Council Chambers | 751 W 4th Street, Kuna, Idaho 83634 | 6:00 PM

KUNA PLANNING & ZONING COMMISSION
AGENDA
Tuesday, January 14, 2020
Open to the Public

1. *CALL TO ORDER AND ROLL CALL*

COMMISSIONERS:

Chairman Lee Young
Vice Chairman Dana Hennis
Commissioner Cathy Gealy
Commissioner Stephen Damron
Commissioner John Laraway

2. *CONSENT AGENDA:* *All Listed Consent Agenda Items are Action Items*

A. Planning and Zoning Commission Meeting Minutes, December 10, 2019

3. *PUBLIC HEARING:*

A. **Case No. 19-03-AN (Annexation), 19-02-S (Preliminary Plat) & 19-09-DR (Design Review) Chotika Subdivision – *Continued from December 10, 2019*** **ACTION ITEM**

On behalf of Don Veasey (owner), Accurate Surveyors requests to annex two parcels consisting of approximately 7.67 acres into Kuna City Limits with an R-6 (Medium Density Residential) zone and to subdivide the 7.67 acres into 36 total lots; (thirty-one (31) buildable lots, five (5) common lots). The subject sites are located at 642 S. Ash St. and S. Ash St., Kuna, ID 83634, within Section 26, Township 2 North, Range 1 West; (APNs: R5070503050 and R5070502835).

B. **Case No. 19-05-SUP (Special Use Permit) 1195 West Castro Drive** **ACTION ITEM**

The applicant, Patricia Johnson, seeks Special Use Permit approval in order to operate a home massage therapy business from an accessory structure located at 1195 West Castro Drive, Kuna, ID 83634 (APN: R6899690200).

C. **Case No. 19-10-AN (Annexation), 19-06-DA (Development Agreement) & 19-23-DR (Design Review) – Spring Rock Subdivision** **ACTION ITEM**

Ten Mile Creek, LLC, requests approval for Annexation**,** Planned Unit Development (PUD), Preliminary Plat, Development Agreement and Design Review. Applicant requests to annex approximately 761 ac. into Kuna City limits, with a variety of zones throughout the project; including R-6 (Medium Density Residential), R-12 (High Density Residential), R-20 (High Density Residential), C-1 (Neighborhood Commercial) and the C-2 (Area Commercial) zones. This is a multi-phased, Master-Planned Development proposing *up to* 2,274 dwelling units (Single Family [1,886] and Multi-Family [388]). Applicant requests Preliminary Plat approval in order to subdivide approximately 477 of the 761.44 acres into 757 Single family and 136 Multi-family lots, 34 common lots, 7 commercial lots, one school lot and two public facility lots. The remaining lands (approx. 284 ac.) will be developed in the future with separate applications. The project site is in Sections 14, 15, 23 & 24, all in T2N, R1E, near the northeast corner of Cloverdale and Kuna Roads.

4. *ADJOURNMENT:*

KUNA PLANNING & ZONING COMMISSION
MINUTES
Tuesday, December 10, 2019
Open to the Public

1. *CALL TO ORDER AND ROLL CALL*

COMMISSIONERS:
Chairman Lee Young
Vice Chairman Dana Hennis - *Absent*
Commissioner Cathy Gealy
Commissioner Stephen Damron
Commissioner John Laraway - *Absent*

CITY STAFF PRESENT:
Wendy Howell, Planning and Zoning Director
Doug Hanson, Planner I
Jace Hellman, Planner II

2. *CONSENT AGENDA:* *All Listed Consent Agenda Items are Action Items*

A. **Planning and Zoning Commission Meeting Minutes**

1. Regular Planning and Zoning Commission Minutes, November 26, 2019

B. **Findings of Fact and Conclusions of Law**

1. Consideration to approve Case No. 19-28-DR (Design Review) for Ashton Estates Commercial Shell

Commissioner Stephen Damron moved to approve the consent agenda. Seconded by Commissioner Cathy Gealy. Approved by the following roll call vote:
Voting Aye: Chairman Lee Young, Commissioner Stephen Damron, Commissioner Cathy Gealy.
Voting No: None
Absent: 2
Motion carried: 3-2-0

3. *PUBLIC HEARING:*

A. **Case No. 19-03-AN (Annexation), 19-02-S (Preliminary Plat) & 19-09-DR (Design Review) Chotika Subdivision –** ***Continued from October 22, 2019***
ACTION ITEM

Chairman Young: Staff has requested that we table this to January 14, 2020 as a revised plat has not been submitted.

Commissioner Cathy Gealy moved to table 19-03-AN, 19-02-S and 19-09-DR to January 14, 2020. Seconded by Commissioner Stephen Damron. Motion carried 3-2-0.

B. **Case No. 19-05-ZC (Rezone), 19-04-SUP (Special Use Permit) 763 W Avalon ACTION ITEM**

Chairman Young: Staff has requested that we table this item to January 14, 2020 due to a noticing violation.

Doug Hanson, Planner I: Staff now requests that we table that item until January 28th.

Chairman Young: Ok.

Commissioner Cathy Gealy moved to table 19-05-ZC and 19-04-SUP to January 28, 2020. Seconded by Commissioner Stephen Damron. Motion carried 3-2-0.

4. ***ADJOURNMENT:*** **6:02 PM**

Chairman Young: I don't see anything else on the agenda.

Commissioner Stephen Damron moved to adjourn. Seconded by Commissioner Cathy Gealy. Motion carried 3-2-0.

_____

Lee Young, Chairman
Kuna Planning and Zoning Commission

ATTEST:

_____

Wendy Howell, Planning and Zoning Director
Kuna Planning and Zoning Department

City of Kuna

Planning and Zoning Commission
Amended Staff Report

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To: Planning and Zoning Commission

Case Numbers: 19-03-AN (Annexation), 19-02-S (Preliminary Plat) & 19-09-DR (Design Review) **Chotika Subdivision**

Site Location: 642 S. Ash St and S. Ash St., Kuna, ID 83634

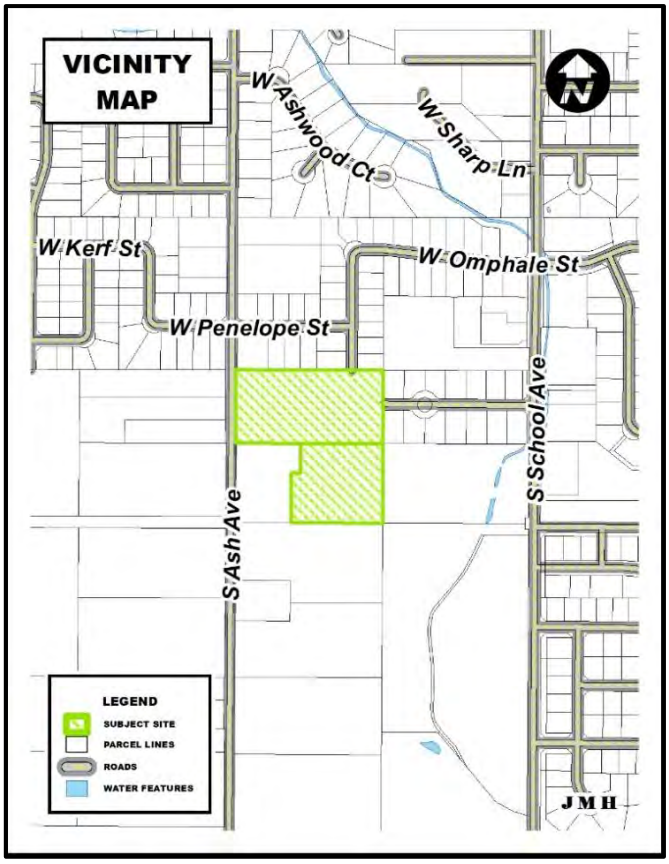
Planner: Jace Hellman, Planner II

Hearing Date: December 10, 2019
Continued To: **January 14, 2020**

Owner: Don Veasey
31045 Temecula Parkway #201
Temecula, CA 92592
951.970.9191
don@kalpacific.com

Applicant: Crystal McDaniel, Accurate Surveyors
1602 W Hays St, Suite 306
Boise, ID 83702
208.488.4227
crystal@accuratesurveyors.com

Representative: Roger Smith
1693 S. Coronado Ave
Boise, ID 83709
208-870-1015
Roger-j-smith@msn.com



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I. Commission's Recommendation

A. Process and Noticing:

1. Kuna City Code (KCC), Title 1, Chapter 14, Section 3, states that design reviews are designated as *public meetings*, with the Planning and Zoning Commission (acting as the Design Review Board) as the decision-making body; and that preliminary plats and annexations are designated as public hearings, with the Planning and Zoning Commission as a recommending body and City Council as the decision-making body. These land use applications were given proper public notice and followed the requirements set forth in Idaho Code, Chapter 65, Local Planning Act.

a. Notifications

i.	Neighborhood Meeting	March 27, 2019 (10 people attended)
ii.	Agency Comment Request	June 18, 2019
iii.	400' Property Owners Notice	September 4, 2019
iv.	Kuna Melba Newspaper	September 4, 2019
v.	Site Posted	September 13, 2019
vi.	Courtesy Notice	October 23, 2019 & December 13, 2019

B. Applicant's Request:

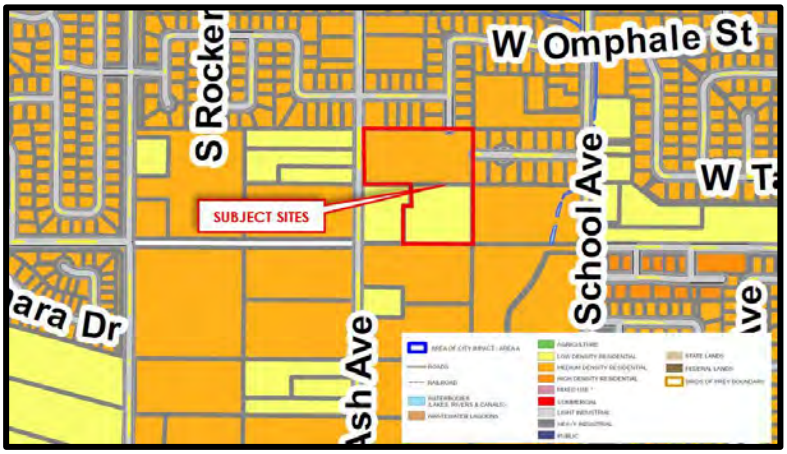
On behalf of Don Veasey (owner), Accurate Surveyors requests to annex two parcels consisting of approximately 7.67 acres into Kuna City Limits with an R-6 (Medium Density Residential) zone and to subdivide the 7.67 acres into 36 total lots (thirty-one (31) buildable lots, five (5) common lots). The subject sites are located at 642 S. Ash St. and S. Ash St., Kuna, ID 83634, within Section 26, Township 2 North, Range 1 West; (APNs: R5070503050 and R5070502835).

C. Site History:

Both parcels are currently zoned Rural Urban Transition (RUT) within unincorporated Ada County. Historically these parcels have served as farmland.

D. General Projects Facts:

1. **Comprehensive Plan Map:** The Future Land Use Map (FLUM) is intended to serve as a *guide* for the decision-making body for the City. The FLUM indicates land use designations generally speaking, it is not the actual zone. The Future Land Use Map identifies the 7.67-acre site as Medium Density Residential and Low-Density Residential.



2. **Recreation and Pathways Map:** The Recreation and Pathways Master Plan Map does not indicate a future pathway/trail through the subject site.

3. **Surrounding Land Uses:**

North	R-6	Medium Density Residential – Kuna City
South	RUT	Rural Urban Transition – Ada County
East	RUT R-4	Rural Urban Transition – Ada County Medium Density Residential – Kuna City
West	RUT R1	Rural Urban Transition – Ada County Estate Residential – Ada County

4. **Parcel Sizes, Current Zoning, Parcel Numbers:**

Property Owner	Parcel Size	Current Zone:	Parcel Numbers
Don Veasey	7.67 acres	RUT (Rural Urban Transition)	R5070503050 & R5070502835

5. **Services:**

Sanitary Sewer– City of Kuna

Potable Water – City of Kuna
Pressurized Irrigation – City of Kuna (KMIS)
Fire Protection – City of Kuna (KRFD)
Police Protection – Kuna Police (Ada County Sheriff's office)
Sanitation Services – J & M Sanitation

6. **Existing Structures, Vegetation and Natural Features:**
The proposed project sites contain one single-family home and two (2) outbuildings. vegetation on-site is consistent with that of crop fields. The sites have an estimated average slope of 2% to 3%. Bedrock depth is estimated to be greater than 60 inches according to the USDA Soil Survey for Ada County.

7. **Transportation / Connectivity:**
The applicant proposes connections to existing public streets in three locations, including the projects main ingress/egress onto South Ash Avenue. Additionally, an extension of a section of Sunbeam Street (mid-mile collector) is proposed along the southern boundary of the proposed property.

8. **Environmental Issues:**
Staff is not aware of any environmental issues, health or safety conflicts beyond the designation of being in the nitrate priority area. Idaho Department of Environmental Quality (DEQ) has provided recommendations for surface and groundwater protection practices and requirements for development of the site.

9. **Agency Responses:** The following responding agency comments are included as exhibits with this case file:
   - Central District Health Department ..... Exhibit C-2
   - Boise Project Board of Control ..... Exhibit C-3
   - Department of Environmental Quality ..... Exhibit C-4
   - Nampa & Meridian Irrigation District ..... Exhibit C-5
   - Idaho Transportation Department ..... Exhibit C-6
   - Ada County Highway District ..... Exhibit C-7
   - Kuna City Engineer ..... Exhibit C-8

E. Staff Analysis:

On May 23, 2019, Staff held a pre-application meeting with the applicant, Public Works, Kuna School District, and Kuna Rural Fire District to discuss the project. The applicant held a neighborhood meeting with residents within 400 ft of the subject site on March 27, 2019. There were 10 residents who attended the meeting. A recap of the neighborhood meeting was provided as a part of the application.

The first preliminary plat that was submitted with this application consisted of 37 lots (34 buildable and three (3) common lots), however this plat did not include the construction of a mid-mile collector section (Sunbeam Street) and appropriate buffer widths along the future mid mile collector. Additionally, the initial preliminary plat only included 1.8% useable open space. The applicant was instructed by staff from the City and Ada County Highway District to re-draw the plat to include the mid mile collector, buffers and increase the amount of usable open space.

On September 24, 2019, a preliminary plat containing 38 total lots (33 buildable lots and five common lots) at a net density of 5.817 was presented to the Planning and Zoning Commission. Following Staff's, the applicant's and Public's testimony, the Planning and Zoning Commission requested that the applicant redesign the layout of the plat to include more accessible and centrally located open space, remove the flag lots and reduce the overall density of the project. The applicant accepted, and the proposed preliminary plat and annexation was tabled to October 22, 2019. Due to staff not receiving an amended preliminary plat from the applicant, the project was tabled again until December 10, 2019 and again until January 14, 2020.

On December 12, 2019, Staff did receive an updated application package including a new preliminary plat, featuring 36 total lots (31 buildable lots and five common lots) at a net density of 5.092 dwellings per acre.

The project proposes to take its main access from Ash Avenue. Additionally, the applicant proposes connections into existing stub streets (W. Recess Way and S. Cassandra Avenue). the property's southern border aligns with the mid-mile collector, Sunbeam Street. Typically, this would indicate the applicant would be responsible for the dedication of proper right-of-way and the construction of half of a 36-ft street section with vertical curb, gutter, 8-ft wide detached sidewalk, plus 12-ft of additional pavement widening, 3-ft wide shoulder and borrow ditch abutting the site. However, Sunbeam is currently not constructed to the east and west of the site. Ada County Highway District (ACHD) has recommended that the applicant be required to provided sufficient right-of-way along the south property line abutting the site, and provide ACHD with road trust funds for the future improvements to Sunbeam Street abutting the site. Staff would support ACHD's recommendation. Cassandra Avenue will stub into what will be Sunbeam Street, the applicant will be required to install a sign at the terminus of each of the roads stating these roads will continue in the future. Staff will defer the applicant to comments provided by ACHD for preferred language.

There is an existing home on the subject site that will remain as a part of this subdivision. The home currently takes driveway access onto Ash Avenue. However, the applicant has proposed and is required to improve Ash Avenue with vertical curb, gutter and a five-foot wide attached sidewalk. These improvements will close the existing driveway's onto Ash Avenue, and the existing home will have to take access from W. Recess Way.

The installation of streetlights are a required public improvement (Kuna City Code 6-4-2). The applicant has not identified streetlight locations on the preliminary plat. Applicant will be required to work with staff in order to comply with Kuna City code and install street lights a maximum spacing of 250 feet along the site's frontage. The locations of street lights will be approved at the time of construction document review. Staff would note that these street lights must be designed and installed according to "Dark skies" standards and Kuna City Code.

Kuna's Comprehensive Plan (Comp Plan), encourages a variety of housing types for all income levels numerous times throughout the document. Additionally, the City attempts to balance all housing types within the City. Pertinent sections of the Comp Plan that address housing types are included below, in Section K (Comp Plan Analysis) of this report.

A design review application for common area landscaping and open space was included as a part of the overall application. As mentioned previously, the first preliminary plat and landscape, only contained approximately 1.8% open space for the 7.67-acre site, while the second plat contained approximately 3.59% open space. Following conversation with staff, and the recommendations of the Planning and Zoning Commission the applicant has proposed approximately 5.97% of the overall project to be considered as useable open space. 9.15% (including what is considered useable open space) has been dedicated to landscape buffers and open space. Staff finds the proposed landscaping, buffers and open space to be in compliance with Kuna City Code. Staff notes that if this project is approved, at the time of civil plan development, landscaping cannot be placed within ten (10) feet of any and all meter pits, pressurized irrigation valves, and ACHD underground facilities.

A monument sign for the subdivision has been included in this application (exhibit B3). The sign measures approximately 3-ft high, 6-ft wide. Staff notes that this sign in conformance with Kuna City Code 5-10. Applicant is hereby notified that this project is subject to design review inspection fees. Required inspections (post construction), are to verify landscaping compliance prior to signature on the final plat.

Staff has determined the preliminary plat and design review generally complies with the goals and policies for Kuna City, Title 5 and Title 6 of the Kuna City Code; Idaho Statute § 67-6511; and the Kuna Comprehensive Plan. Staff recommends that if the Planning and Zoning Commission recommends approval of case nos. 19-03-AN (Annexation) and 19-02-S (Preliminary Plat) and approves case no. 19-09-DR (Design Review), the applicant be

subject to the conditions of approval listed in section "I" of this report, as well as any additional conditions requested by the Planning and Zoning Commission.

F. Applicable Standards:

1. City of Kuna Zoning Ordinance Title 5.
2. City of Kuna Subdivision Ordinance Title 6.
3. City of Kuna Comprehensive Plan.
4. Idaho Code, Title 67, Chapter 65- the Local Land Use Planning Act.

G. Proposed Comprehensive Plan Analysis:

Kuna Planning and Zoning Commission may (accept or reject) the Comprehensive Plan components, and shall determine if the proposed annexation and preliminary plat requests for the site (*are/are not)* consistent with the following Comprehensive Plan components as described below:

Goal Area 3: Kuna's land uses will support a desirable, distinctive and well-designed community.

- Goal 3.D: Encourage development of housing options and strong neighborhoods.
  - Objective 3.D.1: Encourage development of housing options for all citizens.
    - Policy 3.D.1.a: Encourage preservation and development of housing that meets demand for household sizes, lifestyles and settings.
- Goal 3.G: Respect and protect private property rights.
  - Objective 3.G.1: Ensure land use policies, restrictions, and fees do not violate private property rights.
    - Policy 3.G.1.b: Ensure City land use actions, decisions and regulations will not cause an unconstitutional regulatory taking of private property; and do not effectively eliminate all economic value of the subject property.
    - Policy 3.G.1.c: Ensure City land use actions, decisions and regulations do not prevent a private property owner from taking advantage of a fundamental property right. Ensure city actions do not impose a substantial and significant limitation on the use of the property.

Goal Area 4: Kuna will be a connected community through strong transportation and infrastructure systems.

- Goal 4.D: Promote a connected street network that incorporates mid-mile collectors and crossing for improved neighborhood connectivity.
  - Objective 4.D.2: Ensure the continued expansion/development of mid-mile collector system throughout the community.
    - Policy 4.D.2.a: Extend and expand mid-mile roads as growth occurs.
    - Policy 4.D.1.b: Preserve adequate right-of-way along all mid-mile roads or other approved alternative locations to align roads.

H. Proposed Kuna City Code Analysis:

1. This request appears to be consistent and in compliance with all Kuna City Code (KCC).

   Comment: *The proposed applications (adhere/do not adhere) to the applicable requirements of Title 5 and Title 6 of KCC.*

2. The Planning and Zoning Commission feels the site (*is/is not)* physically suitable for the proposed development.

   Comment: *The 7.67-acre (approximate) site (does/does not) appear to be suitable for the proposed development.*

3. The preliminary plat request is not likely to cause substantial environmental damage or avoidable injury to wildlife or their habitat.

Comment: *The land to be developed is not used as wildlife habitat. Roads, driveways, family units and open spaces are planned for construction according the City and ACHD requirements and best practices and will therefore not cause environmental damage or loss of habitat.*

4. These applications (*are/are not)* likely to cause adverse public health problems.

   Comment: *The project would connect to public sewer and potable water systems, therefore eliminating the occurrence of adverse public health problems.*

5. The application appears to avoid detriment to the present and potential surrounding uses; to the health, safety, and general welfare of the public taking into account the physical features of the site, public facilities and existing adjacent uses.

   Comment*: The preliminary plat request considers the location of the property and adjacent uses. The adjacent uses are medium density residential (Kuna City) and rural urban transition (Ada County).*

6. The existing and proposed street and utility services in proximity to the site are suitable *or* adequate for a commercial development.

   Comment: *Correspondence from ACHD and Kuna Public Works confirms that the streets and utility services are suitable and adequate for this project, however, per Kuna City Engineer comments (exhibit C8), a commensurate impact of City services will result with this development.*

I. Commission's Recommendation:

Note: These motions are for the approval, conditional approval or denial of the design review application and the recommendation of approval, conditional approval or denial of the annexation and preliminary plat applications to the City Council. However, if the planning and Zoning Commission wishes to approve or deny specific parts of these requests as detailed in the report, those changes must be specified.

Based on the facts outlined in staff's report and public testimony as presented, the Planning and Zoning Commission of Kuna, Idaho, hereby recommends (*approval/conditional approval/denial)* of Case Nos*. 19-03-AN (Annexation) and 19-02-S* (Preliminary Plat), a subdivision request from Accurate Surveyors requests to annex two parcels consisting of approximately 7.67 acres into Kuna City Limits with an R-6 (Medium Density Residential) zone and to subdivide the 7.67 acres into 36 total lots (31 buildable lots, five common lots); AND (*approves/conditionally approves/denies)* Case No. 19-09-DR (Design Review), subject to the following conditions of approval:

1. The applicant and/or owner shall obtain written approval on letterhead or may be written/stamped on the approved plans of the construction plans from the agencies noted below. All submittals are required to include the lighting, landscaping, drainage, and development plans. All site improvements are prohibited prior to approval of the following agencies:
   a. The City Engineer shall approve the sewer hook-ups.
   b. The City Engineer shall approve all civil plans. No construction, grading, filling, clearing or excavation of any kind shall be initiated until the applicant has received approval of the drainage plan.
   c. Central District Health Department recommends the plan be designed and constructed in conformance with standards contained in, "Catalog for Best Management Practices for Idaho Cities and Counties".
   d. The Kuna Fire District shall approve fire flow requirements and/or building plans. Installation of fire protection facilities as required by Kuna Fire District are required.
   e. The Kuna Municipal Irrigation System and Boise Project Board of Control shall approve any modifications to the existing irrigation system.

f. Approval from Ada County Highway District (ACHD) shall be obtained and Impact Fees must be paid prior to *issuance* of any building permit(s).
g. All public rights-of-way shall be dedicated and constructed to standards of the City and Ada County Highway District. No public street construction may commence without the approval and permit from Ada County Highway District.

2. Installation of service facilities shall comply with the requirements of the public utility or irrigation district providing the services. All utilities shall be installed underground, see **KCC 6-4-2-W**.
3. Compliance with Idaho Code, Section §31-3805 pertaining to irrigation waters is required. Irrigation/drainage waters shall not be impeded by any construction on site. Compliance with the requirements of the Boise Project Board of Control is required.
4. When required, submit a petition to the City (as necessary, confirmed with the City engineer) consenting to the pooling of irrigation surface water rights for delivery purposes and request to annex the irrigation surface water rights appurtenant to the property over to the Kuna Municipal Pressure Irrigation system of the City (KMID).
5. Connection to City Services (Sewer, Water, Pressurized Irrigation) is required. The applicant shall conform all corresponding Master Plans.
6. Curb, gutter and sidewalk (attached and detached) shall be installed in accordance with Kuna City Code Title 5 Chapter 17.
7. Applicant shall work with staff in order to provide locations of street lights as required by Kuna City Code.
8. Street lights for the site shall be LED lighting and must comply with Kuna City Code and established Dark Skies practices.
9. Fencing within and around the site shall comply with Kuna City Code (Unless specifically approved otherwise and permitted).
10. All required landscaping shall be permanently maintained in a healthy growing condition. The property owner shall remove and replace unhealthy or dead plant material within 3 days or as the planting season permits as required to meet the standards of these requirements. Maintenance and planting within public rights-of-way shall be with approval from the public entities owning the property.
11. If any revisions are made, the applicant shall provide the Planning and Zoning Staff with a revised copy of the preliminary plat.
12. Any revisions of the plat are subject to administrative determination to rule if the revision is substantial.
13. The land owner/applicant/developer, and any future assigns having an interest in the subject property, shall fully comply with all conditions of development as approved by the City Council, or seek amending them through public hearing processes.
14. Developer/owner/applicant shall follow staff, City engineers and other agency recommended requirements as applicable.
15. Developer/owner/applicant shall comply with all local, state and federal laws.

DATED this 14th day of January, 2020.

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Based upon the record contained in Case Nos. 19-03-AN, 19-02-S and 19-09-DR including the Comprehensive Plan, Kuna City Code, Staff's Memorandums, including the exhibits, and the testimony during the public hearing, the Kuna Commission hereby (approves/conditionally approves/denies) Case No. 19-09-DR and recommends (*approval/denial) of* the Findings of Fact and Conclusions of Law, and conditions of approval for Case No's 19-03-AN and 19-02-S, a request from Accurate Surveyors requests to annex two parcels consisting of approximately 7.67 acres into Kuna City Limits with an R-6 (Medium Density Residential) zone and to subdivide the 7.67 acres into 36 total lots (31 buildable lots, five common lots).

If the planning and Zoning Commission wishes to approve, deny or modify specific parts of the Findings of Facts and Conclusions of Law as detailed below, those changes must be specified.

1. *Based on the evidence contained in Case Nos. 19-03-AN, 19-02-S and 19-09-DR, this proposal does generally comply with the City Code.*

   Staff Finding: *The applicant has submitted a complete application, and following staff review for technical compliance the application appears to be in general compliance with the design requirements, public improvement requirements, objectives and considerations listed in Kuna City Code Title 5 and Title 6.*

2. The public notice requirements have been met and the neighborhood meeting was conducted within the guidelines of applicable Idaho Code and City Ordinances.

   Staff Finding: *Neighborhood Notices were mailed out to residents within 400-FT of the proposed project site on September 4, 2019 and a legal notice was published in the Kuna Melba Newspaper on September 4, 2019. The applicant posted sign on the property on September 13, 2019. Courtesy Notices were sent out on October 23, 2019 and December 13, 2019.*

3. *Based on the evidence contained in Case Nos. 19-03-AN, 19-02-S and 19-09-DR, this proposal does generally comply with the Comprehensive Plan.*

   Staff Finding: *The Comp Plan has listed numerous goals for providing a variety of housing densities and types to accommodate various lifestyles, ages and economic group in Kuna. The proposed zoning designation is R-6 (Medium Density Residential). The Comp Plan Map designates the northern property as Medium Density and the southern parcel as low density.*

4. The contents of the proposed preliminary plat application *does* contain all of the necessary requirements as listed in Kuna City Code 6-2-3: - Preliminary Plat.

   Staff Finding: *Review by Staff of the proposed preliminary plat confirms all technical requirements listed in KCC 6-2-3 were provided.*

5. The availability of existing and proposed public services and streets *can* accommodate the proposed development.

   Staff Finding: *Correspondence from ACHD and Kuna Public Works confirms that the streets and utility services and suitable and adequate to accommodate the proposed project. It should be noted that installation of this project will place a commensurate impact on City services.*

6. The proposed development *is* continuous with Master Utility Plans (Sewer/Water/Pressurized Irrigation).

   Staff Finding: *Correspondence from Kuna Public Works recommends the applicant be required to conform to the Master Sewer Plan, Master Water Plan and Master Pressurized Irrigation Plan, therefore satisfying this requirement.*

7. The public *does* have the financial capability to provide supporting services to the proposed development.

   Staff Finding: *Throughout the development of the project and beyond, connection fees, impact fees (Fire, police, Park and Ada County Highway District), and property taxes will be collected, therefore satisfying the financial capability to provide supporting services.*

8. The proposed project *does* consider health and safety of the public and the surrounding area's environment**.**

   Staff Finding: *Connection to City services, as well as other public improvements such as streetlights, fire hydrants, sidewalks, bike lanes, etc. are required to be implemented as a part of this project. No major wildlife habitats will be impacted by the proposed development.*

9. All private landowners *have* consented to annexation.

   Staff Finding: *An affidavit of legal interest was signed by THREEHOUSEASHPONDNORTHVIEWGALLAHAD-GRANGERGRANGER, LLC. and TWOPDXMOORESTATEELDORADO34, LLC. allowing Accurate Surveyors to act on their behalf of this project, therefore consenting to the annexation of the proposed project site.*

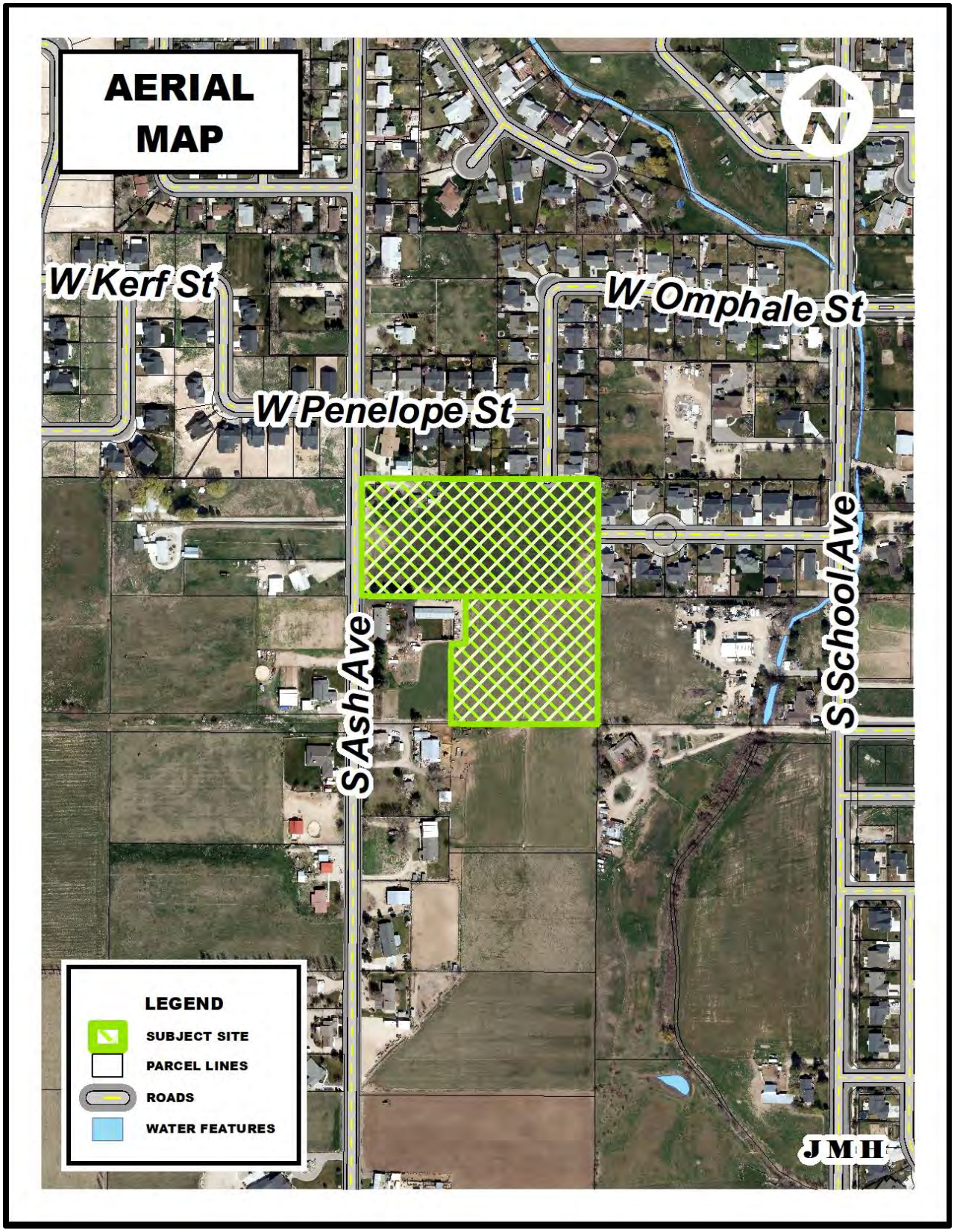
10. The proposed project lands *are* contiguous or adjacent to property within Kuna City Limits.

