City of Kuna
P.O. Box 13
Kuna, Idaho 83634
Phone: (208) 922-5274
Fax: (208) 922-5989
www.kunacity.id.gov

Planning & Zoning Department

Agency Notification

January 29, 2021

Notice is hereby given by the City of Kuna that the following action(s) are under consideration**:**

File Number & Case Name:	20-07-AN (Annexation) & 20-16-S (Preliminary Plat) – Arrowood Heights Subdivision
Project Description	Wendy Shrief of JUB Engineers, on behalf of Hayden Homes, requests approval for Annexation of approximately 53.16 ac. into Kuna City Limits with 33.71 ac. R-6 (Medium Density Residential); 7.59 ac. R-8 (Medium Density Residential) and 9.79 ac. C-1 (Neighborhood Commercial) zoning designations. Applicant also requests Preliminary Plat approval to subdivide approximately 41.3 ac. into 177 Single-Family Residential lots with an R-6 & R-8 (Med. Density Residential) zoning, 26 Common Lots & four (four) shared driveways. C-1 (Neighborhood Commercial) to be developed in the future (APN: S1303417354). Section 3, Township 2 North, Range 1 West.
Site Location	7445 S Ten Mile Road, Kuna 83634.
Applicant	**Hayden Homes** 1406 N Main Street, Suite 109 Meridian, ID 83642 208.869.9785
Representative	**Wendy Shrief, JUB Engineers** 2760 W Excursion Lane, Suite 400 Meridian, ID 83642 208.376.7330 wshrief@jub.com
Tentative Public Hearing Date	Tuesday, **March 23, 2021** 6:00 PM Council Chambers within Kuna City Hall, located at 751 W. 4th Street, Kuna, ID 83634
Staff Contact	Jessica Reid Kuna P&Z Staff 208.387.7731 jreid@kunaid.gov

Enclosed is information to assist you with your consideration and response. All comments as to how this action may affect the service(s) your agency provides, is greatly appreciated. Please contact staff with any questions. **If your agency needs different or additional information to review and provide comments please notify our office and they will be sent to you.** If your agency needs additional time for review, please let our office know as soon as possible. *No response within 15 business days will indicate you have no objection or comments for this project.*

J-U-B COMPANIES
THE LANGDON GROUP
GATEWAY MAPPING INC.

J-U-B ENGINEERS, INC.

October 30, 2020

City of Kuna
763 W. Avalon
Kuna, ID 83634

RE: ARROWOOD HEIGHTS SUBDIVISION– PRELIMINARY PLAT, AND ANNEXATION AND ZONING APPLICATIONS

To Whom It May Concern:

On behalf of our client, Hayden Homes, please accept this request for a preliminary plat and annexation and zoning for Arrowood Heights Subdivision; the proposed development is located on the west side of Ten Mile Road in Kuna, Idaho. The property is located immediately to the south of Memory Ranch Subdivision. The proposed development includes a total of 177 residential lots on 41.3 acres with a density of 4.29 dwelling units per acre. The property is currently located in Ada County and R-6 and R-8 zoning is requested for the property's zoning designation. C-1 zoning is being requested for a 9.79 acre property that is located adjacent to Ten Mile; the commercial property will be annexed into the City of Kuna for future development but the property is not included in the preliminary plat. The Comprehensive Plan designation for the property is Mixed-Use.

Corrected to 177 Residential Lots & 26 Common lots on updated Pre Plat Color Rendering 01.29.2021

Preliminary Plat

The design of the project is intended to provide an upscale single-family residential subdivision for Kuna residents. The 41.30 acre property will be divided into ~~207 residential lots, 25 common~~ lots, and 4 shared driveway lots. Three phases are proposed for the subdivision. The property is currently zoned RUT and located in Ada County. The average lot size in the subdivision is 5,508 square feet in size. The southern side of the proposed subdivision borders an existing County subdivision with 1 acre lots; R-6 zoning and a large common area is proposed for the area bordering the County subdivision. 16% of the subdivision property will be dedicated to open space; 12% of the subdivision will be dedicated to usable open space including a regional pathway and park areas.

There are adequate public services available to this area to serve the subdivision; The development will be served with public sewer and water provided by the City of Kuna. Fire protection will be available through the Kuna Fire Department. Storm water will be retained on site and designed by a civil engineer in accordance with City of Kuna requirements.

Access to the development will be off of Ten Mile Road; the proposed subdivision will also be connected to a Collector street which will be constructed on the northern side of the proposed

subdivision. Internal access to residential lots will be provided through public streets; standard street sections with 50' of right-of-way and 36' of pavement are proposed.

Neighborhood Meeting and Revised layout

Our client, Hayden Homes, held two Neighborhood Meetings to discuss the proposed layout with neighbors of the proposed Arrowood Heights Subdivision. At the first Neighborhood Meeting, held of September 24th, neighbors expressed concerns about proposed homes that would have bordered an existing County subdivision located to the south of Arrowood Heights. Following the meeting, Hayden Homes revamped their layout to move an open space area to the southern edge of the subdivision; several lots were also dropped from the plat to accommodate the layout change. A second Neighborhood Meeting was held on October 21st to show neighbors the proposed layout changes. The response of the neighbors to the layout changes and revised open space location was overwhelmingly positive.

Proposed Amenities

A multi-use regional pathway will be constructed on the northern side of the Kuna Canal. Several micropath connections are proposed within the subdivision to create pedestrian connections within the subdivision and to improve access to open space areas and the regional pathway. 16% of the proposed subdivision will be dedicated to open space, park areas and a basketball court are planned for open space areas.

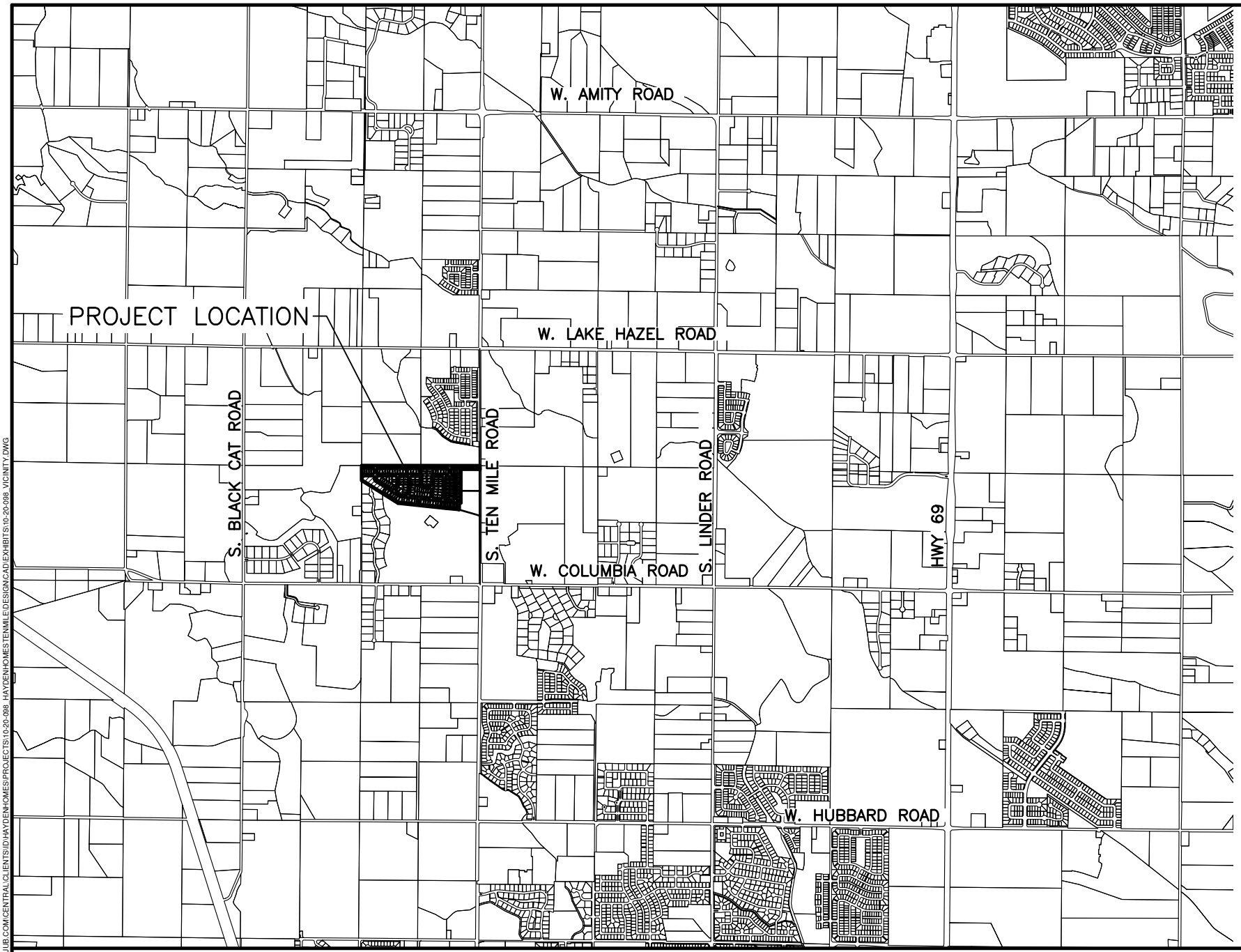
Annexation and Zoning

Our client is requesting R-6 and R-8 zoning designations for the proposed annexation of Arrowood Heights Subdivision, C-1 Zoning is proposed for the area bordering Ten Mile. R-8 zoning will be located adjacent to the future commercial area on Ten Mile and R-6 zoning is proposed for the western portion of the subdivision. The two varying densities are being proposed to allow for a transition between the future commercial development and the proposed residential subdivision. The proposed residential and commercial zoning designations are compatible with the City of Kuna's Mixed Use Comprehensive Plan designation for the area.

The development has been designed in accordance with the City of Kuna's Code and Comprehensive Plan. Please contact me at 376-7330 if you have any questions regarding this application.

Sincerely,
J-U-B ENGINEERS, Inc.

Wendy Shrief, AICP



ARROWOOD SUBDIVISION
KUNA, IDAHO

TWO MILE RADIUS VICINITY MAP

J-U-B ENGINEERS, INC.

LAST UPDATE: 11/4/2020
PLOT DATE: 11/4/2020
FILE: 10-20-098 VICINITY

Plot Date:11/4/2020 12:13 PM Plotted By: Everett Earnest
Date Created:11/4/2020 \\JUB.COM\CENTRAL\CLIENTS\ID\HAYDENHOMES\PROJECTS\10-20-098_HAYDENHOMESTENMILE\DESIGN\CAD\EXHIBITS\10-20-098_VICINITY.DWG

Wendy Shrief

From: Sub Name Mail <subnamemail@adacounty.id.gov>
Sent: Monday, October 26, 2020 7:30 AM
To: Wendy Shrief
Cc: Rob Kazarinoff
Subject: RE: Arrowwood Heights Subdivision Name Reservation

[External Email]

October 26, 2020

Rob Kazarinoff, J-U-B Engineers
Wendy Shrief, J-U-B Engineers

RE: Subdivision Name Reservation: **ARROWWOOD HEIGHTS SUBDIVISION**

At your request, I will reserve the name **Arrowwood Heights Subdivision** for your project. I can honor this reservation only as long as your project is in the approval process. Final approval can only take place when the final plat is recorded.

This reservation is available for the project as long as it is in the approval process unless the project is terminated by the client, the jurisdiction or the conditions of approval have not been met, in which case the name can be re-used by someone else.

Sincerely,

Glen Smallwood
Surveying Technician
Ada County Development Services
200 W. Front St., Boise, ID 83702
(208) 287-7926 *office*
(208) 287-7909 *fax*

From: Wendy Shrief <wshrief@jub.com>
Sent: Friday, October 23, 2020 1:04 PM
To: Sub Name Mail <subnamemail@adacounty.id.gov>
Subject: [EXTERNAL] Re: Arrowwood Heights - Subdivision Name Reservation

Rob Kazarinoff is the PLS

Wendy Shrief
208.559.1760

On Oct 23, 2020, at 1:00 PM, Sub Name Mail <subnamemail@adacounty.id.gov> wrote:

ADA COUNTY RECORDER Christopher D. Rich
BOISE IDAHO Pgs=4 LISA BATT
RUSSELL METCALF

2014-056657
07/17/2014 08:35 AM
AMOUNT:$19.00

00001475201400566570040049

QUITCLAIM DEED

FOR VALUE RECEIVED, **Dean S. Leavitt and Ann B. Leavitt,** husband and wife (collectively, the "Grantor"), hereby remise, release and forever quitclaim unto **Dean S. Leavitt and Ann B. Leavitt,** husband and wife (collectively, the "Grantee"), whose address is 7445 South Ten Mile Road, Meridian, Idaho 83642, as community property with rights of survivorship, all of their right, title and interest in and to the real property located at 7445 South Ten Mile Road, Meridian, Idaho 83642, which real property is more particularly described as follows:

The North ½ of the Southeast ¼ of Section 3, Township 2 North, Range 1 West, Boise Meridian, Ada County, Idaho,

EXCEPTING THEREFROM THE FOLLOWING:

A part of the North ½ of the Southeast ¼ of Section 3, Township 2 North, Range 1 West, Boise Meridian, Ada County, Idaho, more particularly described to wit:

Commencing at the Northeast corner of the said North ½ of the Southeast ¼;

thence South 0° 00' 00" West 1331.69 feet, along the East line of the said North ½ of the Southeast ¼, to the Southeast corner of the said North ½ of the Southeast ¼;

thence North 89° 40' 49" West 360.00 feet, along the South line of the said North ½ of the Southeast ¼, to the INITIAL POINT of this description;

thence continue North 89° 40' 49" West 2294.70 feet, along the said South line to the Southwest corner of the said North ½ of the Southeast ¼;

thence North 0° 07' 59" East 991.90 feet, along the West line of the said North ½ of the Southeast ¼, to a point on the centerline of a canal;

thence meandering along said centerline South 57° 54' 06" East 961.16 feet;

thence South 83° 45' 33" East 1083.05 feet;

thence South 84° 55' 31" East 273.08 feet;

thence South 73° 44' 33" East 470.58 feet;

thence South 61° 24' 27" East 42.96 feet, to a point on the said East line;

thence leaving said centerline South 0° 00' 00" West 80.79 feet, along the said East line;

thence North 89° 40' 49" West 360.00 feet, parallel with the said South line;

thence South 0° 00' 00" West 121.00 feet, parallel with the said East line, to the INITIAL POINT of this description.

This tract contains 28.883 acres, more or less, and is subject to a 25.00 foot road right of way along the said East line and a right of way for a canal on the Northerly side and to all other existing rights of way and easements.

A part of the Northeast ¼ of the Southeast ¼ of Section 3, Township 2 North, Range 1 West of the Boise Meridian in Ada County, Idaho, more particularly described to wit:

Commencing at the Northeast corner of the said Northeast ¼ of the Southeast ¼;

thence South 0° 00' 00" West 1210.69 feet, along the East line of the said Northeast ¼ of the Southeast ¼, to the INTIAL POINT of this description;

thence continue South 0° 00' 00" West 121.00 feet, to the Southeast corner of the said Northeast ¼ of the Southeast ¼;

thence North 89° 40' 49" West 360.00 feet, along the South line of the said Northeast ¼ of the Southeast ¼;

thence North 0° 00' 00" East 121.00 feet, parallel with the said East line;

thence South 89° 40' 49" East 360.00 feet, parallel with the said South line to the INTIAL POINT of this description;

This tract contains 1.00 acre, more or less, and is subject to a road right of way on the East 25.00 feet and to all other existing rights of way and easements.

TO HAVE AND TO HOLD the said premises, with all rights and appurtenances, as community property with rights of survivorship, unto the said Grantee, their heirs and assigns forever.

DATED this 15th day of July, 2014.

Grantor:

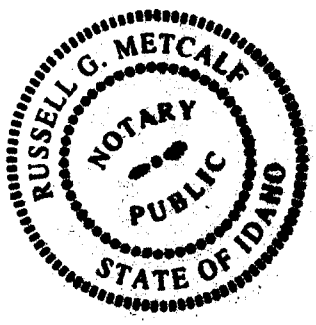
Dean S. Leavitt

Ann B. Leavitt

STATE OF IDAHO)
) ss.
County of Canyon)

On this 15th day of July, 2014, before me, the undersigned, a Notary Public in and for said County and State, personally appeared Dean S. Leavitt and Ann B. Leavitt, husband and wife, known or identified to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal on the day and year in this certificate first above written.



NOTARY PUBLIC FOR IDAHO
Residing at: Nampa, Idaho
My commission expires: 3/28/20

City of Kuna
AFFIDAVIT OF LEGAL INTEREST

City of Kuna
P.O. Box 13
Kuna, Idaho 83634
Phone: (208) 922-5274
Fax: (208) 922-5989
Web: www.Kunacity.id.gov

State of Idaho)
) ss.
County of Ada)

I, Dean S. Leavitt (**Name**), 7445 S. Ten Mile Rd. (**Address**)

Meridian (**City**), ID (**State**) 83642 (**Zip Code**)

being first duly sworn upon oath, depose and say:

(If Applicant is also Owner of Record, skip to B)

A. That I am the record owner of the property described on the attached, and I grant my permission to Tim Mokwa for Hayden Homes Idaho LLC (Name) 1406 N Main St., Suite 109 Meridian ID 83642 (Address)

to submit the accompanying application pertaining to that property.

B. I agree to indemnify, defend and hold City of Kuna and its employees harmless from any claim or liability resulting from any dispute as to the statements contained herein or as to the ownership of the property which is the subject of the application.

C. I hereby grant permission to the City of Kuna staff to enter the subject property for the purpose of site inspections related to processing said application(s),

Dated this 22nd day of October, 2020

Dean Leavitt
Signature

Subscribed and sworn to before me the day and year first above written.

Chelsie Bardin
Notary Public for Idaho

CHELSIE BARDIN
Notary Public - State of Idaho
Commission Number 20181680
My Commission Expires Sep 4, 2024

Residing at: 1112 1st Street S Nampa ID 83651

My commission expires: Sep 4, 2024

From: noreply@civicplus.com
To: Jessica Reid; Doug Hanson
Subject: Online Form Submittal: Preliminary Plat
Date: Friday, November 13, 2020 3:18:59 PM

Preliminary Plat

Step 1

Please complete each section of application in full
NOTE: Engineering fees shall be paid by the applicant if required.

Contact/Applicant Information

Owner(s) of Record	Leavitt, Dean
Phone:	NA
Email:	NA
Address1	7445 S. Ten Mile Road
Address2	*Field not completed.*
City	Meridian
State	ID
Zip	83642
Applicant (Developer):	Tim Mokwa
Applicant (Developer) Company:	Hayden Homes
Phone:	208.869.9785
Email:	*Field not completed.*
Address1	1406 N. Main Street, Ste 109
Address2	*Field not completed.*
City	Meridian
State	ID
Zip	83642
Engineer/Representative:	Shrief, Wendy

Engineer/Representative Company:	JUB Engineers
Phone:	2083767330
Email:	wshrief@jub.com
Address1	2760 W. Excursion Ln. Suite 400
Address2	*Field not completed.*
City	Meridian
State	ID
Zip	83642

(Section Break)

Subject Property Information	
Site Address:	7445 S. Ten Mile Road
Nearest Cross Streets:	W. Columbia Rd
Parcel Number(s):	S1303417354
Section, Township, Range:	2N 1W Section 3
Property Size:	41.3
Current Land Use:	Residential / Ag
Current Zoning District:	RUT
Proposed Land Use:	Single family residential
Proposed Zoning District	R6 / R8

(Section Break)

Project Description	
Project/Subdivision Name:	Arrowood Heights Subdivision
General description of proposed project/request:	177 lot residential subdivision

Type of Use Proposed - Check all that apply:	Residential
If Other has been selected, please provide a description:	*Field not completed.*
Amenities provided with this development:	Landscaping, multi-use pathway, basketball court, active open space
(Section Break)	
Residential Project Summary (if applicable):	
Are there existing buildings?	No
Please describe existing buildings:	*Field not completed.*
Any existing buildings to remain?	No
Number of Residential Units:	177
Number of buildable lots:	177
Number of common lots and/or other lots:	~~29~~ Corrected to 26 Common Lots 01.29.2021
Type of dwellings proposed - Check all that apply:	Single-Family
Minimum square footage of structures:	1,200 sf
Gross Density (DU/Acre - Total Property):	4.29 DU / ac
Net Density (DU/Acre - Excluding Roads):	7.93 DU / ac
% of Open Space provided:	~~17%~~ Corrected to 16% Open Space with 12% Usable Open Space 01.29.2021
Acreage of Open Space:	6.86
Type of Open Space	Landscaping, multi-use pathway, basketball court, active open

provided?	space
(Section Break)	
Non-Residential Project Summary (if applicable):	
Number of building lots:	*Field not completed.*
Other lots:	*Field not completed.*
Gross floor area square footage:	*Field not completed.*
Existing:	*Field not completed.*
Hours of Operation:	*Field not completed.*
Building Height:	*Field not completed.*
Total Number of Employees:	*Field not completed.*
Max. Number of Employees at one time?	*Field not completed.*
Number & ages of students/children:	*Field not completed.*
Seating Capacity:	*Field not completed.*
Existing fencing? Type? Will it remain?	*Field not completed.*
Fencing type, size & location?	*Field not completed.*
Handicapped parking spaces:	*Field not completed.*
Total parking spaces:	*Field not completed.*
Width of driveway aisle:	*Field not completed.*
Proposed lighting:	Streetlights will meet Kuna design standards
Proposed landscaping:	*Field not completed.*
(Section Break)	

By checking the "I agree" box below, you agree and acknowledge that 1) Your

application will not be signed in the sense of a traditional paper document, 2) By signing in this alternate manner, you authorize your electronic signature to be valid and binding upon you to the same force and effect as a handwritten signature, and 3) You may still be required to provide a traditional signature at a later date.

First Name	Wendy
Last Name	Shrief
Electronic Signature Agreement	I Agree

Step 2

NOTE: A file MUST be provided for each item marked with a red asterisk (*) in order to be able to submit this application.
Once the application is deemed complete, staff will notify the applicant of the scheduled hearing date, fees due, additional copies needed, etc.

Vicinity Map	10-20-098_2 MILE VICINITY.pdf
Maintenance Agreement	Arrowood Subdivision Preliminary Plat Landscape Plan 11-2-20.pdf
Legal Description	20098_ANNEX_Legal_Desc.pdf
Proof of Ownership	Affidavit.pdf
Letter of Intent	Narrative.pdf
Commitment of Property Posting	Posting.pdf
Traffic Impact Study	TenMile TIS 03NOV20_FINAL.pdf
TIS Dropbox Link	*Field not completed.*
Subdivision Name Reservation	Subnameapproval.pdf
Phasing Plan	ARROWOOD PRE-PLAT.pdf
Landscape Plan	Arrowood Subdivision Preliminary Plat Landscape Plan 11-2-20_1.pdf
Neighborhood Meeting Certification	MtgCert.pdf
8.5" x 11" Proposed Preliminary Plat	ARROWOOD PRE-PLAT_2.pdf

24" x 36" Preliminary Plat Drawing	ARROWOOD PRE-PLAT_3.pdf
(Section Break)	
Reference	
Affidavit of Legal Interest	Click here
Commitment to Property Posting	Click here

EXHIBIT "A"

LEAVITT ANNEXATION
ANNEXATION TO THE CITY OF KUNA
LEGAL DESCRIPTION

That portion of the North Half of the Southeast Quarter of Section 3, Township 2 North, Range 1 West, Boise Meridian, Ada County, Idaho, more particularly described as follows:

BEGINNING at the east quarter corner of Section 3, Township 2 North, Range 1 West, Boise Meridian, from which the southeast corner of said Section 3 bears South 00°06'19" East, 2,663.38 feet;

Thence S00°06'19"E, 1,129.97 feet along the east line of the North Half of the Southeast Quarter of said Section 3 to the centerline of the Kuna Canal according to the official plat of Ironhorse Subdivision filed in Book 91 of Plats at Pages 10651 through 10655, Ada County Records;

Thence departing from said east line and along said centerline the following five (5) courses:

1) N 61°31'27" W, 43.03 feet;
2) N 73°51'33" W, 470.58 feet;
3) N 85°02'31" W, 273.08 feet;
4) N 83°52'33" W, 1,083.05 feet;
5) N 58°01'06" W, 961.12 feet to the west line of said North Half of the Southeast Quarter;

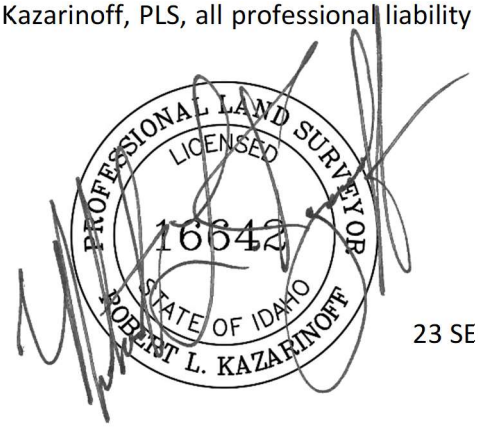
Thence N 00°00'55" E, 335.16 feet departing from said centerline and along said west line to the northwest corner of said North Half of the Southeast Quarter (center-quarter of said Section 3);
Thence S 89°53'52" E, 2,651.86 feet along the north line of said North Half of the Southeast Quarter to the **POINT OF BEGINNING**, containing 51.09 acres, more or less.

END DESCRIPTION

This description was prepared by me or under my supervision. If any portion of this description is modified or removed without the written consent of Robert L. Kazarinoff, PLS, all professional liability associated with this document is hereby declared null and void.

_____
Robert L. Kazarinoff, PLS 16642

_____
Date



23 SEPT 2020

a 250 S. Beechwood Avenue, Suite 201, Boise, ID 83709 *p* 208-376-7330 *w* www.jub.com

EXHIBIT "A"

LEAVITT REZONE
33.71 ACRE PARCEL ZONING TO R-6
LEGAL DESCRIPTION

That portion of the North Half of the Southeast Quarter of Section 3, Township 2 North, Range 1 West, Boise Meridian, Ada County, Idaho, more particularly described as follows:

BEGINNING at the east quarter corner of Section 3, Township 2 North, Range 1 West, Boise Meridian, from which the southeast corner of said Section 3 bears South 00°06'19" East, 2,663.38 feet;
Thence S00°06'19"E, 80.00 feet along the east line of the North Half of the Southeast Quarter of said Section 3;
Thence N 89°53'52" W, 678.09 feet departing from said east line;
Thence S 00°06'17" W, 129.95 feet;
Thence N 89°53'43" W, 124.50 feet;
Thence S 00°06'17" W, 274.97 feet to the beginning of a curve;
Thence along said curve to the right an arc length of 31.51 feet, having a radius of 300.00 feet, a central angle of 06°01'06", a chord bearing of S 03°06'50" W and a chord length of 31.50 feet;
Thence S 06°07'23" W, 259.47 feet;
Thence N 83°52'37" W, 51.40 feet;
Thence S 06°07'23" W, 173.31 feet to the centerline of the Kuna Canal according to the official plat of Ironhorse Subdivision filed in Book 91 of Plats at Pages 10651 through 10655, Ada County Records;
Thence N 83°52'33" W, 939.91 feet along said centerline;
Thence N 58°01'06" W, 961.12 feet along said centerline to the west line of said North Half of the Southeast Quarter;
Thence N 00°00'55" E, 335.16 feet departing from said centerline and along said west line to the northwest corner of said North Half of the Southeast Quarter (center-quarter of said Section 3);
Thence S 89°53'52" E, 2,651.86 feet along the north line of said North Half of the Southeast Quarter to the **POINT OF BEGINNING**, containing 33.71 acres, more or less.

END DESCRIPTION

This description was prepared by me or under my supervision. If any portion of this description is modified or removed without the written consent of Robert L. Kazarinoff, PLS, all professional liability associated with this document is hereby declared null and void.

_____
Robert L. Kazarinoff, PLS 16642

_____
Date 27 OCT 2020

a 250 S. Beechwood Avenue, Suite 201, Boise, ID 83709 *p* 208-376-7330 *w* www.jub.com

EXHIBIT "A"

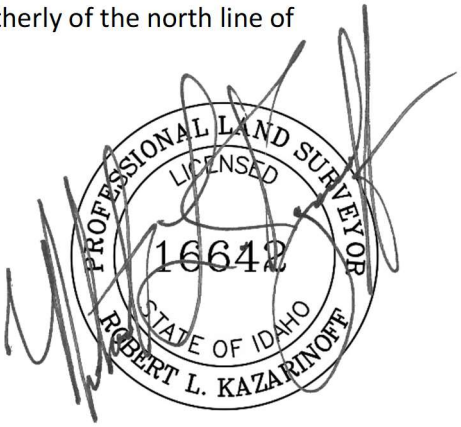
LEAVITT REZONE
7.59 ACRE PARCEL ZONING TO R-8
LEGAL DESCRIPTION

That portion of the North Half of the Southeast Quarter of Section 3, Township 2 North, Range 1 West, Boise Meridian, Ada County, Idaho, more particularly described as follows:

COMMENCING at the east quarter corner of Section 3, Township 2 North, Range 1 West, Boise Meridian, from which the southeast corner of said Section 3 bears South 00°06'19" East, 2,663.38 feet; Thence S00°06'19"E, 80.00 feet along the east line of the North Half of the Southeast Quarter of said Section 3; Thence N 89°53'52" W, 427.59 feet along a line parallel with and 80.00 feet southerly of the north line of said North Half of the Southeast Quarter to the **POINT OF BEGINNING**;

Thence S 00°06'17" W, 755.66 feet;
Thence N 85°02'35" W, 40.14 feet;
Thence S 00°06'17" W, 152.62 feet to the centerline of the Kuna Canal according to the official plat of Ironhorse Subdivision filed in Book 91 of Plats at Pages 10651 through 10655, Ada County Records;
Thence N 73°51'33" W, 19.45 feet along said centerline;
Thence N 85°02'31" W, 273.08 feet along said centerline;
Thence N 83°52'33" W, 143.14 feet along said centerline;
Thence N 06°07'23" E, 173.31 feet departing from said centerline;
Thence S 83°52'37" E, 51.40 feet;
Thence N 06°07'23" E, 259.47 feet to the beginning of a curve;
Thence along said curve to the left an arc length of 31.51 feet, having a radius of 300.00 feet, a central angle of 06°01'06", a chord bearing of N 03°06'50" E and a chord length of 31.50 feet;
Thence N 00°06'17" E, 274.97 feet;
Thence S 89°53'43" E, 124.50 feet;
Thence N 00°06'17" E, 129.95 feet to a line parallel with and 80.00 feet southerly of the north line of said North Half of the Southeast Quarter;
Thence S 89°53'52" E, 250.50 feet along said parallel line to the **POINT OF BEGINNING**, containing 7.59 acres, more or less.

