and Design Manual § 400. **Table 2** summarizes the results for both opening year and horizon year conditions.

The speed applicable to the through roadway is an important input to turn lane warrant analysis and lane sizing. As noted above, none of the roadways evaluated for turn lanes has a posted speed limit and some of the intersections analyzed are located near jurisdictional boundaries that separate higher speed (over 40 mph) and lower speed (40 mph and under) segments of the same roadway. Since speed limits are not posted, the default limits found in the Ohio Revised Code § 4511.21 were applied with consideration given to whether a specific intersection approach is entering or leaving a lower speed area when the intersection is located near a boundary. Some site access points are located near the municipal boundary and turn lane warrants at all site access points were evaluated using more conservative, high-speed (over 40 mph) criteria even though they are all within City limits and qualify for low speed analysis.

The Lithopolis Road/Oregon Road intersection is located on the approach to the Gender Road/Lithopolis Road roundabout, which has an advisory speed of 20 mph. It is also located over 1,800 feet from the municipal boundary and well within the statutory 35 mph zone. The southbound right turn lane warrant on Lithopolis Road at Oregon Road was therefore analyzed using low-speed (40 mph and under) criteria. A northbound left turn lane at this intersection is existing.

The Lithopolis Road/Hayes Road intersection is within 550 feet of the municipal boundary and may receive higher speed traffic entering Canal Winchester from the northwest. Traffic approaching from the southeast is departing the Gender Road roundabout located about 1,500 feet away, which has an advisory speed of 20 mph, and the entire distance between Gender Road and Hayes Road is within the 35 mph statutory zone. Considering the foregoing, we applied high-speed criteria to southbound right turn conditions on Lithopolis Road at Hayes Road and low speed criteria to northbound left turn conditions.

Results of these analyses show that none of the site access points require turn lanes under ODOT turn lane warrant criteria. A northbound left turn lane is warranted on Lithopolis Road at Hayes Road by background traffic in the 2019 opening year irrespective of whether the site is developed or not. A southbound right turn

lane meets warrants on Lithopolis Road at Oregon Road due to site development, but only in the 2029 design year. This southbound right turn lane is not warranted in the 2019 opening year, and is on the line separating warranted from unwarranted results in the 2029 design year. See the next section for additional information about the need for this lane.

Table 2-Turn Lane Warrant Results

Intersection	Turn Lane	2019		2029	
		No Build	Build	No Build	Build
Lithopolis Road/Hayes Road	SB RT	Not Warranted	Not Warranted	Not Warranted	Not Warranted
	NB LT	Warranted	Warranted	Warranted 175 ft.	Warranted 200 ft.
Lithopolis Road/Oregon Road	SB RT	Not Warranted	Not Warranted	Not Warranted	Warranted 50 ft.
Oregon Road/Drive A	EB LT	Not Warranted	Not Warranted	Not Warranted	Not Warranted
	WB RT	Not Warranted	Not Warranted	Not Warranted	Not Warranted
Oregon Road/Drive B	EB LT	Not Warranted	Not Warranted	Not Warranted	Not Warranted
	WB RT	Not Warranted	Not Warranted	Not Warranted	Not Warranted
Hayes Road/Drive C	WB LT	Not Warranted	Not Warranted	Not Warranted	Not Warranted
	EB RT	Not Warranted	Not Warranted	Not Warranted	Not Warranted
Hayes Road/Drive D	WB LT	Not Warranted	Not Warranted	Not Warranted	Not Warranted
	EB RT	Not Warranted	Not Warranted	Not Warranted	Not Warranted

<u>Intersection Capacity Analyses</u>

HCS7 and SIDRA software was used to evaluate operational characteristics of Study Area intersections. Traffic analysis consisted of morning, and afternoon, peak capacity analysis for opening year and horizon year, no-build and build conditions. Acceptable performance levels are overall intersection level of service (LOS) D, minimum approach LOS D and minimum individual movement LOS E.

The results of the capacity showed that all movements at each intersection operate at a LOS C or better in opening day and horizon year build conditions. The analysis is summarized in **Table 3**. Printouts of the capacity analysis output reports are attached for reference.

Table 3: Summary of Capacity Analysis Results

Time	Year	Scenario	EBLT	EBTH	EBRT	WBLT	WBTH	WBRT	NBLT	NBTH	NBRT	SBLT	SBTH	SBRT	TOTAL
Gender Rd/Lithopolis Rd															
AM Peak	2019	No Build	B/11.1	A/4.4	-	-	A/4.6	A/5.1	-	-	-	B/14.4	-	A/7.4	A/6.6
		Build	B/11.1	A/4.5	-	-	A/4.9	A/5.5	-	-	-	B/14.5	-	A/7.5	A/6.9
	2029	No Build	A/5.6	A/5.6	-	-	A/6.8	A/7.2	-	-	-	A/7.7	-	A/7.0	A/6.8
		Build	B/11.1	A/4.4	-	-	A/4.8	A/5.5	-	-	-	B/14.5	-	A/7.4	A/6.9
PM Peak	2019	No Build	C/20.8	B/14.2	-	-	A/4.5	A/4.6	-	-	-	B/10.5	-	A/4.6	B/10.8
		Build	C/23.1	B/16.5	-	-	A/4.6	A/4.8	-	-	-	B/10.7	-	A/4.7	B/11.8
	2029	No Build	C/21.4	B/14.8	-	-	A/4.5	A/4.6	-	-	-	B/10.5	-	A/4.5	B/11.0
		Build	C/23.9	B/17.3	-	-	A/4.5	A/4.7	-	-	-	B/10.6	-	A/4.7	B/12.1
Lithopolis Rd/Oregon Rd															
AM Peak	2019	No Build	-	-	-	A/7.8	-	-	B/12.5			-	-	-	-
		Build	-	-	-	A/7.9	-	-	C/16.9			-	-	-	-
	2029	No Build	-	-	-	A/7.9	-	-	B/13.5			-	-	-	-
		Build	-	-	-	A/8.0	-	-	C/19.4			-	-	-	-
PM Peak	2019	No Build	-	-	-	A/9.0	-	-	B/14.2			-	-	-	-
		Build	-	-	-	A/9.4	-	-	C/19.5			-	-	-	-
	2029	No Build	-	-	-	A/9.3	-	-	C/15.8			-	-	-	-
		Build	-	-	-	A/9.8	-	-	C/23.2			-	-	-	-
Oregon Rd/Drive A															
AM Peak	2019	Build	A/7.4	-	-	-	-	-	-	-	-	A/9.4			-
	2029	Build	A/7.4	-	-	-	-	-	-	-	-	A/9.5			-
PM Peak	2019	Build	A/7.6	-	-	-	-	-	-	-	-	B/10.0			-
	2029	Build	A/7.6	-	-	-	-	-	-	-	-	B/10.3			-
Oregon Rd/Drive B															
AM Peak	2019	Build	A/7.3	-	-	-	-	-	-	-	-	A/9.1			-
	2029	Build	A/7.4	-	-	-	-	-	-	-	-	A/9.2			-
PM Peak	2019	Build	A/7.5	-	-	-	-	-	-	-	-	A/9.6			-
	2029	Build	A/7.5	-	-	-	-	-	-	-	-	A/9.8			-
Hayes Rd/Drive C															
AM Peak	2019	Build	-	-	-	A/7.3	-	-	A/9.2			-	-	-	-
	2029	Build	-	-	-	A/7.3	-	-	A/9.3			-	-	-	-
PM Peak	2019	Build	-	-	-	A/7.8	-	-	B/10.0			-	-	-	-
	2029	Build	-	-	-	A/7.9	-	-	B/10.2			-	-	-	-
Hayes Rd/Drive D															
AM Peak	2019	Build	-	-	-	A/7.3	-	-	A/8.8			-	-	-	-
	2029	Build	-	-	-	A/7.3	-	-	A/8.8			-	-	-	-
PM Peak	2019	Build	-	-	-	A/7.9	-	-	A/9.9			-	-	-	-
	2029	Build	-	-	-	A/7.9	-	-	B/10.1			-	-	-	-
Lithopolis Rd/Hayes Rd															
AM Peak	2019	No Build	-	-	-	A/8.3	-	-	B/10.6			-	-	-	-
		Build	-	-	-	A/8.4	-	-	B/13.6			-	-	-	-
	2029	No Build	-	-	-	A/8.4	-	-	B/10.9			-	-	-	-
		Build	-	-	-	A/8.5	-	-	B/14.4			-	-	-	-
PM Peak	2019	No Build	-	-	-	A/8.2	-	-	B/13.4			-	-	-	-
		Build	-	-	-	A/8.3	-	-	B/15.0			-	-	-	-
	2029	No Build	-	-	-	A/8.2	-	-	B/14.5			-	-	-	-
		Build	-	-	-	A/8.4	-	-	C/16.5			-	-	-	-

X/X = Overall LOS / Average Delay Per Vehicle

Crash Analysis/Safety Review

This study reviewed crash data from 2015 to 2017 using ODOT's GIS Crash Analysis Tool (GCAT) along Lithopolis Road at Hayes Road, Oregon Road, and Gender Road. Nine crashes occurred at these locations during this period. Five crashes occurred at Lithopolis Road/Gender Road, and three at Lithopolis Road/Hayes Road. One off-road, fixed object crash occurred at 5840 Hayes Road near the intersection at Lithopolis Road. No intersection crashes occurred at Lithopolis Road/Oregon Road.

The Lithopolis Road/Gender Road intersection had 2 injury crashes and 3 crashes limited to property damage only. Three of the crashes were rear-end incidents that occurred on the entry to the roundabout (two entering from southbound Gender Road and one entering from northwest-bound Lithopolis Road). Police reports indicate that those crashes arose from lack of attentiveness on the part of the following driver, when the leading driver stopped before entering the roundabout. Two angle/sideswipe collisions occurred when drivers entered the roundabout from the south leg on Lithopolis Road and struck a vehicle in the circulating lane of the roundabout. The number, type and frequency of incidents at this intersection does not indicate a pattern of crashes suggesting a need for mitigation.

All of the crashes at the Lithopolis Road/Hayes Road intersection were limited to property damage incidents without injury. Two of the crashes were rear-end incidents involving eastbound motorists on Hayes Road stopped at the stop sign. One crash involved a right turn driver on Hayes Road failing to yield to a southbound driver on Lithopolis Road. The northbound left turn movement from Lithopolis Road to Hayes Road warrants a left turn lane in the background condition, irrespective of site development, but there were no crashes involving that movement. With an average of 1 intersection crash per year, no pattern was identified that suggests a need for mitigation at this intersection. One non-intersection crash occurred on July 20, 2017 when a vehicle left Hayes Road just west of Lithopolis Road and struck a building at 5840 Hayes Road. The police report attributed the cause to failure to control and unsafe speed.

Sight Distance Evaluation/Access Exhibit

This study checked available sight distance at each intersection in the Study Area using available contour mapping. Findings should be checked during the design phase of the project based on actual field survey. Attached exhibits show sight lines available to the driver on each side-street approach. Driver eye location, object height and speed criteria shown on the exhibits are consistent with the Location and Design Manual § 200 (Ohio Department of Transportation). If available sight distance exceeded the design/legal speed of the roadway, the available distance and corresponding speed was shown on the exhibits.

Most Study Area intersections provide sight distance accommodating at least a 55 mph design speed. One exception is Hayes Road east of Drive D where sight distance exceeds 50 mph criteria and represents the maximum attainable due to the terminus of Hayes Road at Lithopolis Road. A second exception is at Oregon Road/Drive A where 45 mph sight distance is available within existing right of way on the curve south of the site. Available sight distance at all locations equals or exceeds the ODOT guideline for the legal speed limit of the roadways as discussed above.

In addition to the sight distance exhibits, an exhibit titled Thoroughfare Plan Roadway Network is attached. The network exhibit shows the planned configuration of Study Area roadways based on the City of Canal Winchester Thoroughfare Plan, including the number of lanes and right of way width. The network exhibit also shows minimum lane and shoulder width, anticipated intersection controls, and the location of the background warranted improvement on Lithopolis Road for context.

Conclusions and Recommendations

Turn lane warrant analysis showed that two turn lanes meet warrants. A northbound left turn lane is warranted on Lithopolis Road at Hayes Road. The need for this lane is a background condition and not related to site development. Site generated traffic adds 25 feet to the calculated storage length of the lane.

A southbound right turn lane is warranted on Lithopolis Road at Oregon Road due to the addition of site-generated traffic. The lane is not needed for capacity however as the intersection achieves LOS C or better without it. The proximity of Oregon Road to the Lithopolis Road/Gender Road roundabout raises the possibility that adding a right turn lane for Oregon Road could be confusing to drivers that may perceive it to be part of the roundabout approach. We also considered that the City's Thoroughfare Plan ultimately calls for the relocation of Oregon Road in this area. We do not recommend the right-turn lane addition for all of the foregoing reasons.

If you have questions or comments during your review of this matter, please contact me directly at (614) 775-460.

Sincerely,

Lawrence C. Creed, Esq, PE
Principal
Director of Traffic Engineering Services

Engineers, Surveyors, Planners, Scientists

June 14, 2018

Mr. Lucas Haire
Development Director
City of Canal Winchester
36 South High Street
Canal Winchester, Ohio 43110

Subject: Imler Tract Traffic Impact Study – Revised MOU
Canal Winchester, Ohio

Dear Mr. Haire,

This Memorandum of Understanding is submitted to document the scope of the above captioned traffic impact study for a planned residential development in the City of Canal Winchester. Following your concurrence, EMH&T will prepare a traffic impact study in accordance with the methodologies and assumptions described below.

Proposed Development & Site Access Plan

The development site is located in the southwest quadrant of the Hayes Road/Lithopolis Road intersection and extends south to include frontage along Oregon Road. Proposed site access includes two driveways along Oregon Road and two driveways along Hayes Road (total of four). Site development will include 117 traditional single family homes and 58 "lifestyle" single family homes that are targeted (but not restricted) to age 55 and older buyers for a total of 175 dwelling units. Floodplain and wetland areas bisect the site and create two separate development areas, one accessed from Hayes Road and one accessed from Oregon Road. A site plan is attached for reference.

Data Collection

Peak hour manual turning movement counts will be conducted at the three Lithopolis Road intersections at Gender Road (SR 674), Oregon Road, and Hayes Road. These counts will help determine peak hour traffic levels adjacent to the site. The count data will be supplied for reference and used to complete analyses for this TIS.

Crash data will be retrieved from the ODPS website for the last available three-year period at the Lithopolis Road intersections at Oregon Road and Hayes Road.

5500 New Albany Road, Columbus, OH 43054 • Phone 614.775.4500 • Fax 614.775.4800
Columbus • Charlotte • Indianapolis
emht.com

Intersections to Analyze

Analyses will be completed for weekday AM and PM Peak Hour periods at the following intersections:

- Lithopolis Road/SR 674 (Gender Road)
- Lithopolis Road/Oregon Road
- Lithopolis Road/Hayes Road
- Oregon Road/Drive A
- Oregon Road/Drive B
- Hayes Road/Drive C
- Hayes Road/Drive D

Trip Generation

Trip generation methodology contained in Trip Generation, 10th Edition (ITE) will be used to forecast new trips associated with proposed development. We will calculate site trips based on 175 Single Family-Detached homes (land use #210) and the calculation will separate the northern (58 units) and southern (117 units) sections of the development as shown in **Table 1**. The 58 homes in the northern section of the site are age-targeted and intended for age 55 and over buyers which typically generate half or less of the trips associated with traditional single-family residential. These units would more accurately be analyzed as Detached Senior Adult Housing (ITE land use #251) but this study was directed to apply to the single family trip rate to all units as a conservative approach.

Table 1: Expected Trip Generation

Land Use	Square Feet or Units	ITE Code	Time Period	ITE Formula	Total Trips	Trips Entering	Trips Exiting
Single Family - Detached	117 units	210	ADT	Ln(T)=0.92Ln(x)+2.71	1202	601	601
			AM Peak	T=0.71(x)+4.8	88	22	66
			PM Peak	Ln(T)=0.96Ln(x)+0.2	118	74	44
Single Family - Detached	58 units	210	ADT	Ln(T)=0.92Ln(x)+2.71	630	315	315
			AM Peak	T=0.71(x)+4.8	46	12	34
			PM Peak	Ln(T)=0.96Ln(x)+0.2	60	38	22

Trip Distribution

Existing traffic count data at the count locations will help determine how traffic is assigned. Since the State Route 674 connection north to US 33 provides quick access to a regional route and most of the shopping and schools are to the north, much of the traffic is expected to distribute in that direction. Consequently, the following trip distribution will be utilized based on direction from City staff after review of traffic count data:

- 35% to/from the north on Gender Road (SR 674)
- 25% to/from the west on Lithopolis Road
- 15% to/from west on Hayes Road
- 20% to/from the east on Lithopolis Road
- 5% to/from the south on Oregon Road

Site traffic assignment worksheets will be included in the final TIS report for reference.

Traffic Projections

Site generated traffic volumes will be combined with existing traffic volumes observed at each intersection and expected non-site (background) traffic growth to provide total traffic volumes. Traffic volumes will be prepared for opening (2019) and horizon year (2029) full build conditions for use in traffic analyses. A traffic growth rate will be requested from the Mid-Ohio Regional Planning Commission (MORPC) for use in completing background traffic projections.

Traffic Analyses

Intersection Capacity Analyses

Synchro (v.10) and SIDRA (v.7) software will be used to evaluate operational characteristics of the proposed study area intersections with the addition of any warranted turn lanes. Traffic analysis will consist of AM and PM peak capacity analysis for Opening and Horizon year, No-Build and Build conditions. A minimum overall intersection level of service (LOS) of D, minimum approach LOS of D and minimum individual movement LOS E will be considered acceptable.

Turn Lane Warrants

The study will evaluate left and right turn lane warrants at Study Area intersections including each planned access point where public street access is desired for Opening and Horizon year Build conditions, pursuant to the requirements set forth in the Location and Design Manual (Ohio Department of Transportation).

Turn Lane Length Calculations

Lengths of all capacity driven or warranted turn lanes will be determined using storage calculations provided in the Location and Design Manual § 401 (Ohio Department of Transportation, 2010). The lengths will be based on the maximum volume for the 2029 Build condition for either AM or PM peak conditions.

Crash Analysis/Safety Review

A crash analysis will be completed at two locations in the study area consisting of the Lithopolis Road intersections with Oregon Road and with Hayes Road. We will review crash history for the last three complete years of available data and discuss crash trends identified at either intersection. This review will suggest potential mitigation measures that may address historical crash patterns independent of site development impacts. In addition, this safety review will coordinate identified crash patterns with existing roadway geometry and potential roadway improvements that arise from capacity and turn lane warrant analyses.

Sight Distance Evaluation/Access Exhibit

This study will provide an access exhibit(s) for all Study Area intersections including site connections to the public street system. The access exhibit(s) is intended to portray the long-term future condition of Study Area roadways including site impact mitigation, policy driven improvements such as Thoroughfare Plan rights of way and pavement width, and potential safety mitigation depending on the outcome of the crash analysis described above. The following items comprise the access exhibit(s):

1. Sight distance at proposed site access points and existing Study Area intersections showing sight triangles based on ODOT L&D Manual criteria
2. Roadway improvements needed to mitigate site development impacts
3. Lane width improvements to achieve minimum 12-foot wide travel lanes and 2-foot wide paved shoulders

4. Existing right of way limits and future right of way as provided in the City's Thoroughfare Plan.
    a. Lithopolis Road and Hayes Road are minor arterials and the required right of way is 80 feet while Oregon Road requires 60 feet of right of way
5. Roadway improvements identified as potential mitigation for crash trends identified as described above

Final Report

A detailed report including applicable figures and tables will be prepared to summarize study methodologies, analysis, findings and recommendations. The report will be submitted to the City of Canal Winchester for review. Please signify your concurrence with the scope of work outlined herein by signing below and returning this Memorandum of Understanding to me.

If you have questions or comments during your review of this matter, please contact me directly at (614) 775-4640.

Sincerely,

Lawrence C. Creed, Esq., PE
Principal
Director of Traffic Engineering Services

Copies: Terry Andrews, Westport Homes
Jeff Strung, EMH&T

ACCEPTANCE AND APPROVAL OF MEMORANDUM OF UNDERSTANDING

By: _____
City of Canal Winchester

Date: _____

LOCATION MAP
NO SCALE

SITE STATISTICS:

TOTAL ACREAGE:	±79.5 ACRES
NET ACREAGE:	±63.8 ACRES (EXCLUDING R/W)
NET DEVELOPABLE AREA:	±50.84 ACRES (EXCLUDING R/W AND REQUIRED OPEN SPACE)
TOTAL NUMBER OF LOTS:	175
TRADITIONAL:	117
LIFESTYLE:	58
TOTAL GROSS DENSITY:	±2.2 LOTS/ACRE
NET DEVELOPABLE DENSITY:	±3.44 LOTS/ACRE (BASED ON NET DEVELOPABLE AREA)
OPEN SPACE REQUIRED:	±12.76 ACRES, 20% (BASED ON NET ACREAGE)
TOTAL OPEN SPACE PROVIDED:	±22.2 ACRES, 34.7% (BASED ON NET ACREAGE)
RESERVE "A":	±0.2 ACRES
RESERVE "B":	±0.3 ACRES
RESERVE "C":	±18.9 ACRES
RESERVE "D":	±2.1 ACRES
RESERVE "E":	±0.5 ACRES
RESERVE "F":	±0.2 ACRES

NOTES:

NOTE "A":
ALL OF MIDDLETOWN FARMS IS IN THE FLOOD HAZARD ZONE X AND ZONE AE AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP NUMBER 39045C0125G, EFFECTIVE DATE JANUARY 6, 2012.

NOTE "B":
4' SIDEWALKS SHALL BE PROVIDED PARALLEL AND ON BOTH SIDES OF THE ROADS WITHIN THE PROPOSED RIGHT OF WAY.

NOTE "C":
RESERVES "A"-"F" ARE OPEN SPACES WITHIN THE DEVELOPMENT AND THEY SHALL BE OWNED AND MAINTAINED BY THE MIDDLETOWN FARMS HOMEOWNERS ASSOCIATION.

GRAPHIC SCALE
0 50 100 200
1 inch = 100 feet

REVISIONS

MARK	DATE	DESCRIPTION
	12/21	REVISED PER STAFF COMMENTS
	2/21	REVISED PER STAFF COMMENTS

WESTPORT HOMES
DEVELOPING COMMUNITIES WITH CHARACTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
DEVELOPMENT PLAN
FOR
MIDDLETOWN FARMS
SITE PLAN

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
DECEMBER 1, 201

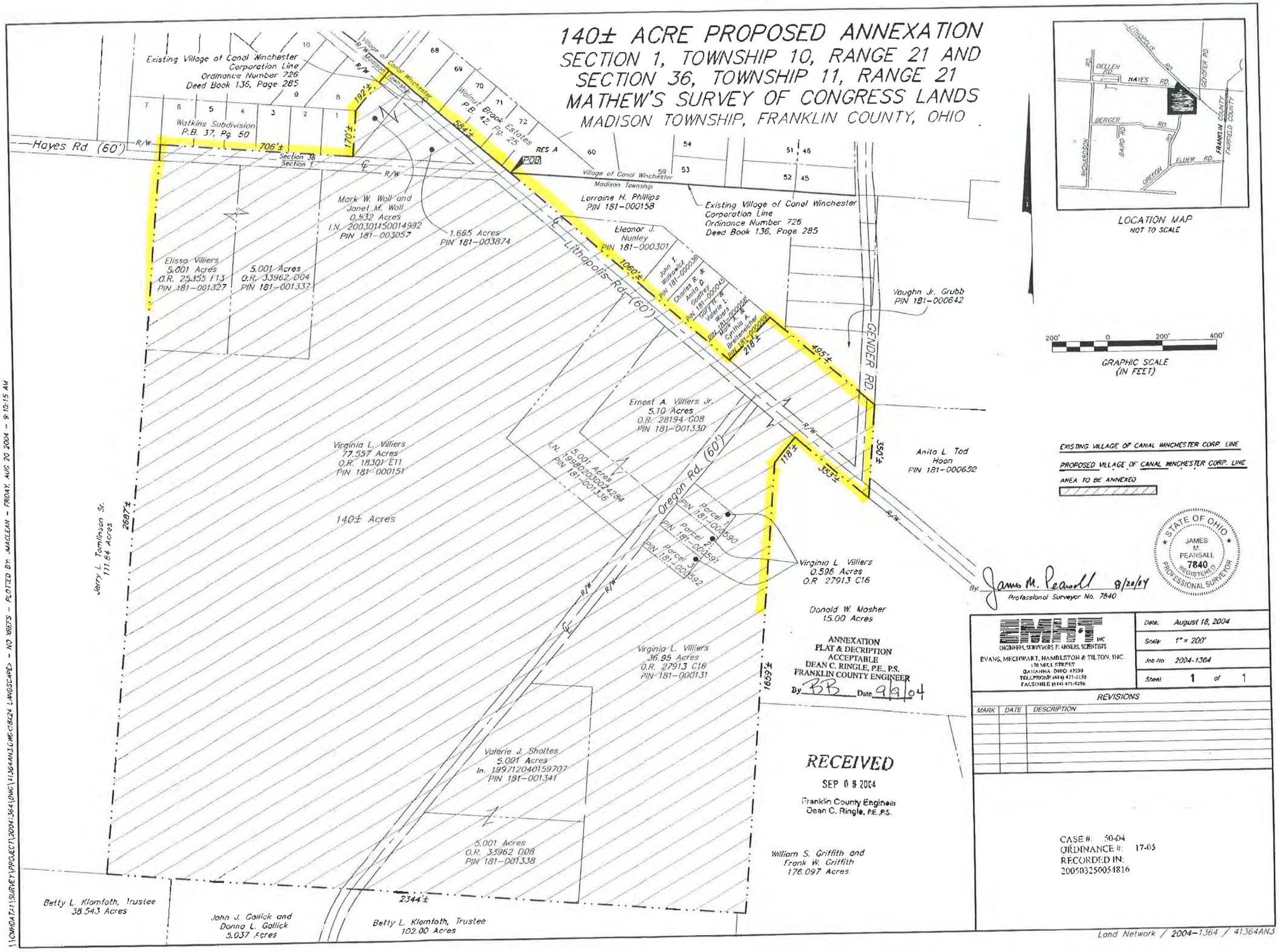
SCALE
1" = 100

JOB NO.
201-11-

EXHIBIT
D-1

\\CMHDATA\PROJECTS\2017\1150\DWG\SHEETS\DEVELOPMENT PLAN\D-1 SITE PLAN.DWG plotted by FLOW, ANDREW on 4/20/2018 9:46:50 AM last saved by ATLOW on 4/20/2018 8:11:51 AM

140± ACRE PROPOSED ANNEXATION
SECTION 1, TOWNSHIP 10, RANGE 21 AND SECTION 36, TOWNSHIP 11, RANGE 21
MATHEW'S SURVEY OF CONGRESS LANDS
MADISON TOWNSHIP, FRANKLIN COUNTY, OHIO



EMH&T

5500 New Albany Road
Columbus, OH 43054
emht.com

File Name : lithopolis rd - hayes rd
Site Code : 00000000
Start Date : 11/14/2017
Page No : 1

Groups Printed- Cars - Trucks - Pedestrians

	Southbound					LITHOPOLIS RD Westbound					HAYES RD Northbound					LITHOPOLIS RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	142	78	0	220	8	0	2	0	10	4	43	0	0	47	277
07:15 AM	0	0	0	0	0	0	163	51	0	214	8	0	0	0	8	6	96	0	0	102	324
07:30 AM	0	0	0	0	0	0	65	55	0	120	3	0	0	0	3	2	25	0	0	27	150
07:45 AM	0	0	0	0	0	0	36	36	0	72	11	0	0	0	11	2	9	0	0	11	94
Total	0	0	0	0	0	0	406	220	0	626	30	0	2	0	32	14	173	0	0	187	845
08:00 AM	0	0	0	0	0	0	45	30	0	75	9	0	2	0	11	1	12	0	0	13	99
08:15 AM	0	0	0	0	0	0	40	22	0	62	7	0	1	0	8	1	7	0	0	8	78
08:30 AM	0	0	0	0	0	0	18	10	0	28	10	0	0	0	10	1	8	0	0	9	47
08:45 AM	0	0	0	0	0	0	23	9	0	32	9	0	2	0	11	0	9	0	0	9	52
Total	0	0	0	0	0	0	126	71	0	197	35	0	5	0	40	3	36	0	0	39	276
*** BREAK ***																					
04:00 PM	0	0	0	0	0	0	23	5	0	28	68	0	2	0	70	0	59	0	0	59	157
04:15 PM	0	0	0	0	0	0	15	9	0	24	40	0	2	0	42	1	88	0	0	89	155
04:30 PM	0	0	0	0	0	0	47	13	0	60	52	0	0	0	52	0	88	0	0	88	200
04:45 PM	0	0	0	0	0	0	22	13	0	35	63	0	0	0	63	0	105	0	0	105	203
Total	0	0	0	0	0	0	107	40	0	147	223	0	4	0	227	1	340	0	0	341	715
05:00 PM	0	0	0	0	0	0	17	7	0	24	58	0	1	0	59	1	58	0	0	59	142
05:15 PM	0	0	0	0	0	0	51	15	0	66	48	0	3	0	51	0	70	0	0	70	187
05:30 PM	0	0	0	0	0	0	30	10	0	40	38	0	0	0	38	1	66	0	0	67	145
05:45 PM	0	0	0	0	0	0	15	13	0	28	22	0	0	0	22	0	40	0	0	40	90
Total	0	0	0	0	0	0	113	45	0	158	166	0	4	0	170	2	234	0	0	236	564
Grand Total	0	0	0	0	0	0	752	376	0	1128	454	0	15	0	469	20	783	0	0	803	2400
Apprch %	0	0	0	0		0	66.7	33.3	0		96.8	0	3.2	0		2.5	97.5	0	0		
Total %	0	0	0	0	0	0	31.3	15.7	0	47	18.9	0	0.6	0	19.5	0.8	32.6	0	0	33.5	
Cars	0	0	0	0	0	0	714	367	0	1081	440	0	13	0	453	16	759	0	0	775	2309
% Cars	0	0	0	0	0	0	94.9	97.6	0	95.8	96.9	0	86.7	0	96.6	80	96.9	0	0	96.5	96.2
Trucks	0	0	0	0	0	0	38	9	0	47	14	0	2	0	16	4	24	0	0	28	91
% Trucks	0	0	0	0	0	0	5.1	2.4	0	4.2	3.1	0	13.3	0	3.4	20	3.1	0	0	3.5	3.8
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Columbus, OH 43054
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File Name : lithopolis rd - hayes rd
Site Code : 00000000
Start Date : 11/14/2017
Page No : 2

	Southbound					LITHOPOLIS RD Westbound					HAYES RD Northbound					LITHOPOLIS RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	0	0	0	0	0	142	**78**	0	**220**	8	0	**2**	0	10	4	43	0	0	47	277
07:15 AM	0	0	0	0	0	0	**163**	51	0	214	8	0	0	0	8	**6**	**96**	0	0	**102**	**324**
07:30 AM	0	0	0	0	0	0	65	55	0	120	3	0	0	0	3	2	25	0	0	27	150
07:45 AM	0	0	0	0	0	0	36	36	0	72	**11**	0	0	0	**11**	2	9	0	0	11	94
Total Volume	0	0	0	0	0	0	406	220	0	626	30	0	2	0	32	14	173	0	0	187	845
% App. Total	0	0	0	0		0	64.9	35.1	0		93.8	0	6.2	0		7.5	92.5	0	0		
PHF	.000	.000	.000	.000	.000	.000	.623	.705	.000	.711	.682	.000	.250	.000	.727	.583	.451	.000	.000	.458	.652
Cars	0	0	0	0	0	0	377	214	0	591	28	0	2	0	30	11	156	0	0	167	788
% Cars	0	0	0	0	0	0	92.9	97.3	0	94.4	93.3	0	100	0	93.8	78.6	90.2	0	0	89.3	93.3
Trucks	0	0	0	0	0	0	29	6	0	35	2	0	0	0	2	3	17	0	0	20	57
% Trucks	0	0	0	0	0	0	7.1	2.7	0	5.6	6.7	0	0	0	6.3	21.4	9.8	0	0	10.7	6.7
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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File Name : lithopolis rd - hayes rd
Site Code : 00000000
Start Date : 11/14/2017
Page No : 3

	Southbound					LITHOPOLIS RD Westbound					HAYES RD Northbound					LITHOPOLIS RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	0	47	13	0	60	52	0	0	0	52	0	88	0	0	88	200
04:45 PM	0	0	0	0	0	0	22	13	0	35	**63**	0	0	0	**63**	0	**105**	0	0	**105**	**203**
05:00 PM	0	0	0	0	0	0	17	7	0	24	58	0	1	0	59	**1**	58	0	0	59	142
05:15 PM	0	0	0	0	0	0	**51**	**15**	0	**66**	48	0	**3**	0	51	0	70	0	0	70	187
Total Volume	0	0	0	0	0	0	137	48	0	185	221	0	4	0	225	1	321	0	0	322	732
% App. Total	0	0	0	0		0	74.1	25.9	0		98.2	0	1.8	0		0.3	99.7	0	0		
PHF	.000	.000	.000	.000	.000	.000	.672	.800	.000	.701	.877	.000	.333	.000	.893	.250	.764	.000	.000	.767	.901
Cars	0	0	0	0	0	0	135	46	0	181	218	0	4	0	222	1	320	0	0	321	724
% Cars	0	0	0	0	0	0	98.5	95.8	0	97.8	98.6	0	100	0	98.7	100	99.7	0	0	99.7	98.9
Trucks	0	0	0	0	0	0	2	2	0	4	3	0	0	0	3	0	1	0	0	1	8
% Trucks	0	0	0	0	0	0	1.5	4.2	0	2.2	1.4	0	0	0	1.3	0	0.3	0	0	0.3	1.1
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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File Name : lithopolis rd - oregon rd
Site Code : 00000000
Start Date : 11/14/2017
Page No : 1

Groups Printed- Cars - Trucks - Pedestrians

	OREGON RD Southbound					LITHOPOLIS RD Westbound					OREGON RD Northbound					LITHOPOLIS RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	174	11	0	185	5	0	7	0	12	0	17	0	0	17	214
07:15 AM	0	0	0	0	0	0	214	2	0	216	6	0	0	0	6	3	51	0	0	54	276
07:30 AM	0	0	0	0	0	0	180	12	0	192	11	0	2	0	13	2	104	0	0	106	311
07:45 AM	0	0	0	0	0	0	107	11	0	118	5	0	0	0	5	0	24	0	0	24	147
Total	0	0	0	0	0	0	675	36	0	711	27	0	9	0	36	5	196	0	0	201	948
08:00 AM	0	0	0	0	0	0	74	5	0	79	14	0	4	0	18	0	21	0	0	21	118
08:15 AM	0	0	0	0	0	0	55	7	0	62	10	0	3	0	13	0	18	0	0	18	93
08:30 AM	0	0	0	0	0	0	57	6	0	63	6	0	4	0	10	2	15	0	0	17	90
08:45 AM	0	0	0	0	0	0	22	5	0	27	15	0	1	0	16	0	16	0	0	16	59
Total	0	0	0	0	0	0	208	23	0	231	45	0	12	0	57	2	70	0	0	72	360
*** BREAK ***																					
04:00 PM	0	0	0	0	0	0	27	13	0	40	11	0	1	0	12	2	98	0	0	100	152
04:15 PM	0	0	0	0	0	0	32	11	0	43	14	0	0	0	14	1	106	0	0	107	164
04:30 PM	0	0	0	0	0	0	16	13	0	29	12	0	1	0	13	4	115	0	0	119	161
04:45 PM	0	0	0	0	0	0	44	16	0	60	16	0	3	0	19	2	144	0	0	146	225
Total	0	0	0	0	0	0	119	53	0	172	53	0	5	0	58	9	463	0	0	472	702
05:00 PM	0	0	0	0	0	0	38	20	0	58	12	0	0	0	12	5	149	0	0	154	224
05:15 PM	0	0	0	0	0	0	23	13	0	36	22	0	0	0	22	5	115	2	0	122	180
05:30 PM	0	0	0	0	0	0	50	14	0	64	8	0	0	0	8	1	107	0	0	108	180
05:45 PM	0	0	0	0	0	0	50	16	0	66	2	0	0	0	2	4	104	0	0	108	176
Total	0	0	0	0	0	0	161	63	0	224	44	0	0	0	44	15	475	2	0	492	760
Grand Total	0	0	0	0	0	0	1163	175	0	1338	169	0	26	0	195	31	1204	2	0	1237	2770
Apprch %	0	0	0	0		0	86.9	13.1	0		86.7	0	13.3	0		2.5	97.3	0.2	0		
Total %	0	0	0	0	0	0	42	6.3	0	48.3	6.1	0	0.9	0	7	1.1	43.5	0.1	0	44.7	
Cars	0	0	0	0	0	0	1121	168	0	1289	167	0	21	0	188	30	1172	2	0	1204	2681
% Cars	0	0	0	0	0	0	96.4	96	0	96.3	98.8	0	80.8	0	96.4	96.8	97.3	100	0	97.3	96.8
Trucks	0	0	0	0	0	0	42	7	0	49	2	0	5	0	7	1	32	0	0	33	89
% Trucks	0	0	0	0	0	0	3.6	4	0	3.7	1.2	0	19.2	0	3.6	3.2	2.7	0	0	2.7	3.2
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Columbus, OH 43054
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File Name : lithopolis rd - oregon rd
Site Code : 00000000
Start Date : 11/14/2017
Page No : 2

	OREGON RD Southbound					LITHOPOLIS RD Westbound					OREGON RD Northbound					LITHOPOLIS RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 12:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	0	0	0	0	0	174	11	0	185	5	0	**7**	0	12	0	17	0	0	17	214
07:15 AM	0	0	0	0	0	0	**214**	2	0	**216**	6	0	0	0	6	**3**	51	0	0	54	276
07:30 AM	0	0	0	0	0	0	180	**12**	0	192	**11**	0	2	0	**13**	2	**104**	0	0	**106**	**311**
07:45 AM	0	0	0	0	0	0	107	11	0	118	5	0	0	0	5	0	24	0	0	24	147
Total Volume	0	0	0	0	0	0	675	36	0	711	27	0	9	0	36	5	196	0	0	201	948
% App. Total	0	0	0	0		0	94.9	5.1	0		75	0	25	0		2.5	97.5	0	0		
PHF	.000	.000	.000	.000	.000	.000	.789	.750	.000	.823	.614	.000	.321	.000	.692	.417	.471	.000	.000	.474	.762
Cars	0	0	0	0	0	0	643	35	0	678	25	0	8	0	33	4	183	0	0	187	898
% Cars	0	0	0	0	0	0	95.3	97.2	0	95.4	92.6	0	88.9	0	91.7	80.0	93.4	0	0	93.0	94.7
Trucks	0	0	0	0	0	0	32	1	0	33	2	0	1	0	3	1	13	0	0	14	50
% Trucks	0	0	0	0	0	0	4.7	2.8	0	4.6	7.4	0	11.1	0	8.3	20.0	6.6	0	0	7.0	5.3
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Columbus, OH 43054
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File Name : lithopolis rd - oregon rd
Site Code : 00000000
Start Date : 11/14/2017
Page No : 3

	OREGON RD Southbound					LITHOPOLIS RD Westbound					OREGON RD Northbound					LITHOPOLIS RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:15 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	0	0	0	0	0	44	16	0	60	16	0	**3**	0	19	2	144	0	0	146	**225**
05:00 PM	0	0	0	0	0	0	38	**20**	0	58	12	0	0	0	12	**5**	**149**	0	0	**154**	224
05:15 PM	0	0	0	0	0	0	23	13	0	36	**22**	0	0	0	**22**	5	115	**2**	0	122	180
05:30 PM	0	0	0	0	0	0	**50**	14	0	**64**	8	0	0	0	8	1	107	0	0	108	180
Total Volume	0	0	0	0	0	0	155	63	0	218	58	0	3	0	61	13	515	2	0	530	809
% App. Total	0	0	0	0		0	71.1	28.9	0		95.1	0	4.9	0		2.5	97.2	0.4	0		
PHF	.000	.000	.000	.000	.000	.000	.775	.788	.000	.852	.659	.000	.250	.000	.693	.650	.864	.250	.000	.860	.899
Cars	0	0	0	0	0	0	152	60	0	212	58	0	3	0	61	13	513	2	0	528	801
% Cars	0	0	0	0	0	0	98.1	95.2	0	97.2	100	0	100	0	100	100	99.6	100	0	99.6	99.0
Trucks	0	0	0	0	0	0	3	3	0	6	0	0	0	0	0	0	2	0	0	2	8
% Trucks	0	0	0	0	0	0	1.9	4.8	0	2.8	0	0	0	0	0	0	0.4	0	0	0.4	1.0
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Smart Services, Inc.