    Staff Finding: *The parcel is contiguous with City limits to the north and east.*

11. The site landscaping *does* minimize the impact on adjacent properties through the use of screening.

    Staff Finding: *Per the submitted landscape Plan, the applicant is proposing a 15-foot landscape buffer along Ash Avenue, a 20-foot landscape buffer along the proposed road section of Sunbeam Street. A six-foot vinyl fence is proposed around the entire project.*

DATED this 14th day of January, 2020.


AERIAL MAP
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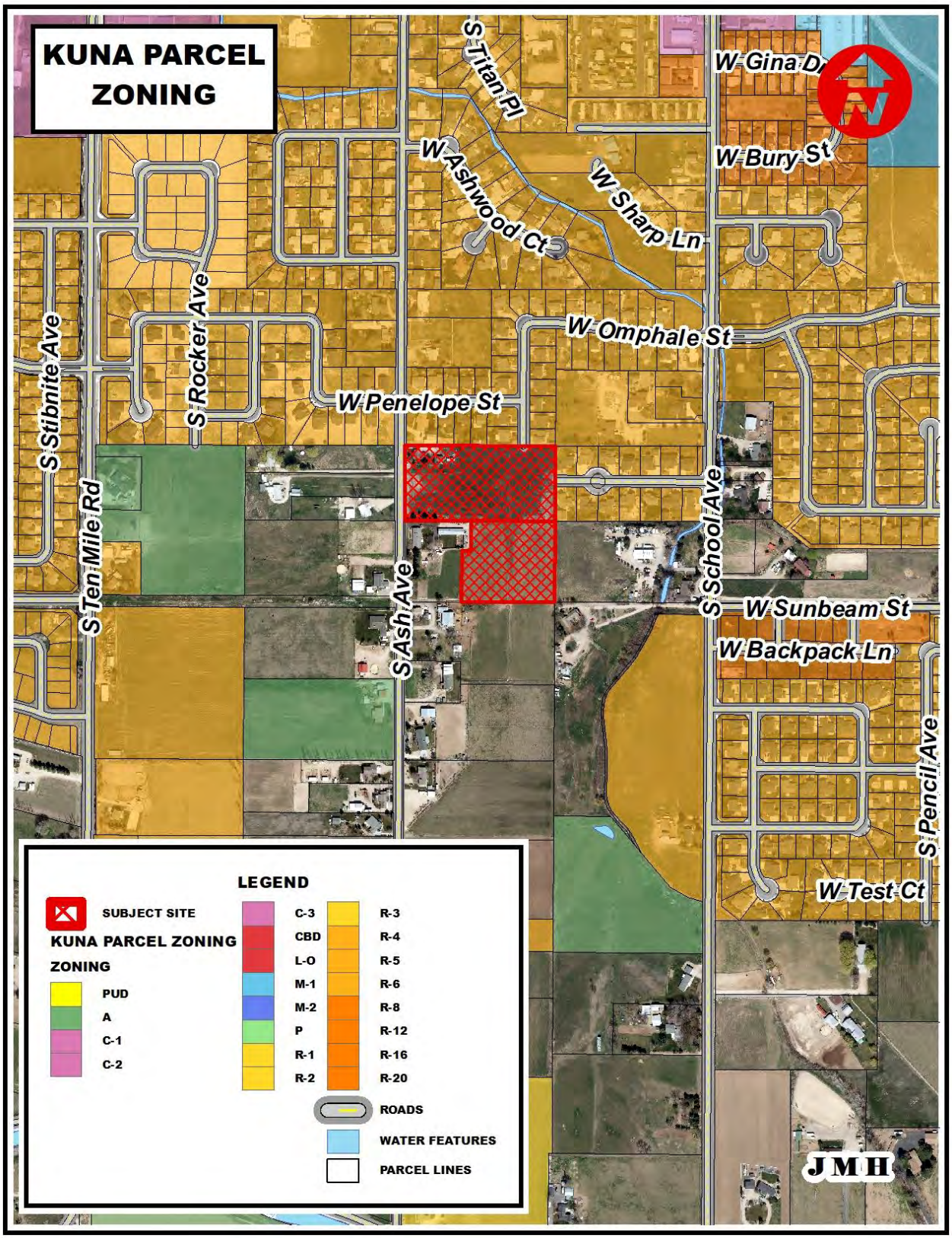
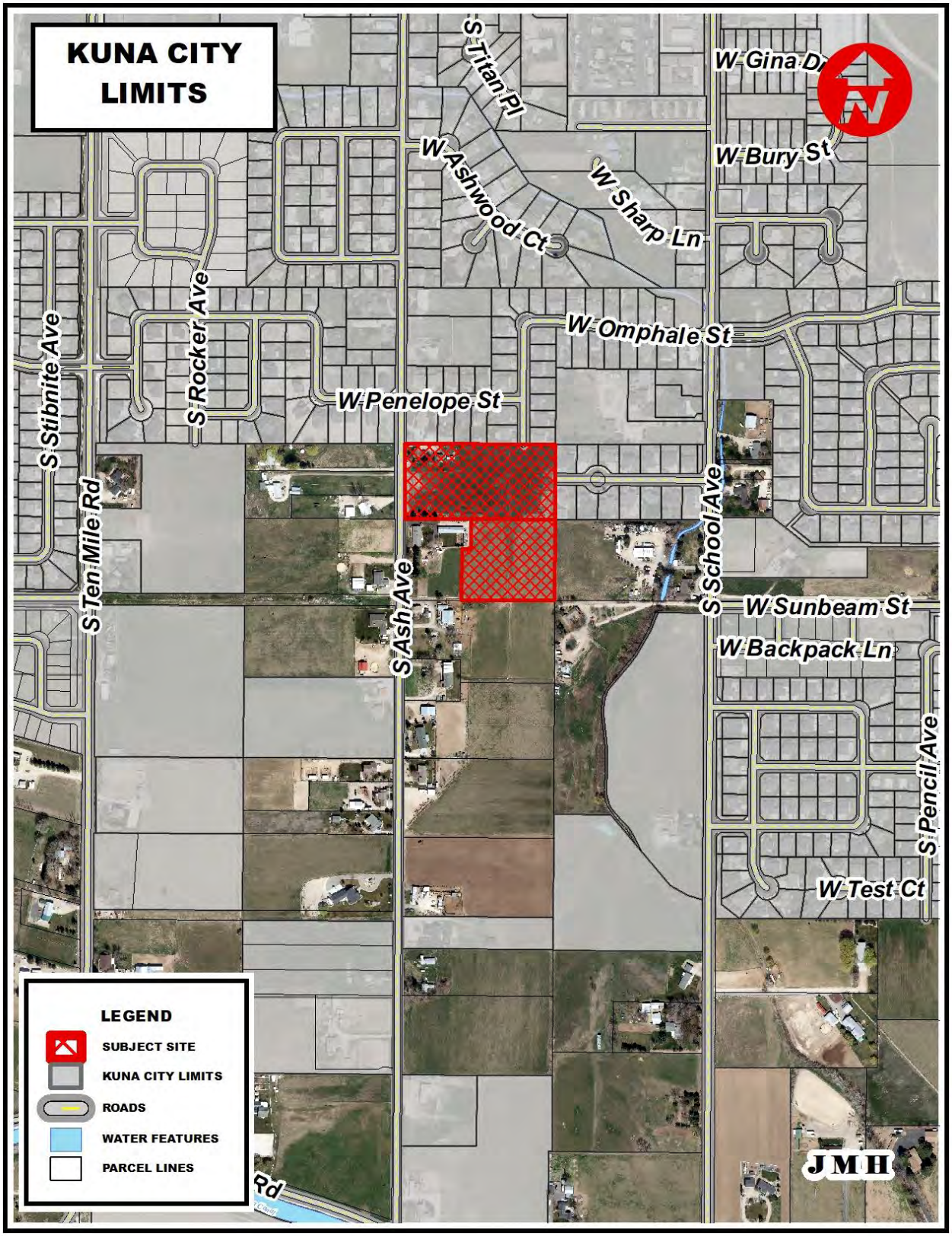
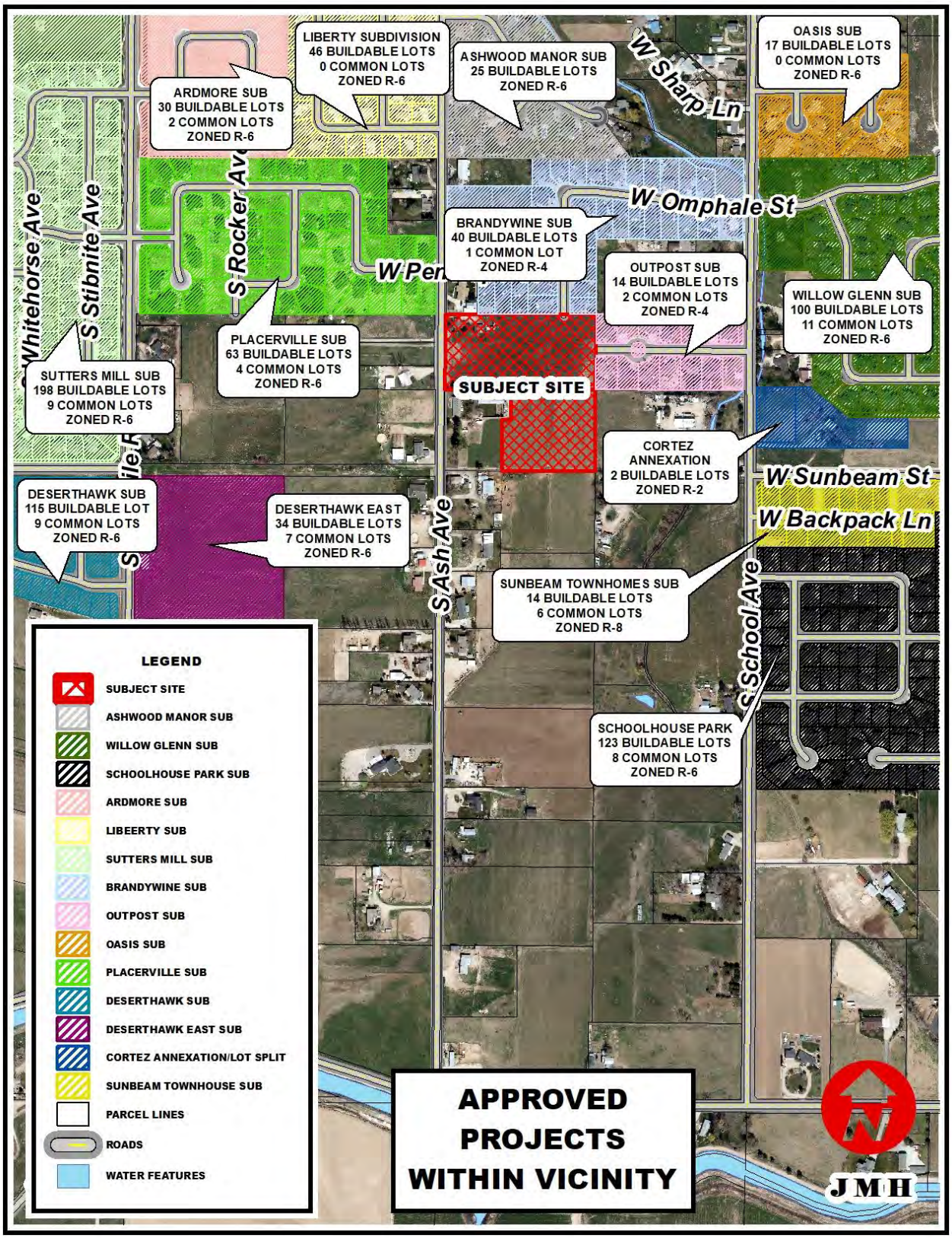
W Omphale St
W Penelope St
S Ash Ave
S School Ave
LEGEND
SUBJECT SITE
PARCEL LINES
ROADS
WATER FEATURES
JMH


KUNA PARCEL ZONING
S Titan Pl
W Gina Dr
W Bury St
W Ashwood Ct
W Sharp Ln
S Stibnite Ave
S Rocker Ave
W Omphale St
W Penelope St
S Ten Mile Rd
S Ash Ave
S School Ave
W Sunbeam St
W Backpack Ln
S Pencil Ave
W Test Ct
LEGEND
SUBJECT SITE
KUNA PARCEL ZONING
ZONING
PUD
A
C-1
C-2
C-3
CBD
L-O
M-1
M-2
P
R-1
R-2
R-3
R-4
R-5
R-6
R-8
R-12
R-16
R-20
ROADS
WATER FEATURES
PARCEL LINES
JMH


KUNA CITY LIMITS
S Titan Pl
W Gina Dr
W Bury St
W Ashwood Ct
W Sharp Ln
S Stibnite Ave
S Rocker Ave
W Omphale St
W Penelope St
S Ten Mile Rd
S Ash Ave
S School Ave
W Sunbeam St
W Backpack Ln
S Pencil Ave
W Test Ct
Rd
LEGEND
SUBJECT SITE
KUNA CITY LIMITS
ROADS
WATER FEATURES
PARCEL LINES
JMH


LIBERTY SUBDIVISION
46 BUILDABLE LOTS
0 COMMON LOTS
ZONED R-6
ASHWOOD MANOR SUB
25 BUILDABLE LOTS
ZONED R-6
OASIS SUB
17 BUILDABLE LOTS
0 COMMON LOTS
ZONED R-6
ARDMORE SUB
30 BUILDABLE LOTS
2 COMMON LOTS
ZONED R-6
W Sharp Ln
W Omphale St
BRANDYWINE SUB
40 BUILDABLE LOTS
1 COMMON LOT
ZONED R-4
OUTPOST SUB
14 BUILDABLE LOTS
2 COMMON LOTS
ZONED R-4
WILLOW GLENN SUB
100 BUILDABLE LOTS
11 COMMON LOTS
ZONED R-6
PLACERVILLE SUB
63 BUILDABLE LOTS
4 COMMON LOTS
ZONED R-6
SUTTERS MILL SUB
198 BUILDABLE LOTS
9 COMMON LOTS
ZONED R-6
SUBJECT SITE
CORTEZ
ANNEXATION
2 BUILDABLE LOTS
ZONED R-2
W Sunbeam St
W Backpack Ln
DESERTHAWK SUB
115 BUILDABLE LOT
9 COMMON LOTS
ZONED R-6
DESERTHAWK EAST
34 BUILDABLE LOTS
7 COMMON LOTS
ZONED R-6
SUNBEAM TOWNHOMES SUB
14 BUILDABLE LOTS
6 COMMON LOTS
ZONED R-8
SCHOOLHOUSE PARK
123 BUILDABLE LOTS
8 COMMON LOTS
ZONED R-6
Whitehorse Ave
S Stibnite Ave
S Rocker Ave
S Ash Ave
S School Ave
LEGEND
SUBJECT SITE
ASHWOOD MANOR SUB
WILLOW GLENN SUB
SCHOOLHOUSE PARK SUB
ARDMORE SUB
LIBEERTY SUB
SUTTERS MILL SUB
BRANDYWINE SUB
OUTPOST SUB
OASIS SUB
PLACERVILLE SUB
DESERTHAWK SUB
DESERTHAWK EAST SUB
CORTEZ ANNEXATION/LOT SPLIT
SUNBEAM TOWNHOUSE SUB
PARCEL LINES
ROADS
WATER FEATURES
APPROVED
PROJECTS
WITHIN VICINITY
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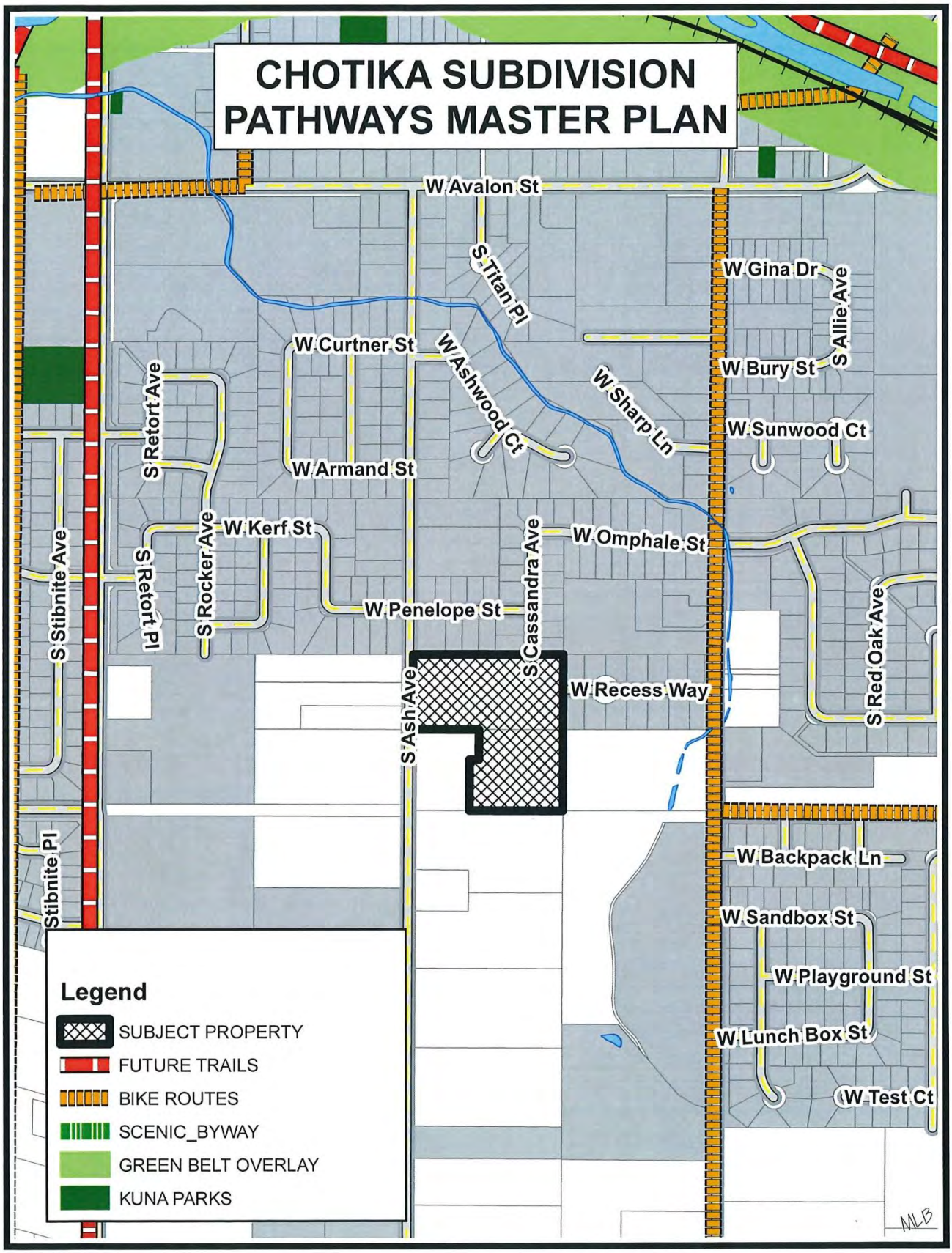
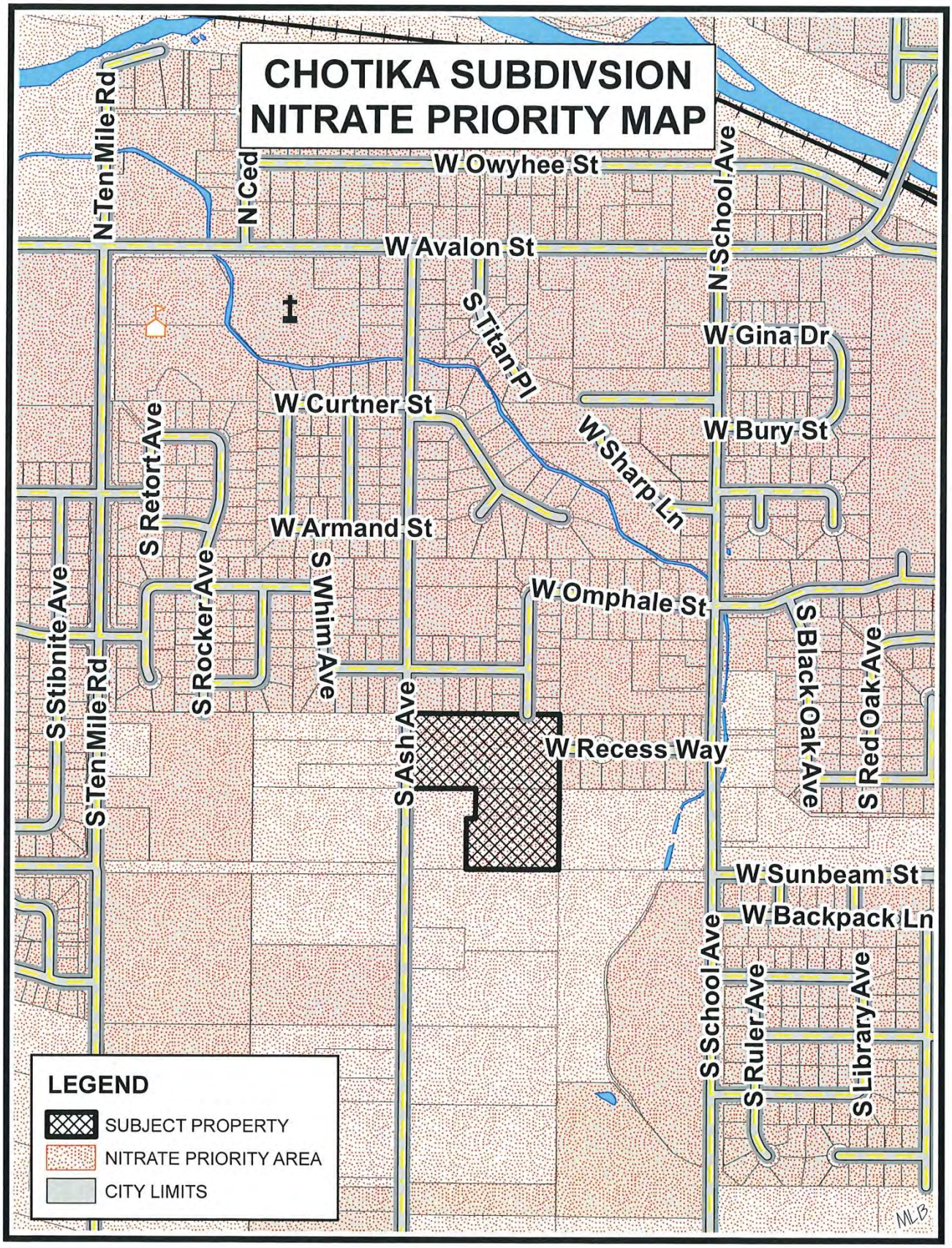
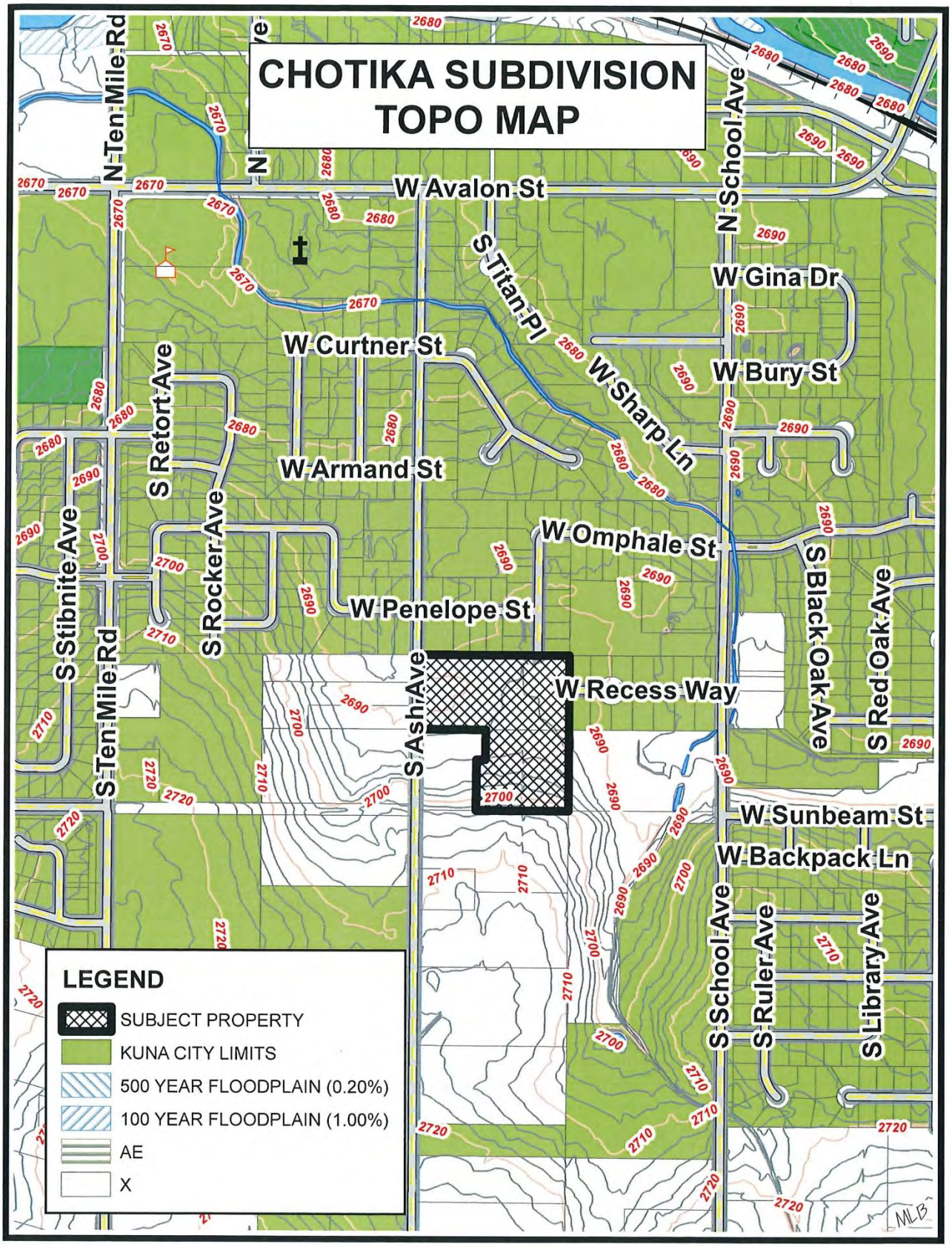
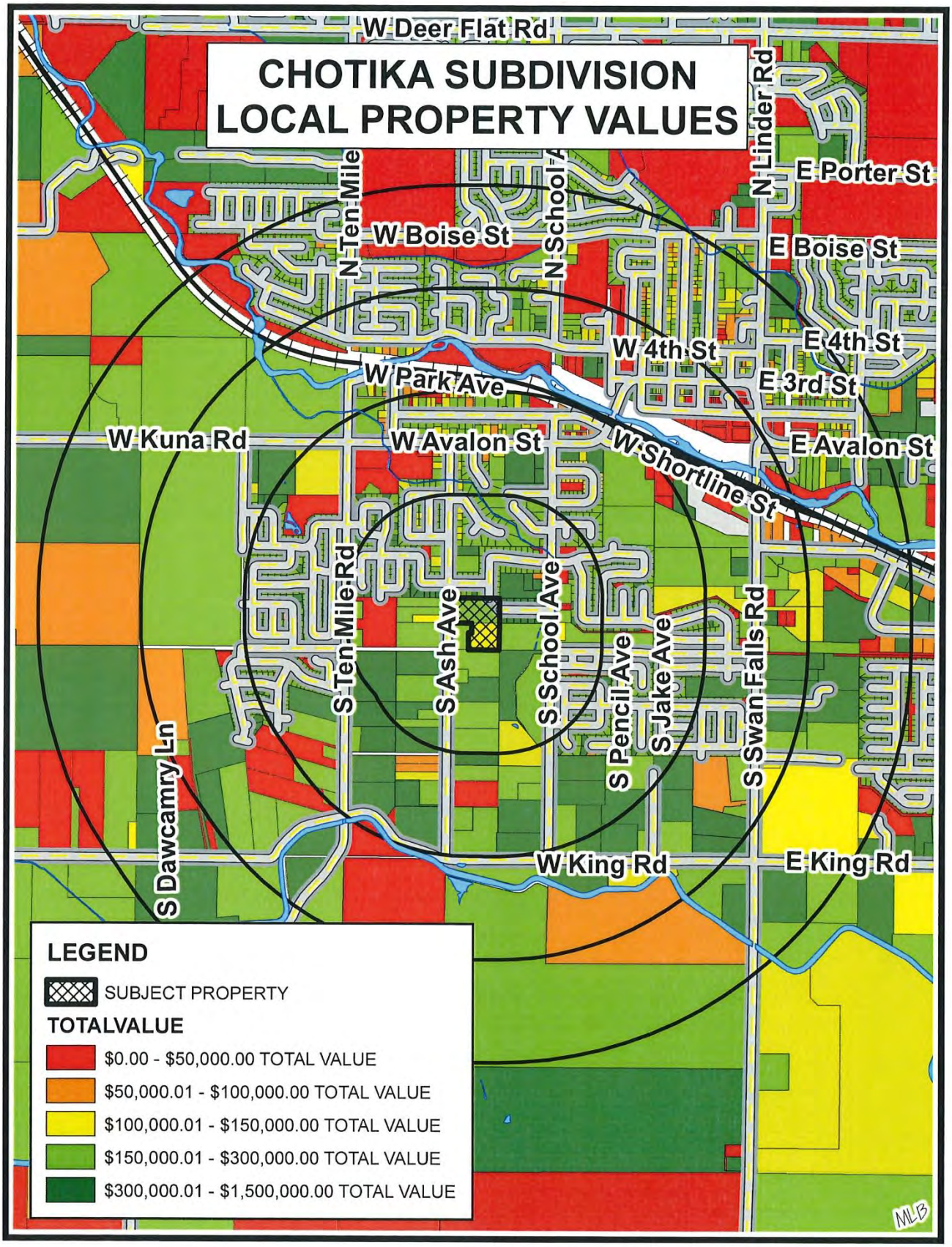
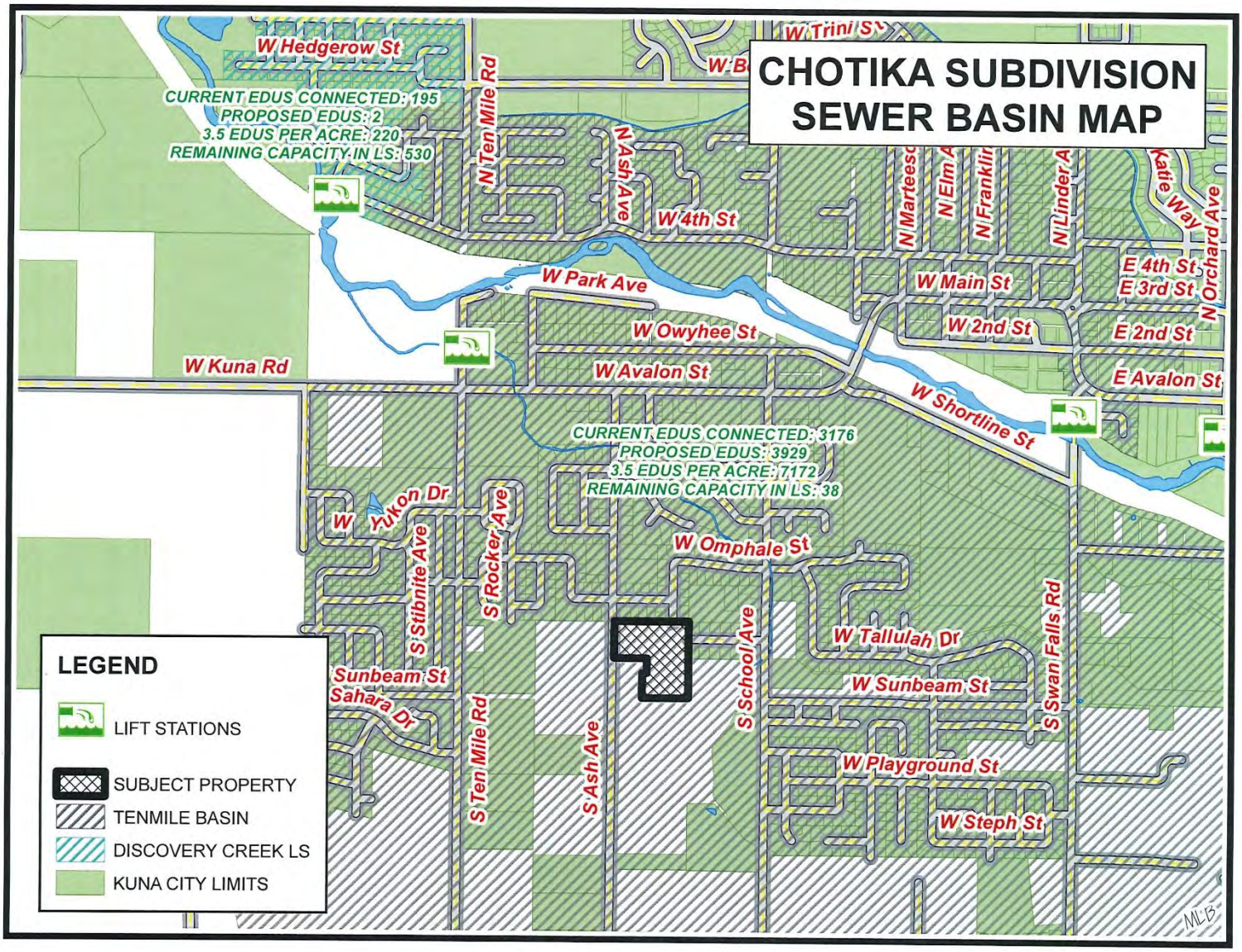
JMH