END DESCRIPTION



This description was prepared by me or under my supervision. If any portion of this description is modified or removed without the written consent of Robert L. Kazarinoff, PLS, all professional liability associated with this document is hereby declared null and void.

_____
Robert L. Kazarinoff, PLS 16642 27 OCT 2020

a 250 S. Beechwood Avenue, Suite 201, Boise, ID 83709 *p* 208-376-7330 *w* www.jub.com

EXHIBIT "A"

LEAVITT REZONE
9.79 ACRE PARCEL ZONING TO C-1
LEGAL DESCRIPTION

That portion of the North Half of the Southeast Quarter of Section 3, Township 2 North, Range 1 West, Boise Meridian, Ada County, Idaho, more particularly described as follows:

COMMENCING at the east quarter corner of Section 3, Township 2 North, Range 1 West, Boise Meridian, from which the southeast corner of said Section 3 bears South 00°06'19" East, 2,663.38 feet; Thence S00°06'19"E, 80.00 feet along the east line of the North Half of the Southeast Quarter of said Section 3 to the **POINT OF BEGINNING**;

Thence continuing S 00°06'19" E, 1,049.97 feet along said east line to the centerline of the Kuna Canal according to the official plat of Ironhorse Subdivision filed in Book 91 of Plats at Pages 10651 through 10655, Ada County Records;
Thence N 61°31'27" W, 43.03 feet along said centerline;
Thence N 73°51'33" W, 451.13 feet along said centerline;
Thence N 00°06'17" E, 152.62 feet departing from said centerline;
Thence S 85°02'35" E, 40.14 feet;
Thence N 00°06'17" E, 755.66 feet to a line parallel with and 80.00 feet southerly of the north line of said North Half of the Southeast Quarter;
Thence S 89°53'52" E, 427.59 feet along said parallel line to the **POINT OF BEGINNING**, containing or 9.79 acres, more or less.

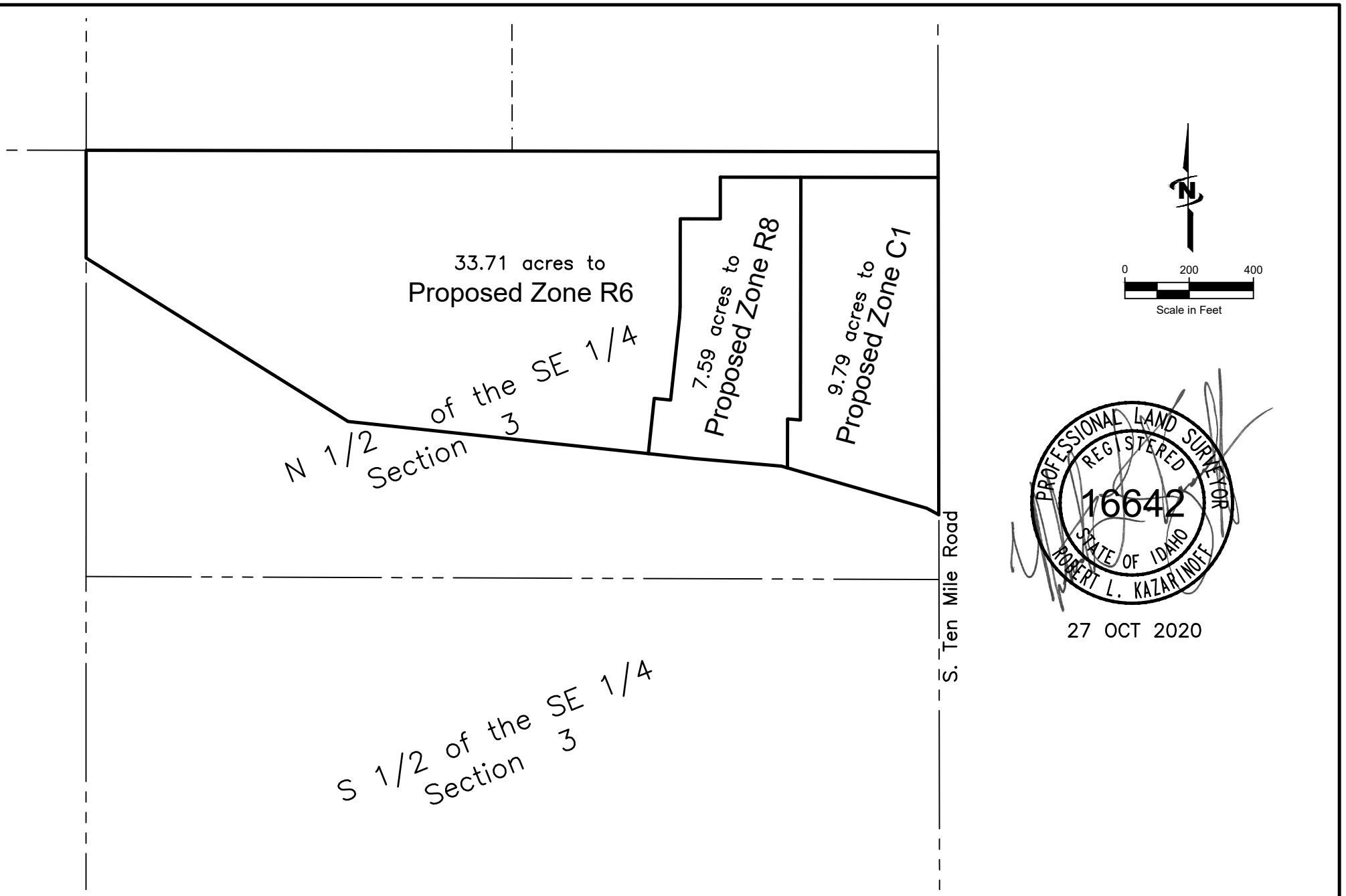
END DESCRIPTION

This description was prepared by me or under my supervision. If any portion of this description is modified or removed without the written consent of Robert L. Kazarinoff, PLS, all professional liability associated with this document is hereby declared null and void.

_____
Robert L. Kazarinoff, PLS 16642

_____
Date 27 OCT 2020

a 250 S. Beechwood Avenue, Suite 201, Boise, ID 83709 *p* 208-376-7330 *w* www.jub.com



PROFESSIONAL LAND SURVEYOR
REGISTERED
16642
STATE OF IDAHO
ROBERT L. KAZARINOFF

27 OCT 2020

EXHIBIT "B"

Leavitt Property Portions Rezoned to R6, R8 & C1

Situate in the North Half of the Southeast Quarter of
Section 3, T.2N.,R.1W., Boise Meridian, Ada County, Idaho

J-U-B ENGINEERS, INC.

LAST UPDATE: 10/27/2020
PLOT DATE: 10/27/2020
FILE: 20098_ZONING_EXHIBIT

NOTES

1. ALL LANDSCAPE SHALL BE INSTALLED IN ACCORDANCE WITH KUNA CITY ORDINANCE REQUIREMENTS.ALL LOTS WILL COMPLY WITH KUNA CITY ORDINANCE REQUIRING ONE (1) TREE PER LOT (PROVIDED BY BUILDER AND/OR DEVELOPER).
2. ALL PLANTING AREAS TO BE WATERED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM.
3. TREES SHALL NOT BE PLANTED WITHIN THE 10-CLEAR ZONE OF ALL ACHD STORM DRAIN PIPE, STRUCTURES, OR FACILITIES. SEEPAGE BEDS MUST BE PROTECTED FROM ANY AND ALL CONTAMINATION DURING THE CONSTRUCTION AND INSTALLATION OF THE LANDSCAPE IRRIGATION SYSTEM. ALL SHRUBS PLANTED OVER OR ADJACENT TO SEEPAGE BEDS TO HAVE A ROOT BALL THAT DOES NOT EXCEED18" IN DIAMETER. NO LAWN SOD TO BE PLACED OVER DRAINAGE SWALE SAND WINDOWS (IF PRESENT).
4. NO TREES SHALL IMPEDE THE 40' STREET AND DEPARTURE VISION TRIANGLES AT ALL INTERSECTIONS. NO CONIFEROUS TREES OR SHRUBS OVER 3' HIGH AT MATURITY WILL BE LOCATED WITHIN VISION TRIANGLE OR ACHD ROW. AS TREES MATURE, THE OWNER SHALL BE RESPONSIBLE FOR PRUNING TREE CANOPIES TO MEET ACHD REQUIREMENTS FOR MAINTAINING CLEAR VISIBILITY WITHIN 40' STREET AND DEPARTURE VISION TRIANGLE. TREES SHALL BE PLANTED NO CLOSER THAN 50' FROM STOP SIGNS.
5. LANDSCAPE AND TREES IN FRONT OF BUILDING LOTS ON INTERIOR STREETS TO BE COMPLETED DURING CONSTRUCTION OF THESE LOTS. TREE LOCATIONS MAY BE ALTERED TO ACCOMMODATE DRIVEWAYS AND UTILITIES. TREES SHALL NOT BE PLANTED WITHIN 5' OF WATER METERS OR UTILITY LINES.
6. PLANT LIST IS REPRESENTATIVE AND SUBJECT TO SUBSTITUTIONS OF SIMILAR SPECIES BY OWNER, SUBJECT TO CITY FORESTER'S PRE-APPROVAL. PLANTING BED DESIGN AND QUANTITIES MAY BE ALTERED DURING FINAL PLAT LANDSCAPE PLAN DESIGN. BURLAP AND WIRE BASKETS TO BE REMOVED FROM ROOT BALL AS MUCH AS POSSIBLE, AT LEAST HALFWAY DOWN THE BALL OF THE TREE. ALL NYLON ROPES TO BE COMPLETELY REMOVED FROM TREES.
7. THERE ARE NO EXISTING TREES ON SITE.

DEVELOPMENT DATA

TOTAL AREA	51.09 ACRES
RESIDENTIAL LOTS	177
COMMON LOTS	26
SHARED DRIVEWAYS	4
TOTAL LOTS	207
USABLE COMMON AREA	4.54 ACRES
EXISTING ZONING	RUT
PROPOSED ZONING	R-6 & R-8

OWNER OF RECORD

DEAN LEAVITT

7445 S. TEN MILE RD
MERIDIAN, ID 83642

DEVELOPER

TIM MAKWA
HAYDEN HOMES, LLC
1406 N. MAIN ST., STE 109
MERIDIAN, ID 83642

CIVIL ENGINEER

KEITH MORSE, P.E.
J-U-B ENGINEERS
2760 W. EXCURSION LN., STE 400
MERIDIAN, ID 83642

PLANT PALETTE

SYM	COMMON NAME	BOTANICAL NAME	SIZE
EVERGREEN TREES			
	AUSTRIAN PINE	PINUS NIGRA	6-8' HT B&B
	BLACK HILLS SPRUCE	PICEA GLAUCA 'DENSATA'	6-8' HT B&B
	FAT ALBERT BLUE SPRUCE	PICEA PUNGENS 'FAT ALBERT'	6-8' HT B&B
	MOONGLOW JUNIPER	JUNIPERUS SCOPLULORUM 'MOOGLOW'	6-8' HT B&B
	NORWAY SPRUCE	PICEA ABIES	6-8' HT B&B
	VANDERWOLFS PINE	PINUS FLEXILIS 'VANDERWOLFS'	6-8' HT B&B
SHADE TREES (CLASS III)			
	BLOODGOOD LONDON PLANETREE	PLATANUS x ACERIFOLIA 'BLOODGOOD'	2" CAL B&B
	SWAMP OAK	QUERCUS BICOLOR	2" CAL B&B
SHADE/STREET TREES (CLASS II)			
	AUTUMN PURPLE ASH	FRAXINUS AMERICANA 'AUTUMN PURPLE'	2" CAL B&B
	CRIMSON SPIRE OAK	QUERCUS ROBUR x Q. ALBA 'CRIMSCHMIDT'	2" CAL B&B
	SKYLINE HONEYLOCUST	PYRUS CALLERYANA 'GLEN'S FORM'	2" CAL B&B
	LITTLELEAF LINDEN	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE'	2" CAL B&B
	AMERICAN SWEETGUM	TILIA CORDATA	2" CAL B&B
	TULIP TREE	LIRODENDRON TULIPIFERA	2" CAL B&B
ORNAMENTAL TREES (CLASS I)			
	FLAME AMUR MAPLE	ACER GINNALA 'FLAME'	6-8' HT. MULTI-STEM
	CANADA RED CHOKECHERRY	PRUNUS VIRGINIANA 'CANADA RED'	6-8' HT. MULTI-STEM
	CRUZAN CRUSADER HAWTHORN	CRATAEGUS CRUS-GALLI 'CRUZAM'	2" CAL B&B
	HOTWINGS MAPLE	ACER TATARICUM 'GARANN'	6-8' HT. MULTI-STEM
	ROYAL RAINDROPS CRABAPPLE	MALUS x 'JFS-KW5'	2" CAL B&B
	SPRING SNOW CRABAPPLE	MALUS 'SPRINGSNOW'	2" CAL B&B

SYM	COMMON NAME	BOTANICAL NAME	SIZE
SHRUBS/ORNAMENTAL GRASSES/PERENNIALS			
	ARIZONA SUN GAILLARDIA	GAILLARDIA x 'ARIZONA SUN'	1 GAL
	BLACK EYED SUSAN	RUDBECKIA FULGIDA 'GOLDSTRUM'	1 GAL
	BLUE GRAMMA GRASS	BOUTELOUA GRACILIS 'BLONDE AMBITION'	1 GAL
	BLUE MIST SPIREA	CARYOPTERIS x CLANDONENSIS 'BLUE MIST'	2 GAL
	BLUE OAT GRASS	HELICTOTRICHON SEMPERVIRENS	1 GAL
	BLUE RUG JUNIPER	JUNIPERUS HORIZONTALIS 'WILTONI'	3 GAL
	PURPLE CONEFLOWER	ECHINACEA PURPUREA	1 GAL
	RED FLOWER CARPET ROSE	ROSA 'FLOWER CARPET- NOARE'	2 GAL
	DARTS GOLD NINEBARK	PHYSOCARPUS OPULIFOLIUS 'DART'S GOLD'	3 GAL
	STELLA DE ORO DAYLILLY	HEMEROCALLIS 'STELLA D'ORO'	1 GAL
	FINE LINE BUCKTHORN	RHAMNUS FRAGULA 'RON WILLIAMS'	5 GAL
	GRO-LOW SUMAC	RHUS AROMATICA 'GRO-LOW'	3 GAL
	RED HOT POKER	KNIPHOFIA UVARIA ' FLAMENCO'	1 GAL
	HUSKER RED PENSTEMON	PENSTEMON DIGITALIS 'HUSKER RED'	1 GAL
	IVORY HALO DOGWOOD	CORNUS ALBA 'BAILHALO'	5 GAL
	KARL FOERSTER REED GRASS	CALAMAGROSTIS ARUNDINACEA 'K.F.'	1 GAL
	LITTLE DEVIL NINEBARK	PHYSOCARPUS OPULIFOLIUS 'DONNA MAY'	3 GAL
	HIDCOTE BLUE ENGLISH LAVENDER	LAVANDULA ANGUSTIFOLIA 'HIDCOTE BLUE'	1 GAL
	IVORY TOWER YUCCA	YUCCA FILAMENTOSA 'IVORY TOWER'	3 GAL
	MAIDEN GRASS	MISCANTHUS SINENSIS 'GRACILLIMUS'	1 GAL
	BRAKELIGHTS RED YUCCA	HESPERALOE PARVIFLORA 'PERPA'	3 GAL
	SUMMERWINE NINEBARK	PHYSOCARPUS OPULIFOLIA 'SEWARD'	5 GAL
	TIGER EYE SUMAC	RHUS TYPHINA 'BAILTIGER'	5 GAL

LAWN

6' VINYL FENCE ALONG PERIMETER PROPERTY LINES (TYP).

6' VINYL FENCE W/ LATTICE TOP ADJACENT TO COMMON AREAS (TYP).

6' HT CHAINLINK FENCE ALONG KUNA CANAL. (TYP).

LANDSCAPE CALCULATIONS

RESIDENTIAL LANDSCAPE BUFFERS ARE REQUIRED TO BE PLANTED WITH THE FOLLOWING PLANTS PER 100 LINEAR FEET: TWO (2) SHADE TREES, THREE (3) EVERGREEN TREES, AND TWELVE (12) SHRUBS.

LOCATION	BUFFER WIDTH	LENGTH	REQUIRED	PROVIDED
ARMIDALE RD.	20'	2125' / 100' =	43 TREES	47.5 TREES (37 SHADE TREES + 21 ORNAMENTAL TREES)
			64 EVERGREENS	64 EVERGREENS
			255 SHRUBS	255+ SHRUBS
ARMIDALE RD. (COMMERCIAL)	20'	340' / 35' =	10 TREES	10 TREES
			49 SHRUBS	49+ SHRUBS
(1) SHADE TREE & (5) SHRUBS/ 35' (2:1) SUBSTITUTION FOR EVERGREEN AND ORNAMENTAL TREES				
COMMON AREA		158,270' / 800' =	197 TREES	199 TREES
TOTAL NUMBER OF BUFFER TREES:			314 TREES	132 TREES
TOTAL NUMBER OF COMMON AREA TREES:				199 TREES
TOTAL NUMBER OF TREES				331 TREES

ARROWOOD SUBDIVISION

KUNA, ID

PRELIMINARY PLAT LANDSCAPE PLAN

STATE OF IDAHO — LICENSED LANDSCAPE ARCHITECT — 15535

JENSENBELTS ASSOCIATES
Site Planning / Landscape Architecture
1509 Tyrell Lane, Ste 130 Boise, ID 83706
Ph. (208) 343-7175 www.jensenbelts.com

NORTH

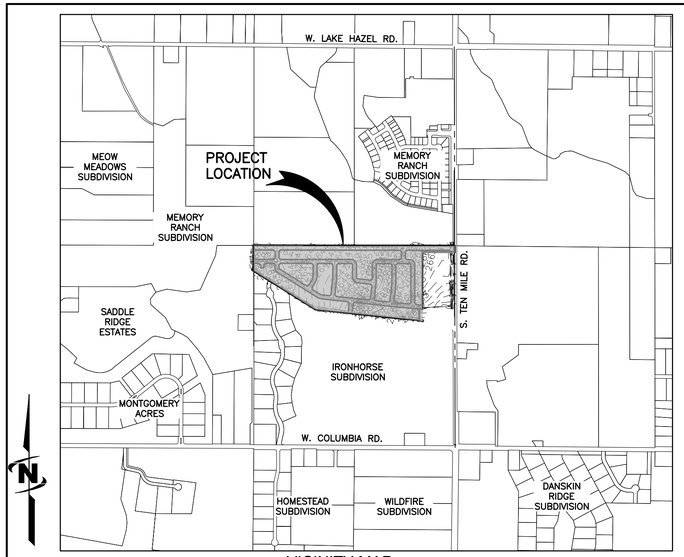
JANUARY 15, 2021

0' 80' 160' 240'
SCALE 1" = 80'

PRELIMINARY PLAT FOR

ARROWOOD HEIGHTS

SITUATED IN THE SOUTHEAST QUARTER OF SECTION 3,
TOWNSHIP 2 NORTH, RANGE 1 WEST, BOISE MERIDIAN,
CITY OF KUNA, ADA COUNTY, IDAHO
2021



VICINITY MAP
SCALE: 1"=1000'

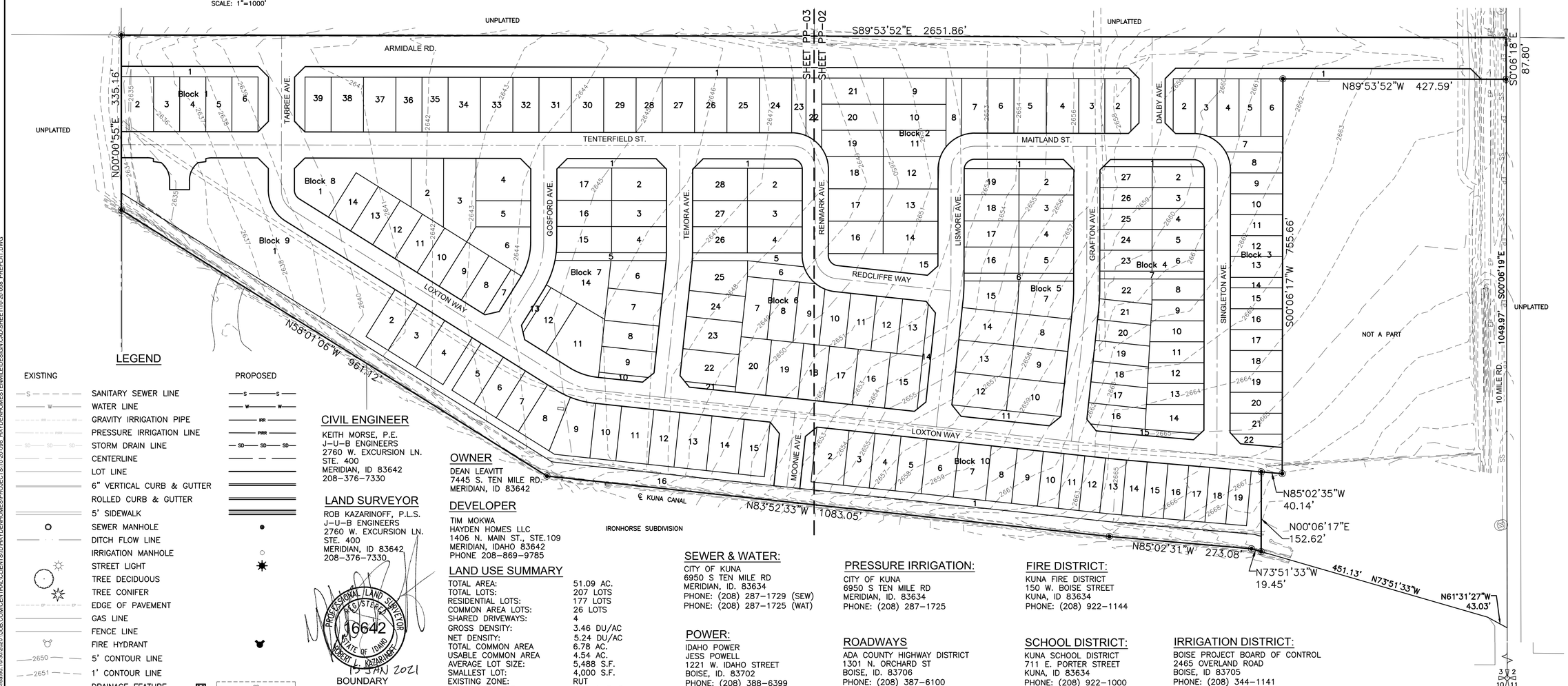
NOTES:

1. CONTOUR AND SPOT ELEVATION DATA IS REFERENCED TO NAVD '88 DATUM.
2. THE STREETS WITHIN THIS DEVELOPMENT ARE PUBLIC STREETS AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH ADA COUNTY HIGHWAY DISTRICT (ACHD) STANDARDS FOR PUBLIC STREETS WITH A MINIMUM GRADIENT OF 0.40%.
3. ALL LOTS ARE RESIDENTIAL BUILDING LOTS EXCEPT LOT 1 OF BLOCK 1, LOTS 1, 15 & 23 OF BLOCK 2, LOTS 1, 14 & 22 OF BLOCK 3, LOTS 1, 7, & 15 OF BLOCK 4, LOTS 1, 6, & 11 OF BLOCK 5, LOTS 1, 5, 14 & 21 OF BLOCK 6, LOTS 1, 5, 10 & 13 OF BLOCK 7, LOTS 1 & 7 OF BLOCK 8, LOT 1 OF BLOCK 9, AND LOT 1 of BLOCK 10 WHICH ARE COMMON AREA\DRAINAGE STORAGE LOTS. LOTS 8 & 22 OF BLOCK 2, AND LOT 7 OF BLOCK 3 ARE COMMON SHARED DRIVEWAY LOTS. LOT 16 OF BLOCK 9 IS THE KUNA CANAL EASEMENT.
4. STORMWATER RUN-OFF GENERATED ON THIS SITE SHALL HAVE A QUALITY CONTROL TREATMENT PRIOR TO BEING CONVEYED TO ONSITE STORAGE FACILITIES.
5. PUBLIC UTILITIES SHALL INCLUDE WATER, SEWER, ELECTRIC POWER, NATURAL GAS, TELEPHONE, AND CABLE TELEVISION.
6. THIS SUBDIVISION WILL RECEIVE PRESSURIZED IRRIGATION FROM THE CITY OF KUNA. THE CONSTRUCTED PRESSURE IRRIGATION SYSTEM SHALL BE MAINTAINED AND OPERATED BY THE HOME OWNERS ASSOCIATION AND GOLF COURSE.
7. THIS DEVELOPMENT RECOGNIZES SECTION 22-4503 OF IDAHO CODE, RIGHT TO FARM ACT, WHICH STATES, "NO AGRICULTURAL OPERATION, AGRICULTURAL FACILITY OR EXPANSION THEREOF SHALL BE OR BECOME A NUISANCE, PRIVATE OR PUBLIC, BY ANY CHANGED CONDITIONS IN OR ABOUT THE SURROUNDING NONAGRICULTURAL ACTIVITIES AFTER IT HAS BEEN IN OPERATION FOR MORE THAN ONE (1) YEAR, WHEN THE OPERATION, FACILITY OR EXPANSION WAS NOT A NUISANCE AT THE TIME IT BEGAN OR WAS CONSTRUCTED. THE PROVISIONS OF THIS SECTION SHALL NOT APPLY WHEN A NUISANCE RESULTS FROM THE IMPROPER OR NEGLIGENT OPERATION OF AN AGRICULTURAL OPERATION, AGRICULTURAL FACILITY OR EXPANSION THEREOF."
8. DOMESTIC AND FIRE PROTECTION WATER SHALL BE PROVIDED BY THE CITY OF KUNA.
9. SANITARY SEWER COLLECTION SHALL BE PROVIDED BY THE CITY OF KUNA.
10. IRRIGATION DITCHES THROUGH THE PROJECT SHALL BE PIPED WHERE THEY CROSS ROADWAYS WITH ALL STRUCTURES LOCATED BEYOND ANY PUBLIC RIGHT-OF-WAY.
11. LANDSCAPED COMMON LOTS ARE LOCATED THROUGHOUT THE PROJECT AND ARE IDENTIFIED ON THE PLAN. THESE LOTS SHALL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
12. BUILDING SETBACKS AND DIMENSIONAL STANDARDS SHALL BE IN ACCORDANCE WITH THE DEVELOPMENT AGREEMENT WITH THE CITY OF KUNA.
13. ANY RE-SUBDIVISION OF THIS PLAT SHALL COMPLY WITH THE APPLICABLE ZONING REGULATIONS IN AFFECT AT THE TIME OF THE RE-SUBDIVISION.
14. THE OWNER SHALL COMPLY WITH IDAHO CODE, SECTION 31-3805 OR ITS PROVISIONS THAT MAY APPLY TO IRRIGATION RIGHTS.
15. A STORMWATER DRAINAGE EASEMENT SHALL BE RESERVED ON THE DRAINAGE LOTS FOR THE BENEFIT OF ACHD. LANDSCAPING OVER SAID LOTS SHALL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION AND ACHD SHALL PROVIDE HEAVY MAINTENANCE OF THE STORM DRAINAGE FACILITIES AS DEFINED IN THE COVENANTS, CONDITIONS AND RESTRICTIONS FOR ARROWOOD SUBDIVISION.
16. THIS PROPERTY IS IN ZONE X OF THE FLOOD INSURANCE RATE MAP NO. 16001C0250 J, COMMUNITY PANEL NO. 0250, WHICH BEARS AN EFFECTIVE DATE OF OCTOBER 2, 2003 AND IS NOT IN A SPECIAL FLOOD HAZARD AREA.