88 W. Church Street
Newark, OH 43055
(740) 345-4700

File Name : Lithopolis_Rd_&_Gender_Road_(SR_674)_AM_474266_11-15-2017
Site Code : 474266
Start Date : 11/15/2017
Page No : 1

Groups Printed- Cars - Trucks

	Gender Road (SR 674) Southbound				Lithopolis Road (SR 674) Westbound				Lithopolis Road Eastbound				
Start Time	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Int. Total
07:00 AM	21	34	0	55	128	100	0	228	11	7	0	18	301
07:15 AM	30	69	1	100	149	97	0	246	39	13	1	53	399
07:30 AM	31	78	1	110	132	101	1	234	80	26	1	107	451
07:45 AM	31	16	1	48	81	82	0	163	25	17	1	43	254
Total	113	197	3	313	490	380	1	871	155	63	3	221	1405
08:00 AM	27	16	0	43	61	69	0	130	18	19	0	37	210
08:15 AM	42	15	0	57	55	105	0	160	17	15	0	32	249
08:30 AM	29	17	2	48	43	90	0	133	23	11	0	34	215
08:45 AM	27	12	1	40	25	71	1	97	20	13	0	33	170
Total	125	60	3	188	184	335	1	520	78	58	0	136	844
Grand Total	238	257	6	501	674	715	2	1391	233	121	3	357	2249
Apprch %	47.5	51.3	1.2		48.5	51.4	0.1		65.3	33.9	0.8		
Total %	10.6	11.4	0.3	22.3	30	31.8	0.1	61.8	10.4	5.4	0.1	15.9	
Cars	221	227	4	452	664	697	1	1362	216	116	3	335	2149
% Cars	92.9	88.3	66.7	90.2	98.5	97.5	50	97.9	92.7	95.9	100	93.8	95.6
Trucks	17	30	2	49	10	18	1	29	17	5	0	22	100
% Trucks	7.1	11.7	33.3	9.8	1.5	2.5	50	2.1	7.3	4.1	0	6.2	4.4

Smart Services, Inc.

88 W. Church Street
Newark, OH 43055
(740) 345-4700

File Name : Lithopolis_Rd_&_Gender_Road_(SR_674)_AM_474266_11-15-2017
Site Code : 474266
Start Date : 11/15/2017
Page No : 2

	Gender Road (SR 674) Southbound				Lithopolis Road (SR 674) Westbound				Lithopolis Road Eastbound				
Start Time	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	21	34	0	55	128	100	0	228	11	7	0	18	301
07:15 AM	30	69	1	100	149	97	0	246	39	13	1	53	399
07:30 AM	31	78	1	110	132	101	1	234	80	26	1	107	451
07:45 AM	31	16	1	48	81	82	0	163	25	17	1	43	254
Total Volume	113	197	3	313	490	380	1	871	155	63	3	221	1405
% App. Total	36.1	62.9	1		56.3	43.6	0.1		70.1	28.5	1.4		
PHF	.911	.631	.750	.711	.822	.941	.250	.885	.484	.606	.750	.516	.779

Smart Services, Inc.

88 W. Church Street
Newark, OH 43055
(740) 345-4700

File Name : SR_674_&_Lithopolis_Rd_PM_476678_11-14-2017 (2)
Site Code :
Start Date : 11/14/2017
Page No : 1

Groups Printed- Cars - Trucks

	Gender Road (SR 674) Southbound				Lithopolis Rd (SR 674) Westbound				Lithopolis Rd Eastbound				
Start Time	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Int. Total
04:00 PM	91	20	0	111	15	38	1	54	18	98	0	116	281
04:15 PM	88	44	0	132	18	55	0	73	22	82	0	104	309
04:30 PM	108	20	0	128	8	49	0	57	33	97	0	130	315
04:45 PM	93	36	0	129	23	55	2	80	28	134	0	162	371
Total	380	120	0	500	64	197	3	264	101	411	0	512	1276
05:00 PM	96	37	0	133	23	62	1	86	52	104	0	156	375
05:15 PM	80	14	0	94	18	58	0	76	38	96	1	135	305
05:30 PM	84	33	0	117	30	66	1	97	22	96	1	119	333
05:45 PM	81	45	0	126	20	53	0	73	15	90	0	105	304
Total	341	129	0	470	91	239	2	332	127	386	2	515	1317
Grand Total	721	249	0	970	155	436	5	596	228	797	2	1027	2593
Apprch %	74.3	25.7	0		26	73.2	0.8		22.2	77.6	0.2		
Total %	27.8	9.6	0	37.4	6	16.8	0.2	23	8.8	30.7	0.1	39.6	
Cars	717	243	0	960	152	432	5	589	228	793	2	1023	2572
% Cars	99.4	97.6	0	99	98.1	99.1	100	98.8	100	99.5	100	99.6	99.2
Trucks	4	6	0	10	3	4	0	7	0	4	0	4	21
% Trucks	0.6	2.4	0	1	1.9	0.9	0	1.2	0	0.5	0	0.4	0.8

Smart Services, Inc.

88 W. Church Street
Newark, OH 43055
(740) 345-4700

File Name : SR_674_&_Lithopolis_Rd_PM_476678_11-14-2017 (2)
Site Code :
Start Date : 11/14/2017
Page No : 2

	Gender Road (SR 674) Southbound				Lithopolis Rd (SR 674) Westbound				Lithopolis Rd Eastbound				
Start Time	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:00 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	88	44	0	132	18	55	0	73	22	82	0	104	309
04:30 PM	108	20	0	128	8	49	0	57	33	97	0	130	315
04:45 PM	93	36	0	129	23	55	2	80	28	134	0	162	371
05:00 PM	96	37	0	133	23	62	1	86	52	104	0	156	375
Total Volume	385	137	0	522	72	221	3	296	135	417	0	552	1370
% App. Total	73.8	26.2	0		24.3	74.7	1		24.5	75.5	0		
PHF	.891	.778	.000	.981	.783	.891	.375	.860	.649	.778	.000	.852	.913

Creed, Larry

From: Hwashik Jang <hjang@morpc.org>
Sent: Tuesday, December 5, 2017 9:56 AM
To: Wu, Charles
Cc: Zhuojun Jiang; Bender, Douglas; Creed, Larry; Nick Gill
Subject: RE: Traffic growth request for Imler Tract

Categories: Filed by Newforma

Charles,

We have completed processing growth rates for Imler Tract development area.
Please use a linear annual growth rate as summarized in the following table below.

Location	Linear Annual Growth Rate
Lithopolis Rd e/o Hayes Rd	0.90%
Lithopolis Rd w/o Hayes Rd	0.70%
Hayes Rd s/o Lithopolis Rd	1.20%
Lithopolis Rd e/o Oregon Rd	1.10%
Lithopolis Rd w/o Oregon Rd	0.90%
Oregon Rd s/o Lithopolis Rd	2.30%
Lithopolis Rd e/o Gender Rd	1.00%
Gender Rd n/o Lithopolis Rd	1.10%
Lithopolis Rd w/o Gender Rd	1.10%

Note: This is planning level analysis based on MORPC regional travel demand model.

If you have any other questions, please let me know.

Thanks,

Hwashik

___
Hwashik Jang | hjang@morpc.org | **MORPC**
Tel 614.233.4145 | **Fax 614.233.4245**

From: Wu, Charles [mailto:cwu@emht.com]
Sent: Tuesday, November 21, 2017 4:37 PM
To: Hwashik Jang <hjang@morpc.org>
Cc: Zhuojun Jiang <zjiang@morpc.org>; Bender, Douglas <dbender@emht.com>; Creed, Larry <LCreed@emht.com>; Wu, Charles <cwu@emht.com>
Subject: Traffic growth request for Imler Tract

Hi Hwashik,

I have a rush request for a proposed residential development called Imler Tract. Our client is pushing hard to get the TIS done ASAP.

The following are information for your use to process growth rates.

1. The traffic count data for Lithopolis Road/Oregon Road and Lithopolis Road/Hayes Road are attached. We are still waiting for the count data at Lithopolis Road/Gender Road to come in. We will forward to you as soon as we receive it. We will apply the growth rates to these count data.
2. Open Year is 2019 & Horizon Year is 2029, for this study.
3. The site is located on the south quadrant of Lithopolis Road/Hayes Road intersection. A proposed site plan is attached. The proposed residential development will consist of 129 single family units, 42 senior adult housing units, and 22 condo units. The proposed trip 4. 4.
4. The intersections that will be analyzed are Lithopolis Road/SR 674 (Gender Road), Lithopolis Road/Oregon Road, Lithopolis Road/Hayes Road, Oregon Road/two site drives, and Hayes Road/two site drives.
5. The contact person with the City of Canal Winchester is the Development Director - Lucas Haire.

If you need more information or have any question, please feel free to let me know.

Thanks

Charles Wu, P.E.
Traffic Engineer

Engineers, Surveyors, Planners, Scientists
5500 New Albany Road, Columbus, OH 43054
v. 614.775.4643 | f. 614.775.4855 | CWu@emht.com

Learn about EMH&T's leadership in sustainable design by clicking **NEXT**GENERATION**GREEN**TM.

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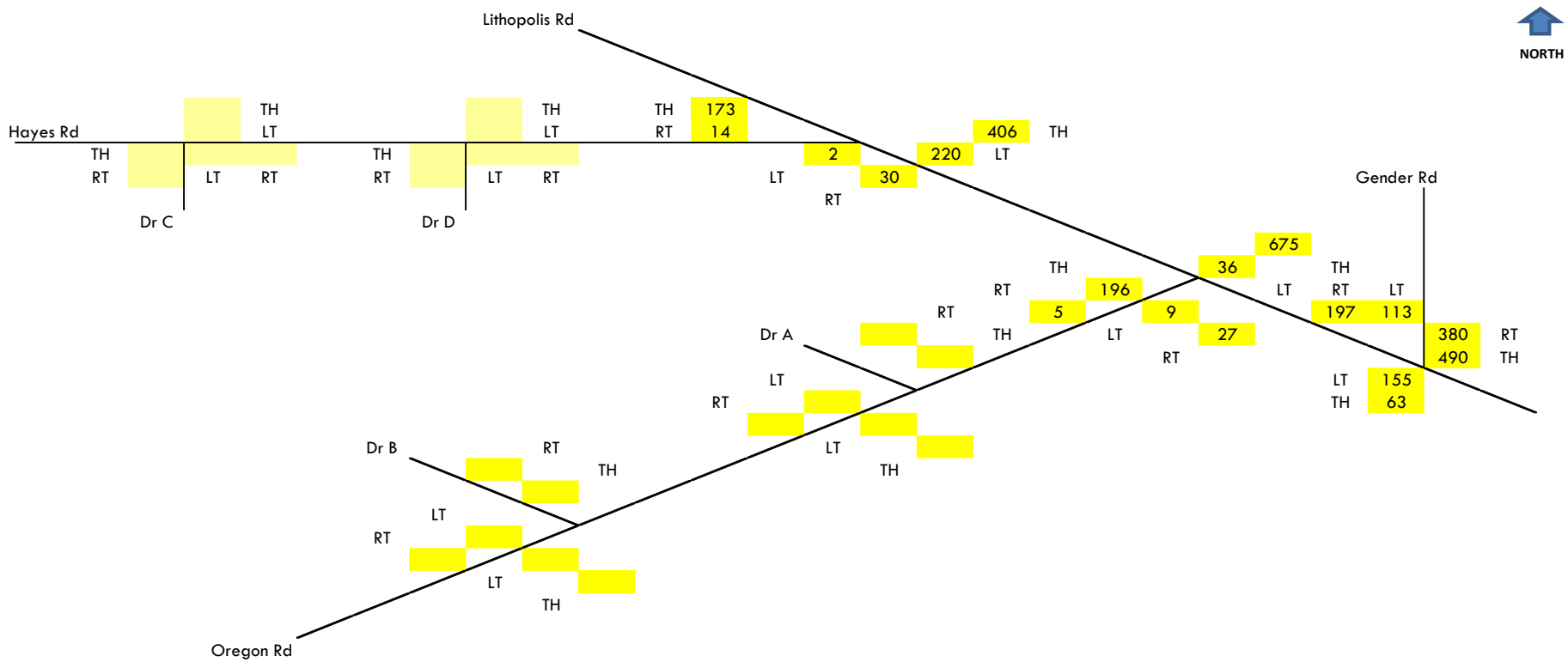
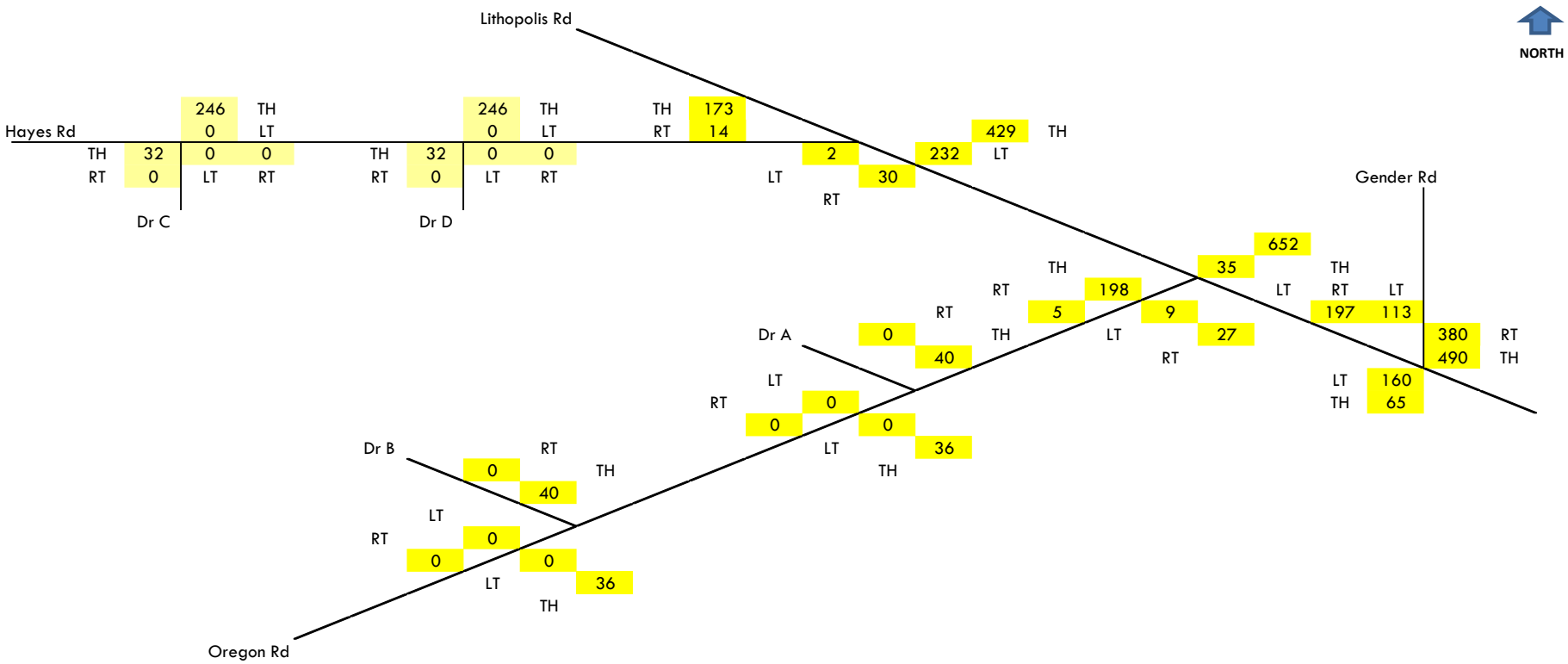
Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

2017 Counted Traffic Volumes **AM Peak Hour**
(7:00 - 8:00) **a**



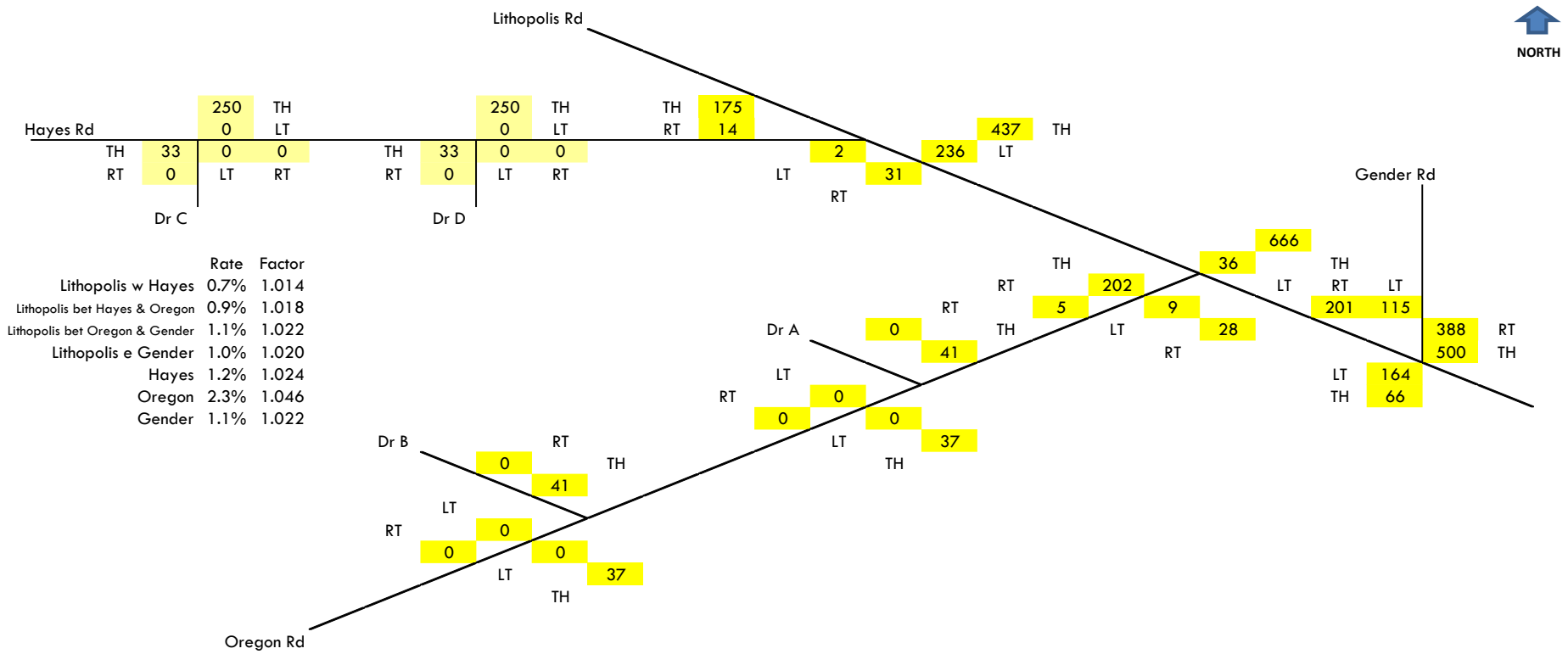
Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

2017 Adjusted Traffic Volumes **AM Peak Hour**
(7:00 - 8:00) **b**



Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

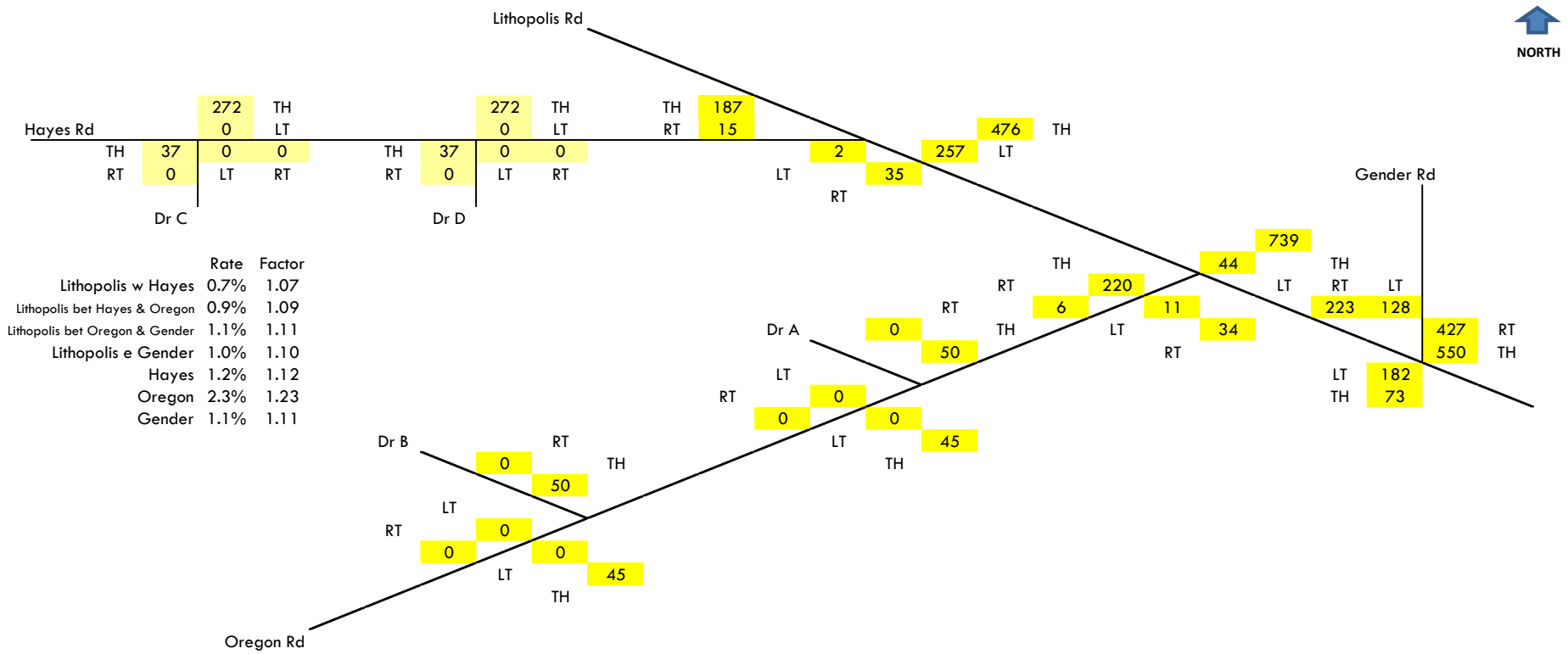
2019 No Build Traffic Volumes **AM Peak Hour**
(7:00 - 8:00) **c**



	Rate	Factor
Lithopolis w Hayes	0.7%	1.014
Lithopolis bet Hayes & Oregon	0.9%	1.018
Lithopolis bet Oregon & Gender	1.1%	1.022
Lithopolis e Gender	1.0%	1.020
Hayes	1.2%	1.024
Oregon	2.3%	1.046
Gender	1.1%	1.022

Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

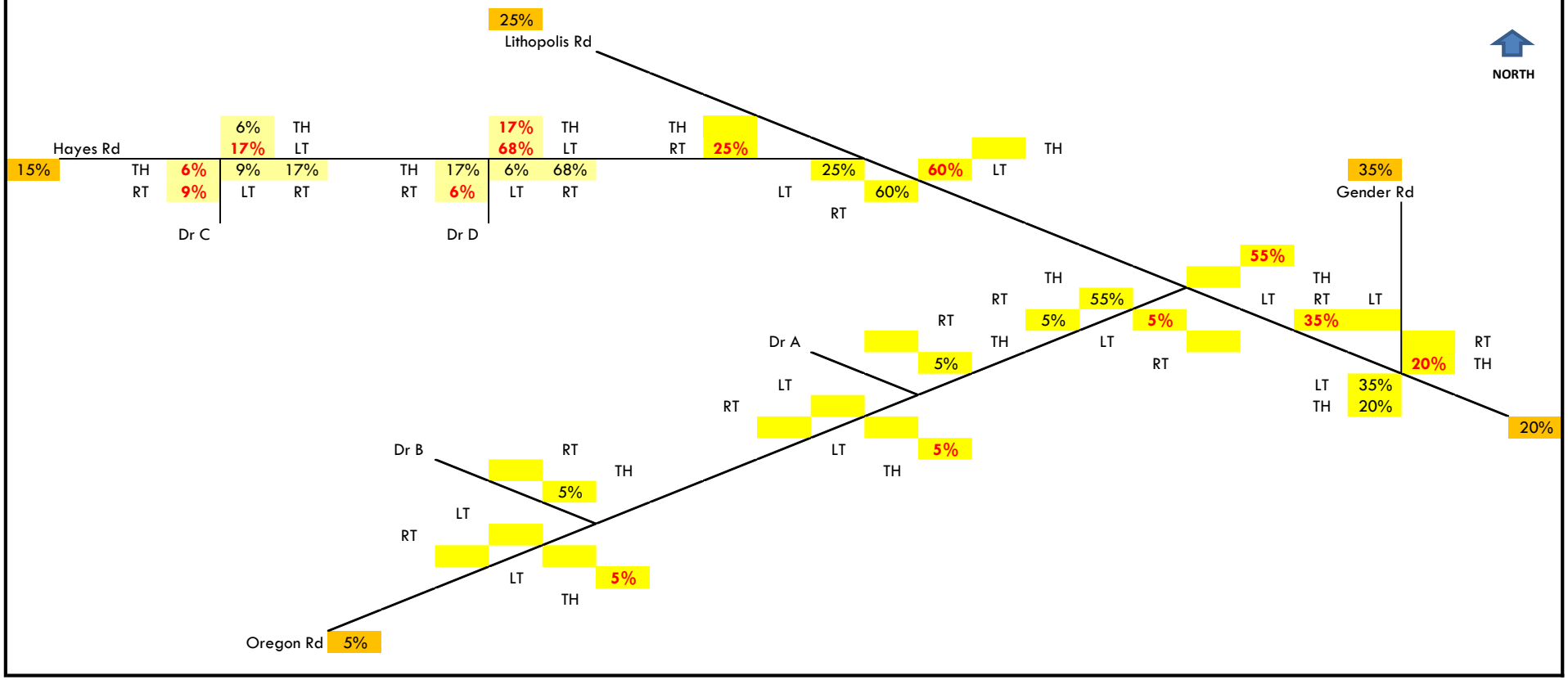
2029 No Build Traffic Volumes **AM Peak Hour**
(7:00 - 8:00) **d**



	Rate	Factor
Lithopolis w Hayes	0.7%	1.07
Lithopolis bet Hayes & Oregon	0.9%	1.09
Lithopolis bet Oregon & Gender	1.1%	1.11
Lithopolis e Gender	1.0%	1.10
Hayes	1.2%	1.12
Oregon	2.3%	1.23
Gender	1.1%	1.11

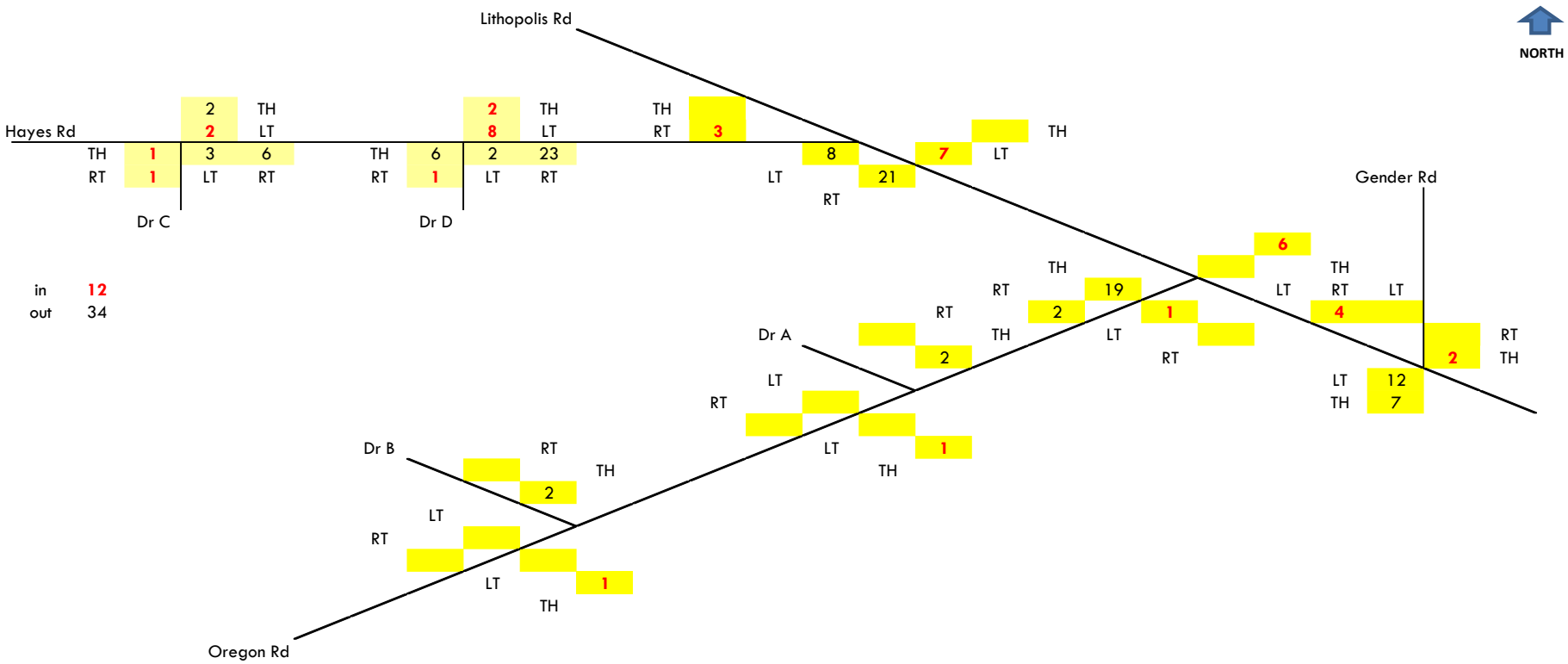
Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

Directional Distribution for Lifestyle Units-Northern Subarea **AM Peak Hour**
(7:00 - 8:00) **e**



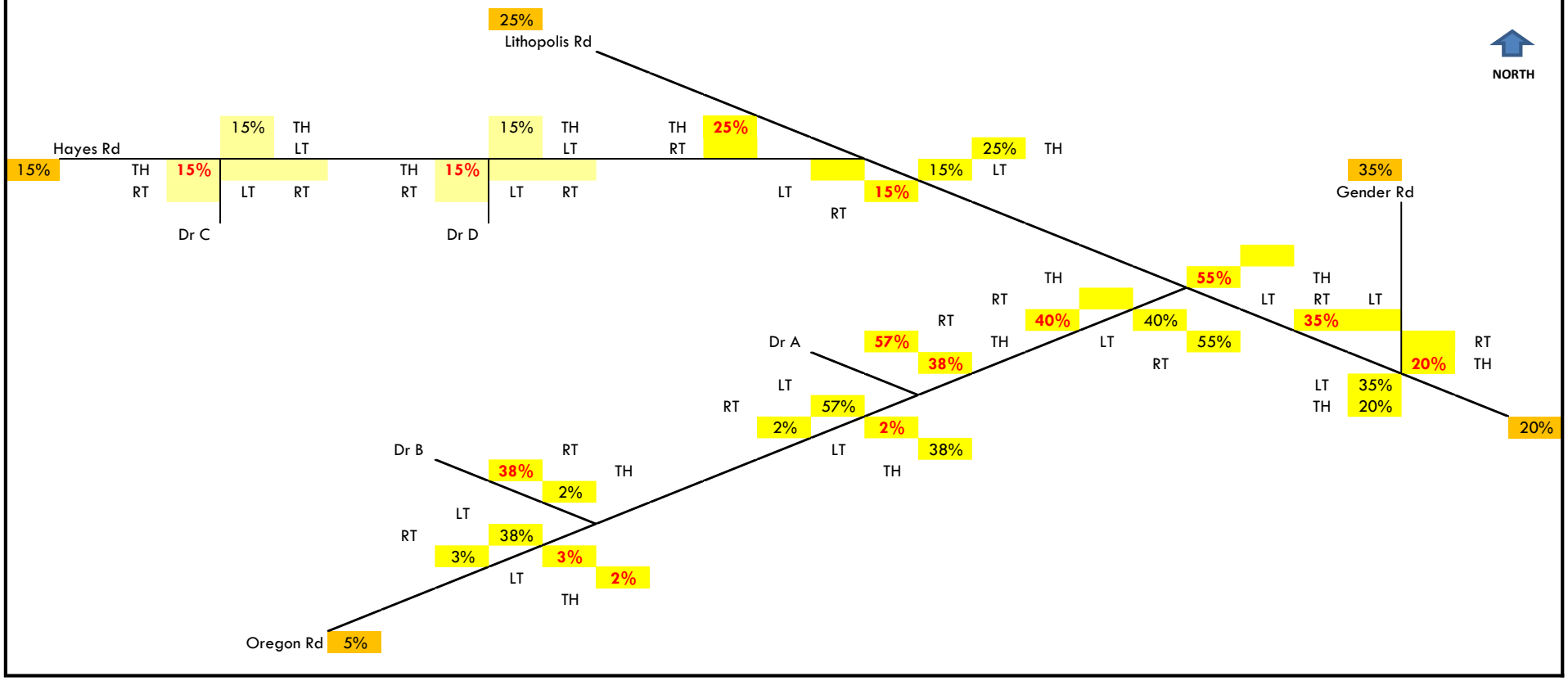
Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

Site Trips for Lifestyle Units-Northern Subarea **AM Peak Hour**
(7:00 - 8:00) **e1**



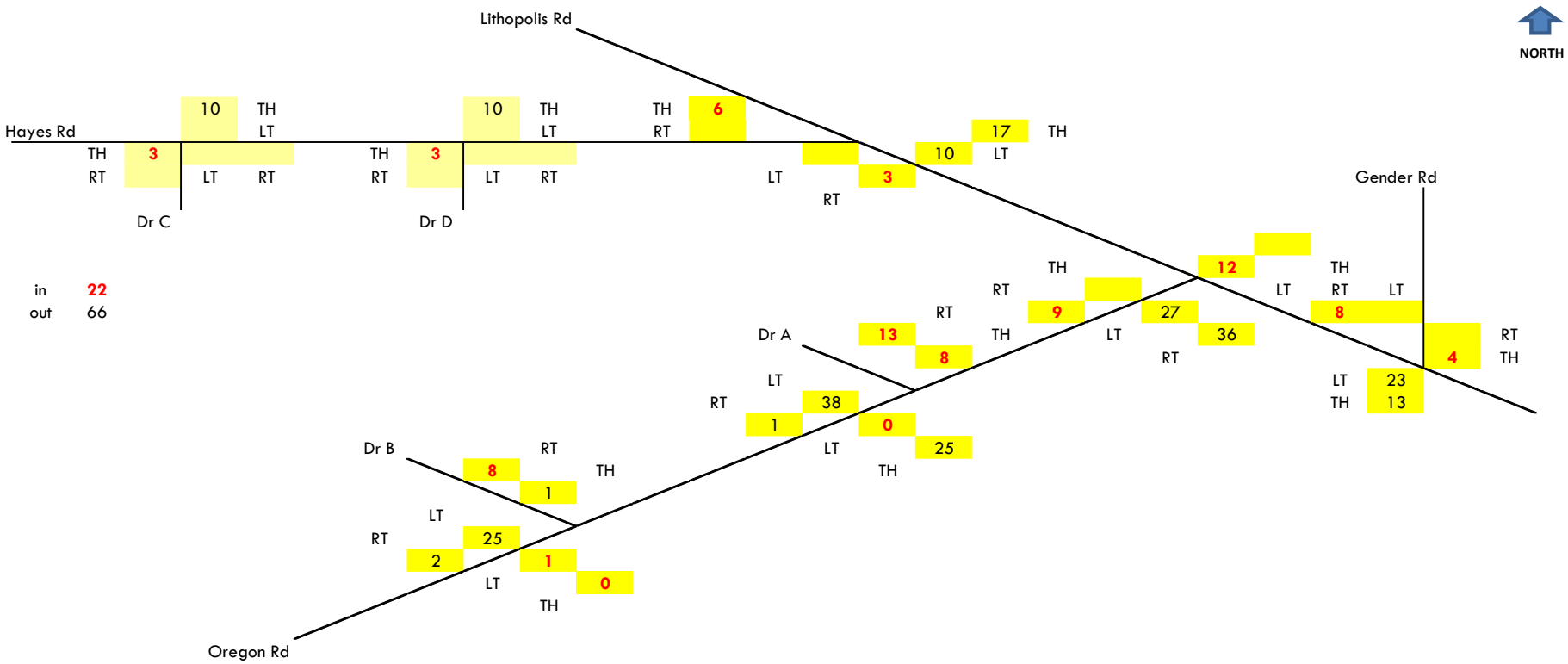
Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

Directional Distribution for Traditional Units-Southern Subarea **AM Peak Hour**
(7:00 - 8:00) **f**



Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

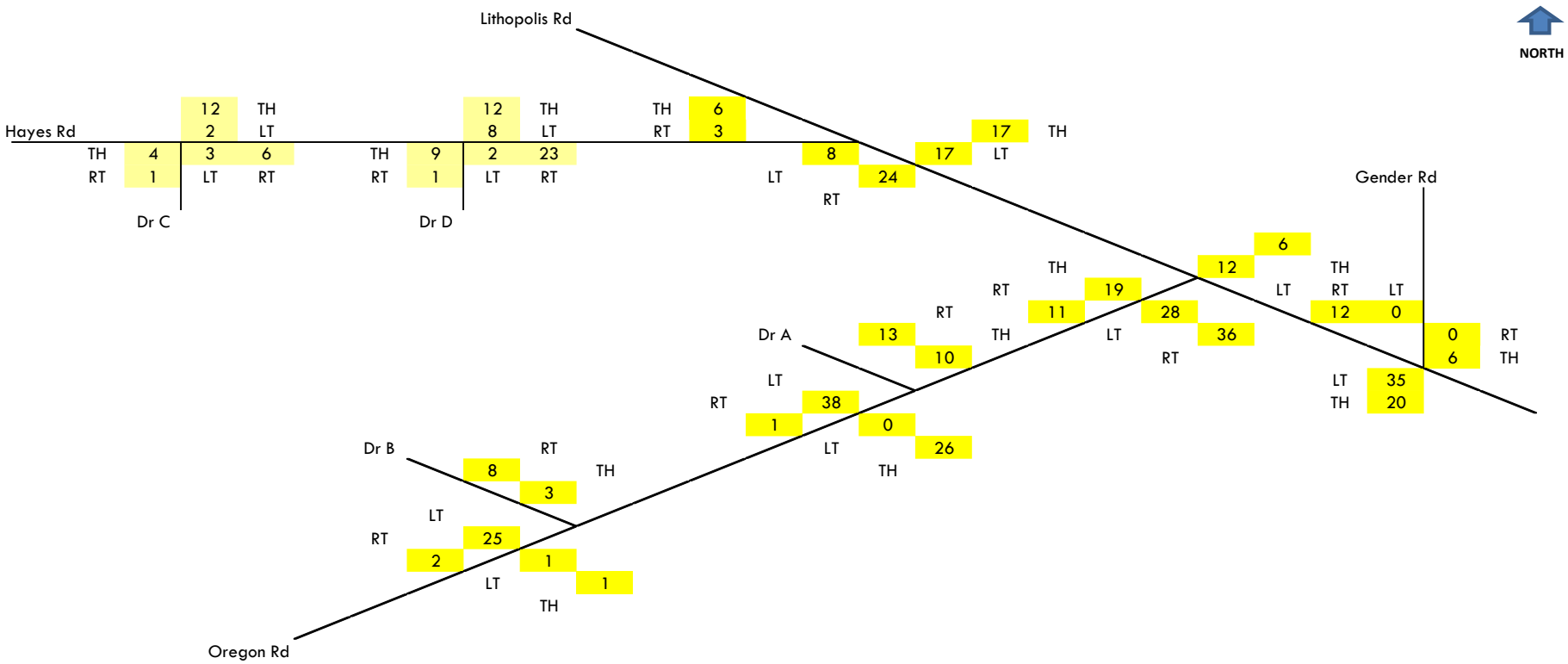
Site Trips for Traditional Units-Southern Subarea **AM Peak Hour**
(7:00 - 8:00) **f1**



Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

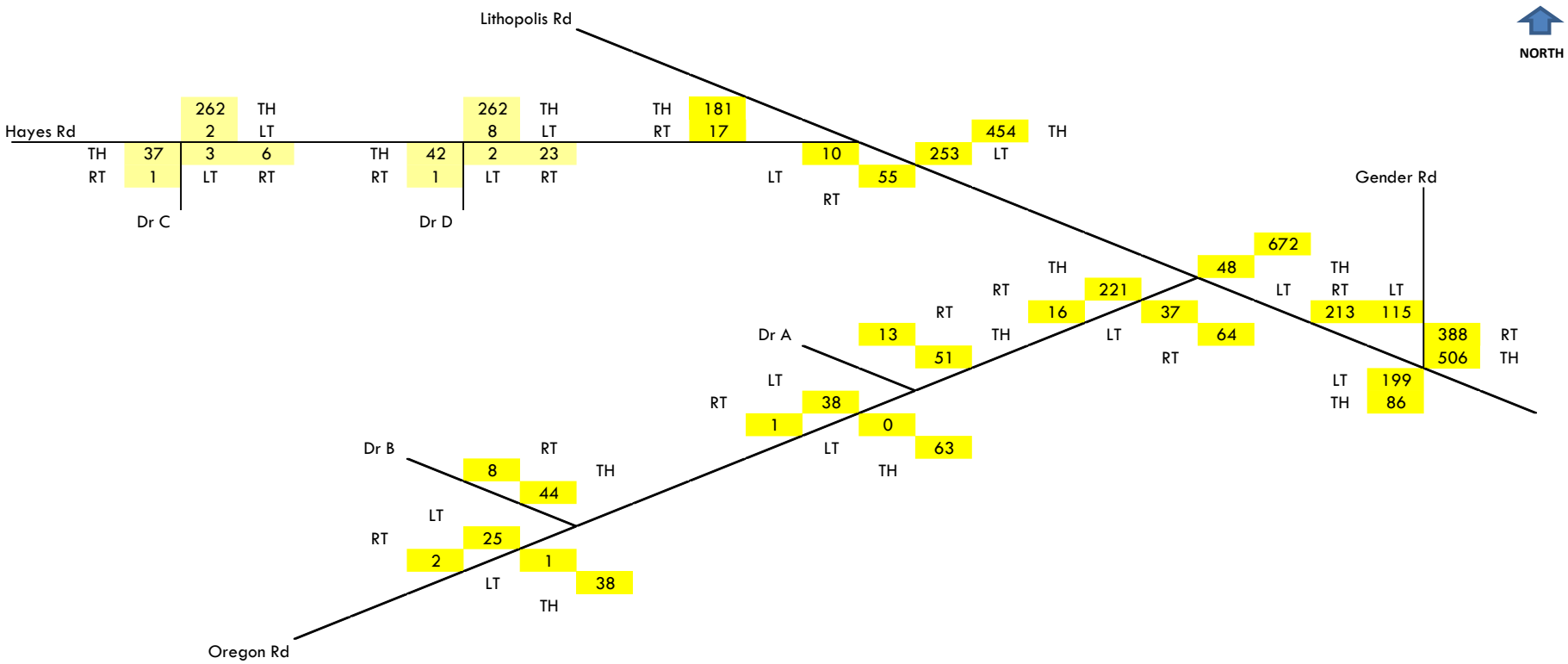
Total Site Trips
(7:00 - 8:00)

AM Peak Hour
g=e1+f1



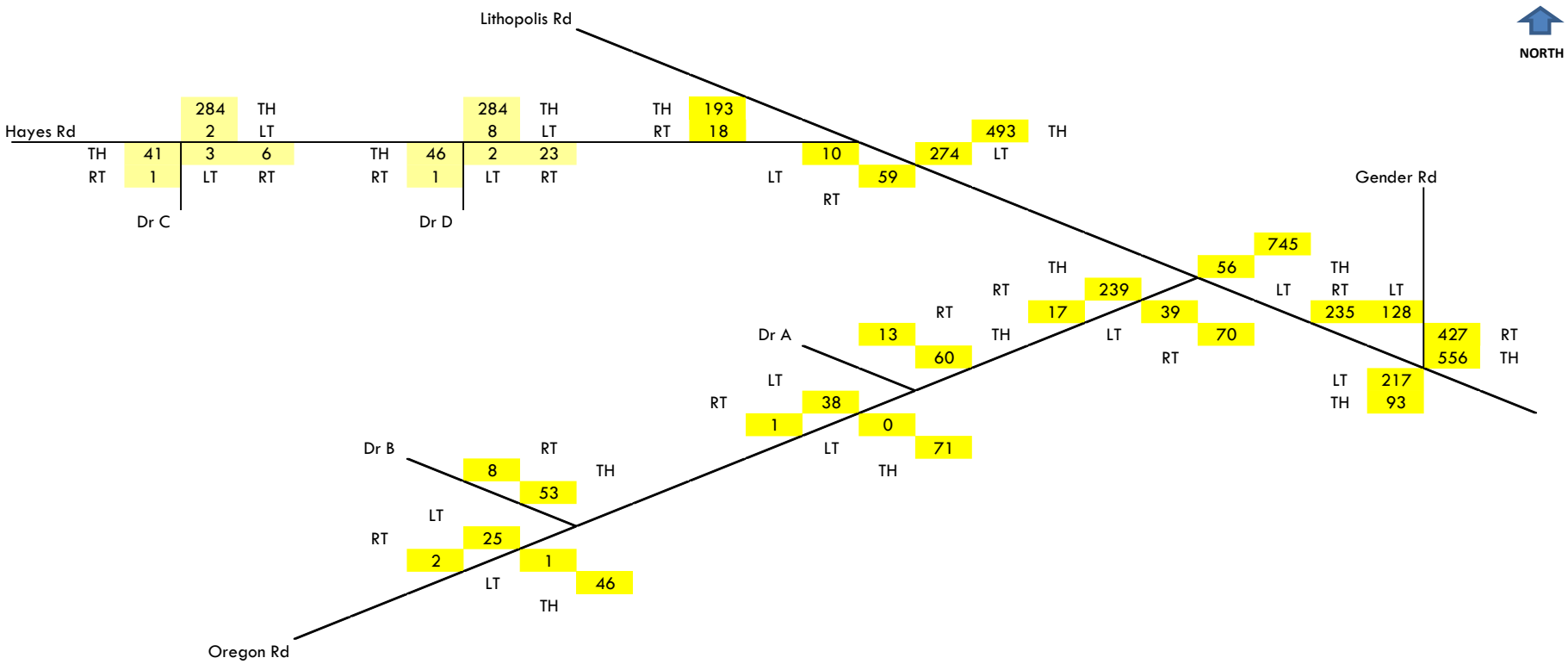
Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

2019 Build Traffic Volumes **AM Peak Hour**
(7:00 - 8:00) **h-c+g**



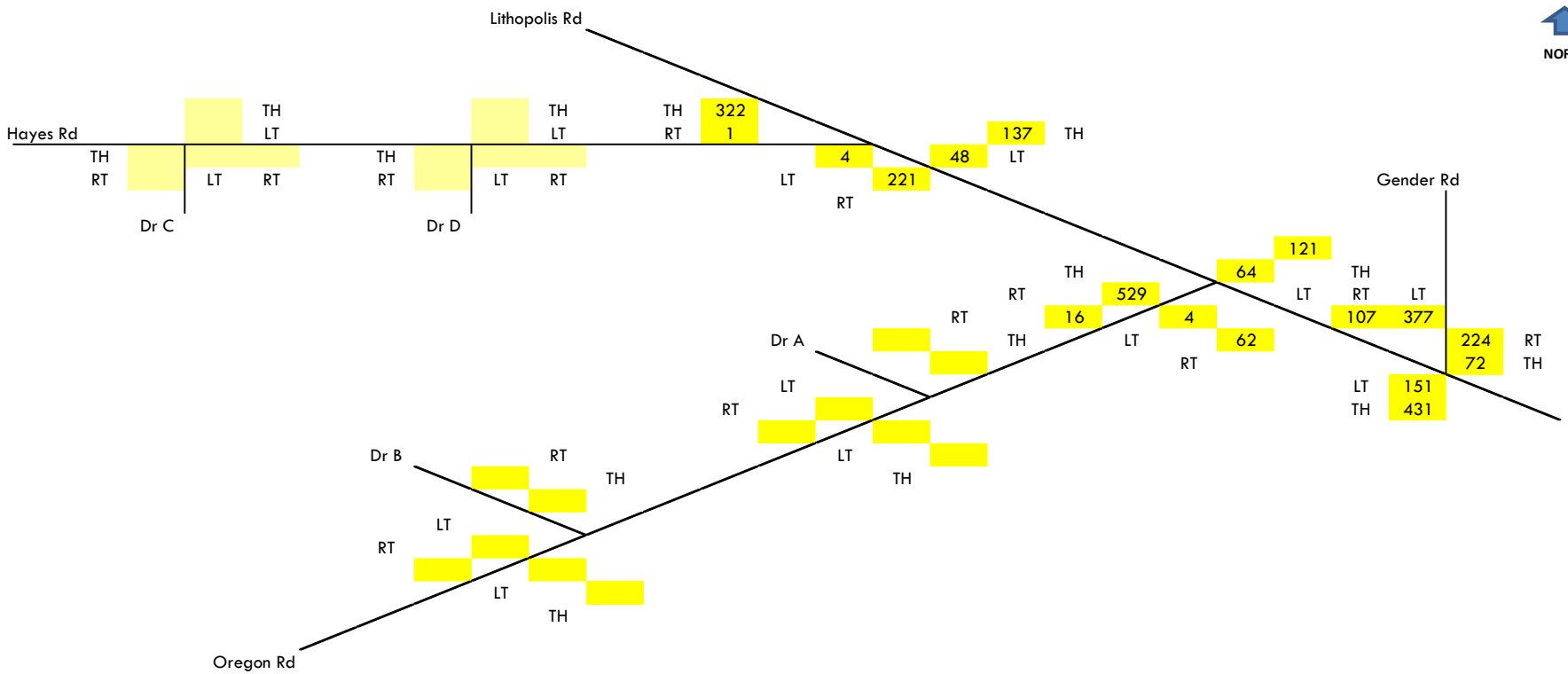
Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

2029 Build Traffic Volumes **AM Peak Hour**
(7:00 - 8:00) **i-d+g**



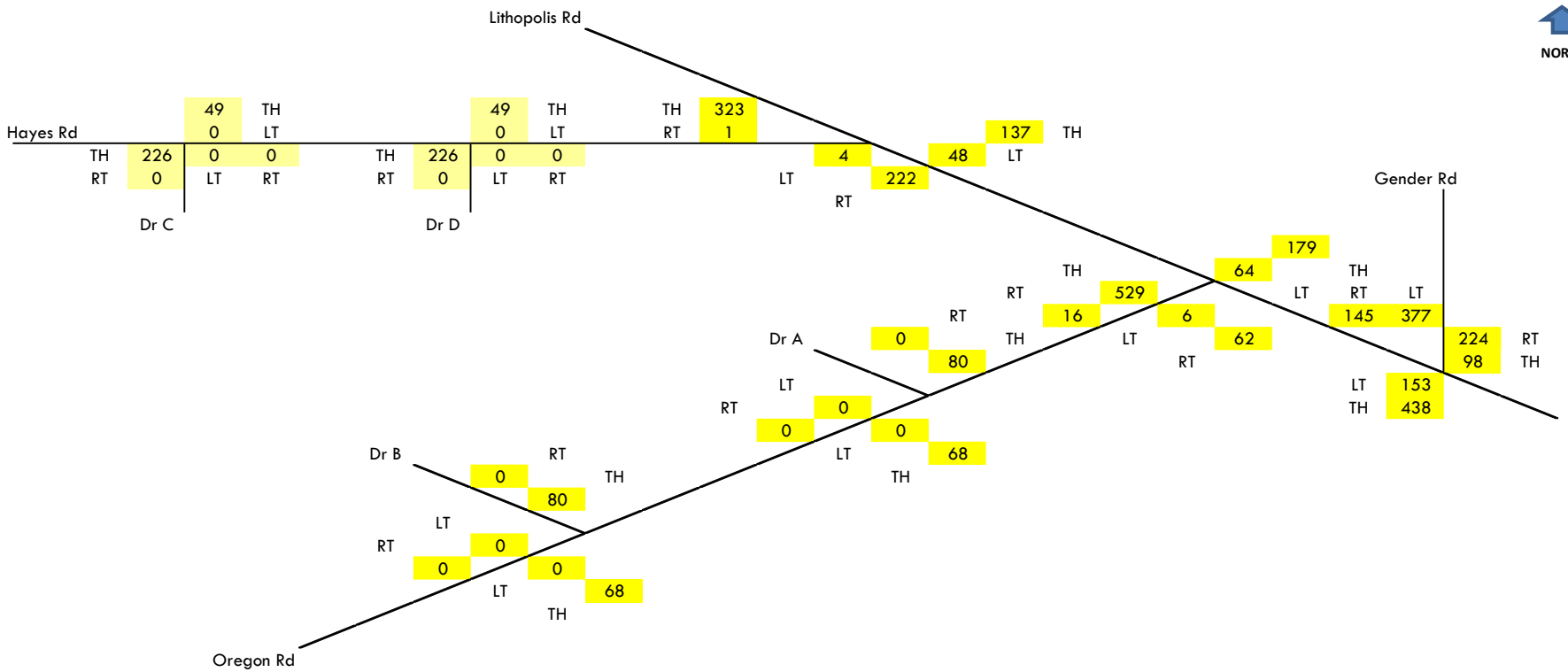
Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

2017 Counted Traffic Volumes **PM Peak Hour**
(4:30 - 5:30) **a**



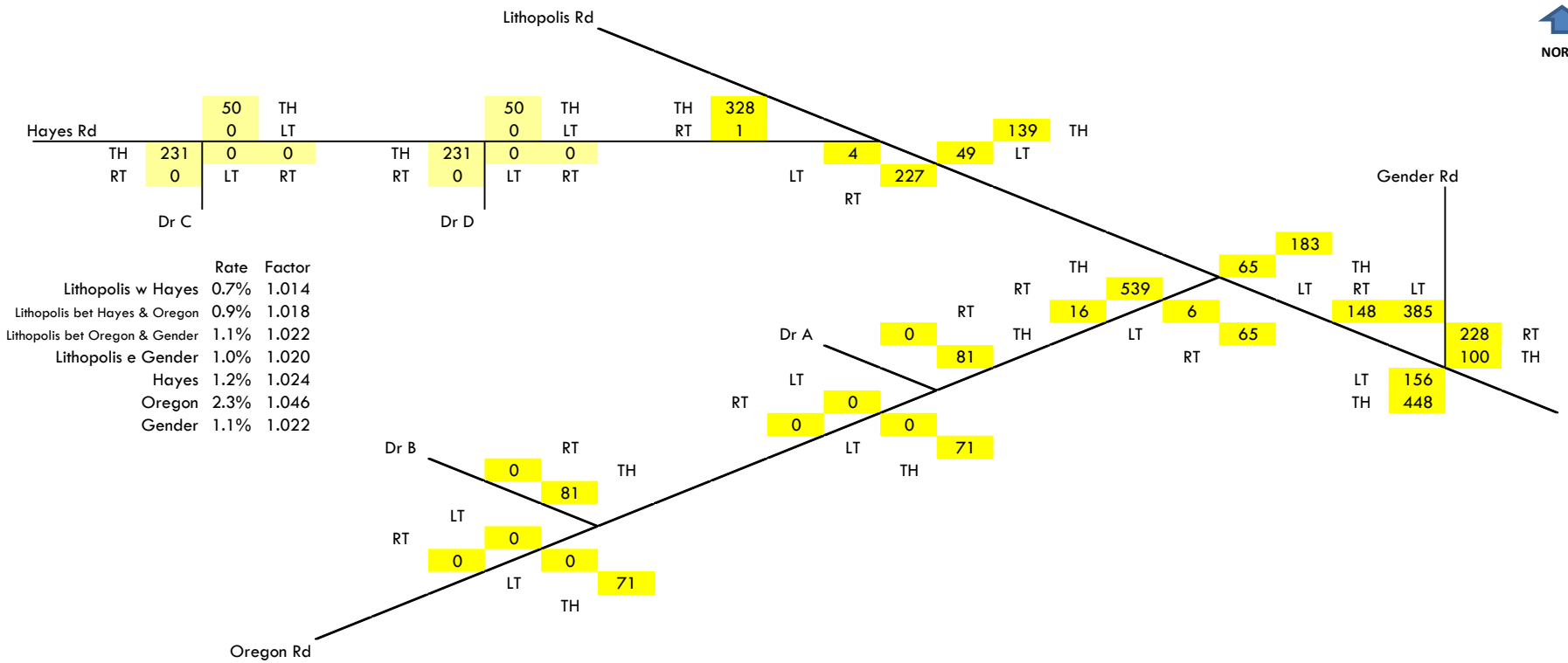
Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

2017 Adjusted Traffic Volumes **PM Peak Hour**
(4:30 - 5:30) **b**



Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

2019 No Build Traffic Volumes **PM Peak Hour**
(4:30 - 5:30) **c**



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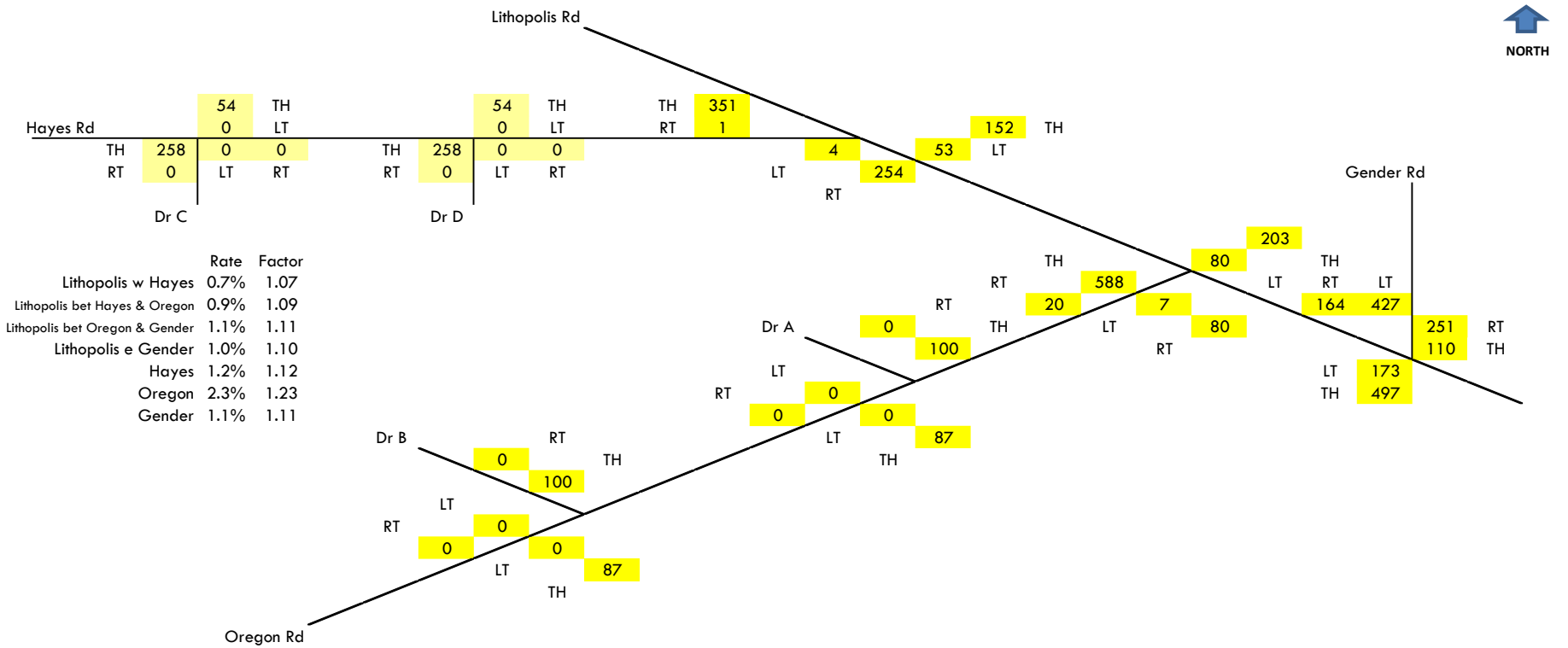
Hayes	1.2%	1.024
Oregon	2.3%	1.046
Gender	1.1%	1.022

Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

2029 No Build Traffic Volumes **PM Peak Hour**
(4:30 - 5:30) **d**



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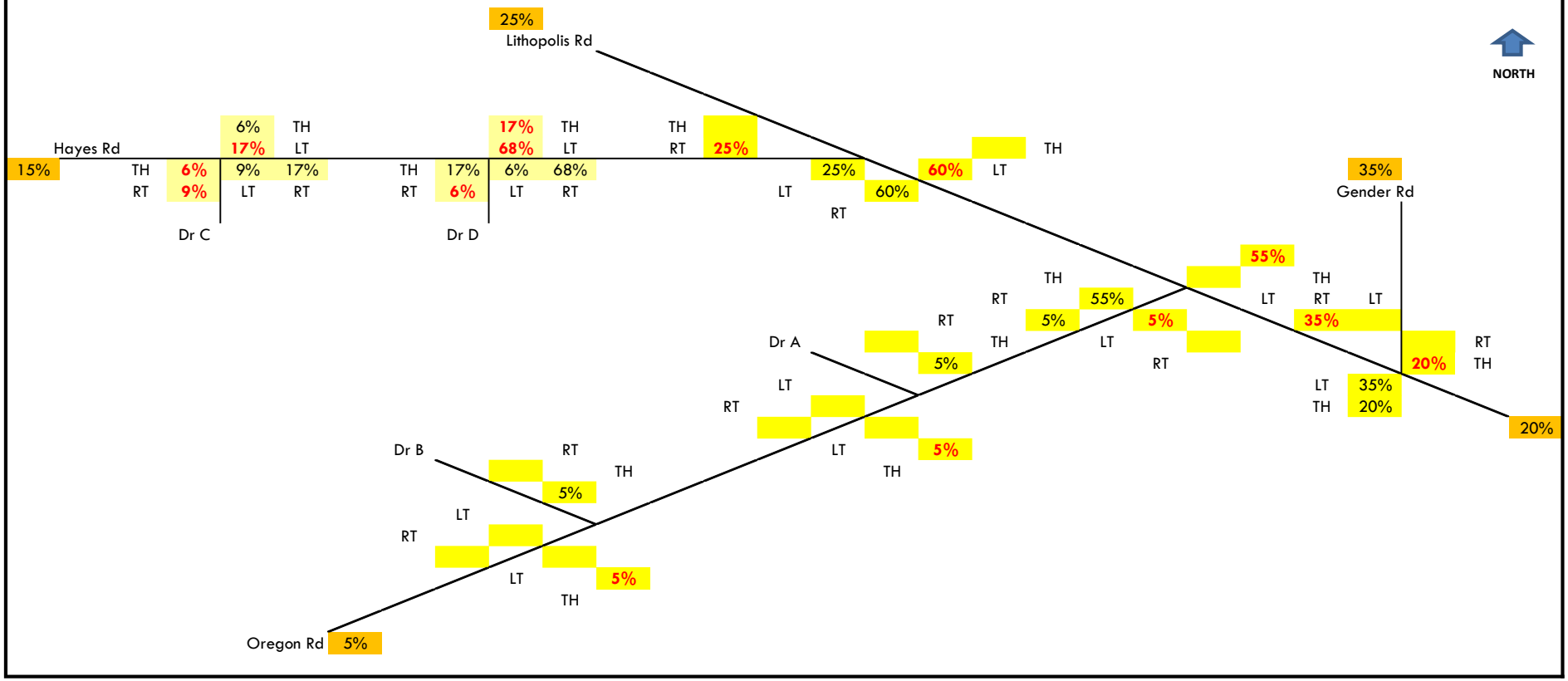
Oregon	2.3%	1.23
Gender	1.1%	1.11

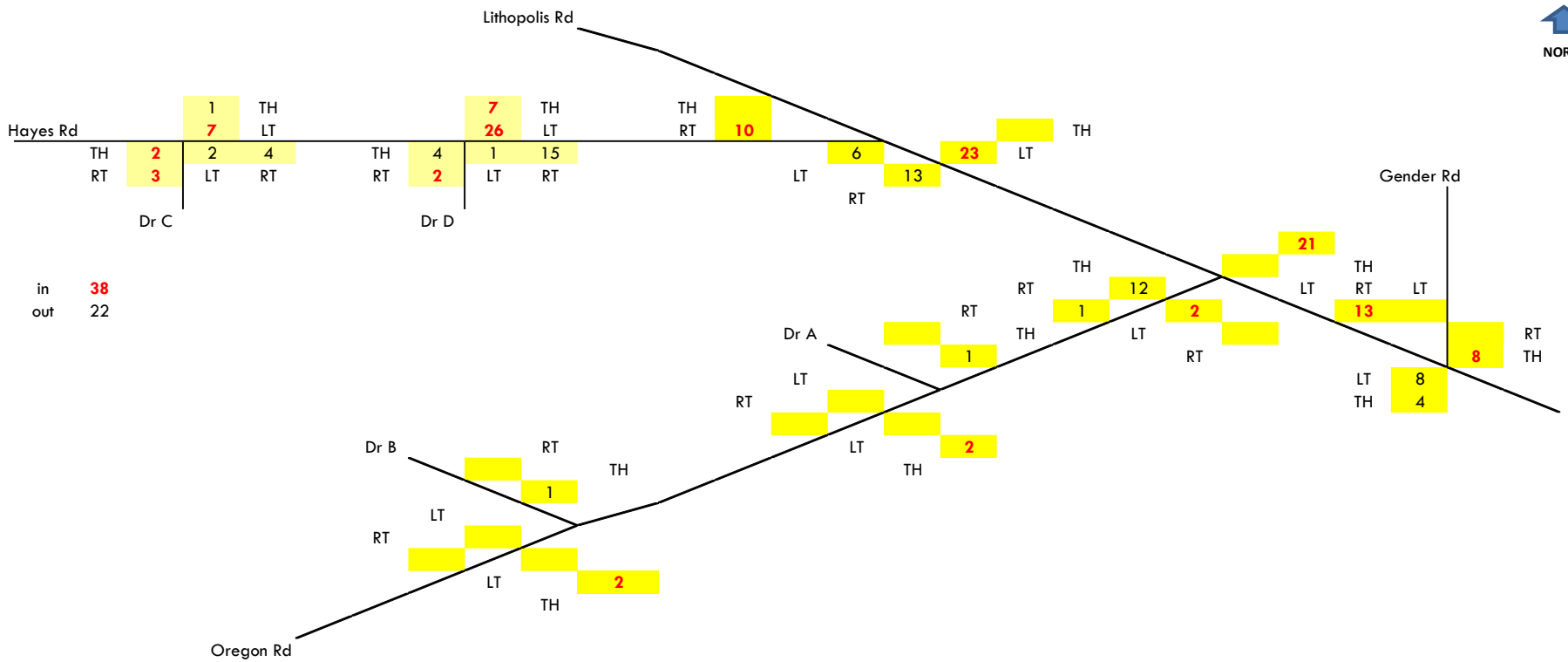
Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

Directional Distribution for Lifestyle Units-Northern Subarea **PM Peak Hour**
(4:30 - 5:30) **e**



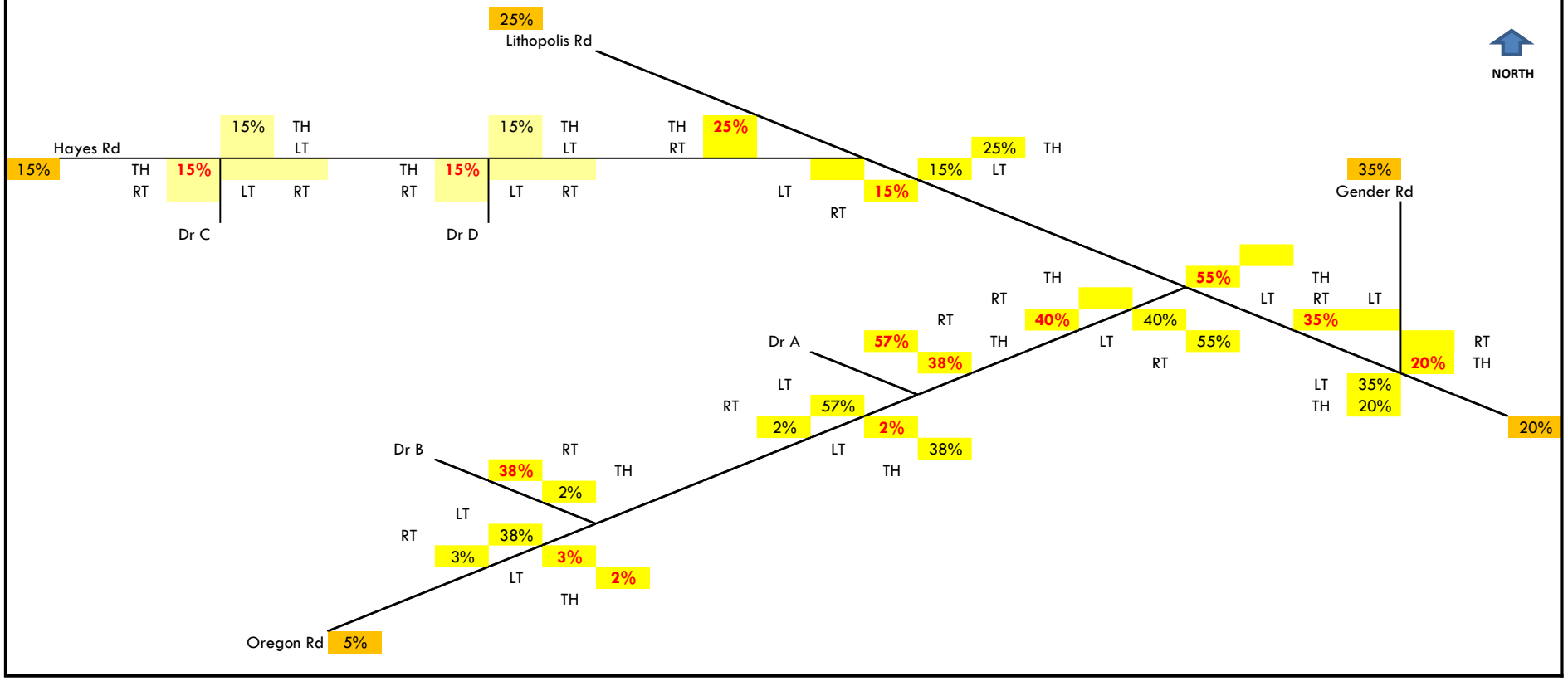
Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

Site Trips for Lifestyle Units-Northern Subarea **PM Peak Hour**
(4:30 - 5:30) **e1**



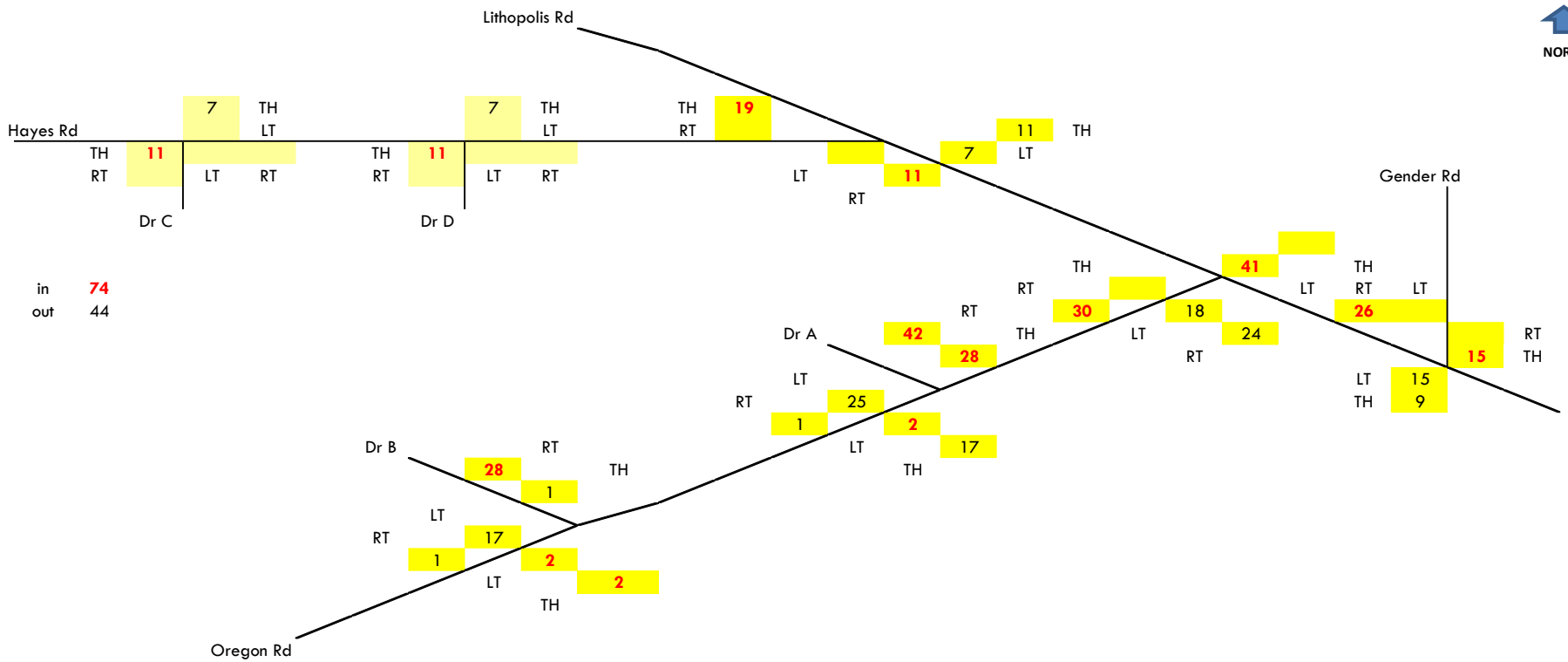
Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

Directional Distribution for Traditional Units-Southern Subarea **PM Peak Hour**
(4:30 - 5:30) **f**



Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

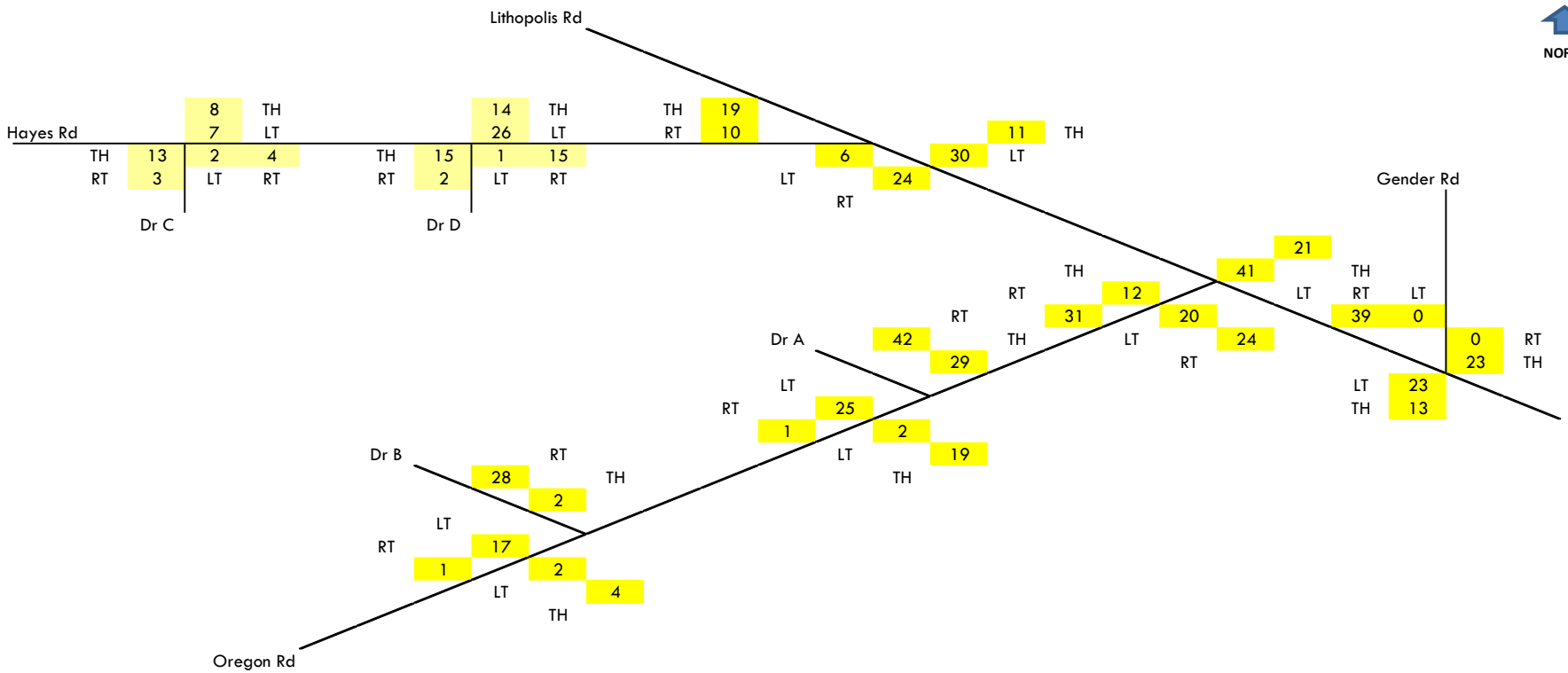
Site Trips for Traditional Units-Southern Subarea **PM Peak Hour**
(4:30 - 5:30) **f1**



Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

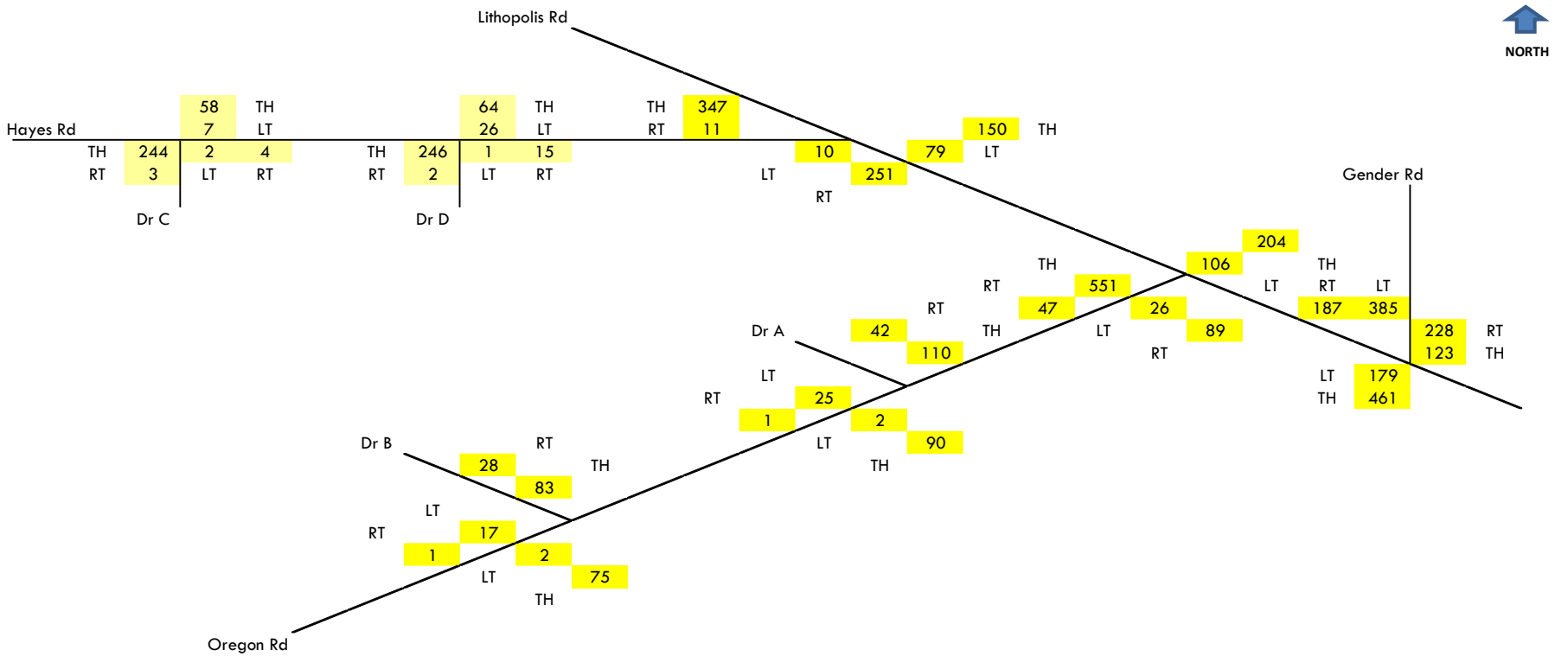
Total Site Trips
(4:30 - 5:30)

PM Peak Hour
g=e1+f1



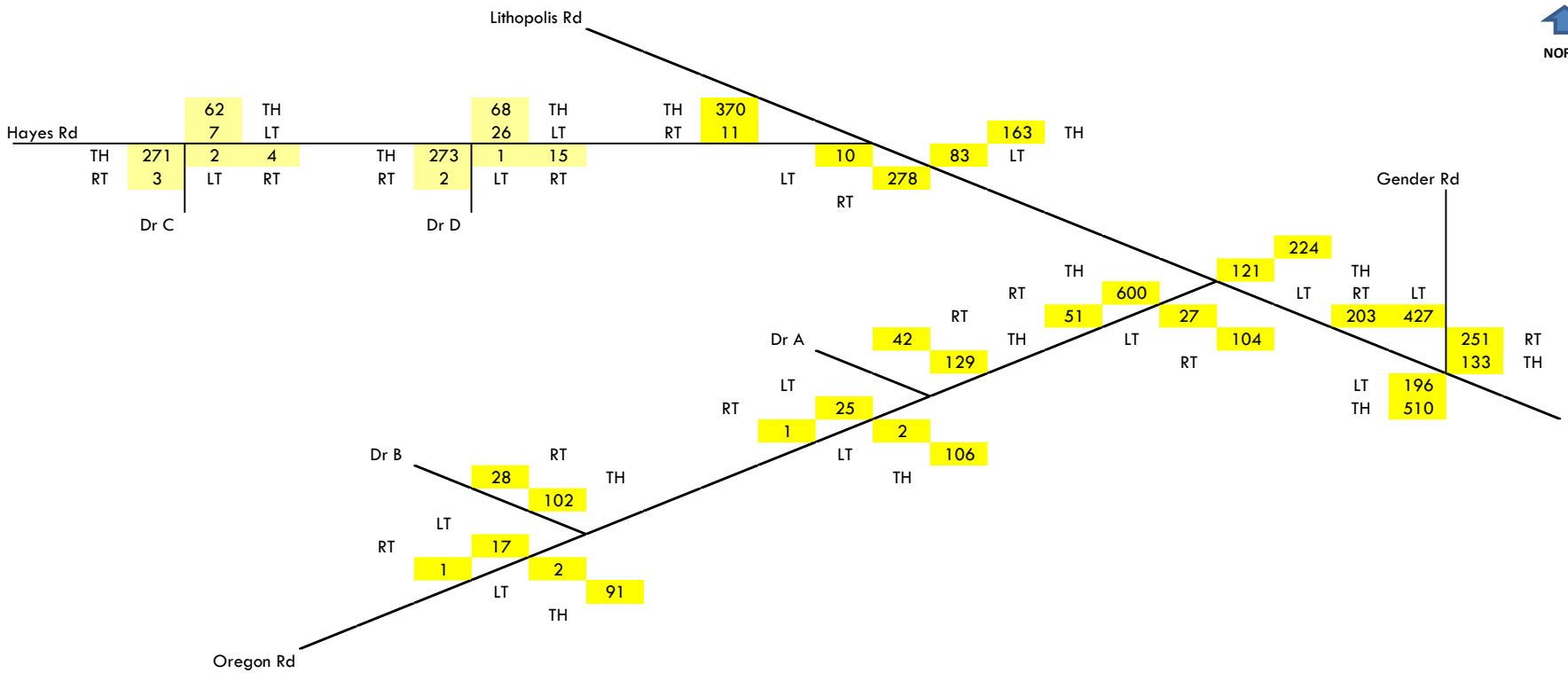
Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

2019 Build Traffic Volumes **PM Peak Hour**
(4:30 - 5:30) **h-c+g**



Middletown Farms
Traffic Impact Study
Traffic Volume Calculations

2029 Build Traffic Volumes **PM Peak Hour**
(4:30 - 5:30) **i-d+g**



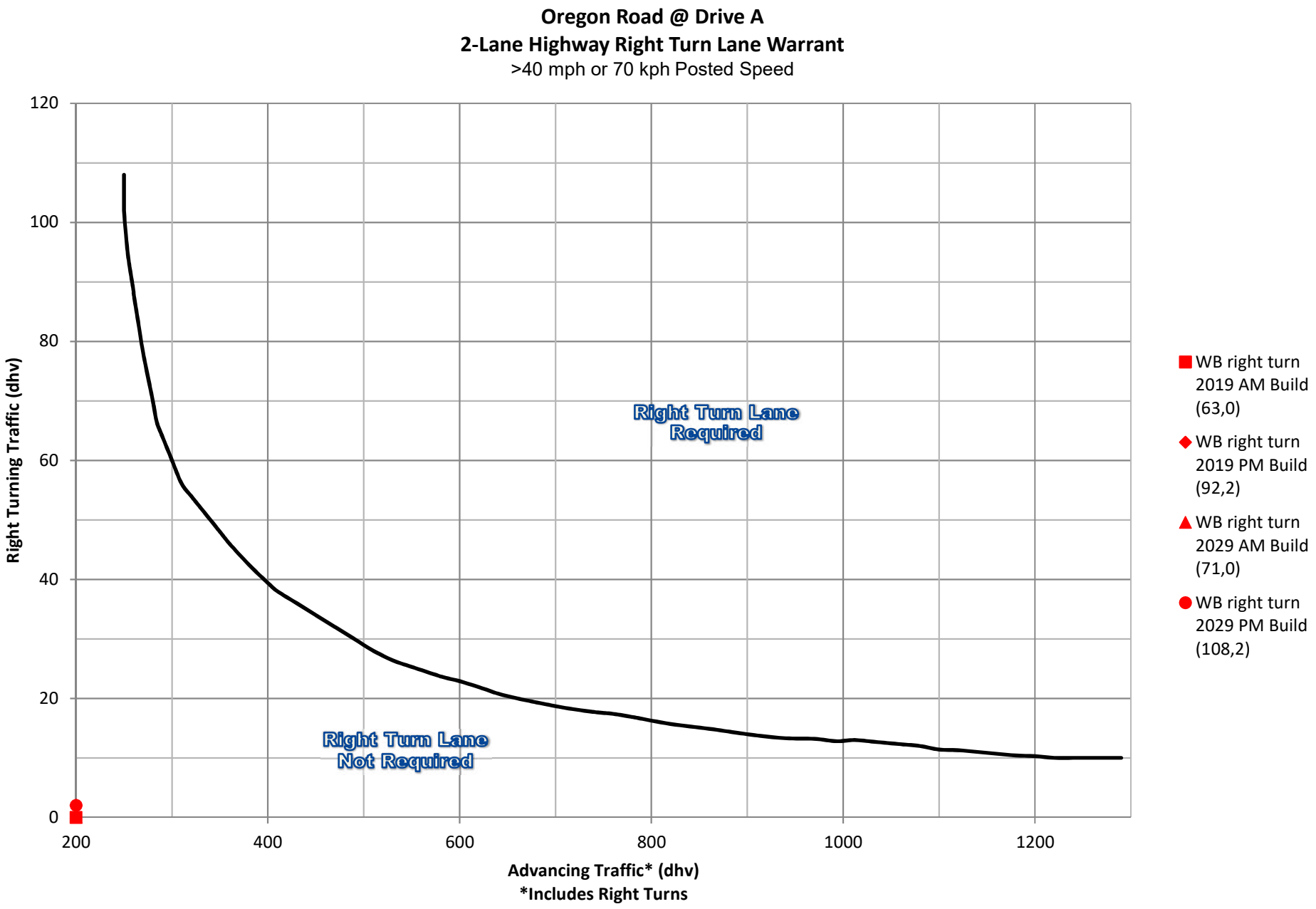
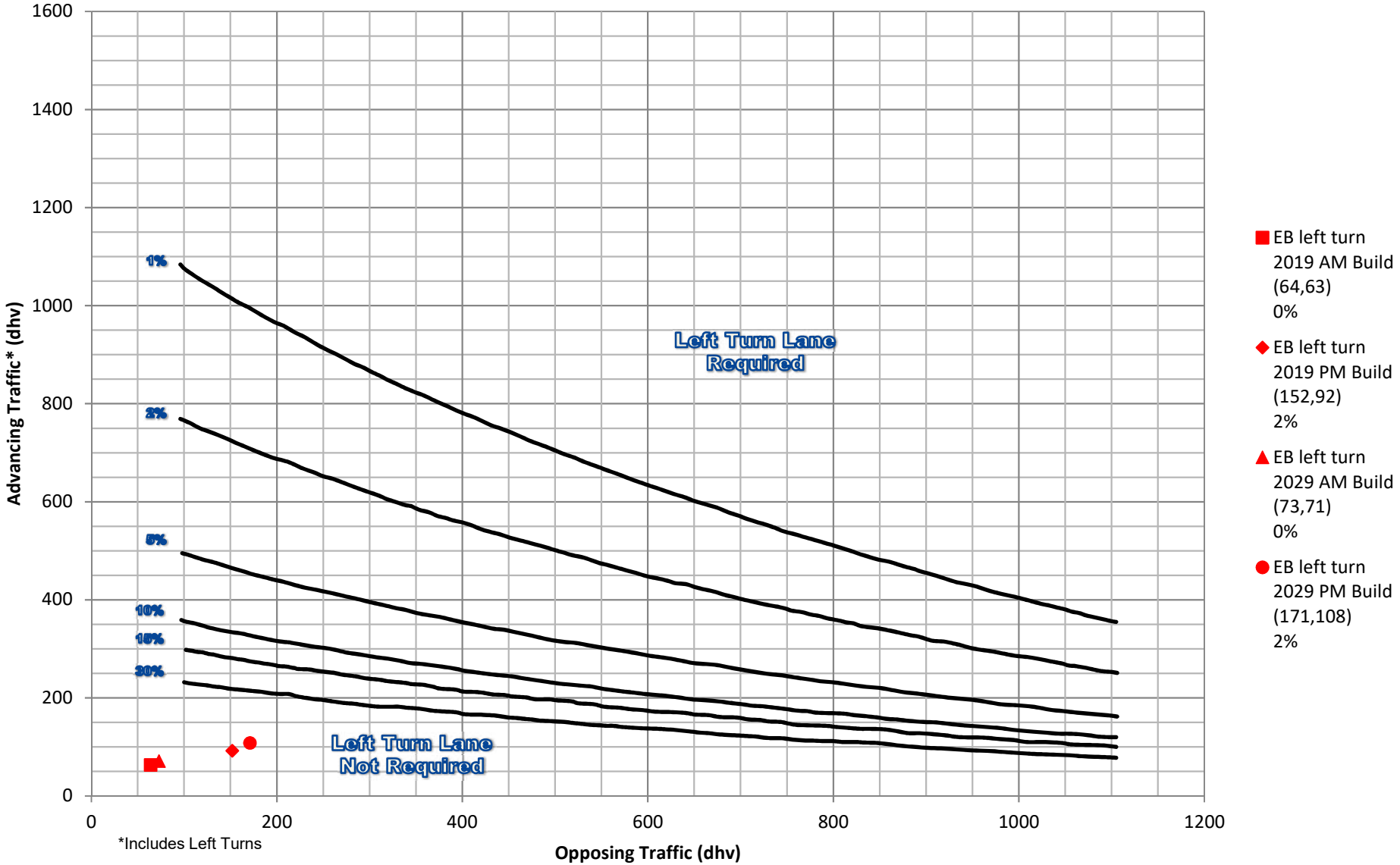
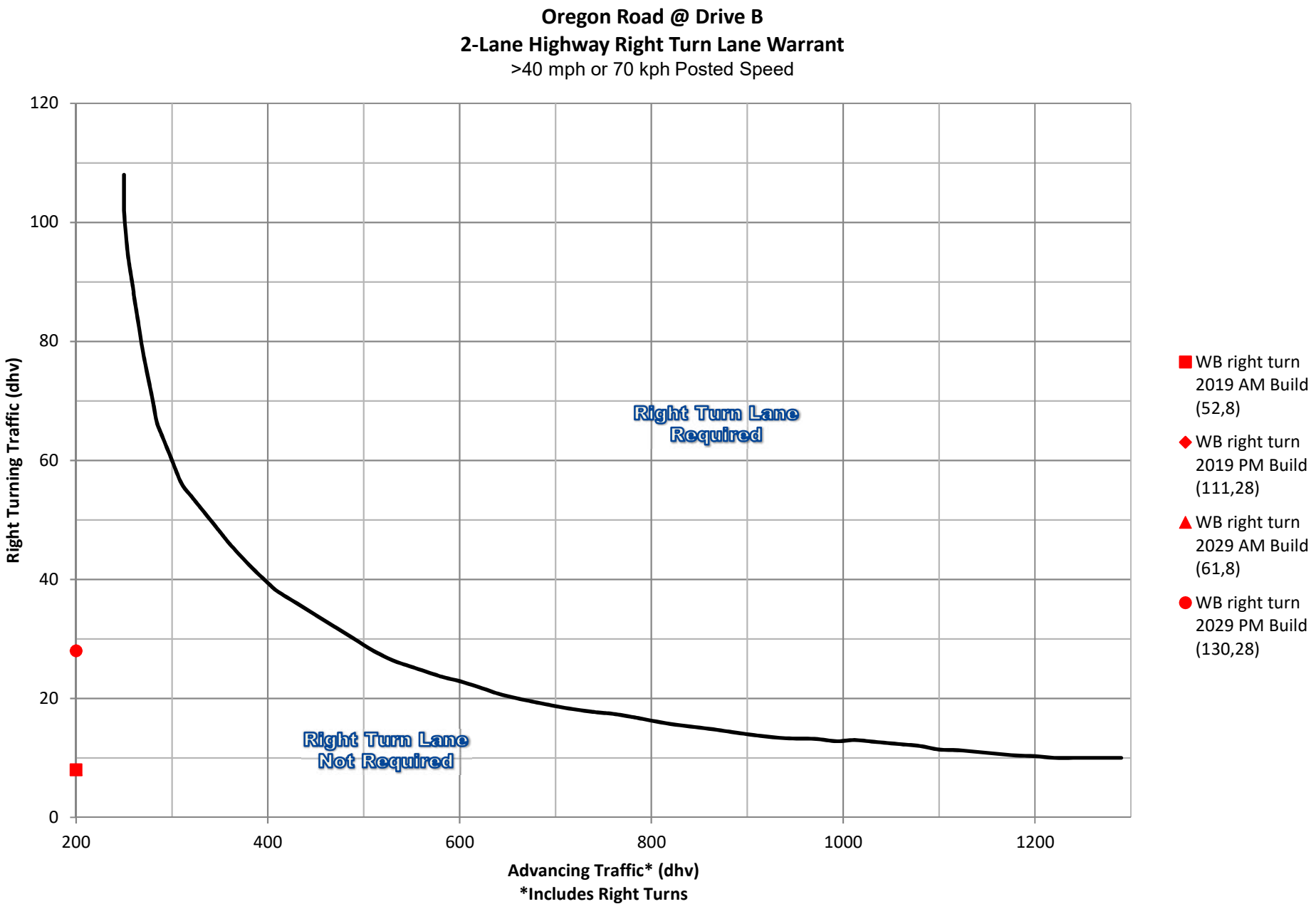


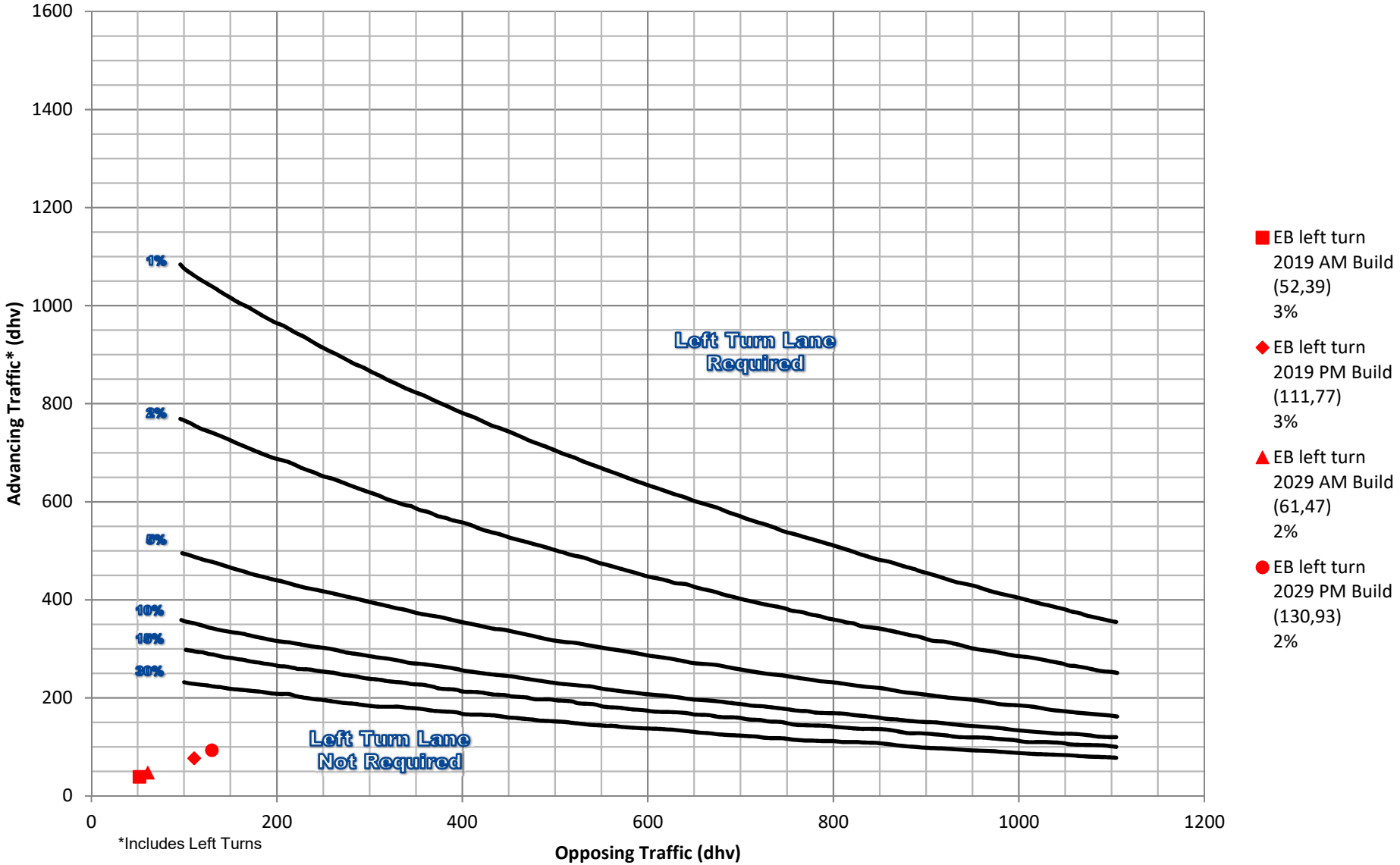
Fig. 401-6bE
ODOT Location and Design Manual, Volume One October 2004

Oregon Road @ Drive A
2-Lane Highway Left Turn Lane Warrant
>40 mph or 70 kph Posted Speed

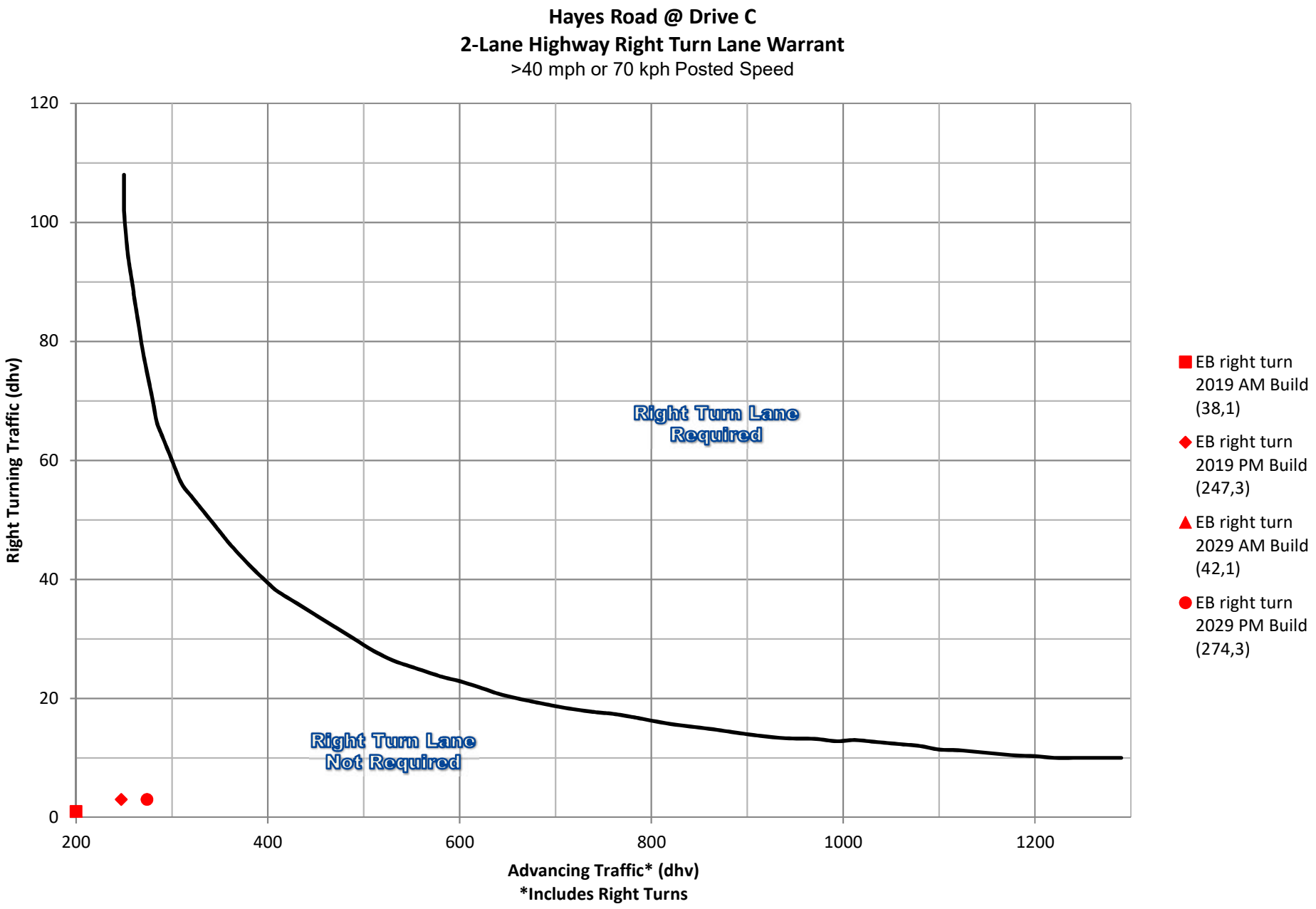



Oregon Road @ Drive B
2-Lane Highway Right Turn Lane Warrant
>40 mph or 70 kph Posted Speed
Right Turning Traffic (dhv)
120
100
80
60
40
20
0
200
400
600
800
1000
1200
Advancing Traffic* (dhv)
*Includes Right Turns
Right Turn Lane Required
Right Turn Lane Not Required
WB right turn 2019 AM Build (52,8)
WB right turn 2019 PM Build (111,28)
WB right turn 2029 AM Build (61,8)
WB right turn 2029 PM Build (130,28)

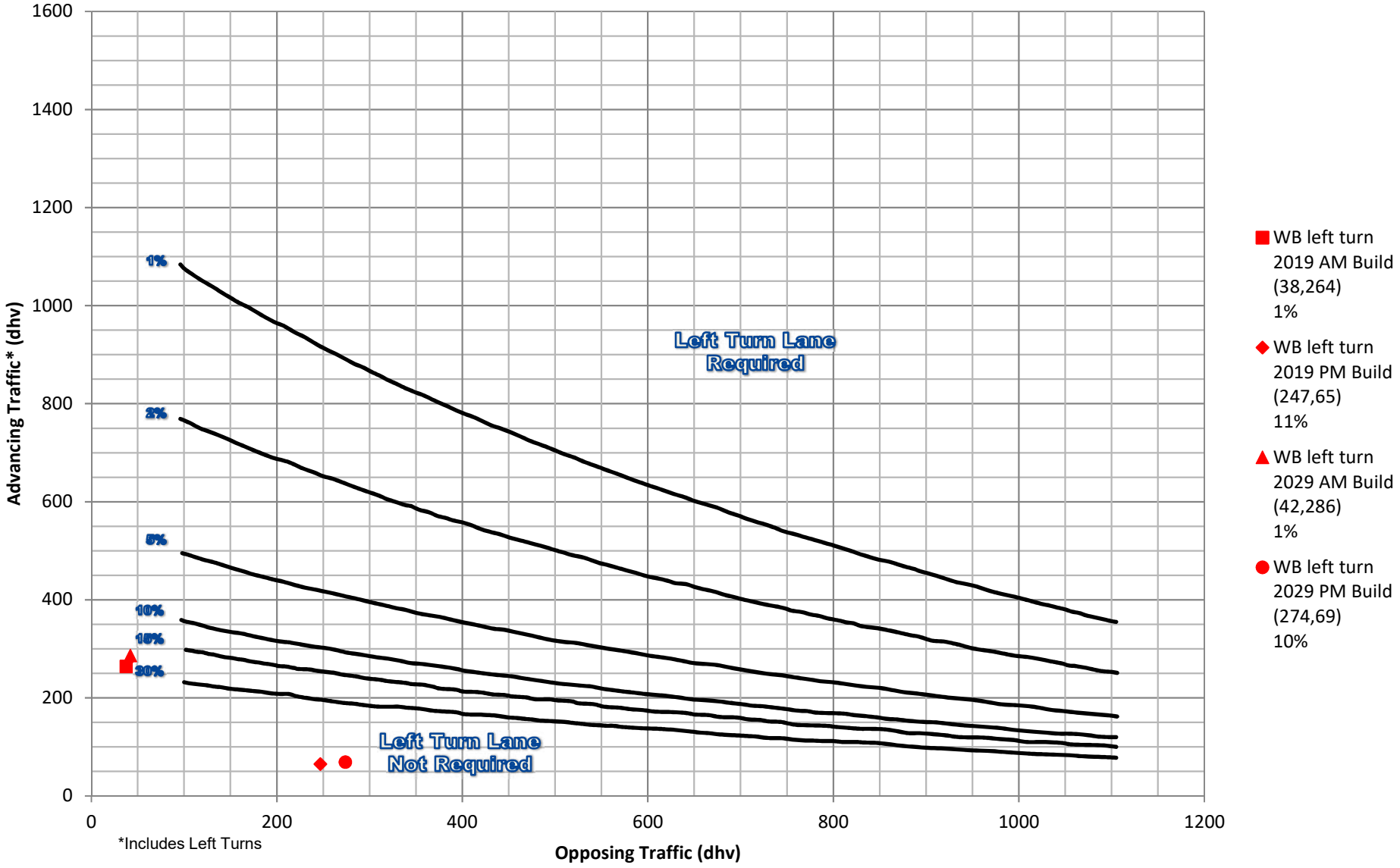
Oregon Road @ Drive B
2-Lane Highway Left Turn Lane Warrant
>40 mph or 70 kph Posted Speed



*Includes Left Turns


Hayes Road @ Drive C
2-Lane Highway Right Turn Lane Warrant
>40 mph or 70 kph Posted Speed
Right Turning Traffic (dhv)
120
100
80
60
40
20
0
200
400
600
800
1000
1200
Advancing Traffic* (dhv)
*Includes Right Turns
Right Turn Lane Required
Right Turn Lane Not Required
EB right turn 2019 AM Build (38,1)
EB right turn 2019 PM Build (247,3)
EB right turn 2029 AM Build (42,1)
EB right turn 2029 PM Build (274,3)

Hayes Road @ Drive C
2-Lane Highway Left Turn Lane Warrant
>40 mph or 70 kph Posted Speed



*Includes Left Turns

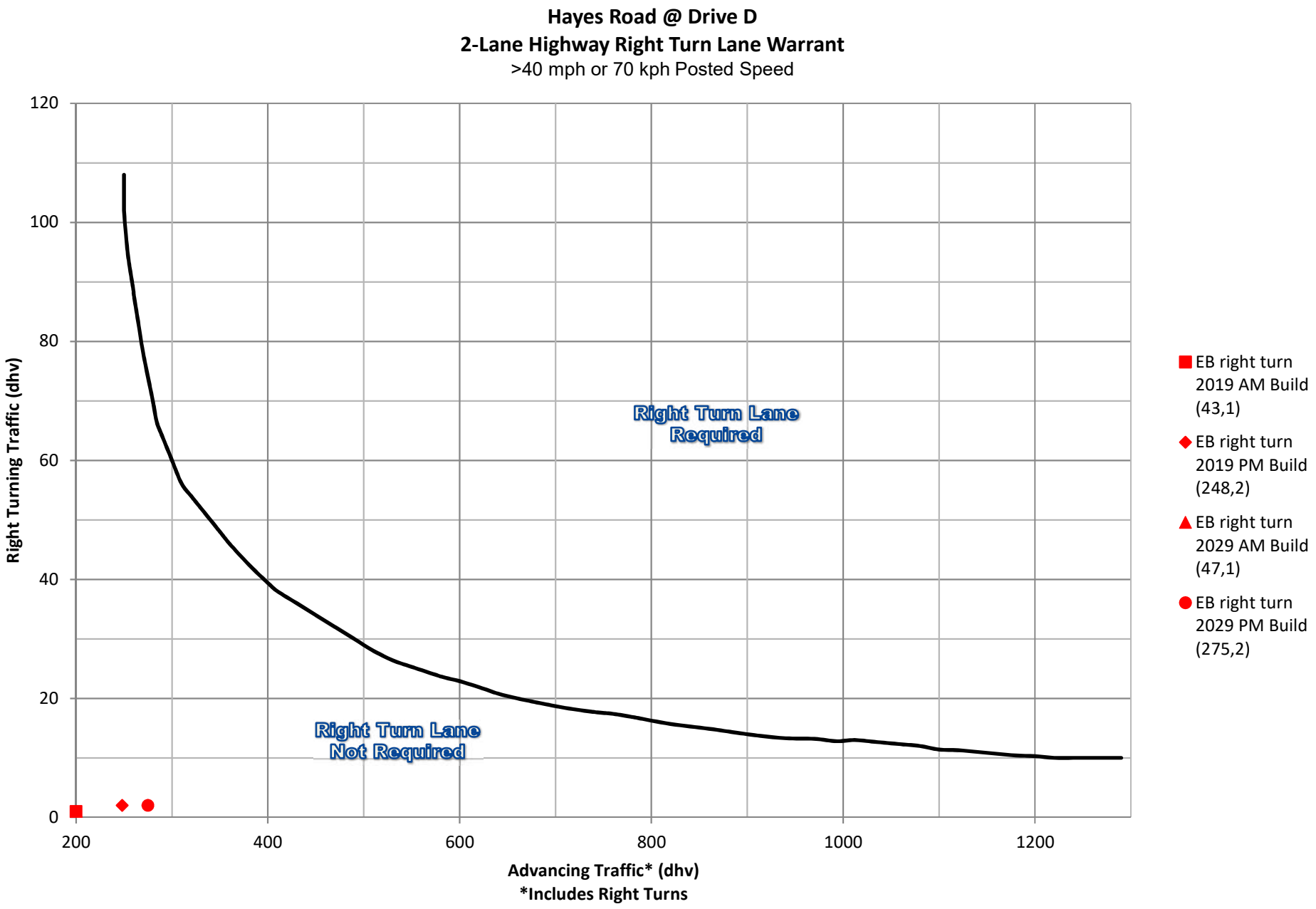
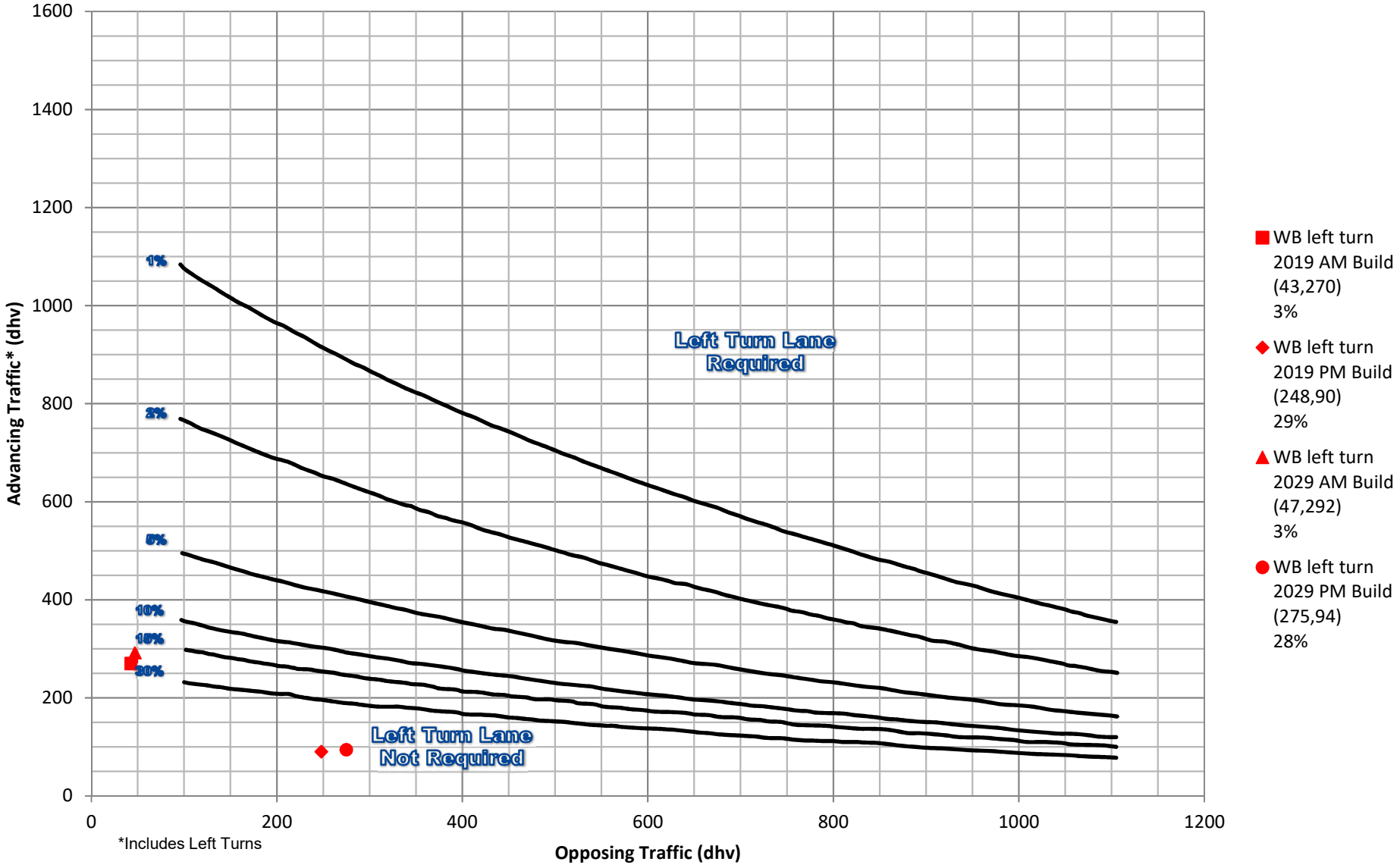
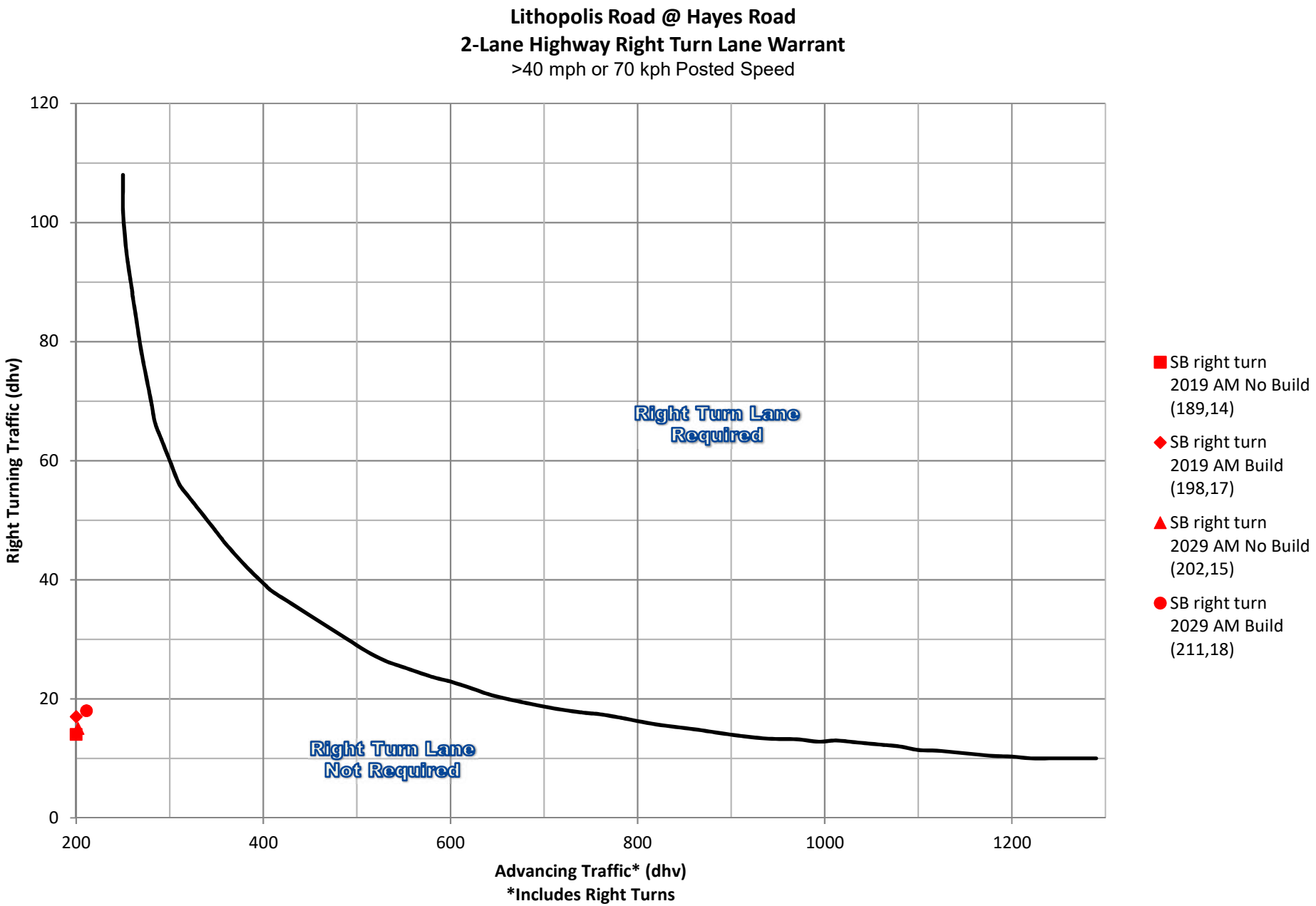