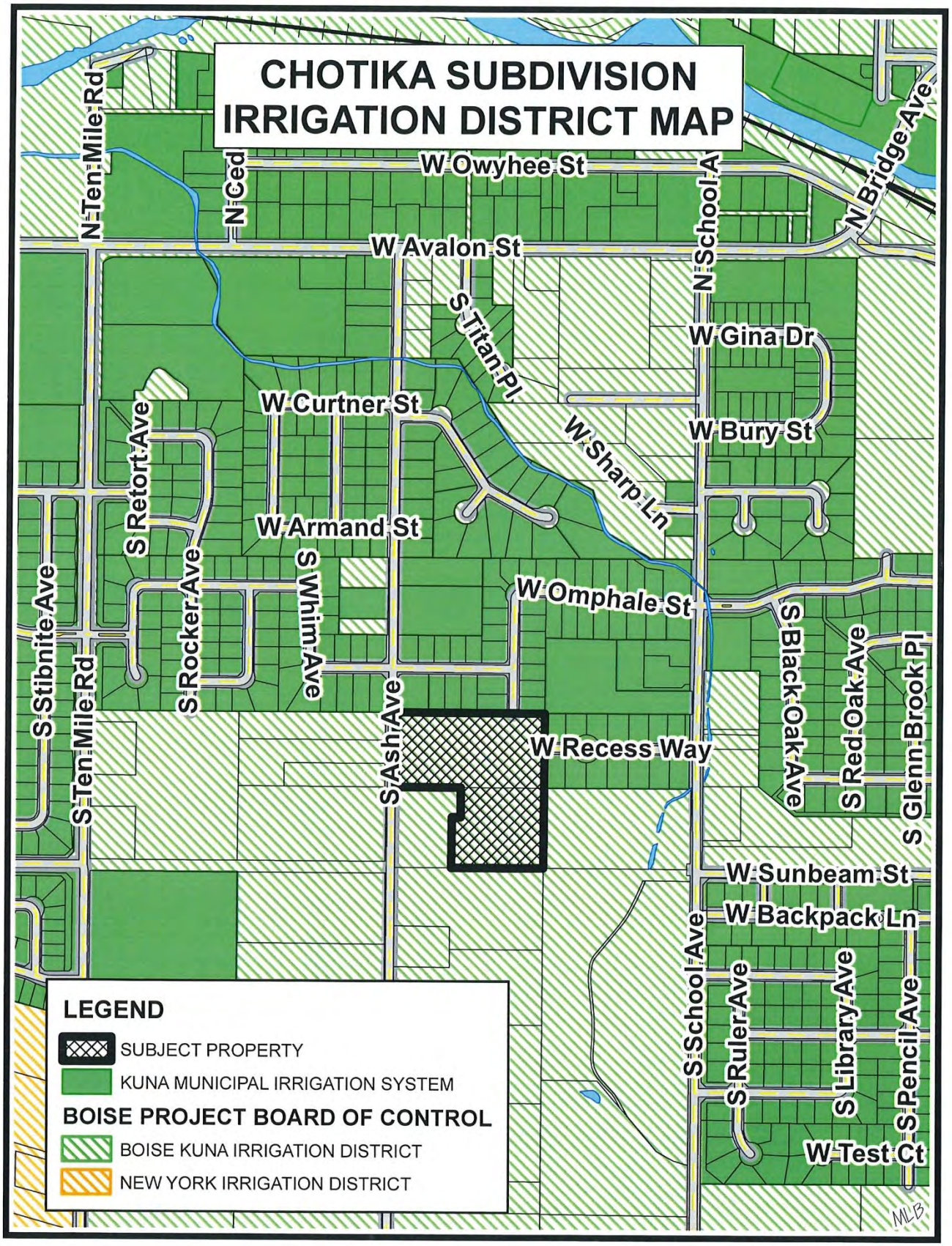

CHOTIKA SUBDIVISION
PATHWAYS MASTER PLAN
W Avalon St
S Titan Pl
W Gina Dr
S Allie Ave
W Curtner St
W Ashwood Ct
W Bury St
W Sharp Ln
W Sunwood Ct
S Retort Ave
W Armand St
W Kerf St
S Rocker Ave
W Omphale St
S Cassandra Ave
S Stibnite Ave
S Retort Pl
W Penelope St
S Red Oak Ave
S Ash Ave
W Recess Way
Stibnite Pl
W Backpack Ln
W Sandbox St
W Playground St
W Lunch Box St
W Test Ct
Legend
SUBJECT PROPERTY
FUTURE TRAILS
BIKE ROUTES
SCENIC_BYWAY
GREEN BELT OVERLAY
KUNA PARKS
MLB

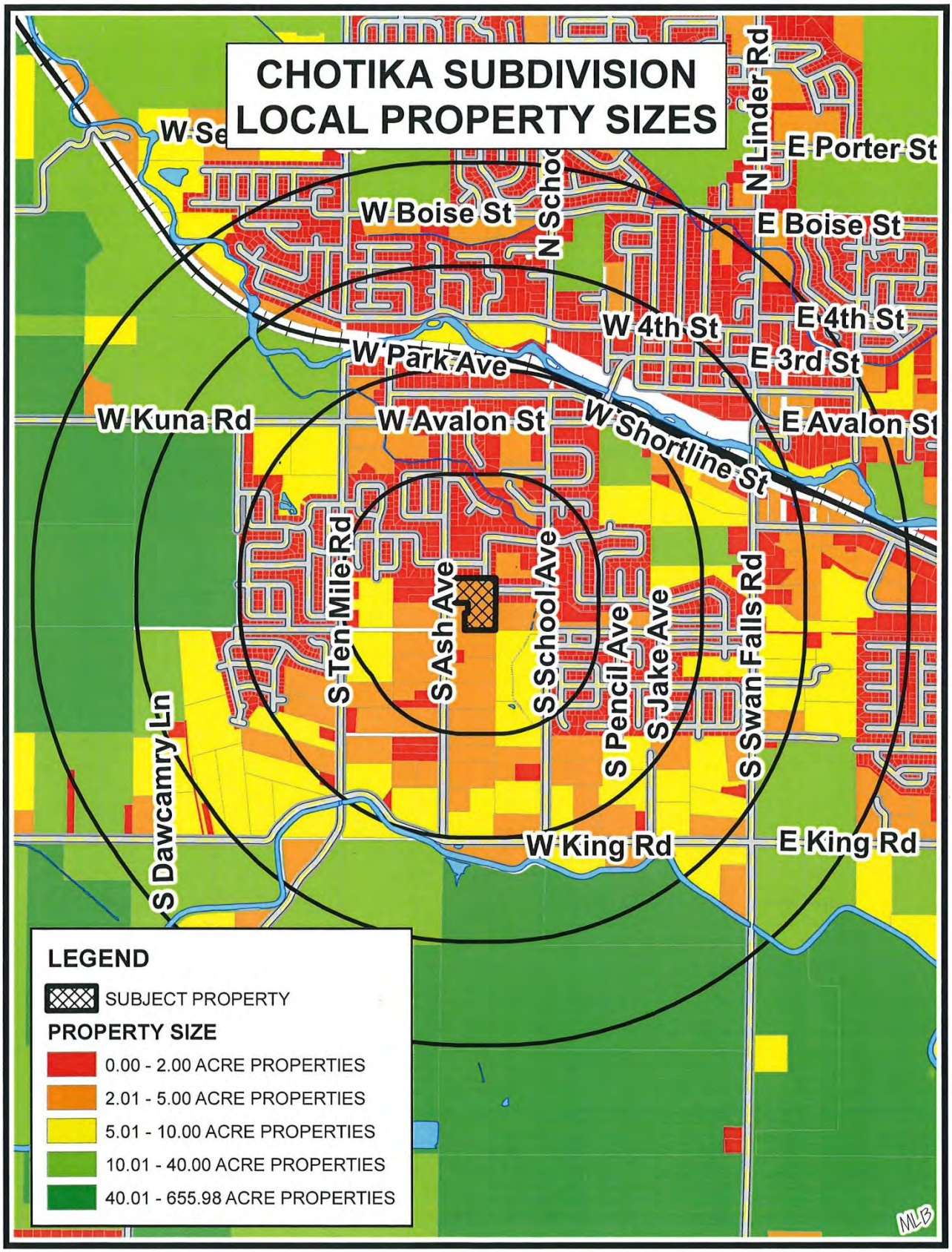

CHOTIKA SUBDIVSION
NITRATE PRIORITY MAP
N Ten Mile Rd
N Ced
W Owyhee St
N School Ave
W Avalon St
S Titan Pl
W Gina Dr
W Curtner St
W Bury St
W Sharp Ln
S Retort Ave
W Armand St
S Whim Ave
S Rocker Ave
W Omphale St
S Stibnite Ave
S Ten Mile Rd
S Ash Ave
W Recess Way
S Black Oak Ave
S Red Oak Ave
W Sunbeam St
W Backpack Ln
S School Ave
S Ruler Ave
S Library Ave
LEGEND
SUBJECT PROPERTY
NITRATE PRIORITY AREA
CITY LIMITS
MLB


CHOTIKA SUBDIVISION
TOPO MAP
N Ten Mile Rd
W Avalon St
N School Ave
S Titan Pl
W Gina Dr
W Curtner St
W Bury St
W Sharp Ln
S Retort Ave
W Armand St
S Stibnite Ave
S Rocker Ave
W Omphale St
S Black Oak Ave
S Red Oak Ave
W Penelope St
S Ten Mile Rd
S Ash Ave
W Recess Way
W Sunbeam St
W Backpack Ln
S School Ave
S Ruler Ave
S Library Ave
LEGEND
SUBJECT PROPERTY
KUNA CITY LIMITS
500 YEAR FLOODPLAIN (0.20%)
100 YEAR FLOODPLAIN (1.00%)
AE
X


CHOTIKA SUBDIVISION
LOCAL PROPERTY VALUES
W Deer Flat Rd
N Ten Mile
W Boise St
N School
N Linder Rd
E Porter St
E Boise St
W 4th St
E 4th St
W Park Ave
E 3rd St
W Kuna Rd
W Avalon St
W Shortline St
E Avalon St
S Ten Mile Rd
S Ash Ave
S School Ave
S Pencil Ave
S Jake Ave
S Swan Falls Rd
S Dawcamry Ln
W King Rd
E King Rd
LEGEND
SUBJECT PROPERTY
TOTALVALUE
$0.00 - $50,000.00 TOTAL VALUE
$50,000.01 - $100,000.00 TOTAL VALUE
$100,000.01 - $150,000.00 TOTAL VALUE
$150,000.01 - $300,000.00 TOTAL VALUE
$300,000.01 - $1,500,000.00 TOTAL VALUE
MLB


CHOTIKA SUBDIVISION
SEWER BASIN MAP
W Hedgerow St
CURRENT EDUS CONNECTED: 195
PROPOSED EDUS: 2
3.5 EDUS PER ACRE: 220
REMAINING CAPACITY IN LS: 530
N Ten Mile Rd
N Ash Ave
W 4th St
W Park Ave
W Owyhee St
W Avalon St
W Kuna Rd
W Shortline St
CURRENT EDUS CONNECTED: 3176
PROPOSED EDUS: 3929
3.5 EDUS PER ACRE: 7172
REMAINING CAPACITY IN LS: 38
W Yukon Dr
S Stibnite Ave
S Rocker Ave
W Omphale St
S School Ave
W Tallulah Dr
S Swan Falls Rd
W Sunbeam St
Sunbeam St
Sahara Dr
S Ten Mile Rd
S Ash Ave
W Playground St
W Steph St
N Orchard Ave
E 4th St
E 3rd St
E 2nd St
E Avalon St
W Main St
W 2nd St
LEGEND
LIFT STATIONS
SUBJECT PROPERTY
TENMILE BASIN
DISCOVERY CREEK LS
KUNA CITY LIMITS


CHOTIKA SUBDIVISION
IRRIGATION DISTRICT MAP
N Ten Mile Rd
N Ced
W Owyhee St
N School Ave
N Bridge Ave
W Avalon St
S Titan Pl
W Gina Dr
W Curtner St
W Bury St
W Sharp Ln
S Retort Ave
W Armand St
S Whim Ave
S Rocker Ave
S Stibnite Ave
W Omphale St
S Black Oak Ave
S Red Oak Ave
S Glenn Brook Pl
S Ten Mile Rd
S Ash Ave
W Recess Way
W Sunbeam St
W Backpack Ln
S School Ave
S Ruler Ave
S Library Ave
S Pencil Ave
W Test Ct
MLB
LEGEND
SUBJECT PROPERTY
KUNA MUNICIPAL IRRIGATION SYSTEM
BOISE PROJECT BOARD OF CONTROL
BOISE KUNA IRRIGATION DISTRICT
NEW YORK IRRIGATION DISTRICT


CHOTIKA SUBDIVISION
LOCAL PROPERTY SIZES
W Se
W Boise St
N Schoo
N Linder Rd
E Porter St
E Boise St
W 4th St
E 4th St
W Park Ave
E 3rd St
W Kuna Rd
W Avalon St
W Shortline St
E Avalon St
S Ten Mile Rd
S Ash Ave
S School Ave
S Pencil Ave
S Jake Ave
S Swan Falls Rd
S Dawcamry Ln
W King Rd
E King Rd
LEGEND
SUBJECT PROPERTY
PROPERTY SIZE
0.00 - 2.00 ACRE PROPERTIES
2.01 - 5.00 ACRE PROPERTIES
5.01 - 10.00 ACRE PROPERTIES
10.01 - 40.00 ACRE PROPERTIES
40.01 - 655.98 ACRE PROPERTIES
MLB

City of Kuna
Planning & Zoning
Department
PO. Box 13
Kuna, ID 83634
208.922.5274
www.kunacity.id.gov

Preliminary Plat Checklist

Preliminary Plats require public hearings with both the Planning & Zoning Commission and City Council. Public hearing signs will be required to be posted by the applicant for both meetings. Sign posting regulations are available online.

Project Name: Chotika Subdivision **Applicant:** Crystal McDaniel

All applications are required to contain on copy of the following:

Applicant (√)	Description	Staff (√)
☒	**Electronic copy of all required submittal items.**	☑
☒	**Completed and signed Commission & Council Review Application.**	☑
☒	**Vicinity map showing relationship of the proposed plat to the surrounding area with a 2-mile radius.**	☑
☐	**Homeowner's maintenance agreement for the care of landscaped common areas.**	☐
☒	**Legal description of the preliminary plat area: Include a metes & bounds description to the section line of all adjacent roadways stamped & signed by a registered professional land surveyor with a calculated closure sheet & a map showing the boundaries of the legal description.**	☑
☒	**Proof of ownership—A copy of your deed and Affidavit of Legal Interest (for all interested parties involved).**	☑
☒	**Letter of intent indicating reasons and details for preliminary plat.**	☑
☒	**Commitment of Property Posting form signed by the applicant/agent.**	☑
☐	**If preliminary plat includes 100 lots or more, please submit a traffic impact study.**	☐
☒	**A letter from Ada County Engineer with the Subdivision Name reservation. A name change needs to be submitted and approved by the Planning & Zoning Director and Ada County Engineer.**	☑
☐	**Phasing Plan**	☐
☒	**Landscape plan for subdivision entrances, buffers, common areas, etc.**	☑
☒	**Neighborhood meeting certification (certification & neighborhood meeting list forms shall accompany this application).**	☑
☒	**8 1/2 x 11 proposed preliminary plat.**	☑
☒	**Preliminary plat drawing on 24x36 quality paper drawn to scale of 1 to 100' or more. The following information shall be contained on the preliminary plat:** ◊ **Topography at two-foot (2') intervals** ◊ **Land uses (location, layout, types & dimensions): residential, commercial & industrial land uses.** ◊ **Street right-of-way: dimensions of right-of-way dedication for all roadways, street sections, improvements, etc.** ◊ **Easements/common space: utility easements, parks, community spaces** ◊ **Lots: layout and dimensions of lots** ◊ **Preliminary improvement drawing: show water, sewer, drainage, electricity, irrigation, telephone, natural gas, proposed street lighting, proposed street names, proposed subdivision name, fire hydrant placement, storm water disposal, underground utilities, and sidewalks.**	☑

NOTE: One copy of the above items need to be submitted when applying for multiple applications. This application shall not be considered complete (nor will a public hearing be set) until staff has received ***all required information****. Once the application is deemed complete, staff will notify the applicant of the scheduled hearing date, fees due, additional copies needed, etc.*

Exhibit A2

City of Kuna
Planning & Zoning
Department
P.O. Box 13
Kuna, Idaho 83634
208.922.5274
Fax: 208.922.5989
Web: Kunacity.id.gov

Annexation Checklist

Annexation requires public hearings with both the Planning & Zoning Commission and City Council. Public hearing signs will be required to be posted by the applicant for both meetings. Sign posting regulations are available online.

Project name:	**Applicant:**
Chotika Subdivision	Crystal McDaniel

All applications are required to contain one copy of the following:

Applicant (√)	Description	Staff (√)
X	Completed and signed Commission & Council Review Application.	✓
X	Letter of Intent indicating reasons for proposed annexation and the availability of public services.	✓
X	Vicinity map drawn to scale, showing the location of the subject property. Map shall contain the following information: Shaded area showing the annexation property, Street names and names of surrounding subdivisions.	✓
X	Legal description of the annexation area: Include a metes & bounds description to the section line of all adjacent roadways stamped & signed by a registered professional land surveyor with a calculated closure sheet & a map showing the boundaries of the legal description.	✓
X	Recorded warranty deed for the property.	✓
X	Proof of ownership—A copy of your deed **and** Affidavit of Legal Interest (All parties involved)	✓
NA	Development Agreement & Development Agreement Checklist	
X	Neighborhood meeting certification (certification & neighborhood meeting list forms shall accompany this application).	✓
X	Commitment of Property Posting form signed by the applicant/agent.	✓

Note: Only one copy of the above items need to be submitted when applying for multiple applications.

This application shall not be considered complete (nor will a Public Hearing be set) until staff has received all required information. Once the application is deemed complete, staff will notify the applicant of the scheduled hearing date, fees due, additional copies needed, etc.

City of Kuna
Planning & Zoning
Department
PO. Box 13
Kuna, ID 83634
208.922.5274
www.kunacity.id.gov

Preliminary Plat Checklist

Preliminary Plats require public hearings with both the Planning & Zoning Commission and City Council. Public hearing signs will be required to be posted by the applicant for both meetings. Sign posting regulations are available online.

Project Name: Chotika Subdivision **Applicant:** Crystal McDaniel

All applications are required to contain on copy of the following:

Applicant (√)	Description	Staff (√)
☒	**Electronic copy of all required submittal items.**	☑
☒	**Completed and signed Commission & Council Review Application.**	☑
☒	**Vicinity map showing relationship of the proposed plat to the surrounding area with a 2-mile radius.**	☑
☒	**Homeowner's maintenance agreement for the care of landscaped common areas.**	☒
☒	**Legal description of the preliminary plat area: Include a metes & bounds description to the section line of all adjacent roadways stamped & signed by a registered professional land surveyor with a calculated closure sheet & a map showing the boundaries of the legal description.**	☑
☒	**Proof of ownership—A copy of your deed and Affidavit of Legal Interest (for all interested parties involved).**	☑
☒	**Letter of intent indicating reasons and details for preliminary plat.**	☑
☒	**Commitment of Property Posting form signed by the applicant/agent.**	☑
☐	**If preliminary plat includes 100 lots or more, please submit a traffic impact study.**	☐
☒	**A letter from Ada County Engineer with the Subdivision Name reservation. A name change needs to be submitted and approved by the Planning & Zoning Director and Ada County Engineer.**	☑
☐	**Phasing Plan**	☐
☒	**Landscape plan for subdivision entrances, buffers, common areas, etc.**	☑
☒	**Neighborhood meeting certification (certification & neighborhood meeting list forms shall accompany this application).**	☑
☒	**8 1/2 x 11 proposed preliminary plat.**	☑
☒	**Preliminary plat drawing on 24x36 quality paper drawn to scale of 1 to 100' or more. The following information shall be contained on the preliminary plat:** ◊ **Topography at two-foot (2') intervals** ◊ **Land uses (location, layout, types & dimensions): residential, commercial & industrial land uses.** ◊ **Street right-of-way: dimensions of right-of-way dedication for all roadways, street sections, improvements, etc.** ◊ **Easements/common space: utility easements, parks, community spaces** ◊ **Lots: layout and dimensions of lots** ◊ **Preliminary improvement drawing: show water, sewer, drainage, electricity, irrigation, telephone, natural gas, proposed street lighting, proposed street names, proposed subdivision name, fire hydrant placement, storm water disposal, underground utilities, and sidewalks.**	☑

NOTE: One copy of the above items need to be submitted when applying for multiple applications. This application shall not be considered complete (nor will a public hearing be set) until staff has received ***all required information****. Once the application is deemed complete, staff will notify the applicant of the scheduled hearing date, fees due, additional copies needed, etc.*

Exhibit A2

City of Kuna
Planning & Zoning
Department
P.O. Box 13
Kuna, Idaho 83634
208.922.5274
Fax: 208.922.5989
Website: www.kunacity.id.gov

Commission & Council Review Application

Note: Engineering fees shall be paid by the applicant if required.

*Please submit the appropriate checklist (s) with application

Type of Review (check all that apply):

- [X] Annexation
- [ ] Appeal
- [ ] Comprehensive Plan Amendment
- [ ] Design Review
- [ ] Development Agreement
- [ ] Final Planned Unit Development
- [ ] Final Plat
- [ ] Lot Line Adjustment
- [ ] Lot Split
- [ ] Planned Unit Development
- [X] Preliminary Plat
- [ ] Rezone
- [ ] Special Use
- [ ] Temporary Business
- [ ] Vacation
- [ ] Variance

For Office Use Only	
File Number (s)	
Project name	
Date Received	
Date Accepted/ Complete	
Cross Reference Files	
Commission Hearing Date	
City Council Hearing Date	

Contact/Applicant Information

Owners of Record: Don Veasey	Phone Number: 951-970-9191
Address: 31045 Temecula Parkway, #201	E-Mail: don@kalpacific.com
City, State, Zip: Temecula, CA 92592	Fax #:
Applicant (Developer): Crystal McDaniel	Phone Number: 208-488-4227
Address: 1602 W Hays St, Suite 306	E-Mail: crystal@accuratesurveyors.com
City, State, Zip: Boise, ID 83702	Fax #:
Engineer/Representative: Roger Smith	Phone Number: 208-870-1015
Address: 1693 S Coronado Ave	E-Mail: roger-j-smith@msn.com
City, State, Zip: Boise, ID 83709	Fax #:

Subject Property Information

Site Address: 642 S Ash St, Kuna, ID

Site Location (Cross Streets): W Penelope St and S Cassandra Ave

Parcel Number (s): R5070503050 and R5070502835

Section, Township, Range: Section 26, T2N, R1W

Property size : 7.665 acres

Current land use: Residential	Proposed land use: Subdivision
Current zoning district: RUT	Proposed zoning district: R6

Project Description

Project / subdivision name: Chotika

General description of proposed project / request: Preliminary Plat Application for proposed subdivision

Type of use proposed (check all that apply):

- [X] Residential Subdivision for single family homes
- [ ] Commercial
- [ ] Office
- [ ] Industrial
- [ ] Other

Amenities provided with this development (if applicable): Common space

Residential Project Summary (if applicable)

Are there existing buildings? [X] Yes [ ] No

Please describe the existing buildings: One house and 2 sheds

Any existing buildings to remain? [X] Yes [ ] No

X Number of residential units: 31 Number of building lots: 31

Number of common and/or other lots: 5

Type of dwellings proposed:

- [X] Single-Family
- [X] Townhouses
- [ ] Duplexes
- [ ] Multi-Family
- [ ] Other

Minimum Square footage of structure (s): Minimum lot size is 5,000± S.F

Gross density (DU/acre-total property): 4.044 Net density (DU/acre-excluding roads): 5.092

Percentage of open space provided: 9.15% Acreage of open space: 0.701± Acre

Type of open space provided (i.e. landscaping, public, common, etc.): Landscaping and common space

Non-Residential Project Summary (if applicable) Not Applicable

Number of building lots: Other lots:

Gross floor area square footage: Existing (if applicable):

Hours of operation (days & hours): Building height:

Total number of employees: Max. number of employees at one time:

Number and ages of students/children: Seating capacity:

Fencing type, size & location (proposed or existing to remain):

Proposed Parking:

a. Handicapped spaces: Dimensions:
b. Total Parking spaces: Dimensions:
c. Width of driveway aisle:

Proposed Lighting:

Proposed Landscaping (berms, buffers, entrances, parking areas, common areas, etc.):

Applicant's Signature: Date: 12/12/19

Accurate Surveying & Mapping

A Professional Corporation
1602 W. Hays St., Suite 306
Boise, ID 83702
www.accuratesurveyors.com

08/12/2019

Dear Planning & Development Services Officials,

We are submitting a Preliminary Plat on behalf of our client, Don Veasey, as part of the process to develop a subdivision located at 642 S. Ash St., Kuna, Idaho. It will be annexed into the City of Kuna and follow Kuna's standards and guidelines for the proposed R6 zoning. The total property size is 7.665± acres. The subdivision will contain 33 single family lots. The smallest lot being 4,911± S.F.; the largest lot being 15,525± S.F. The property owner intends to build on some of the lots. Others may be sold to select builders, depending on availability.

The subdivision will also have 1 common space lot (lot 3 in block 1) and 4 landscape buffers (lot 1 in block 1, lot 1 in block 3, lot 21 in block 3 and lot 9 in block 4). The HOA will employ a landscaping service to maintain these areas. There will be CC&Rs developed that will meet city standards. The common space will contain open grass for resident use. The landscape will meet Kuna KCC 5-17 requirements with the following plants per one hundred (100) linear feet: Two (2) shade trees, three (3) evergreen trees and twelve (12) shrubs.

City water and sanitation services are being extended for subdivision access. Pressure irrigation will be provided as required by state code. The irrigation ditch running North and South of the easterly side of the plat will be piped. Two fire hydrants are being added: one on S. Cassandra Ave., in block 4, by lot 1 and one on S. Cassandra Ave. in block 3 by lot 14. All storm drainage will be retained on site per city and ACHD standards.

Public streets will meet city and ACHD standards. Existing streets Recess Way and Cassandra Ave. are being extended from surrounding subdivisions. A new cul-de-sac is being added from Cassandra Ave in block 3.

Please let me know if you need anything else in order to accept this application.

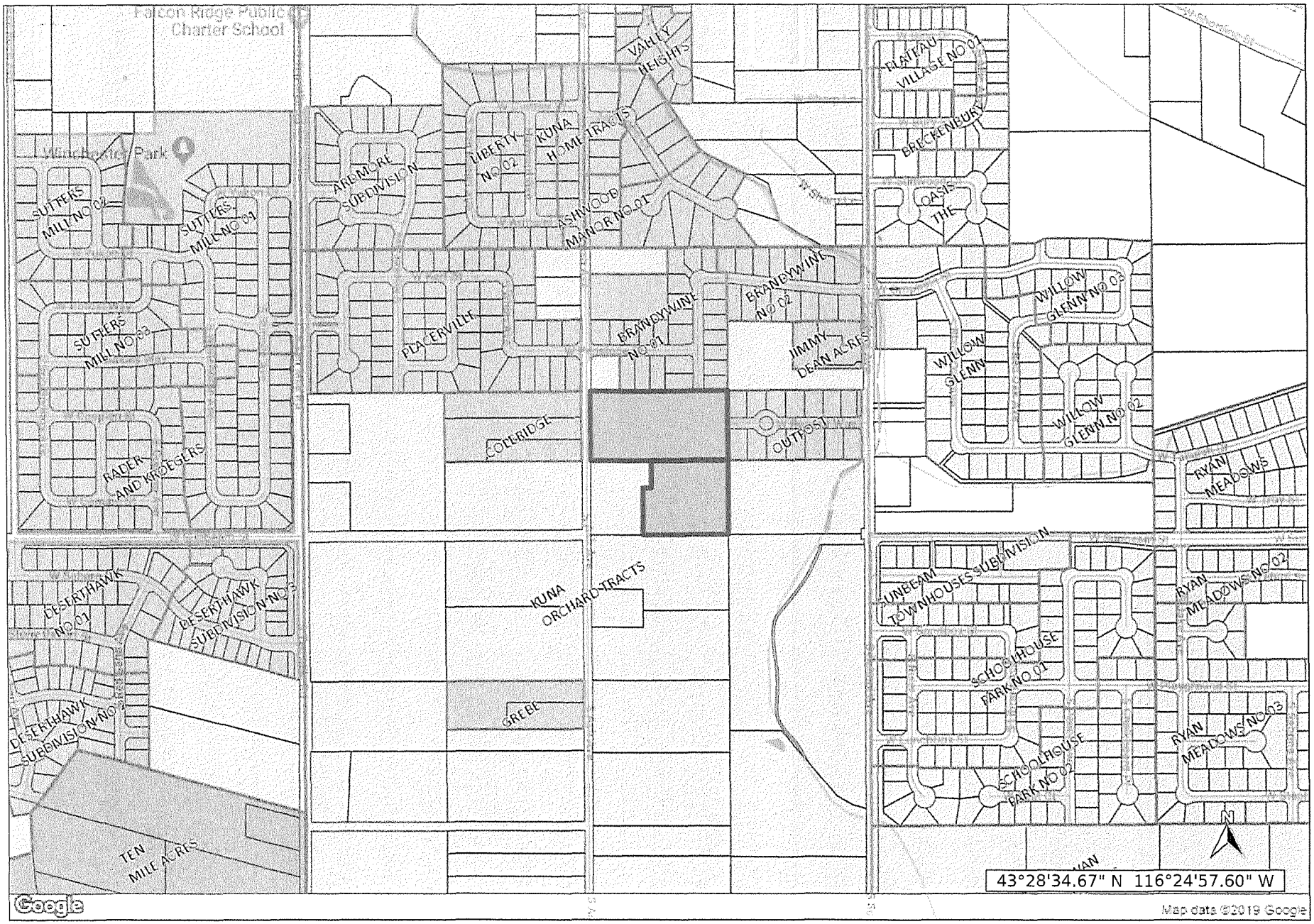
Sincerely,

Crystal McDaniel; Office Manager
Accurate Surveying and Mapping

Exhibit

A2.C.

landproDATA PDF



Apr 03, 2019 - landproDATA.com
Scale: 1 inch approx 600 feet

The materials available at this website are for informational purposes only and do not constitute a legal document.

After Recording, Return to:

Boise, ID 83703

Draft Only

Above Space for Recording Purposes Only

NOTICE

THE FOLLOWING IS A VERY IMPORTANT DOCUMENT WHICH EACH AND EVERY POTENTIAL BUYER, OWNER AND OCCUPANT OF PROPERTY WITHIN CHOTIKA SUBDIVISION SHOULD READ AND UNDERSTAND. THIS DOCUMENT DETAILS THE OBLIGATIONS AND PROHIBITIONS IMPOSED UPON ALL OWNERS AND OCCUPANTS.

Exhibit
A2d

DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR CHOTAKA SUBDIVISION

July 1, 2019

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DECLARATION COVENANTS, CONDITIONS AND RESTRICTIONS FOR CHOTIKA SUBDIVISION

This Declaration of Covenants, Conditions and Restrictions for Chotika Subdivision (this "Declaration") is made effective this ____ day of _____, 2019, by 3 Valley Development, LLC ("Declarant").

ARTICLE I: RECITALS

Section 1. Property Covered. The property subject to this Declaration is the property legally described in the attached **Exhibit A**, which is made a part hereof, together with any other property made subject to this Declaration pursuant to the terms herein (the "Property"). This Declaration is for the benefit of any and all Owners of any portion of the Property.

Section 2. Purpose of Declaration. The purpose of this Declaration is to set forth the basic restrictions, covenants, limitations, conditions and equitable servitudes (collectively "Restrictions") that will apply to the Property, and use of any and all portions thereof. The Restrictions are designed to protect, enhance and preserve the value, amenities, desirability, and attractiveness of the Property in a cost effective and administratively efficient manner.

ARTICLE II: DECLARATION

Declarant hereby declares that the Property, and each lot, dwelling, parcel or portion thereof, is and/or shall be held, sold, conveyed, encumbered, used, occupied and improved subject to the following terms and Restrictions, all of which are declared and agreed to be in furtherance of a general plan for the protection, maintenance, subdivision, improvement and sale of the Property, and to enhance the value, desirability and attractiveness thereof. The Restrictions set forth herein shall run with the land constituting the Property, and with each estate therein, and shall be binding upon any person or entity, and his/her/its successors, agents and assigns having or acquiring any right, title or interest in the Property or any lot, dwelling, parcel or portion thereof; shall inure to the benefit of every lot, dwelling, parcel or portion of the Property and any interest therein; and may be enforced by Declarant, any of its grantees or grantees' successors, the Association, and any Owner or Owners' successors of the Property or any Lot, Dwelling Unit or portion thereof.

ARTICLE III: DEFINITIONS

Section 1. "Assessments" shall mean Regular Assessments, Special Assessments and Limited Assessments.

Section 2. "Association" or "Corporation" shall mean and refer to the Bristlegrove Subdivision Homeowners' Association, Inc., its successors and assigns.

Section 3. "Board" shall mean and refer to the Board of Directors of the Association.