BOUNDARY LEGEND

- Subdivision Boundary Line
- Section Line
- Center Line
- Right-of-way Line
- Existing Parcel Line
- Section Corner
- Quarter-Section Corner
- Property Corner

SCALE IN FEET: 0, 100, 200



LEGEND

EXISTING		PROPOSED
S	SANITARY SEWER LINE	S S
W	WATER LINE	W W
IRR	GRAVITY IRRIGATION PIPE	IRR
PRR	PRESSURE IRRIGATION LINE	PRR
SD	STORM DRAIN LINE	SD SD SD
	CENTERLINE	
	LOT LINE	
	6" VERTICAL CURB & GUTTER	
	ROLLED CURB & GUTTER	
	5' SIDEWALK	
	SEWER MANHOLE	
	DITCH FLOW LINE	
	IRRIGATION MANHOLE	
	STREET LIGHT	
	TREE DECIDUOUS	
	TREE CONIFER	
	EDGE OF PAVEMENT	
	GAS LINE	
	FENCE LINE	
	FIRE HYDRANT	
2650	5' CONTOUR LINE	
2651	1' CONTOUR LINE	
	DRAINAGE FEATURE	D.D. 50

CIVIL ENGINEER

KEITH MORSE, P.E.
J-U-B ENGINEERS
2760 W. EXCURSION LN.
STE. 400
MERIDIAN, ID 83642
208-376-7330

LAND SURVEYOR

ROB KAZARINOFF, P.L.S.
J-U-B ENGINEERS
2760 W. EXCURSION LN.
STE. 400
MERIDIAN, ID 83642
208-376-7330

PROFESSIONAL LAND SURVEYOR
REGISTERED
16642
STATE OF IDAHO
ROBERT L. KAZARINOFF
15 JAN 2021
BOUNDARY CERTIFICATION

OWNER

DEAN LEAVITT
7445 S. TEN MILE RD.
MERIDIAN, ID 83642

DEVELOPER

TIM MOKWA
HAYDEN HOMES LLC
1406 N. MAIN ST., STE.109
MERIDIAN, IDAHO 83642
PHONE 208-869-9785

LAND USE SUMMARY

TOTAL AREA:	51.09 AC.
TOTAL LOTS:	207 LOTS
RESIDENTIAL LOTS:	177 LOTS
COMMON AREA LOTS:	26 LOTS
SHARED DRIVEWAYS:	4
GROSS DENSITY:	3.46 DU/AC
NET DENSITY:	5.24 DU/AC
TOTAL COMMON AREA	6.78 AC.
USABLE COMMON AREA	4.54 AC.
AVERAGE LOT SIZE:	5,488 S.F.
SMALLEST LOT:	4,000 S.F.
EXISTING ZONE:	RUT
PROPOSED ZONE:	R-6 & R-8

SEWER & WATER:

CITY OF KUNA
6950 S TEN MILE RD
MERIDIAN, ID. 83634
PHONE: (208) 287-1729 (SEW)
PHONE: (208) 287-1725 (WAT)

POWER:

IDAHO POWER
JESS POWELL
1221 W. IDAHO STREET
BOISE, ID. 83702
PHONE: (208) 388-6399

PRESSURE IRRIGATION:

CITY OF KUNA
6950 S TEN MILE RD
MERIDIAN, ID. 83634
PHONE: (208) 287-1725

ROADWAYS

ADA COUNTY HIGHWAY DISTRICT
1301 N. ORCHARD ST
BOISE, ID. 83706
PHONE: (208) 387-6100

FIRE DISTRICT:

KUNA FIRE DISTRICT
150 W. BOISE STREET
KUNA, ID 83634
PHONE: (208) 922-1144

SCHOOL DISTRICT:

KUNA SCHOOL DISTRICT
711 E. PORTER STREET
KUNA, ID 83634
PHONE: (208) 922-1000

IRRIGATION DISTRICT:

BOISE PROJECT BOARD OF CONTROL
2465 OVERLAND ROAD
BOISE, ID 83705
PHONE: (208) 344-1141

J-U-B ENGINEERS, INC.
2760 W. Excursion Ln.
Suite 400
Meridian, ID 83642
Phone: 208.376.7330
www.jub.com

PROFESSIONAL ENGINEER
LICENSED
17892
STATE OF IDAHO
KEITH R. MORSE

NO.	REVISION	BY	APP'D	DATE
	DESCRIPTION			

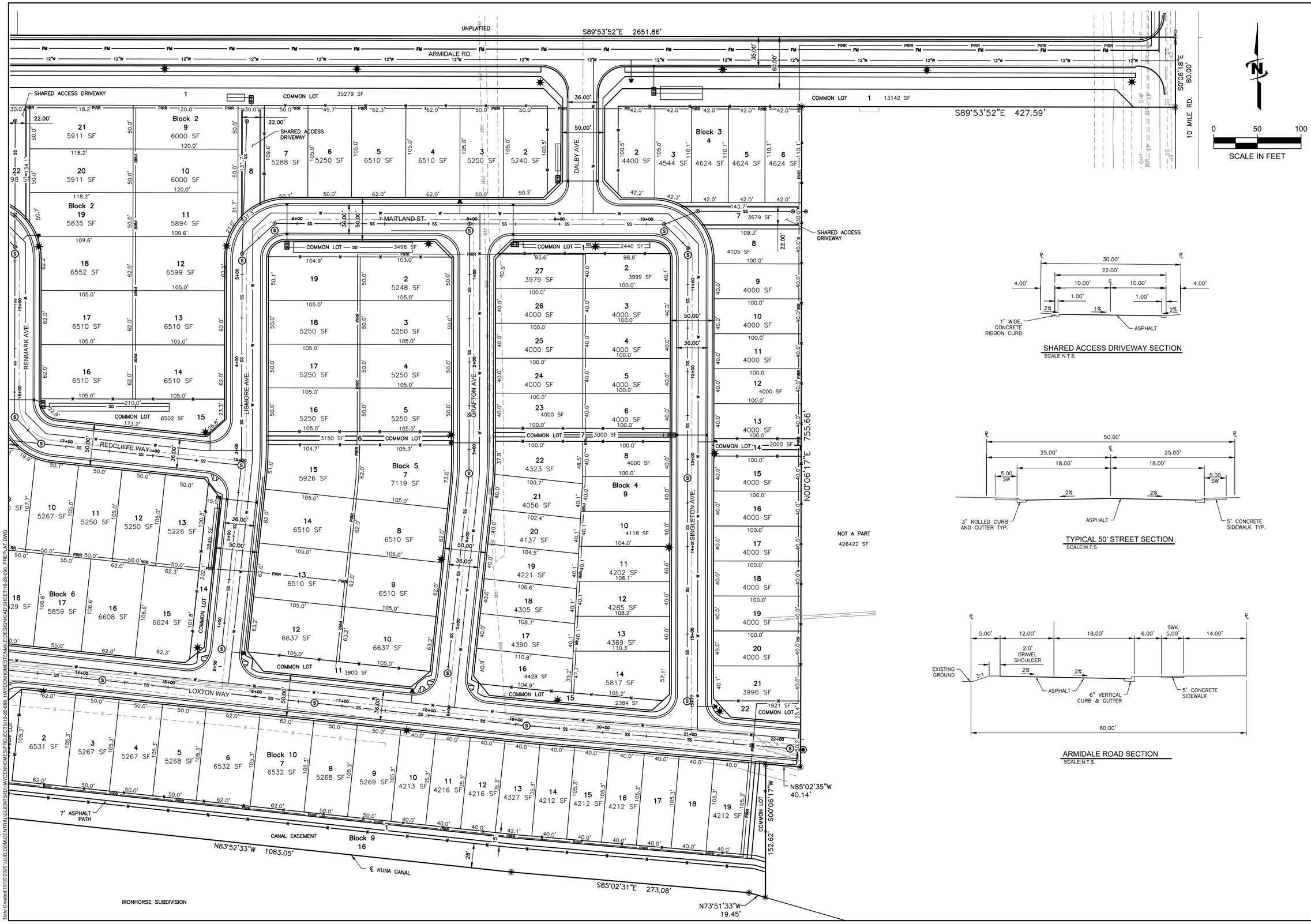
ARROWOOD HEIGHTS
CITY OF KUNA, ADA COUNTY, IDAHO

BOUNDARY AND PROJECT INFORMATION

FILE : 10-20-098 PREPLAT
JUB PROJ. # : 10-20-098
DRAWN BY: ----
DESIGN BY: ----
CHECKED BY: ----
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 1/15/2021

SHEET NUMBER:
PP-01

Plot Date:1/15/2021 9:52 AM Plotted By: Keith Morse
Date Created:10/30/2020 \\JUB.COM\CENTRAL\CLIENTS\ID\HAYDEN\HOMES\PROJECTS\10-20-098_HAYDEN\HOMESTENMILE\DESIGN\CAD\SHEET\10-20-098_PREPLAT.DWG



SHARED ACCESS DRIVEWAY SECTION
SCALE:N.T.S.

TYPICAL 50' STREET SECTION
SCALE:N.T.S.

ARMIDALE ROAD SECTION
SCALE:N.T.S.

J-U-B ENGINEERS, INC.
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PROFESSIONAL ENGINEER
LICENSED
17892
STATE OF IDAHO
KEITH H. MORSE

NO.	DESCRIPTION	BY	APP'L	DATE
	REVISION			

ARROWOOD HEIGHTS
CITY OF KUNA, ADA COUNTY, IDAHO

EXISTING AND PROPOSED CONDITIONS

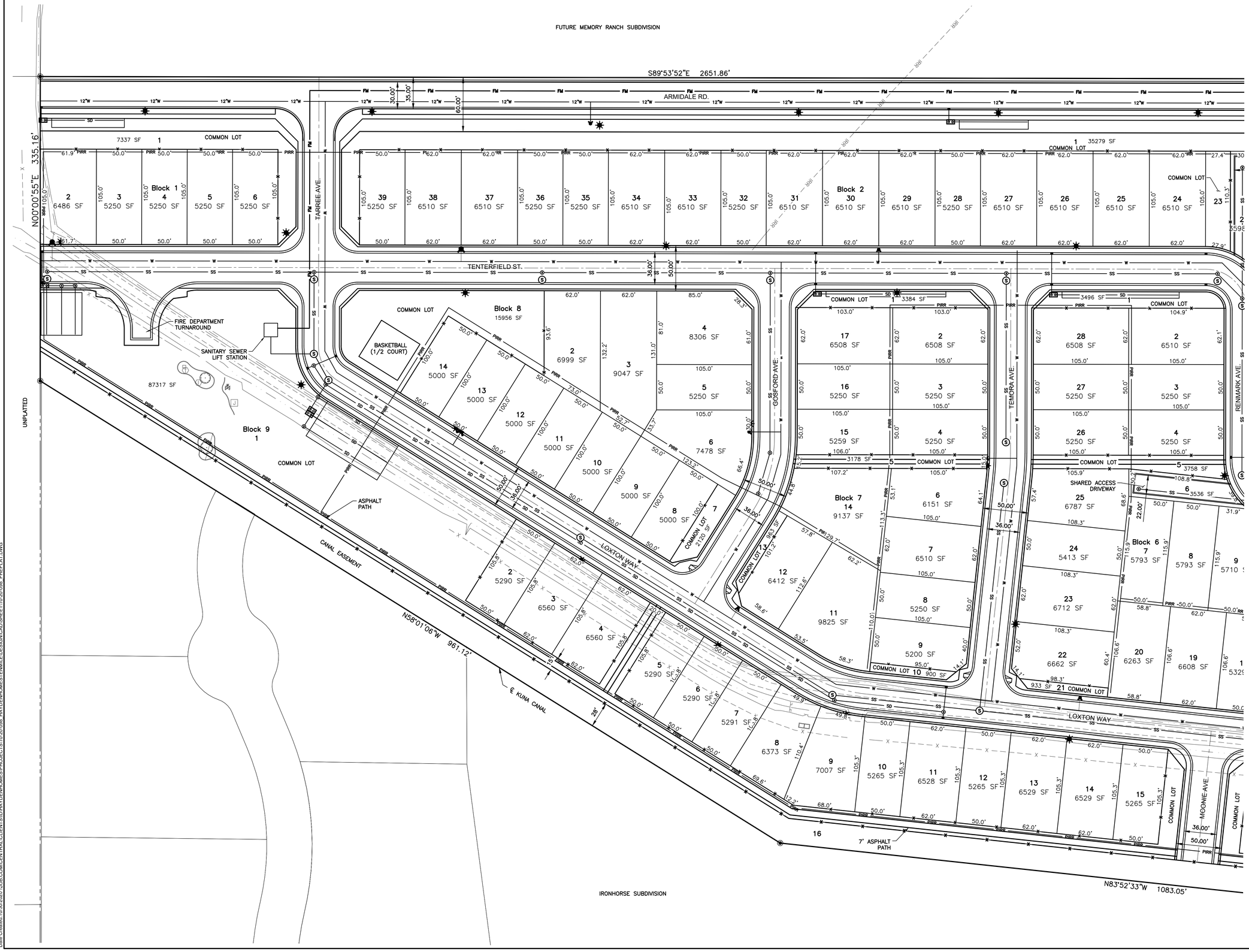
FILE :	10-20-098_PREPLAT
JUB PROJ. # :	10-20-098
DRAWN BY:	----
DESIGN BY:	----
CHECKED BY:	----

ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY

LAST UPDATED: 1/15/2021

SHEET NUMBER:
PP-02

Plot Date:1/15/2021 9:27 AM Plotted By: Keith Morse
Date Created:10/20/2020 I:\JUB.COM\CENTRAL\CLIENTS\ID\HAYDENHOMES\PROJECTS\10-20-098_HAYDENHOMESTENMILEDESIGN\CAD\SHEET\10-20-098_PREPLAT.DWG



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PROFESSIONAL ENGINEER
LICENSED
17892
STATE OF IDAHO
KEITH B. MORSE

NO.	DESCRIPTION	BY	APPR.	DATE
	REVISION			

ARROWOOD HEIGHTS
CITY OF KUNA, ADA COUNTY, IDAHO

EXISTING AND PROPOSED CONDITIONS

FILE :	10-20-098_PREPLAT
JUB PROJ. # :	10-20-098
DRAWN BY:	----
DESIGN BY:	----
CHECKED BY:	----

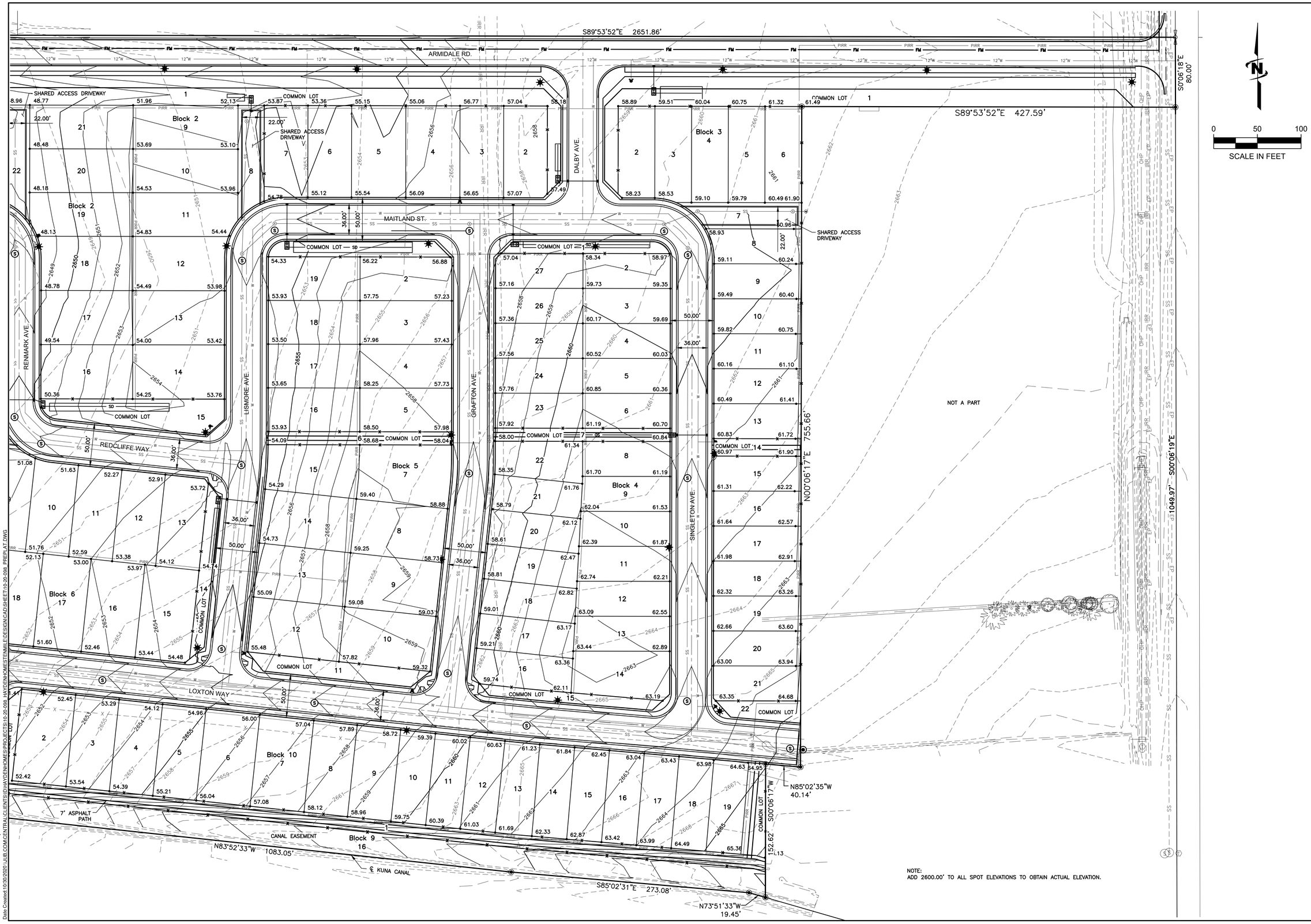
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY

LAST UPDATED: 1/15/2021

SHEET NUMBER:

PP-03

Plot Date:1/15/2021 9:27 AM Plotted By: Keith Morse
Date Created:10/30/2020 \\JUB.COM\CENTRAL\CLIENTS\ID\HAYDENHOMES\PROJECTS\10-20-098_HAYDENHOMESTENMILE\DESIGN\CAD\SHEET\10-20-098_PREPLAT.DWG



NOTE:
ADD 2600.00' TO ALL SPOT ELEVATIONS TO OBTAIN ACTUAL ELEVATION.

J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
2760 W. Excursion Ln.
Suite 400
Meridian, ID 83642
Phone: 208.376.7330
www.jub.com

PROFESSIONAL ENGINEER — LICENSED — 17892 — STATE OF IDAHO — KEITH H. MORSE

NO.	DESCRIPTION	BY	APPR.	DATE
	REVISION			

ARROWOOD HEIGHTS
CITY OF KUNA, ADA COUNTY, IDAHO

PROPOSED GRADING PLAN

FILE :	10-20-098_PREPLAT
JUB PROJ. # :	10-20-098
DRAWN BY:	----
DESIGN BY:	----
CHECKED BY:	----

ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY

LAST UPDATED: 1/15/2021

SHEET NUMBER:

PP-04

Plot Date:1/15/2021 9:28 AM Plotted By: Keith Morse
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FUTURE MEMORY RANCH SUBDIVISION

S89°53'52"E 2651.86'

N00°00'55"E 335.16'

ARMIDALE RD.

TARREE AVE.

TENTERFIELD ST.

GOSFORD AVE.

TEMORA AVE.

RENMARK AVE.

LOXTON WAY

MOONIE AVE.

FIRE DEPARTMENT TURNAROUND

SANITARY SEWER LIFT STATION

BASKETBALL (1/2 COURT)

ASPHALT PATH

7' ASPHALT PATH

SHARED ACCESS DRIVEWAY

CANAL EASEMENT

N55°01'06"W 961.12'

E KUNA CANAL

IRON HORSE SUBDIVISION

UNPLATTED

N83°52'33"W 1083.05'

Block 1 — COMMON LOT — 7337 SF

Block 2 — COMMON LOT

Block 8 — COMMON LOT

Block 7 — COMMON LOT

Block 6 — COMMON LOT

COMMON LOT 10

COMMON LOT 13

NOTE:
ADD 2600.00' TO ALL SPOT ELEVATIONS TO OBTAIN ACTUAL ELEVATION.

0 50 100
SCALE IN FEET

J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
2760 W. Excursion Ln.
Suite 400
Meridian, ID 83642
Phone: 208.376.7330
www.jub.com

PROFESSIONAL ENGINEER — LICENSED — 17892 — STATE OF IDAHO — KEITH B. MORSE

NO.	DESCRIPTION	BY	APPR.	DATE
	REVISION			

ARROWOOD HEIGHTS
CITY OF KUNA, ADA COUNTY, IDAHO

PROPOSED GRADING PLAN

FILE :	10-20-098_PREPLAT
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LAST UPDATED: 1/15/2021

SHEET NUMBER:

PP-05

Plot Date:1/15/2021 9:29 AM Plotted By: Keith Morse
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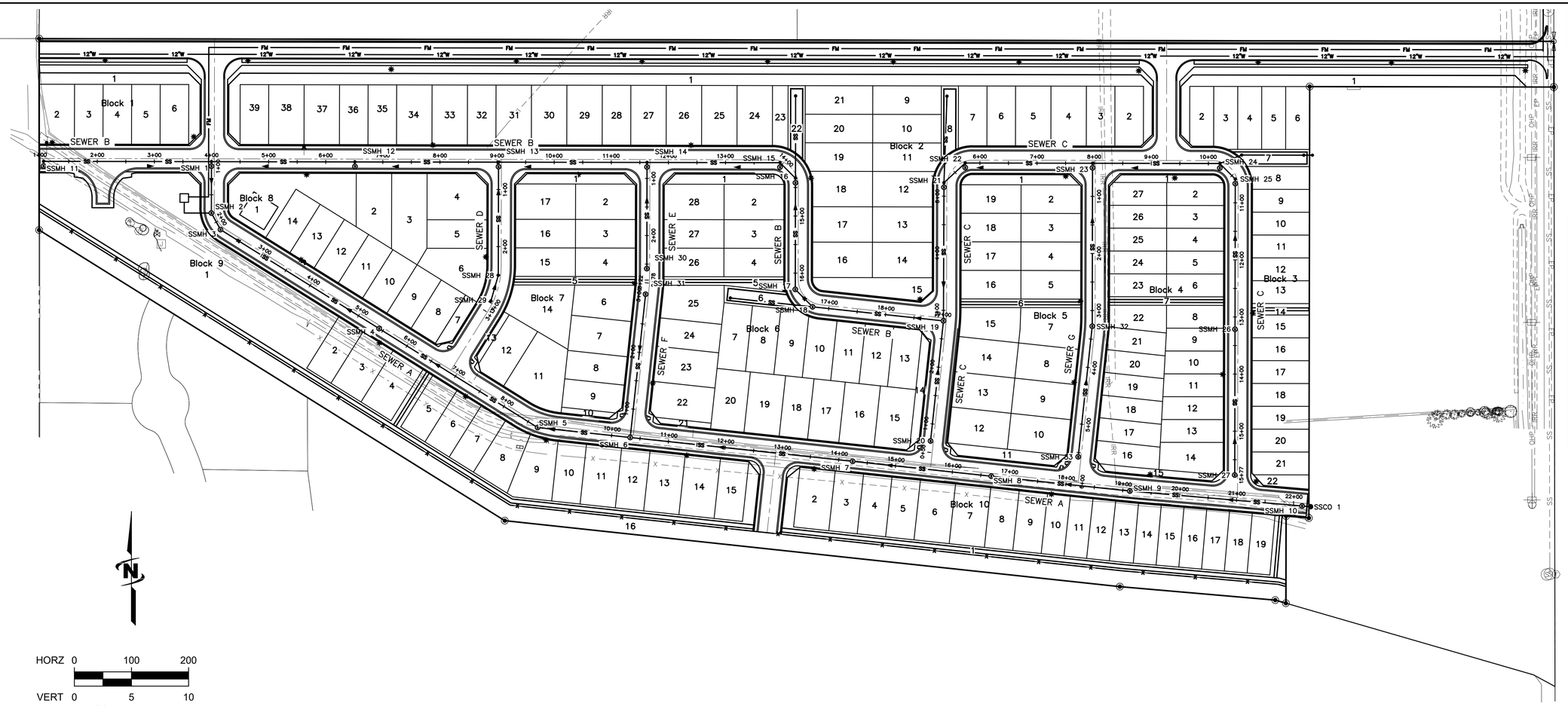

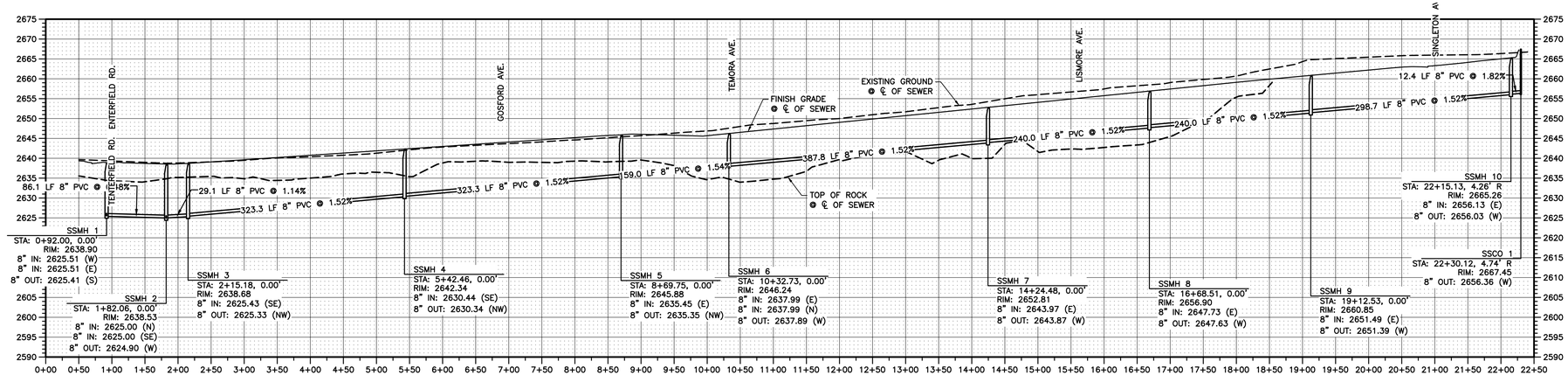

SEWER LINE A

SEE SHEET PP-07 FOR ADDITIONAL SEWER PROFILE INFORMATION

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	REVISION			

ARROWOOD HEIGHTS
CITY OF KUNA, ADA COUNTY, IDAHO

PROPOSED SEWER PLAN & PROFILE

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LAST UPDATED: 1/15/2021

SHEET NUMBER:

PP-06

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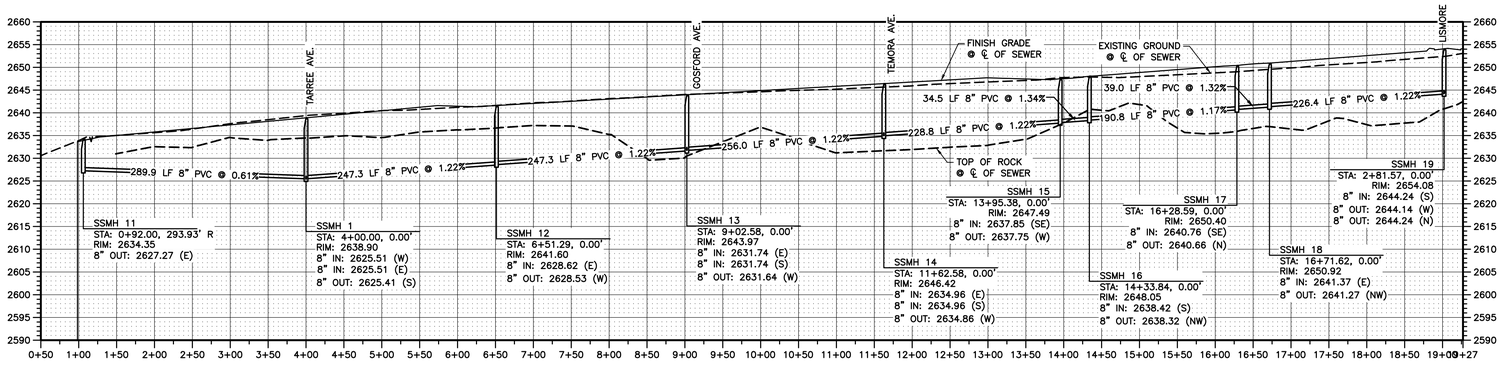

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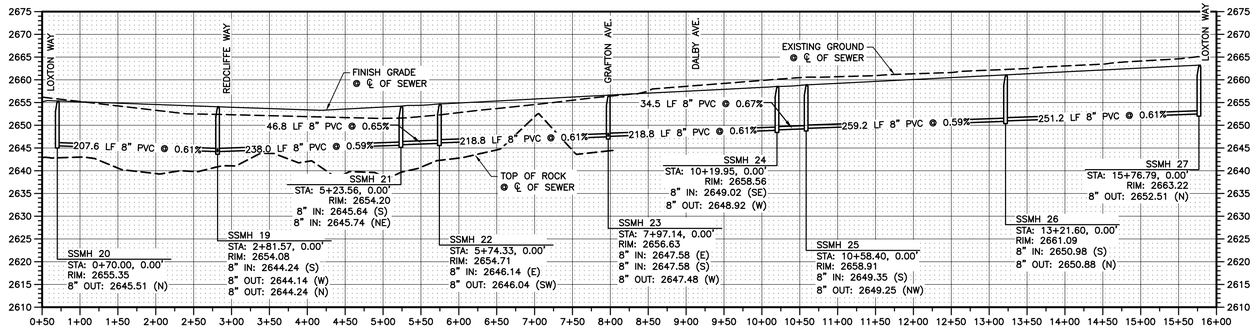

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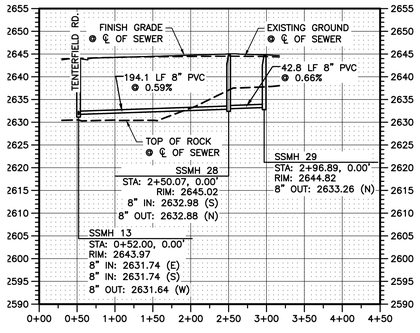

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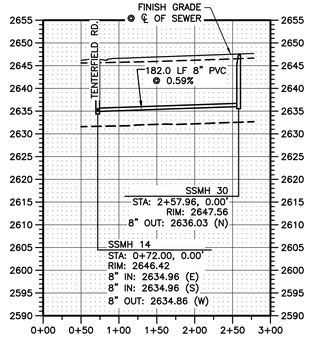