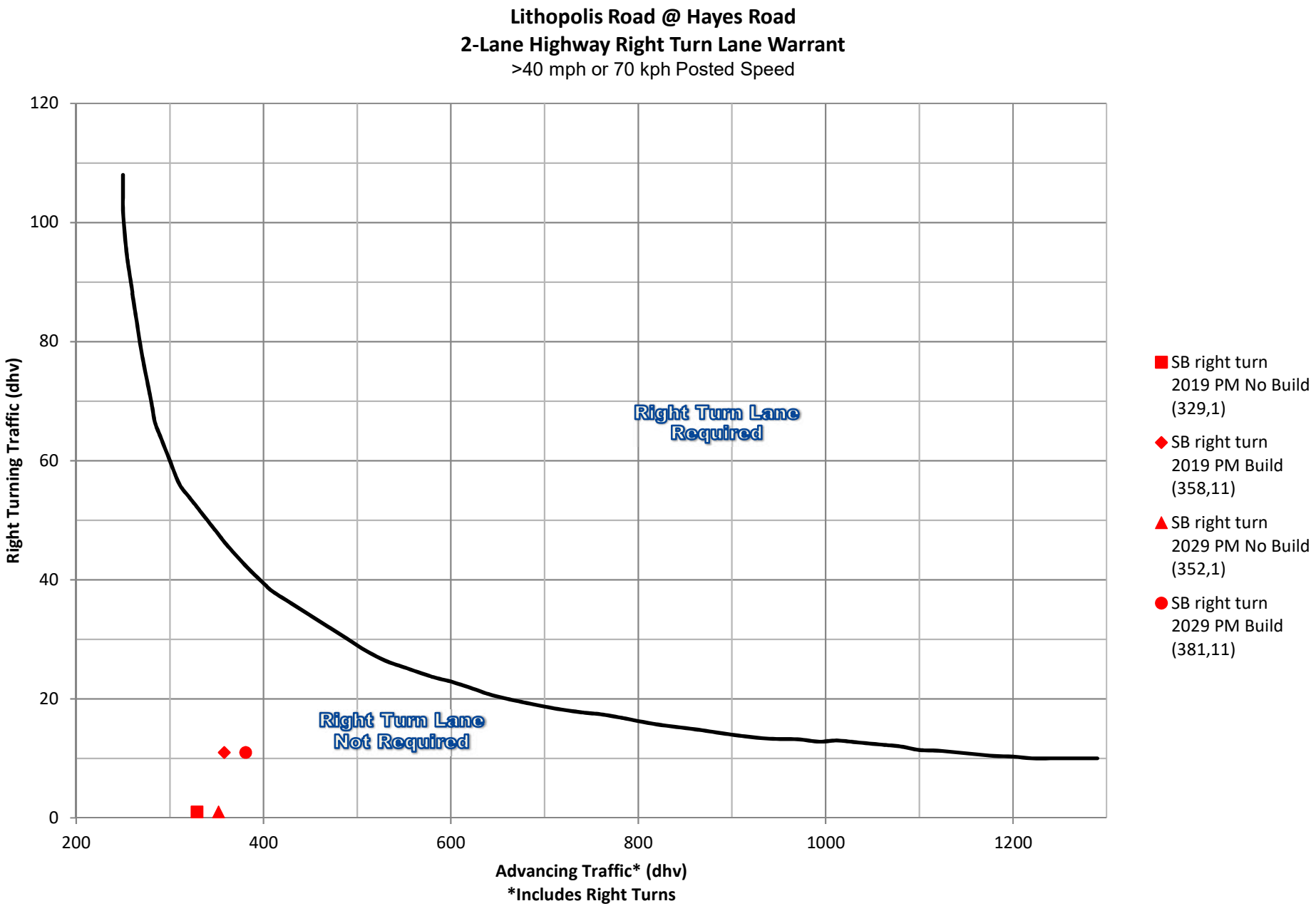
Fig. 401-6bE
ODOT Location and Design Manual, Volume One October 2004

Hayes Road @ Drive D
2-Lane Highway Left Turn Lane Warrant
>40 mph or 70 kph Posted Speed

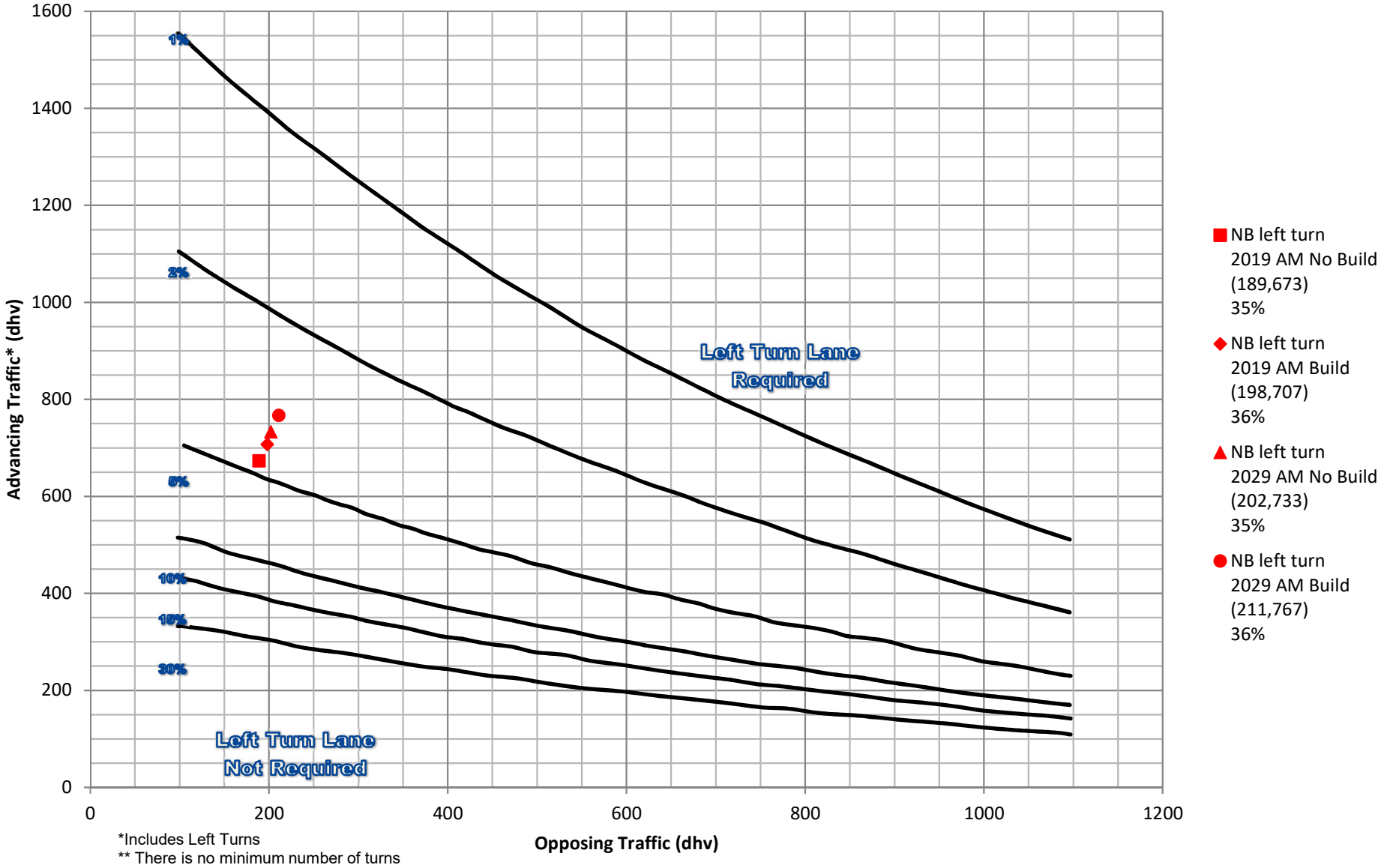


*Includes Left Turns


Lithopolis Road @ Hayes Road
2-Lane Highway Right Turn Lane Warrant
>40 mph or 70 kph Posted Speed
Right Turning Traffic (dhv)
120
100
80
60
40
20
0
200
400
600
800
1000
1200
Advancing Traffic* (dhv)
*Includes Right Turns
Right Turn Lane Required
Right Turn Lane Not Required
SB right turn 2019 AM No Build (189,14)
SB right turn 2019 AM Build (198,17)
SB right turn 2029 AM No Build (202,15)
SB right turn 2029 AM Build (211,18)

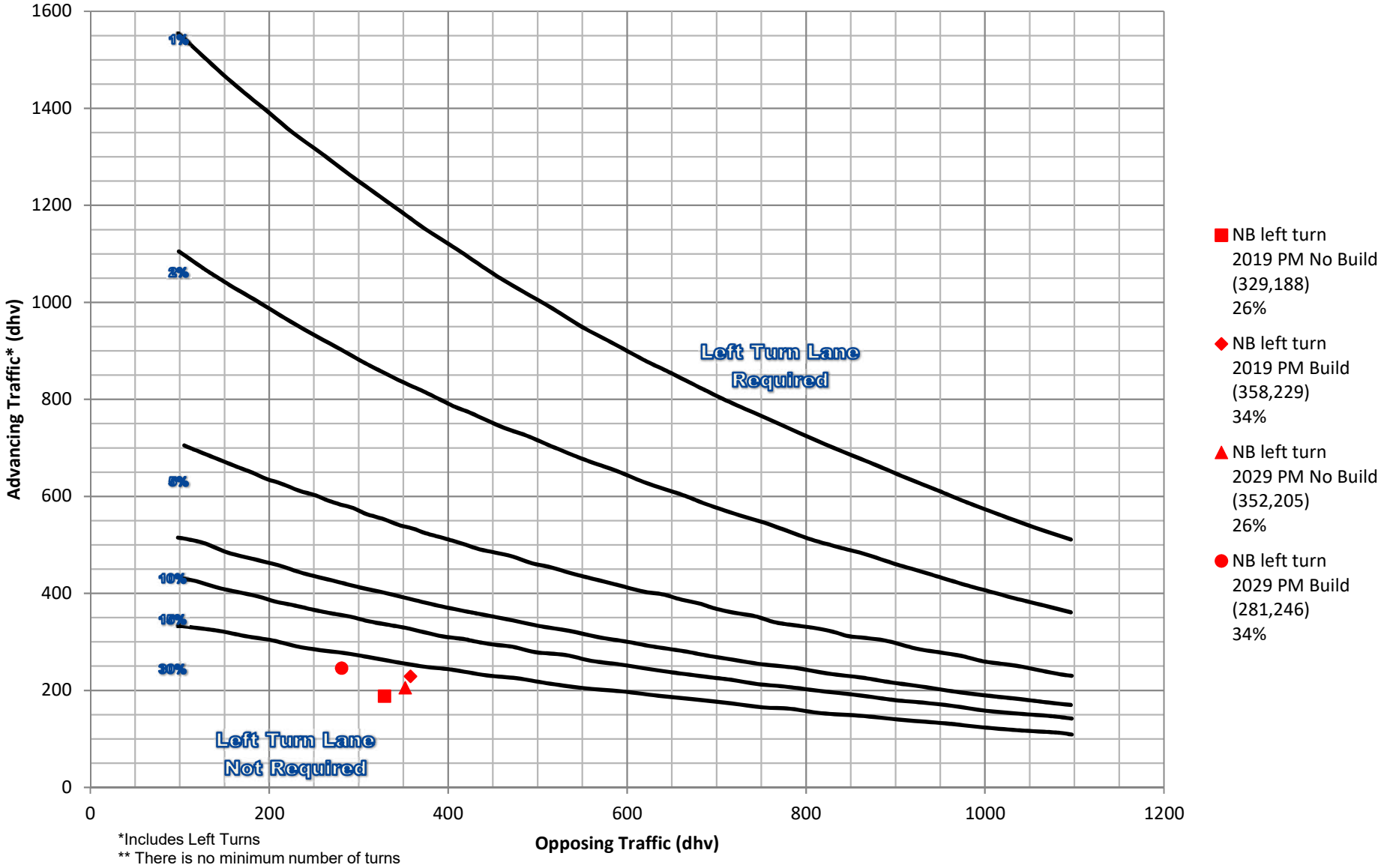

Lithopolis Road @ Hayes Road
2-Lane Highway Right Turn Lane Warrant
>40 mph or 70 kph Posted Speed
Right Turning Traffic (dhv)
120
100
80
60
40
20
0
200
400
600
800
1000
1200
Advancing Traffic* (dhv)
*Includes Right Turns
Right Turn Lane Required
Right Turn Lane Not Required
SB right turn 2019 PM No Build (329,1)
SB right turn 2019 PM Build (358,11)
SB right turn 2029 PM No Build (352,1)
SB right turn 2029 PM Build (381,11)

Lithopolis Road @ Hayes Road
2-Lane Highway Left Turn Lane Warrant
=<40 mph or 70 kph Posted Speed

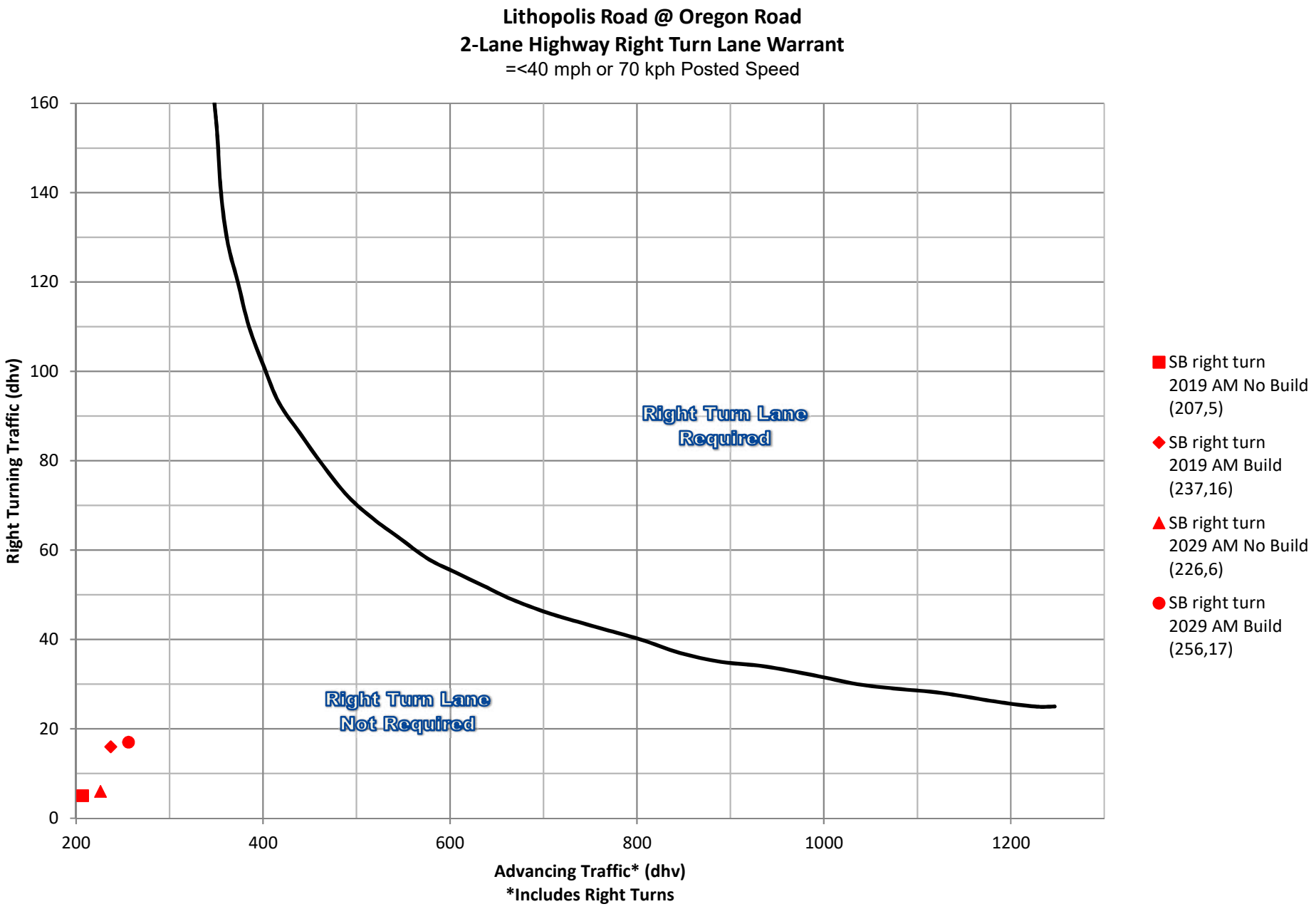


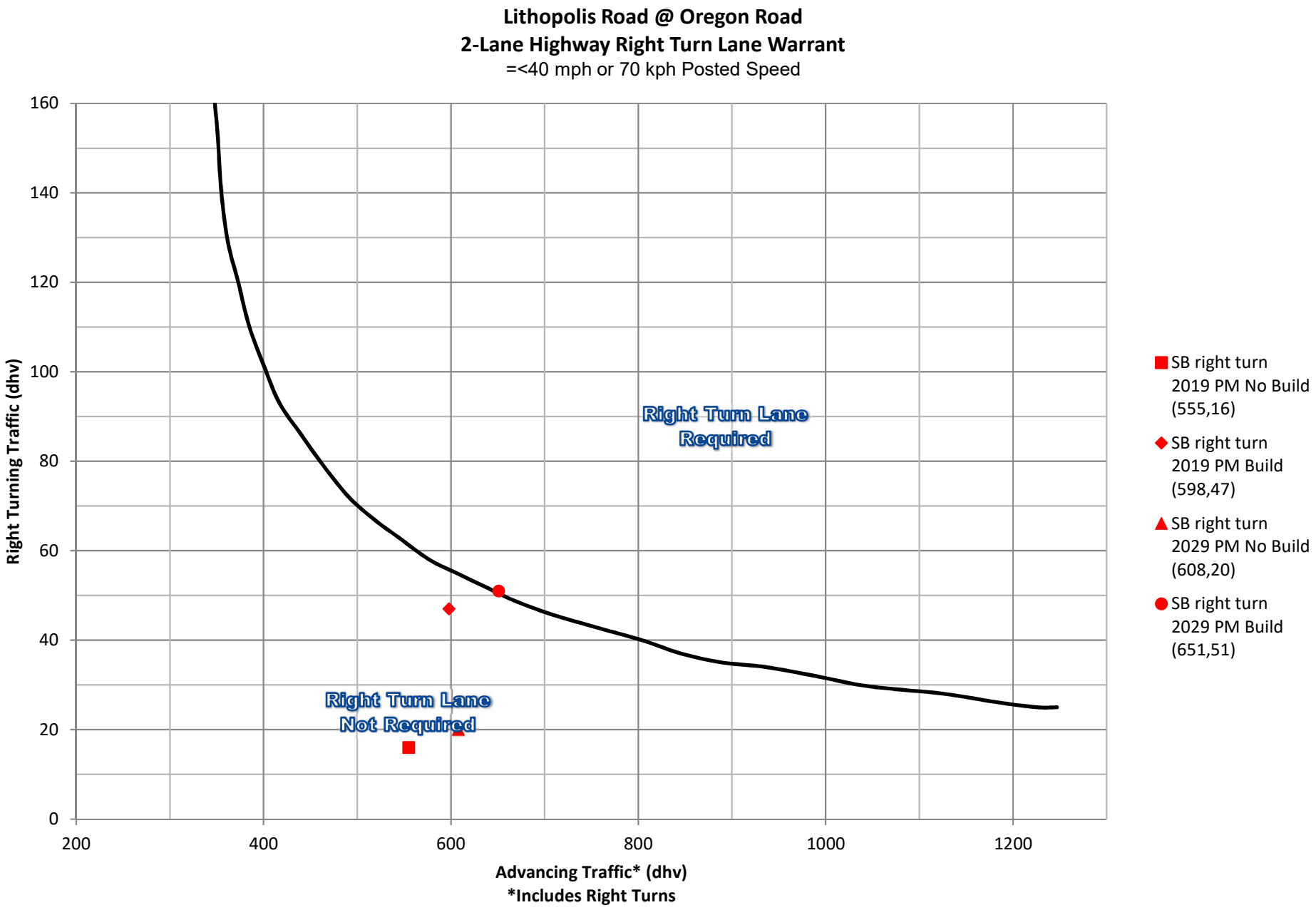
*Includes Left Turns
** There is no minimum number of turns

Lithopolis Road @ Hayes Road
2-Lane Highway Left Turn Lane Warrant
=<40 mph or 70 kph Posted Speed



*Includes Left Turns
** There is no minimum number of turns


Lithopolis Road @ Oregon Road
2-Lane Highway Right Turn Lane Warrant
=<40 mph or 70 kph Posted Speed
Right Turning Traffic (dhv)
160
140
120
100
80
60
40
20
0
200
400
600
800
1000
1200
Advancing Traffic* (dhv)
*Includes Right Turns
Right Turn Lane Required
Right Turn Lane Not Required
SB right turn 2019 AM No Build (207,5)
SB right turn 2019 AM Build (237,16)
SB right turn 2029 AM No Build (226,6)
SB right turn 2029 AM Build (256,17)


Lithopolis Road @ Oregon Road
2-Lane Highway Right Turn Lane Warrant
=<40 mph or 70 kph Posted Speed
Right Turning Traffic (dhv)
160
140
120
100
80
60
40
20
0
200
400
600
800
1000
1200
Advancing Traffic* (dhv)
*Includes Right Turns
Right Turn Lane Required
Right Turn Lane Not Required
SB right turn 2019 PM No Build (555,16)
SB right turn 2019 PM Build (598,47)
SB right turn 2029 PM No Build (608,20)
SB right turn 2029 PM Build (651,51)

Middletown Farms

Turn Lane Length Calculations

AM Peak Hour

2029 No Build

Lithopolis Road/Hayes Road		
Movement	**NBLT**	
Design Speed	35	mph
Cycle Length	60	seconds
Control (Stop or Signal)	Stop	
Through Volume	476	vph
Number of Through Lanes	1	
Turning Volume	257	vph
Number of Turning Lanes	1	
Design Condition	A	A, B, or C
Turning Percentage	35%	
Vehicles Per Cycle	4.3	
Storage Length	175	feet
Deceleration/Taper	50	feet
Calculated Turn Lane Length	**225**	**feet**
No Block Distance	N.A.	feet
No Block Turn Lane Length	N.A.	feet

PM Peak Hour

2029 No Build

Lithopolis Road/Hayes Road		
Movement	**NBLT**	
Design Speed	35	mph
Cycle Length	60	seconds
Control (Stop or Signal)	Stop	
Through Volume	152	vph
Number of Through Lanes	1	
Turning Volume	53	vph
Number of Turning Lanes	1	
Design Condition	A	A, B, or C
Turning Percentage	26%	
Vehicles Per Cycle	0.9	
Storage Length	50	feet
Deceleration/Taper	50	feet
Calculated Turn Lane Length	**100**	**feet**
No Block Distance	N.A.	feet
No Block Turn Lane Length	N.A.	feet

AM Peak Hour

2029 Build

Lithopolis Road/Hayes Road		
Movement	**NBLT**	
Design Speed	35	mph
Cycle Length	60	seconds
Control (Stop or Signal)	Stop	
Through Volume	493	vph
Number of Through Lanes	1	
Turning Volume	274	vph
Number of Turning Lanes	1	
Design Condition	A	A, B, or C
Turning Percentage	36%	
Vehicles Per Cycle	4.6	
Storage Length	200	feet
Deceleration/Taper	50	feet
Calculated Turn Lane Length	**250**	**feet**
No Block Distance	N.A.	feet
No Block Turn Lane Length	N.A.	feet

PM Peak Hour

2029 Build

Lithopolis Road/Hayes Road		
Movement	**NBLT**	
Design Speed	35	mph
Cycle Length	60	seconds
Control (Stop or Signal)	Stop	
Through Volume	163	vph
Number of Through Lanes	1	
Turning Volume	83	vph
Number of Turning Lanes	1	
Design Condition	A	A, B, or C
Turning Percentage	34%	
Vehicles Per Cycle	1.4	
Storage Length	50	feet
Deceleration/Taper	50	feet
Calculated Turn Lane Length	**100**	**feet**
No Block Distance	N.A.	feet
No Block Turn Lane Length	N.A.	feet

AM Peak Hour		
2029 Build		
Lithopolis Road/Oregon Road		
Movement	**SBRT**	
Design Speed	35	mph
Cycle Length	60	seconds
Control (Stop or Signal)	Stop	
Through Volume	239	vph
Number of Through Lanes	1	
Turning Volume	17	vph
Number of Turning Lanes	1	
Design Condition	A	A, B, or C
Turning Percentage	7%	
Vehicles Per Cycle	0.3	
Storage Length	50	feet
Deceleration/Taper	50	feet
Calculated Turn Lane Length	**100**	**feet**
No Block Distance	N.A.	feet
No Block Turn Lane Length	N.A.	feet

PM Peak Hour		
2029 Build		
Lithopolis Road/Oregon Road		
Movement	**SBRT**	
Design Speed	35	mph
Cycle Length	60	seconds
Control (Stop or Signal)	Stop	
Through Volume	651	vph
Number of Through Lanes	1	
Turning Volume	51	vph
Number of Turning Lanes	1	
Design Condition	A	A, B, or C
Turning Percentage	7%	
Vehicles Per Cycle	0.9	
Storage Length	50	feet
Deceleration/Taper	50	feet
Calculated Turn Lane Length	**100**	**feet**
No Block Distance	N.A.	feet
No Block Turn Lane Length	N.A.	feet

HCS7 Two-Way Stop-Control Report

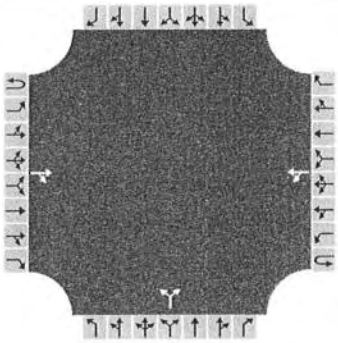
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2019 AM No Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Lithopolis Rd & Oregon Rd
Jurisdiction	
East/West Street	Lithopolis Rd
North/South Street	Oregon Rd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			202	5		36	666			9		28				
Percent Heavy Vehicles (%)						7				8		8				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.17				6.48		6.28				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						39					40					
Capacity, c (veh/h)						1333					523					
v/c Ratio						0.03					0.08					
95% Queue Length, Q_{95} (veh)						0.1					0.2					
Control Delay (s/veh)						7.8					12.5					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					0.8				12.5							
Approach LOS									B							

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HCS7 Two-Way Stop-Control Report

General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
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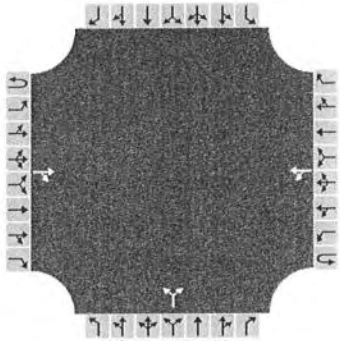
Time Analyzed	2019 AM Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Lithopolis Rd & Oregon Rd
Jurisdiction	
East/West Street	Lithopolis Rd
North/South Street	Oregon Rd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			221	16		48	672			37		64				
Percent Heavy Vehicles (%)						7				8		8				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.17				6.48		6.28				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						52					110					
Capacity, c (veh/h)						1296					412					
v/c Ratio						0.04					0.27					
95% Queue Length, Q_{95} (veh)						0.1					1.1					
Control Delay (s/veh)						7.9					16.9					
Level of Service (LOS)						A					C					
Approach Delay (s/veh)					1.0				16.9							
Approach LOS									C							

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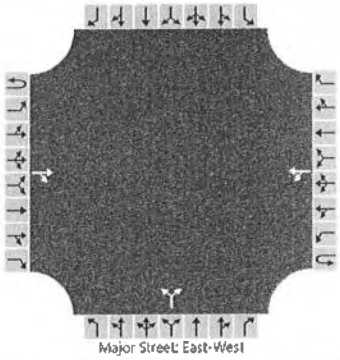
Time Analyzed	2029 AM No Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Lithopolis Rd & Oregon Rd
Jurisdiction	
East/West Street	Lithopolis Rd
North/South Street	Oregon Rd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			220	6		44	739			11		34				
Percent Heavy Vehicles (%)						7				8		8				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.17				6.48		6.28				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						48					49					
Capacity, c (veh/h)						1309					471					
v/c Ratio						0.04					0.10					
95% Queue Length, Q_{95} (veh)						0.1					0.3					
Control Delay (s/veh)						7.9					13.5					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					0.9				13.5							
Approach LOS									B							

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Time Analyzed	2029 AM Build
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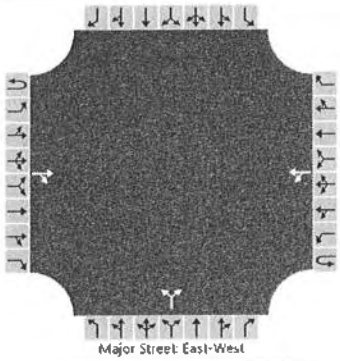
Project Description	

Site Information

Intersection	Lithopolis Rd & Oregon Rd
Jurisdiction	
East/West Street	Lithopolis Rd
North/South Street	Oregon Rd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			238	17		56	745			39		70				
Percent Heavy Vehicles (%)						7				8		8				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.17				6.48		6.28				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						61					118					
Capacity, c (veh/h)						1274					368					
v/c Ratio						0.05					0.32					
95% Queue Length, Q_{95} (veh)						0.2					1.4					
Control Delay (s/veh)						8.0					19.4					
Level of Service (LOS)						A					C					
Approach Delay (s/veh)					1.2				19.4							
Approach LOS									C							

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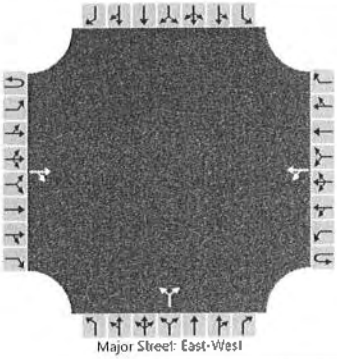
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Lithopolis Rd & Oregon Rd
Jurisdiction	
East/West Street	Lithopolis Rd
North/South Street	Oregon Rd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			539	16		65	183			6		65				
Percent Heavy Vehicles (%)						2				6		6				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.46		6.26				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						71					77					
Capacity, c (veh/h)						970					466					
v/c Ratio						0.07					0.17					
95% Queue Length, Q_{95} (veh)						0.2					0.6					
Control Delay (s/veh)						9.0					14.2					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					2.9				14.2							
Approach LOS									B							

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HCS7 Two-Way Stop-Control Report

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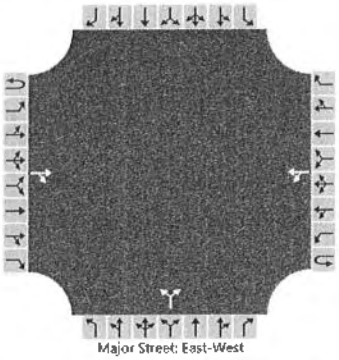
Time Analyzed	2019 PM Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Lithopolis Rd & Oregon Rd
Jurisdiction	
East/West Street	Lithopolis Rd
North/South Street	Oregon Rd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			551	47		106	204			26		89				
Percent Heavy Vehicles (%)						2				6		6				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.46		6.26				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						115					125					
Capacity, c (veh/h)						932					372					
v/c Ratio						0.12					0.34					
95% Queue Length, Q_{95} (veh)						0.4					1.5					
Control Delay (s/veh)						9.4					19.5					
Level of Service (LOS)						A					C					
Approach Delay (s/veh)					4.1				19.5							
Approach LOS									C							

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HCS7 Two-Way Stop-Control Report

General Information

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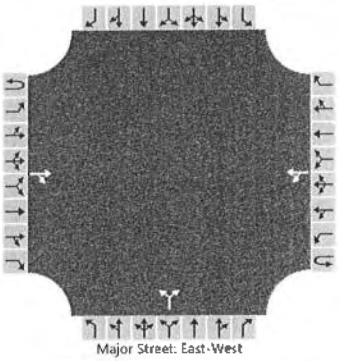
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2029 PM No Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Lithopolis Rd & Oregon Rd
Jurisdiction	
East/West Street	Lithopolis Rd
North/South Street	Oregon Rd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			588	20		80	203			7		80				
Percent Heavy Vehicles (%)						2				6		6				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.46		6.26				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						87					95					
Capacity, c (veh/h)						923					428					
v/c Ratio						0.09					0.22					
95% Queue Length, Q_{95} (veh)						0.3					0.8					
Control Delay (s/veh)						9.3					15.8					
Level of Service (LOS)						A					C					
Approach Delay (s/veh)					3.3				15.8							
Approach LOS									C							

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HCS7 Two-Way Stop-Control Report

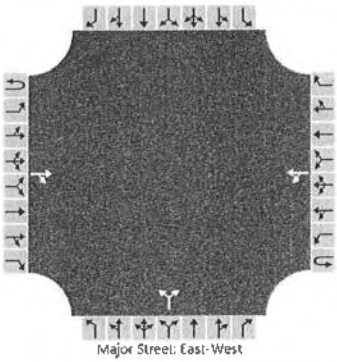
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2029 PM Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Lithopolis Rd & Oregon Rd
Jurisdiction	
East/West Street	Lithopolis Rd
North/South Street	Oregon Rd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			600	51		121	224			27		104				
Percent Heavy Vehicles (%)						2				6		6				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.46		6.26				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						132					142					
Capacity, c (veh/h)						887					338					
v/c Ratio						0.15					0.42					
95% Queue Length, Q_{95} (veh)						0.5					2.0					
Control Delay (s/veh)						9.8					23.2					
Level of Service (LOS)						A					C					
Approach Delay (s/veh)					4.5				23.2							
Approach LOS									C							

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HCS7 Two-Way Stop-Control Report

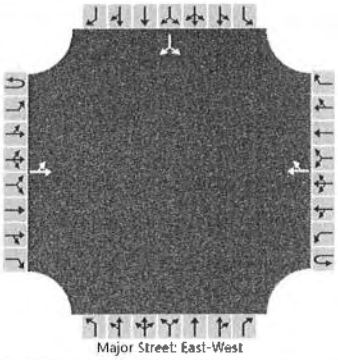
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2019 AM Build
Intersection Orientation	East-West
Project Description	Imler Tract, 20171359

Site Information

Intersection	Oregon Road and Dr A
Jurisdiction	
East/West Street	Oregon Rd
North/South Street	Dr A
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		0	63				51	13						38		1
Percent Heavy Vehicles (%)		8												0		0
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.18												6.40		6.20
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0													42	
Capacity, c (veh/h)		1521													864	
v/c Ratio		0.00													0.05	
95% Queue Length, Q_{95} (veh)		0.0													0.2	
Control Delay (s/veh)		7.4													9.4	
Level of Service (LOS)		A													A	
Approach Delay (s/veh)	0.0												9.4			
Approach LOS													A			

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HCS7 Two-Way Stop-Control Report

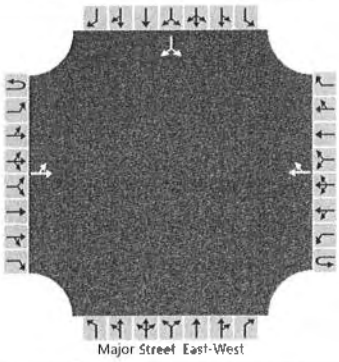
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2029 AM Build
Intersection Orientation	East-West
Project Description	Imler Tract, 20171359