Section 4. "Common Area" shall mean all real property not covered by a building or a Public Street (including the Improvements thereto) owned by the Association for the common use and enjoyment of the Owners, including Private drive aisles as defined in Article VIII. The Common Area and lots shown on the attached **Exhibit B**, which is made a part hereof. Common Area may also be established from time to time by Declarant on any portion of the Property by describing such area on the Plat or other recorded plat of the Property, or any portion thereof, by granting or reserving it in a deed or other instrument, or by designating it as such in this Declaration or in any supplemental declaration. In addition, the Association and/or Declarant may acquire any Common Area it deems necessary and/or beneficial to the Property. Common Area may include easement and/or license rights.

Section 5. "Declarant" shall mean and refer to Idaho Property, LLC, its designated successors and assigns.

Section 6. "Dwelling Unit" shall mean and refer to the residential Improvement to be constructed on each Lot by Declarant or any other Owner.

Section 7. "Improvement" shall mean any structure, facility or system, or other improvement or object, whether permanent or temporary, which is erected, constructed, placed upon or allowed on, under or over any portion of the Property, including, without limitation, Dwelling Units, fences, streets, roads, drives, driveways, parking areas, sidewalks, bicycle paths, curbs, landscaping, irrigation systems, walls, hedges, plantings, trees, living and/or dead vegetation, rocks, signs, lights, mail boxes, electrical lines, pipes, pumps, ditches, waterways, recreational facilities, grading, road construction, utility improvements, and any new exterior construction or exterior improvement which may not be included in the foregoing. Improvement(s) includes both original improvements existing on the Property on the date hereof and all later changes and Improvements.

Section 8. "Limited Assessment" shall mean a charge against a particular Owner and such Owner's Lot, directly attributable to the Owner or the Owner's Occupant(s), equal to the cost incurred by the Association in connection with corrective action performed pursuant to the provisions of this Declaration or any supplemental declaration, including, without limitation, damage to any Common Area or Maintenance Area, or the failure of an Owner to keep his/her/its Lot or Dwelling Unit in proper repair, and including interest thereon.

Section 9. "Lot" shall mean and refer to any plot of land shown upon the Plat and/or any other recorded subdivision plat of the Property, with the exception of the Common Area.

Section 10. "Maintenance Property" shall mean and refer to all roofs, gutters, down spouts, drainage systems, exterior building surfaces, trash cans, trash collection facilities, trees, shrubs, grass,

lawns, walks, exterior light fixtures, sprinkler systems and all other exterior Improvements located on or attached to a Dwelling Unit or Lot, including any fence or other exterior Improvement approved by the Board and erected or constructed by any Owner or Occupant; provided that Maintenance Property shall not include glass surfaces or exterior doors.

Section 11. "Member" shall mean each Person holding a membership in the Association, including Declarant.

Section 12. "Mortgage" shall mean any mortgage, deed of trust, or other document pledging any portion of the Property or interest therein as security for the payment of a debt or obligation.

Section 13. "Occupant" shall mean 1) any resident, occupant, guest, family member, invitee, licensee and/or tenant of an Owner, and 2) any occupant, guest, family member, invitee, and/or licensee of a tenant.

Section 14. "Owner" shall mean and refer to the record owner, other than Declarant, whether one or more Persons, of a fee simple title to any Lot which is a part of the Property, including contract sellers, but excluding those having such interest merely as security for the performance of an obligation.

Section 15. "Person(s)" shall mean any individual, partnership, corporation or other legal entity, including Declarant.

Section 16. "Plat" shall mean the Chotika Subdivision final plat as recorded in the records of Ada Kuna, Idaho, on the ____ day of _____, as Instrument No. _____ (a copy of which is attached hereto as **Exhibit C**, and made a part hereof), as it may be amended from time to time.

Section 17. "Property" shall mean and refer to that certain real property legally described on the attached **Exhibit A**, and such annexations or other additions thereto as may hereafter be brought within the jurisdiction of this Declaration.

Section 18. "Regular Assessments" shall mean the portion of the cost of maintaining, improving, repairing, managing and operating the Common Area and Maintenance Property, including all Improvements thereon or thereto, and all other costs and expenses incurred to conduct the business and affairs of the Association which is levied against the Lot of each Owner by the Association pursuant to the terms of this Declaration or any supplemental declaration.

Section 19. "Special Assessments" shall mean that portion of the costs of the capital improvements or replacements, equipment purchases and replacements or shortages in Regular

Assessments levied against the Lot of each Owner by the Association pursuant to the terms of this Declaration or any supplemental declaration.

ARTICLE IV: PROPERTY RIGHTS

Section 1. Owners' Easements of Enjoyment of Common Area. Every Owner shall have a right and easement of enjoyment in and to the Common Area which shall be appurtenant to and shall pass with the title to every Lot, subject to the following provisions:

(a) the right of the Association to charge reasonable admission and other fees or Assessments for the use of any recreational facility situated upon the Common Area;

(b) the right of the Association to suspend the voting rights and use of any recreational facility by an Owner or any of said Owner's Occupants for any period during which any Assessment against his/her/its Lot remains unpaid; and for a period not to exceed sixty (60) days for any infraction by the Owner or the Owner's Occupants of the Association's rules and regulations;

(c) the right of the Association to dedicate or transfer all or any part of the Common Area to any public agency, authority, or utility for such purposes and subject to such conditions as may be agreed to by the Class A Members. No such dedication or transfer shall be effective unless an instrument agreeing to such dedication or transfer signed by two-thirds (2/3) of each class of Members has been recorded.

Section 2. Delegation of Use. Any Owner may delegate his/her/its right of enjoyment to the Common Area and related facilities to one or more Occupants.

Section 3. Encumbrance of Common Area. The Common Area cannot be mortgaged or conveyed without the approval of at least two-thirds (2/3) of the Class A Members. If ingress or egress to any Dwelling Unit is through any portion of the Common Area, any conveyance or encumbrance of the Common Area shall be subject to an easement of the Owners of such Dwelling Units for the purpose of ingress and egress.

ARTICLE V: MEMBERSHIP AND VOTING RIGHTS

Section 1. Membership. Every Owner of a Lot shall be a Member of the Association. Membership shall be appurtenant to and may not be separated from ownership of any Lot which is subject to Assessment.

Section 2. Voting Classes. The Association shall have two (2) classes of voting memberships:

Class A. The Class A Members shall be all Owners and shall be entitled to one vote for each Lot owned. When more than one Person holds an interest in any Lot, all such Persons shall be Members. The vote for such Lot shall be exercised as they determine, but in no event shall more than one (1) vote be cast with respect to any Lot.

Class B. The Class B Member shall be the Declarant and shall be entitled to ten (10) votes for each Lot owned. The Class B membership shall cease when, and if, Declarant has sold all Lots within the Property.

ARTICLE VI: USE AND REGULATION OF USES

Section 1. Multi-Family Residences. Each Lot may be used for multi-family residential purposes, and for the common social, recreational or other reasonable uses normally incident to such use, and also for such additional uses or purposes as are from time to time determined appropriate by the Board. Lots may be used for the purposes of operating the Association and for the management of the Association if required. The provisions of this Section shall not preclude Declarant from conducting sales, construction, development and related activities from Lots owned by Declarant.

By accepting a deed to any portion of the Property, each Owner hereby covenants that they agree to and will abide by all terms and Restrictions contained in this Declaration, any supplement declaration, the Plat and any rules or regulations adopted by the Board. In addition, each Owner agrees to make all of his/her/its Occupants aware of, and abide by, all of the aforementioned terms and Restrictions, including, without limitation, a covenant in each Owner lease whereby the tenant(s) agree and acknowledge that they have received copies of this Declaration, any applicable supplemental declaration, the Plat and any rules or regulations adopted by the Board, and that they will abide by all terms and Restrictions contained therein.

Section 2. Home Occupations. Assuming all governmental laws, rules, regulations, and ordinances are complied with, home occupations may be conducted from the interior of Dwelling Units provided such home occupations do not increase the burdens on the Common Area (including increased traffic on the Private Roads) or Maintenance Property. If the Board determines, in its sole and absolute discretion, that a home occupation is increasing the burden on the Common Area and/or Maintenance Property, the Board shall have the right to terminate any Owner's or Occupant's ability to conduct a home occupation from a Dwelling Unit. Notwithstanding the foregoing, Declarant may conduct any business operation it sees fit from any portion of the Property owned by it, regardless of the impact on the Common Area or Maintenance Property.

Section 3. Parking. Unenclosed parking areas (which include all paved areas within the Property other than covered parking spaces and prohibited parking areas) are restricted to use for temporary parking, as defined below, of operative motor vehicles of Owners and Occupants, provided that such vehicles are parked so as to not interfere with any other Owner's or Occupant's right of ingress and egress to his/her/its Dwelling Unit or applicable portion thereof.

Notwithstanding the foregoing, the parking of equipment, motor homes, campers, trailers, boats and other recreational vehicles on the Property is strictly prohibited (loading and unloading are permitted provided such activities do not exceed four (4) hours). For purposes of this Section, "temporary parking" shall mean the parking of operative motor vehicles (other than motor homes, campers, trailers, boats and other recreational vehicles) for no more than forty-eight (48) hours per vehicle, per month.

The Board may require removal of any inoperative vehicle, or any unsightly vehicle, and any other vehicle, motor home, camper, trailer, boat, equipment or item improperly parked or stored. If the same is not removed by the applicable Owner or Occupant after three (3) days' prior written notice, the Board may cause removal at the risk and expense of the Owner and/or Occupant thereof. Any other item or equipment determined by the Board to be objectionable may be similarly removed.

Section 4. Compliance with Laws and Waste. No Owner or Occupant shall permit anything to be done or kept in his/her/its Lot or Dwelling Unit, or any portion thereof, or any part of the Common Area, which would be in violation of any laws, rules, regulations or ordinances. No waste shall be permitted in the Common Area, Maintenance Property, Lot or any Dwelling Unit.

Section 5. Signs. No sign of any kind shall be displayed on any Lot or Dwelling Unit without the prior written consent of the Board; provided however, one sign of not more than four (4) square feet advertising the Lot for sale may be installed on any Lot, but the sign shall be removed within five (5) days following sale. Notwithstanding the foregoing, Declarant may display any sign it sees fit on any portion of Property owned by Declarant.

Section 6. Pets. No animals (which term includes livestock, domestic animals, poultry, reptiles and any other living creature of any kind) shall be raised, bred or kept in any Dwelling Unit, Lot or in the Common Area, whether as pets or otherwise, except as may be allowed by rules and regulations adopted by the Board; provided however, that this provision shall not prohibit Owners or Occupants from having two (2) or less dogs and/or cats (i.e. an Owner or Occupant may have a maximum of two (2) dogs, two (2) cats or one (1) dog and one (1) cat). The Board may at any time require the removal of any animal, including domestic dogs and cats, which it finds is creating unreasonable noise or otherwise disturbing the Owners or Occupants, in the Board's determination, and may exercise this authority for specific animals even though other animals are permitted to remain. All dogs shall be walked on a leash only and shall not be allowed to roam or run loose, whether or not accompanied by an Owner or Occupant. All Owners and Occupants shall be responsible for picking up and properly disposing of all organic waste of their domestic dogs and cats.

Section 7. Nuisance. No noxious or offensive activity shall be carried on in any Dwelling Unit, Common Area, Maintenance Property or Lot, or shall anything be done therein which may be or become an annoyance or nuisance to other Owners or Occupants. No rubbish or

debris of any kind shall be placed or permitted to accumulate anywhere upon the Property, including the Common Area, and no odor shall be permitted to arise from any portion of the Property so as to render the Property or any portion thereof unsanitary, unsightly, offensive or detrimental to the Property or to its occupants or residents, or to any other property in the vicinity thereof or to its occupants or residents. No noise, no exterior fires, no obstructions of pedestrian walkways, no unsightliness, or other nuisance shall be permitted to exist or operate upon any portion of the Property so as to be offensive or detrimental to the Property or to its Owners or Occupants or to other property in the vicinity or to its occupants or residents, as determined by the Board, in its reasonable judgment, or in violation of any federal, state or local law or ordinance. Without limiting the generality of any of the foregoing, no whistles, bells or other sound devices (other than security devices used exclusively for security purposes which have been approved by the Board), flashing lights or search lights, shall be located, used or placed on the Property. No unsightly articles shall be permitted to remain on any Lot so as to be visible from any other portion of the Property. Without limiting the generality of the foregoing, refuse, garbage, garbage cans, trash, trash cans, dog houses, equipment, gas canisters, propane gas tanks, barbecue equipment, heat pumps, compressors, containers, lumber, firewood, grass, shrub or tree clippings, metals, bulk material, and scrap shall be screened from view at all times. No clothing or fabric shall be hung, dried or aired in such a way as to be visible to any other portion of the Property. In addition, no activities shall be conducted on the Property, and no Improvements shall be constructed on any Property which are or might be unsafe or hazardous to any Person or property.

Section 8. Common Area and Maintenance Property. Nothing shall be altered or constructed in or removed from the Common Area or Maintenance Property except upon written consent of the Board and in accordance with procedures required herein or by law.

Section 9. Exterior Improvements. No exterior Improvement, including, without limitation, deck, patio, landscaping, permanent exterior affixed decoration, exterior lighting or heating, cooling and other utility systems shall be altered, erected, or placed on any Lot or the exterior of any Dwelling Unit unless and until the building, plot or other plan has been reviewed in advance by the Board and the same has been approved in writing, and a Boise City building permit has been acquired, if required by law. The review and approval may include, without limitation, topography, finish, ground elevations, landscaping, lighting, drainage, color, material, design, conformity to other residences in the area, and architectural symmetry. Approval of the architectural design shall apply only to the exterior appearance of said Improvements. It shall not be the intent of these restrictions to control the interior layout or design of said structures.

The Board shall consider and act upon any and all proposals or plans and specifications submitted for its approval pursuant to this Declaration. The Board may condition its approval of proposals upon the agreement of the Owner to an additional Assessment for the cost of maintenance and the payment of a processing fee. The Board may require submission of additional plans or review by a professional architect. The Board may issue guidelines setting forth procedures for the submission of plans for approval. The Board may require such detail in plans and specifications

submitted for its review as it deems proper, including, without limitation, floor plans, site plans, drainage plans, elevations, drawings and description of samples of exterior material and colors. Until receipt by the Board of any required plans and specifications the Board may postpone review of plans. Decisions of the Board and the reasons therefor shall be transmitted by the Board, in writing, to the applicant at the address set forth in the application for approval within thirty (30) days after filing all materials required by the Board.

The process for inspection of work, correction of defects and review of alterations which were not submitted for approval is as follows:

(a) Upon completion of any work for which approved plans are required under this Article, the Owner shall give written notice of completion to the Board.

(b) Within sixty (60) days thereafter, the Board or its duly authorized representative may inspect such Improvement. If the Board finds that such work was not done in substantial compliance with the approved plans, it shall notify the Owner in writing of such noncompliance within such sixty (60) day period, specifying the particulars of noncompliance, and shall require the Owner to remedy the same.

(c) If upon the expiration of thirty (30) days from the date of such notification the Owner shall have failed to remedy such noncompliance, the Board, at its option, may exercise its right to enforce the provisions of this Declaration, by any proceeding at law or in equity on behalf of the Association, and may take such other actions as are appropriate, including the correction of the noncompliance and the levy of a Limited Assessment against such Owner for reimbursement of the cost thereof pursuant to this Declaration.

(d) If the Board determines that alterations were made at any time by an Owner or Occupant which were not submitted to the Board for approval, the Board shall inspect such unauthorized alteration and if the Board finds that the work is in noncompliance it shall notify the Owner in writing of such noncompliance at which time the Owner shall remedy or remove the same within a period of not more than forty-five (45) days from the date the written notice is sent by the Board. If the Owner does not comply with the Board ruling within such period, the Board, at its option, may exercise its right to enforce the provisions of this Declaration, by a proceeding at law or in equity on behalf of the Association, and may take such other actions as are appropriate, including the correction of the noncompliance and the levy of a Limited Assessment against such Owner for reimbursement of the cost thereof pursuant to this Declaration.

Section 10. Outbuildings. Storage and other outbuildings are strictly prohibited.

Section 11. Fences. Fencing, other than fencing provided by the Declarant, will be prohibited.

Section 12. Insurance. Nothing shall be done or kept in any Dwelling Unit, Lot, Maintenance Property or Common Area which will increase the rate of insurance on the Common Area or any Lot without the prior written consent of the Board. Each Owner must maintain a homeowner's insurance policy insuring the homeowner from loss by fire, theft, or all other loss or damage.

Section 13. Drainage. The Association is charged with the obligation to clean and continuously maintain the on-site drainage storage system, including, without limitation, any storage pipeline, sedimentation/skimmer boxes located along said pipeline, and any meter boxes. The Association is also charged with the obligation to maintain the Operation and Maintenance Manuel and keep all appropriate records.

ARTICLE VII: EXTERIOR APPEARANCE AND MAINTENANCE

Section 1. Uniform Appearance. In order to preserve a uniform exterior appearance of the Dwelling Units and Lots, the Board shall provide maintenance for all Common Area and Maintenance Property. Unless otherwise specifically provided in this Declaration, the cost of the aforementioned maintenance shall be paid by all Owners in the form of Assessments. By accepting a deed to any portion of the Property, each Owner acknowledges and agrees to pay all Assessments and each Owner acknowledges that certain Common Area and/or Maintenance Property will require more maintenance than others due to weather, location, acts of god, and other extraneous factors.

In the event that the need for maintenance or repair of a Lot, Dwelling Unit, Common Area or Maintenance Property is caused by the willful or negligent acts of an Owner or one or more of his/her/its Occupants, the cost of such exterior maintenance shall be treated as a Limited Assessment and charged only to said Owner.

Section 2. Entry for Repairs. In the event of an emergency which in the judgment of the Board presents an immediate threat to the health and safety of the Owners or Occupants, or an immediate risk of harm or damage to any of the Dwelling Units or any part of the Property, the Board and its agents or employees, may enter any Lot or Dwelling Unit to make repairs or perform maintenance. Such entry shall be repaired by the Board and paid for by Assessments levied against the Owners (unless the emergency was caused by an Owner or Occupant, in which case the cost shall be treated as a Limited Assessment and charged only to that Owner). In addition, if the repairs or maintenance were requested by an Owner or his/her/its Occupant, the costs thereof shall be treated as a Limited Assessment to such Owner.

ARTICLE VIII: PRIVATE DRIVE ISLES

There is hereby reserved for the use and benefit of Declarant and the Association, and granted for the use and benefit of each Lot, and for the use and benefit of each Owner and Occupant, and their respective successors and assigns, for the purposes incidental to the use and enjoyment of the Lots and Common Area, a perpetual easement to enter on, over, across and through Lots _____, and_____ Block _____, and Lots _____, and _____, Block _____, as shown on the Plat (herein "Private Drive Isle"), which Private Isles are to be used for ingress to and egress from each Lot. In addition and pursuant to the Plat, all Lots contains a perpetual public utility and Boise City Sewer and United Water easement. It is expressly understood and agreed that the easements herein created shall be absolute and non-exclusive and that in all respects the Private Drive Isle shall be used, and available for use, by all such Persons, their guests, invitees and licensees in the same manner as if the Private Drive Isle were a public road, subject to the Restrictions contained in this Declaration and the right of the Board to impose such rules, regulations and restrictions, as may be necessary, required or convenient to assure the privacy, safety, security and well-being of each such Lot and the Owners and Occupants residing within the Property, provided, however, that such shall not deprive or unreasonably restrict any of such Owner's or Occupant's right to have access to and from such Lot.

Nothing herein contained shall prohibit or limit the right of Declarant to extend the easement rights herein granted over, along and across the Private Drive Isle within the Property to provide ingress and egress, utilities, drainage, and irrigation to property adjacent to the Property, but not initially included within the Property as described in this Declaration. Such right of use of the easements herein created may be extended by Declarant to such additional property by either the annexation of such additional property under this Declaration or the recording of easement(s) by Declarant in the official records of Kuna, Idaho, setting forth such rights of use and extension of the easements, which recorded document shall specifically describe the additional property to be benefitted thereby. In the event of the extension of the easement rights to such additional property, Declarant shall make provision for the right of the Board to collect from the owners of said additional property a reasonable sum as a contribution for the maintenance, repair and replacement of the Private Drive Isle and security facilities, if any, within the Property, which contribution shall be reasonably related to use, should the Board not have the right, under the terms of this Declaration, to levy and collect any assessment against such additional property. In addition, Declarant shall have the right to grant any easement on, over, across and through the Private Drive Isle to any governmental or quasi-governmental agency or utility company for access to any facilities owned, controlled or used by such grantee.

ARTICLE IX: IRRIGATION AND WATER RIGHTS

Section 1. Irrigation Water Supply. Irrigation water will be provided by the Kuna Irrigation District water system. There shall be no separate irrigation water or irrigation water system provided by the Declarant. Each lot will be provided pressurized irrigation from a single point connection within this subdivision and all lots will share in the maintenance and costs of that facility proportionately.

Section 2. Water Rights Appurtenant to Property. Declarant owns the water rights, if any, which are appurtenant to the Property. Upon conveyance of the Lots to Owners, Declarant will reserve in itself any and all water rights appurtenant to the Property, and accordingly, Owners of any and all Lots shall have no right, title or interest in any of said water or water rights.

Section 3. Reservation of Easement. Declarant hereby reserves an easement for all main lines, service lines, heads, pumps and other equipment on, over, across, and through all Lots, Common Areas, and Maintenance Property to the extent reasonably required to operate and maintain any irrigation system.

ARTICLE X: SPECIFIC LOT USES AND RESTRICTIONS

There is granted to the Association a permanent, non-exclusive, non-vehicular pedestrian access easement over all common and landscape areas, for the purpose of pedestrian ingress and egress to the Property for the benefit of the Association, Declarant, the Owners and Occupants. Any use of common and landscape areas by the Owner and/or Occupants of common and landscape areas shall not interfere with this easement or its intended use.

ARTICLE XI: INSURANCE

Section 1. Insurance. The Association shall obtain insurance from insurance companies authorized to do business in the State of Idaho, and maintain in effect any insurance policy the Association deems necessary or advisable, which shall include, without limitation, the following policies to the extent its is possible for the Association to obtain the same:

(a) Fire insurance including those risks embraced by coverage of the type known as the broad form or "All Risk" or special extended coverage endorsement on a blanket agreed amount basis for the full insurable replacement value of all equipment and fixtures located within the Common Area and Maintenance Property;

(b) Comprehensive general liability insurance insuring the Association and the Owners, and the individual grantees, agents and employees, invitees and guests of each of the foregoing against any liability incident to the ownership, management, maintenance and/or use of the Property. Limits on liability of such coverage shall be as follows: Not less than One Million

Dollars ($1,000,000) per occurrence with respect to personal injury or death, and One Million Dollars ($1,000,000) per occurrence with respect to property damage or such amounts in excess thereof which the Association determines is commercially reasonable and prudent under the circumstances;

(c) Full coverage directors' and officers' liability insurance for the Association's directors and officers with a limit of at least Two Hundred Fifty Thousand Dollars ($250,000) or such amounts in excess thereof which the Association determines is commercially reasonable and prudent under the circumstances;

(d) Such other insurance, including motor vehicle insurance and worker's compensation insurance, to the extent necessary to comply with all applicable laws and indemnity, faithful performance, fidelity and other bonds as the Association shall deem necessary or required to carry out the Association functions or to insure the Association against any loss from malfeasance or dishonesty of any employee or other person charged with the management or possession of any Association funds or other property.

Section 2. Insurance Proceeds. The Association shall be deemed trustee of the interests of all Owners in connection with any insurance proceeds paid to the Association under such policies, and shall have full power to receive such Owner's interests, if any, in such proceeds and to deal therewith.

Section 3. Premiums Included in Assessments. Insurance premiums for the above insurance coverage shall be deemed a common expense to be included in the Regular Assessments levied by the Association.

ARTICLE XII: COVENANT FOR MAINTENANCE ASSESSMENTS

Section 1. Creation of the Lien and Personal Obligation of Assessments. The Declarant, for each Lot owned within the Property, hereby covenants, and each Owner of any Lot by acceptance of a deed therefor is deemed to covenant and agree to pay to the Association: (1) Regular Assessments, including, without limitation, annual assessments for maintenance of the Common Area and Maintenance Property and for any and all insurance premiums and reserves the Association deems advisable, (2) Special Assessments, including, without limitation, for capital Improvements, and (3) Limited Assessments. Regular, Special and Limited Assessments, together with interest, costs, late fees and reasonable attorney's fees, shall be a continuing lien upon the Lot against which each such Assessment is made. Each such Assessment, together with interest, costs, and reasonable attorney's fees, shall also be the personal obligation of the Person who was the Owner of such Lot at the time when the Assessment became due. The personal obligation for delinquent Assessments shall not pass to his/her/its successors in title unless expressly assumed by them.

Section 2. Purposes of Assessments. The Assessments levied by the Association shall be used exclusively to promote the recreation, health, safety, and welfare of the Owners and Occupants and for any construction, maintenance, and operation of the Common Area, Maintenance Property, and Lots.

Section 3. Uniform Rate of Assessment. Regular and Special Assessments must be fixed at a uniform rate for all Lots.

Section 4. Date of Commencement of Annual Assessments; Due Dates. The Regular Assessments provided for herein shall commence as to all Lots on the first day of the month six (6) months following the closing of the sale of the first Lot from Declarant to an Owner. The first annual assessment shall be adjusted according to the number of months remaining in the calendar year. The Board shall fix the amount of the Regular Assessments against each Lot at least thirty (30) days in advance of each annual Regular Assessment period. Written notice of the Regular Assessment shall be sent to every Owner subject thereto at least thirty (30) days in advance of each annual Regular Assessment period. The due dates shall be established by the Board, which may be annually, quarterly or monthly as the Board, in its sole discretion, shall determine. The Association shall, upon demand, and for a reasonable charge, furnish a certificate signed by an officer of the Association setting forth whether the Assessments on a specific Lot have been paid. A properly executed certificate of the Association as to the status of Assessments on a Lot is binding upon the Association as of the date of its issuance.

Section 5. Effect of Nonpayment of Assessments; Remedies of the Association. Any Assessment not paid within thirty (30) days after the due date shall bear interest from the date of delinquency at a rate equal to the lesser of eighteen percent (18%) or the highest rate allowed by applicable law. The date of delinquency is the date which is thirty (30) days after the due date of any assessment. Additionally, a late fee of $15.00 shall be added to and charged on each Assessment which is not paid by the date of delinquency. The Association may bring an action at law against the Owner personally obligated to pay the same, or foreclose the lien against the Lot. No Owner may waive or otherwise escape liability for the Assessments provided for herein by non-use of the Common Area or Maintenance Property or abandonment of his/her/its Lot.

Section 6. Subordination of the Lien to Mortgages. The lien of the Assessments provided for herein shall be subordinate to the lien of any first Mortgage. Sale or transfer of any Lot shall not affect the Assessment lien. However, the sale or transfer of any Lot pursuant to mortgage foreclosure or any proceeding in lieu thereof shall extinguish the lien of such Assessments as to payments which became due prior to such sale or transfer. No sale or transfer shall relieve such Lot from liability for any Assessments thereafter becoming due or from the lien thereof.

ARTICLE XIII: AUTHORITY OF BOARD OF DIRECTORS

Section 1. Authority of Board. The Board, for the benefit of the Corporation and the Owners, shall enforce the provisions of this Declaration and the Association's articles and by-laws, shall have all powers and authority permitted to the Board under the Association's articles of incorporation and by-laws and this Declaration, and shall acquire and shall pay for, out of a common expense fund to be established by the Board, all goods and services requisite for the proper functioning of the Corporation and the Property, including but not limited to the following:

(a) Operation, maintenance and management of the Common Areas and Maintenance Property, including repair and replacement of property damaged or destroyed by casualty loss.

(b) Water, sewer, garbage collection, electrical, and any other utility service as required for the Common Area. If one or more Dwelling Units, Lots or the Common Area are not separately metered, utility services may be paid as a common expense, and the Board may by reasonable formula allocate a portion of such expense to each such Dwelling Unit, Lot or Common Area involved as a portion of its Regular Assessment. The Board may arrange for special metering of utilities as appropriate.

(c) Maintenance and repair of storm drains located on the Property, except for those storm drains located on or within the right-of-way of any street, road, alley or other land dedicated to public use.

(d) Policies of insurance providing coverage for fire and other hazard, public liability and property damage, and fidelity bonding as the same are more fully described in the by-laws or this Declaration. Each Owner shall be responsible for his/her/its own insurance on the contents of his/her/its Lot and/or Dwelling Unit, his/her/its additions and Improvements to his/her/its Dwelling Unit, and decorating and furnishings, and his/her/its Personal property stored elsewhere on the Property, and his/her/its personal liability or injury insurance.

(e) The services of Persons as required to properly manage the affairs of the Corporation to the extent deemed advisable by the Board as well as such other personnel as the Board shall determine are necessary or proper for the operation of the Property.

(f) Legal and accounting services necessary or proper in the operation of the Corporation's affairs, administration of the Property, or the enforcement of this Declaration.

(g) Painting, maintenance, repair, snow removal, lawn care, watering, landscaping, gardening and fencing for the Property; provided that the interior of each Dwelling Unit, or any portion thereof, shall be maintained and repaired by the Owner thereof as previously provided in this Declaration.

(h) Any other materials, supplies, labor services, maintenance, repairs, structural alterations, insurance, taxes or assessments which the Board is required to secure by law or which in its opinion shall be necessary or proper for the operation of the Property or for the enforcement of this Declaration; provided that if for any reason such materials, supplies, labor, services, maintenance, repairs, structural alterations, insurance, taxes, or assessments are provided for particular Dwelling Units or their Owners or Occupants, the cost thereof shall be treated as a Limited Assessment and charged to the Owners of such Dwelling Units.

(i) Maintenance and repair of any Dwelling Unit, its appurtenances and appliances, if such maintenance or repair is reasonably necessary in the discretion of the Board to protect or preserve the appearance and value of the Property, and the Owner of said Dwelling Unit have failed or refused to perform said maintenance or repair within a reasonable time after written notice of the necessity of said maintenance or repair has been delivered by the Board to the Owner, provided that the Board shall levy a Limited Assessment against the Dwelling Unit of such Owner for the cost of such maintenance or repair.

(j) The Board may also pay any amount necessary to discharge any lien or encumbrance levied against the Property or any part thereof, which is claimed to or against the Property, rather than merely against the interest therein of particular Owners. Where one or more Owners are responsible for the existence of such lien, they shall be jointly and severally liable for the cost of discharging it and any costs and expenses incurred by the Board by reason of such lien or liens shall be assessed against the Owners and the Dwelling Units responsible to the extent of their responsibility.

(k) The Board shall not make any non-budgeted expenditure in excess of $1,000.00 without the approval thereof by two-thirds (2/3) of each class of Members voting thereon at a meeting called for such purpose, except for an emergency threatening the security of any Improvement on the Property.

The Board shall have the absolute right to adopt any rules and regulations it deems to be in the best interest of the Property, the Owners and/or Occupants. In addition, the Board shall have the absolute right to hire or otherwise contract with independent third parties to operate, maintain and manage the Common Areas and Maintenance Property, and to perform any other right, duty or obligation of the Board or Association.

Section 2. Easement. The Board and its agents and employees shall have, and are hereby granted, a permanent easement of ingress and egress to enter upon each Lot for the purposes of performing repairs, maintenance and care of the Property as provided herein or for otherwise discharging the responsibilities and duties of the Board as provided in this Declaration.

Section 3. Non-Waiver. The failure of the Board in any one or more instances to insist upon the strict performance of any of the terms or Restrictions of this Declaration, the Plat or of the Association's articles of incorporation or by-laws, or to exercise any right or option contained in such documents, or to serve any notice or to institute any action, shall not be construed as a waiver or a relinquishment for the future of such term or Restriction, but such term or Restriction shall remain in full force and effect. Failure by the Board to enforce any such term or Restriction shall not be deemed a waiver of the right to do so thereafter, and no waiver by the Board of any provision hereof shall be deemed to have been made unless expressed in writing and signed for the Board. This Section also extends to the Declarant exercising the powers of the Board during the initial period of operation of the Corporation.

Section 4. Limitation of Liability. Neither the Board nor Declarant shall be liable for any failure of any utility or other service to be obtained and paid for by the Board and/or Declarant, or for injury or damage to a Person or property caused by the elements, or by any Owner, Occupant or other Person; or resulting from electricity, gas, water, rain, dust or sand which may lead or flow from pipes, drains, conduits, appliances, or equipment, or from articles used or stored by Owners or Occupants on the Property or in Dwelling Units. No diminution or abatement of Assessments shall be claimed or allowed for inconveniences or discomfort arising from the making of repairs or Improvements to the Property or from any action taken to comply with any law, ordinance, or order of a governmental authority.

Section 5. Indemnification of Board Members. Each member of the Board shall be indemnified by the Corporation and the Owners against all expenses (including attorneys' fees), judgments, liabilities, fines and amounts paid in settlement, or actually and reasonably incurred, in connection with any action, suit or proceeding, whether civil, criminal, administrative or investigative instituted by or against the Corporation or against the Board member and incurred by reason of the fact that he or she is or was a Board member, if such Board member acted in good faith and in a manner such Board member believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe that such Board member's conduct was unlawful. This Section shall extend to and apply also to the indemnification of the Declarant while the Declarant is a member of the Board.

ARTICLE XIV: GENERAL PROVISIONS

Section 1. Enforcement. The Association, Declarant and/or any Owner, shall have the right to enforce, by any proceeding at law or in equity, all terms and Restrictions now or hereafter imposed by the provisions of this Declaration.