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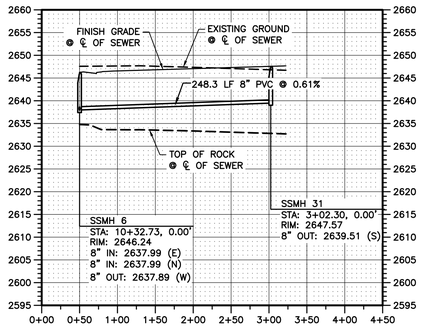

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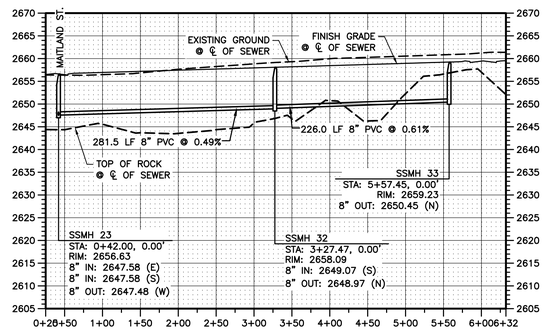

SEWER LINE G

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PROFESSIONAL ENGINEER
LICENSED
17892
STATE OF IDAHO
KEITH H. MORSE

NO.	DESCRIPTION	BY	APPR.	DATE
	REVISION			

ARROWOOD HEIGHTS
CITY OF KUNA, ADA COUNTY, IDAHO

PROPOSED SEWER PROFILES

FILE : 10-20-098 PREPLAT
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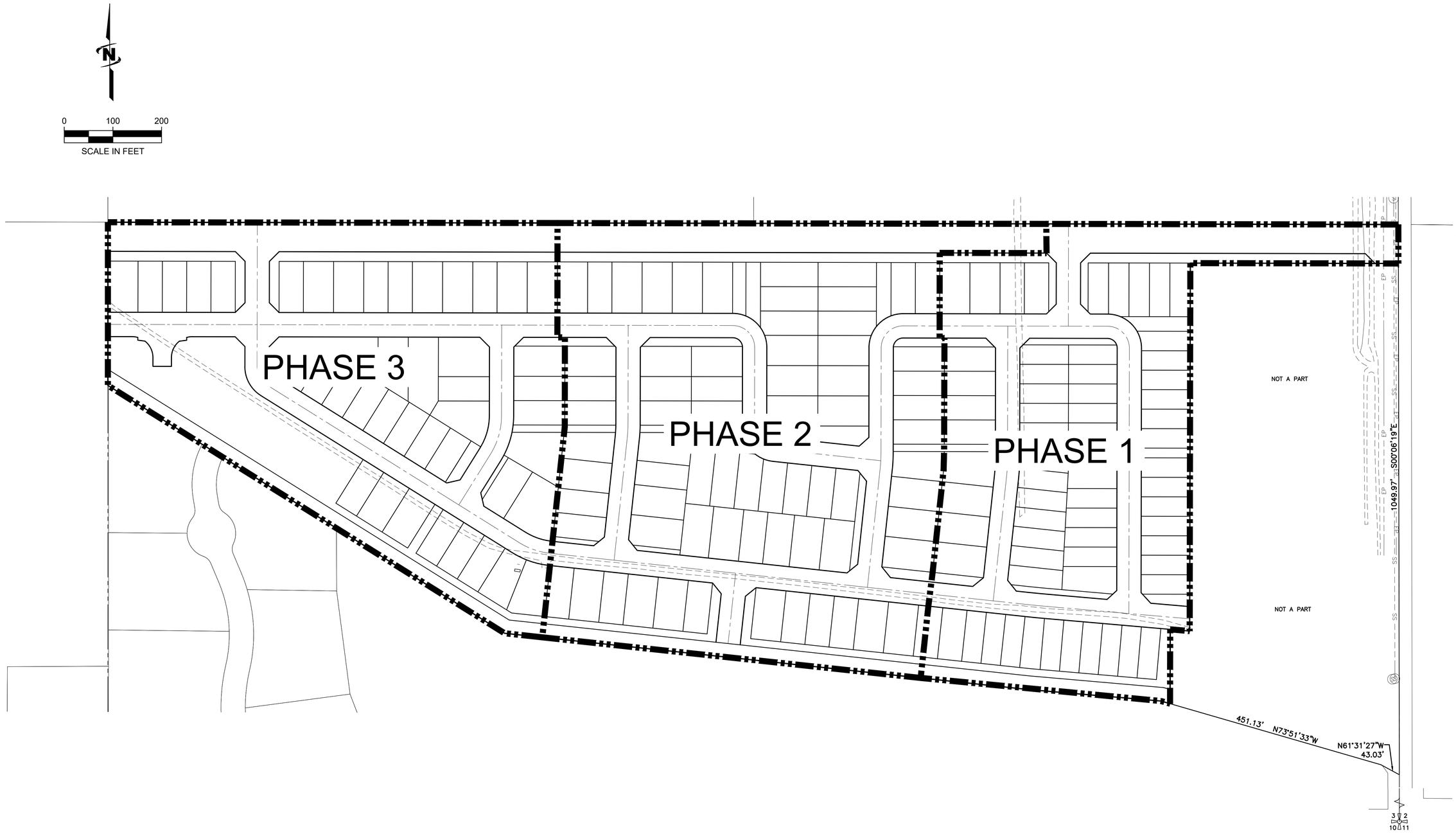
SHEET NUMBER:
PP-07

Plot Date:1/15/2021 9:30 AM Plotted By: Keith Morse
Date Created:10/30/2020 \\JUB.COM\CENTRAL\CLIENTS\IDHAYDENHOMES\PROJECTS\10-20-098_HAYDENHOMESTENMILEDESIGN\CAD\SHEET\10-20-098_PREPLAT.DWG



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17892
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NO.	DESCRIPTION	BY	APPR.	DATE
	REVISION			

ARROWOOD HEIGHTS
CITY OF KUNA, ADA COUNTY, IDAHO

PHASING PLAN

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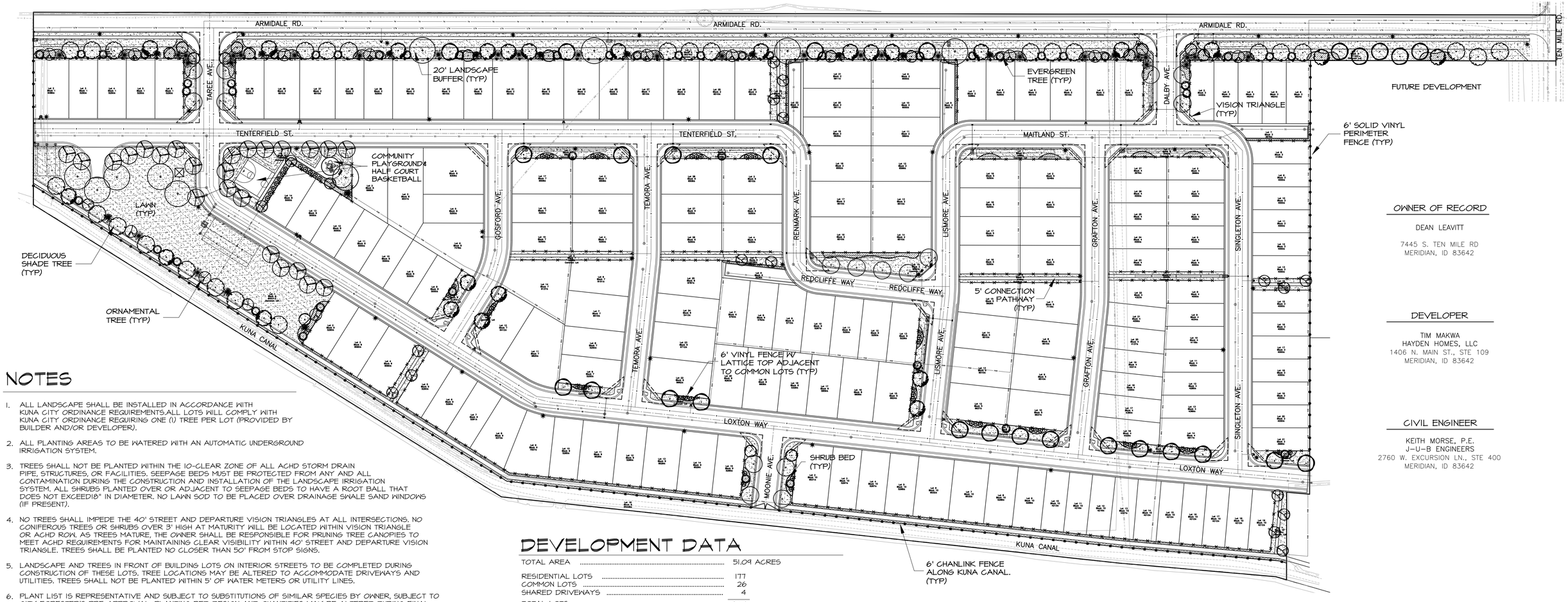
SHEET NUMBER:

PP-08

5621 Operation and Maintenance of the Common Area. Operate, maintain, and otherwise manage, or provide for the operation, maintenance, and management of, the Common Area and Landscape Easement areas (as defined in Article 3), including the repair and replacement of property damaged or destroyed by casualty loss.

Specifically, the Association shall, at Declarant's sole discretion, operate and maintain all properties owned by Declarant which are designated by Declarant for temporary or permanent use by Members of the Association. Such properties may include those lands intended for open space uses and which may be referred to as "non-buildable" lots per the Plat. Additionally, the Association may, in its discretion, limit or restrict the use of the Common Area to the Owners residing in the Subdivision.



NOTES

1. ALL LANDSCAPE SHALL BE INSTALLED IN ACCORDANCE WITH KUNA CITY ORDINANCE REQUIREMENTS.ALL LOTS WILL COMPLY WITH KUNA CITY ORDINANCE REQUIRING ONE (1) TREE PER LOT (PROVIDED BY BUILDER AND/OR DEVELOPER).
2. ALL PLANTING AREAS TO BE WATERED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM.
3. TREES SHALL NOT BE PLANTED WITHIN THE 10-CLEAR ZONE OF ALL ACHD STORM DRAIN PIPE, STRUCTURES, OR FACILITIES. SEEPAGE BEDS MUST BE PROTECTED FROM ANY AND ALL CONTAMINATION DURING THE CONSTRUCTION AND INSTALLATION OF THE LANDSCAPE IRRIGATION SYSTEM. ALL SHRUBS PLANTED OVER OR ADJACENT TO SEEPAGE BEDS TO HAVE A ROOT BALL THAT DOES NOT EXCEED18" IN DIAMETER. NO LAWN SOD TO BE PLACED OVER DRAINAGE SWALE SAND WINDOWS (IF PRESENT).
4. NO TREES SHALL IMPEDE THE 40' STREET AND DEPARTURE VISION TRIANGLES AT ALL INTERSECTIONS. NO CONIFEROUS TREES OR SHRUBS OVER 3' HIGH AT MATURITY WILL BE LOCATED WITHIN VISION TRIANGLE OR ACHD ROW. AS TREES MATURE, THE OWNER SHALL BE RESPONSIBLE FOR PRUNING TREE CANOPIES TO MEET ACHD REQUIREMENTS FOR MAINTAINING CLEAR VISIBILITY WITHIN 40' STREET AND DEPARTURE VISION TRIANGLE. TREES SHALL BE PLANTED NO CLOSER THAN 50' FROM STOP SIGNS.
5. LANDSCAPE AND TREES IN FRONT OF BUILDING LOTS ON INTERIOR STREETS TO BE COMPLETED DURING CONSTRUCTION OF THESE LOTS. TREE LOCATIONS MAY BE ALTERED TO ACCOMMODATE DRIVEWAYS AND UTILITIES. TREES SHALL NOT BE PLANTED WITHIN 5' OF WATER METERS OR UTILITY LINES.
6. PLANT LIST IS REPRESENTATIVE AND SUBJECT TO SUBSTITUTIONS OF SIMILAR SPECIES BY OWNER, SUBJECT TO CITY FORESTER'S PRE-APPROVAL. PLANTING BED DESIGN AND QUANTITIES MAY BE ALTERED DURING FINAL PLAT LANDSCAPE PLAN DESIGN. BURLAP AND WIRE BASKETS TO BE REMOVED FROM ROOT BALL AS MUCH AS POSSIBLE, AT LEAST HALFWAY DOWN THE BALL OF THE TREE. ALL NYLON ROPES TO BE COMPLETELY REMOVED FROM TREES.
7. THERE ARE NO EXISTING TREES ON SITE.

DEVELOPMENT DATA

TOTAL AREA	51.09 ACRES
RESIDENTIAL LOTS	177
COMMON LOTS	26
SHARED DRIVEWAYS	4
TOTAL LOTS	207
USABLE COMMON AREA	4.54 ACRES
EXISTING ZONING	RUT
PROPOSED ZONING	R-6 & R-8

OWNER OF RECORD

DEAN LEAVITT

7445 S. TEN MILE RD
MERIDIAN, ID 83642

DEVELOPER

TIM MAKWA
HAYDEN HOMES, LLC
1406 N. MAIN ST., STE 109
MERIDIAN, ID 83642

CIVIL ENGINEER

KEITH MORSE, P.E.
J-U-B ENGINEERS
2760 W. EXCURSION LN., STE 400
MERIDIAN, ID 83642

PLANT PALETTE

SYM	COMMON NAME	BOTANICAL NAME	SIZE
EVERGREEN TREES			
	AUSTRIAN PINE	PINUS NIGRA	6-8' HT B&B
	BLACK HILLS SPRUCE	PICEA GLAUCA 'DENSATA'	6-8' HT B&B
	FAT ALBERT BLUE SPRUCE	PICEA PUNGENS 'FAT ALBERT'	6-8' HT B&B
	MOONGLOW JUNIPER	JUNIPERUS SCOPULORUM 'MOOGLOW'	6-8' HT B&B
	NORWAY SPRUCE	PICEA ABIES	6-8' HT B&B
	VANDERWOLFS PINE	PINUS FLEXILIS 'VANDERWOLFS'	6-8' HT B&B
SHADE TREES (CLASS III)			
+	BLOODGOOD LONDON PLANETREE	PLATANUS x ACERIFOLIA 'BLOODGOOD'	2" CAL B&B
	SWAMP OAK	QUERCUS BICOLOR	2" CAL B&B
SHADE/STREET TREES (CLASS II)			
	AUTUMN PURPLE ASH	FRAXINUS AMERICANA 'AUTUMN PURPLE'	2" CAL B&B
	CRIMSON SPIRE OAK	QUERCUS ROBUR x Q. ALBA 'CRIMSCHMIDT'	2" CAL B&B
	SKYLINE HONEYLOCUST	PYRUS CALLERYANA 'GLEN'S FORM'	2" CAL B&B
	LITTLELEAF LINDEN	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE'	2" CAL B&B
	AMERICAN SWEETGUM	TILIA CORDATA	2" CAL B&B
	TULIP TREE	LIRODENDRON TULIPIFERA	2" CAL B&B
ORNAMENTAL TREES (CLASS I)			
	FLAME AMUR MAPLE	ACER GINNALA 'FLAME'	6-8' HT. MULTI-STEM
	CANADA RED CHOKECHERRY	PRUNUS VIRGINIANA 'CANADA RED'	6-8' HT. MULTI-STEM
	CRUZAN CRUSADER HAWTHORN	CRATAEGUS CRUS-GALLI 'CRUZAM'	2" CAL B&B
	HOTWINGS MAPLE	ACER TATARICUM 'GARANN'	6-8' HT. MULTI-STEM
	ROYAL RAINDROPS CRABAPPLE	MALUS x 'JFS-KW5'	2" CAL B&B
	SPRING SNOW CRABAPPLE	MALUS 'SPRINGSNOW'	2" CAL B&B

SYM	COMMON NAME	BOTANICAL NAME	SIZE
SHRUBS/ORNAMENTAL GRASSES/PERENNIALS			
	ARIZONA SUN GAILLARDIA	GAILLARDIA x 'ARIZONA SUN'	1 GAL
	BLACK EYED SUSAN	RUDBECKIA FULGIDA 'GOLDSTRUM'	1 GAL
	BLUE GRAMMA GRASS	BOUTELOUA GRACILIS 'BLONDE AMBITION'	1 GAL
	BLUE MIST SPIREA	CARYOPTERIS x CLANDONENSIS 'BLUE MIST'	2 GAL
	BLUE OAT GRASS	HELICTOTRICHON SEMPERVIRENS	1 GAL
	BLUE RUG JUNIPER	JUNIPERUS HORIZONTALIS 'WILTONI'	3 GAL
	PURPLE CONEFLOWER	ECHINACEA PURPUREA	1 GAL
	RED FLOWER CARPET ROSE	ROSA 'FLOWER CARPET- NOARE'	2 GAL
	DARTS GOLD NINEBARK	PHYSOCARPUS OPULIFOLIUS 'DART'S GOLD'	3 GAL
	STELLA DE ORO DAYLILLY	HEMEROCALLIS 'STELLA D'ORO'	1 GAL
	FINE LINE BUCKTHORN	RHAMNUS FRAGULA 'RON WILLIAMS'	5 GAL
	GRO-LOW SUMAC	RHUS AROMATICA 'GRO-LOW'	3 GAL
	RED HOT POKER	KNIPHOFIA UVARIA ' FLAMENCO'	1 GAL
	HUSKER RED PENSTEMON	PENSTEMON DIGITALIS 'HUSKER RED'	1 GAL
	IVORY HALO DOGWOOD	CORNUS ALBA 'BAILHALO'	5 GAL
	KARL FOERSTER REED GRASS	CALAMAGROSTIS ARUNDINACEA 'K.F.'	1 GAL
	LITTLE DEVIL NINEBARK	PHYSOCARPUS OPULIFOLIUS 'DONNA MAY'	3 GAL
	HIDCOTE BLUE ENGLISH LAVENDER	LAVANDULA ANGUSTIFOLIA 'HIDCOTE BLUE'	1 GAL
	IVORY TOWER YUCCA	YUCCA FILAMENTOSA 'IVORY TOWER'	3 GAL
	MAIDEN GRASS	MISCANTHUS SINENSIS 'GRACILLIMUS'	1 GAL
	BRAKELIGHTS RED YUCCA	HESPERALOE PARVIFLORA 'PERPA'	3 GAL
	SUMMERWINE NINEBARK	PHYSOCARPUS OPULIFOLIA 'SEWARD'	5 GAL
	TIGER EYE SUMAC	RHUS TYPHINA 'BAILTIGER'	5 GAL

LAWN — 6' VINYL FENCE ALONG PERIMETER PROPERTY LINES (TYP). — 6' VINYL FENCE W/ LATTICE TOP ADJACENT TO COMMON AREAS (TYP). — 6' HT CHAINLINK FENCE ALONG KUNA CANAL. (TYP).

LANDSCAPE CALCULATIONS

RESIDENTIAL LANDSCAPE BUFFERS ARE REQUIRED TO BE PLANTED WITH THE FOLLOWING PLANTS PER 100 LINEAR FEET: TWO (2) SHADE TREES, THREE (3) EVERGREEN TREES, AND TWELVE (12) SHRUBS.

LOCATION	BUFFER WIDTH	LENGTH	REQUIRED	PROVIDED
ARMIDALE RD.	20'	2125' / 100' =	43 TREES	47.5 TREES (37 SHADE TREES + 21 ORNAMENTAL TREES)
			64 EVERGREENS	64 EVERGREENS
			255 SHRUBS	255+ SHRUBS
ARMIDALE RD. (COMMERCIAL)	20'	340' / 35' =	10 TREES	10 TREES
			49 SHRUBS	49+ SHRUBS
(1) SHADE TREE & (5) SHRUBS/ 35' (2:1) SUBSTITUTION FOR EVERGREEN AND ORNAMENTAL TREES				
COMMON AREA		158,270' / 800' =	197 TREES	199 TREES
TOTAL NUMBER OF BUFFER TREES:			314 TREES	132 TREES
TOTAL NUMBER OF COMMON AREA TREES:				199 TREES
TOTAL NUMBER OF TREES				331 TREES

ARROWOOD SUBDIVISION

KUNA, ID

PRELIMINARY PLAT LANDSCAPE PLAN

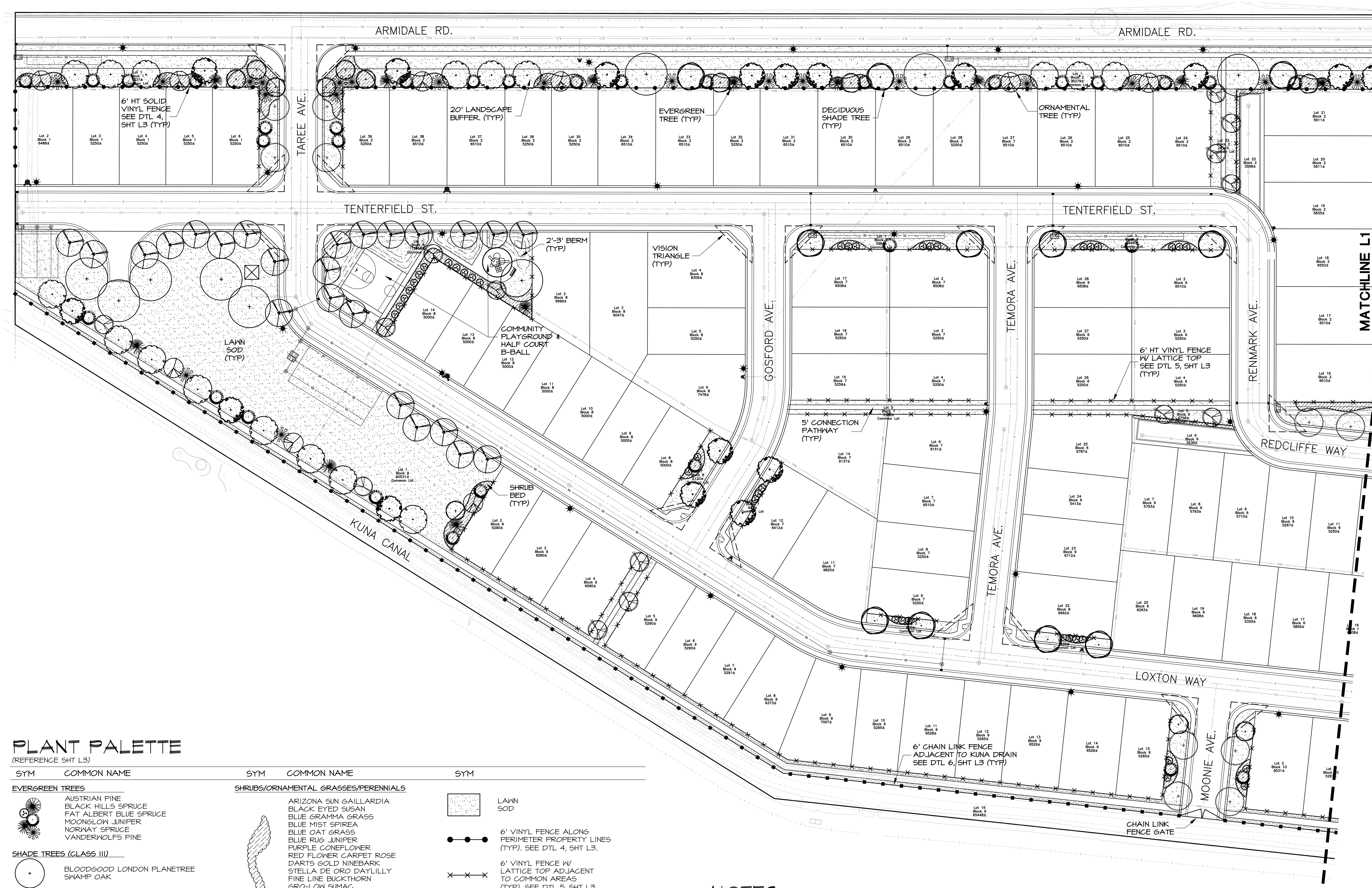
JENSENBELTS ASSOCIATES
Site Planning / Landscape Architecture
1509 Tyrell Lane, Ste 130 Boise, ID 83706
Ph. (208) 345-7175 www.jensenbelts.com

JANUARY 15, 2021

NORTH

0' 80' 160' 240'

SCALE 1" = 80'



PLANT PALETTE

(REFERENCE SHT L3)

SYM	COMMON NAME
	EVERGREEN TREES
	AUSTRIAN PINE BLACK HILLS SPRUCE FAT ALBERT BLUE SPRUCE MOONGLOW JUNIPER NORWAY SPRUCE VANDERWOLFS PINE
	SHADE TREES (CLASS III)
	BLOODGOOD LONDON PLANETREE SWAMP OAK
	STREET TREES (CLASS II)
	AUTUMN PURPLE ASH CRIMSON SPIRE OAK SKYLINE HONEYLOCUST LITTLELEAF LINDEN AMERICAN SWEETGUM TULIP TREE
	ORNAMENTAL TREES (CLASS I)
	FLAME AMUR MAPLE CANADA RED CHOKECHERRY CRUZAN CRUSADER HAWTHORN HOTWINGS MAPLE ROYAL RAINDROPS CRABAPPLE SPRING SNOW CRABAPPLE

SYM	COMMON NAME
	SHRUBS/ORNAMENTAL GRASSES/PERENNIALS
	ARIZONA SUN GAILLARDIA BLACK EYED SUSAN BLUE GRAMMA GRASS BLUE MIST SPIREA BLUE OAT GRASS BLUE RUG JUNIPER PURPLE CONEFLOWER RED FLOWER CARPET ROSE DARTS GOLD NINEBARK STELLA DE ORO DAYLILLY FINE LINE BUCKTHORN GRO-LOW SUMAC RED HOT POKER HUSKER RED PENSTEMON IVORY HALO DOGWOOD KARL FOERSTER REED GRASS LITTLE DEVIL NINEBARK HIDCOTE BLUE ENGLISH LAVENDER IVORY TOWER YUCCA MAIDEN GRASS BRAKELIGHTS RED YUCCA SUMMERWINE NINEBARK TIGER EYE SUMAC

SYM	
	LAWN SOD
	6' VINYL FENCE ALONG PERIMETER PROPERTY LINES (TYP). SEE DTL 4, SHT L3.
	6' VINYL FENCE W/ LATTICE TOP ADJACENT TO COMMON AREAS (TYP). SEE DTL 5, SHT L3.
	6' HT CHAINLINK FENCE ALONG KUNA CANAL. (TYP). SEE DTL 6, SHT L3.

NOTES

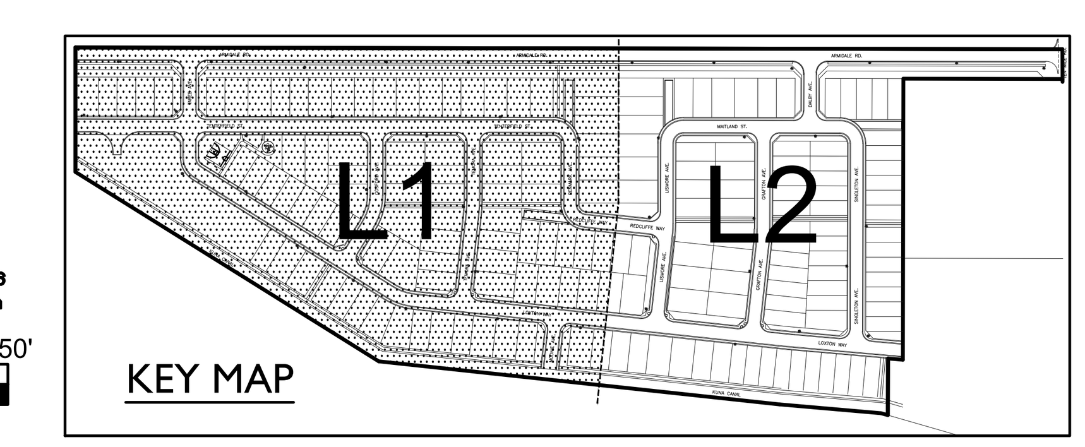
1. REFER TO SHEET L3 FOR PLANT PALETTE, DEVELOPMENT DATA, LANDSCAPE CALCULATIONS, LANDSCAPE DETAILS, AND FENCING DETAILS.