Site Information

Intersection	Oregon Road and Dr A
Jurisdiction	
East/West Street	Oregon Rd
North/South Street	Dr A
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		0	71				60	13						38		1
Percent Heavy Vehicles (%)		8												0		0
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.18												6.40		6.20
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0													42	
Capacity, c (veh/h)		1509													844	
v/c Ratio		0.00													0.05	
95% Queue Length, Q_{95} (veh)		0.0													0.2	
Control Delay (s/veh)		7.4													9.5	
Level of Service (LOS)		A													A	
Approach Delay (s/veh)	0.0												9.5			
Approach LOS													A			

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HCS7 Two-Way Stop-Control Report

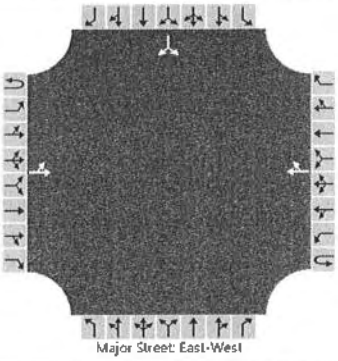
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2019 PM Build
Intersection Orientation	East-West
Project Description	Imler Tract, 20171359

Site Information

Intersection	Oregon Road and Dr A
Jurisdiction	
East/West Street	Oregon Rd
North/South Street	Dr A
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		2	90				110	42						25		1
Percent Heavy Vehicles (%)		6												0		0
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.16												6.40		6.20
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2													28	
Capacity, c (veh/h)		1403													747	
v/c Ratio		0.00													0.04	
95% Queue Length, Q_{95} (veh)		0.0													0.1	
Control Delay (s/veh)		7.6													10.0	
Level of Service (LOS)		A													B	
Approach Delay (s/veh)	0.2												10.0			
Approach LOS													B			

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HCS7 Two-Way Stop-Control Report

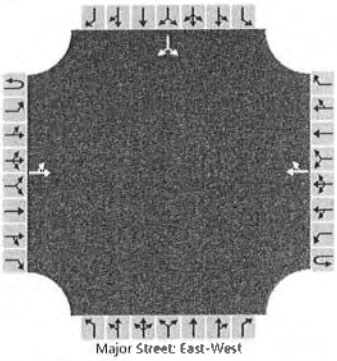
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2029 PM Build
Intersection Orientation	East-West
Project Description	Imler Tract, 20171359

Site Information

Intersection	Oregon Road and Dr A
Jurisdiction	
East/West Street	Oregon Rd
North/South Street	Dr A
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		2	106				129	42						25		1
Percent Heavy Vehicles (%)		6												0		0
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.16												6.40		6.20
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2													28	
Capacity, c (veh/h)		1379													711	
v/c Ratio		0.00													0.04	
95% Queue Length, Q_{95} (veh)		0.0													0.1	
Control Delay (s/veh)		7.6													10.3	
Level of Service (LOS)		A													B	
Approach Delay (s/veh)		0.2												10.3		
Approach LOS														B		

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HCS7 Two-Way Stop-Control Report

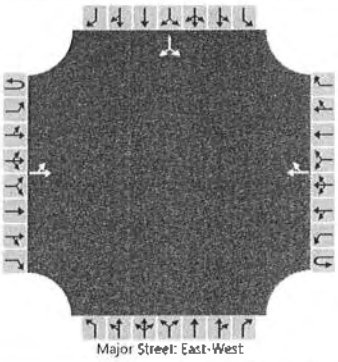
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2019 AM Build
Intersection Orientation	East-West
Project Description	Imler Tract, 20171359

Site Information

Intersection	Oregon Road and Dr B
Jurisdiction	
East/West Street	Oregon Rd
North/South Street	Dr B
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		1	38				44	8						25		2
Percent Heavy Vehicles (%)		8												0		0
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.18												6.40		6.20
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		1													29	
Capacity, c (veh/h)		1538													908	
v/c Ratio		0.00													0.03	
95% Queue Length, Q_{95} (veh)		0.0													0.1	
Control Delay (s/veh)		7.3													9.1	
Level of Service (LOS)		A													A	
Approach Delay (s/veh)	0.2												9.1			
Approach LOS													A			

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HCS7 Two-Way Stop-Control Report

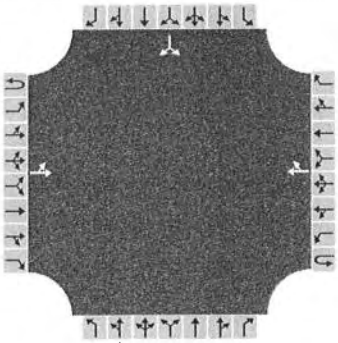
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2029 AM Build
Intersection Orientation	East-West
Project Description	Imler Tract, 20171359

Site Information

Intersection	Oregon Road and Dr B
Jurisdiction	
East/West Street	Oregon Rd
North/South Street	Dr B
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		1	46				53	8						25		2
Percent Heavy Vehicles (%)		8												0		0
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.18												6.40		6.20
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		1													29	
Capacity, c (veh/h)		1526													887	
v/c Ratio		0.00													0.03	
95% Queue Length, Q_{95} (veh)		0.0													0.1	
Control Delay (s/veh)		7.4													9.2	
Level of Service (LOS)		A													A	
Approach Delay (s/veh)		0.2												9.2		
Approach LOS														A		

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HCS7 Two-Way Stop-Control Report

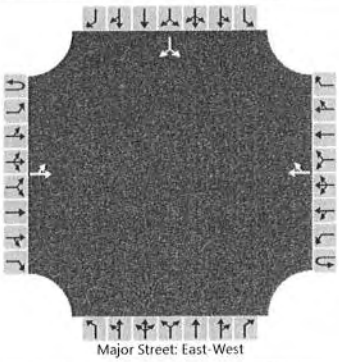
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2019 PM Build
Intersection Orientation	East-West
Project Description	Imler Tract, 20171359

Site Information

Intersection	Oregon Road and Dr B
Jurisdiction	
East/West Street	Oregon Rd
North/South Street	Dr B
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		2	75				83	28						17		1
Percent Heavy Vehicles (%)		6												0		0
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.16												6.40		6.20
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2													20	
Capacity, c (veh/h)		1457													802	
v/c Ratio		0.00													0.02	
95% Queue Length, Q_{95} (veh)		0.0													0.1	
Control Delay (s/veh)		7.5													9.6	
Level of Service (LOS)		A													A	
Approach Delay (s/veh)		0.2												9.6		
Approach LOS														A		

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HCS7 Two-Way Stop-Control Report

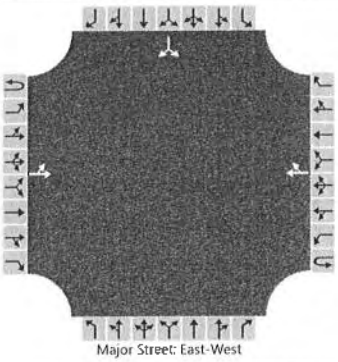
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2029 PM Build
Intersection Orientation	East-West
Project Description	Imler Tract, 20171359

Site Information

Intersection	Oregon Road and Dr B
Jurisdiction	
East/West Street	Oregon Rd
North/South Street	Dr B
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		2	91				102	28						17		1
Percent Heavy Vehicles (%)		6												0		0
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.16												6.40		6.20
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2													20	
Capacity, c (veh/h)		1432													764	
v/c Ratio		0.00													0.03	
95% Queue Length, Q_{95} (veh)		0.0													0.1	
Control Delay (s/veh)		7.5													9.8	
Level of Service (LOS)		A													A	
Approach Delay (s/veh)		0.2												9.8		
Approach LOS														A		

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HCS7 Two-Way Stop-Control Report

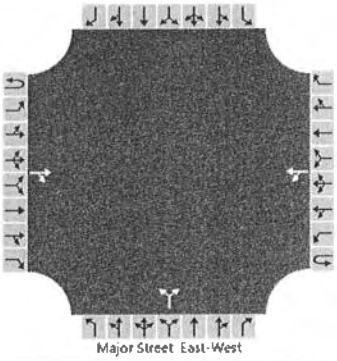
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2019 AM Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Hayes Rd and Dr C
Jurisdiction	
East/West Street	Hayes Rd
North/South Street	Dr C
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			37	1		2	262			3		6				
Percent Heavy Vehicles (%)						4				0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.14				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						2					10					
Capacity, c (veh/h)						1559					868					
v/c Ratio						0.00					0.01					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.3					9.2					
Level of Service (LOS)						A					A					
Approach Delay (s/veh)					0.1				9.2							
Approach LOS									A							

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HCS7 Two-Way Stop-Control Report

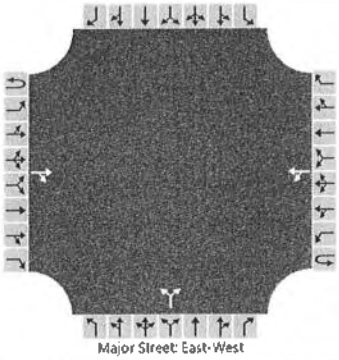
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2029 AM Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Hayes Rd and Dr C
Jurisdiction	
East/West Street	Hayes Rd
North/South Street	Dr C
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			41	1		2	284			3		6				
Percent Heavy Vehicles (%)						4				0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.14				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						2					10					
Capacity, c (veh/h)						1554					851					
v/c Ratio						0.00					0.01					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.3					9.3					
Level of Service (LOS)						A					A					
Approach Delay (s/veh)					0.1				9.3							
Approach LOS									A							

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HCS7 Two-Way Stop-Control Report

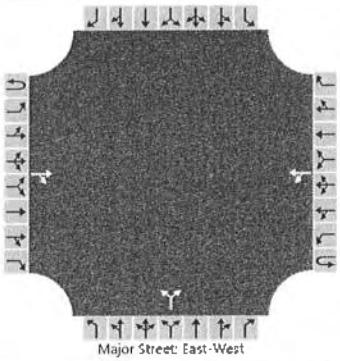
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2019 PM Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Hayes Rd and Dr C
Jurisdiction	
East/West Street	Hayes Rd
North/South Street	Dr C
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			244	3		7	58			2		4				
Percent Heavy Vehicles (%)						2				0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						8					7					
Capacity, c (veh/h)						1289					724					
v/c Ratio						0.01					0.01					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.8					10.0					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					0.9				10.0							
Approach LOS									B							

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HCS7 Two-Way Stop-Control Report

General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
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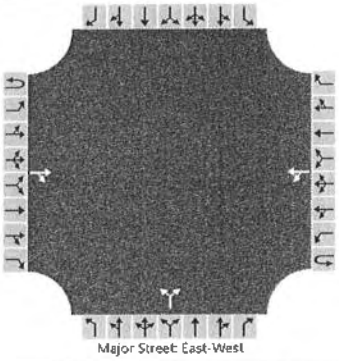
Time Analyzed	2029 PM Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Hayes Rd and Dr C
Jurisdiction	
East/West Street	Hayes Rd
North/South Street	Dr C
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			271	3		7	62			2		4				
Percent Heavy Vehicles (%)						2				0		0				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						8					7					
Capacity, c (veh/h)						1257					696					
v/c Ratio						0.01					0.01					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.9					10.2					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					0.8				10.2							
Approach LOS									B							

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HCS7 Two-Way Stop-Control Report

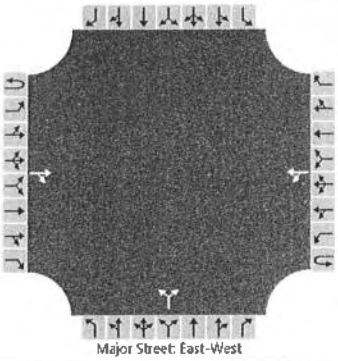
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2019 AM Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Hayes Road and Dr D
Jurisdiction	
East/West Street	Hayes Rd
North/South Street	Dr D
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			42	1		8	262			2		23				
Percent Heavy Vehicles (%)						4				0		0				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.14				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						9					27					
Capacity, c (veh/h)						1552					974					
v/c Ratio						0.01					0.03					
95% Queue Length, Q_{95} (veh)						0.0					0.1					
Control Delay (s/veh)						7.3					8.8					
Level of Service (LOS)						A					A					
Approach Delay (s/veh)					0.3				8.8							
Approach LOS									A							

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HCS7 Two-Way Stop-Control Report

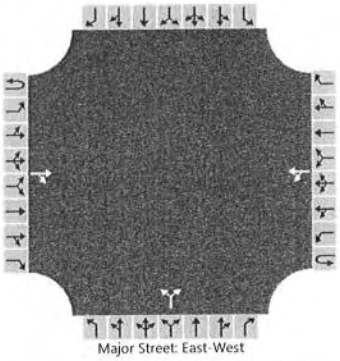
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2029 AM Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Hayes Rd and Dr D
Jurisdiction	
East/West Street	Hayes Rd
North/South Street	Dr D
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			46	1		8	264			2		23				
Percent Heavy Vehicles (%)						4				0		0				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.14				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						9					27					
Capacity, c (veh/h)						1546					965					
v/c Ratio						0.01					0.03					
95% Queue Length, Q_{95} (veh)						0.0					0.1					
Control Delay (s/veh)						7.3					8.8					
Level of Service (LOS)						A					A					
Approach Delay (s/veh)					0.2				8.8							
Approach LOS									A							

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HCS7 Two-Way Stop-Control Report

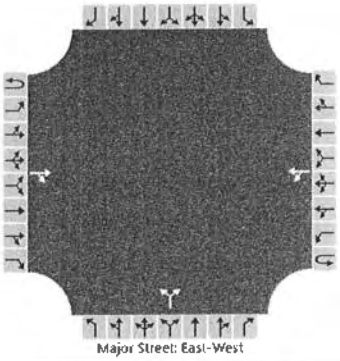
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2019 PM Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Hayes Rd and Dr D
Jurisdiction	
East/West Street	Hayes Rd
North/South Street	Dr D
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			246	2		26	64			1		15				
Percent Heavy Vehicles (%)						2				0		0				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						28					17					
Capacity, c (veh/h)						1288					755					
v/c Ratio						0.02					0.02					
95% Queue Length, Q_{95} (veh)						0.1					0.1					
Control Delay (s/veh)						7.9					9.9					
Level of Service (LOS)						A					A					
Approach Delay (s/veh)					2.4				9.9							
Approach LOS									A							

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HCS7 Two-Way Stop-Control Report

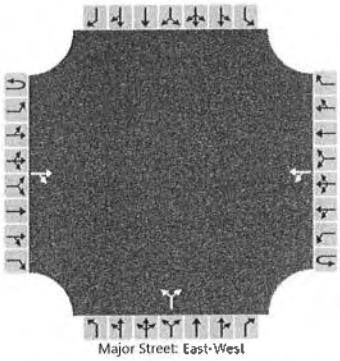
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2029 PM Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Hayes Rd and Dr D
Jurisdiction	
East/West Street	Hayes Rd
North/South Street	Dr D
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			273	2		26	68			1		15				
Percent Heavy Vehicles (%)						2				0		0				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						28					17					
Capacity, c (veh/h)						1256					727					
v/c Ratio						0.02					0.02					
95% Queue Length, Q_{95} (veh)						0.1					0.1					
Control Delay (s/veh)						7.9					10.1					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					2.3				10.1							
Approach LOS									B							

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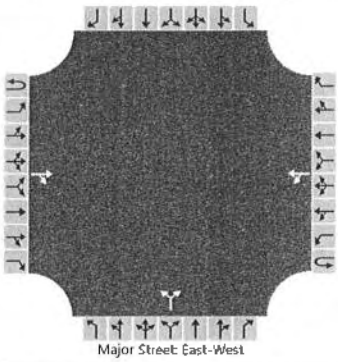
HCS7 Two-Way Stop-Control Report

General Information

Analyst	CW	Intersection	Lithopolis Rd & Hayes Rd
Agency/Co.	EMH&T	Jurisdiction	
Date Performed	12/6/2017	East/West Street	Lithopolis Rd
Analysis Year	2017	North/South Street	Hayes Rd
Time Analyzed	2019 AM No Build	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description			

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			175	14		236	437			2		31				
Percent Heavy Vehicles (%)						7				4		4				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.17				6.44		6.24				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						257					36					
Capacity, c (veh/h)						1355					676					
v/c Ratio						0.19					0.05					
95% Queue Length, Q_{95} (veh)						0.7					0.2					
Control Delay (s/veh)						8.3					10.6					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					4.3				10.6							
Approach LOS									B							

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HCS7 Two-Way Stop-Control Report

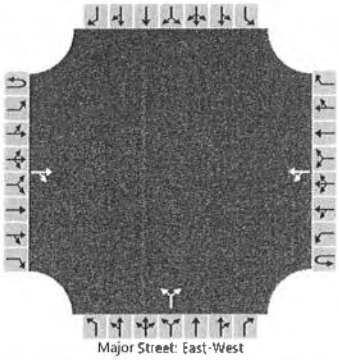
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2019 AM Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Lithopolis Rd & Hayes Rd
Jurisdiction	
East/West Street	Lithopolis Rd
North/South Street	Hayes Rd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			181	17		253	454			10		55				
Percent Heavy Vehicles (%)						7				4		4				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.17				6.44		6.24				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						275					71					
Capacity, c (veh/h)						1344					490					
v/c Ratio						0.20					0.14					
95% Queue Length, Q_{95} (veh)						0.8					0.5					
Control Delay (s/veh)						8.4					13.6					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					4.5				13.6							
Approach LOS									B							

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HCS7 Two-Way Stop-Control Report

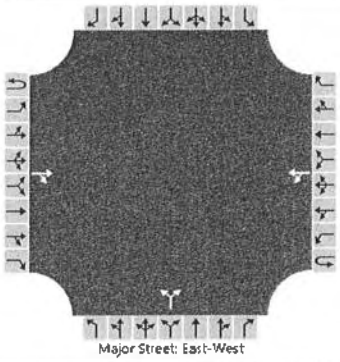
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2029 AM No Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Lithopolis Rd & Hayes Rd
Jurisdiction	
East/West Street	Lithopolis Rd
North/South Street	Hayes Rd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			187	15		257	476			2		35				
Percent Heavy Vehicles (%)						7				4		4				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.17				6.44		6.24				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						279					40					
Capacity, c (veh/h)						1339					655					
v/c Ratio						0.21					0.06					
95% Queue Length, Q_{95} (veh)						0.8					0.2					
Control Delay (s/veh)						8.4					10.9					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					4.5				10.9							
Approach LOS									B							

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HCS7 Two-Way Stop-Control Report

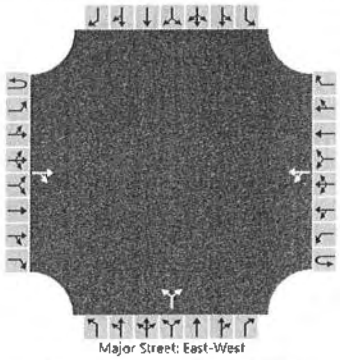
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2029 AM Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Lithopolis Rd & Hayes Rd
Jurisdiction	
East/West Street	Lithopolis Rd
North/South Street	Hayes Rd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			193	18		274	493			10		59				
Percent Heavy Vehicles (%)						7				4		4				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.17				6.44		6.24				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						298					75					
Capacity, c (veh/h)						1328					458					
v/c Ratio						0.22					0.16					
95% Queue Length, Q_{95} (veh)						0.9					0.6					
Control Delay (s/veh)						8.5					14.4					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					4.8				14.4							
Approach LOS									B							

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HCS7 Two-Way Stop-Control Report

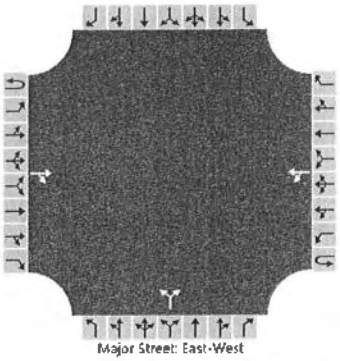
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2019 PM No Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Lithopolis Rd & Hayes Rd
Jurisdiction	
East/West Street	Lithopolis Rd
North/South Street	Hayes Rd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			328	1		49	139			4		227				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						53					251					
Capacity, c (veh/h)						1195					678					
v/c Ratio						0.04					0.37					
95% Queue Length, Q_{95} (veh)						0.1					1.7					
Control Delay (s/veh)						8.2					13.4					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					2.4				13.4							
Approach LOS									B							

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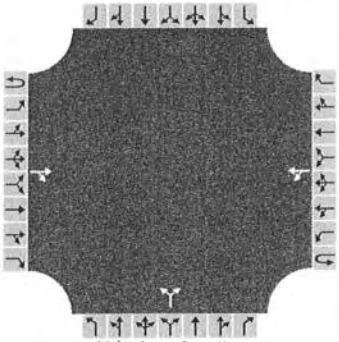
HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	CW	Intersection	Lithopolis Rd & Hayes Rd
Agency/Co.	EMH&T	Jurisdiction	
Date Performed	12/6/2017	East/West Street	Lithopolis Rd
Analysis Year	2017	North/South Street	Hayes Rd
Time Analyzed	2019 PM Build	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description			

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			347	11		79	150			10		251				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						86					284					
Capacity, c (veh/h)						1164					642					
v/c Ratio						0.07					0.44					
95% Queue Length, Q_{95} (veh)						0.2					2.3					
Control Delay (s/veh)						8.3					15.0					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					3.3				15.0							
Approach LOS									B							

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HCS7 Two-Way Stop-Control Report

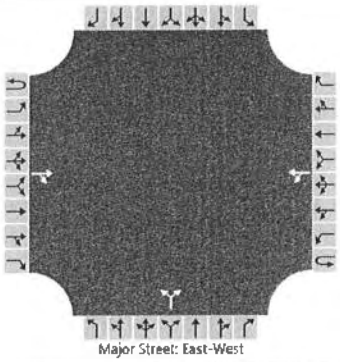
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2029 PM No Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Lithopolis Rd & Hayes Rd
Jurisdiction	
East/West Street	Lithopolis Rd
North/South Street	Hayes Rd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			351	1		53	152			4		254				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						58					280					
Capacity, c (veh/h)						1170					657					
v/c Ratio						0.05					0.43					
95% Queue Length, Q_{95} (veh)						0.2					2.1					
Control Delay (s/veh)						8.2					14.5					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					2.5				14.5							
Approach LOS									B							

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HCS7 Two-Way Stop-Control Report

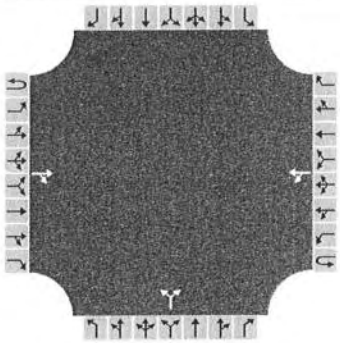
General Information

Analyst	CW
Agency/Co.	EMH&T
Date Performed	12/6/2017
Analysis Year	2017
Time Analyzed	2029 PM Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Lithopolis Rd & Hayes Rd
Jurisdiction	
East/West Street	Lithopolis Rd
North/South Street	Hayes Rd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			370	11		83	163			10		278				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						90					313					
Capacity, c (veh/h)						1139					622					
v/c Ratio						0.08					0.50					
95% Queue Length, Q_{95} (veh)						0.3					2.8					
Control Delay (s/veh)						8.4					16.5					
Level of Service (LOS)						A					C					
Approach Delay (s/veh)					3.3				16.5							
Approach LOS									C							

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MOVEMENT SUMMARY

Site: 101 [2019 AM No Build w current lanes]

Imler Tract, 20171359
Gender Rd and Lithopolis Rd
2019 AM No Build, Current lanes
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Lithopolis Rd											
6	T1	543	2.0	0.428	4.6	LOS A	3.2	80.1	0.49	0.46	36.9
16	R2	422	2.0	0.377	5.1	LOS A	2.6	65.4	0.48	0.55	35.8
Approach		965	2.0	0.428	4.8	LOS A	3.2	80.1	0.49	0.50	36.4
North: Gender Rd											
7	L2	125	10.0	0.193	14.4	LOS B	1.1	29.5	0.69	0.81	33.0
14	R2	218	10.0	0.269	7.4	LOS A	1.7	45.8	0.70	0.74	34.9
Approach		343	10.0	0.269	10.0	LOS A	1.7	45.8	0.70	0.76	34.1
West: Lithopolis Rd											
5	L2	178	7.0	0.245	11.1	LOS B	1.5	40.7	0.41	0.60	35.1
2	T1	72	7.0	0.245	4.4	LOS A	1.5	40.7	0.41	0.60	35.0
Approach		250	7.0	0.245	9.2	LOS A	1.5	40.7	0.41	0.60	35.1
All Vehicles		1559	4.6	0.428	6.6	LOS A	3.2	80.1	0.52	0.57	35.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

LANE LEVEL OF SERVICE

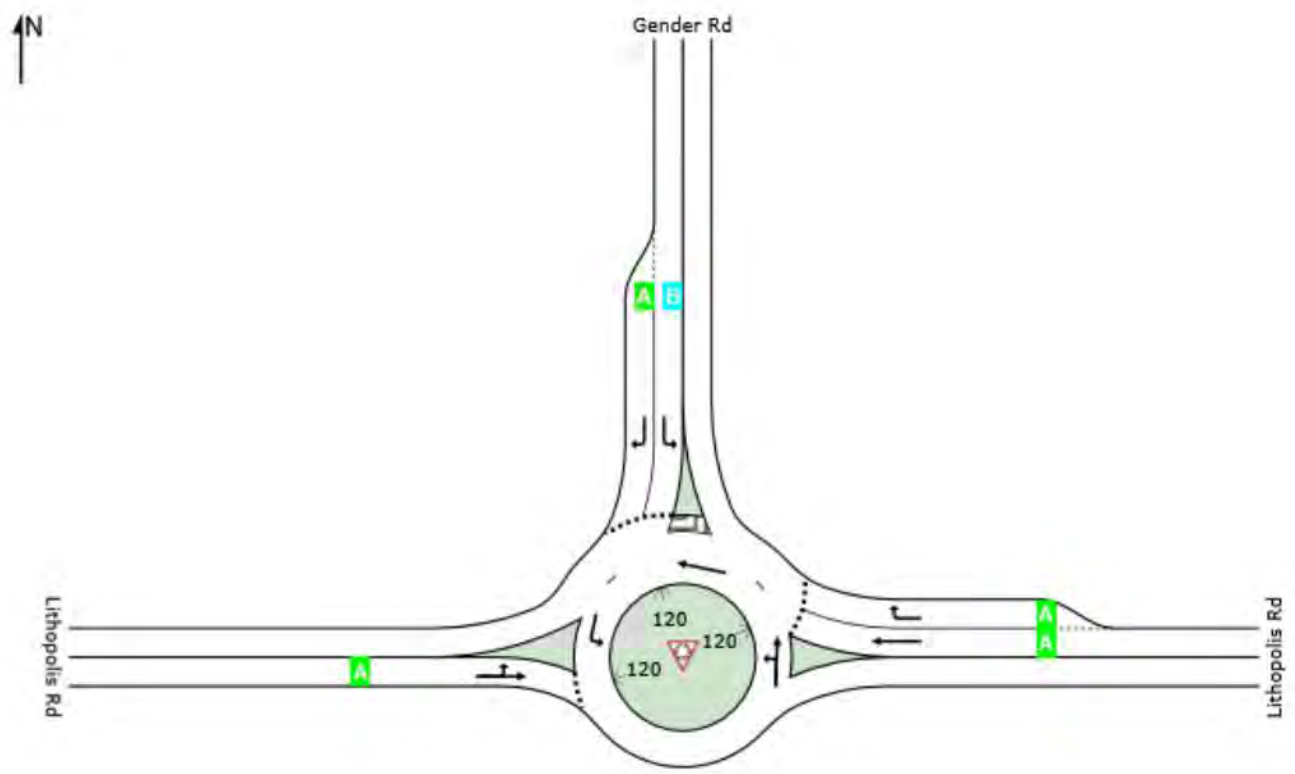
Lane Level of Service

Site: 101 [2019 AM No Build w current lanes]

Imler Tract, 20171359
Gender Rd and Lithopolis Rd
2019 AM No Build, Current lanes
Roundabout

All Movement Classes

	East	North	West	Intersection
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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MOVEMENT SUMMARY

Site: 101 [2019 AM Build w current lanes]

Imler Tract, 20171359
Gender Rd and Lithopolis Rd
2019 AM Build, Current lanes
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Lithopolis Rd											
6	T1	550	2.0	0.451	4.9	LOS A	3.4	85.9	0.55	0.49	36.7
16	R2	422	2.0	0.395	5.5	LOS A	2.7	69.1	0.54	0.59	35.6
Approach		972	2.0	0.451	5.1	LOS A	3.4	85.9	0.54	0.53	36.2
North: Gender Rd											
7	L2	125	10.0	0.200	14.5	LOS B	1.1	30.7	0.70	0.82	32.9
14	R2	232	10.0	0.289	7.5	LOS A	1.9	50.5	0.72	0.75	34.8
Approach		357	10.0	0.289	10.0	LOS A	1.9	50.5	0.71	0.77	34.1
West: Lithopolis Rd											
5	L2	216	7.0	0.299	11.1	LOS B	2.0	52.7	0.43	0.60	35.1
2	T1	93	7.0	0.299	4.5	LOS A	2.0	52.7	0.43	0.60	35.0
Approach		310	7.0	0.299	9.1	LOS A	2.0	52.7	0.43	0.60	35.1
All Vehicles		1638	4.7	0.451	6.9	LOS A	3.4	85.9	0.56	0.60	35.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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LANE LEVEL OF SERVICE

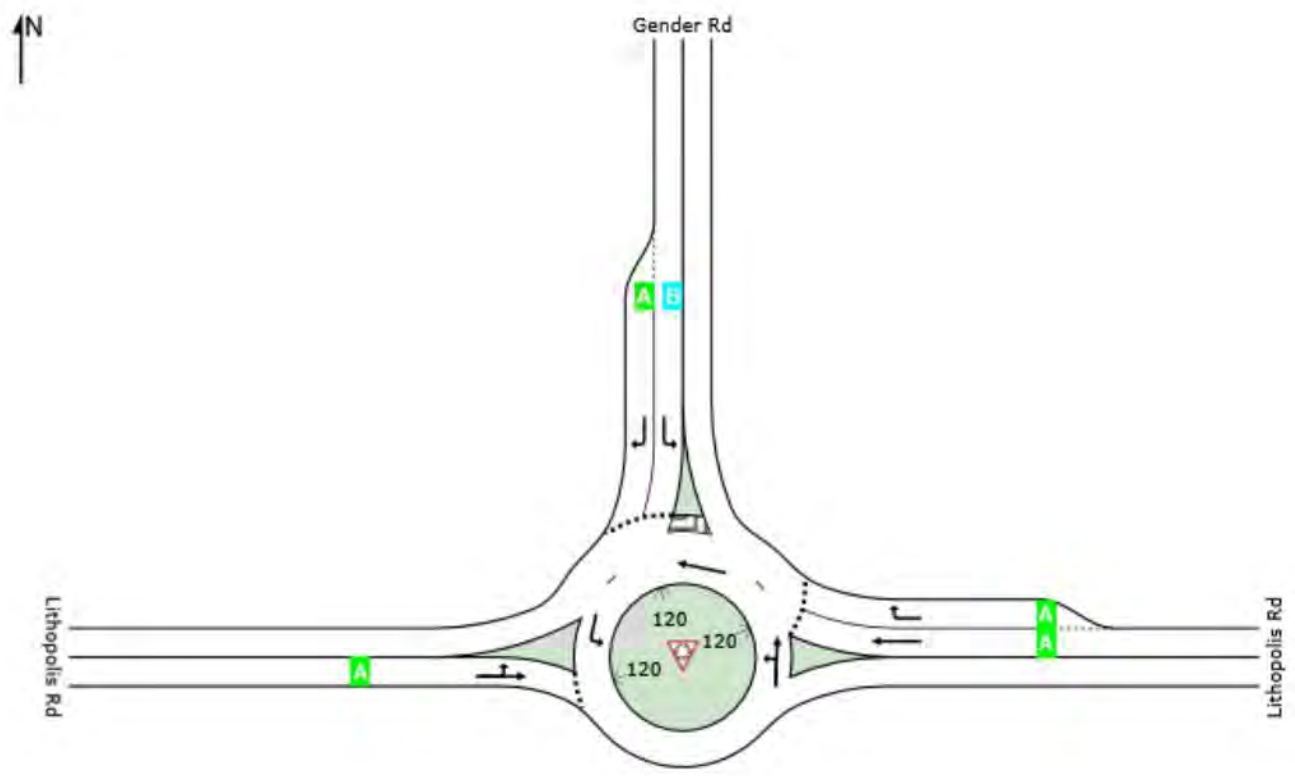
Lane Level of Service

Site: 101 [2019 AM Build w current lanes]

Imler Tract, 20171359
Gender Rd and Lithopolis Rd
2019 AM Build, Current lanes
Roundabout

All Movement Classes

	East	North	West	Intersection
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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MOVEMENT SUMMARY

Site: 101 [2029 AM No Build w current lanes]

Imler Tract, 20171359
Gender Rd and Lithopolis Rd
2029 AM No Build, Current lanes
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Lithopolis Rd											
6	T1	598	2.0	0.437	4.5	LOS A	3.3	84.0	0.50	0.46	36.8
16	R2	464	2.0	0.400	5.2	LOS A	2.8	71.5	0.51	0.56	35.7
Approach		1062	2.0	0.437	4.8	LOS A	3.3	84.0	0.51	0.50	36.3
North: Gender Rd											
7	L2	139	10.0	0.206	14.4	LOS B	1.2	32.9	0.71	0.81	32.9
14	R2	242	10.0	0.276	7.4	LOS A	1.9	50.1	0.73	0.74	34.9
Approach		382	10.0	0.276	9.9	LOS A	1.9	50.1	0.73	0.77	34.1
West: Lithopolis Rd											
5	L2	198	7.0	0.251	11.0	LOS B	1.6	42.9	0.42	0.60	35.1
2	T1	79	7.0	0.251	4.4	LOS A	1.6	42.9	0.42	0.60	35.0
Approach		277	7.0	0.251	9.1	LOS A	1.6	42.9	0.42	0.60	35.1
All Vehicles		1721	4.6	0.437	6.7	LOS A	3.3	84.0	0.54	0.58	35.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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LANE LEVEL OF SERVICE

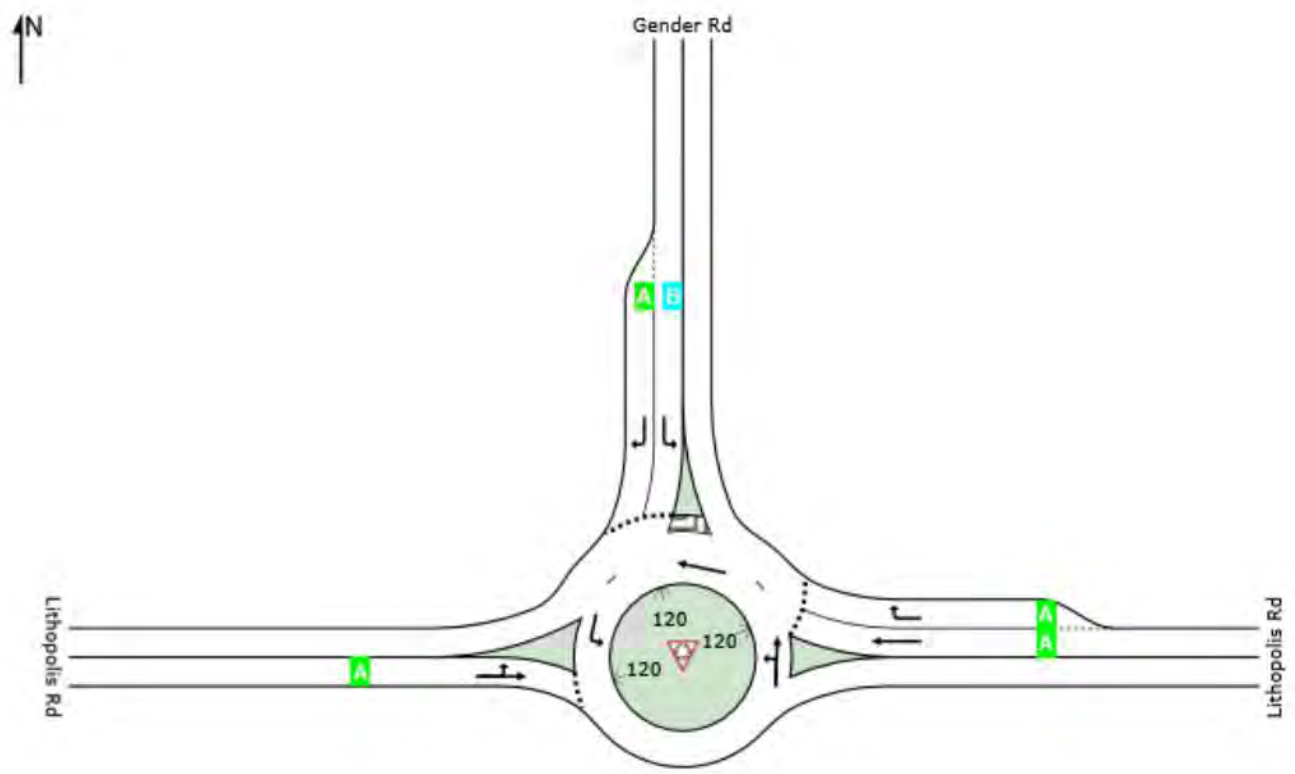
Lane Level of Service

Site: 101 [2029 AM No Build w current lanes]

Imler Tract, 20171359
Gender Rd and Lithopolis Rd
2029 AM No Build, Current lanes
Roundabout

All Movement Classes

	East	North	West	Intersection
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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MOVEMENT SUMMARY

Site: 101 [2029 AM Build w current lanes]

Imler Tract, 20171359
Gender Rd and Lithopolis Rd
2029 AM Build, Current lanes
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Lithopolis Rd											
6	T1	604	2.0	0.459	4.8	LOS A	3.5	89.5	0.56	0.48	36.6
16	R2	464	2.0	0.418	5.5	LOS A	3.0	75.3	0.56	0.60	35.6
Approach		1068	2.0	0.459	5.1	LOS A	3.5	89.5	0.56	0.53	36.2
North: Gender Rd											
7	L2	139	10.0	0.211	14.5	LOS B	1.3	34.2	0.73	0.82	32.9
14	R2	255	10.0	0.296	7.4	LOS A	2.0	55.0	0.75	0.75	34.8
Approach		395	10.0	0.296	10.0	LOS A	2.0	55.0	0.74	0.78	34.1
West: Lithopolis Rd											
5	L2	236	7.0	0.302	11.1	LOS B	2.1	54.4	0.44	0.60	35.1
2	T1	101	7.0	0.302	4.4	LOS A	2.1	54.4	0.44	0.60	35.0
Approach		337	7.0	0.302	9.1	LOS A	2.1	54.4	0.44	0.60	35.1
All Vehicles		1800	4.7	0.459	6.9	LOS A	3.5	89.5	0.58	0.60	35.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