Section 2. Severability. Invalidation of any one of these terms or Restrictions by judgment or court order shall in no way affect any other provisions which shall remain in full force and effect.

Section 3. Amendment. Approval by Kuna City: Unless the express written and recorded consent of the City of Kuna has been obtained, the Declaration may not be amended, deleted, added or terminated, with respect to the following: (i) any provision of this Declaration which has been required by the City of Kuna in its approval of this Subdivision, or which affects, recognizes, conveys and/or confers upon the City of Kuna any easement, right or power, or requirement; (ii) any material provisions on easements, access, and/or the operation, repair, maintenance, repair and replacement of Common Area, infrastructure and/or public works systems; and/or (iii) any dissolution or termination of the Association.

The terms and Restrictions of this Declaration shall run with and bind the land, for a term of twenty (20) years from the date this Declaration is recorded, after which time they shall be automatically extended for successive periods of ten (10) years. This Declaration may be amended during the first twenty (20) year period by an instrument signed by Declarant (assuming Declarant owns one or more Lots) and not less than two-thirds (2/3) of all other Lot Owners, and thereafter by an instrument signed by not less than seventy-five percent (75%) of the Lot Owners; provided however, that no amendment shall act to dissolve the Association without the prior written consent of the City of Kuna. Amendments shall be in the form of supplemental declarations, and must be recorded in the records of Ada County, Idaho.

Section 4. Annexation. Additional residential property, Common Area and Maintenance Property may be annexed to the Property by Declarant. Annexations shall be accomplished by supplemental declarations to this Declaration recorded in the records of Ada County, Idaho.

Section 5. Duration and Applicability to Successors. The terms and Restrictions set forth in this Declaration shall run with the land and shall inure to the benefit of and be binding upon the Declarant and all Lot Owners and their successors in interest.

Section 6. City of Kuna. Unless the express written and recorded consent of the City of Kuna has been obtained, the Declaration may not be amended, deleted, added or terminated, with respect to the following: (i) any provision of this Declaration which has been required by the City of Kuna in its approval of this Subdivision, or which affects, recognizes, conveys and/or confers upon the City of Kuna any easement, right or power, or requirement; (ii) any material provisions on easements, access, and/or the operation, repair, maintenance, repair and replacement of Common Area, infrastructure and/or public works systems; and/or (iii) any dissolution or termination of the Association.

IN WITNESS WHEREOF, the undersigned, being the Declarant herein, has hereunto set his hand and seal this ____ day of _____, 2015.

3 Valley Development, LLC,
an Idaho limited liability company

By:_____
Donald Veasey, Managing Member

ACKNOWLEDGMENT

STATE OF IDAHO)
) ss.
County of _____)

On this _____ day of _____, 2015, before me the undersigned, a Notary Public in and for said state, personally appeared Donald Veasey, the Managing Member of 3 Valley Development, LLC, the Idaho limited liability company that executed the within and foregoing instrument, and acknowledged to me that such Idaho limited liability company executed the same.

_____
Notary Public for Idaho
Residing at:_____
My Commission Expires:_____

Accurate Surveying & Mapping

A Professional Corporation
1602 W. Hays St., Suite 306
Boise, ID 83702
www.accuratesurveyors.com

Land Description

A portion of Lot 18 in Kuna Orchard Tracts as recorded in Book 6 of Plats at Page 291, Records of Ada County, and a portion of the Southeast Quarter of the Northwest Quarter of Section 26, Township 2 North, Range 1 West of the Boise Meridian, Ada County, Idaho, being more particularly described as follows:

Commencing at the found 5/8th inch diameter iron pin with a aluminum cap labeled PLS 7015 at the Center Quarter corner of said Section 26, from which the found aluminum cap monument in asphalt at the West Quarter corner of said Section 26 bears N 89° 48' 48" W a distance of 2630.79 feet; thence N 89° 48' 48" W along the center section line for a distance of 657.75 feet to a point witnessed by a set 5/8th inch diameter iron with a 2-inch aluminum cap labeled PLS 11463 which bears N 00° 16' 33" E a distance of 3.00 feet, said point being the **REAL POINT OF BEGINNING;**

Thence continuing N 89° 48' 48" W along the center section line for a distance of 395.75 feet to a set 5/8th iron pin with a 2-inch aluminum cap labeled PLS 11463;

Thence N 00° 18' 02" E for a distance of 216.32 feet to a set 5/8th iron pin with a 2-inch aluminum cap labeled PLS 11463;

Thence S 89° 48' 48" E for a distance of 39.01 feet to a set 5/8th iron pin with a 2-inch aluminum cap labeled PLS 11463;

Thence N 00° 18' 02" E for a distance of 127.05 feet to a set 5/8th iron pin with a 2-inch aluminum cap labeled PLS 11463;

Thence N 89° 49' 34" W for a distance of 281.01 feet to a set 5/8th iron pin with a 2-inch aluminum cap labeled PLS 11463;

Thence N 00° 18' 02" E for a distance of 318.30 feet to a set 5/8th iron pin with a 2-inch aluminum cap labeled PLS 11463; the southwest corner of Kuna Orchard Tracts;

Thence S 89° 50' 18" E along the south line of said Tracts for a distance of 657.46 feet to a found 5/8th inch diameter iron pin labeled PLS 4347 at the corner common to Lots 23, 24, 17 and 18 of said Tracts;

Thence S 00° 16' 33" W along the line common to said Lots 17 and 18 for a distance of 661.88 feet to the **REAL POINT OF BEGINNING.**

Land area is 7.665 acres, more or less.

Exhibit
A2e

SITE

ADA COUNTY RECORDER Christopher D Rich
BOISE IDAHO Pgs=2 CHE FOWLER
ZVNH

2018-010536
02/05/2018 10:28 AM
AMOUNT:$15 00

00459690201800105360020021

QUITCLAIM DEED

FOR VALUE RECEIVED

ZVNH FAMILY TRUST do(es) hereby convey, release and forever quitclaim unto

THREEHOUSEASHPONDNORTHVIEWGALLAHADGRANGERLLC

Whose current address is 642 S. ASH, KUNA, IDAHO, ADA COUNTY the following described premises, to-wit:

PARCEL NUMBER R50705028356

LEGAL; SEE EXHIBIT " A "

Dated 1/1/18

ZVNH Family Trust by [signature] member

[signature]

STATE OF Idaho)

SS

COUNTY OF Ada)

On this 1 **day of** Jan **,** 2018 **, before me, the undersigned, a Notary Public in and for said State, personally appeared** Nick and Zhanna Hansen **known or identified to me to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same.**

Signature: Kelly Vieira

Name: Kelly Vierra

Residing at: Eagle ID

My Commission expires: 3/12/2020

MY COMMISSION EXPIRES
03/12/2020

KELLY VIERRA
NOTARY PUBLIC
STATE OF IDAHO

Exhibit
A29

EXHIBIT "A"

PARCEL I
All of the North half of Lot 18 of KUNA ORCHARD TRACTS, according to the official plat thereof, filed in Book 6 of Plats at Page 291, records of Ada County, Idaho.

EXCEPTING THEREFROM the following:

Beginning at the Northwest corner of said North half of Lot 18; thence South and parallel to the East boundary of said Lot 18, 120 feet; thence East and parallel to the North boundary of said Lot 18, 154 feet; thence North and parallel to the East boundary of said Lot 18, 120 feet; thence West along the North boundary of said Lot 18, 154 feet to the POINT OF BEGINNING.

PARCEL II
A parcel of land situated in the North half of Lot 18 of KUNA ORCHARD TRACTS, according to the official plat thereof, filed in Book 6 of Plats at Page 291, records of Ada County, Idaho, more particularly described as follows:

Beginning at the Northwest corner of said North half of Lot 18; thence South and parallel to the East boundary of said Lot 18, 120 feet; thence East and parallel to the North boundary of said Lot 18, 154 feet; thence North parallel to the East boundary of said Lot 18, 120 feet; thence West along the North boundary of said Lot 18, 154 feet to the POINT OF BEGINNING.

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.cityofkuna.com

State of Idaho)
) ss.
County of Ada)

I, _____ , _____
Name Address

_____ , _____ _____
City State 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 Nathan Dang, Accurate Surveying, 1602 W. Hays, Boise, ID
Name Address Ste. 306

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 2 day of April, 2019

Three House, LLC by Nick Thomas, member
Three PDX Moore Gate, Eldorado 34 LLC by Nick Thomas, member
Signature

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

Kelly Vierra
Notary Public for Idaho

Residing at: Boise ID

My commission expires: 3/26/2024

Kelly Vierra
Commission Number 20180545
Notary Public
State of Idaho
My Commission Expires
March 26, 2024

City of Kuna
Planning & Zoning
Department
PO. Box 13
Kuna, ID 83634
208.922.5274
www.kunacity.id.gov

City of Kuna
COMMITMENT TO PROPERTY POSTING

Per City Code 5-1A-8, the applicant for all applications requiring a public hearing shall post the subject property not less than ten (10) days prior to the hearing. The applicant shall post a copy of the public hearing notice or the application (s) on the property under consideration.

The applicant shall submit proof of property posting in the form of a notarized statement and a photograph of the posting to the City no later than seven (7) days prior to the public hearing attesting to where and when the sign (s) were posted. Unless such Certificate is received by the required date, the hearing will be continued.

The sign (s) shall be removed no later than three (3) days after the end of the public hearing for which the sign (s) had been posted.

I am aware of the above requirements and will comply with the posting requirements as stated in Kuna City Code 5-1A-8

Applicant/agent signature

3/27/19
Date

Exhibit A2h

Gmail by Google

Crystal McDaniel <crystal@accuratesurveyors.com>

Fwd: Chotika Subdivision Name Reservation

1 message

Nathan Dang <nathan@accuratesurveyors.com> Thu, Apr 4, 2019 at 5:04 PM
To: Crystal McDaniels <crystal@accuratesurveyors.com>

---------- Forwarded message ---------
From: **Sub Name Mail** <subnamemail@adacounty.id.gov>
Date: Tue, Feb 19, 2019 at 2:26 PM
Subject: RE: Chotika Subdivision Name Reservation
To: Nathan Dang <nathan@accuratesurveyors.com>

February 19, 2019

Nathan Dang, Accurate Surveying & Mapping

RE: Subdivision Name Reservation: **CHOTIKA SUBDIVISION**

At your request, I will reserve the name **Chotika 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*

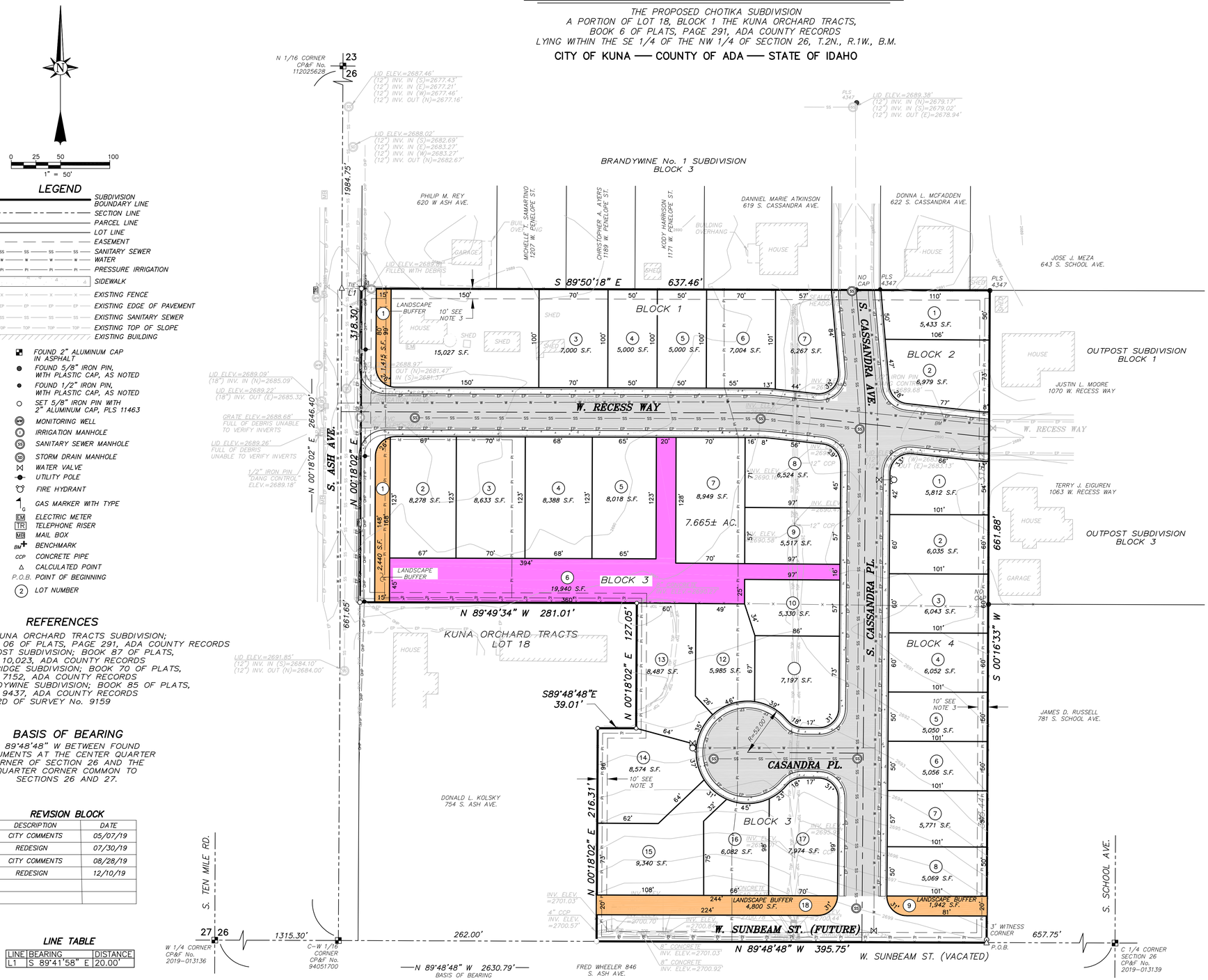
(208) 287-7909 *fax*

From: Nathan Dang [mailto:nathan@accuratesurveyors.com]
Sent: Tuesday, February 19, 2019 12:39 PM
To: Sub Name Mail
Subject: Re: [EXTERNAL] Re: Subdivision Name Reservation

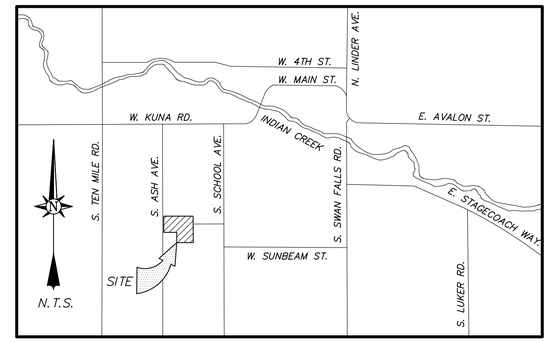
Exhibit A2j

PRELIMINARY PLAT

THE PROPOSED CHOTIKA SUBDIVISION
A PORTION OF LOT 18, BLOCK 1 THE KUNA ORCHARD TRACTS,
BOOK 6 OF PLATS, PAGE 291, ADA COUNTY RECORDS
LYING WITHIN THE SE 1/4 OF THE NW 1/4 OF SECTION 26, T.2N., R.1W., B.M.
CITY OF KUNA — COUNTY OF ADA — STATE OF IDAHO



VICINITY MAP



LEGEND

- SUBDIVISION BOUNDARY LINE
- SECTION LINE
- PARCEL LINE
- LOT LINE
- EASEMENT
- SANITARY SEWER
- WATER
- PRESSURE IRRIGATION
- SIDEWALK
- EXISTING FENCE
- EXISTING EDGE OF PAVEMENT
- EXISTING SANITARY SEWER
- EXISTING TOP OF SLOPE
- EXISTING BUILDING
- FOUND 2" ALUMINUM CAP IN ASPHALT
- FOUND 5/8" IRON PIN, WITH PLASTIC CAP, AS NOTED
- FOUND 1/2" IRON PIN, WITH PLASTIC CAP, AS NOTED
- SET 5/8" IRON PIN WITH 2" ALUMINUM CAP, PLS 11463
- MONITORING WELL
- IRRIGATION MANHOLE
- SANITARY SEWER MANHOLE
- STORM DRAIN MANHOLE
- WATER VALVE
- UTILITY POLE
- FIRE HYDRANT
- GAS MARKER WITH TYPE
- ELECTRIC METER
- TELEPHONE RISER
- MAIL BOX
- BENCHMARK
- CCP CONCRETE PIPE
- CALCULATED POINT
- P.O.B. POINT OF BEGINNING
- (2) LOT NUMBER

REFERENCES

R1 = THE KUNA ORCHARD TRACTS SUBDIVISION; BOOK 06 OF PLATS, PAGE 291, ADA COUNTY RECORDS
R2 = OUTPOST SUBDIVISION; BOOK 87 OF PLATS, PAGE 10,023, ADA COUNTY RECORDS
R3 = COLERIDGE SUBDIVISION; BOOK 70 OF PLATS, PAGE 7152, ADA COUNTY RECORDS
R4 = BRANDYWINE SUBDIVISION; BOOK 85 OF PLATS, PAGE 9437, ADA COUNTY RECORDS
R5 = RECORD OF SURVEY No. 9159

BASIS OF BEARING

N 89°48'48" W BETWEEN FOUND MONUMENTS AT THE CENTER QUARTER CORNER OF SECTION 26 AND THE QUARTER CORNER COMMON TO SECTIONS 26 AND 27.

REVISION BLOCK

DESCRIPTION	DATE
CITY COMMENTS	05/07/19
REDESIGN	07/30/19
CITY COMMENTS	08/28/19
REDESIGN	12/10/19

LINE TABLE

LINE	BEARING	DISTANCE
L1	S 89°41'58" E	20.00'

OWNER/DEVELOPER

3 VALLEY DEVELOPMENT LLC.
DON VEASEY
31045 TEMECULA PARKWAY; #201
TEMECULA, CA 92592
(951) 970-9191

SURVEYOR

NATHAN J. DANG
ACCURATE SURVEYING AND MAPPING, P.C.
1602 W HAYS ST. SUITE 306
BOISE, ID 83702
208-488-4227

ZONING AND SETBACKS

EXISTING ZONING DESIGNATION: – RUT
PROPOSED ZONING DESIGNATION: – R6
MINIMUM LOT SIZE: – 5,000 S.F.

SETBACKS: FRONT YARD/SIDEYARD, STREET – 20 FEET
SIDE YARD, INTERIOR – 5 FEET
REAR YARD – 15 FEET

GENERAL SITE NOTES:

PROPERTY SIZE: 333,887± S.F. / 7.665± ACRES
INTENDED USE: RESIDENTIAL
SITE ADDRESS: 642 S. ASH AVE.
PARCEL ID NO: R5070502835/R5070503050
GROSS DENSITY (DU/ACRE-TOTAL PROPERTY): 4.044± ACRES
NET DENSITY (DU/ACRE-EXCLUDING ROADS): 5.092± ACRES

NOTES:

1. ANY RE-SUBDIVISION OF THIS PLAT SHALL COMPLY WITH THE APPLICABLE ZONING REGULATIONS IN EFFECT AT THE TIME OF THE RE-SUBDIVISION.
2. MINIMUM BUILDING SETBACKS SHALL BE IN ACCORDANCE WITH THE KUNA CITY ZONING ORDINANCE.
3. THE EXTERIOR BOUNDARY OF THIS SUBDIVISION HAS A TEN (10) FOOT WIDE PERMANENT PUBLIC UTILITIES AND LOT DRAINAGE EASEMENT.
4. IN COMPLIANCE WITH THE DISCLOSURE REQUIREMENTS OF IDAHO CODE 31-3805(2), IRRIGATION WATER HAS NOT BEEN PROVIDED FOR BY THE OWNER, AND THE LOTS SHOWN ON THIS PLAT SHALL BE SUBJECT TO ASSESSMENTS BY BOISE-KUNA IRRIGATION DISTRICT.
5. DEVELOPMENT OF THIS PROPERTY SHALL BE IN COMPLIANCE WITH CITY OF KUNA ZONING ORDINANCE.
6. LOT 1, BLOCK 2 IS DESIGNATED AS A COMMON AREA.
7. LOT 16, BLOCK 3 CONTAINS A FIRE TURNAROUND.
8. MAINTENANCE OF COMMON AREAS AND OPEN SPACE BY HOME OWNERS ASSOCIATION.

Nathan J. Dang,
P.L.S. 11463

PROFESSIONAL LAND SURVEYOR REGISTERED 11463 STATE OF IDAHO NATHAN J. DANG

Accurate Surveying & Mapping
1602 W. Hays St., Suite 306
Boise, Idaho 83702
(208) 488-4227
www.accuratesurveyors.com

INTEGRITY ★ SERVICE ★ TECHNOLOGY

JOB NO. 18-340
DRAWN BY: PGL2
SHEET: 1 OF 1

Neighborhood Meeting Certification

received 4.5.19

CITY OF KUNA PLANNING & ZONING * 763 W. Avalon, Kuna, Idaho, 83634 * www.kunacity.id.gov * (208) 922-5274 * Fax: (208) 922-5989

GENERAL INFORMATION:

You must conduct a neighborhood meeting prior to application for variance, conditional use, zoning ordinance map amendment, expansion or extension of a nonconforming use, and/or a subdivision. Please see Section 5-1A-2 of the Kuna City Code or ask one of our planners for more information on neighborhood meetings.

The meeting must be held either on a weekend between 10 a.m. and 7 p.m., or a weekday between 6 p.m. and 8 p.m. Meetings cannot be conducted on holidays, holiday weekends, or the day before or after a holiday or holiday weekend. The meeting must be held at one of the following locations:

- The Subject Property;
- The nearest available public meeting place (Examples include fire stations, libraries and community centers);
- An office space within a 1-mile radius of the subject property.

The meeting cannot take place more than 2 months prior to acceptance of the application and the application will not be accepted before the neighborhood meeting is conducted. You are required to send written notification of your meeting, allowing a reasonable amount of time before your meeting for property owners to plan to attend. Contacting and/or meeting individually with residents will not fulfill Neighborhood Meeting requirements.

You may request a list of the people you need to invite to the neighborhood meeting from our department. This list includes property owners within 300 feet of the subject property. Once you have held your neighborhood meeting, please complete this certification form and include it with your application.

Please Note: The neighborhood meeting must be conducted in one location for attendance by all neighboring residents. Contacting and/or meeting individually with residents does not comply with the neighborhood meeting requirements.

Please include a copy of the sign-in sheet for your neighborhood meeting, so we have written record of who attended your meeting and the letter of intent sent to each recipient. In addition, provide any concerns that may have been addressed by individuals that attended the meeting.

Description of proposed project: Chotika Subdivision to be located at 642 S. Ash St., Kuna, ID

Date and time of neighborhood meeting: 3/27/19, from 6:00 PM to 8:00 PM

Location of neighborhood meeting: Kuna Public Library, 457 N Locust Ave, Kuna, ID

SITE INFORMATION:

Location: Quarter: NW Section: 26 Township: 2N Range: 1W Total Acres: 7.665

Subdivision Name: Chotika Lot: N1/2 18 Block:

Site Address: 642 S Ash St. Kuna, ID Tax Parcel Number(s): R5070503050 and R5070502835

Please make sure to include **all** parcels & addresses included in your proposed use.

CURRENT PROPERTY OWNER:

Name: Don Veasy

Address: PO Box 140838 City: Garden City State: ID Zip: 83714

CONTACT PERSON (Mail recipient and person to call with questions):

Name: Crystal McDaniel Business (if applicable): Accurate Surveying & Mapping

Address: 1602 W. Hays, Suite 306 City: Boise State: ID Zip: 83702

Exhibit A2n

PROPOSED USE:

I request a neighborhood meeting list for the following proposed use of my property (check all that apply):

Application Type	*Brief Description*
Annexation	
Re-zone	
Subdivision (Sketch Plat and/or Prelim. Plat)	
Special Use	
Variance	
Expansion of Extension of a Nonconforming Use	
Zoning Ordinance Map Amendment	

APPLICANT:

Name: Crystal McDaniel

Address: 1602 W Hays, Suite 306

City: Boise State: ID Zip: 83702

Telephone: 208-488-4227 Fax:

I certify that a neighborhood meeting was conducted at the time and location noted on this form and in accord with Section 5-1A-2 of the Kuna City Code

Signature: (Applicant) Crystal McDaniel Date 3/28/19

SIGN IN SHEET

PROJECT NAME: Chotika Subdivision

Date: 3/27/19

	Name	Address	Zip	Phone
1	Sharon Wheeler	846 S. ASH AVE	83634	922-4336
2	Fred Wheeler	"	"	"
3	William Brush	1198 W. Penelope St	83634	353-4785
4	Olivia Flores	1022 W. Reese Way	83634	208-284-5209
5	Jeff Foster	805 S. School St	83634	208-870-7894
6	Jim Russell	781 SO. School Ave	83634	208 631-1119
7	Sheri Russell	781 S. School Ave	83634	" " "
8	Jim Porter	993 W Recess Way	83634	208 863-5621
9	Bryce & Kathleen Baker	975 W Recess Way	83634	208-922-1891
10	LORNA KOLSKY	754 S. ASH AVE	83634	208-249-8880
11				
12				
13	Jim Russell	[redacted]	JrrIdaho@gmail.com	
14				
15	Jim Porter	porterinvestments@gmail.com		
16				
17	Fred Wheeler	wheeels44@msn.com		
18	LORNA KOLSKY	lkolsky@yahoo.com		
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

NEIGHBORHOOD MEETING MINUTES

Meeting Date: 3/27/19 Number of Attendees: 12

Meeting Location: Kuna Public Library, 457 N Locust Ave, Kuna, ID 83634

Description of Project Presented:

Preliminary platting application for the proposed Chotika Subdivision located at 642 S Ash Ave, Kuna, Idaho

Attendee's comments:

Question: Who are the subdivision builders. Answer: That hasn't been decided.

Ash Ave is narrow. There is poor visibility at the Ash Ave and Avalon St. intersection. There is a bottleneck at Ash and Avalon. There is concern that overflow traffic will go to Recess Way. There is also concern about slowing down emergency vehicle responses with more traffic congestion.

Does fencing go up first? There is concern about debris from construction. Also, stated that vinyl fence doesn't work well when bordered with neighbors with livestock. May need to set back fence from hot wire fence.

Common area is in wrong place. Would be better in the middle of the subdivision.

Comments are continued on 2nd page

I hereby certify that the above information is complete and correct to the best of by knowledge.

Crystal McDaniel

Printed Name

Crystal McDaniel

Signature

3/28/19

Date

Continuation of Comments

Question: What zone will the subdivision be in? There is concern about population density and they don't want R8. They prefer R4, but no higher than R6.

Question: What is the city going to do about the pressurized irrigation system low pressure problem? It is already an issue that will only get worse with more users.

Question: Are the HOA CC&Rs available for public review?

The neighbors would like socials with pie to get acquainted with the new neighbors. Something like this was done before.

City of Kuna
Design Review Application

P.O. Box 13
Kuna, Idaho 83634
(208) 922.5274
Fax: (208) 922.5989
Website: www.kunacity.id.gov

FILE NO.: 19-09-DR

CROSS REF.:

FILES: 19-03-AN, 19-02-S & 19-09-DR

The City of Kuna has adopted a Design Review process whose purpose is to make Kuna a pleasant and comfortable place to live and work. This Design Review process is based on standards and guidelines found in the Design Review Ordinance No. 2007-02 and the Architecture and Site Design Booklet. Both documents can be found online (www.cityofkuna.com) or are picked up in the City's Planning and zoning department is located at 751 W 4th Street, Kuna ID.

The Design Review application applies to the following land use actions:

- ▶ Multi- family dwellings (3 or more)
- ▶ Commercial
- ▶ Industrial
- ▶ Institutional
- ▶ Office
- ▶ Common Area
- ▶ Subdivision Signage
- ▶ Proposed Conversions
- ▶ Proposed changes in land use and/or building use or exterior remodeling
- ▶ Exterior restoration, and enlargement or expansion of existing buildings, signs or sites.

Application Submittal Requirements

Applicant Use		Staff Use
X	Date of pre- application meeting : 5/23/19 *Note: Pre-Applications are valid for a period of three (3) months.*	✓
X	A complete Design Review Application form *Note: It is the applicant's responsibility to use a current application.*	✓
X	Detailed letter of explanation or justification for the application, describing the project and design elements, and how the project complies with Design Review standards.	✓
✓	One (1) Vicinity Map (8 ½" x 11") at 1" = 300' scale (or similar), label the location of the property and adjacent streets.	✓
✓	One 8 ½" x 11" colored aerial photo depicting proposed site, street names, and surrounding area within five-hundred feet (500').	✓
X	Copy of Deed; and, if the applicant is not the owner, an **original** notarized statement (affidavit of legal interest) from the owner (and all interested parties) stating the applicant is authorized to submit this application.	✓

Exhibit B1

[X] Detailed site, landscape, drainage plan, elevation and to scale. *(No smaller than 1"=30', unless otherwise approved.)* [✓]

One of each plan (site, landscape, drainage plan and elevations) is required to be submitted in the following plan sizes:

(2) 24" x 36" LARGE FORMAT PLANS
(1) 11" X 17" PLAN REDUCATIONS
(1) 8 ½" x 11" PLAN REDUCTIONS

[ ] Provide a color rendering and material sample board specifically noting where each color and material is to be located on the structure. [ ] N/A

Note: Provide photo of the colored rendering and material samples board to City Staff electronically in a JPG or PDF format.

The Applicant is obligated to provide a site plan that graphically portrays the site and includes the following features:

Site Plan

Applicant Use		Staff Use
[ ]	North Arrow	[X]
[ ]	To scale drawings	[X]
[ ]	Property lines	[X]
[ ]	Name of "Plan Preparer" with contact information	[X]
[ ]	Name of project and date	[X]
[ ]	Existing structures, identify those which are to be relocated or removed	[X]
[ ]	On-site and adjoining streets, alleys, private drives and rights-of-way	[X]
[ ]	Drainage location and method of on-site retention / detention	[X]
[ ]	Location of public restrooms	[ ] N/A
[ ]	Existing / proposed utility service and any above-ground utility structures and their location	[X]
[ ]	Location and width of easements, canals and drainage ditches	[X]
[ ]	Location and dimension of off-street parking	[ ] N/A
[ ]	Locations and sizes of any loading area, docks, ramps and vehicle storage or service areas	[ ] N/A
[ ]	Trash storage areas and exterior mechanical equipment, with proposed method of screening	[ ] N/A
[ ]	Sign locations *(a separate sign application must be submitted with this application)*	[X]
[ ]	On-site transportation circulation plan for motor vehicles, pedestrians and bicycles	[ ] N/A
[ ]	Locations and uses of ALL open spaces	[X]
[ ]	Locations, types and sizes of sound and visual buffers *(Note: all buffers must be located outside the public right-of-way)*	[X]
[ ]	Parking layout including spaces, driveways, curb cuts, circulation patterns, pedestrian walks and vision triangle	[ ] N/A
[ ]	Locations of subdivision lines *(if applicable)*	[X]
[ ]	Illustration that demonstrates adequate sight distance is provided for motor vehicles, pedestrians and bicycles	[X]
[ ]	Location of walls and fences and indication of their height and material of construction	[X]
[ ]	Roofline and foundation plan of building, location on the site	[ ] N/A
[ ]	Location and designations of all sidewalks	[X]
[ ]	Location and designation of all rights-of-way and property lines	[X]

Landscape and Streetscape Plan

The landscape and streetscape plans need to be drawn by the project architect, professional landscape architect, landscape designer, or qualified nurseryman for development's possessing more than twelve thousand (12,000) square feet of private land. The landscaped and streetscape plans must be colored. The Planning Director or City Forester may require the preparation of a landscape plan for smaller developments by one of the noted individuals if the lot(s) have unique attributes.