JENSENBELTS ASSOCIATES
Site Planning / Landscape Architecture
1509 Tyrell Lane, Ste 130 Boise, ID 83706
Ph. (208) 343-7175 www.jensenbelts.com

NORTH

0' 50' 100' 150'

SCALE 1" = 50'



KEY MAP

Issue Description	Date
ISSUE	11-2-20
BASE REV.	1-15-21

JENSENBELTS ASSOCIATES
Site Planning
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1509 Tyrell Lane, Ste 130
Boise, Idaho 83706
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www.jensenbelts.com

ARROWOOD SUBDIVISION
KUNA, ID

PRELIMINARY PLAT LANDSCAPE PLAN

Job Number 2076

Drawn	Checked
JJN	KCS
Scale	AS SHOWN

Sheet Title

LANDSCAPE PLAN

Sheet Number

L1

PLANT PALETTE

(REFERENCE SHT L3)

SYM	COMMON NAME
EVERGREEN TREES	
	AUSTRIAN PINE
	BLACK HILLS SPRUCE
	FAT ALBERT BLUE SPRUCE
	MOONGLOW JUNIPER
	NORWAY SPRUCE
	VANDERWOLFS PINE
SHADE TREES (CLASS III)	
	BLOODGOOD LONDON PLANETREE
	SWAMP OAK
STREET TREES (CLASS II)	
	AUTUMN PURPLE ASH
	CRIMSON SPIRE OAK
	SKYLINE HONEYLOCUST
	LITTLELEAF LINDEN
	AMERICAN SWEETGUM
	TULIP TREE
ORNAMENTAL TREES (CLASS I)	
	FLAME AMUR MAPLE
	CANADA RED CHOKECHERRY
	CRUZAN CRUSADER HAWTHORN
	HOTWINGS MAPLE
	ROYAL RAINDROPS CRABAPPLE
	SPRING SNOW CRABAPPLE
SHRUBS/ORNAMENTAL GRASSES/PERENNIALS	
	ARIZONA SUN GAILLARDIA
	BLACK EYED SUSAN
	BLUE GRAMMA GRASS
	BLUE MIST SPIREA
	BLUE OAT GRASS
	BLUE RUG JUNIPER
	PURPLE CONEFLOWER
	RED FLOWER CARPET ROSE
	DARTS GOLD NINEBARK
	STELLA DE ORO DAYLILLY
	FINE LINE BUCKTHORN
	GRO-LOW SUMAC
	RED HOT POKER
	HUSKER RED PENSTEMON
	IVORY HALO DOGWOOD
	KARL FOERSTER REED GRASS
	LITTLE DEVIL NINEBARK
	HIDCOTE BLUE ENGLISH LAVENDER
	IVORY TOWER YUCCA
	MAIDEN GRASS
	BRAKELIGHTS RED YUCCA
	SUMMERWINE NINEBARK
	TIGER EYE SUMAC
	LAWN SOD
	6' VINYL FENCE ALONG PERIMETER PROPERTY LINES (TYP). SEE DTL 4, SHT L3.
	6' VINYL FENCE W/ LATTICE TOP ADJACENT TO COMMON AREAS (TYP). SEE DTL 5, SHT L3.
	6' HT CHAINLINK FENCE ALONG KUNA CANAL. (TYP). SEE DTL 6, SHT L3.

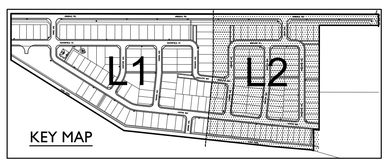
NOTES

1. REFER TO SHEET L3 FOR PLANT PALETTE, DEVELOPMENT DATA, LANDSCAPE CALCULATIONS, LANDSCAPE DETAILS, AND FENCING DETAILS.

NORTH

0' 50' 100' 150'

SCALE 1" = 50'



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Issue Description	Date
ISSUE	11-2-20
BASE REV.	1-15-21

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ARROWOOD SUBDIVISION
KUNA, ID

PRELIMINARY PLAT LANDSCAPE PLAN

Job Number 2076

Drawn	Checked
JJN	KCS

Scale AS SHOWN

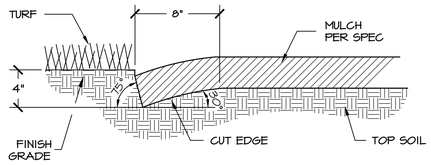
Sheet Title

LANDSCAPE PLAN

Sheet Number

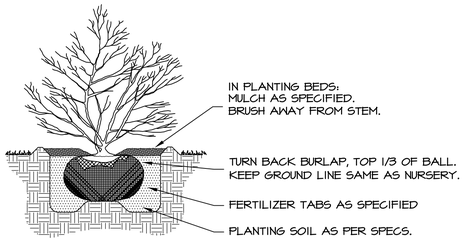
L2

3 of 4 Sheets



1 PLANTER CUT BED EDGE

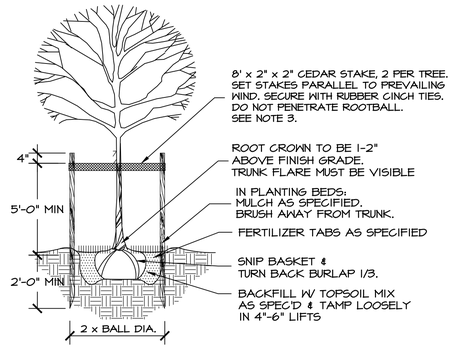
NOT TO SCALE



NOTE: DIG HOLE TWICE THE SIZE OF ROOTBALL.

2 SHRUB PLANTING

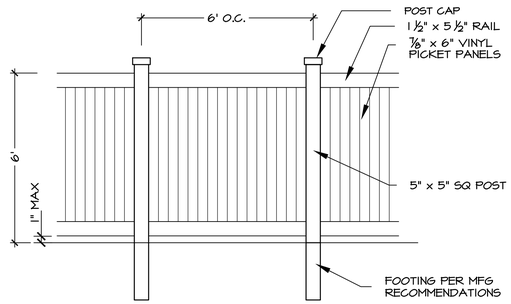
NOT TO SCALE



NOTES:
1. REMOVE ALL TWINE, ROPE, OR BINDINGS FROM ALL TRUNKS.
2. REMOVE BURLAP AND WIRE BASKETS FROM THE TOP 1/3 OF ALL ROOT BALLS AFTER PLANTING. IF SYNTHETIC WRAP/BURLAP IS USED, IT MUST BE COMPLETELY REMOVED.
3. STAKING OF TREES TO BE THE CONTRACTOR'S OPTION; HOWEVER, THE CONTRACTOR IS RESPONSIBLE TO INSURE THAT ALL TREES ARE PLANTED STRAIGHT AND REMAIN STRAIGHT FOR A MIN OF 1 YEAR. ALL STAKING SHALL BE REMOVED AT THE END OF THE 1 YEAR WARRANTY PERIOD.
4. TREES PLANTED IN TURF AREAS: REMOVE TURF 3' DIA. FROM TREE TRUNK.

3 TREE PLANTING/STAKING

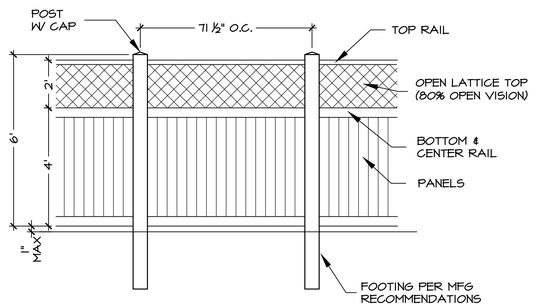
NOT TO SCALE



NOTES:
1. FENCE TO STEP DOWN TO 3' HEIGHT 20' FROM ROW.
2. VINYL FENCE STYLE MAY VARY SLIGHTLY.
3. SAND COLOR

4 VINYL PRIVACY FENCE

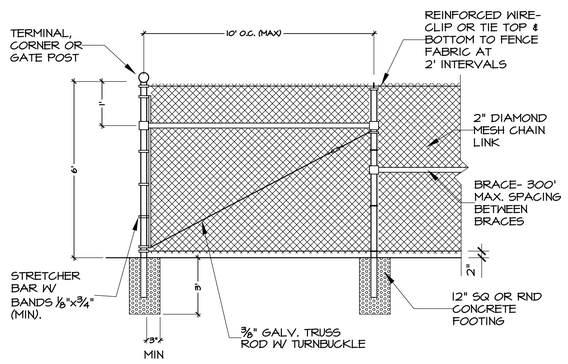
NOT TO SCALE



NOTES:
1. FENCE TO STEP DOWN TO 3' HEIGHT 20' FROM ROW.
2. VINYL LATTICE FENCE STYLE MAY VARY SLIGHTLY.
3. SAND COLOR

5 VINYL LATTICE TOP FENCE

NOT TO SCALE



6 6' CHAIN LINK FENCE

NOT TO SCALE

PET WASTE STATION TO BE DOGIPOT (1-800-364-7681) ALUMINUM DOGIPOT PET STATION MODEL #1003-L OR APPROVED EQUAL.

FINISH ON TRASH RECEPTACLE TO BE BLACK (#1206BLK-L)

QUANTITY: ONE (1)

LOCATIONS: IN DOG PARK AREA - AS SHOWN ON PLAN

COLOR NOT REPRESENTATIVE

FINISH TO BE POWDERCOATED BLACK

7 PET WASTE STATION

NOT TO SCALE

LANDSCAPE CALCULATIONS

RESIDENTIAL LANDSCAPE BUFFERS ARE REQUIRED TO BE PLANTED WITH THE FOLLOWING PLANTS PER 100 LINEAR FEET: TWO (2) SHADE TREES, THREE (3) EVERGREEN TREES, AND TWELVE (12) SHRUBS.

LOCATION	BUFFER WIDTH	LENGTH	REQUIRED	PROVIDED
ARMIDALE RD.	20'	2125' / 100' =	43 TREES	47.5 TREES (37 SHADE TREES + 21 ORNAMENTAL TREES)
			64 EVERGREENS	64 EVERGREENS
			255 SHRUBS	255+ SHRUBS
ARMIDALE RD. (COMMERCIAL)	20'	340' / 35' =	10 TREES	10 TREES
			49 SHRUBS	49+ SHRUBS
(1) SHADE TREE & (5) SHRUBS/ 35' (2:1) SUBSTITUTION FOR EVERGREEN AND ORNAMENTAL TREES				
COMMON AREA		158,270' / 800' =	197 TREES	199 TREES
TOTAL NUMBER OF BUFFER TREES:			314 TREES	132 TREES
TOTAL NUMBER OF COMMON AREA TREES:				199 TREES
TOTAL NUMBER OF TREES				331 TREES

PLANT PALETTE

SYM	COMMON NAME	BOTANICAL NAME	SIZE
EVERGREEN TREES			
	AUSTRIAN PINE	PINUS NIGRA	6-8' HT B&B
	BLACK HILLS SPRUCE	PICEA GLAUCA 'DENSATA'	6-8' HT B&B
	FAT ALBERT BLUE SPRUCE	PICEA PUNGENS 'FAT ALBERT'	6-8' HT B&B
	MOONGLOW JUNIPER	JUNIPERUS SCOPULULORUM 'MOOGLOW'	6-8' HT B&B
	NORWAY SPRUCE	PICEA ABIES	6-8' HT B&B
	VANDERWOLFS PINE	PINUS FLEXILIS 'VANDERWOLFS'	6-8' HT B&B
SHADE TREES (CLASS III)			
	BLOODGOOD LONDON PLANETREE	PLATANUS x ACERIFOLIA 'BLOODGOOD'	2" CAL B&B
	SWAMP OAK	QUERCUS BICOLOR	2" CAL B&B
SHADE/STREET TREES (CLASS II)			
	AUTUMN PURPLE ASH	FRAXINUS AMERICANA 'AUTUMN PURPLE'	2" CAL B&B
	CRIMSON SPIRE OAK	QUERCUS ROBUR x Q. ALBA 'CRIMSCHMIDT'	2" CAL B&B
	SKYLINE HONEYLOCUST	PYRUS CALLERYANA 'GLEN'S FORM'	2" CAL B&B
	LITTLELEAF LINDEN	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE'	2" CAL B&B
	AMERICAN SWEETGUM	TILIA CORDATA	2" CAL B&B
	TULIP TREE	LIRODENDRON TULIPIFERA	2" CAL B&B
ORNAMENTAL TREES (CLASS I)			
	FLAME AMUR MAPLE	ACER GINNALA 'FLAME'	6-8' HT, MULTI-STEM
	CANADA RED CHOKECHERRY	PRUNUS VIRGINIANA 'CANADA RED'	6-8' HT, MULTI-STEM
	CRUZAN CRUSADER HAWTHORN	CRATAEGUS CRUS-GALLI 'CRUZAM'	2" CAL B&B
	HOTWINGS MAPLE	ACER TATARICUM 'GARANN'	6-8' HT, MULTI-STEM
	ROYAL RAINDROPS CRABAPPLE	MALUS x 'JFS-KW5'	2" CAL B&B
	SPRING SNOW CRABAPPLE	MALUS 'SPRINGSNOW'	2" CAL B&B
SHRUBS/ORNAMENTAL GRASSES/PERENNIALS			
	ARIZONA SUN GAILLARDIA	GAILLARDIA x 'ARIZONA SUN'	1 GAL
	BLACK EYED SUSAN	RUDBECKIA FULGIDA 'GOLDSTRUM'	1 GAL
	BLUE GRAMMA GRASS	BOUTELOUA GRACILIS 'BLONDE AMBITION'	1 GAL
	BLUE MIST SPIRAEA	CARYOPTERIS x CLANDONENSIS 'BLUE MIST'	2 GAL
	BLUE OAT GRASS	HELICTOTRICHON SEMPERVIRENS	1 GAL
	BLUE RUG JUNIPER	JUNIPERUS HORIZONTALIS 'WILTONI'	3 GAL
	PURPLE CONEFLOWER	ECHINACEA PURPUREA	1 GAL
	RED FLOWER CARPET ROSE	ROSA 'FLOWER CARPET- NOARE'	2 GAL
	DARTS GOLD NINEBARK	PHYSOCARPUS OPULIFOLIUS 'DART'S GOLD'	3 GAL
	STELLA DE ORO DAYLILLY	HEMEROCALLIS 'STELLA D'ORO'	1 GAL
	FINE LINE BUCKTHORN	RHAMNUS FRAGULA 'RON WILLIAMS'	5 GAL
	GRO-LOW SUMAC	RHUS AROMATICA 'GRO-LOW'	3 GAL
	RED HOT POKER	KNIPHOFIA UVARIA ' FLAMENCO'	1 GAL
	HUSKER RED PENSTEMON	PENSTEMON DIGITALIS 'HUSKER RED'	1 GAL
	IVORY HALO DOGWOOD	CORNUS ALBA 'BAILHALO'	5 GAL
	KARL FOERSTER REED GRASS	CALAMAGROSTIS ARUNDINACEA 'K.F.'	1 GAL
	LITTLE DEVIL NINEBARK	PHYSOCARPUS OPULIFOLIUS 'DONNA MAY'	3 GAL
	HIDCOTE BLUE ENGLISH LAVENDER	LAVANDULA ANGUSTIFOLIA 'HIDCOTE BLUE'	1 GAL
	IVORY TOWER YUCCA	YUCCA FILAMENTOSA 'IVORY TOWER'	3 GAL
	MAIDEN GRASS	MISCANTHUS SINENSIS 'GRACILLIMUS'	1 GAL
	BRAKELIGHTS RED YUCCA	HESPERALOE PARVIFLORA 'PERPA'	3 GAL
	SUMMERWINE NINEBARK	PHYSOCARPUS OPULIFOLIA 'SEWARD'	5 GAL
	TIGER EYE SUMAC	RHUS TYPHINA 'BAILTIGER'	5 GAL

LAWN

6' VINYL FENCE ALONG PERIMETER PROPERTY LINES (TYP). SEE DTL 4, THIS SHT.

6' VINYL FENCE W/ LATTICE TOP ADJACENT TO COMMON AREAS (TYP). SEE DTL 5, THIS SHT.

6' HT CHAINLINK FENCE ALONG KUNA CANAL. (TYP). SEE DTL 6, THIS SHT.

NOTES

1. ALL LANDSCAPE SHALL BE INSTALLED IN ACCORDANCE WITH KUNA CITY ORDINANCE REQUIREMENTS. ALL LOTS WILL COMPLY WITH KUNA CITY ORDINANCE REQUIRING ONE (1) TREE PER LOT (PROVIDED BY BUILDER AND/OR DEVELOPER).
2. ALL PLANTING AREAS TO BE WATERED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM.
3. TREES SHALL NOT BE PLANTED WITHIN THE 10-CLEAR ZONE OF ALL ACHD STORM DRAIN PIPE, STRUCTURES, OR FACILITIES. SEEPAGE BEDS MUST BE PROTECTED FROM ANY AND ALL CONTAMINATION DURING THE CONSTRUCTION AND INSTALLATION OF THE LANDSCAPE IRRIGATION SYSTEM. ALL SHRUBS PLANTED OVER OR ADJACENT TO SEEPAGE BEDS TO HAVE A ROOT BALL THAT DOES NOT EXCEED 18" IN DIAMETER. NO LAWN SOD TO BE PLACED OVER DRAINAGE SWALE SAND WINDOWS (IF PRESENT).
4. NO TREES SHALL IMPEDE THE 40' STREET AND DEPARTURE VISION TRIANGLES AT ALL INTERSECTIONS. NO CONIFEROUS TREES OR SHRUBS OVER 3' HIGH AT MATURITY WILL BE LOCATED WITHIN VISION TRIANGLE OR ACHD ROW. AS TREES MATURE, THE OWNER SHALL BE RESPONSIBLE FOR PRUNING TREE CANOPIES TO MEET ACHD REQUIREMENTS FOR MAINTAINING CLEAR VISIBILITY WITHIN 40' STREET AND DEPARTURE VISION TRIANGLE. TREES SHALL BE PLANTED NO CLOSER THAN 50' FROM STOP SIGNS.
5. LANDSCAPE AND TREES IN FRONT OF BUILDING LOTS ON INTERIOR STREETS TO BE COMPLETED DURING CONSTRUCTION OF THESE LOTS. TREE LOCATIONS MAY BE ALTERED TO ACCOMMODATE DRIVEWAYS AND UTILITIES. TREES SHALL NOT BE PLANTED WITHIN 5' OF WATER METERS OR UTILITY LINES.
6. PLANT LIST IS REPRESENTATIVE AND SUBJECT TO SUBSTITUTIONS OF SIMILAR SPECIES BY OWNER, SUBJECT TO CITY FORESTER'S PRE-APPROVAL. PLANTING BED DESIGN AND QUANTITIES MAY BE ALTERED DURING FINAL PLAT LANDSCAPE PLAN DESIGN. BURLAP AND WIRE BASKETS TO BE REMOVED FROM ROOT BALL AS MUCH AS POSSIBLE, AT LEAST HALFWAY DOWN THE BALL OF THE TREE. ALL NYLON ROPES TO BE COMPLETELY REMOVED FROM TREES.
7. THERE ARE NO EXISTING TREE ON-SITE.

DEVELOPMENT DATA

TOTAL AREA	51.09 ACRES
RESIDENTIAL LOTS	177
COMMON LOTS	26
SHARED DRIVEWAYS	4
TOTAL LOTS	207
USABLE COMMON AREA	4.54 ACRES
EXISTING ZONING	RUT
PROPOSED ZONING	R-6 & R-8

OWNER OF RECORD
DEAN LEAVITT
7445 S. TEN MILE RD
MERIDIAN, ID 83642

DEVELOPER
TIM MAKWA
HAYDEN HOMES, LLC
1406 N. MAIN ST., STE 109
MERIDIAN, ID 83642

CIVIL ENGINEER
KEITH MORSE, P.E.
J-U-B ENGINEERS
2760 W. EXCURSION LN., STE 400
MERIDIAN, ID 83642

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ARROWOOD SUBDIVISION
KUNA, ID

PRELIMINARY PLAT LANDSCAPE PLAN

Job Number 2076

Drawn	Checked
JJN	KCS
Scale	AS SHOWN

Sheet Title
LANDSCAPE PLAN

Sheet Number
L3
4 of 4 Sheets

Traffic Impact Statement

Arrowood Subdivision
Kuna, Idaho

November 3, 2020

J·U·B ENGINEERS, INC.

TRAFFIC IMPACT STATEMENT

ARROWOOD SUBDIVISION DEVELOPMENT

KUNA, ID

NOVEMBER 3, 2020

PREPARED BY:

J-U-B ENGINEERS, INC.

392 East Winchester Street, Suite 300
Salt Lake City, UT 84107

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1. EXECUTIVE SUMMARY

The proposed Arrowood Subdivision (Project) site is located west of South Ten Mile Road between Lake Hazel Road and West Columbia Road near Kuna, Idaho (**Figure 1**). The Project is proposed on existing vacant land west of South Ten Mile Road. The Project consists of 181 dwelling units that will be accessed via two access points to a future collector road that will connect to South Ten Mile Road. The Project is anticipated to be built out and generating traffic by 2026.

Based upon the existing and future traffic analysis, the proposed Project results in a slight increase in delay for some traffic turning movements at the intersection of Lake Hazel Road and South Ten Mile Road under the future background conditions (2026) without project traffic. The traffic analysis for existing conditions indicates that the intersection of Lake Hazel Road and South Ten Mile Road currently operates at an acceptable level of service. However, the analysis for buildout year (2026) without Project traffic indicates that delay will increase, and the intersection will operate at an unacceptable level of service (LOS F). Based on the ACHD Five Year Work Plan, a traffic signal is anticipated to be the mitigation to improve traffic operations into the future. This intersection would operate at an overall LOS B under signalized AM and PM conditions, with or without the project in the year 2026. It is recommended that a signal be installed to improve operations.

The traffic analysis for buildout year (2026) with the project traffic indicates the South Ten Mile Road/ New East-West Collector Road intersection is anticipated to operate at an acceptable level of service. It is recommended that the project design the Project access points to meet City standards, and to design the access points and site layout to meet the sight distance standards in the AASHTO Green Book. Based on traffic analysis, the proposed access locations represent an acceptable traffic solution.

2. INTRODUCTION

2.1 Purpose

J-U-B Engineers, Inc. (J-U-B) has been contracted by Hayden Homes, LLC. to prepare a Traffic Impact Statement (TIS) for the proposed Arrowood Subdivision development located near Kuna, Idaho, and hereafter referred to as the Project. The purpose of this study is to evaluate the traffic impacts of the proposed Project and identify potential mitigation measures. This TIS was prepared to conform to the Ada County Highway District (ACHD) Traffic Impact Studies requirements in discussions ACHD staff and data from Community Planning Association of Southwest Idaho (COMPASS).

2.2 Proposed Development and Access

The Project site is located west of South Ten Mile Road between Lake Hazel Road and West Columbia Road near Kuna, Idaho (**Figure 1**). The Project is proposed on existing vacant land west of South Ten Mile Road. The Project consists of 181 dwelling units that will be accessed via two access points to a future collector road that will connect to South Ten Mile Road. The conceptual site plan is shown in **Appendix A**. The Project is anticipated to be completed by 2026. There are currently no existing land uses on the Project site, but the site is adjacent to residential land uses. The Project site parcel zoning is RR Rural Residential. The land uses west of the Project site include residential, while to the north, south and east, the area is unincorporated, and the use is a mix of agricultural, commercial, and residential.

Figure 1: Approximate Site Location

2.3 Study Area and Methodology

Based on coordination with Ada County Highway District (ACHD), the City of Kuna, and Community Planning Association of Southwest Idaho (COMPASS), the study area includes one existing intersection and two existing roadway segments. The study area is shown below **Figure 2.**

Intersections:

- South Ten Mile Road / Lake Hazel Road
- South Ten Mile Road / New East-West Collector Roadway

Roadway Segments:

- South Ten Mile Road from Lake Hazel Road to New Collector Road
- New East-West Collector Roadway from South Ten Mile Road to End of Project Frontage

The weekday AM and PM peak hours were determined to be the critical hours for traffic analysis purposes. Synchro models were developed for the existing 2020 AM and PM peak hours for the study intersections. Existing traffic volumes were collected on a typical weekday in February, 2020 prior to Covid-19 in the AM (7:00 – 9:00) and PM (4:00 – 6:00) peak hours. Growth rates were calculated from the information

provided by COMPASS. The forecasted 2026 horizon year conditions with and without the Project development were analyzed and mitigation measures were identified.

Figure 2: Study Area

3. ANALYSIS OF EXISTING CONDITIONS

3.1 Existing Roadway Conditions and Intersection Controls

Lake Hazel Road is classified as a principal arterial and South Ten Mile Road is a two-lane minor arterial. The posted speed limit is 50 mph on Lake Hazel Road and South Ten Mile Road.

The four-legged intersection of South Ten Mile Road / Lake Hazel Road currently operates as an all-way stop control intersection, and the lane configuration on all approaches includes a shared right/thru/left lane.

The project access points connect to a new East-West Roadway, which is anticipated to be a 2-lane collector roadway.

3.2 Data Collection

L2 Data Collection performed weekday AM (7:00 – 9:00) and PM (4:00 – 6:00) peak hour intersection turning movement counts on February 26, 2020. The traffic data is included in **Appendix B** and is summarized as follows.

- Intersection turning movement counts for the weekday AM and PM peak hour periods at one intersection:
    - South Ten Mile Road / Lake Hazel Road

3.3 Existing Traffic Operations and Level of Service

Level of Service (LOS) is a qualitative description of the level of congestion ranging from LOS A to LOS F. LOS A represents free-flowing traffic and LOS F represents gridlock. LOS is defined by the average delay per vehicle and is illustrated in **Table 1**. For a two way stop controlled intersection, LOS is reported per movement rather than for the overall intersection because most of the vehicles at an unsignalized intersection are thru traffic on the main road and experience little to no delay.

Table 1: Intersection Level of Service Criteria

Level of Service	Unsignalized Intersection (Delay per Seconds per Vehicle)	Signalized Intersection (Delay per Seconds per Vehicle)
A	⩽ 10	≤ 10
B	> 10 and ⩽ 15	> 10 and ≤ 20
C	> 15 and ⩽ 25	> 20 and ≤ 35
D	> 25 and ⩽ 35	> 35 and ≤ 55
E	> 35 and ⩽ 50	> 55 and ≤ 80
F	> 50	> 80

The minimum acceptable level of service for ACHD roadways is LOS "E" for Principal Arterials and Minor Arterials and LOS "D" for Collectors. The acceptable level of service for all intersections is based on a maximum volume to capacity (v/c) ratio of 0.90.

The results of the intersection level of service analysis for the 2020 existing conditions are summarized in **Table 2.** The detailed Synchro output results for the delay and LOS are provided in **Appendix C**.

Table 2: Existing 2020 Intersection Level of Service Summary

Intersection	Movement	AM Peak Hour				PM Peak Hour			
		Volume	Delay (sec)	v/c ratio	LOS	Volume	Delay (sec)	v/c ratio	LOS
1: South Ten Mile Road \ Lake Hazel Road	EBL	23	12.3	0.39	B	5	9.7	0.13	A
	EBT	117				57			
	ERB	25				16			
	WBL	10	10.1	0.16	B	26	11.5	0.34	B
	WBT	59				167			
	WBR	21				15			
	NBL	15	16.1	0.61	C	18	11.0	0.33	B
	NBT	358				184			
	NBR	16				10			
	SBL	34	10.8	0.27	B	29	13.3	0.51	B
	SBT	121				291			
	SBR	3				16			
	Overall Intersection		13.5	B			11.9	B	

As shown in **Table 2**, the v/c ratios for the study intersection movements are less than 0.90 and they meet the minimum acceptable criteria established by ACHD.

The existing 2020 AM and PM peak directional segment volumes on South Ten Mile Road were compared to the ACHD roadway segment maximum peak hour volume for a 2-lane facility with LOS E standard. The roadway levels of service are shown in **Table 3.**

Table 3: Existing 2020 Roadway Level of Service Summary

Segment	From	To	AM Peak Hour Directional Volume	PM Peak Hour Directional Volume	Highest Peak Hour Directional Volume	ACHD Standard for LOS D/E	Meets LOS E (Y/N)
Ten Mile	Lake Hazel Road	New East-West Collector Road (Project)	389	333	389	575	Y
New East- West Collector	South Ten Mile Road	End or Project Frontage	N/A	N/A	N/A	425	N/A

As shown above, the South Ten Mile Road segment in the study area is operating at LOS E or better in the 2020 AM and PM peak hours.

4. ANALYSIS OF BACKGROUND TRAFFIC CONDITIONS

4.1 COMPASS Growth Rates

2026 has been identified as the horizon year for the purpose of this analysis. Community Planning Association of Southwest Idaho (COMPASS) provided the PM peak hour base year (2020) and future year (2025) model run outputs (**Appendix D**). The traffic analysis zone impacted by this development is TAZ 1153 in COMPASS models. The 2025 model output contains 18 existing single-family units along with the 181 units anticipated in the Project. Prior to estimating the growth rate, the model generated Project trips were deducted from the peak hour volumes. This represents the 2025 background volumes on study roadways without the Project trips. A straight-line growth rate was then estimated using the peak hour 2020 base year volumes and the 2025 background year volumes. The linear annual growth rates were estimated for each directional segment and are presented in **Table 4**.

Table 4: Study Area Model Growth Rate

Intersection	Movement	Growth Rate
1: South Ten Mile Road \ Lake Hazel Road	EB	10.6%
	WB	6.87%
	NB	5.9%
	SB	1.4%

4.2 Planned Improvements

The ACHD Five Year Work Plan (2021-2025) was reviewed to identify planned roadway projects in the study area. A signal and intersection widening project are included in the ACHD Five Year Work Plan at the intersection of South Ten Mile Road and Lake Hazel Road. The construction date for the project is

listed as “Future,” as it is anticipated to occur after 2025. No additional planned roadway improvements are identified for South Ten Mile Road or Lake Hazel Road within the study area.

4.3 Access Geometrics

The conceptual site plan layout in **Appendix A** includes two access points onto the new East-West Collector Road that provide egress and ingress into the Project via the South Ten Mile Road/new East-West Collector Road intersection. The sight distance of the proposed access points have and the South Ten Mile Road/new East-West Collector Road intersection not been evaluated. However, as the design is finalized the access points should be designed to provide sufficient intersection sight distances to meet standards in the American Association of State Highway and Transportation Officials (AASHTO) Green Book.

4.4 Background Traffic Operations Without Improvements

The Project build out date is 2026. The COMPASS model growth trends are based upon base year 2020 and future year 2025. These growth trends were converted to linear annual growth rates as shown in **Table 4** and were then applied to 2020 traffic volumes for 6 years to derive the 2026 horizon year traffic volumes. The 2026 AM and PM peak hour background traffic volumes were estimated using the existing AM and PM peak hour volumes and applying the growth rates shown in **Table 4**.

The 2026 background volumes were analyzed with the existing intersection geometry. The results of the intersection level of service analysis for the 2026 background conditions are summarized in **Table 5** and the detailed Synchro output results for the delay and LOS are included in **Appendix C**. Most movements show a slight increase in delays compared to existing conditions. However, the northbound movement level of service is expected to degrade to LOS F in the AM peak hour condition.