LANE LEVEL OF SERVICE

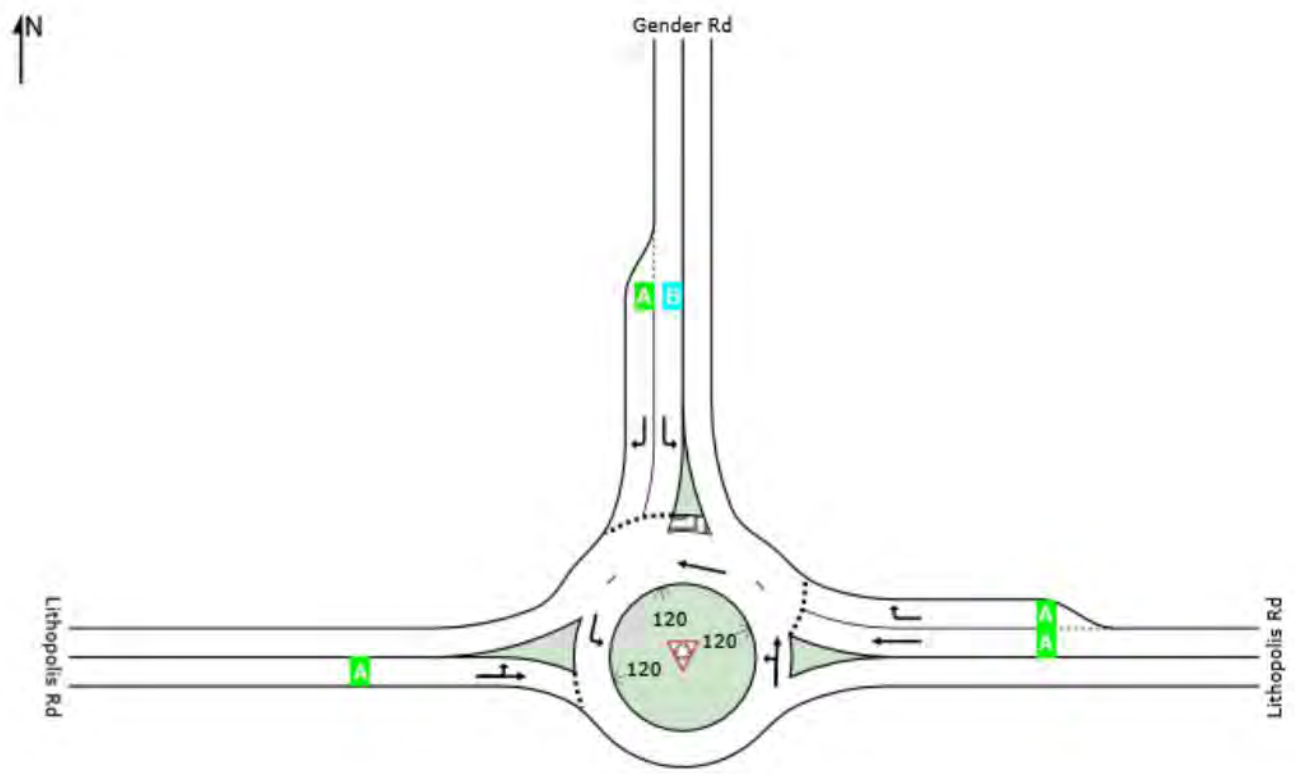
Lane Level of Service

Site: 101 [2029 AM Build w current lanes]

Imler Tract, 20171359
Gender Rd and Lithopolis Rd
2029 AM Build, Current lanes
Roundabout

All Movement Classes

	East	North	West	Intersection
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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MOVEMENT SUMMARY

Site: 101 [2019 PM No Build w current lanes]

Imler Tract, 20171359
Gender Rd and Lithopolis Rd
2019 PM No Build, Current lanes
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Lithopolis Rd											
6	T1	109	1.0	0.114	4.5	LOS A	0.7	16.8	0.43	0.45	37.2
16	R2	248	1.0	0.202	4.6	LOS A	1.3	33.9	0.43	0.50	36.0
Approach		357	1.0	0.202	4.6	LOS A	1.3	33.9	0.43	0.49	36.3
North: Gender Rd											
7	L2	418	1.0	0.301	10.5	LOS B	2.0	50.5	0.33	0.61	34.5
14	R2	161	1.0	0.160	4.6	LOS A	0.9	22.3	0.33	0.48	36.2
Approach		579	1.0	0.301	8.9	LOS A	2.0	50.5	0.33	0.57	35.0
West: Lithopolis Rd											
5	L2	170	2.0	0.793	20.8	LOS C	11.5	291.4	0.96	1.09	32.3
2	T1	487	2.0	0.793	14.2	LOS B	11.5	291.4	0.96	1.09	32.1
Approach		657	2.0	0.793	15.9	LOS B	11.5	291.4	0.96	1.09	32.2
All Vehicles		1592	1.4	0.793	10.8	LOS B	11.5	291.4	0.61	0.77	34.0

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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LANE LEVEL OF SERVICE

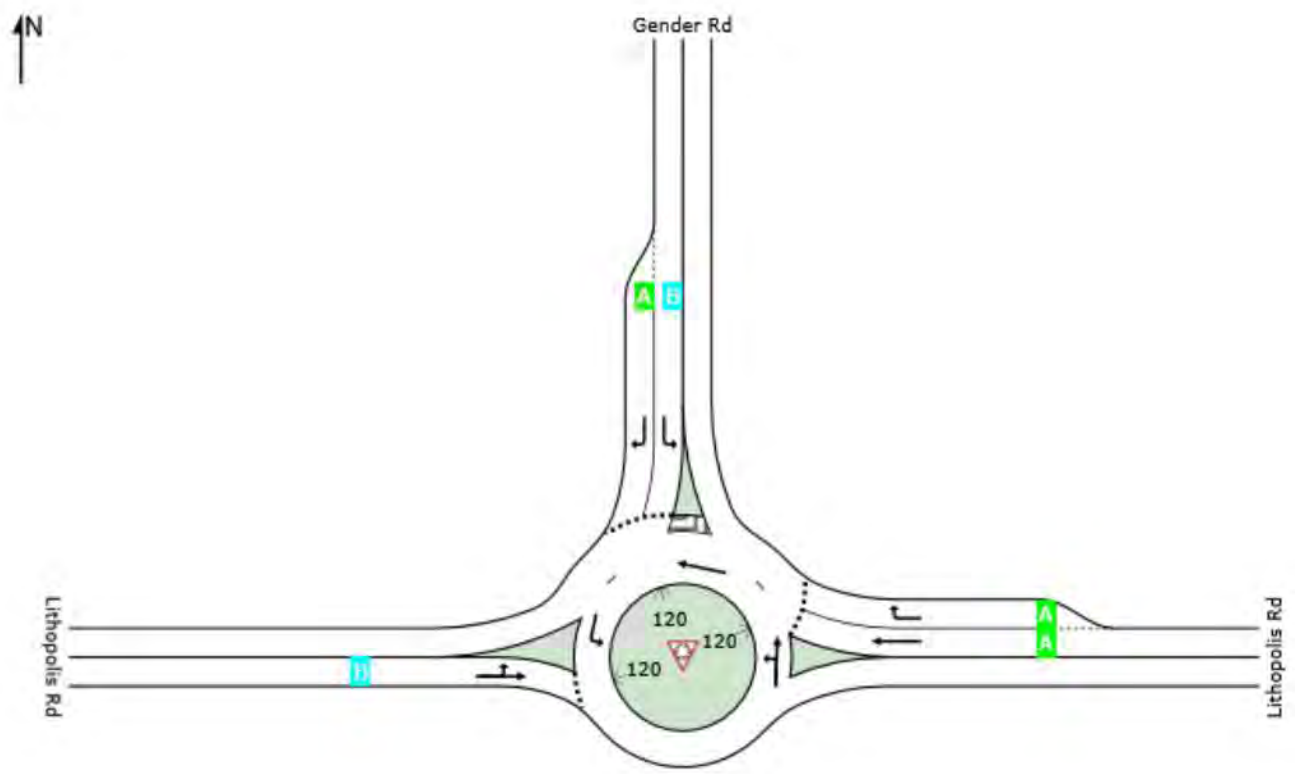
Lane Level of Service

Site: 101 [2019 PM No Build w current lanes]

Imler Tract, 20171359
Gender Rd and Lithopolis Rd
2019 PM No Build, Current lanes
Roundabout

All Movement Classes

	East	North	West	Intersection
LOS	A	A	B	B



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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MOVEMENT SUMMARY

Site: 101 [2019 PM Build w current lanes]

Imler Tract, 20171359
Gender Rd and Lithopolis Rd
2019 PM Build, Current lanes
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Lithopolis Rd											
6	T1	134	1.0	0.136	4.6	LOS A	0.8	20.7	0.46	0.46	37.0
16	R2	248	1.0	0.208	4.8	LOS A	1.4	35.2	0.46	0.52	35.9
Approach		382	1.0	0.208	4.7	LOS A	1.4	35.2	0.46	0.50	36.3
North: Gender Rd											
7	L2	418	1.0	0.311	10.7	LOS B	2.1	52.6	0.37	0.62	34.4
14	R2	203	1.0	0.193	4.7	LOS A	1.1	28.0	0.36	0.49	36.1
Approach		622	1.0	0.311	8.7	LOS A	2.1	52.6	0.37	0.58	34.9
West: Lithopolis Rd											
5	L2	195	2.0	0.840	23.1	LOS C	14.1	357.7	1.00	1.17	31.2
2	T1	501	2.0	0.840	16.5	LOS B	14.1	357.7	1.00	1.17	31.1
Approach		696	2.0	0.840	18.4	LOS B	14.1	357.7	1.00	1.17	31.1
All Vehicles		1699	1.4	0.840	11.8	LOS B	14.1	357.7	0.65	0.80	33.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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LANE LEVEL OF SERVICE

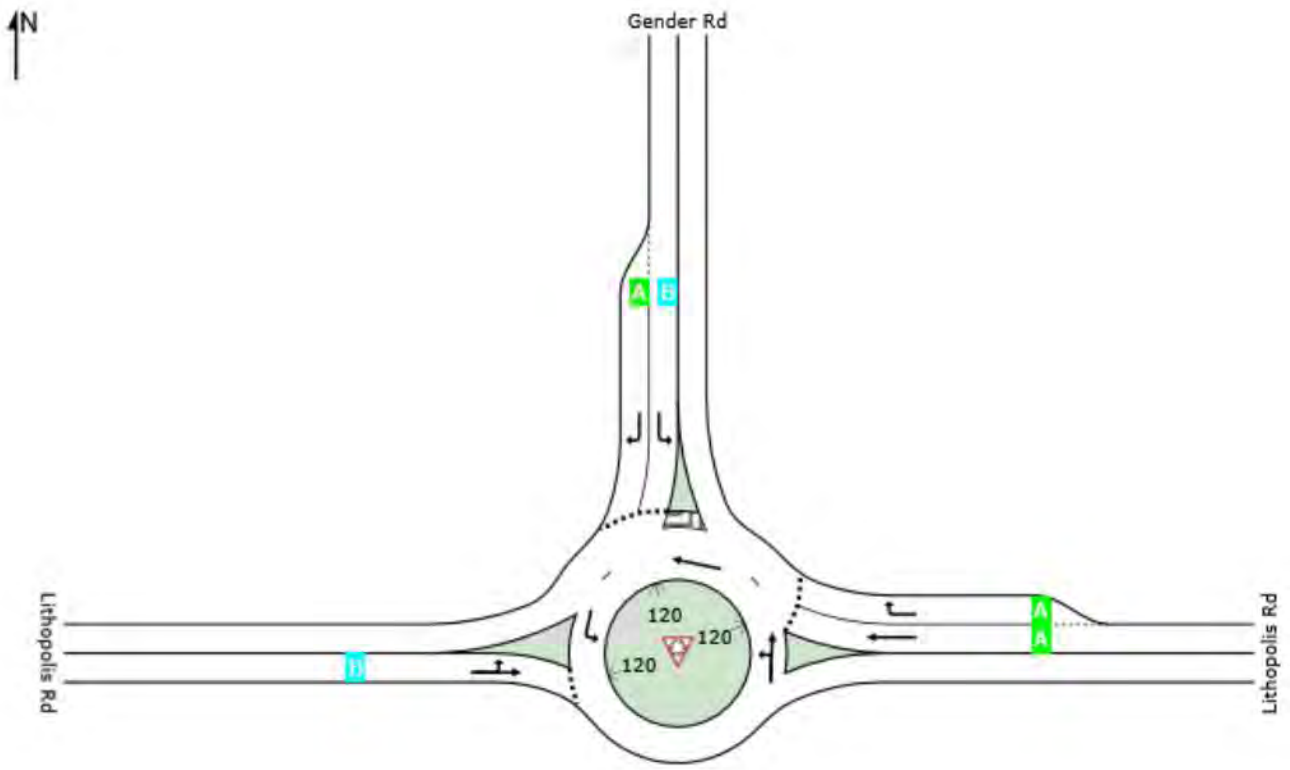
Lane Level of Service

Site: 101 [2019 PM Build w current lanes]

Imler Tract, 20171359
Gender Rd and Lithopolis Rd
2019 PM Build, Current lanes
Roundabout

All Movement Classes

	East	North	West	Intersection
LOS	A	A	B	B



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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MOVEMENT SUMMARY

Site: 101 [2029 PM No Build w current lanes]

Imler Tract, 20171359
Gender Rd and Lithopolis Rd
2029 PM No Build, Current lanes
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Lithopolis Rd											
6	T1	120	1.0	0.116	4.5	LOS A	0.7	17.5	0.44	0.45	37.1
16	R2	273	1.0	0.205	4.6	LOS A	1.4	35.5	0.44	0.51	35.9
Approach		392	1.0	0.205	4.5	LOS A	1.4	35.5	0.44	0.49	36.3
North: Gender Rd											
7	L2	464	1.0	0.310	10.5	LOS B	2.1	53.3	0.34	0.61	34.5
14	R2	178	1.0	0.162	4.5	LOS A	0.9	22.9	0.33	0.48	36.2
Approach		642	1.0	0.310	8.9	LOS A	2.1	53.3	0.34	0.57	34.9
West: Lithopolis Rd											
5	L2	188	2.0	0.813	21.4	LOS C	12.8	326.0	0.98	1.13	32.1
2	T1	540	2.0	0.813	14.8	LOS B	12.8	326.0	0.98	1.13	31.9
Approach		728	2.0	0.813	16.5	LOS B	12.8	326.0	0.98	1.13	31.9
All Vehicles		1763	1.4	0.813	11.0	LOS B	12.8	326.0	0.63	0.78	33.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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LANE LEVEL OF SERVICE

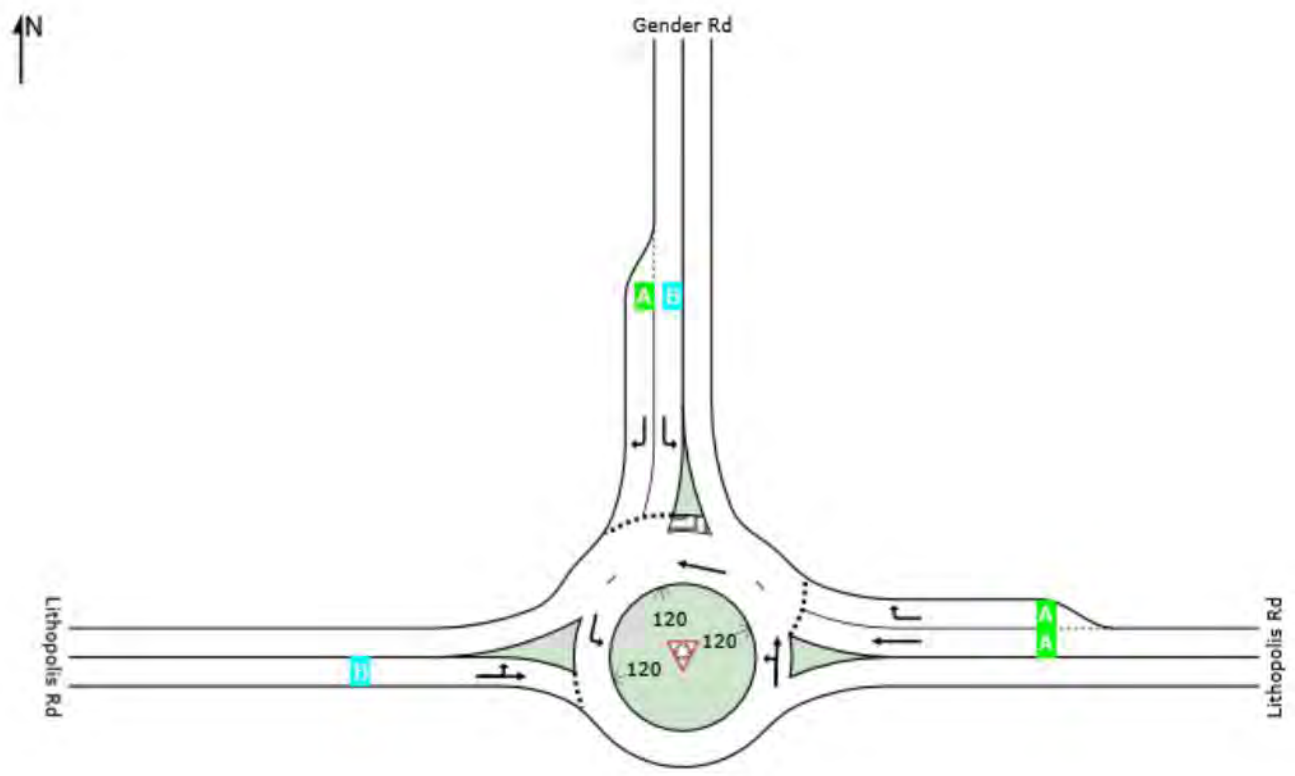
Lane Level of Service

Site: 101 [2029 PM No Build w current lanes]

Imler Tract, 20171359
Gender Rd and Lithopolis Rd
2029 PM No Build, Current lanes
Roundabout

All Movement Classes

	East	North	West	Intersection
LOS	A	A	B	B



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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MOVEMENT SUMMARY

Site: 101 [2029 PM Build w current lanes]

Imler Tract, 20171359
Gender Rd and Lithopolis Rd
2029 PM Build, Current lanes
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Lithopolis Rd											
6	T1	145	1.0	0.138	4.5	LOS A	0.9	21.5	0.47	0.46	37.0
16	R2	273	1.0	0.210	4.7	LOS A	1.5	36.6	0.47	0.52	35.8
Approach		417	1.0	0.210	4.6	LOS A	1.5	36.6	0.47	0.50	36.2
North: Gender Rd											
7	L2	464	1.0	0.319	10.6	LOS B	2.2	55.3	0.38	0.62	34.4
14	R2	221	1.0	0.195	4.7	LOS A	1.1	28.8	0.37	0.49	36.1
Approach		685	1.0	0.319	8.7	LOS A	2.2	55.3	0.38	0.58	34.9
West: Lithopolis Rd											
5	L2	213	2.0	0.858	23.9	LOS C	15.7	399.3	1.00	1.20	30.9
2	T1	554	2.0	0.858	17.3	LOS B	15.7	399.3	1.00	1.20	30.8
Approach		767	2.0	0.858	19.1	LOS B	15.7	399.3	1.00	1.20	30.8
All Vehicles		1870	1.4	0.858	12.1	LOS B	15.7	399.3	0.65	0.82	33.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
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Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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LANE LEVEL OF SERVICE

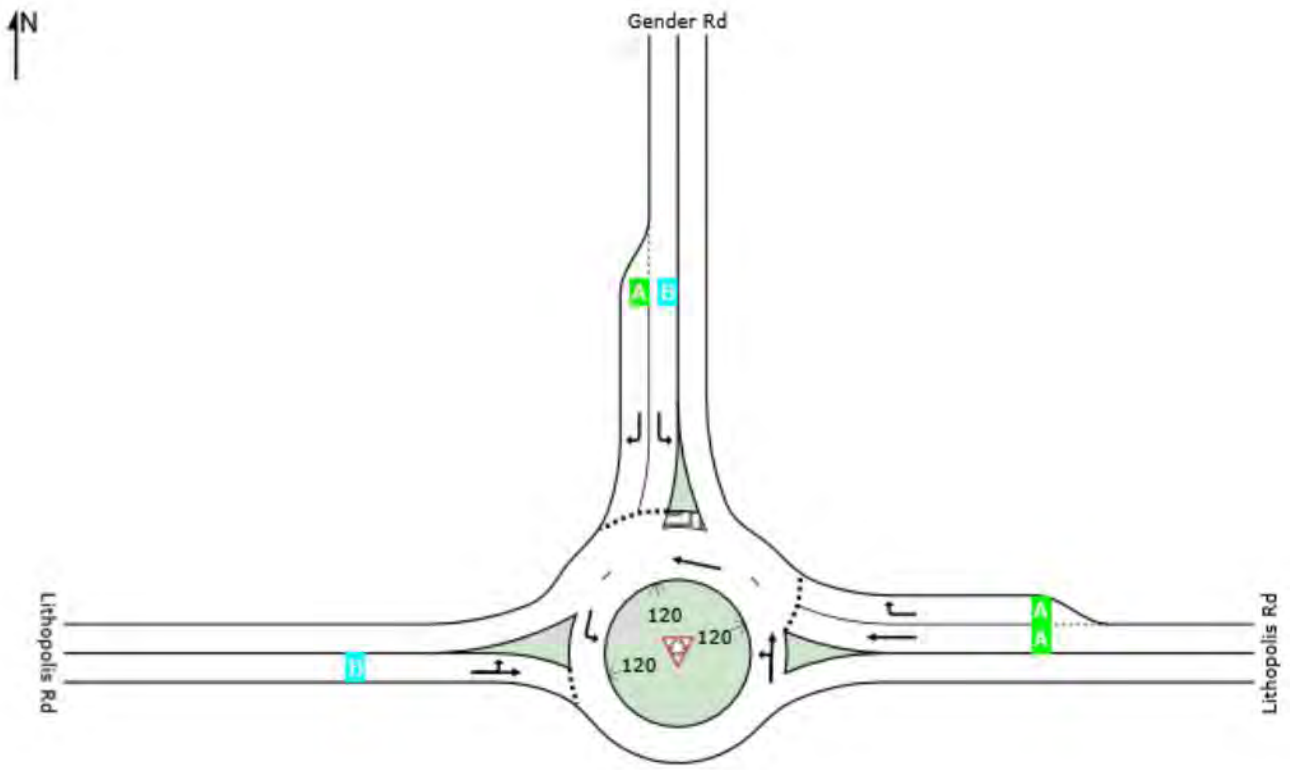
Lane Level of Service

Site: 101 [2029 PM Build w current lanes]

Imler Tract, 20171359
Gender Rd and Lithopolis Rd
2029 PM Build, Current lanes
Roundabout

All Movement Classes

	East	North	West	Intersection
LOS	A	A	B	B



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
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LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
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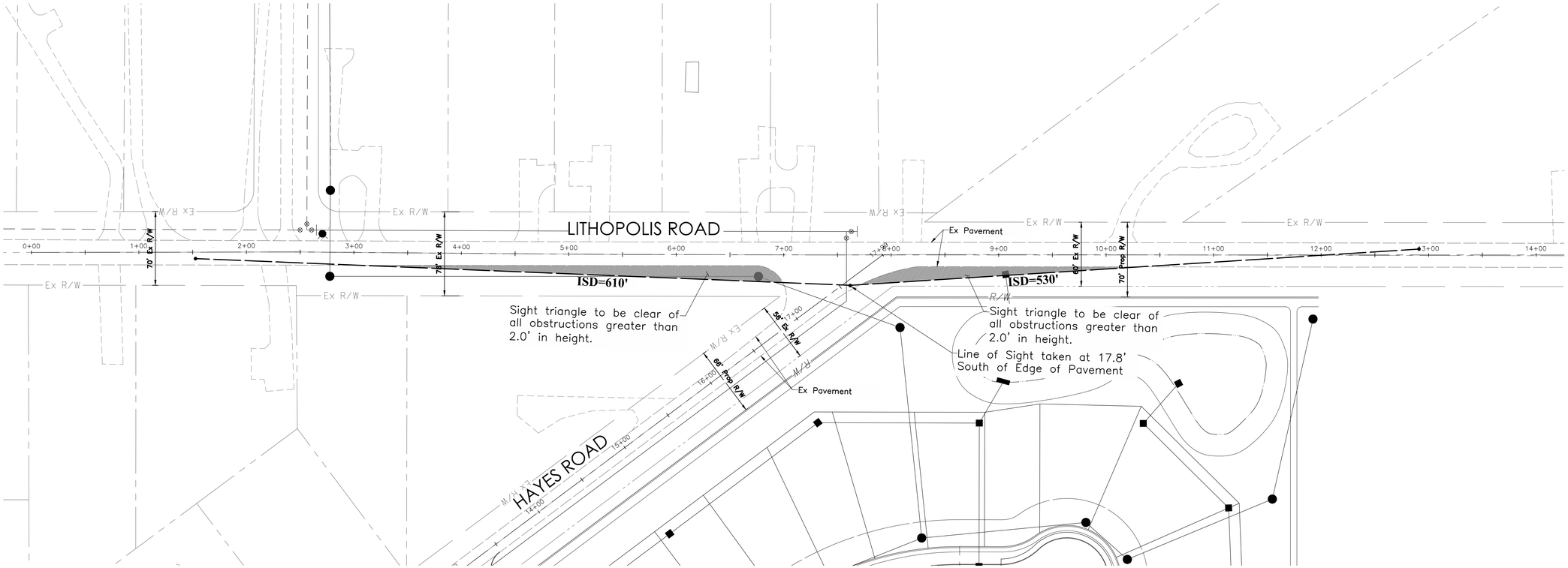
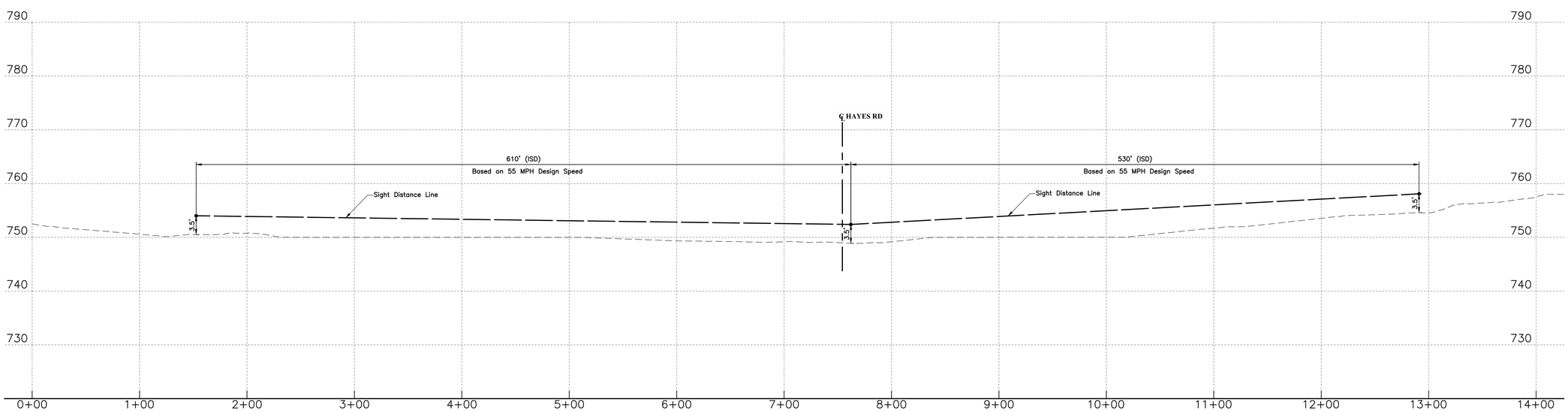


Notes:

1. Stationing is for exhibit use only and shall not be used for design purposes. Stationing is not based on record plans.
2. Existing ground profile is based on GIS contours and shall not be used for design purposes.



RE□ISIONS

MARK	DATE	DESCRIPTION

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
DE□ELOPMENT PLAN
FOR
MIDDLETOWN FARMS
INTERSECTION SIGHT DISTANCE EXHIBIT

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
DECEMBER 1□, 201□

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201□11□□

EXHIBIT
1□

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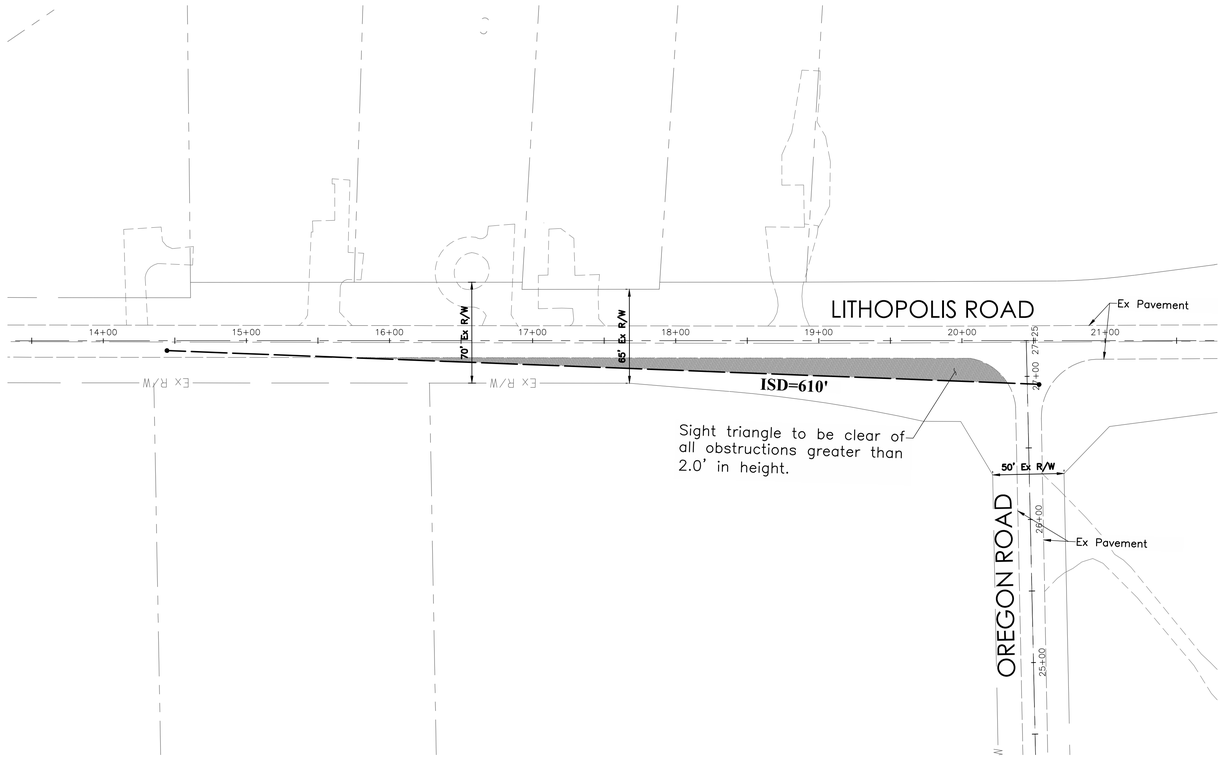

Notes:

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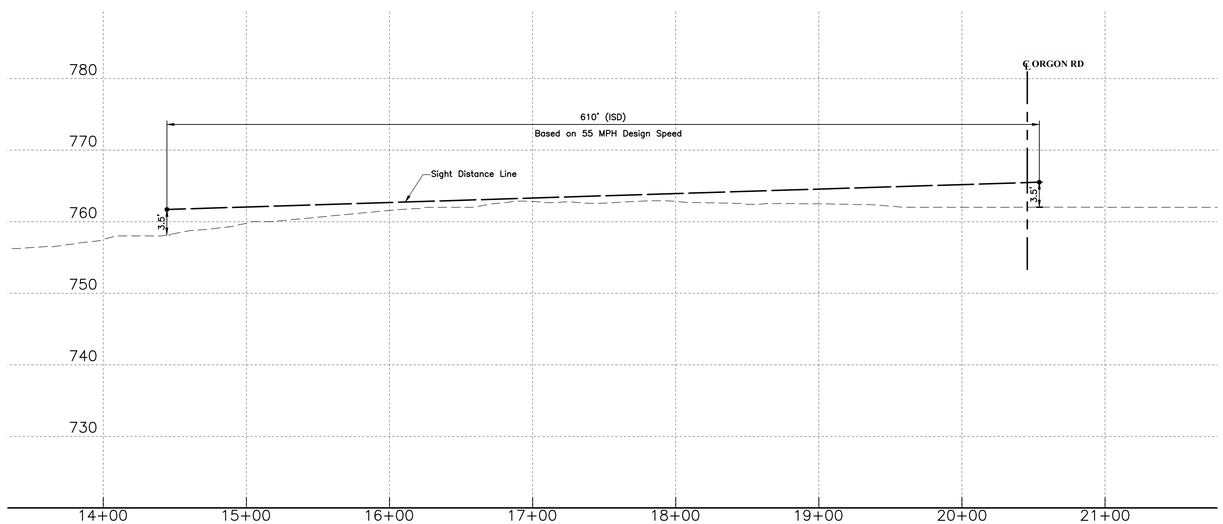

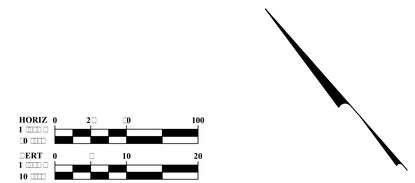

MARK	DATE	DESCRIPTION

RE□ISIONS

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
DE□ELOPMENT PLAN
FOR
MIDDLETOWN FARMS
INTERSECTION SIGHT DISTANCE EXHIBIT

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

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DECEMBER 1□, 201□

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201□11□□

EXHIBIT
2□□

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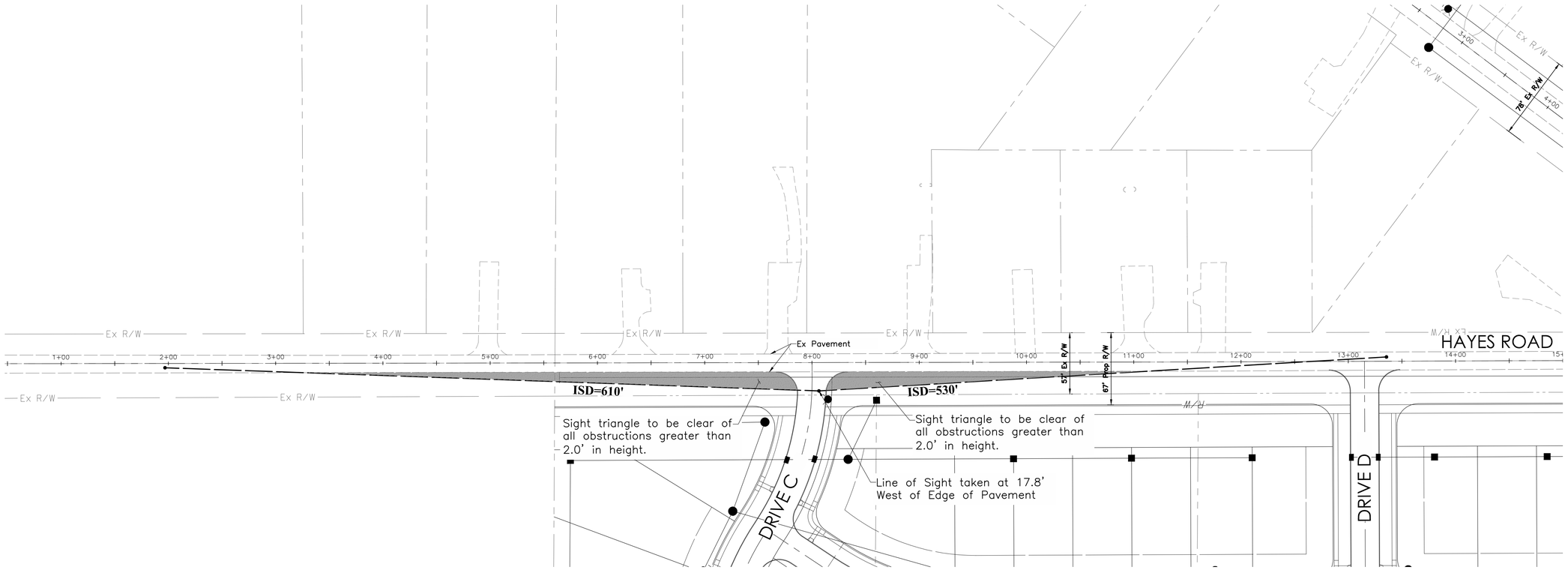

Notes:

1. Stationing is for exhibit use only and shall not be used for design purposes. Stationing is not based on record plans.
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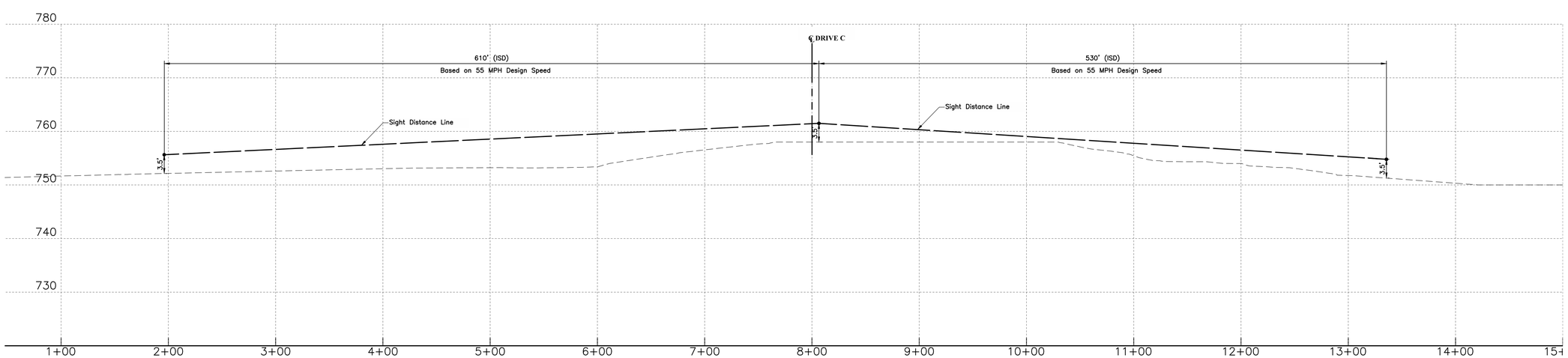

MARK	DATE	DESCRIPTION

REVISIONS

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
DEVELOPMENT PLAN
FOR
MIDDLETOWN FARMS
INTERSECTION SIGHT DISTANCE EXHIBIT

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Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
DECEMBER 1, 201