Applicant Use		Staff Use
☑	North Arrow	☒
☑	To scale drawings	☒
☑	Boundaries, property lines and dimensions	☒
☑	Name of "Plan Preparer" with contact information	☒
☑	Name of project and date	☒
☑	Type and location of all plant materials and other ground covers. *Please review the City's plant list and rely upon it to identify the site's planting strategy. Include botanical and common name, quantity, spacing and sizes of all proposed landscape materials at the time of planting, and at maturity. A list of acceptable trees is available upon request from City Planning Staff.*	☒
☑	Existing vegetation identified by specific size. Identify those which are proposed to be relocated or removed	☒
☑	Method of irrigation *Note: All plant materials, except existing native plants not damaged during construction or xeriscape species shown not to require regular watering, shall be irrigated by underground sprinkler systems set on a timer in order to obtain proper watering duration and ease of maintenance.*	☒
N/A ☐	Location, description, materials, and cross-sections of special features, including berming, retaining walls, hedges, fencings, fountains street/pathway furniture *(benches, etc.), etc.*	☐
N/A ☐	Sign locations *Note: A separate sign application must be submitted with this application*	☐
N/A ☐	Locations and uses for open spaces	☒
☑	Parking layout including spaces, driveways, curb cuts, circulation patterns, pedestrian walks and vision triangle	☒
☑	Illustration that demonstrates adequate sight distance is provided for motor vehicles, pedestrians and bicycles	☒
☑	Location and designations of all sidewalks	☒
☑	Clearly identify pressurized irrigation lines and underground water storage	☒
☐	Engineered grading and drainage plans: A generalized drainage plan showing direction drainage with proposed on-site retention. Upon submission of building/construction plans for an approved design review application, a detailed site grading and drainage plan, prepared by a registered professional engineer (PE) shall be submitted to the City for review and approval by the City Engineer.	☐

Building Elevations

Applicant Use		Staff Use	
☐	Detailed elevation plans of each side of any proposed building(s) or additions(s) *Note: Four (4) elevations to include all sides of development and must be in color*	☐	
☐	Identify the elevations as to north, south, east, and west orientation	☐	
☐	Colored copies of all proposed building materials and indication where each material and color application is to be located *Note: Submit as 11"x17" reductions*	☐	N/A
☐	Screening/treatment of mechanical equipment	☐	
☐	Provide a cross-section of the building showing any roof top mechanical units and their roof placement	☐	
☐	Detailed elevation plans showing the materials to be used in construction of trash enclosures	☐	

Lighting Plan

Applicant Use		Staff Use	
☐	Exterior lighting including detailed cut sheets and photometric plan (pedestrian, vehicle, security, decoration)	☐	
☐	Types and wattage of all light fixtures *Note: The City encourages use of "dark sky" lighting fixtures*	☐	N/A
☐	Placement of all light fixtures shown on elevations and landscaping plans	☐	

Roof Plans

Applicant Use		Staff Use	
☐	Size and location of all roof top mechanical units	☐	N/A

Design Review Application

Applicant: Crystal McDaniel Phone: 208-488-4227

☐ Owner ☒ Representative Fax/Email: crystal@accuratesurveyors.com

Applicant's Address: 1602 W Hays St, Suite 306, Boise, ID

Zip: 83702

Owner: Don Veasey Phone: 951-970-9191

Owner's Address: 31045 Temecula Parkway, #201, Temecula, CA Email: don@kalpacific.com

Zip: 92592

Represented By: *(if different from above)* Phone:

Address: Email:

Zip:

Address of Property: 642 S Ash St, Kuna, ID

Zip: 83634

Distance from Major Cross Street: Abuts S Ash Ave Street Name(s): S Ash Ave

Please check the box that reflects the intent of the application

☐ **BUILDING DESIGN REVIEW**
☒ **SUBDIVISION / COMMON AREA LANDSCAPE**
☐ **DESIGN REVIEW MODIFICATION**
☐ **STAFF LEVEL APPLICATION**

This Design Review application is a request to construct, add or change the following: *(Briefly explain the nature of the request.)*

1. Dimension of Property: 7.665± acres
2. Current Land Use(s): Residential
3. What are the land uses of the adjoining properties?
   - North: Residential
   - South: Residential
   - East: Residential
   - West: Residential
4. Is the project intended to be phased, if so what is the phasing time period? No

   Please explain:

5. The number and use(s) of all structures: _____

6. Building heights: _____ Number of stories: _____

The height and width relationship of new structures shall be compatible and consistent with the architectural character of the area and proposed use.

Note: The maximum building height for each zoning district is as follows:

L-O: 35'	C-2: 60'	CBD: 80'	M-2: 60'	P: 60'
C-1: 35'	C-3: 60'	M-1: 60'	M-3: 60'	

7. What is the percentage of building space on the lot when compared to the total lot area? _____

8. Exterior building materials & colors: *(Note: This section must be completed in compliance with the City of Kuna Ordinance No. 2007-21A (as amended); found online at (www.cityofkuna.com) under the City Code.*

	MATERIAL		COLOR
Roof:		/	

Walls: (State percentage of wall coverage fro each type of building material below for each frontage wall) If there is not adequate space to identify the various building materials and applications, please list them on the attached sheet of this application. Please attach photos to support application types.

% of Wood application:		/	
% EIFS: *(Exterior Insulation Finish System)*		/	
% Masonry:		/	
% Face Block:		/	
% Stucco:		/	
& other material(s):		/	
List all other materials:			
Windows/Doors: *(Type of window frames & styles / doors & styles, material)*		/	
Soffits and fascia material:		/	
Trim, etc.:		/	
Other:		/	

9. Please identify Mechanical Units: _____
   Type/Height: _____
   Proposed Screening Method: _____

10. Please identify trash enclosure: *(size, location, screening & construction materials)* _____

11. Are there any irrigation ditches/canals on or adjacent to the property? Yes
    If yes, what is the name of the irrigation or drainage provider? Boise Kuna Irrigation District

12. Fencing: *(Please provide information about new fencing material as well as any exiting fencing material)*
    Six feet tall vinyl fence on the perimeter
    Type: Vinyl

Size: _____

Location: _____

(Please note that the City has height limitations of fencing material and requires a fence permit to be obtained prior to installation)

13. Proposed method of On-site Drainage Retention/Detention:

_____

14. Percentage of Site Devoted to Building Coverage: 75%

% of Site Devoted to Landscaping: *(including landscaped rights-of-way)* 3% Square Footage: 10,000

% of Site that is Hard Surface: *(Paving, driveways, walkways, etc.)* 22% Square Footage: 73,500

% of Site Devoted to other uses: _____

Describe: _____

% of landscaping within the parking lot (landscaped islands, etc.): _____

_____

15. For details, please provide dimensions of landscaped areas within public rights-of-way:

_____

16. Are there any existing trees of 4" or greater in caliper on the property? *(Please provide the information on the site plans.)*

If yes, what type, size and the general location? *(The City's goal is to preserve existing trees with a four inch (4") or greater caliper whenever possible):*

There are 4 coniferous trees and 1 deciduous tree. The trees are on the landscape plan.

_____

_____

17. Dock Loading Facilities:

Number of docking facilities and their location: _____

_____

Method of screening: _____

_____

18. Pedestrian Amenities: *(bike racks, receptacles, drinking fountains, benches, etc.)* None

_____

_____

19. Setbacks of the proposed building from property lines:

Front _____ -feet Rear _____ -feet Side _____ -feet Side _____ -feet

20. Parking requirements: _____

Total Number of Parking Spaces: _____ Width and Length of Spaces: _____

Total Number of Compact Spaces 8'x17'): _____

21. Is any portion of the property subject to flooding conditions? Yes _____ No _____

IF THE PLANNING DIRECTOR OR DESIGNEE, THE DESIGN REVIEW BOARD AND/OR THE CITY COUNCIL DETERMINE THAT ADDITIONAL AND/OR REVISED INFORMATION IS NEEDED, AND/OR IF OTHER UNFORESEEN CIRCUMSTANCES ARISE, ANY DATES OUTLINED FOR PROCESSING MAY BE RE-SCHEDULED BY THE CITY. APPLICANT/REPRESENTATIVE MUST ATTEND THE DESIGN REVIEW BOARD MEETING/PLANNING AND ZONING MEETINGS.

The Ada County Highway District may also conduct public meetings regarding this application. If you have questions about the meeting date or the traffic that this development may generate or the impact of that traffic on streets in the area, please contact the Ada County Highway District at 208.387.6170. In order to expedite you request, please have ready the file number indicated in this notice.

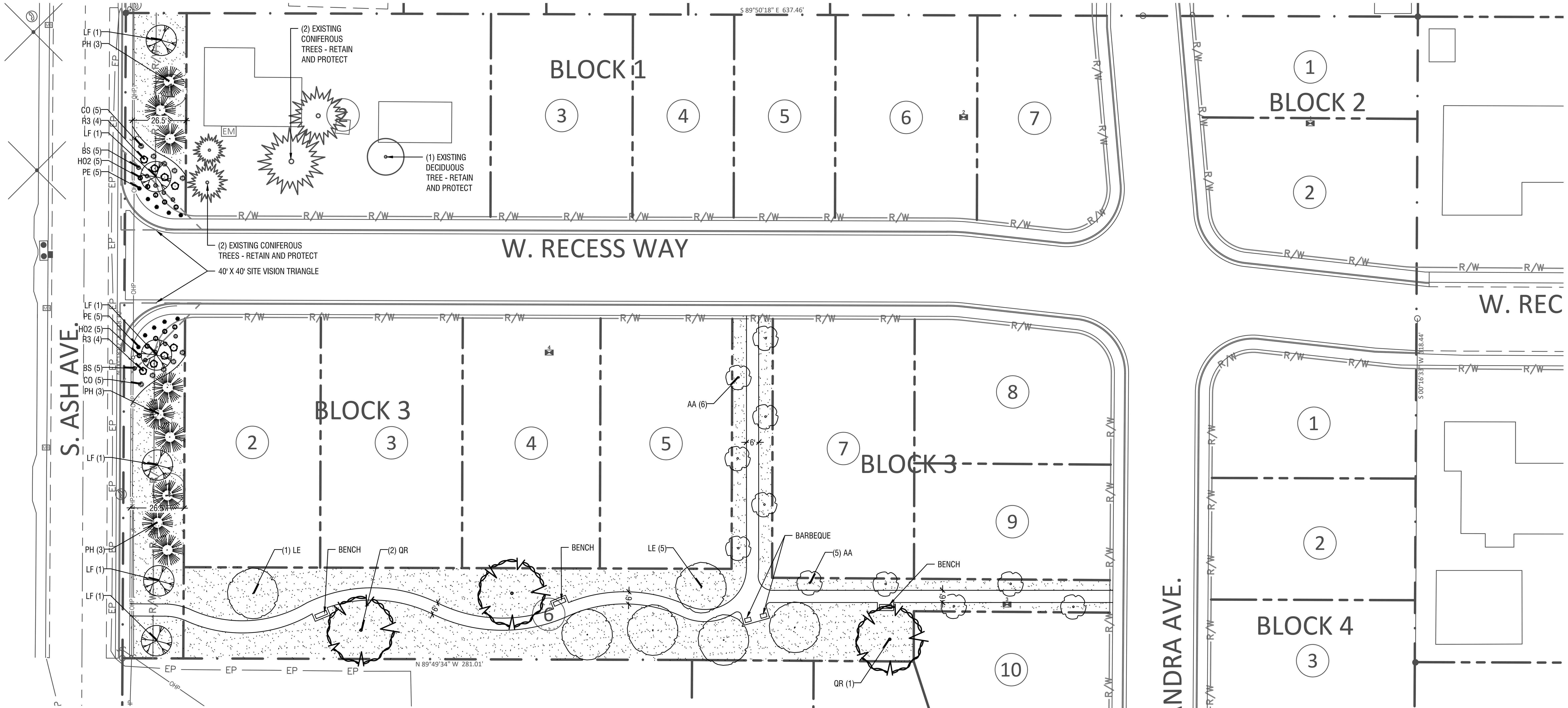
Signature of Applicant _____ Date 6/17/19

City staff comments:

Signature of receipt by City Staff _____ Date 6/18/19

FOR ADDITIONAL INFORMATION:

(Please list page number and item in reference)



PLANT SCHEDULE OVERALL				
EVERGREEN TREES	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
PH	PICEA PUNGENS `HOOPSII` / HOOPSI BLUE SPRUCE 30`H X 15`W	6` HT.	B&B	19
CLASS II DECIDUOUS TREES	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
AA	ACER FREEMANII `ARMSTRONG` / FREEMAN MAPLE 45`H X 15`W	2" CAL.	B&B	11
LE	LIRIODENDRON TULIPIFERA `EMERALD CITY` TM / EMERALD CITY TULIP TREE 55`H X 25`W	2" CAL.	B&B	6
LF	LIRIODENDRON TULIPIFERA `FASTIGIATA` / TULIP TREE 40`H X 15`W	2" CAL.	B&B	13
CLASS III DECIDUOUS TREES	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
QR	QUERCUS RUBRA / RED OAK 50`H X 45`W	2" CAL.	B&B	3
SHRUBS	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
BS	BUXUS SEMPERVIRENS `SUFFRUTICOSA` / DWARF ENGLISH BOXWOOD 2`H X 2`W	1 GAL		20
CO	CALAMAGROSTIS X ACUTIFLORA `OVERDAM` / OVERDAM FEATHER REED GRASS 3`H X 3`W	1 GAL		16
HO2	HEMEROCALLIS X `STELLA DE ORO` / STELLA DE ORO DAYLILY 2`H X 2`W	1 GAL		22
PE	PHLOX SUBULATA `EMERALD BLUE` / EMERALD BLUE MOSS PHLOX 6"H X 3`W	1 GAL		24
R3	ROSA GROUNDCOVER X `RADTKO` / DOUBLE KNOCK OUT GROUNDCOVER ROSE 3`H X 4`W	2 GAL		8

Landscape Material Legend:

- 80/20 BLUEGRASS/PERENNIAL RYE BLENDED TURF SOD
- EXISTING CONIFEROUS TREE - RETAIN AND PROTECT
- EXISTING DECIDUOUS TREE - RETAIN AND PROTECT

Tree Protection Notes:

A. PROTECT THE CRITICAL ROOT ZONE OF THE TREES TO BE RETAINED ON SITE: (NOTE: CRITICAL ROOT ZONE IS THE AREA DIRECTLY BELOW THE DRIP LINE OF THE TREE.)
- A.A. CONSTRUCT PROTECTIVE FENCING OF CHAIN-LINK AROUND THE CRITICAL ROOT ZONE PRIOR TO DEMOLITION OR CONSTRUCTION.
- A.B. DO NOT ALLOW COMPACTION BY EQUIPMENT TRAFFIC DURING CONSTRUCTION OR DURING DEMOLITION.
- A.C. DO NOT ALLOW CEMENT TRUCKS TO RINSE WITHIN THE PROTECTION AREA, ANYWHERE THAT TREE ROOTS EXIST OR IN PLANNED PLANTING BEDS.
- A.D. DO NOT STOCKPILE MATERIALS, DEBRIS OR DIRT WITHIN THE TREE PROTECTION AREA.
- A.E. MAINTAIN WATERING WITHIN THE CRITICAL ROOT ZONE FROM MID-APRIL TO MID-OCTOBER AT THE RATE OF NOT LESS THAN THE EQUIVALENT OF 1-1/2" OF WATER OVER THE ENTIRE AREA PER WEEK.
- A.F. DO NOT TRENCH, EXCAVATE, FILL OR OTHERWISE DISTURB THE SOIL WITHIN THE CRITICAL ROOT ZONE.
- A.G. ADJUST PROPOSED IMPROVEMENT LOCATIONS AS REQUIRED TO AVOID DAMAGING TREE ROOTS.

B. PROTECT THE CROWN AND TRUNK OF TREES TO BE RETAINED ON SITE:
- B.A. OPERATE EQUIPMENT IN SUCH A WAY AS TO AVOID CONTACT WITH TREE TRUNKS OR BRANCHES.
- B.B. PRUNING OF PUBLIC PROPERTY TREES SHALL BE PERFORMED BY A LICENSED ARBORIST.

C. ALL TREES DAMAGED OR DESTROYED DURING CONSTRUCTION SHALL BE REPLACED USING THE FOLLOWING CRITERIA:

EXISTING TREE	*REPLACEMENT*
1" TO 6" CALIPER	*2X CALIPER OF TREE REMOVED*
6" TO 12" CALIPER	*1.5X CALIPER OF TREE REMOVED*
> 12" OR LARGER CALIPER	*1X CALIPER OF TREE REMOVED*

EXAMPLE: IF AN 8" CALIPER TREE IS REMOVED, AN ACCEPTABLE REPLACEMENT WOULD BE (3) 4" CALIPER TREES OR (4) 3" CALIPER TREES.

Design Review-Landscape Plan

Horizontal Scale: 1" = 30'

Last Plotted By: james leo
Date Plotted: Monday, December 2 2019 at 08:30 AM

Landscape Requirements:

AS IDENTIFIED IN THE KUNA, IDAHO CITY ORDINANCE:

LANDSCAPE BUFFER VEGETATIVE DENSITY *(5-17-15)*
TWO (2) SHADE TREES, THREE (3) EVERGREEN TREES, AND 12 SHRUBS EVERY 100 LINEAR FEET.

AREA	LANDSCAPE REQUIRED	LANDSCAPE PROVIDED
W. ASH AVE. (272 L.F.)	6 SHADE TREES 9 EVERGREEN TREES 36 SHRUBS	6 SHADE TREES 9 EVERGREEN TREES 48 SHRUBS
W. SUNBEAM ST. (345 L.F.)	7 SHADE TREES 10 EVERGREEN TREES 41 SHRUBS	7 SHADE TREES 10 EVERGREEN TREES 42 SHRUBS

COMMON AREA LANDSCAPES *(5-17-12-C)*
ONE (1) DECIDUOUS TREE PER ONE THOUSAND (1,000) SQUARE FEET OF SITE AND LAWN

AREA	LANDSCAPE REQUIRED	LANDSCAPE PROVIDED
20062 SQ. FT.	20 DECIDUOUS TREES	20 DECIDUOUS TREES

Landscape Notes:

A. CONTRACTOR SHALL REPORT TO LANDSCAPE ARCHITECT ALL CONDITIONS WHICH IMPAIR AND/OR PREVENT THE PROPER EXECUTION OF THIS WORK, PRIOR TO BEGINNING WORK.

B. FINISH GRADES TO BE SMOOTH AND EVEN GRADIENTS WITH POSITIVE DRAINAGE IN ACCORDANCE WITH SITE GRADING PLAN. REMOVE RIDGES AND FILL DEPRESSIONS, AS REQUIRED TO MEET FINISH GRADES. PLACE 3" DEPTH OF 1" MINUS BLACK AND TAN ROCK MULCH OVER SUBGRADE SOIL TO ACHIEVE FINISH GRADE. FINISH GRADE RELATED TO ADJACENT SITE ELEMENTS SHALL BE:
- B.A. 1-INCH BELOW TOP OF ADJACENT PAVEMENT, VALVE BOX, VAULT, ETC.
- B.B. 3-INCHES BELOW TOP OF CURB UNLESS NOTED OTHERWISE.

C. ALL PLANTING BEDS SHALL HAVE A MINIMUM OF 18" OF TOPSOIL, SOD AREAS A MINIMUM OF 12" OF TOPSOIL. SPREAD, COMPACT AND FINE GRADE TOPSOIL TO A SMOOTH AND UNIFORM GRADE.

D. RE-USE EXISTING SURFACE TOPSOIL WHERE POSSIBLE. VERIFY SUITABILITY OF SURFACE SOIL TO PRODUCE TOPSOIL MEETING REQUIREMENTS AND AMEND WHEN NECESSARY. TOPSOIL SHALL BE A LOOSE, FRIABLE, SANDY LOAM, CLEAN AND FREE OF TOXIC MATERIALS, NOXIOUS WEEDS, WEED SEEDS, ROCKS, GRASS OR OTHER FOREIGN MATERIAL AND A PH OF 5.5 TO 7.0. IF ON-SITE TOPSOIL DOES NOT MEET THESE MINIMUM STANDARDS, CONTRACTORS ARE RESPONSIBLE TO EITHER: A) PROVIDE APPROVED IMPORTED TOPSOIL, OR B.) IMPROVE ON-SITE TOPSOIL WITH METHODS APPROVED BY LANDSCAPE ARCHITECT. SUPPLEMENT WITH IMPORTED TOPSOIL WHEN QUANTITIES ARE INSUFFICIENT. CLEAN TOPSOIL OF ROOTS, PLANTS, SODS, STONES, CLAY LUMPS AND OTHER EXTRANEOUS MATERIALS HARMFUL TO PLANT GROWTH.

E. IF IMPORTED TOPSOIL FROM OFF-SITE SOURCES IS REQUIRED, PROVIDE NEW TOPSOIL THAT IS FERTILE, FRIABLE, NATURAL LOAM, SURFACE SOIL, REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH, WEEDS AND OTHER LITTER, AND FREE OF ROOTS, STUMPS, STONES LARGER THAN 2 INCHES IN ANY DIMENSION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH.

F. OBTAIN TOPSOIL FROM LOCAL SOURCES OR FROM AREAS HAVING SIMILAR SOIL CHARACTERISTICS TO THAT FOUND AT PROJECT SITE. OBTAIN TOPSOIL ONLY FROM NATURALLY, WELL-DRAINED SITES WHERE TOPSOIL OCCURS IN A DEPTH OF NOT LESS THAN 4 INCHES.

G. ALL LANDSCAPE AREAS SHALL BE WEED FREE AT THE TIME OF LANDSCAPE INSTALLATION.REMOVE ALL ROOTS, WEEDS, ROCKS AND FOREIGN MATERIAL ON THE SURFACE.

H. NEW TREE PLANTING, SEE DETAIL 1 & 2/L1.50. CONTRACTOR SHALL STAKE ALL TREES DEEMED NECESSARY, I.E. FROM BEING BLOWN OVER, PLANTED WITH LOOSE ROOT BALL, ETC. CONTRACTOR'S OPTION.

I. NEW SHRUB PLANTING. SEE DETAIL 3/L1.50.

J. ALL PLANT MATERIAL SHALL CONFORM TO THE AMERICAN NURSERYMAN STANDARDS FOR TYPE AND SIZE SHOWN. PLANTS WILL BE REJECTED IF NOT IN A SOUND AND HEALTHY CONDITION.

K. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR BEGINNING AT THE DATE OF SUBSTANTIAL COMPLETION. REPLACE ALL PLANT MATERIAL FOUND DEAD OR NOT IN A HEALTHY CONDITION IMMEDIATELY WITH THE SAME SIZE AND SPECIES AT NO COST TO THE OWNER.

L. TREE PIT BACKFILL PLANTING MIX: BLEND TOPSOIL AND SOIL AMENDMENTS AND FERTILIZER FOR TREE PIT BACKFILL AT THE FOLLOWING RATES. BLEND AMENDMENTS THOROUGHLY WITH SOIL BACKFILL. TREE PITS SHALL BE 5'x5'x1.5' (37.5 CF/ 1.5 CY).
- L.A. APPLICATION RATES:
  - L.A.A. HUMIC ACID: 25 LBS PER TREE PIT
  - L.A.B. COMMERCIAL GRADE COMPOST - 10 CUBIC FEET PER TREE PIT
  - L.A.C. PLANTING TABLET FERTILIZER - 4 TABLETS PER TREE PIT
  - L.A.D. CALCIFIED DIATOMACEOUS EARTH - 75 LBS PER TREE PIT

M. SHRUB PIT BACKFILL PLANTING MIX: BLEND TOPSOIL AND SOIL AMENDMENTS AND FERTILIZER FOR SHRUB PIT BACKFILL AT THE FOLLOWING RATES. BLEND AMENDMENTS WITH THOROUGHLY WITH SOIL BACKFILL. SHRUB PITS SHALL BE 2.5'x2.5'x1' (6.25 CF/ 0.25 CY).
- M.A. APPLICATION RATES:
  - M.A.A. HUMIC ACID: 2 LBS PER SHRUB PIT
  - M.A.B. COMMERCIAL GRADE COMPOST - 2 CUBIC FEET PER SHRUB PIT
  - M.A.C. PLANTING TABLET FERTILIZER - 2 TABLETS PER SHRUB PIT
  - M.A.D. CALCIFIED DIATOMACEOUS EARTH - 15 LBS PER SHRUB PIT

N. IMMEDIATELY CLEAN UP ANY TOPSOIL OR OTHER DEBRIS ON THE SITE CREATED FROM LANDSCAPE OPERATIONS AND DISPOSE OF PROPERLY OFF SITE.

O. CONTRACTOR SHALL SUBMIT MATERIAL SAMPLES FOR LANDSCAPE ROCK MULCH TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO PROCUREMENT. LANDSCAPE BOULDERS, PHOTO SUBMITTAL IS ADEQUATE. FOR ROCK MULCH, SUBMIT 1 GALLON BAG SAMPLE TO OWNER.

Automatic Underground Irrigation Notes:

A. ALL LANDSCAPED AREAS SHALL HAVE AN AUTOMATIC UNDERGROUND SPRINKLER SYSTEM WHICH ENSURES COMPLETE COVERAGE AND PROPERLY ZONED FOR REQUIRED WATER USES.

B. EACH HYDROZONE IS TO BE IRRIGATED WITH SEPARATE INDIVIDUAL STATIONS.

C. POP-UP SPRINKLER HEADS SHALL HAVE A MINIMUM RISER HEIGHT OF 18" AT PLANTER BEDS, 6" AT LAWN AREAS..

D. PLANTER BEDS ARE TO HAVE DRIP IRRIGATION SYSTEMS - WITH DRIP CONTROL ZONE KIT AND 150 MESH FILTER (MIN.).

E. ELECTRONIC WATER DISTRIBUTION/ TIMING CONTROLLERS ARE TO BE PROVIDED. MINIMUM CONTROLLER REQUIREMENTS ARE AS FOLLOWS:
- E.A. PRECISE INDIVIDUAL STATION TIMING
- E.B. RUN TIME CAPABILITIES FOR EXTREMES IN PRECIPITATION RATES
- E.C. AT LEAST ONE PROGRAM FOR EACH HYDROZONE
- E.D. SUFFICIENT MULTIPLE CYCLES TO AVOID WATER RUN-OFF
- E.E. POWER FAILURE BACKUP FOR ALL PROGRAMMED INDIVIDUAL VALVED WATERING STATIONS WILL BE DESIGNED AND INSTALLED TO PROVIDE WATER TO RESPECTIVE HYDRO-ZONES.

F. INDIVIDUAL VALVED WATERING STATIONS WILL BE DESIGNED AND INSTALLED TO PROVIDE WATER TO RESPECTIVE HYDRO-ZONES.

G. THE IRRIGATION SYSTEM SHALL BE DESIGNED TO PROVIDE 100% COVERAGE WITH HEAD TO HEAD SPACING OR TRIANGULAR SPACING AS APPROPRIATE.

H. SPRINKLER HEADS SHALL BE ADJUSTED TO REDUCE OVERSPRAY ONTO IMPERVIOUS SURFACES SUCH AS SIDEWALKS, DRIVEWAYS, AND PARKING AREA.

I. EACH VALVE SHALL BE INSTALLED IN A VALVE BOX LARGE ENOUGH TO ALLOW FOR MAINTENANCE AND REMOVAL. ONLY ONE VALVE PER BOX.

THE LAND GROUP
462 E. Shore Dr. Suite 100
Eagle, Idaho 83616
208-939-4041

CHOTIKA SUBDIVISION

642 S Ash Ave
Kuna, Idaho 83634

Revisions
1.

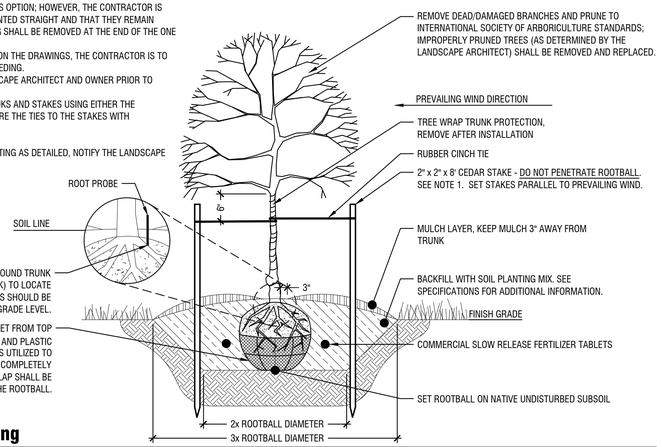
STATE OF IDAHO · DAVID J. KOGA · LA-164 · LICENSED LANDSCAPE ARCHITECT
12/02/2019

Project No.:	119020
Date of Issuance:	12/02/2019
Project Milestone:	Design Review

Design Review Landscape Plan

L1.00

NOTES:
1. THE STAKING OF TREES IS TO BE THE CONTRACTOR'S OPTION; HOWEVER, THE CONTRACTOR IS RESPONSIBLE TO INSURE THAT ALL TREES ARE PLANTED STRAIGHT AND THAT THEY REMAIN STRAIGHT FOR A MINIMUM OF 1 YEAR. ALL STAKING SHALL BE REMOVED AT THE END OF THE ONE YEAR WARRANTY PERIOD.
2. IN THE EVENT OF A QUESTION OR LACK OF CLARITY ON THE DRAWINGS, THE CONTRACTOR IS TO NOTIFY THE LANDSCAPE ARCHITECT BEFORE PROCEEDING.
3. LANDSCAPE CONTRACTOR IS TO NOTIFY THE LANDSCAPE ARCHITECT AND OWNER PRIOR TO INSTALLATION OF PLANT MATERIAL.
4. WRAP RUBBER CINCH TIES AROUND THE TREE TRUNKS AND STAKES USING EITHER THE STANDARD OR FIGURE EIGHT TYING METHOD. SECURE THE TIES TO THE STAKES WITH GALVANIZED NAILS TO PREVENT SLIPPAGE.
5. WATER TREE TWICE WITHIN THE FIRST 24 HOURS.
6. IN THE EVENT HARDPAN SOILS PREVENT TREE PLANTING AS DETAILED, NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY.



1 Deciduous Tree Planting
Scale: NTS

NOTES:
1. THE STAKING OF TREES IS TO BE THE CONTRACTOR'S OPTION; HOWEVER, THE CONTRACTOR IS RESPONSIBLE TO INSURE THAT ALL TREES ARE PLANTED STRAIGHT AND THAT THEY REMAIN STRAIGHT FOR A MINIMUM OF 1 YEAR. ALL STAKING SHALL BE REMOVED AT THE END OF THE ONE YEAR WARRANTY PERIOD.
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5. WATER TREE TWICE WITHIN THE FIRST 24 HOURS.
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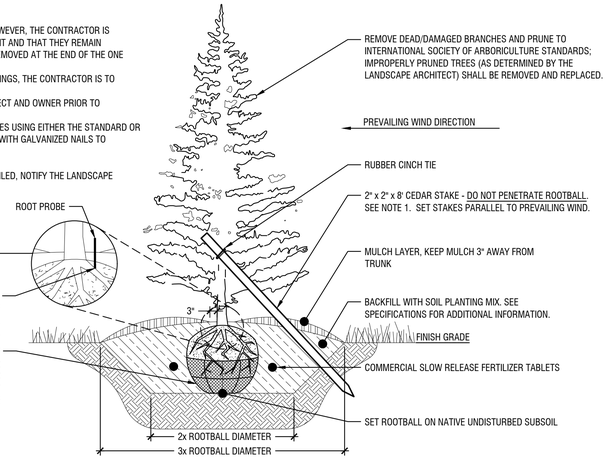
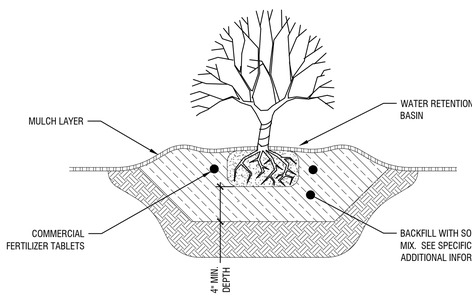
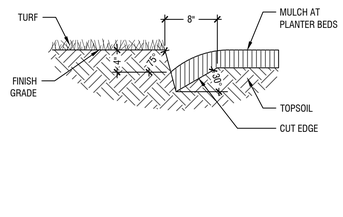


2 Coniferous Tree Planting
Scale: NTS



3 Shrub Planting
Scale: NTS



4 Planter Edge Cut Edge
Scale: NTS

THE LAND GROUP

CHOTIKA SUBDIVISION

642 S Ash Ave
Kuna, Idaho 83634

Revisions
1.

STATE OF IDAHO
DAVID J. KOGA
LA-164
LICENSED LANDSCAPE ARCHITECT
12/02/2019

Project No.: 119020
Date of Issuance: 12/02/2019
Project Milestone: Design Review

Design Review Landscape Details

L1.50

File path: J:\2019\119020\cad\119020 A 11X17 landscape plan.dwg
Last Modified by: jordan.ray
Date Printed: Monday, December 2, 2019 9:36:38 AM

SANDSTONE SLAB
75"x40"x14"

75"

FRONT VIEW

SIDE VIEW

Exhibit
B3

Jace Hellman

From:	Jace Hellman
Sent:	Wednesday, August 14, 2019 11:32 AM
To:	Ada County Engineer; Ada County Highway District; Adam Ingram; Becky Rone - Kuna USPS Addressing; Bob Bachman; Bobby Withrow; Boise Project Board of Control (TRitthaler@boiseproject.org); Cable One t.v.; Central District Health Dept. CDHD; COMPASS; DEQ (Alicia.martin@deq.idaho.gov); Eric Adolfson; Idaho Power; Idaho Power; Idaho Power Easements; 'Idaho Power Easments 2'; Intermountain Gas; ITD; J&M Sanitation - Chad Gordon; jmcdaniel@adaweb.net; Julie Stanely - Regional Address Mgmt.; Kuna Postmaster - Marc C. Boyer; Kuna School District; Kuna School District; Kuna School District; Lisa Holland; Megan Leatherman; Nampa Meridian Irrigation District; New York Irrigation; Paul Stevens; Perry Palmer; Planning Mgr: Ada County Development Services; Wendy
Subject:	Kuna Planning and Zoning Department, Request for Comment - Case Nos. 19-03-AN, 19-02-S & 19-09-DR
Attachments:	Chotika Subdivision Agency Packet.pdf

Agency Transmittal (AMMENDED)

Hello,

The applicant has submitted a modified preliminary plat. If you have submitted comments previously on this application, and have no further comment, please let me know. Thank you.