Table 5: Future Background Traffic (Year 2026) Intersection Level of Service Summary

Intersection	Movement	AM Peak Hour				PM Peak Hour			
		Volume	Delay	v/c ratio	LOS	Volume	Delay	v/c ratio	LOS
1: South Ten Mile Road \ Lake Hazel Road	EBL	38	31.3	0.81	D	8	13.0	0.29	B
	EBT	290				93			
	EBR	41				26			
	WBL	14	14.2	0.31	B	31	19.2	0.60	C
	WBT	83				235			
	WBR	30				21			
	NBL	20	85.8	1.06	F	24	18.3	0.58	C
	NBT	485				249			
	NBR	22				14			
	SBL	37	15.5	0.41	C	31	23.9	0.72	C
	SBT	131				315			
	SBR	3				17			
	Overall Intersection		51.3	F			19.8	B	

As shown in **Table 5**, the northbound movement delays are anticipated to exceed allowable standards in the AM peak hour. The v/c ratios for the same movement exceeds the ACHD standard of 0.90 which is considered unacceptable.

The 2026 AM and PM peak directional segment volumes on South Ten Mile Road were compared to the ACHD roadway segment maximum peak hour volume for a 2-lane facility with LOS E standard. The roadway level of service are shown in **Table 6.**

Table 6: Future Background 2026 Roadway Level of Service Summary

Segment	From	To	AM Peak Hour Directional Volume	PM Peak Hour Directional Volume	Highest Peak Hour Directional Volume	ACHD Standard for LOS D/E	Meets LOS E (Y/N)
Ten Mile	Lake Hazel Road	New East-West Collector Road (Project)	552	378	552	575	Y
New East- West Collector	South Ten Mile Road	End or Project Frontage	N/A	N/A	N/A	425	N/A

As shown above, the South Ten Mile Road segment in the study area is expected to operate at LOS E or better in the 2026 AM and PM peak hours.

5. PROJECT TRAFFIC

5.1 Trip Generation

Trip generation for the proposed Project was estimated using data published in Institute of Transportation Engineers (ITE) ***Trip Generation**, 10th Edition*, 2017. Land Use Code (LUC) 210 Single Family Residential was used to estimate the trip generation for the project using the regression Equations. The daily, AM and PM peak hour trips are shown in **Table 7**.

Table 7: ITE Trip Generation Summary

Land Use	Dwelling Units	Land Use Code	Daily	AM In	AM Out	AM Total	PM In	PM Out	PM Total
Residential Single Family	181	210	1,795	33	101	134	114	67	180

5.2 Trip Distribution and Assignment

The trip distribution and assignment for the Project is based on the COMPASS traffic model distribution on Lake Hazel Road and South Ten Mile Road. The AM and PM peak hour Project trip assignment to the study intersections is shown in **Table 8.**

Table 8: Project Trip Assignment

Intersection	Movement	Project Trip % (Inbound/Outbound)	AM Peak Hour Project Trips	PM Peak Hour Project Trips
1: South Ten Mile Road \ Lake Hazel Road	EBL	0%	0	0
	EBT	0%	0	0
	EBR	12%	4	14
	WBL	28%	9	32
	WBT	0%	0	0
	WBR	0%	0	0
	NBL	12%	12	8
	NBT	31%	32	21
	NBR	28%	28	19
	SBL	0%	0	0
	SBT	31%	11	36
	SBR	0%	0	0
2: New East-West Collector Road / South Ten Mile Road	EBL	71%	72	48
	EBT	0%	0	0
	EBR	29%	29	19
	NBL	29%	10	33
	NBT	0%	0	0
	NBR	0%	0	0
	SBL	0%	0	0
	SBT	0%	0	0
	SBR	71%	24	81

5.3 Future Traffic Operations with Project

The Project trips were combined with the 2026 background conditions to develop the future AM and PM peak hour volumes with the Project. The results of the intersection level of service analysis for the year 2026 conditions with the Project are summarized in **Table 9**. The detailed Synchro output results for the delay and LOS are included in **Appendix B**.

As shown in **Table 9,** the South Ten Mile Road / Lake Hazel Road intersection is anticipated to operate at reduced levels of services in the AM peak hour. The South Ten Mile Road and New East-West Collector Road intersection is expected to operate at acceptable levels of service.

Table 9: 2026 with Project Intersection Level of Service Summary

Intersection	Movement	AM Peak Hour				PM Peak Hour			
		Volume	Delay	v/c ratio	LOS	Volume	Delay	v/c ratio	LOS
1: South Ten Mile Road \ Lake Hazel Road	EBL	38	29.3	0.81	D	8	14.5	0.33	B
	EBT	290				93			
	EBR	45				40			
	WBL	23	14.6	0.33	B	68	25.0	0.69	C
	WBT	83				235			
	WBR	30				21			
	NBL	33	113.6	1.15	F	32	24.4	0.69	C
	NBT	516				270			
	NBR	50				32			
	SBL	37	15.7	0.42	C	31	33.1	0.81	D
	SBT	142				351			
	SBR	3				17			
	Overall Intersection		65.0	F			26.3	D	
2: New Collector / Ten Mile Road	EBL	72	17.1	0.29	C	48	18.2	0.22	C
	EBT	0				0			
	EBR	29				19			
	NBL	10	0.1	0.01	A	33	0.9	0.04	A
	NBT	527				287			
	NBR	0				0			
	SBL	0	0	-	A	0	0	-	A
	SBT	186				387			
	SBR	24				81			

The 2026 AM and PM peak directional segment volumes on South Ten Mile Road and the New East-West Collector Road were compared to the ACHD roadway segment maximum peak hour volume for a 2-lane facility with LOS D/E standard. The roadway levels of service are shown in **Table 10**.

Table 10: 2026 With Project Roadway Level of Service Summary

Segment	From	To	AM Peak Hour Directional Volume	PM Peak Hour Directional Volume	Highest Peak Hour Directional Volume	ACHD Standard for LOS D/E	Meets LOS E (Y/N)
Ten Mile	Lake Hazel Road	New East-West Collector Road (Project)	599	378	599	575	N
New East- West Collector	South Ten Mile Road	End or Project Frontage	101	114	114	425	Y

As shown above, the South Ten Mile Road segment in the study area is not anticipated to operate at LOS E or better in the 2026 AM peak hour. The New Collector is expected to operate at LOS D or better in the AM and PM peak hours.

5.4 Future Traffic Operations with Project and Improvements

The South Ten Mile Road / Lake Hazel Road intersection is expected to operate at reduced levels of service under background year 2026 and future year 2026 with project conditions during the AM peak hour. According to the ACHD Five Year Work Plan, a traffic signal is anticipated to be the mitigation to improve traffic operations. This intersection is anticipated to operate at an overall LOS B under signalized AM and PM conditions, with or without the Project in the year 2026. It is recommended that a signal be installed to improve operations with or without the Project. **Table 11** shows the intersection level of service for the

South Ten Mile Road / Lake Hazel Road intersection with a proposed signal. No additional lanes or turn lanes were included with the signal analysis. The detailed Synchro output results for the delay and LOS are included in **Appendix B**.

Table 11: Future Traffic with Project (2026) with Improvements

Intersection	Movement	AM Peak Hour				PM Peak Hour			
		Volume	Delay	v/c ratio	LOS	Volume	Delay	v/c ratio	LOS
1: South Ten Mile Road \ Lake Hazel Road	EBL	38	19.2	0.69	B	8	8.6	0.25	A
	EBT	290				93			
	EBR	45				40			
	WBL	23	10.3	0.26	B	68	16.3	0.62	B
	WBT	83				235			
	WBR	30				21			
	NBL	33	20.3	0.80	C	32	11.3	0.51	B
	NBT	519				270			
	NBR	50				32			
	SBL	37	9.2	0.27	A	31	13.0	0.41	B
	SBT	142				351			
	SBR	3				17			
	Overall Intersection		17.4	B			12.9	B	

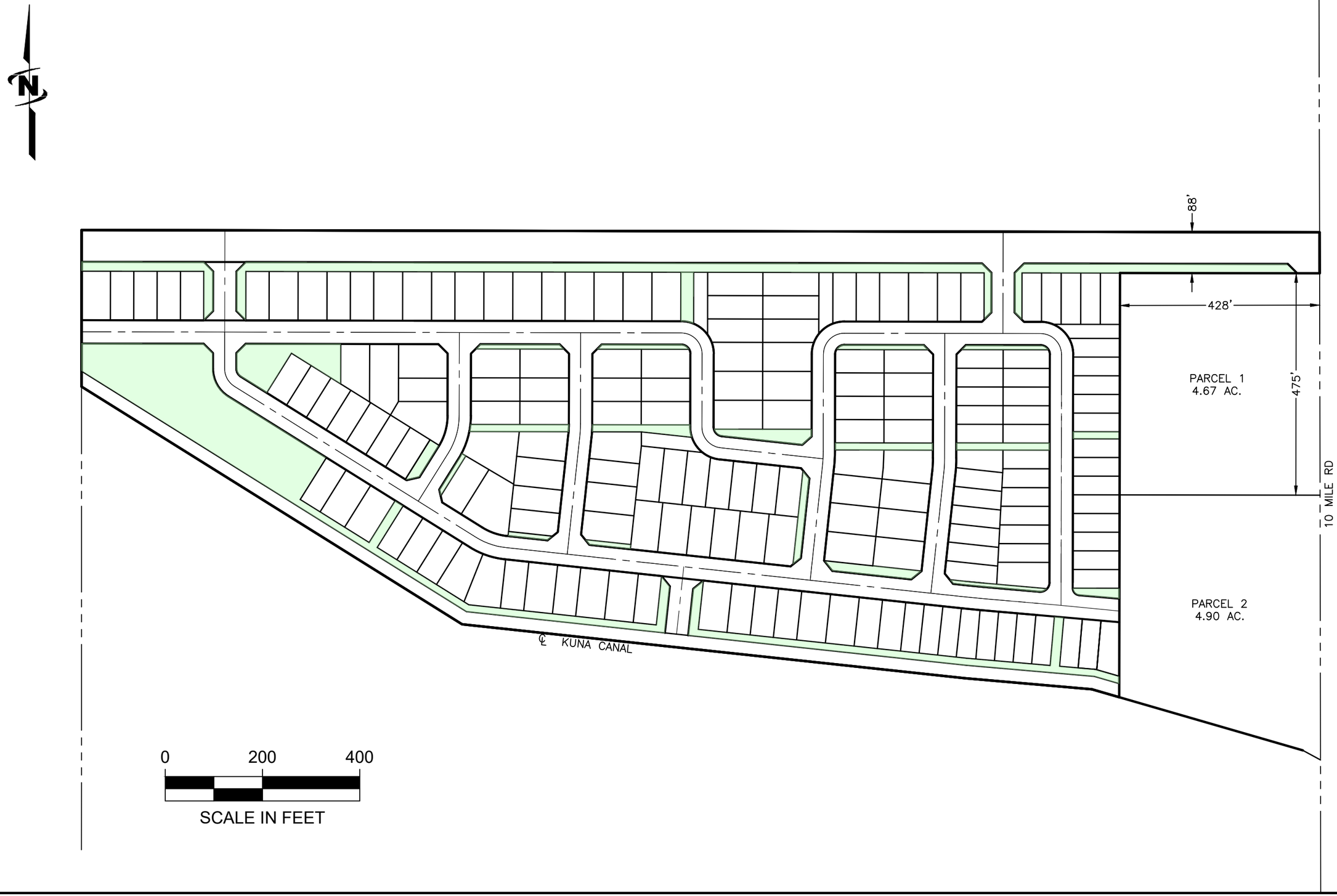
6. CONCLUSIONS AND RECOMMENDATIONS

Based upon the existing and future traffic analysis, the proposed Project results in a slight increase in delay for some traffic movements at the intersection of Lake Hazel Road and South Ten Mile Road under the future background conditions (2026) without project traffic. The traffic analysis for existing conditions indicates that the intersection of Lake Hazel Road and South Ten Mile Road currently operates at an acceptable level of service. However, the analysis for background year (2026) without Project traffic indicates that delay will increase, and the intersection will operate at an unacceptable level of service (LOS F). Based on the ACHD Five Year Work Plan, a traffic signal is anticipated to be the mitigation to improve traffic operations. This intersection would operate at an overall LOS B under signalized AM and PM conditions, with or without the project in the year 2026. It is recommended that a signal be installed to improve operations.

The traffic analysis for buildout year (2026) with the project traffic indicates the South Ten Mile Road/ New East-West Collector Road is anticipated to operate at an acceptable level of service. It is recommended that the project design the Project access points to meet City standards, and to design the access points and site layout to meet the sight distance standards in the AASHTO Green Book. Based on traffic analysis, the proposed access locations represent an acceptable traffic solution.

7. APPENDICES

A. SITE PLAN



LAYOUT EXHIBIT

ARROWOOD SUBDIVISION
HAYDEN HOMES

SE 1/4, SEC. 3, T.2 N., R.1 W., B.M.
CITY OF KUNA, ADA COUNTY, IDAHO

J-U-B ENGINEERS, INC.

LAST UPDATED: 10/7/2020
PLOT DATE: 10/7/2020
FILE: 10-20-098 LAYOUT

Plot Date:10/7/2020 11:02 AM Plotted By: Vaun Cloyd
Date Created:10/5/2020 \\JUB.COM\CENTRAL\CLIENTS\ID\HAYDENHOMES\PROJECTS\10-20-098_HAYDENHOMESTENMILE\DESIGN\SURVEY\EXHIBITS\10-20-098_LAYOUT.DWG

B. TURNING MOVEMENT COUNTS

L2 Data Collection

L2DataCollection.com
(208) 860-7554 Utah (801) 413-2993

Study: WHP0010
Intersection:Ten Mile Rd / Lake Hazel Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Ten Mile Rd & Lake Hazel Rd
Site Code : 00000000
Start Date : 2/26/2020
Page No : 1

Groups Printed- General Traffic

	Ten Mile Road From North					Lake Hazel Raod From East					Ten Mile Road From South					Lake Hazel Raod From West					
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	1	25	6	0	32	4	21	2	0	27	3	109	2	0	114	7	35	4	0	46	219
07:15 AM	0	33	10	0	43	6	11	3	0	20	5	105	5	0	115	6	42	9	0	57	235
07:30 AM	0	34	11	0	45	7	14	3	0	24	4	78	2	0	84	5	55	5	0	65	218
07:45 AM	2	29	7	0	38	4	13	2	0	19	4	66	6	0	76	7	45	5	0	57	190
Total	3	121	34	0	158	21	59	10	0	90	16	358	15	0	389	25	177	23	0	225	862
08:00 AM	3	27	5	0	35	7	14	1	0	22	3	77	4	0	84	4	29	6	0	39	180
08:15 AM	0	23	6	0	29	3	8	2	0	13	8	65	4	0	77	11	16	2	0	29	148
08:30 AM	2	32	5	0	39	2	6	2	0	10	4	83	6	0	93	8	19	4	0	31	173
08:45 AM	5	23	5	0	33	3	2	2	0	7	0	66	6	0	72	7	10	1	0	18	130
Total	10	105	21	0	136	15	30	7	0	52	15	291	20	0	326	30	74	13	0	117	631

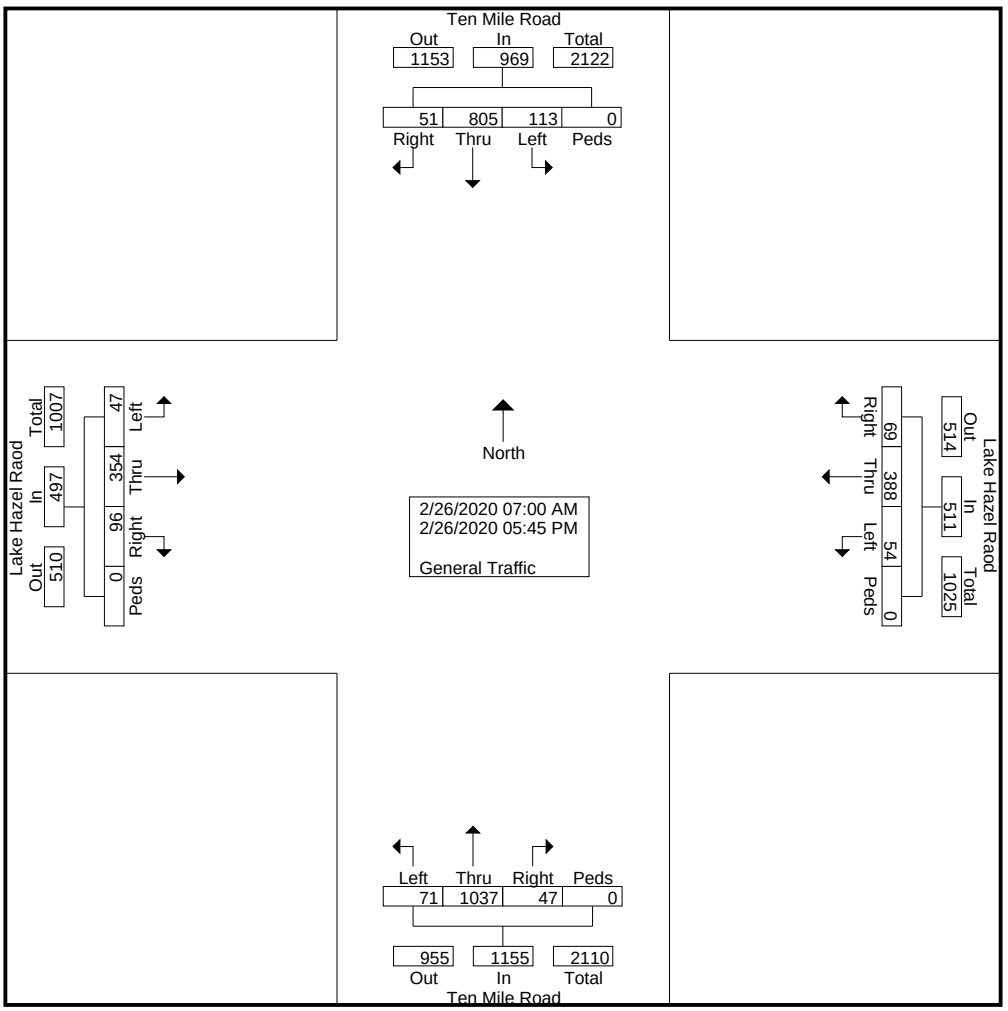
04:00 PM	4	72	6	0	82	4	26	3	0	33	2	54	5	0	61	5	7	0	0	12	188
04:15 PM	5	65	7	0	77	10	25	4	0	39	2	62	4	0	68	7	13	3	0	23	207
04:30 PM	8	74	8	0	90	1	40	1	0	42	0	46	5	0	51	8	12	2	0	22	205
04:45 PM	1	79	7	0	87	2	48	6	0	56	1	55	3	0	59	3	15	0	0	18	220
Total	18	290	28	0	336	17	139	14	0	170	5	217	17	0	239	23	47	5	0	75	820
05:00 PM	8	76	4	0	88	2	34	8	0	44	4	37	2	0	43	0	11	1	0	12	187
05:15 PM	4	64	10	0	78	4	37	8	0	49	2	55	5	0	62	6	17	1	0	24	213
05:30 PM	3	72	8	0	83	7	48	4	0	59	3	37	8	0	48	7	14	3	0	24	214
05:45 PM	5	77	8	0	90	3	41	3	0	47	2	42	4	0	48	5	14	1	0	20	205
Total	20	289	30	0	339	16	160	23	0	199	11	171	19	0	201	18	56	6	0	80	819
Grand Total	51	805	113	0	969	69	388	54	0	511	47	1037	71	0	1155	96	354	47	0	497	3132
Apprch %	5.3	83.1	11.7	0		13.5	75.9	10.6	0		4.1	89.8	6.1	0		19.3	71.2	9.5	0		
Total %	1.6	25.7	3.6	0	30.9	2.2	12.4	1.7	0	16.3	1.5	33.1	2.3	0	36.9	3.1	11.3	1.5	0	15.9	

L2 Data Collection

L2DataCollection.com
(208) 860-7554 Utah (801) 413-2993

Study: WHP0010
Intersection:Ten Mile Rd / Lake Hazel Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Ten Mile Rd & Lake Hazel Rd
Site Code : 00000000
Start Date : 2/26/2020
Page No : 2



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Intersection:Ten Mile Rd / Lake Hazel Rd
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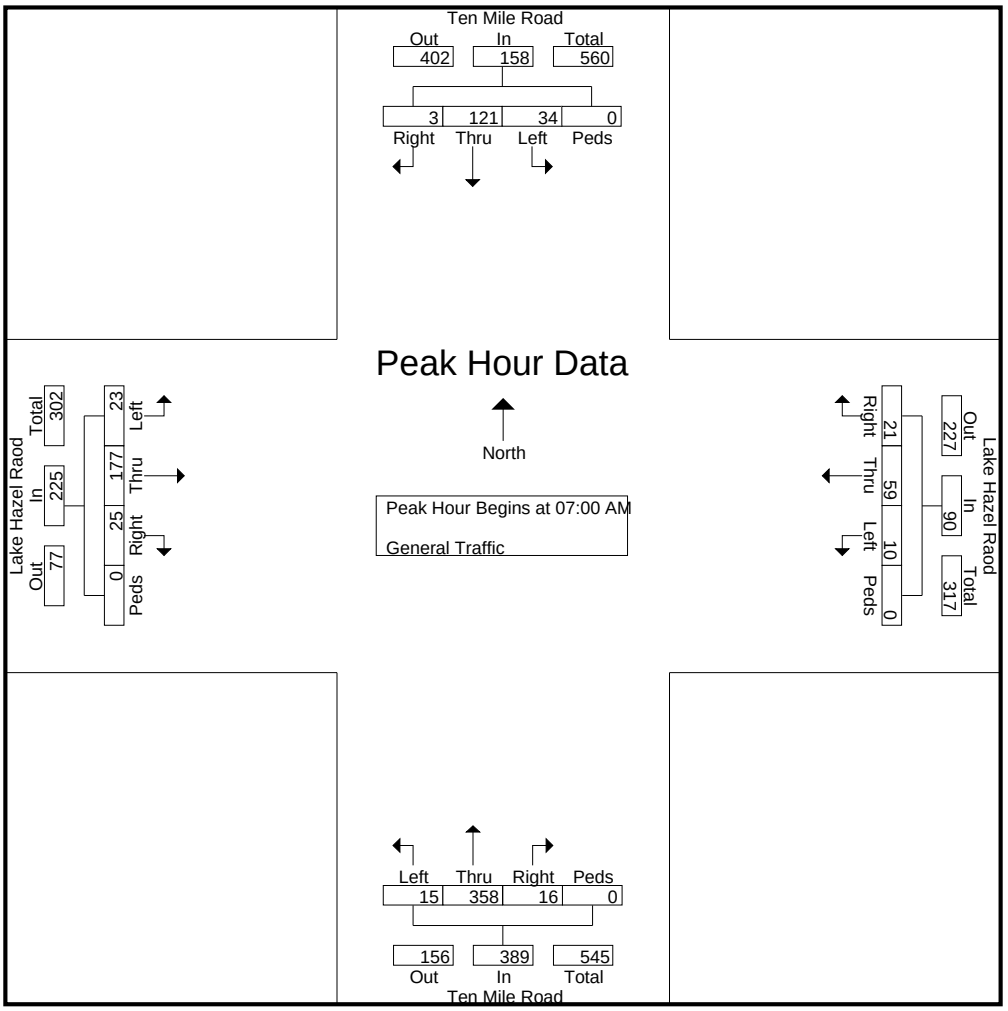
Page No : 3

	Ten Mile Road From North					Lake Hazel Raod From East					Ten Mile Road From South					Lake Hazel Raod From West					
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	1	25	6	0	32	4	**21**	2	0	**27**	3	**109**	2	0	114	**7**	35	4	0	46	219
07:15 AM	0	33	10	0	43	6	11	**3**	0	20	**5**	105	5	0	**115**	6	42	**9**	0	57	**235**
07:30 AM	0	**34**	**11**	0	**45**	**7**	14	3	0	24	4	78	2	0	84	5	**55**	5	0	**65**	218
07:45 AM	**2**	29	7	0	38	4	13	2	0	19	4	66	**6**	0	76	7	45	5	0	57	190
Total Volume	3	121	34	0	158	21	59	10	0	90	16	358	15	0	389	25	177	23	0	225	862
% App. Total	1.9	76.6	21.5	0		23.3	65.6	11.1	0		4.1	92	3.9	0		11.1	78.7	10.2	0		
PHF	.375	.890	.773	.000	.878	.750	.702	.833	.000	.833	.800	.821	.625	.000	.846	.893	.805	.639	.000	.865	.917



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Control: All Stop

File Name : Ten Mile Rd & Lake Hazel Rd
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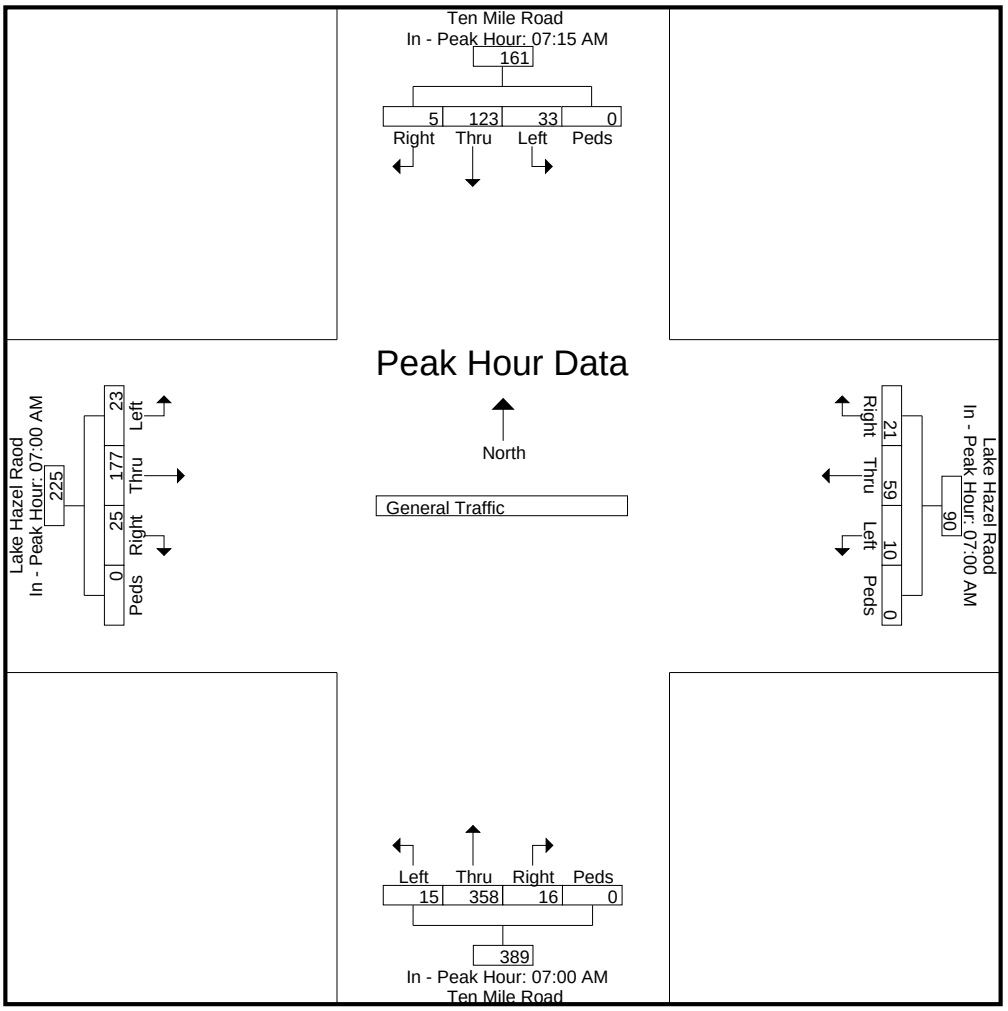
Start Date : 2/26/2020
Page No : 4

	Ten Mile Road From North					Lake Hazel Raod From East					Ten Mile Road From South					Lake Hazel Raod From West					
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 Each Approach Begins at:																					
	07:15 AM					07:00 AM					07:00 AM					07:00 AM					
+0 mins.	0	33	10	0	43	4	**21**	2	0	**27**	3	**109**	2	0	114	**7**	35	4	0	46	
+15 mins.	0	**34**	**11**	0	**45**	6	11	**3**	0	20	**5**	105	5	0	**115**	6	42	**9**	0	57	
+30 mins.	2	29	7	0	38	**7**	14	3	0	24	4	78	2	0	84	5	**55**	5	0	**65**	
+45 mins.	**3**	27	5	0	35	4	13	2	0	19	4	66	**6**	0	76	7	45	5	0	57	
Total Volume	5	123	33	0	161	21	59	10	0	90	16	358	15	0	389	25	177	23	0	225	
% App. Total	3.1	76.4	20.5	0		23.3	65.6	11.1	0		4.1	92	3.9	0		11.1	78.7	10.2	0		
PHF	.417	.904	.750	.000	.894	.750	.702	.833	.000	.833	.800	.821	.625	.000	.846	.893	.805	.639	.000	.865	