SCALE
AS NOTED

JOB NO.
201711

EXHIBIT

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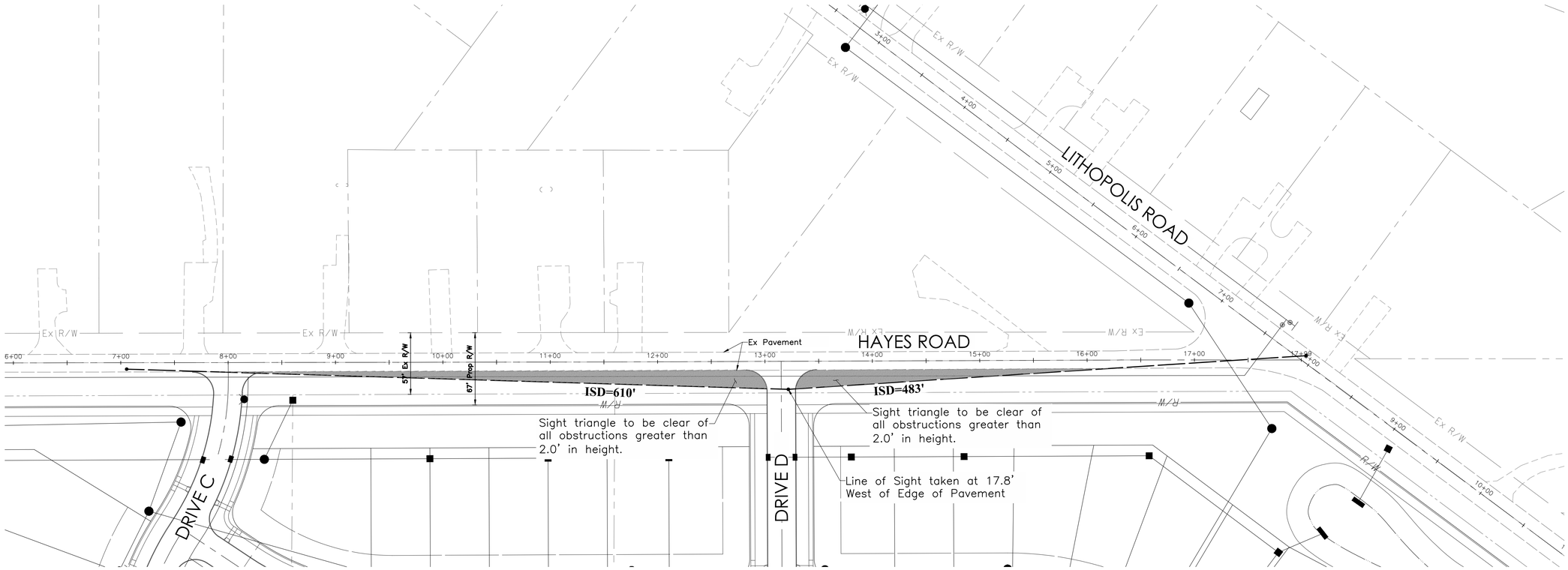

Notes:

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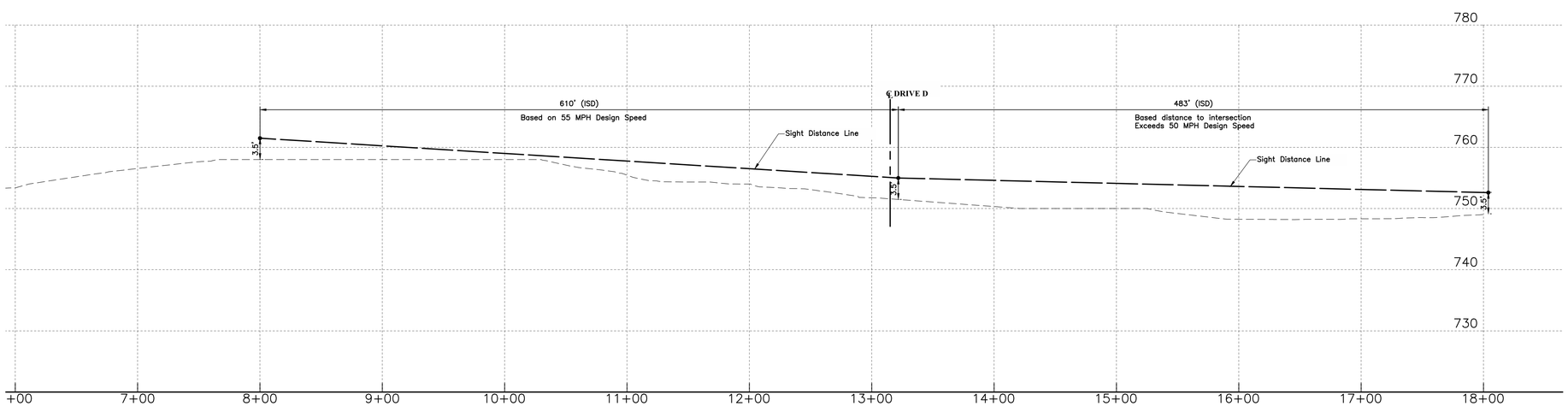

RE□ISONS

MARK	DATE	DESCRIPTION

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
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201□11□□

EXHIBIT
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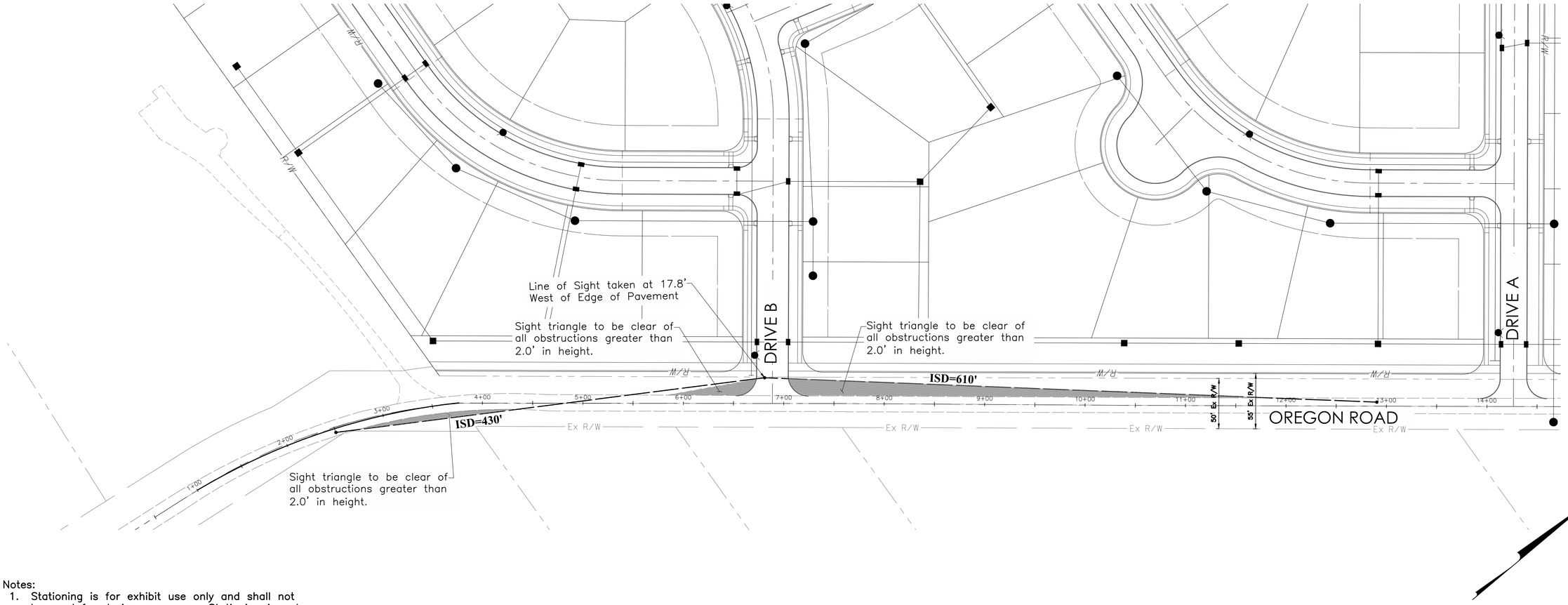
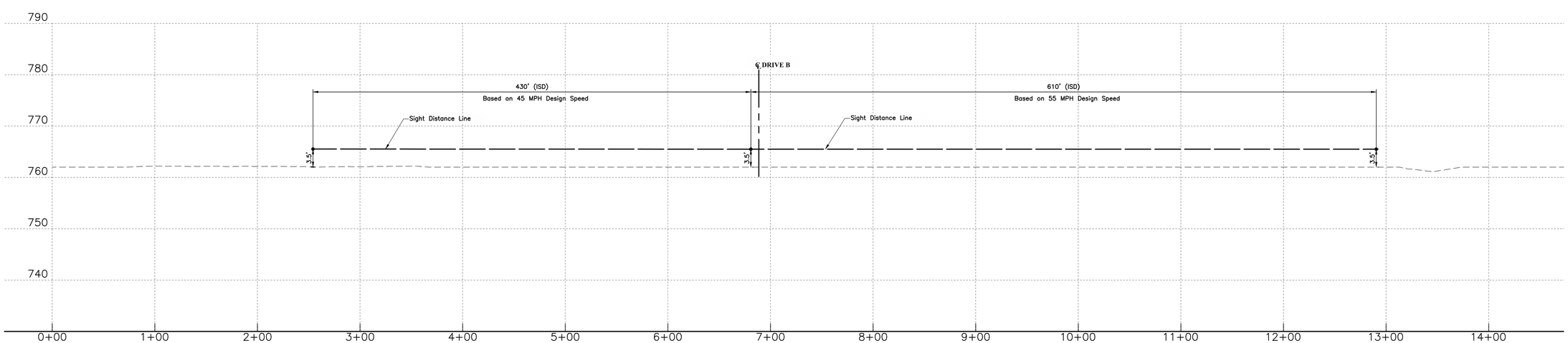


Notes:

1. Stationing is for exhibit use only and shall not be used for design purposes. Stationing is not based on record plans.
2. Existing ground profile is based on GIS contours and shall not be used for design purposes.



MARK	DATE	DESCRIPTION

REVISIONS

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
DEVELOPMENT PLAN
FOR
MIDDLETOWN FARMS
INTERSECTION SIGHT DISTANCE EXHIBIT

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
DECEMBER 1, 201

SCALE
AS NOTED

JOB NO.
201-11-

EXHIBIT

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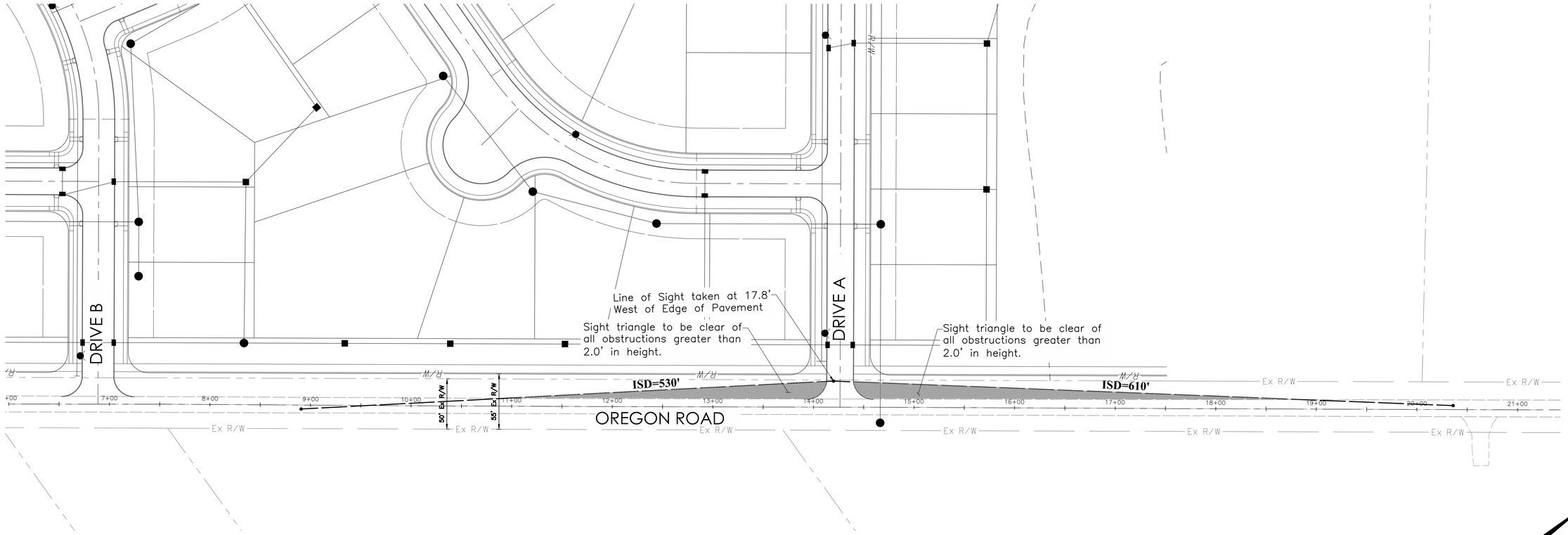

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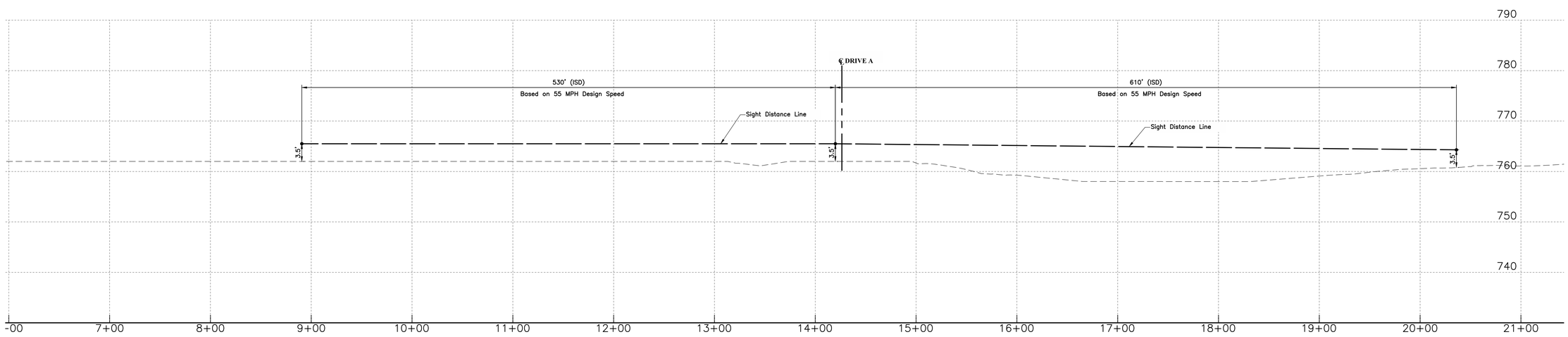

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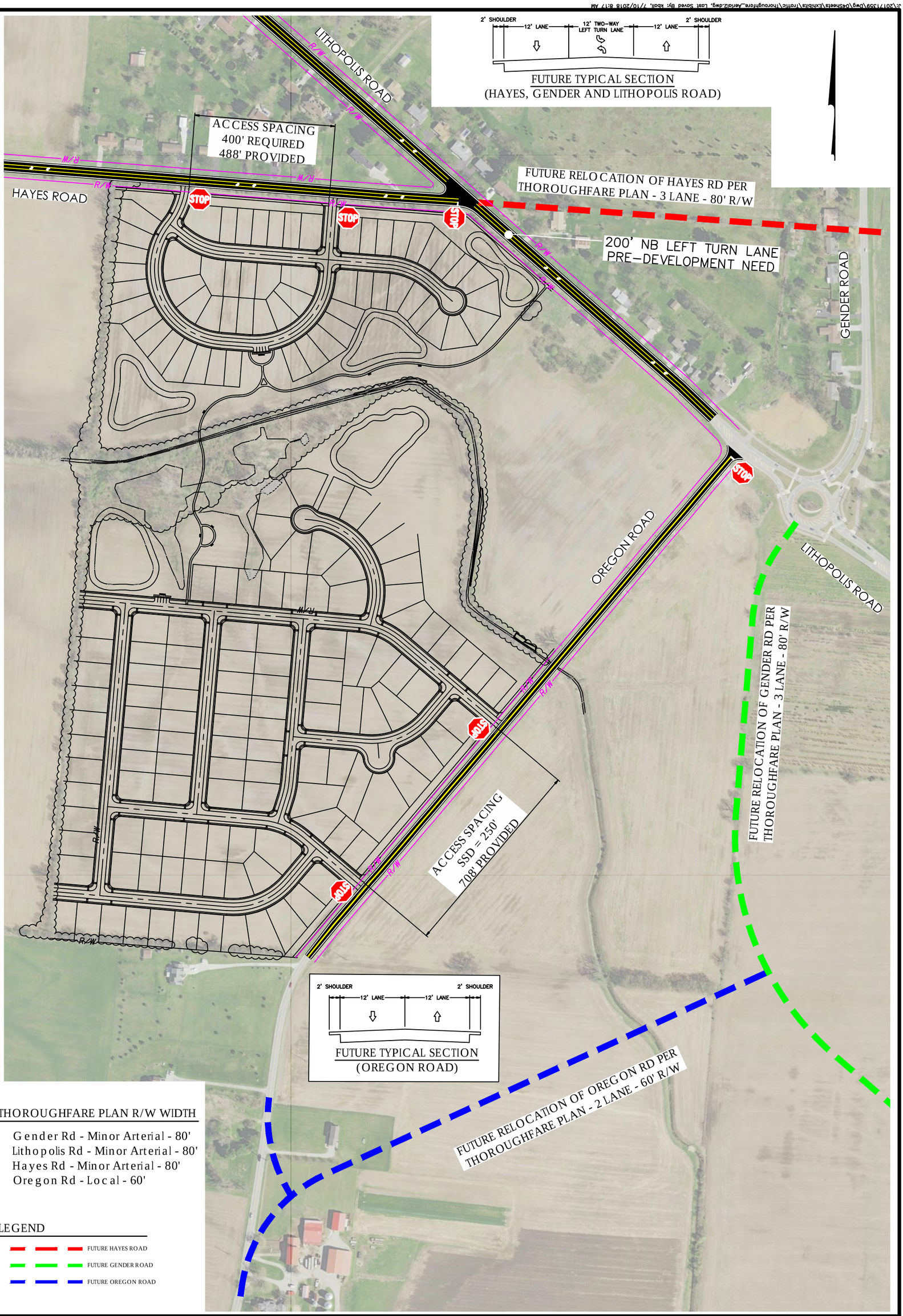

THOROUGHFARE PLAN R/W WIDTH

Gender Rd - Minor Arterial - 80'
Lithopolis Rd - Minor Arterial - 80'
Hayes Rd - Minor Arterial - 80'
Oregon Rd - Local - 60'

LEGEND

FUTURE HAYES ROAD
FUTURE GENDER ROAD
FUTURE OREGON ROAD

MIDDLETOWN FARMS

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO

THOROUGHFARE PLAN ROADWAY NETWORK

GRAPHIC SCALE

0 75 150 300

1 inch = 150 feet

PREPARED BY:

EMHT

Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE:	JULY 6, 2018
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CANAL WINCHESTER
Established 1828

To: Amanda Jackson, CMC, Clerk of Council

From: Andrew Moore, Planning and Zoning Administrator

Date: May 15, 2018

RE: Application ZM-17-007 & PDP-17-003

RECOMMENDATION

Regular Meeting of Planning and Zoning Commission held **May 14, 2018**

Motion by Vasko, seconded by Konold, to recommend to council approval of Zoning Map Amendment ZM-17-007; to consider a Zoning Map Amendment from EU to PRD; for 11.954 acres located along at PID: 184-002994 (Located along the corner of Hayes Road and Lithopolis Road). Westport Homes applicant Jack Mautino, Owner Dwight A. Imler Revocable Living Trust.
Voting yes: Brad Richey. Voting no: Mike Vasko; Bill Christensen; June Konold; Joe Donahue.
Motion Denied: 1-4

Motion by Richey, seconded by Konold, to recommend to council approval of Preliminary Development Plan PDP-17-003; to consider a Preliminary Development Plan for Middletown Farms Planned Residential District; for 79.488 acres located along Hayes Roaed and Oregon Road (PID 184-002994, 184-003001, & 184-002998). Westport Homes applicant Jack Mautino, Owner Dwight A. Imler Revocable Living Trust.
Voting yes: Brad Richey. Voting no: Mike Vasko; Bill Christensen; June Konold; Joe Donahue.
Motion Denied: 1-4

Andrew Moore
Planning and Zoning Administrator

Zoning Map Amendment #ZM-17-007
Preliminary Development Plan #PDP-17-003
Middletown Farms

Owner:	Dwight A Imler Revocable Living Trust
Applicant:	Westport Homes
Property Location:	PID 184-0022998 (PRD), 184-003001 (PRD), 184-002994 (PRD and EU), (consisting of 79.5 acres located along Lithopolis Road and Hayes Road as well as Oregon Road)
Existing Zoning:	PRD (Planned Residential District), EU (Exceptional Use)
Proposed Zoning:	PRD (Planned Residential Development)
Proposed Use:	Sub Area "1": 117 "traditional single-family homes" on 54.3 acres, and Sub Area "2": 58 "detached lifestyle homes" on 25.2 acres

Request
The applicant is requesting to rezone 11.954 acres of the subject property from EU (Exceptional Use District) to PRD (Planned Residential District) and to associate a new development text and development plan with the remaining to allow for 117 "traditional" single-family residential homes on approximately 54.3 acres (Sub Area "1") and 58 detached "lifestyle" homes on approximately 25.2 acres (Sub Area "2").

Location and Surrounding Land Uses
The subject property, approximately 79.5 acres, consists of three parcels at the intersection of Lithopolis Road and Hayes Road as well as along the west side of Oregon Road. These properties are zoned PRD, as well as exceptional Use. Properties to the west along Hayes Road are in unincorporated Madison Township and are zoned Rural. Properties to the north consist of single family homes and zoned Rural or EU (Exceptional Use). Properties to the east are farmed and are zoned EU. Properties to the south consist of a single family homes and a farm in the Rural zoning district.

Criteria for (Zoning Amendment) Review
All rezoning activities must be consistent with the adopted comprehensive plan. The following factors shall also be considered:

(a) Compatibility of the proposed amendment to adjacent land use, adjacent zoning and to appropriate plans for the area, including but not limited to the comprehensive plan.

(b) Relationship of the proposed amendment to access and traffic flow and utility services including sanitary sewer, water, and storm drainage, as outlined in the transportation thoroughfare plan, comprehensive plan and/or other adopted plans for the area.

(c) Relationship of the proposed amendment to the public health, safety, convenience, comfort, prosperity and general welfare, including impact on infrastructure and municipal services.

(d) Relationship of the proposed use to the adequacy of available services and to general expansion plans and planned capital improvements.

1173.01 Planned Districts - Purpose and Intent.
(a) Planned districts shall include residential, commercial, industrial, and mixed-use subdistricts: Planned Residential District (PRD), Planned Commercial District (PCD), Planned Industrial District (PID), Planned Unit District (PUD), and Planned Conservation District (PCND).

(b) It is the intent of the Planned Districts to promote the progressive development of land and construction thereon and to encourage imaginative architectural design and layout, flexibility in building styles and types, and sensitivity to the natural environment.

(c) The Planned Districts are designed to guide development in an orderly, coordinated and comprehensive manner that preserves natural quality and beauty and provides supporting community facilities in the development of diverse, sound urban environments consistent with accepted land planning, landscape architecture practices and engineering principals. Such developments should:

(1) Provide a more useful pattern of open space and recreation areas.

(2) Preserve and utilize natural topography and geologic features, scenic vistas, trees and other vegetation, while preventing disruption of normal drainage patterns.

(3) Provide a more efficient pattern of development that reduces investments in utility lines, streets, and similar infrastructure.

(4) Promotes a development pattern in harmony with the Municipal land use objectives and priorities.

1173.03 Planned Districts - Development Standards
(b) Minimum Lot Requirements

(3) Under PRD and PUD individual home sites or clusters thereof must be designated under one of the Municipality's residential zoning districts. At the time of the application, the Municipality has the ability to negotiate development standards.

(4) Under PRD, PUD, and PCND adjacent residential homes shall not have identical facades relative to style and color, and all residential building front yard setbacks shall meet the applicable district requirement and be staggered.

(c) Planned Districts - Site Development Standards

(4) The maximum PRD and PUD density shall be four (4) dwelling units per acre based on the number of units proposed divided by the net developable site.

(6) Under PRD and PUD a minimum of twenty (20) percent of the gross site minus publicly dedicated streets and alleys shall be set aside as public open space. Such open space shall be used for such public purposes as a natural area, recreational area, or the site of a community or school facility. See section 1181.04 for the full explanation for land dedication and in-lieu fees.

Chapter 1173.04 Planned Districts – Plan Contents and Requirements.
(a)(2) Development Standards Text. A Development Standards Text shall be submitted as part of the Preliminary Plan and shall be narrative and graphics, as necessary, in order to detail the development standards to be applied to the development concept descripted in the Preliminary Plan. ***The Development Standards Text should clearly identify any standards that is less than the standards established by the Chapter. These modifications shall be justified by fully stating what adjustments, amenities or other compensations are provided as part of the Preliminary Plan to offset the use of reduced standards and by demonstrating how the modified standards will result in the best possible development for the site***. Unless specifically modified by the Development Standards Text, the standards established by this Chapter shall apply to the proposed development.

(c) Modifications of Development Standards Text. Any desired modifications of the Development Standards Text approved as part of the Preliminary Plan should be so indicated in a modified Development Standards Text document.

Chapter 1181.04 Land Dedication and In-Lieu Fee
(a) Mandatory Land Dedication. Acreage shall be set aside in all platted subdivisions for the provision of public areas in accordance with the municipality's park and recreation master plan. Such public areas shall be used as sites for public parks, open space, and recreational areas. The amount of acreage to be set aside shall comply with the following.

Zoning District	Land Set Aside
PRD & PUD	25%

Such lands may be deeded to the Municipality and thereby developed and managed by the Municipality or held, developed and maintained by a private association, the bylaws and creation of which shall be by approval of Council as an element of the subdivision platting process.

(b) Review and Approval Process. The mandatory land dedication requirement shall serve as a component of the subdivision review process of Canal Winchester and regulatory review and approval shall be a consistent part of that process. The P&Z Commission may review and reject the proposed acreage if such site(s) is not appropriate for the intended use given environmental, technical or land use considerations. In such circumstances, the P&Z Commission shall request an alternative site(s), which may or may not be provided on site.

History
The property was annexed into the City of Canal Winchester with Ordinance 17-05 on 2/21/2005. A portion of the property was zoned EU at the time of annexation. The remainder of the property consisting of 70.8 acres was zoned PRD via Ordinance 33-05 on 4-4-2005. Exhibits B and C of that ordinance associated a development text and plan with this portion of the property allowed the construction of 133 single family homes and 76 condominiums. This preliminary development plan and text expired on 4/4/2010.

In 2006, Village Council formed a committee to develop standards for residential development in the Village of Canal Winchester to further assist developers and village officials in the preparation and review process of new residential development. This committee presented the Residential Design Standards to Planning and Zoning Commission who then recommended

their adoption to Village Council. On November 6, 2006, the Chapter 1130 Residential Development Standards was adopted by Village Council via Ordinance 82-06. ‘

***Note* Since the adoption of Ordinance 82-06, the Residential Development Standards have not been applied to any residential project, due to no new residential subdivisions being proposed in the City. Ongoing residential growth has been in areas that have been pre-approved prior to 2006.**

Analysis

The applicant is proposing a new development text and plan along with the rezoning request. The applicant has proposed specific development standards for the Planned Residential District. The purpose and intent of Planned Residential Districts is to promote progressive development of land and encourage imaginative architectural design and layout. The applicant however is proposing the same models of homes and architectural standards that are currently being built in Canal Cove Subdivision. The standards for Canal Cove were approved nearly 20 years ago and are not progressive and do not encourage imaginative architectural design and layout. The proposed homes are the same models that Westport builds throughout their portfolio of development sites. Noted further in the staff report, details will be provided illustrating how the proposed home models and site design characteristics proposed do not meet select portions of the Residential Design Standards.

The intent of the Planned Districts are to guide development in an orderly, coordinated and comprehensive manner that preserves natural quality and beauty. The applicant however is proposing to fill 100-year floodplain areas and to mitigate wetland areas that have been identified on the site rather than designing these areas to be part of a useful pattern of open space and recreation areas. They are not proposing to utilize these natural geographic areas to enhance their development, but rather force this proposed development onto a site that does not promote a development pattern in harmony with municipal land use objectives and priorities.

Within the proposed development text, the applicant has proposed residential development standards. They have selectively modified standards that benefit their development and site by reducing the requirements the community has set through residential development standards that were adopted as chapter 1130 of the Canal Winchester Zoning Code. The applicant has provided justifications for these modifications. These modifications should be justified by fully stating what adjustments, amenities or other compensations are provided as part of the Preliminary Plan to offset the use of reduced standards and by demonstrating how the modified standards will result in the best possible development for the site. The applicant has failed to show how reducing standards has resulted in the best possible development and what other amenities or compensations are being offered to enhance the development due to allowing a reduction in standards.

After review of the proposed Preliminary Development Plan for Middletown Farms, the following are the code sections that are not being met.

1) Chapter 1130.09 - Residential Development Standards, House size and setbacks.

	Chapter 1130 Residential Development Standards	**PRD Proposed Traditional SF (Subarea 1)**	**PRD Proposed Lifestyle SF (Subarea 2)**
Lot Area	14,440 sq. ft.	9,375 sq. ft. Typical	6,250 sq. ft.
Lot Coverage (Max)	30%	35%	TBD on Final Building Plan
Front Setback	30 feet	25 feet	25 feet
Side Setback	10 feet	8 feet	5 feet
Minimum Lot Width	90 feet	70-75 feet Typical	50 feet Typical
Minimum Lot Depth	160 feet	125 feet Typical	Not Available for review
1 Story Finished Floor Area	1,650 sq. ft.	1,400 sq. ft.	1,400 sq. ft.
2 Story Finished Floor Area	2,100 sq. ft.	1,800 sq. ft.	N/A

**Note* The applicant has modified the language in the development text from "Minimum" to "Typical" for lot sizes and lot frontage. Staff would like to note that a standard that is "typical" and not a set minimum standard would be difficult to enforce.*

**Note 2* The applicant incorrectly refers to the application as deviating from the R-3 zoning standards for lot size's (including setbacks) and home size's listed in the above table. These standards would not be applied to an R-3 zoning district, but rather are standards for new residential development. The Residential Design Standards were adopted in 2006 for what City Council wanted new development to be constructed as.*

2) Chapter 1130.01 – Architectural Diversity (Same House Model Next to Each Other)
Code Requirement: "All single-family residential developments shall incorporate architectural diversity whereby (a) the same house model shall not be directly across the street and (b) a minimum 2-lot separation shall be required between the same house model on the same side of the street or diagonal from each other.

PRD Development Text: " Diversity, with the following addition: As the same model of home **can** be constructed and altered with multiple different elevations, the following diversity standard shall be met – The same house *elevation* shall not be directly across the street and a minimum 2-lot separation shall be required between the same house *elevation* on the same side of the street or diagonal from each other.

**Note* The applicant has modified the language to allow the same house model to be adjacent to the same model as long as the front elevation is different. When taking a look at the model homes submitted, this would allow, for example: Belmont Elevation A to be constructed immediately adjacent to Belmont Elevation B. Please see the following page for the example.*

3) Chapter 1130.06 – Garages

Code Requirement: "All single-family residential developments shall have a mix of front loaded and side loaded garages. A minimum twenty percent (20%) of the lots must be designed for a standard side entrance garage on lots where side-entry garages can be accommodated, typically seventy-five feet wide and wider lots. For corner lots, the garage shall be oriented towards the "lower" defined street classification as determined by the Planning and Zoning Commission. Garage doors shall be a maximum ten feet height. If there is a living area above the garage, the maximum height of the garage shall be thirty-five feet. Otherwise, the maximum height of the garage is eighteen feet.

Chapter 1130.07 – Front Loaded Garages.

Code Requirement: "(a) Shall be located a minimum four feet behind the front line of the livable area of the home. A covered or uncovered porch shall not be considered a livable area of the home. (b) Garage doors shall not exceed fifty percent (50%) of the house width (frontage). Where more than a standard two car front loaded garage is provided, the additional garage bay(s) shall be offset from and architecturally designed to appear separate and distinct from the two car garage."

Chapter 1130.08 – Side Loaded Garages
Code Requirement: "(a) Side loaded garages may be loaded from an inside court area. (b) The garage elevation facing the street must incorporate design features also found in the front elevation of the home including, but not limited to, windows."

PRD Development Text: "There will be a mix of front loaded and side loaded garages. Subarea 1 (the traditional single-family homes) shall meet the code standard for side entrance garages of twenty percent (20%). (Twenty-three (23) lots in subarea 1 shall be side-loaded). For side loaded garages on corner lots, the garage may be oriented towards any street classification within the community but not external streets. Front load garage doors shall be located **no more than four (4) feet in front of the most front facing architectural element** of the home. Such architectural elements shall include but may not be limited to roof projections, porches with roofs or other appropriate architectural projections. In addition, all garage doors in both subareas shall be 'architectural' in design in a manner that integrates the door as a design element with the balance of the home. Architectural garage door elements shall include but shall not be limited to windows, raised panels, board and batten elements, aesthetic hinges and/or other hardware or other similar elements, as offered by the builder and chosen by customers. No flat panel, plain panel garage doors, or garage doors without architectural features are permitted in either sub area.

**Note 1* Twenty-two (23) lots out of one hundred and seventeen (117) lots in Subarea 1 (the traditional single-family homes) is 19.65%, not 20%.*

**Note 2* Subarea 2 does not accommodate any of the required side load garages, providing a total of zero (0) side load garages. With the 175 units proposed in the entire development (117 Subarea 1 and 58 in Subarea 2), 35 units would be required to have side load garages (20%). The preliminary development text indicates 23 lots will have side load garages. This would equate to 13% of the total lots have side load garages. A deviation from the 20% required for the entire subdivision is not discussed in the development text.*

**Note 3* Seven (7) home models shown for Subarea 1 has more than a two car garage door on the front elevation, exceeding fifty percent (50%) of the front elevation.*

**Note 4* One (1) home model for Subarea 1 appears it would meet the garage setback standard in Chapter 1130.07.*

**Note 5* No examples are provided for what a side load garage home would look like for review.*

**Note 6* The applicant's justification for not meeting the garage setback requirement is by providing 'architectural garage doors' with design elements such as lighting, and no plain panels.*

4) Chapter 1173.03 – Planned District Development Standards
(b) Minimum Lot Requirements.
Code Requirement: (4) "Under PRD, PUD, and PCND adjacent residential homes shall not have identical facades relative to style and color, and all residential building front yard setbacks shall meet the applicable district requirement and be staggered."

**Note 1* The Preliminary Development Plan text does not indicated (in writing) that the homes will be staggered.*

**Note 2* The applicant has not indicated in the plan (in writing) that the color diversity requirements will be met.*

5) Chapter 1173.04 – Planned District Plan Contents and Requirements
(1) Preliminary Plan
Code Requirement: (A) "A topographic map of the site and adjacent property showing existing natural features including wooded areas and major trees. A description of how the proposed development has planned to utilize the existing site, identifying changes to the existing grading and noting major trees that will be removed as part of the proposed development."

**Note 1* The Preliminary Development Plan Text notes on Page 9 that "The final quantity of trees to be removed and replaced shall be determined during the final development plan review in coordination with city staff. Please see Landscape Plans for preliminary tree removal and replacement quantities and location." The landscape plans do not indicate any major trees on site or note any trees to be removed as part of the plan. This text creates confusion and provides no clear answer within the development plan itself for Council approval of a Preliminary Development Plan if the natural features on the existing site are to remain.*

**Note 2* The Preliminary Development Plan shows two lots (lot 88 and 97) will have wetlands on the properties.*

(2) Development Standards Text
Code Requirement: "A Development Standards Text shall be submitted as part of the Preliminary Plan and shall be narrative and graphics, as necessary, in order to detail the development standards to be applied to the development concept described in the Preliminary Plan. The Development Standards Text should clearly identify any standard that is less than the standards established by this Chapter. These modifications shall be justified by fully stating what adjustments, amenities or other compensations are provided as part of the Preliminary Plan to offset the use of reduced standards and by demonstrating how the modified standards will result in the best possible development for the site. Unless specifically modified by the Development Standards Text, the standards established by this Chapter shall apply to the proposed development.

**Note* The Preliminary Development Plan discusses how "Architectural quality, modern design approaches and interior finishes define the value proposition" and how "Westport's commitment to architectural standards, a housing mix and a more efficient development pattern… result in a more valuable community" However, many of the architectural design standards that are required in Chapter 1130 are not being met.*

6) Chapter 1173.05 Planned District Review Basis
(a) Preliminary Plan
Code Requirement: (4) " That any modification or minimum development standards established by the Zoning Code are property identified and adequately justified in the Development Standards Text as necessary to insure a higher quality in development."

**Note* Standards in the zoning code are not properly identified and many that are identified do not justify the deviation as necessary to insure a higher quality in development, but rather are justified by the applicant so that they can develop the site with the current housing products they are offering, with little to no modification to meet the adopted residential development standards, Chapter 1130.*

7) Chapter 1153.21 School Facilities
Code Requirement: (a) Facilities Requirement: "In all new single family, multi-family, planned residential or planned unit developments, a school facility dedication shall be made to the appropriate school board. Said dedication shall be suitable for development and the intended

use to meet the need generated by the proposed development in compliance with the school district's adopted School Facility's Plan. All of the dedicated school land shall be suitable for construction of school facilities and associated outdoor areas. The dedicated school land shall be a single parcel, centrally located within the service radius, with public access to adjacent street frontage, and free from hazards that would threaten the safety of those using the land.

Code Requirement: (b) Land Dedication Formula "The formula for land dedication for schools is 0.03 acres per single-family dwelling unit proposed… The Municipal Council reserves the right to adjust the acreage requirements as deemed necessary to meet the specific needs of the applicable school district. The following is the minimum acreage requirement per school: Elementary = 10 acres; Middle = 25 acres; High = 50 acres; Middle and High combined = 70 acres.

Code Requirement: (c) Cash-in-lieu of Land Dedication. "Cash-in-lieu of land dedication shall be permitted when deemed by the school board to be more appropriate.

**Note* The Canal Winchester Local School District has indicated the will take the Cash-in-lieu of land dedication. The exact amount of the fee will be determined at the discretion of the school board.*

Traffic Study

The traffic study for Middletown Farms has not been fully analyzed by the City. Due to a request by the applicant, a timeline of the ongoing traffic study is detailed below for City Council to view:

- 2/1/2018 - The Middletown Farms traffic study MOU submitted by Westport Homes was sent out for review for the 2/12/18 P&Z Meeting.
- 2/15/18 - Results of that traffic study MOU were received and sent to the applicant.
- 3/13/18 - The applicant scheduled an in person meeting to discuss the traffic study MOU.
- 4/11/18 - The applicant submitted a revised traffic study MOU.
- 5/2/18 - Results of the 4/11/18 MOU was sent to the applicant.
- 5/9/18 - The applicant submitted revisions to the MOU.
- 5/11/18 - Staff's comments on the 5/9/18 MOU was sent to the applicant.
- 6/4/18 - The applicant scheduled an in person meeting to discuss the traffic study MOU.
- 6/14/18 - A revised MOU was sent to the City indicating that the full traffic study was being performed based on the 6/4/18 meeting.
- 7/19/18 - The full traffic study was submitted by the applicant and is currently being reviewed. Comments on that review will be provided at the 8/6/18 City Council Meeting.