August 14, 2019

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

File Number & Case Name:	19-03-AN (Annexation),19-02-S (Preliminary Plat) & 19-09-DR (Design Review) – Chotika Subdivision.
Project Description	On behalf of Don Veasey (owner), Accurate Surveyors requests to annex two parcels consisting of approximately 7.67 acres into Kuna City Limits with an R-6 (Medium Density Residential) zone and to subdivide the 7.67 acres into 37 total lots (thirty-four (34) buildable lots, three (3) common lots). The subject sites are located at 642 S. Ash St and S. Ash St., Kuna, ID 83634, within Section 26, Township 2 North, Range 1 West; (APNs: R5070503050 and R5070502835).
Site Location	642 S. Ash St. and S. Ash St., Kuna, ID 83634
Applicant	**Crystal McDaniel, Accurate Surveyors** 1602 W. Hays St, Suite 306 Boise, ID 83702 208-488-4227 Crystal@accuratesurveyors.com

Representative	**Roger Smith** 1693 S. Coronado Ave Boise, ID 83709 208-870-1015 roger-j-smith@msn.com
Public Hearing Date	Tuesday, **September 24, 2019** 6:00 pm Kuna City Hall is located at 751 W. 4th Street, Kuna, ID 83634
Staff Contact	Jace Hellman, Planner II jhellman@kunaid.gov Phone: 208.922.5274 Fax: 208.922.5989
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.*	

Jace Hellman
Planner II
751 W 4th St
Kuna, ID 83634
jhellman@kunaid.gov

Rebecca W. Arnold, President
Mary May, 1st Vice-President
Sara M. Baker, 2nd Vice-President
Jim D. Hansen, Commissioner
Kent Goldthorpe, Commissioner

August 19, 2019

To: Accurate Surveyors (via email)
Crystal McDaniel
1602 W Hays Street, Ste. 306
Boise, ID 83702

Subject: Chotika Subdivision/ KPP19-0005/ 19-03-AN/ 19-02-S/ 19-09-DR
642 S Ash Street
Annexation and Rezone with preliminary plat consisting of 34 buildable lots and 3 common lots and a design review application on 7.67-acres.

On August 2, 2019, the Ada County Highway District approved Chotika Subdivision/ KPP-19-0005 for an annexation, rezone, preliminary plat and design review of a 37 total lot subdivision. The site-specific conditions of approval also apply to this application.

If you have any questions, please feel free to contact me at (208) 387-6171.

Sincerely,

Stacey Yarrington
Planner III
Development Services

cc: Project File
City of Kuna (via email)
Don Veasey (via email)
Roger Smith (via email)

Attachment: Staff Report

Exhibit
C7

Standard Conditions of Approval

1. All proposed irrigation facilities shall be located outside of the ACHD right-of-way (including all easements). Any existing irrigation facilities shall be relocated outside of the ACHD right-of-way (including all easements).Private Utilities including sewer or water systems are prohibited from being located within the ACHD right-of-way.
2. In accordance with District policy, 7203.6, the applicant may be required to update any existing non-compliant pedestrian improvements abutting the site to meet current Americans with Disabilities Act (ADA) requirements. The applicant's engineer should provide documentation of ADA compliance to District Development Review staff for review.
3. Replace any existing damaged curb, gutter and sidewalk and any that may be damaged during the construction of the proposed development. Contact Construction Services at 387-6280 (with file number) for details.
4. A license agreement and compliance with the District's Tree Planter policy is required for all landscaping proposed within ACHD right-of-way or easement areas.
5. All utility relocation costs associated with improving street frontages abutting the site shall be borne by the developer.
6. It is the responsibility of the applicant to verify all existing utilities within the right-of-way. The applicant at no cost to ACHD shall repair existing utilities damaged by the applicant. The applicant shall be required to call DIGLINE (1-811-342-1585) at least two full business days prior to breaking ground within ACHD right-of-way. The applicant shall contact ACHD Traffic Operations 387-6190 in the event any ACHD conduits (spare or filled) are compromised during any phase of construction.
7. Utility street cuts in pavement less than five years old are not allowed unless approved in writing by the District. Contact the District's Utility Coordinator at 387-6258 (with file numbers) for details.
8. All design and construction shall be in accordance with the ACHD Policy Manual, ISPWC Standards and approved supplements, Construction Services procedures and all applicable ACHD Standards unless specifically waived herein. An engineer registered in the State of Idaho shall prepare and certify all improvement plans.
9. Construction, use and property development shall be in conformance with all applicable requirements of ACHD prior to District approval for occupancy.
10. No change in the terms and conditions of this approval shall be valid unless they are in writing and signed by the applicant or the applicant's authorized representative and an authorized representative of ACHD. The burden shall be upon the applicant to obtain written confirmation of any change from ACHD.
11. If the site plan or use should change in the future, ACHD Planning Review will review the site plan and may require additional improvements to the transportation system at that time. Any change in the planned use of the property which is the subject of this application, shall require the applicant to comply with ACHD Policy and Standard Conditions of Approval in place at that time unless a waiver/variance of the requirements or other legal relief is granted by the ACHD Commission.

ACHD
Committed to Service

Project/File: **Chotika/ KPP19-0005/ 19-02-S/ 19-03-AN/ 19-09-DR**
This is an annexation with rezone to R-6, a preliminary plat consisting of 37 lots, and a design review on 7.7-acres.

Lead Agency: City of Kuna

Site address: 642 S Ash Avenue

Staff Approval: August 2, 2019

Applicant: Don Veasey
31045 Temecula Parkway, #201
Temecula, CA 92592

Representative: Accurate Surveying & Mapping
Crystal McDaniel
1602 W Hays Street, Ste. 306
Boise, ID 83702

Staff Contact: Stacey Yarrington, Planner III
Phone: 387-6171
E-mail: syarrington@achdidaho.org

A. Findings of Fact

1. **Description of Application:** The applicant is requesting approval of an annexation with rezone from RUT (Rural Urban Transition) to R-6 (Medium density Residential), a preliminary plat consisting of 34 buildable lots and 3 common lots, and a design review application. The site is located on 7.7-acres and the applicant's proposal is consistent with the City of Kuna's Future Land Use Map.

2. **Description of Adjacent Surrounding Area:**

Direction	Land Use	Zoning
North	Medium density Residential	R-6
South	Rural Urban Transition (Ada County)	RUT
East	Medium density Residential	R-4
West	Estate Residential (Ada County)	R1

3. **Site History:** ACHD has not previously reviewed this site for a development application.

4. **Adjacent Development:** The following developments are pending or underway in the vicinity of the site:

   - Deserthawk 4, a 34 buildable lot development located southwest of the site, was approved by ACHD in July 2017.

5. **Transit:** Transit services are not available to serve this site.

6. **New Center Lane Miles:** The proposed development includes 0.26 centerline miles of new public road.

7. **Impact Fees:** There will be an impact fee that is assessed and due prior to issuance of any building permits. The assessed impact fee will be based on the impact fee ordinance that is in effect at that time. The impact fee assessment will not be released until the civil plans are approved by ACHD.

8. **Capital Improvements Plan (CIP)/ Integrated Five Year Work Plan (IFYWP):**
   There are no roadways, bridges or intersections in the general vicinity of the project that are in the Integrated Five Year Work Plan (IFYWP) or the District's Capital Improvement Plan (CIP).

B. Traffic Findings for Consideration

1. **Trip Generation:** This development is estimated to generate 312 additional vehicle trips per day (9 existing); 33 additional vehicle trips per hour in the PM peak hour (1 existing), based on the Institute of Transportation Engineers Trip Generation Manual, 10th edition.

2. **Condition of Area Roadways**
   Traffic Count is based on Vehicles per hour (VPH)

Roadway	Frontage	Functional Classification	PM Peak Hour Traffic Count	PM Peak Hour Level of Service
Ten Mile Road	0-feet	Minor Arterial	185	Better than "E"
School Avenue	0-feet	Collector	N/A	N/A
Ash Avenue	318-feet	Local	14	N/A

   * Acceptable level of service for a two-lane minor arterial is "E" (575 VPH).

   * Acceptable level of service for a two-lane collector is "D" (425 VPH).

3. **Average Daily Traffic Count (VDT)**
   Average daily traffic counts are based on ACHD's most current traffic counts.

   - The average daily traffic count for Ten Mile Road south of Avalon Street was 3,230 on 05/15/2018.
   - The average daily traffic count for Ash Avenue north of King Road was 187 on 06/19/2019.
   - There are no current traffic counts for School Avenue.

C. Findings for Consideration

1. Sunbeam Street (New Mid-Mile Collector)

a. **Existing Conditions:** There are no existing roadways internal to the site.

b. **Policy:**
   Collector Street Policy: District policy 7206.2.1 states that the developer is responsible for improving all collector frontages adjacent to the site or internal to the development as required below, regardless of whether access is taken to all of the adjacent streets.

   Master Street Map and Typologies Policy: District policy 7206.5 states that if the collector street is designated with a typology on the Master Street Map, that typology shall be considered for the required street improvements. If there is no typology listed in the Master Street Map, then standard street sections shall serve as the default.

Street Section and Right-of-Way Policy: District policy 7206.5.2 states that the standard right-of-way width for collector streets shall typically be 50 to 70-feet, depending on the location and width of the sidewalk and the location and use of the roadway. The right-of-way width may be reduced, with District approval, if the sidewalk is located within an easement; in which case the District will require a minimum right-of-way width that extends 2-feet behind the back-of-curb on each side.

The standard street section shall be 46-feet (back-of-curb to back-of-curb). This width typically accommodates a single travel lane in each direction, a continuous center left-turn lane, and bike lanes.

Residential Collector Policy: District policy 7206.5.2 states that the standard street section for a collector in a residential area shall be 36-feet (back-of-curb to back-of-curb). The District will consider a 33-foot or 29-foot street section with written fire department approval and taking into consideration the needs of the adjacent land use, the projected volumes, the need for bicycle lanes, and on-street parking.

Sidewalk Policy: District policy 7206.5.6 requires a concrete sidewalk at least 5-feet wide to be constructed on both sides of all collector streets. A parkway strip at least 6-feet wide between the back-of-curb and street edge of the sidewalk is required to provide increased safety and protection of pedestrians. Consult the District's planter width policy if trees are to be placed within the parkway strip. Sidewalks constructed next to the back-of-curb shall be a minimum of 7-feet wide.

Detached sidewalks are encouraged and should be parallel to the adjacent roadway. Meandering sidewalks are discouraged.

A permanent right-of-way easement shall be provided if public sidewalks are placed outside of the dedicated right-of-way. The easement shall encompass the entire area between the right-of-way line and 2-feet behind the back edge of the sidewalk. Sidewalks shall either be located wholly within the public right-of-way or wholly within an easement.

Half Street Policy: District Policy 7206.2.2 required improvements shall consist of pavement widening to one-half the required width, including vertical curb, gutter and concrete sidewalk (minimum 7-feet attached, or 5-foot detached), plus 12-feet of additional pavement widening beyond the centerline established for the street to provide an adequate roadway surface, with the pavement crowned at the ultimate centerline. A 3-foot wide gravel shoulder and a borrow ditch sized to accommodate the roadway storm runoff shall be constructed on the unimproved side.

ACHD Master Street Map: ACHD Policy Section 3111.1 requires the Master Street Map (MSM) guide the right-of-way acquisition, collector street requirements, and specific roadway features required through development. A new collector roadway was identified on the MSM with the street typology of Residential Collector. The new collector roadway should align with Sunbeam Street on the west side of Ash Avenue and continue through the property stubbing to the east. The Residential Collector typology as depicted in the Livable Street Design Guide recommends a 2-lane roadway with bike lanes, and on street parking, a 36-foot street section within 50-feet of right-of-way.

c. **Applicant Proposal:** The applicant is not proposing any improvements to Sunbeam Street abutting the site.

d. **Staff Comments/Recommendations:** There is a new mid-mile collector designated on the MSM along the south property line of this site. The new collector will extend between School Avenue and Ash Avenue. Typically, the applicant would be required to construct Sunbeam Street along the site's south property line as ½ of a 36-foot street section with vertical curb, gutter, 7-foot wide attached (5-foot wide detached) concrete sidewalk, 12-feet of additional pavement widening, 3-foot wide shoulder, and borrow ditch abutting the site.

However, as Sunbeam Street is not currently constructed to the east and west, staff recommends that the applicant be required to provide 27-feet of right-of-way along the south property line abutting the site and provide the District with road trust funds for the future improvements to Sunbeam Street abutting the site.

The applicant should be required to provide the District with a road trust deposit in the amount of $85,200. This amount is based on 18-feet of pavement, vertical curb, gutter, and 7-foot wide concrete sidewalk, plus 10% contingency.

2. Ash Avenue

a. **Existing Conditions:** Ash Avenue is improved with 2-travel lanes, 30-feet of pavement, and no curb, gutter or sidewalk abutting the site. There is 45-feet of right-of-way for Ash Avenue (18-feet from centerline).

There are two unimproved residential driveways onto Ash Avenue from the site.

b. **Policy:**

Local Roadway Policy: District Policy 7207.2.1 states that the developer is responsible for improving all local street frontages adjacent to the site regardless of whether or not access is taken to all of the adjacent streets.

Street Section and Right-of-Way Policy: District Policy 7207.5 states that right-of-way widths for all local streets shall generally not be less than 47-feet wide and that the standard street section shall be 33-feet (back-of-curb to back-of-curb).

Standard Urban Local Street—33-foot Street Section and Right-of-way Policy: District Policy 7207.5.2 states that the standard street section shall be 33-feet (back-of-curb to back-of-curb) for developments with any buildable lot that is less than 1 acre in size. This street section shall include curb, gutter, and minimum 5-foot wide concrete sidewalks on both sides and shall typically be constructed within 47-feet of right-of-way.

For the City of Kuna and City of Star: Unless otherwise approved by Kuna or Star, the standard street section shall be 36-feet (back-of-curb to back-of-curb) for developments with any buildable lot that is less than 1 acre in size. This street section shall include curb, gutter, and minimum 5-foot wide concrete sidewalks on both sides and shall typically be constructed within 50-feet of right-of-way.

Sidewalk Policy: District Policy 7207.5.7 states that five-foot wide concrete sidewalk is required on both sides of all local street, except those in rural developments with net densities of one dwelling unit per 1.0 acre or less, or in hillside conditions where there is no direct lot frontage, in which case a sidewalk shall be constructed along one side of the street. Some local jurisdictions may require wider sidewalks.

The sidewalk may be placed next to the back-of-curb. Where feasible, a parkway strip at least 8-feet wide between the back-of-curb and the street edge of the sidewalk is recommended to provide increased safety and protection of pedestrians and to allow for the planting of trees in accordance with the District's Tree Planting Policy. If no trees are to be planted in the parkway strip, the applicant may submit a request to the District, with justification, to reduce the width of the parkway strip.

Detached sidewalks are encouraged and should be parallel to the adjacent roadway. Meandering sidewalks are discouraged.

A permanent right-of-way easement shall be provided if public sidewalks are placed outside of the dedicated right-of-way. The easement shall encompass the entire area between the right-of-way line and 2-feet behind the back edge of the sidewalk. Sidewalks shall either be located wholly within the public right-of-way or wholly within an easement.

Minor Improvements Policy: District Policy 7203.3 states that minor improvements to existing streets adjacent to a proposed development may be required. These improvements are to correct deficiencies or replace deteriorated facilities. Included are sidewalk construction or replacement; curb and gutter construction or replacement; replacement of unused driveways with curb, gutter and sidewalk; installation or reconstruction of pedestrian ramps; pavement repairs; signs; traffic control devices; and other similar items.

c. **Applicant's Proposal:** The applicant is proposing to dedicate additional right-of-way to total 25-feet from centerline of Ash Avenue. The applicant is proposing to improve Ash Avenue with curb, gutter, and 5-foot wide attached sidewalk abutting the site that will close the two existing residential driveways onto Ash Avenue.

d. **Staff Comments/Recommendations:** The applicant's proposal meets District policy and should be approved.

3. Internal Local Streets

a. **Existing Conditions:** There are no existing streets internal to the site.

Recess Way is stubbed at the site's east property line, 670-feet south of Omphale Street and Cassandra Avenue is stubbed at the site's north property line, 518-feet east of Ash Avenue.

b. **Policy:**

Local Roadway Policy: District Policy 7207.2.1 states that the developer is responsible for improving all local street frontages adjacent to the site regardless of whether or not access is taken to all of the adjacent streets.

Street Section and Right-of-Way Policy: District Policy 7207.5 states that right-of-way widths for all local streets shall generally not be less than 47-feet wide and that the standard street section shall be 33-feet (back-of-curb to back-of-curb).

Standard Urban Local Street—33-foot Street Section and Right-of-way Policy: District Policy 7207.5.2 states that the standard street section shall be 33-feet (back-of-curb to back-of-curb) for developments with any buildable lot that is less than 1 acre in size. This street section shall include curb, gutter, and minimum 5-foot wide concrete sidewalks on both sides and shall typically be constructed within 47-feet of right-of-way.

For the City of Kuna and City of Star: Unless otherwise approved by Kuna or Star, the standard street section shall be 36-feet (back-of-curb to back-of-curb) for developments with any

buildable lot that is less than 1 acre in size. This street section shall include curb, gutter, and minimum 5-foot wide concrete sidewalks on both sides and shall typically be constructed within 50-feet of right-of-way.

Continuation of Streets Policy: District Policy 7207.2.4 states that an existing street, or a street in an approved preliminary plat, which ends at a boundary of a proposed development shall be extended in that development. The extension shall include provisions for continuation of storm drainage facilities. Benefits of connectivity include but are not limited to the following:

- Reduces vehicle miles traveled.
- Increases pedestrian and bicycle connectivity.
- Increases access for emergency services.
- Reduces need for additional access points to the arterial street system
- Promotes the efficient delivery of services including trash, mail and deliveries.
- Promotes appropriate intra-neighborhood traffic circulation to schools, parks, neighborhood commercial centers, transit stops, etc.
- Promotes orderly development.

Sidewalk Policy: District Policy 7207.5.7 states that five-foot wide concrete sidewalk is required on both sides of all local street, except those in rural developments with net densities of one dwelling unit per 1.0 acre or less, or in hillside conditions where there is no direct lot frontage, in which case a sidewalk shall be constructed along one side of the street. Some local jurisdictions may require wider sidewalks.

The sidewalk may be placed next to the back-of-curb. Where feasible, a parkway strip at least 8-feet wide between the back-of-curb and the street edge of the sidewalk is recommended to provide increased safety and protection of pedestrians and to allow for the planting of trees in accordance with the District's Tree Planting Policy. If no trees are to be planted in the parkway strip, the applicant may submit a request to the District, with justification, to reduce the width of the parkway strip.

Detached sidewalks are encouraged and should be parallel to the adjacent roadway. Meandering sidewalks are discouraged.

A permanent right-of-way easement shall be provided if public sidewalks are placed outside of the dedicated right-of-way. The easement shall encompass the entire area between the right-of-way line and 2-feet behind the back edge of the sidewalk. Sidewalks shall either be located wholly within the public right-of-way or wholly within an easement.

Cul-de-sac Streets Policy: District policy 7207.5.8 requires cul-de-sacs to be constructed to provide a minimum turning radius of 45-feet; in rural areas or for temporary cul-de-sacs the emergency service providers may require a greater radius. Landscape and parking islands may be constructed in turnarounds if a minimum 29-foot street section is constructed around the island. The pavement width shall be sufficient to allow the turning around of a standard AASHTO SU design vehicle without backing. The developer shall provide written approval from the appropriate fire department for this design element.

The District will consider alternatives to the standard cul-de-sac turnaround on a case-by-case basis. This will be based on turning area, drainage, maintenance considerations and the written approval of the agency providing emergency fire service for the area where the development is located.

Stub Street Policy: District policy 7206.2.4 (collector)/ 7207.2.4 (local) states that stub streets will be required to provide circulation or to provide access to adjoining properties. Stub streets will conform with the requirements described in Section 7206.2.5.4 (collector)/ 7207.2.5.4 (local), except a temporary cul-de-sac will not be required if the stub street has a length no

greater than 150-feet. A sign shall be installed at the terminus of the stub street stating that, "THIS ROAD WILL BE EXTENDED IN THE FUTURE."

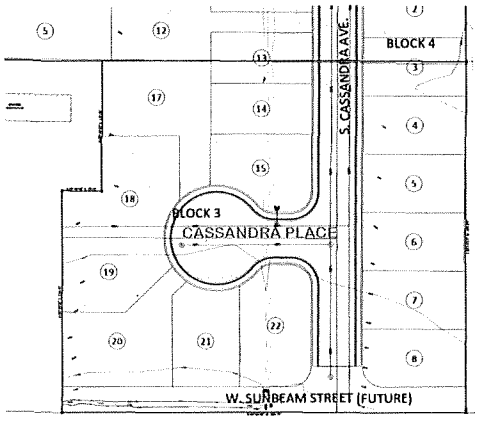
In addition, stub streets must meet the following conditions:

- A stub street shall be designed to slope towards the nearest street intersection within the proposed development and drain surface water towards that intersection; unless an alternative storm drain system is approved by the District.
- The District may require appropriate covenants guaranteeing that the stub street will remain free of obstructions.

c. **Applicant's Proposal:** The applicant is proposing to extend Recess Way and Cassandra Avenue into the site and construct the internal local streets as 36-foot street sections with curb, gutter, and 5-foot wide attached sidewalk within 50-feet of right-of-way.

The applicant is proposing to terminate Cassandra Place with a cul-de-sac turnaround located approximately 120-feet west of Cassandra Avenue (measured centerline to centerline).

The applicant is proposing to stub Cassandra Avenue approximately 125-feet south of Cassandra Place. Cassandra Avenue will intersect, Sunbeam Street, which is the future collector street.



d. **Staff Comments/Recommendations:** The applicant's proposal meets District policy and should be approved, as proposed.

The applicant should be required to construct the cul-de-sac turnaround with a minimum 45-foot turning radius.

The proposed stub street, Cassandra Avenue, is less than 150-feet in length, therefore, a temporary turnaround is not required.

The applicant should be required to install a sign at the terminus of the stub street, Cassandra Avenue, stating that, "THIS ROAD WILL BE EXTENDED IN THE FUTURE."

4. Roadway Offsets

a. **Existing Conditions:** There are no existing streets internal to the site.

b. **Policy:**

Local Offset Policy: District policy 7206.4.5, requires local roadways to align or offset a minimum of 330-feet from a collector roadway (measured centerline to centerline).

District policy 7207.4.2, requires local roadways to align or provide a minimum offset of 125-feet from any other street (measured centerline to centerline).

c. **Applicant's Proposal:** The applicant is proposing to construct a new local street, Recess Way, from the site to intersect Ash Avenue located 314-feet south of Penelope Street and 535-feet north of Sunbeam Street, a future collector street (measured centerline to centerline).

Cassandra Avenue is proposed to intersect Sunbeam Street, which is a future collector street, located 535-feet east of Ash Avenue (measured centerline to centerline).

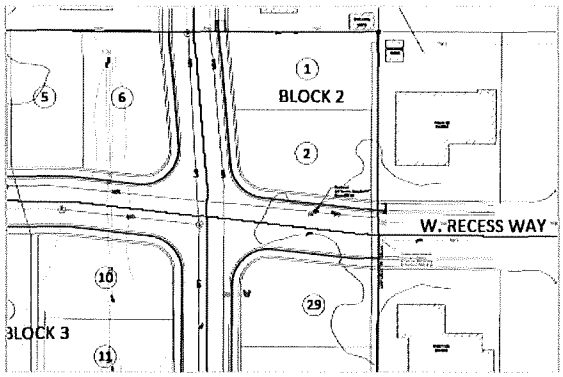
The applicant is proposing to off-set the local internal streets a minimum of 125-feet (measured centerline to centerline).

d. **Staff Comments/Recommendations:** The applicant's proposal to construct a new local street, Recess Way, from the site to intersect Ash Avenue located 314-feet south of Penelope Street and 535-feet north of Sunbeam Street, a future collector street meets District policy and should be approved, as proposed.

The applicant's proposal to provide a new local street, Cassandra Avenue, to intersect the future collector street, Sunbeam Street, meets District Offset policy and should be approved, as proposed.

The construct the internal local streets with a minimum 125-foot offset meets District policy and should be approved, as proposed.

The applicant should coordinate with ACHD staff on the tangent lengths at the Recess Way/ Cassandra Place intersection to ensure that adequate site lines are provided.



5. Tree Planters

Tree Planter Policy: Tree Planter Policy: The District's Tree Planter Policy prohibits all trees in planters less than 8-feet in width without the installation of root barriers. Class II trees may be allowed in planters with a minimum width of 8-feet, and Class I and Class III trees may be allowed in planters with a minimum width of 10-feet.

6. Landscaping

Landscaping Policy: A license agreement is required for all landscaping proposed within ACHD right-of-way or easement areas. Trees shall be located no closer than 10-feet from all public storm drain facilities. Landscaping should be designed to eliminate site obstructions in the vision triangle at intersections. District Policy 5104.3.1 requires a 40-foot vision triangle and a 3-foot height restriction on all landscaping located at an uncontrolled intersection and a 50-foot offset from stop signs. Landscape plans are required with the submittal of civil plans and must meet all District requirements prior to signature of the final plat and/or approval of the civil plans.

7. Other Access

Ash Avenue and Sunbeam Street are classified as collector roadways. Other than the access specifically approved with this application, direct lot access is prohibited to these roadways and should be noted on the final plat.

D. Site Specific Conditions of Approval

1. Dedicate 27-feet of right-of-way along the site's south property line for Sunbeam Street, the future mid-mile collector street.
2. Provide the District with a road trust deposit in the amount of $85,200.
3. Dedicate additional right-of-way to total 25-feet from centerline on Ash Avenue abutting the site.
4. Improve Ash Avenue with curb, gutter, and 5-foot wide attached sidewalk abutting the site and that will close the two existing residential driveways onto Ash Avenue.
5. Extend Recess Way and Cassandra Avenue into the site and construct the internal streets as 36-foot street sections with curb, gutter, and attached 5-foot wide sidewalk within 50-feet of right-of-way.
6. Terminate Cassandra Place with a cul-de-sac turnaround with a minimum 45-foot turning radius,
7. Install signage at the terminus of the stub street, Cassandra Avenue, stating that, "THIS ROAD WILL BE EXTENDED IN THE FUTURE."
8. Construct a new local street, Recess Way, to intersect Ash Avenue located 314-feet south of Penelope Street and 535-feet north of Sunbeam Street.
9. Cassandra Avenue to intersect Sunbeam Street, a future collector street, located 535-feet east of Ash Avenue is approved.
10. Construct the internal local streets with a minimum 125-foot offset.
11. Direct lot access to Ash Avenue and Sunbeam Street is prohibited and should be noted on the final plat.
12. Submit civil plans to ACHD Development Services for review and approval. The impact fee assessment will not be released until the civil plans are approved by ACHD.
13. Payment of impact fees is due prior to issuance of a building permit.
14. Comply with all Standard Conditions of Approval.

E. Standard Conditions of Approval

1. All proposed irrigation facilities shall be located outside of the ACHD right-of-way (including all easements). Any existing irrigation facilities shall be relocated outside of the ACHD right-of-way (including all easements).
2. Private Utilities including sewer or water systems are prohibited from being located within the ACHD right-of-way.
3. In accordance with District policy, 7203.3, the applicant may be required to update any existing non-compliant pedestrian improvements abutting the site to meet current Americans with Disabilities Act (ADA) requirements. The applicant's engineer should provide documentation of ADA compliance to District Development Review staff for review.
4. Replace any existing damaged curb, gutter and sidewalk and any that may be damaged during the construction of the proposed development. Contact Construction Services at 387-6280 (with file number) for details.
5. A license agreement and compliance with the District's Tree Planter policy is required for all landscaping proposed within ACHD right-of-way or easement areas.
6. All utility relocation costs associated with improving street frontages abutting the site shall be borne by the developer.

7. It is the responsibility of the applicant to verify all existing utilities within the right-of-way. The applicant at no cost to ACHD shall repair existing utilities damaged by the applicant. The applicant shall be required to call DIGLINE (1-811-342-1585) at least two full business days prior to breaking ground within ACHD right-of-way. The applicant shall contact ACHD Traffic Operations 387-6190 in the event any ACHD conduits (spare or filled) are compromised during any phase of construction.
8. Utility street cuts in pavement less than five years old are not allowed unless approved in writing by the District. Contact the District's Utility Coordinator at 387-6258 (with file numbers) for details.
9. All design and construction shall be in accordance with the ACHD Policy Manual, ISPWC Standards and approved supplements, Construction Services procedures and all applicable ACHD Standards unless specifically waived herein. An engineer registered in the State of Idaho shall prepare and certify all improvement plans.
10. Construction, use and property development shall be in conformance with all applicable requirements of ACHD prior to District approval for occupancy.
11. No change in the terms and conditions of this approval shall be valid unless they are in writing and signed by the applicant or the applicant's authorized representative and an authorized representative of ACHD. The burden shall be upon the applicant to obtain written confirmation of any change from ACHD.
12. If the site plan or use should change in the future, ACHD Planning Review will review the site plan and may require additional improvements to the transportation system at that time. Any change in the planned use of the property which is the subject of this application, shall require the applicant to comply with ACHD Policy and Standard Conditions of Approval in place at that time unless a waiver/variance of the requirements or other legal relief is granted by the ACHD Commission.

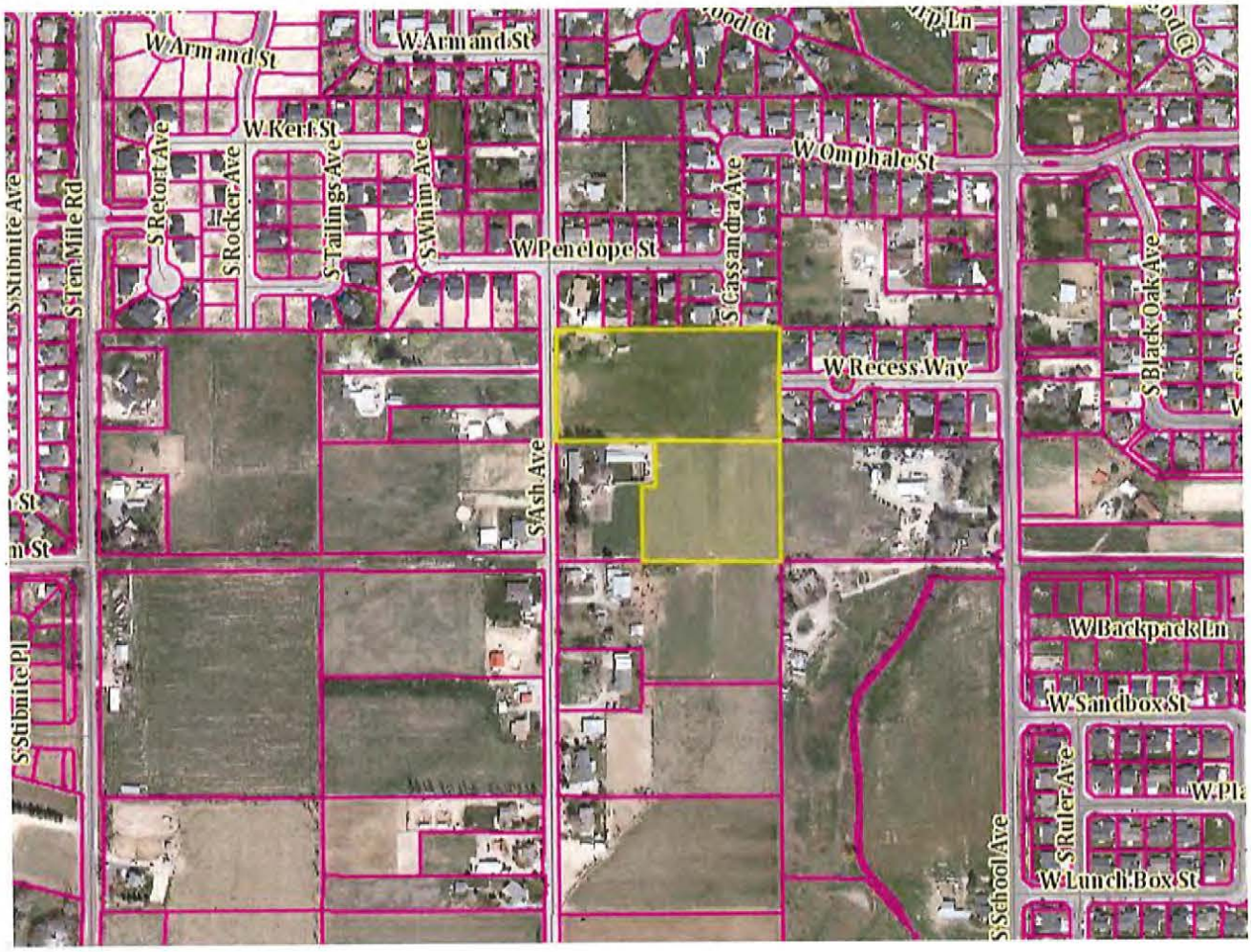
F. Conclusions of Law

1. The proposed site plan is approved, if all of the Site Specific and Standard Conditions of Approval are satisfied.
2. ACHD requirements are intended to assure that the proposed use/development will not place an undue burden on the existing vehicular transportation system within the vicinity impacted by the proposed development.