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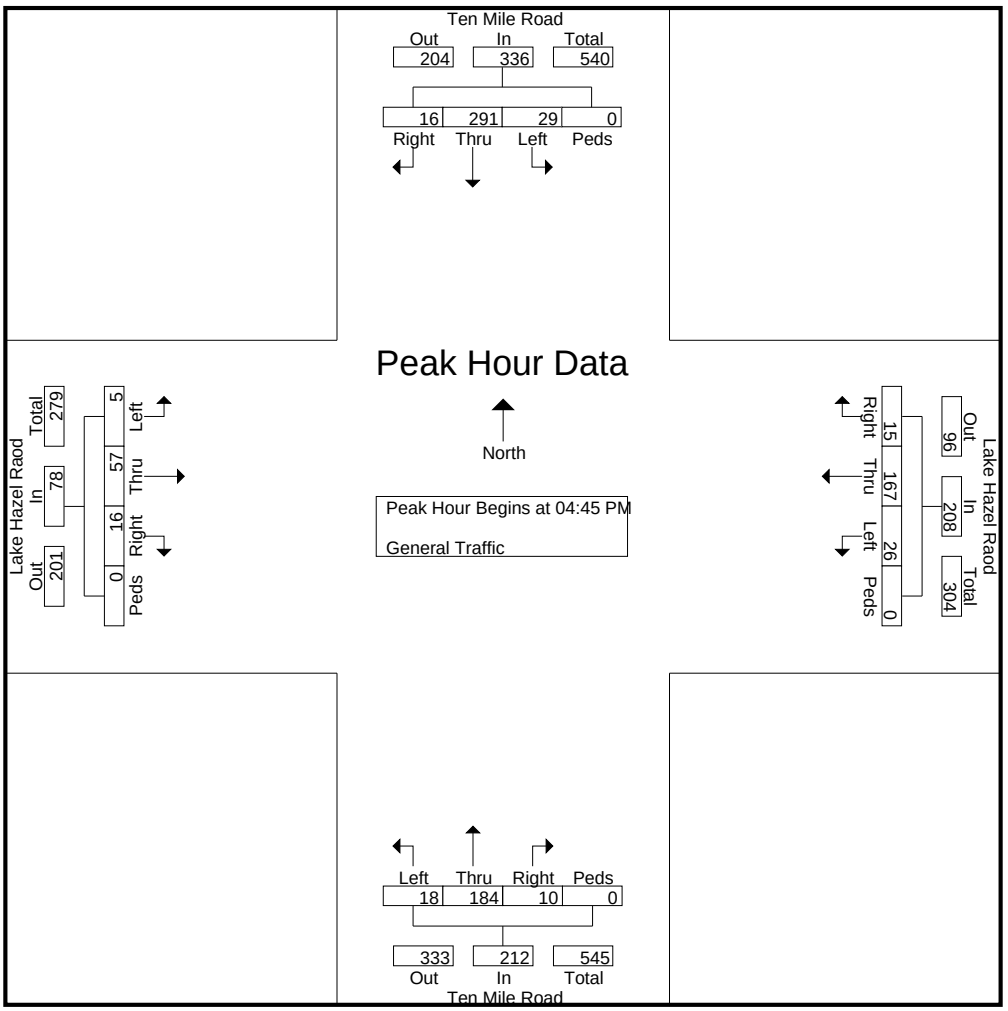
Start Date : 2/26/2020
Page No : 5

	Ten Mile Road From North					Lake Hazel Raod From East					Ten Mile Road From South					Lake Hazel Raod From West					
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 04:45 PM																					
04:45 PM	1	**79**	7	0	87	2	**48**	6	0	56	1	**55**	3	0	59	3	15	0	0	18	**220**
05:00 PM	**8**	76	4	0	**88**	2	34	**8**	0	44	**4**	37	2	0	43	0	11	1	0	12	187
05:15 PM	4	64	**10**	0	78	4	37	8	0	49	2	55	5	0	**62**	6	**17**	1	0	**24**	213
05:30 PM	3	72	8	0	83	**7**	48	4	0	**59**	3	37	**8**	0	48	**7**	14	**3**	0	24	214
Total Volume	16	291	29	0	336	15	167	26	0	208	10	184	18	0	212	16	57	5	0	78	834
% App. Total	4.8	86.6	8.6	0		7.2	80.3	12.5	0		4.7	86.8	8.5	0		20.5	73.1	6.4	0		
PHF	.500	.921	.725	.000	.955	.536	.870	.813	.000	.881	.625	.836	.563	.000	.855	.571	.838	.417	.000	.813	.948



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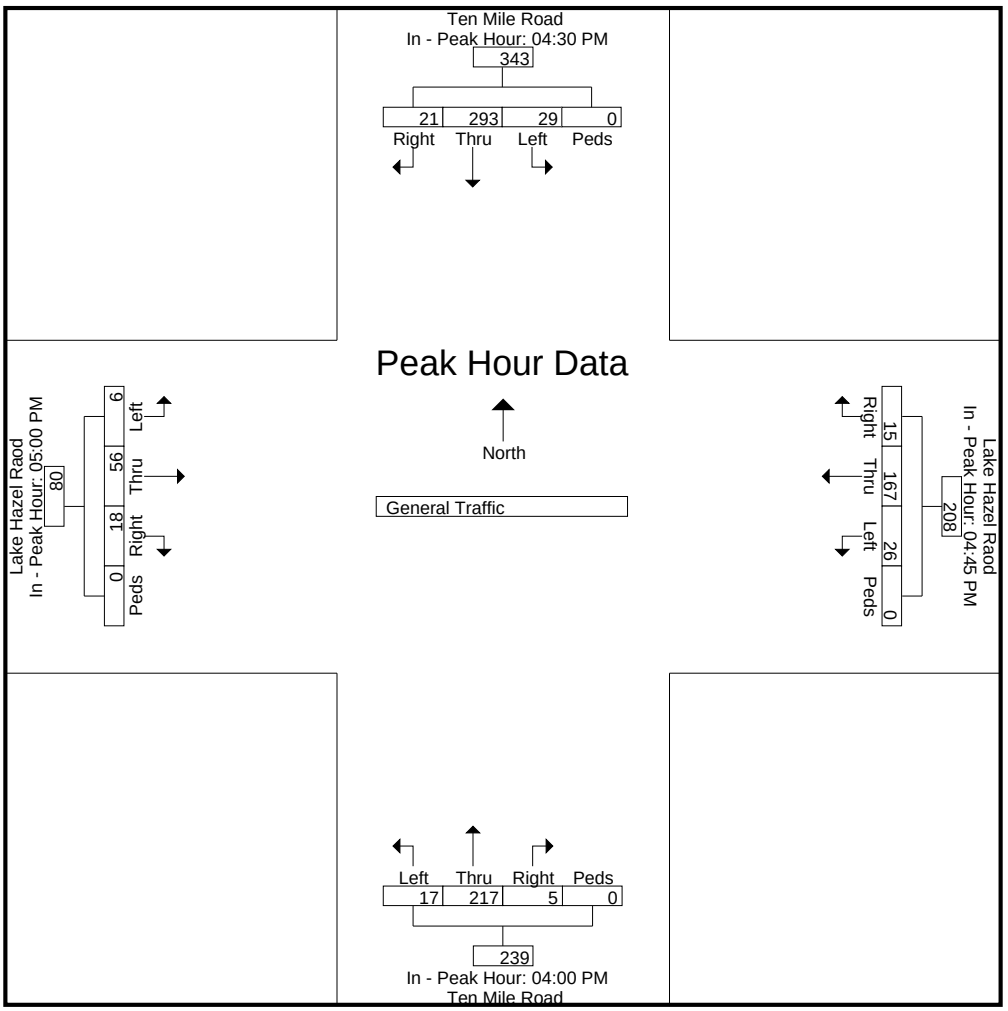
Intersection:Ten Mile Rd / Lake Hazel Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Ten Mile Rd & Lake Hazel Rd
Site Code : 00000000
Start Date : 2/26/2020
Page No : 6

	Ten Mile Road From North					Lake Hazel Raod From East					Ten Mile Road From South					Lake Hazel Raod From West					
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 Each Approach Begins at:																					
	04:30 PM					04:45 PM					04:00 PM					05:00 PM					
+0 mins.	**8**	74	8	0	**90**	2	**48**	6	0	56	**2**	54	**5**	0	61	0	11	1	0	12	
+15 mins.	1	**79**	7	0	87	2	34	**8**	0	44	2	**62**	4	0	**68**	6	**17**	1	0	**24**	
+30 mins.	8	76	4	0	88	4	37	8	0	49	0	46	5	0	51	**7**	14	**3**	0	24	
+45 mins.	4	64	**10**	0	78	**7**	48	4	0	**59**	1	55	3	0	59	5	14	1	0	20	
Total Volume	21	293	29	0	343	15	167	26	0	208	5	217	17	0	239	18	56	6	0	80	
% App. Total	6.1	85.4	8.5	0		7.2	80.3	12.5	0		2.1	90.8	7.1	0		22.5	70	7.5	0		
PHF	.656	.927	.725	.000	.953	.536	.870	.813	.000	.881	.625	.875	.850	.000	.879	.643	.824	.500	.000	.833	



L2 Data Collection

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City, State: Ada County, Idaho
Control: All Stop

File Name : Ten Mile Rd & Lake Hazel Rd
Site Code : 00000000
Start Date : 2/26/2020
Page No : 7

Image 1

C. SYNCHRO OUTPUT

Intersection	
Intersection Delay, s/veh	13.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	177	25	10	59	21	15	358	16	34	121	3
Future Vol, veh/h	23	177	25	10	59	21	15	358	16	34	121	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	192	27	11	64	23	16	389	17	37	132	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.3	10.1	16.1	10.8
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	10%	11%	22%
Vol Thru, %	92%	79%	66%	77%
Vol Right, %	4%	11%	23%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	389	225	90	158
LT Vol	15	23	10	34
Through Vol	358	177	59	121
RT Vol	16	25	21	3
Lane Flow Rate	423	245	98	172
Geometry Grp	1	1	1	1
Degree of Util (X)	0.611	0.385	0.16	0.269
Departure Headway (Hd)	5.205	5.668	5.892	5.631
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	693	633	606	635
Service Time	3.247	3.719	3.955	3.683
HCM Lane V/C Ratio	0.61	0.387	0.162	0.271
HCM Control Delay	16.1	12.3	10.1	10.8
HCM Lane LOS	C	B	B	B
HCM 95th-tile Q	4.2	1.8	0.6	1.1

Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	57	16	26	167	15	18	184	10	29	291	16
Future Vol, veh/h	5	57	16	26	167	15	18	184	10	29	291	16
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	60	17	27	176	16	19	194	11	31	306	17
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.7	11.5	11	13.3
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	6%	12%	9%
Vol Thru, %	87%	73%	80%	87%
Vol Right, %	5%	21%	7%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	212	78	208	336
LT Vol	18	5	26	29
Through Vol	184	57	167	291
RT Vol	10	16	15	16
Lane Flow Rate	223	82	219	354
Geometry Grp	1	1	1	1
Degree of Util (X)	0.33	0.131	0.339	0.505
Departure Headway (Hd)	5.321	5.754	5.574	5.137
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	676	622	644	700
Service Time	3.359	3.804	3.615	3.17
HCM Lane V/C Ratio	0.33	0.132	0.34	0.506
HCM Control Delay	11	9.7	11.5	13.3
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	1.4	0.4	1.5	2.9

Intersection	
Intersection Delay, s/veh	51.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	38	290	41	14	83	30	20	485	22	37	131	3
Future Vol, veh/h	38	290	41	14	83	30	20	485	22	37	131	3
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	330	47	16	94	34	23	551	25	42	149	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	31.3	14.2	85.8	15.5
HCM LOS	D	B	F	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	10%	11%	22%
Vol Thru, %	92%	79%	65%	77%
Vol Right, %	4%	11%	24%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	527	369	127	171
LT Vol	20	38	14	37
Through Vol	485	290	83	131
RT Vol	22	41	30	3
Lane Flow Rate	599	419	144	194
Geometry Grp	1	1	1	1
Degree of Util (X)	1.078	0.786	0.3	0.396
Departure Headway (Hd)	6.482	7.047	7.887	7.587
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	563	516	459	478
Service Time	4.49	5.047	5.887	5.587
HCM Lane V/C Ratio	1.064	0.812	0.314	0.406
HCM Control Delay	85.8	31.3	14.2	15.5
HCM Lane LOS	F	D	B	C
HCM 95th-tile Q	17.9	7.2	1.2	1.9

Intersection	
Intersection Delay, s/veh	19.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	93	26	31	235	21	24	249	14	31	315	17
Future Vol, veh/h	8	93	26	31	235	21	24	249	14	31	315	17
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	106	30	35	267	24	27	283	16	35	358	19
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13	19.2	18.3	23.9
HCM LOS	B	C	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	6%	11%	9%
Vol Thru, %	87%	73%	82%	87%
Vol Right, %	5%	20%	7%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	287	127	287	363
LT Vol	24	8	31	31
Through Vol	249	93	235	315
RT Vol	14	26	21	17
Lane Flow Rate	326	144	326	412
Geometry Grp	1	1	1	1
Degree of Util (X)	0.584	0.283	0.599	0.719
Departure Headway (Hd)	6.451	7.07	6.612	6.273
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	558	505	545	573
Service Time	4.526	5.166	4.686	4.341
HCM Lane V/C Ratio	0.584	0.285	0.598	0.719
HCM Control Delay	18.3	13	19.2	23.9
HCM Lane LOS	C	B	C	C
HCM 95th-tile Q	3.7	1.2	3.9	5.9

Intersection	
Intersection Delay, s/veh	65
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	290	45	23	83	30	33	516	50	37	142	3
Future Vol, veh/h	38	290	45	23	83	30	33	516	50	37	142	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	315	49	25	90	33	36	561	54	40	154	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	29.3	14.6	113.6	15.7
HCM LOS	D	B	F	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	10%	17%	20%
Vol Thru, %	86%	78%	61%	78%
Vol Right, %	8%	12%	22%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	599	373	136	182
LT Vol	33	38	23	37
Through Vol	516	290	83	142
RT Vol	50	45	30	3
Lane Flow Rate	651	405	148	198
Geometry Grp	1	1	1	1
Degree of Util (X)	1.16	0.756	0.309	0.4
Departure Headway (Hd)	6.413	7.224	8.05	7.658
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	566	503	449	473
Service Time	4.43	5.224	6.05	5.658
HCM Lane V/C Ratio	1.15	0.805	0.33	0.419
HCM Control Delay	113.6	29.3	14.6	15.7
HCM Lane LOS	F	D	B	C
HCM 95th-tile Q	22.2	6.5	1.3	1.9

Intersection	
Intersection Delay, s/veh	26.3
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	93	40	68	235	21	32	270	32	31	351	17
Future Vol, veh/h	8	93	40	68	235	21	32	270	32	31	351	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	101	43	74	255	23	35	293	35	34	382	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.5	25	24.4	33.1
HCM LOS	B	C	C	D

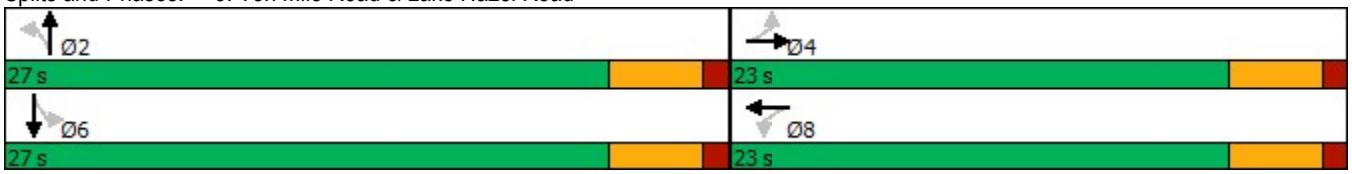
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	6%	21%	8%
Vol Thru, %	81%	66%	73%	88%
Vol Right, %	10%	28%	6%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	334	141	324	399
LT Vol	32	8	68	31
Through Vol	270	93	235	351
RT Vol	32	40	21	17
Lane Flow Rate	363	153	352	434
Geometry Grp	1	1	1	1
Degree of Util (X)	0.696	0.327	0.696	0.814
Departure Headway (Hd)	6.901	7.677	7.112	6.756
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	523	466	507	533
Service Time	4.962	5.755	5.172	4.815
HCM Lane V/C Ratio	0.694	0.328	0.694	0.814
HCM Control Delay	24.4	14.5	25	33.1
HCM Lane LOS	C	B	C	D
HCM 95th-tile Q	5.4	1.4	5.4	8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	290	45	23	83	30	33	516	50	37	142	3
Future Volume (vph)	38	290	45	23	83	30	33	516	50	37	142	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.984			0.970			0.989			0.998	
Flt Protected		0.995			0.992			0.997			0.990	
Satd. Flow (prot)	0	1824	0	0	1792	0	0	1837	0	0	1840	0
Flt Permitted		0.957			0.917			0.977			0.855	
Satd. Flow (perm)	0	1754	0	0	1657	0	0	1800	0	0	1589	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			33			12			2	
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		2418			2334			2662			1332	
Travel Time (s)		33.0			31.8			36.3			18.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	315	49	25	90	33	36	561	54	40	154	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	405	0	0	148	0	0	651	0	0	197	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	23.0	23.0		23.0	23.0		27.0	27.0		27.0	27.0	
Total Split (%)	46.0%	46.0%		46.0%	46.0%		54.0%	54.0%		54.0%	54.0%	
Maximum Green (s)	18.5	18.5		18.5	18.5		22.5	22.5		22.5	22.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		14.2			14.2			19.3			19.3	
Actuated g/C Ratio		0.33			0.33			0.45			0.45	
v/c Ratio		0.69			0.26			0.80			0.27	
Control Delay		19.2			10.3			20.3			9.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		19.2			10.3			20.3			9.2	
LOS		B			B			C			A	
Approach Delay		19.2			10.3			20.3			9.2	
Approach LOS		B			B			C			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 42.8			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 17.4		Intersection LOS: B	
Intersection Capacity Utilization 65.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Ten Mile Road & Lake Hazel Road



Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	72	29	10	527	186	24
Future Vol, veh/h	72	29	10	527	186	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	82	33	11	599	211	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	846	225	238	0	-	0
Stage 1	225	-	-	-	-	-
Stage 2	621	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	333	814	1329	-	-	-
Stage 1	812	-	-	-	-	-
Stage 2	536	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	329	814	1329	-	-	-
Mov Cap-2 Maneuver	329	-	-	-	-	-
Stage 1	802	-	-	-	-	-
Stage 2	536	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.7	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1329	-	397	-	-
HCM Lane V/C Ratio	0.009	-	0.289	-	-
HCM Control Delay (s)	7.7	0	17.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	1.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	93	40	68	235	21	32	270	32	31	351	17
Future Volume (vph)	8	93	40	68	235	21	32	270	32	31	351	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.962			0.991			0.987			0.994	
Flt Protected		0.997			0.990			0.995			0.996	
Satd. Flow (prot)	0	1787	0	0	1828	0	0	1829	0	0	1844	0
Flt Permitted		0.971			0.900			0.934			0.952	
Satd. Flow (perm)	0	1740	0	0	1661	0	0	1717	0	0	1763	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43			8			14			6	
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		2418			2334			2672			1332	
Travel Time (s)		33.0			31.8			36.4			18.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	101	43	74	255	23	35	293	35	34	382	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	153	0	0	352	0	0	363	0	0	434	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.6	22.6		22.6	22.6		27.4	27.4		27.4	27.4	
Total Split (%)	45.2%	45.2%		45.2%	45.2%		54.8%	54.8%		54.8%	54.8%	
Maximum Green (s)	18.1	18.1		18.1	18.1		22.9	22.9		22.9	22.9	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		12.5			12.5			15.3			15.3	
Actuated g/C Ratio		0.34			0.34			0.41			0.41	
v/c Ratio		0.25			0.62			0.51			0.60	
Control Delay		8.6			16.3			11.3			13.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		8.6			16.3			11.3			13.0	
LOS		A			B			B			B	
Approach Delay		8.6			16.3			11.3			13.0	
Approach LOS		A			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 37.2			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 12.9		Intersection LOS: B	
Intersection Capacity Utilization 63.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: Ten Mile Road & Lake Hazel Road

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	48	19	33	287	387	81
Future Vol, veh/h	48	19	33	287	387	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	22	38	326	440	92

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	888	486	532	0	-	0
Stage 1	486	-	-	-	-	-
Stage 2	402	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	314	581	1036	-	-	-
Stage 1	618	-	-	-	-	-
Stage 2	676	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	300	581	1036	-	-	-
Mov Cap-2 Maneuver	300	-	-	-	-	-
Stage 1	590	-	-	-	-	-
Stage 2	676	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.2	0.9	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1036	-	348	-	-
HCM Lane V/C Ratio	0.036	-	0.219	-	-
HCM Control Delay (s)	8.6	-	18.2	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

D. COMPASS DATA

Ten Mile Residential Development

Overview

The following summarizes the results of an area of influence model run for a proposed development located northwest of Ten Mile Rd and Columbia Rd. The proposed development will consist of approximately 169 single family units with an anticipated build out by 2025. See Figure 1.

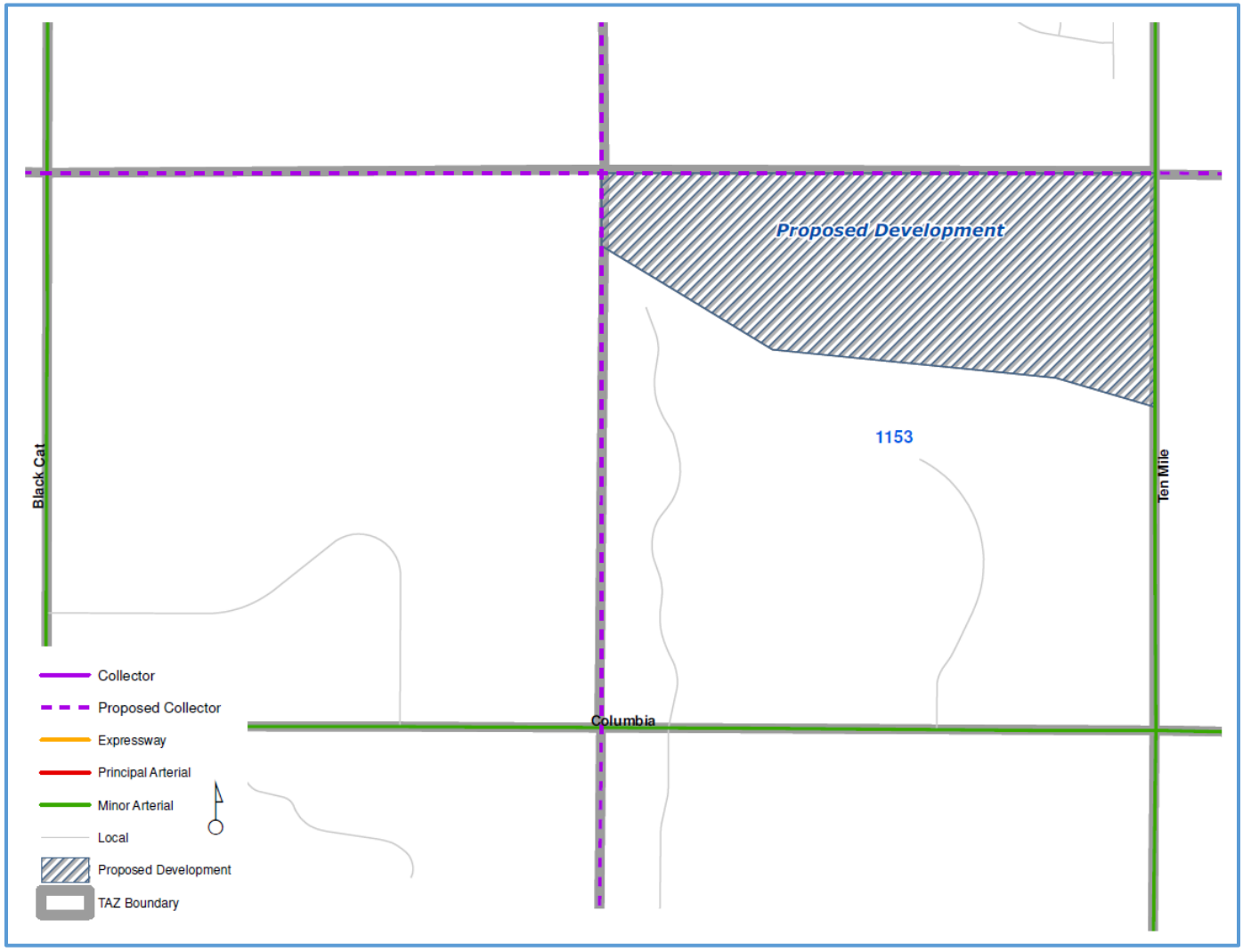


Figure 1: Development Area and Official TAZ 1153

Table 1 provides the existing demographics for TAZ 1153 and the proposed development's demographics used for the area of influence model run.

Table 1: Existing and future demographics for TAZ 1153

	2020		2025 with proposal		2040	
	HH	Jobs	HH	Jobs	HH	Jobs
TAZ 1153	*16*	*0*	185	13	*30*	*38*
Surrounding TAZs	*126*	*25*	98	33	*491*	*39*
Total	***142***	***25***	**283**	**46**	***521***	***77***

Model Plots

The figures on the following pages show the area of influence and projected demand of the new development under different scenarios.

Figure 2: Area of Influence: 2025 peak hour demand percent contribution to the total peak hour demand

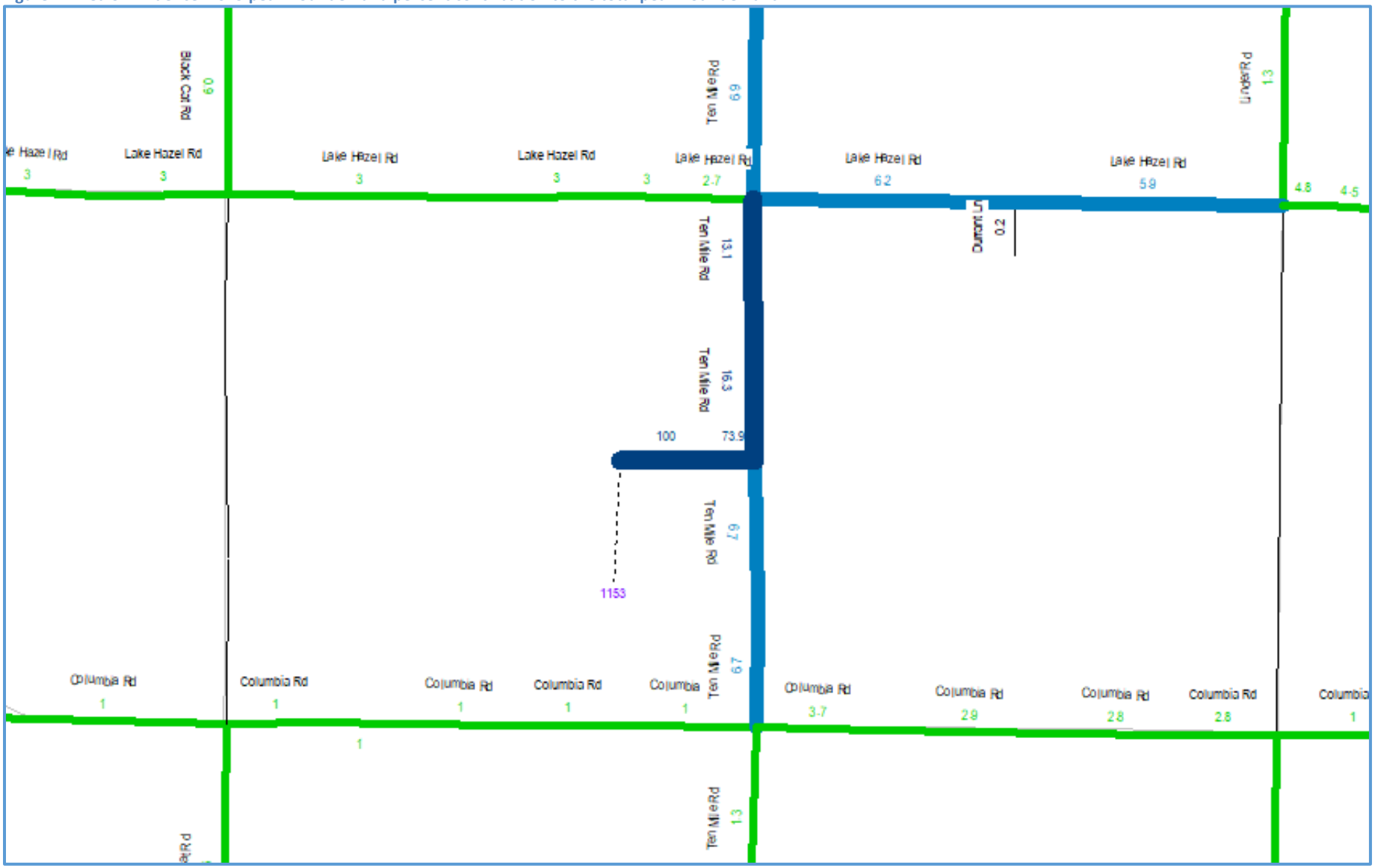


Figure 3: 2025 Peak Hour Demand with Proposed Development

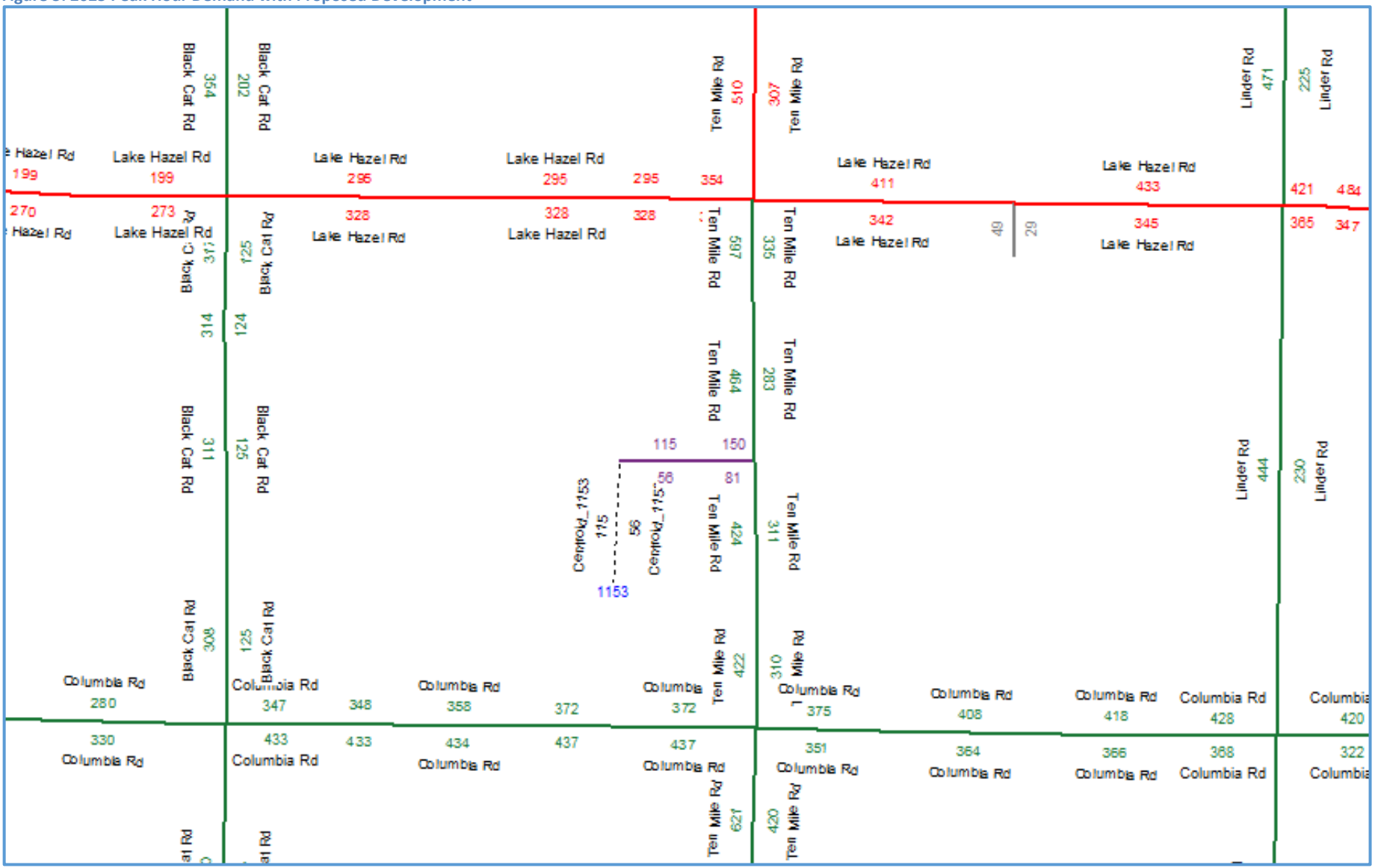


Figure 4: 2025 Peak Hour Demand without Proposed Development

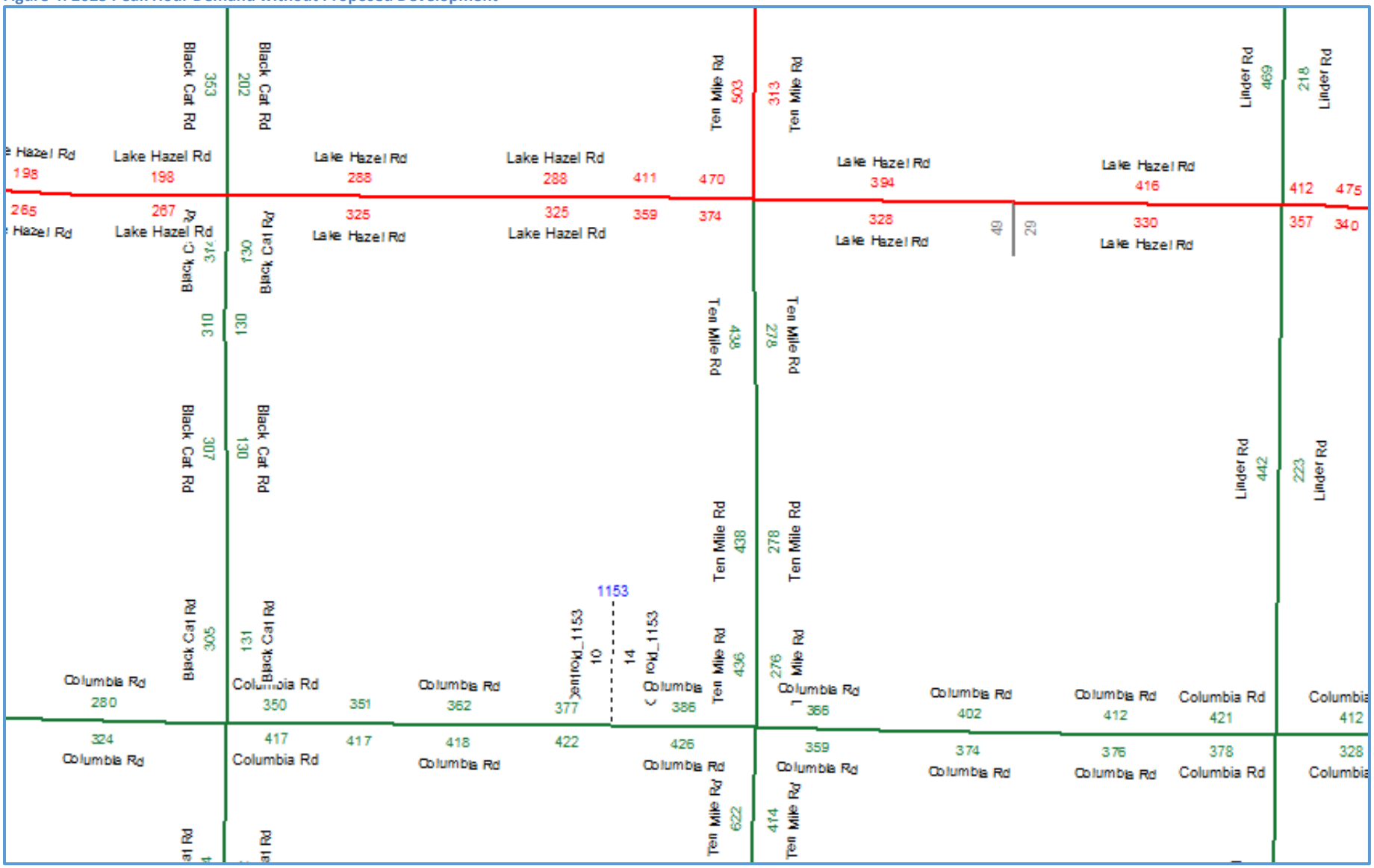
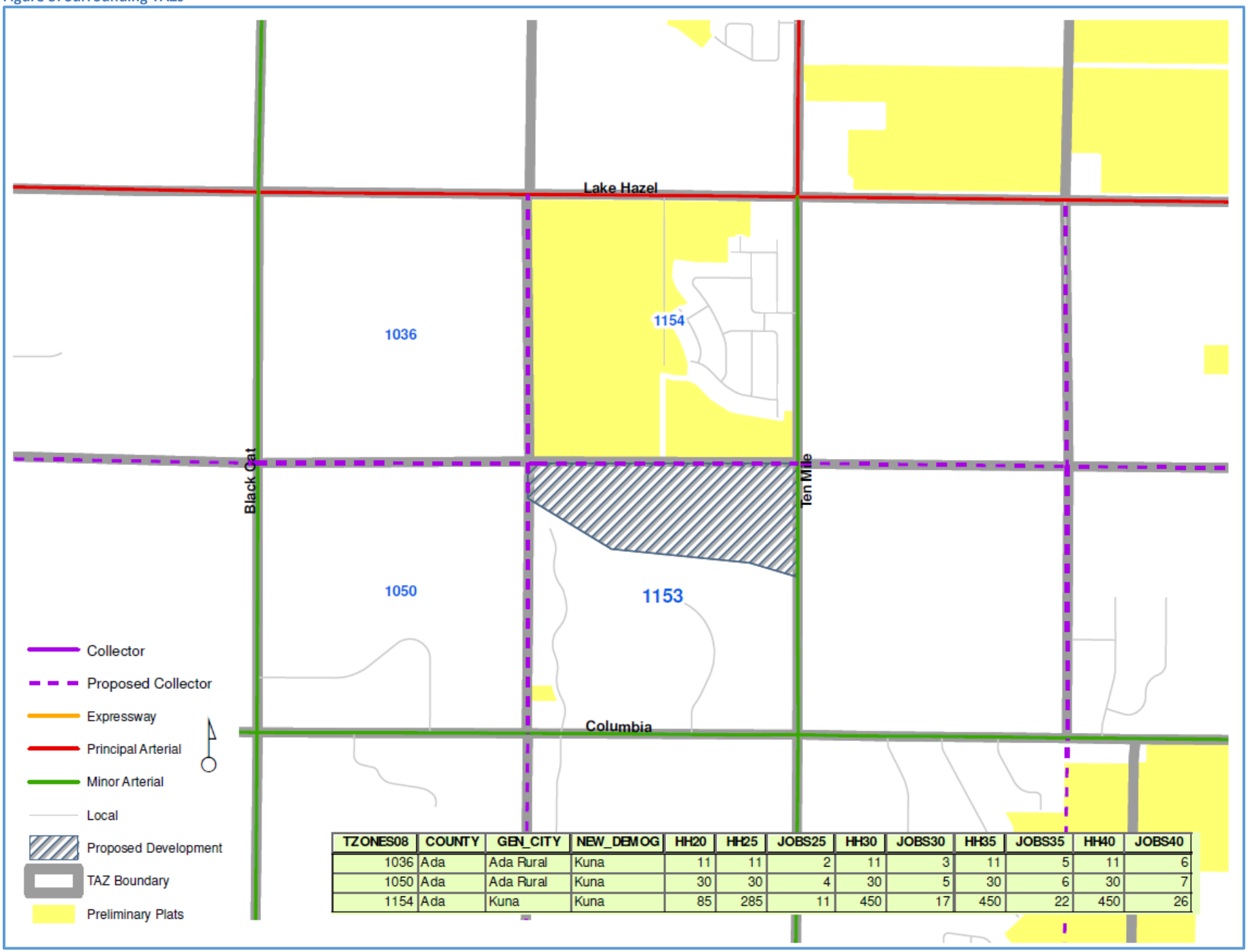
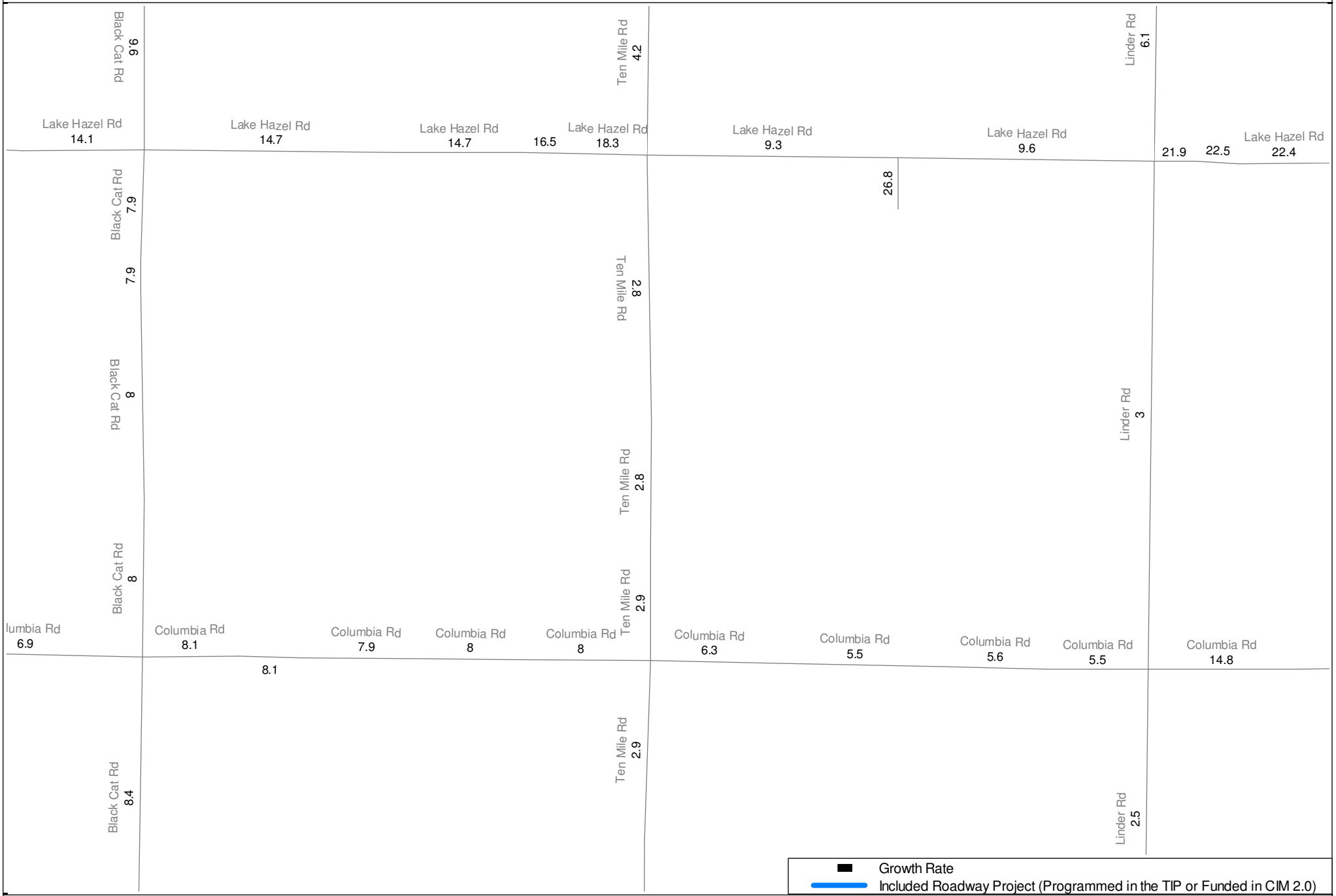


Figure 5: Surrounding TAZs



TZONES08	COUNTY	GEN_CITY	NEW_DEMOG	HH20	HH25	JOBS25	HH30	JOBS30	HH35	JOBS35	HH40	JOBS40
1036	Ada	Ada Rural	Kuna	11	11	2	11	3	11	5	11	6
1050	Ada	Ada Rural	Kuna	30	30	4	30	5	30	6	30	7
1154	Ada	Kuna	Kuna	85	285	11	450	17	450	22	450	26

2020 Peak Hour to 2025 Peak Hour Compounded Annual Growth Rates
10/13/2020



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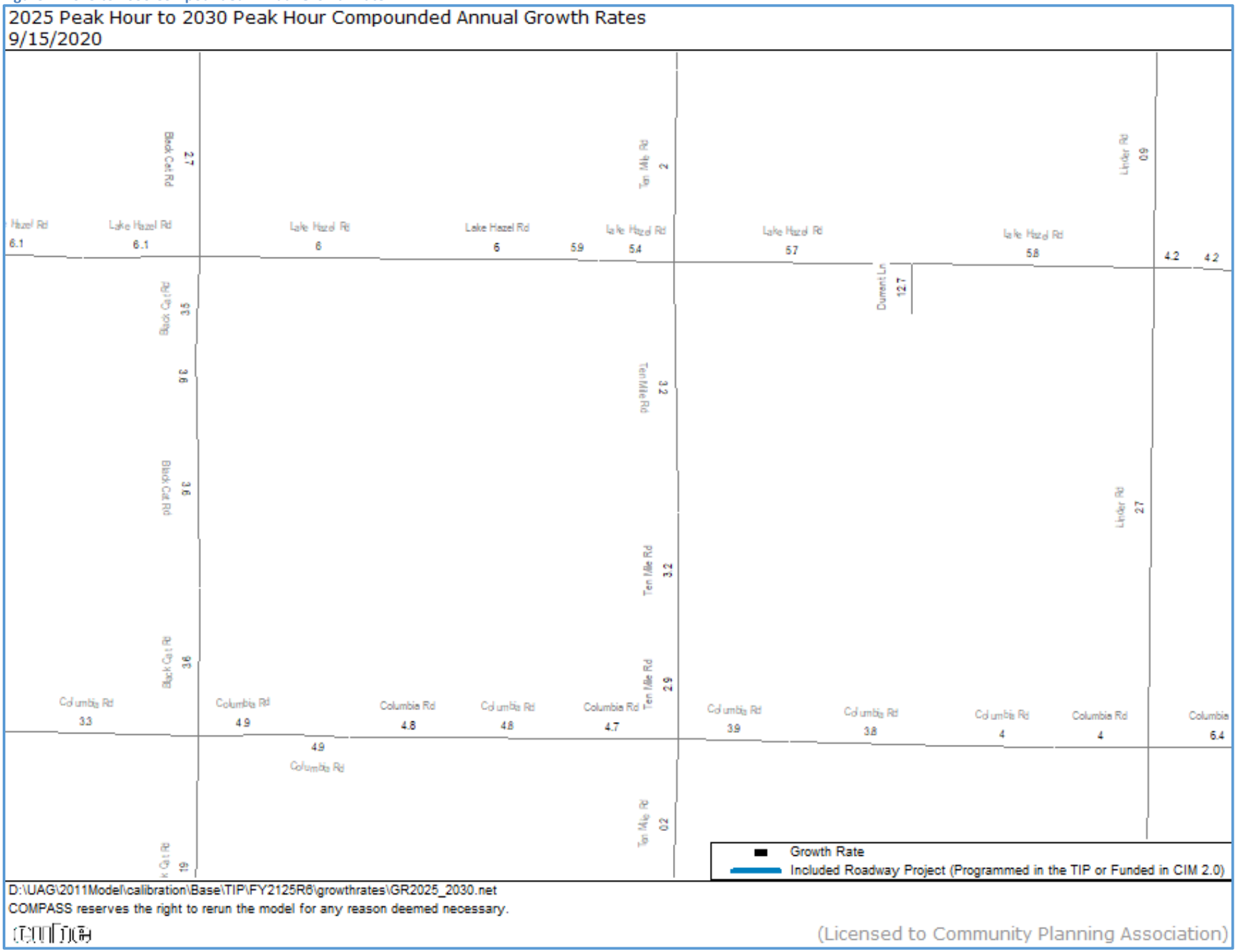
COMPASS reserves the right to rerun the model for any reason deemed necessary.

cube

Figure 7: 2025 to 2030 Compounded Annual Growth Rate



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COMPASS reserves the right to rerun the model for any reason deemed necessary.

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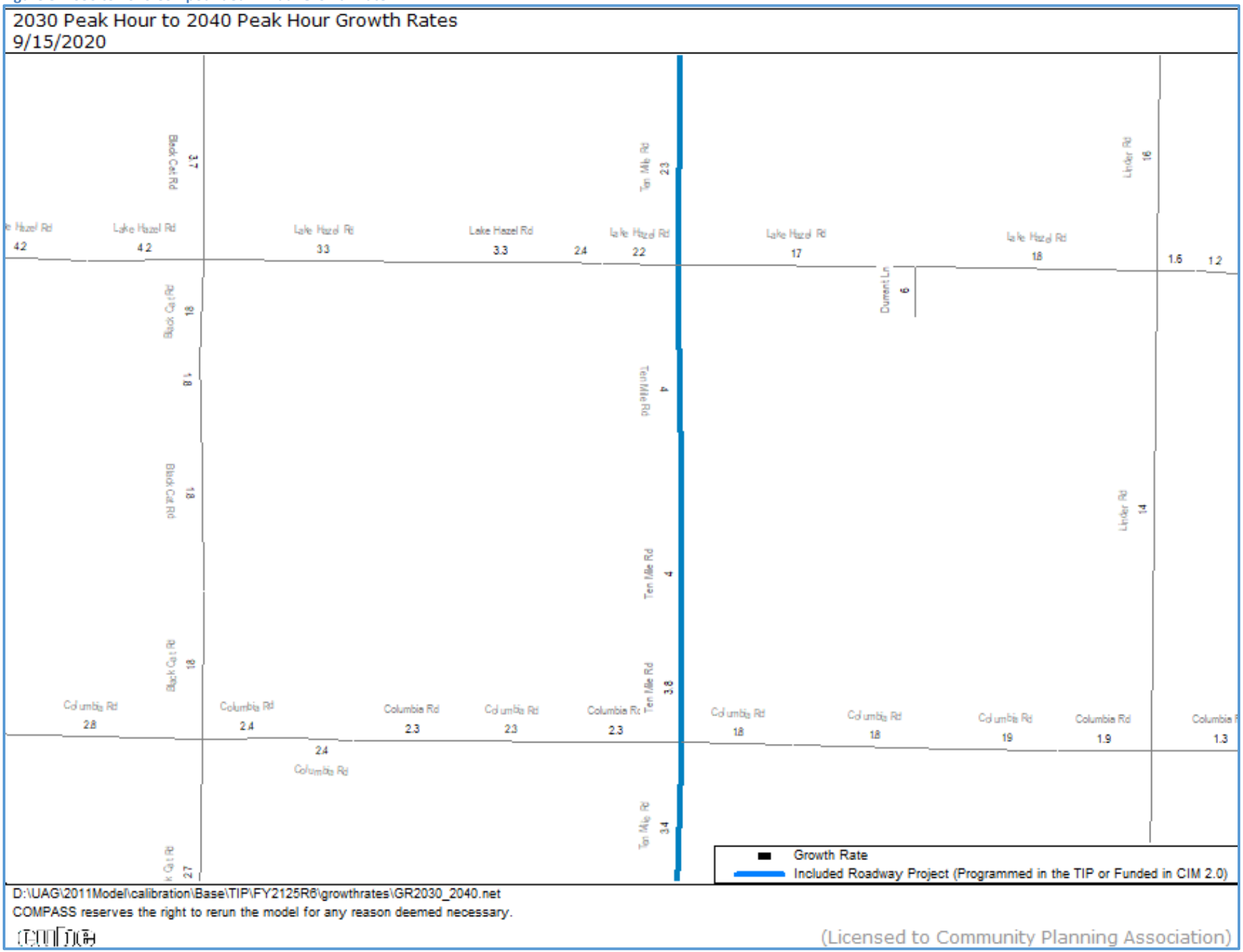
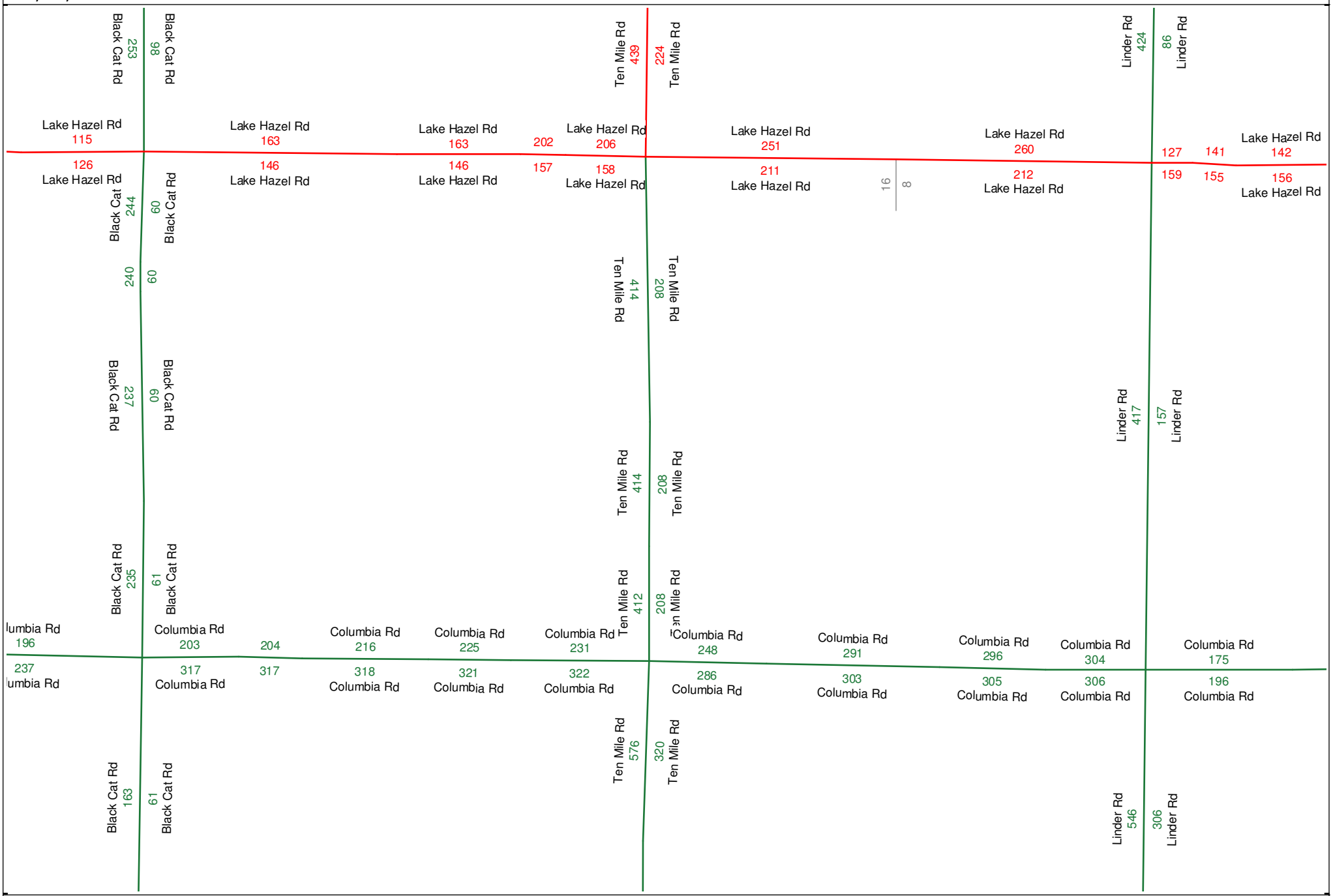
Figure 8: 2030 to 2040 Compounded Annual Growth Rate



2020 Peak Hour Build: 2020 Demographics on 2020 Network (New Model v2015)
10/13/2020



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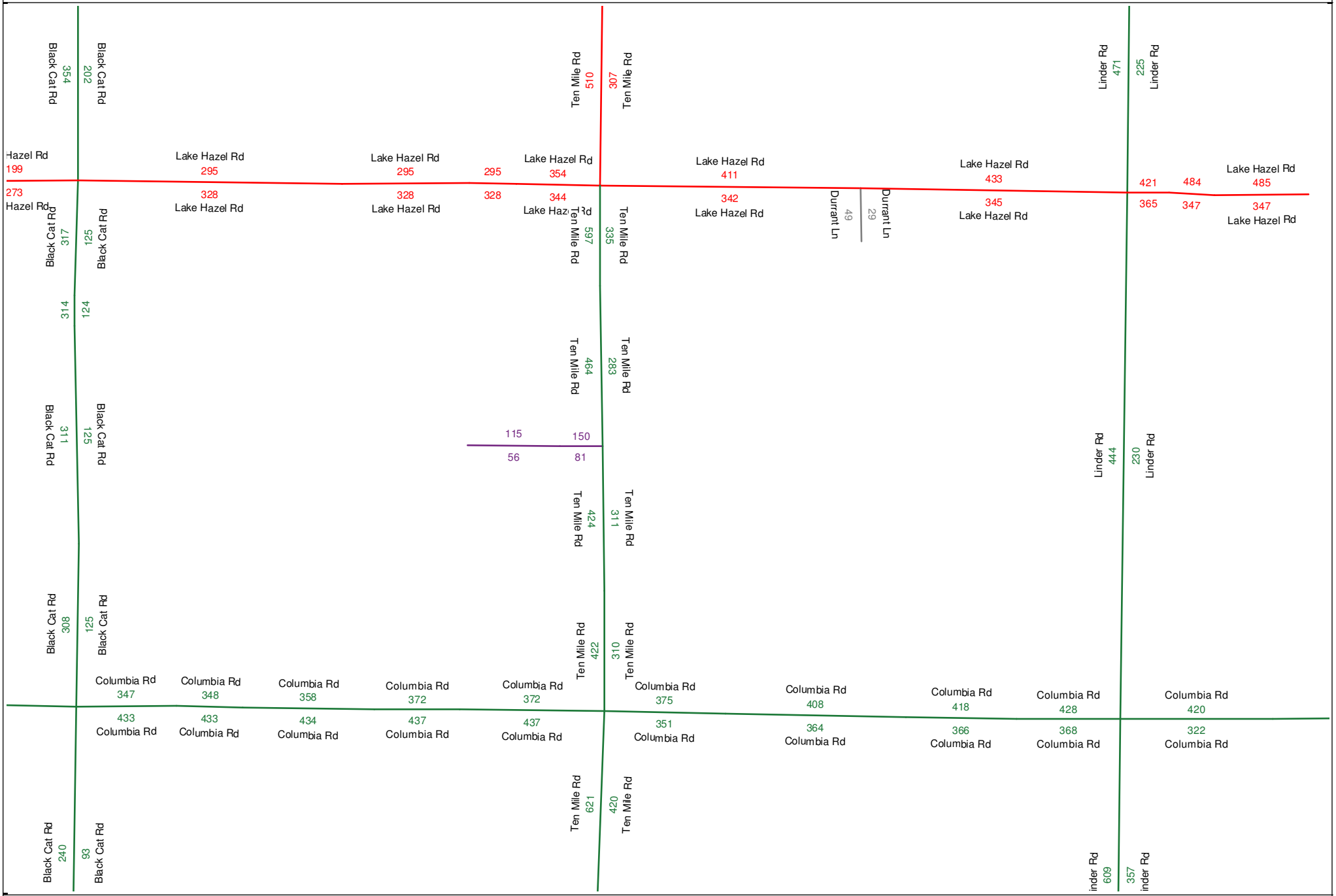
New Regional Model calibrated to 2011/12 conditions - completed in January 2015

2025 Peak Hour Build (Special Run): 2025 demographics on 2021 Build network (New Model v2015)
10/20/2020



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New Regional Model calibrated to 2011/12 conditions - completed in January 2015