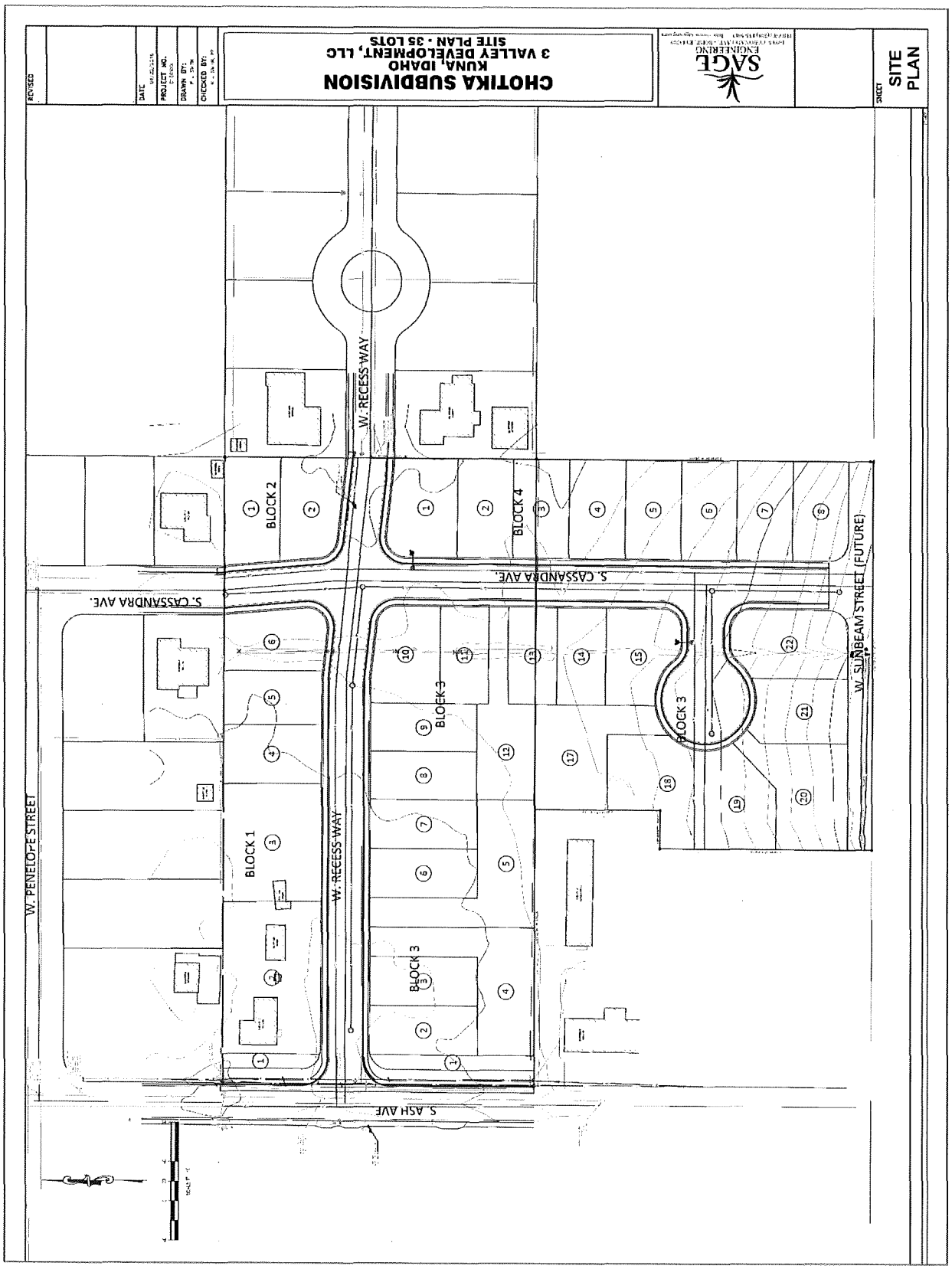
G. Attachments

1. Vicinity Map
2. Site Plan
3. Utility Coordinating Council
4. Development Process Checklist
5. Appeal Guidelines

VICINITY MAP



SITE PLAN


CHOTIKA SUBDIVISION
KUNA, IDAHO
3 VALLEY DEVELOPMENT, LLC
SITE PLAN - 35 LOTS
SAGE ENGINEERING
SITE PLAN
W. RECESS WAY
S. CASSANDRA AVE.
W. SUNBEAM STREET (FUTURE)
W. PENELOPE STREET
S. ASH AVE
BLOCK 1
BLOCK 2
BLOCK 3
BLOCK 4

Ada County Utility Coordinating Council

Developer/Local Improvement District
Right of Way Improvements Guideline Request

Purpose: To develop the necessary avenue for proper notification to utilities of local highway and road improvements, to help the utilities in budgeting and to clarify the already existing process.

1) **Notification:** Within five (5) working days upon notification of required right of way improvements by Highway entities, developers shall provide written notification to the affected utility owners and the Ada County Utility Coordinating Council (UCC). Notification shall include but not be limited to, project limits, scope of roadway improvements/project, anticipated construction dates, and any portions critical to the right of way improvements and coordination of utilities.

2) **Plan Review:** The developer shall provide the highway entities and all utility owners with preliminary project plans and schedule a plan review conference. Depending on the scale of utility improvements, a plan review conference may not be necessary, as determined by the utility owners. Conference notification shall also be sent to the UCC. During the review meeting the developer shall notify utilities of the status of right of way/easement acquisition necessary for their project. At the plan review conference each company shall have the right to appeal, adjust and/or negotiate with the developer on its own behalf. Each utility shall provide the developer with a letter of review indicating the costs and time required for relocation of its facilities. Said letter of review is to be provided within thirty calendar days after the date of the plan review conference.

3) **Revisions:** The developer is responsible to provide utilities with any revisions to preliminary plans. Utilities may request an updated plan review meeting if revisions are made in the preliminary plans which affect the utility relocation requirements. Utilities shall have thirty days after receiving the revisions to review and comment thereon.

4) **Final Notification:** The developer will provide highway entities, utility owners and the UCC with final notification of its intent to proceed with right of way improvements and include the anticipated date work will commence. This notification shall indicate that the work to be performed shall be pursuant to final approved plans by the highway entity. The developer shall schedule a preconstruction meeting prior to right of way improvements. Utility relocation activity shall be completed within the times established during the preconstruction meeting, unless otherwise agreed upon.

Notification to the Ada County UCC can be sent to: 50 S. Cole Rd. Boise 83707, or Visit iducc.com for e-mail notification information.

Development Process Checklist

Items Completed to Date:

☒Submit a development application to a City or to Ada County

☒The City or the County will transmit the development application to ACHD

☒The ACHD **Planning Review Section** will receive the development application to review

☒The **Planning Review Section** will do one of the following:

☐Send a **"No Review"** letter to the applicant stating that there are no site specific conditions of approval at this time.

☒Write a **Staff Level** report analyzing the impacts of the development on the transportation system and evaluating the proposal for its conformance to District Policy.

☒Write a **Commission Level** report analyzing the impacts of the development on the transportation system and evaluating the proposal for its conformance to District Policy.

Items to be completed by Applicant:

☐For **ALL** development applications, including those receiving a **"No Review"** letter:

- The applicant should submit one set of engineered plans directly to ACHD for review by the **Development Review Section** for plan review and assessment of impact fees. (Note: if there are no site improvements required by ACHD, then architectural plans may be submitted for purposes of impact fee assessment.)
- The applicant is required to get a permit from Construction Services (ACHD) for ANY work in the right-of-way, including, but not limited to, driveway approaches, street improvements and utility cuts.

☐Pay Impact Fees prior to issuance of building permit. Impact fees cannot be paid prior to plan review approval.

DID YOU REMEMBER:
Construction (Non-Subdivisions)

☐ **Driveway or Property Approach(s)**
- Submit a "Driveway Approach Request" form to ACHD Construction (for approval by Development Services & Traffic Services). There is a one week turnaround for this approval.

☐ **Working in the ACHD Right-of-Way**
- Four business days prior to starting work have a bonded contractor submit a "Temporary Highway Use Permit Application" to ACHD Construction – Permits along with:
  a) Traffic Control Plan
  b) An Erosion & Sediment Control Narrative & Plat, done by a Certified Plan Designer, if trench is >50' or you are placing >600 sf of concrete or asphalt.

Construction (Subdivisions)

☐ **Sediment & Erosion Submittal**
- At least one week prior to setting up a Pre-Construction Meeting an Erosion & Sediment Control Narrative & Plan, done by a Certified Plan Designer, must be turned into ACHD Construction to be reviewed and approved by the ACHD Stormwater Section.

☐ **Idaho Power Company**
- Vic Steelman at Idaho Power must have his IPCO approved set of subdivision utility plans prior to Pre-Con being scheduled.

☐ **Final Approval from Development Services is required** prior to scheduling a Pre-Con.

Request for Appeal of Staff Decision

1. **Appeal of Staff Decision:** The Commission shall hear and decide appeals by an applicant of the final decision made by the Development Services Manager when it is alleged that the Development Services Manager did not properly apply this section 7101.6, did not consider all of the relevant facts presented, made an error of fact or law, abused discretion or acted arbitrarily and capriciously in the interpretation or enforcement of the ACHD Policy Manual.

    a. Filing Fee: The Commission may, from time to time, set reasonable fees to be charged the applicant for the processing of appeals, to cover administrative costs.

    b. Initiation: An appeal is initiated by the filing of a written notice of appeal with the Secretary and Clerk of the District, which must be filed within ten (10) working days from the date of the decision that is the subject of the appeal. The notice of appeal shall refer to the decision being appealed, identify the appellant by name, address and telephone number and state the grounds for the appeal. The grounds shall include a written summary of the provisions of the policy relevant to the appeal and/or the facts and law relied upon and shall include a written argument in support of the appeal. The Commission shall not consider a notice of appeal that does not comply with the provisions of this subsection.

    c. Time to Reply: The Development Services Manager shall have ten (10) working days from the date of the filing of the notice of appeal to reply to the notice of the appeal, and may during such time meet with the appellant to discuss the matter, and may also consider and/or modify the decision that is being appealed. A copy of the reply and any modifications to the decision being appealed will be provided to the appellant prior to the Commission hearing on the appeal.

    d. Notice of Hearing: Unless otherwise agreed to by the appellant, the hearing of the appeal will be noticed and scheduled on the Commission agenda at a regular meeting to be held within thirty (30) days following the delivery to the appellant of the Development Services Manager's reply to the notice of appeal. A copy of the decision being appealed, the notice of appeal and the reply shall be delivered to the Commission at least one (1) week prior to the hearing.

    e. Action by Commission: Following the hearing, the Commission shall either affirm or reverse, in whole or part, or otherwise modify, amend or supplement the decision being appealed, as such action is adequately supported by the law and evidence presented at the hearing.

CLINTON C. PLINE
CHAIRMAN OF THE BOARD

RON PLATT
VICE CHAIRMAN OF THE BOARD

ROBERT D. CARTER
PROJECT MANAGER

THOMAS RITTHALER
ASSISTANT PROJECT MANAGER

APRYL GARDNER
SECRETARY-TREASURER

MARY SUE CHASE
ASSISTANT SECRETARY-TREASURER

BOISE PROJECT BOARD OF CONTROL

(FORMERLY BOISE U.S. RECLAMATION PROJECT)

2465 OVERLAND ROAD
BOISE, IDAHO 83705-3155

OPERATING AGENCY FOR 167,000 ACRES FOR THE FOLLOWING IRRIGATION DISTRICTS

NAMPA-MERIDIAN DISTRICT
BOISE-KUNA DISTRICT
WILDER DISTRICT
NEW YORK DISTRICT
BIG BEND DISTRICT

TEL: (208) 344-1141
FAX: (208) 344-1437

18 June 2019

City of Kuna
751 W. 4th St.
Kuna, Idaho 83634

RE: Roger Smith, Chotika Sub — **19-03-AN, 19-02-S, 19-09-DR**
642 S Ash St., Kuna 83634
Boise-Kuna Irrigation District — BK-1300 Q1, 1300 Q
Mora Canal 530+00B
Sec. 26, T2N, R1W, BM.

Jace Hellman, Planner:

There are no Boise Project facilities located on the above-mentioned property, however it does in fact possess a valid water right.

Local irrigation/drainage ditches that cross this property, in order to serve neighboring properties, must remain unobstructed and protected by an appropriate easement.

.

If you have any further questions or comments regarding this matter, please do not hesitate to contact me at (208) 344-1141.

Sincerely,

Thomas Ritthaler
Assistant Project Manager, BPBC

tbr/tr
cc: Ray Moore — Watermaster, Div; 3 BPBC
Lauren Boehlke — Secretary – Treasurer, BKID
File

RECEIVED
JUN 21 2019
CITY OF KUNA

Exhibit
C3

CENTRAL DISTRICT HEALTH DEPARTMENT

CENTRAL DISTRICT HEALTH DEPARTMENT

Environmental Health Division

RECEIVED
JUN 24 2019
CITY OF KUNA

Return to:
- ☐ ACZ
- ☐ Boise
- ☐ Eagle
- ☐ Garden City
- ☒ Kuna
- ☐ Meridian
- ☐ Star

Rezone # 19-03-AN/19-02-S/19-09-DR

Conditional Use # _____

Preliminary / Final / Short Plat _____

Chotika

☐ 1. We have No Objections to this Proposal.

☐ 2. We recommend Denial of this Proposal.

☐ 3. Specific knowledge as to the exact type of use must be provided before we can comment on this Proposal.

☐ 4. We will require more data concerning soil conditions on this Proposal before we can comment.

☐ 5. Before we can comment concerning individual sewage disposal, we will require more data concerning the depth of:
- ☐ high seasonal ground water
- ☐ bedrock from original grade
- ☐ waste flow characteristics
- ☐ other _____

☐ 6. This office may require a study to assess the impact of nutrients and pathogens to receiving ground waters and surface waters.

☐ 7. This project shall be reviewed by the Idaho Department of Water Resources concerning well construction and water availability.

☒ 8. After written approval from appropriate entities are submitted, we can approve this proposal for:
- ☒ central sewage
- ☐ interim sewage
- ☐ individual sewage
- ☐ community sewage system
- ☒ central water
- ☐ individual water
- ☐ community water well

☒ 9. The following plan(s) must be submitted to and approved by the Idaho Department of Environmental Quality:
- ☒ central sewage
- ☐ sewage dry lines
- ☐ community sewage system
- ☒ central water
- ☐ community water

☐ 10. This Department would recommend deferral until high seasonal ground water can be determined if other considerations indicate approval.

☐ 11. If restroom facilities are to be installed, then a sewage system MUST be installed to meet Idaho State Sewage Regulations.

☐ 12. We will require plans be submitted for a plan review for any:
- ☐ food establishment
- ☐ beverage establishment
- ☐ swimming pools or spas
- ☐ grocery store
- ☐ child care center

☒ 13. Infiltration beds for storm water disposal are considered shallow injection wells. An application and fee must be submitted to CDHD.

☐ 14. _____ Reviewed By: Rod Boody

_____ Date: 6/19/19

Exhibit C2

Review Sheet

15726-001EH1111

CITY OF KUNA
P.O. BOX 13
KUNA, ID 83634
www.kunacity.id.gov

Paul A. Stevens, P.E.
Kuna City Engineer

MEMORANDUM

Date: 12 July 2019

From: Paul A. Stevens, P.E.

To: Wendy Howell, Planning and Zoning Director

RE: Chotika Subdivision Preliminary Plat – 19-02-S, 19-03-AN Annexation, & Design Review 19-09-DR

The Chotika Preliminary Plat, annexation, and design review request dated 23 May 2019 has been reviewed. While the application outlines the applicant's general development intent, specific development plans are not provided except those implied as allowed or permitted in a "R-6" zone. These comments apply to the preliminary plat and do not address the landscaping design review request. The landscaping design review request rests with the Planning and Zoning Department. Review of civil design drawings is accomplished separately, when received.

Recommendation: proceed with the Preliminary Plat and annexation consistent with the enclosed comments. These comments may be expanded or refined based on future land-use actions. The following comments apply:

1. **General**
   a. Chotika Subdivision is zoned R6, contains 5.851 Acres, 3 common lots and 34 residential lots. A commensurate impact on the City of Kuna's pressurized irrigation, sewer, and water utilities will result.
   b. Access to Chotika Subdivision is from South Ash Avenue and an extension of West Recess Way.
   c. A plan approval letter will be required if this project affects any local irrigation districts.
   d. Verify that existing and proposed elevations match at property boundaries such that a slope burden is not imposed on adjacent properties.
   e. State the vertical datum used for elevations on all drawings.
   f. Provide engineering certification on all final engineering drawings.

2. **Inspection Fees**
   a. An inspection fee will apply to City inspection of water, sewer and irrigation facilities construction associated with this development.
   b. The developer shall retain a qualified responsible, Idaho registered professional engineer to provide sufficient inspection to certify to DEQ the project was completed in accordance with approved plans and specifications and to provide accurate as-built drawings to the City.
   c. The developer's engineer and the City's inspector are permitted to coordinate inspections. The current inspection fee is $1.00 per lineal foot of sewer, water and pressure irrigation pipe. Payment is due and payable prior to City's approval of final construction plans.

Exhibit C8

3. **Right-of-Way**
   a. Chotika Subdivision accesses from South Ash Avenue.
   a. Sufficient right-of-way for existing and future classified streets shall be provided pursuant to City & ACHD standards.
   b. Approaches onto classified streets must comply with ACHD approach policies.
   c. It is recommended that sidewalk, curb and gutter, street widening and any related storm drainage facilities, consistent with city code and policies, are provided in connection with property development.
   d. All street construction must meet or exceed ACHD and City of Kuna development standards.
   e. All city mainlines crossing proposed lots, running along the back of lots and sides of lots shall have easements that allow the City of Kuna to access and maintain the utilities.
   f. Access to Lot 3, Block 3 appears long. Access to Lots 6 & 7, Block 3 appears narrow & long with limited turn around potential. Access to Lot 16, Block 3 is long.

4. **Sanitary Sewer & Potable Water**
   a. The applicant's property is presently undeveloped, is not connected to City services and is subject to connection fees for the ultimate connected sewer load and water demand as provided in the City's Standard Tables. City Code (6-4-2) requires connection to the City sewer system for all sanitary sewer needs. City Code (6-4-2X) requires connection to City water services.
   b. City code 5-16-3: B.2 states that applicant shall extend public sewer and water to each parcel when water and sewer are available within three hundred (300) feet of the parcels.
   c. All sewer and water infrastructure must meet or exceed City of Kuna requirements.
   d. It is recommended that this application be conditioned to conform to the sewer and water master plans as applicable.

5. **Pressurized Irrigation**
   a. The applicant's property is not connected to the City's pressurized irrigation system. Relying on drinking water for irrigation purposes is contrary to City Code (6-4-2).
   b. All pressurized irrigation infrastructure shall meet or exceed City of Kuna standards.
   c. Condition this project to require connection and annexation to the City's Pressurized Irrigation system.
   d. Annexation into the municipal irrigation district and pooling of water rights is a requirement of the final plat approval.
   e. Existing irrigation ditches must be relocated as needed and as approved by the irrigation ditch company/users.
   f. It is recommended that this application be conditioned to conform to the Pressure Irrigation Master Plan where applicable.

6. **Grading and Storm Drainage**

   The following provisions apply to Chotika Subdivision:
   a. Provide a grading and drainage plan which supports and maintains all upstream drainage rights and all downstream irrigation delivery rights as they presently exist for this property.
   b. Verify that existing and proposed elevations match at property boundaries such that a slope burden is not imposed on adjacent properties. Slopes shall not be steeper than 3:1 on lots adjacent to a street or common lot and no steeper than 4:1 for lots with common rear lot lines.
   c. Runoff from public right-of-way is regulated by ACHD. On site storm water retention shall be reviewed in conjunction with the Civil Engineering construction improvements review.

d. Any increase in quantity or rate of runoff or decrease in quality of runoff compared to historical conditions must be detained, treated and released at rates no greater than historical amounts. In the alternative, offsite disposal of storm water in excess of historical rates or conditions of disposal at locations different than provided historically, approval of the operating entity is required. The City of Kuna relies on the ACHD Stormwater Policy Manual to establish the requirements for design of any private disposal system.
e. If impervious area is increased, provide a storm water disposal plan acceptable to the City Engineer which accounts for the increased storm water drainage. Provide detail drawings of drainage facilities for review.

7. As-Built Drawings

a. As-built drawings are required at the conclusion of any public facility construction project and are the responsibility of the developer's engineer. The city may help track changes but will not be responsible for the finished product. As-built drawings will be required before occupancy or final plat approval is granted.

8. Property Description

a. The applicant provided a preliminary plat and supporting documents as part of the application.

CITY OF KUNA
P.O. BOX 13
KUNA, ID 83634
www.kunacity.id.gov

Paul A. Stevens, P.E.
Kuna City Engineer

MEMORANDUM

Date: 12 July 2019

From: Paul A. Stevens, P.E.

To: Wendy Howell, Planning and Zoning Director

RE: Chotika Subdivision Preliminary Plat – 19-02-S, 19-03-AN Annexation, & Design Review 19-09-DR

The Chotika Preliminary Plat, annexation, and design review request dated 23 May 2019 has been reviewed. While the application outlines the applicant's general development intent, specific development plans are not provided except those implied as allowed or permitted in a "R-6" zone. These comments apply to the preliminary plat and do not address the landscaping design review request. The landscaping design review request rests with the Planning and Zoning Department. Review of civil design drawings is accomplished separately, when received.

Recommendation: proceed with the Preliminary Plat and annexation consistent with the enclosed comments. These comments may be expanded or refined based on future land-use actions. The following comments apply:

1. **General**
   a. Chotika Subdivision is zoned R6, contains 5.851 Acres, 3 common lots and 34 residential lots. A commensurate impact on the City of Kuna's pressurized irrigation, sewer, and water utilities will result.
   b. Access to Chotika Subdivision is from South Ash Avenue and an extension of West Recess Way.
   c. A plan approval letter will be required if this project affects any local irrigation districts.
   d. Verify that existing and proposed elevations match at property boundaries such that a slope burden is not imposed on adjacent properties.
   e. State the vertical datum used for elevations on all drawings.
   f. Provide engineering certification on all final engineering drawings.

2. **Inspection Fees**
   a. An inspection fee will apply to City inspection of water, sewer and irrigation facilities construction associated with this development.
   b. The developer shall retain a qualified responsible, Idaho registered professional engineer to provide sufficient inspection to certify to DEQ the project was completed in accordance with approved plans and specifications and to provide accurate as-built drawings to the City.
   c. The developer's engineer and the City's inspector are permitted to coordinate inspections. The current inspection fee is $1.00 per lineal foot of sewer, water and pressure irrigation pipe. Payment is due and payable prior to City's approval of final construction plans.

Exhibit C8

d. Any increase in quantity or rate of runoff or decrease in quality of runoff compared to historical conditions must be detained, treated and released at rates no greater than historical amounts. In the alternative, offsite disposal of storm water in excess of historical rates or conditions of disposal at locations different than provided historically, approval of the operating entity is required. The City of Kuna relies on the ACHD Stormwater Policy Manual to establish the requirements for design of any private disposal system.
e. If impervious area is increased, provide a storm water disposal plan acceptable to the City Engineer which accounts for the increased storm water drainage. Provide detail drawings of drainage facilities for review.

7. As-Built Drawings

a. As-built drawings are required at the conclusion of any public facility construction project and are the responsibility of the developer's engineer. The city may help track changes but will not be responsible for the finished product. As-built drawings will be required before occupancy or final plat approval is granted.

8. Property Description

a. The applicant provided a preliminary plat and supporting documents as part of the application.

STATE OF IDAHO
DEPARTMENT OF ENVIRONMENTAL QUALITY
BOISE REGIONAL OFFICE
1445 North Orchard Street•Boise, ID 83706-2239•(208) 373-0550

DEQ Response to Request for Environmental Comment

Date:	*June 28, 2019*
Agency Requesting Comments:	*City of Kuna*
Date Request Received:	*June 18, 2019*
Applicant/Description:	*Chotika Subdivision, 19-03-AN, 19-02-S, & 19-09-DR* *Robin Hood Subdivision 19-03-S & 19-14-DR*

Thank you for the opportunity to respond to your request for comment. While DEQ does not review projects on a project-specific basis, we attempt to provide the best review of the information provided. DEQ encourages agencies to review and utilize the Idaho Environmental Guide to assist in addressing project-specific conditions that may apply. This guide can be found at http://www.deq.idaho.gov/ieg/.

The following information does not cover every aspect of this project; however, we have the following general comments to use as appropriate:

1. ***Air Quality***
   - *Please review IDAPA 58.01.01 for all rules on Air Quality, especially those regarding fugitive dust (58.01.01.651), trade waste burning (58.01.01.600-617), and odor control plans (58.01.01.776).*

     The property owner, developer, and their contractor(s) must ensure that reasonable controls to prevent fugitive dust from becoming airborne are utilized during all phases of construction activities per IDAPA 58.01.01.651.

     Per IDAPA 58.01.01.600-617, the open burning of any construction waste is prohibited. The property owner, developer, and their contractor(s) are responsible for ensuring no prohibited open burning occurs during construction.

     For questions, contact David Luft, Air Quality Manager, at 373-0550.

2. ***Wastewater and Recycled Water***
   - *DEQ recommends verifying that there is adequate sewer to serve this project prior to approval. Please contact the sewer provider for a capacity statement, declining balance report, and willingness to serve this project.*
   - *IDAPA 58.01.16 and IDAPA 58.01.17 are the sections of Idaho rules regarding wastewater and recycled water. Please review these rules to determine whether this or future projects will require DEQ approval. IDAPA 58.01.03 is the section of Idaho rules regarding subsurface disposal of wastewater. Please review this rule to determine whether this or future projects will require permitting by the district health department.*

     All projects for construction or modification of wastewater systems require preconstruction approval. Recycled water projects and subsurface disposal projects

Exhibit C4

Revised 6/28/19

require separate permits as well.

- *DEQ recommends that projects be served by existing approved wastewater collection systems or a centralized community wastewater system whenever possible. Please contact DEQ to discuss potential for development of a community treatment system along with best management practices for communities to protect ground water.*
- *DEQ recommends that cities and counties develop and use a comprehensive land use management plan, which includes the impacts of present and future wastewater management in this area. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation.*

For questions, contact Todd Crutcher, Engineering Manager, at 373-0550.

3. Drinking Water

- *DEQ recommends verifying that there is adequate water to serve this project prior to approval. Please contact the water provider for a capacity statement, declining balance report, and willingness to serve this project.*
- *IDAPA 58.01.08 is the section of Idaho rules regarding public drinking water systems. Please review these rules to determine whether this or future projects will require DEQ approval.*

  All projects for construction or modification of public drinking water systems require preconstruction approval.
- *DEQ recommends verifying if the current and/or proposed drinking water system is a regulated public drinking water system (refer to the DEQ website at http://www.deq.idaho.gov/water-quality/drinking-water.aspx). For non-regulated systems, DEQ recommends annual testing for total coliform bacteria, nitrate, and nitrite.*
- *If any private wells will be included in this project, we recommend that they be tested for total coliform bacteria, nitrate, and nitrite prior to use and retested annually thereafter.*
- *DEQ recommends using an existing drinking water system whenever possible or construction of a new community drinking water system. Please contact DEQ to discuss this project and to explore options to both best serve the future residents of this development and provide for protection of ground water resources.*
- *DEQ recommends cities and counties develop and use a comprehensive land use management plan which addresses the present and future needs of this area for adequate, safe, and sustainable drinking water. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation.*

  For questions, contact Todd Crutcher, Engineering Manager at 373-0550.

4. Surface Water

- *A DEQ short-term activity exemption (STAE) from this office is required if the project will involve de-watering of ground water during excavation and discharge back into surface water, including a description of the water treatment from this process to prevent excessive sediment and turbidity from entering surface water.*
- *Please contact DEQ to determine whether this project will require a National Pollution Discharge Elimination System (NPDES) Permit. If this project disturbs more than one*

acre, a stormwater permit from EPA may be required.

- *If this project is near a source of surface water, DEQ requests that projects incorporate construction best management practices (BMPs) to assist in the protection of Idaho's water resources. Additionally, please contact DEQ to identify BMP alternatives and to determine whether this project is in an area with Total Maximum Daily Load stormwater permit conditions.*

- *The Idaho Stream Channel Protection Act requires a permit for most stream channel alterations. Please contact the Idaho Department of Water Resources (IDWR), Western Regional Office, at 2735 Airport Way, Boise, or call 208-334-2190 for more information. Information is also available on the IDWR website at:*
  http://www.idwr.idaho.gov/WaterManagement/StreamsDams/Streams/AlterationPermit/AlterationPermit.htm

- *The Federal Clean Water Act requires a permit for filling or dredging in waters of the United States. Please contact the US Army Corps of Engineers, Boise Field Office, at 10095 Emerald Street, Boise, or call 208-345-2155 for more information regarding permits.*

  For questions, contact Lance Holloway, Surface Water Manager, at 373-0550.

5. ***Hazardous Waste And Ground Water Contamination***

- ***Hazardous Waste.*** *The types and number of requirements that must be complied with under the federal Resource Conservations and Recovery Act (RCRA) and the Idaho Rules and Standards for Hazardous Waste (IDAPA 58.01.05) are based on the quantity and type of waste generated. Every business in Idaho is required to track the volume of waste generated, determine whether each type of waste is hazardous, and ensure that all wastes are properly disposed of according to federal, state, and local requirements.*

- *No trash or other solid waste shall be buried, burned, or otherwise disposed of at the project site. These disposal methods are regulated by various state regulations including Idaho's Solid Waste Management Regulations and Standards, Rules and Regulations for Hazardous Waste, and Rules and Regulations for the Prevention of Air Pollution.*

- ***Water Quality Standards.*** *Site activities must comply with the Idaho Water Quality Standards (IDAPA 58.01.02) regarding hazardous and deleterious-materials storage, disposal, or accumulation adjacent to or in the immediate vicinity of state waters (IDAPA 58.01.02.800); and the cleanup and reporting of oil-filled electrical equipment (IDAPA 58.01.02.849); hazardous materials (IDAPA 58.01.02.850); and used-oil and petroleum releases (IDAPA 58.01.02.851 and 852).*

  Petroleum releases must be reported to DEQ in accordance with IDAPA 58.01.02.851.01 and 04. Hazardous material releases to state waters, or to land such that there is likelihood that it will enter state waters, must be reported to DEQ in accordance with IDAPA 58.01.02.850.

- ***Ground Water Contamination.*** *DEQ requests that this project comply with Idaho's Ground Water Quality Rules (IDAPA 58.01.11), which states that "No person shall cause or allow the release, spilling, leaking, emission, discharge, escape, leaching, or disposal of a contaminant into the environment in a manner that causes a ground water quality standard to be exceeded, injures a beneficial use of ground water, or is not in*

accordance with a permit, consent order or applicable best management practice, best available method or best practical method."

For questions, contact Albert Crawshaw, Waste & Remediation Manager, at 373-0550.

6. ***Additional Notes***
   - *If an underground storage tank (UST) or an aboveground storage tank (AST) is identified at the site, the site should be evaluated to determine whether the UST is regulated by DEQ. EPA regulates ASTs. UST and AST sites should be assessed to determine whether there is potential soil and ground water contamination. Please call DEQ at 373-0550, or visit the DEQ website (http://www.deq.idaho.gov/waste-mgmt-remediation/storage-tanks.aspx) for assistance.*
   - *If applicable to this project, DEQ recommends that BMPs be implemented for any of the following conditions: wash water from cleaning vehicles, fertilizers and pesticides, animal facilities, composted waste, and ponds. Please contact DEQ for more information on any of these conditions.*

We look forward to working with you in a proactive manner to address potential environmental impacts that may be within our regulatory authority. If you have any questions, please contact me, or any our technical staff at 208-373-0550.

Sincerely,

Aaron Scheff

Aaron Scheff
aaron.scheff@deq.idaho.gov
Regional Administrator
Boise Regional Office
Idaho Department of Environmental Quality

ec: CM#2019AEK114

Jace Hellman

From: D3 Development Services <D3Development.Services@itd.idaho.gov>
Sent: Friday, August 23, 2019 10:25 AM
To: Jace Hellman
Subject: 19-03-AN, 19-02-S & 19-09-DR Chotika Subdivision

Good morning,
ITD has received applications 19-03-AN, 19-02-S, 19-09-DR for review. ITD does not anticipate any significant traffic impact to the State Highway system from this development and has no objections to the proposed development.

Thank you,

Sarah Arjona
Development Services Coordinator
ITD District 3
(208) 334-8338

From: Jace Hellman <jhellman@kunaID.gov>
Sent: Wednesday, August 14, 2019 11:32 AM
To: Ada County Engineer <agilman@adaweb.net>; Ada County Highway District <planningreview@achdidaho.org>; Adam Ingram <adam.ingram@cableone.biz>; Becky Rone - Kuna USPS Addressing <rebecca.i.rone@usps.gov>; Bob Bachman <bbachman@kunaid.gov>; Bobby Withrow <bwithrow@kunaid.gov>; Boise Project Board of Control (TRitthaler@boiseproject.org) <TRitthaler@boiseproject.org>; Cable One t.v. <cheryl.goettsche@cableone.biz>; Central District Health Dept. CDHD <lbadigia@cdhd.idaho.gov>; COMPASS <cmiller@compassidaho.org>; DEQ (Alicia.martin@deq.idaho.gov) <Alicia.martin@deq.idaho.gov>; Eric Adolfson <eadolfson@compassidaho.org>; Idaho Power <ahawkins@idahopower.com>; Idaho Power <bwatson2@idahopower.com>; Idaho Power Easements <easements@idahopower.com>; Idaho Power Easments 2 <kfunke@idahopower.com>; Intermountain Gas <bryce.ostler@intgas.com>; D3 Development Services <D3Development.Services@itd.idaho.gov>; J&M Sanitation - Chad Gordon <Chad.Gordon@jmsanitation.com>; jmcdaniel@adaweb.net; Julie Stanely - Regional Address Mgmt. <Julie.R.Stanley@usps.gov>; Kuna Postmaster - Marc C. Boyer <marc.c.boyer@usps.gov>; Kuna School District <kbekkedahl@kunaschools.org>; Kuna School District <bsaxton@kunaschools.org>; Kuna School District <wjohnson@kunaschools.org>; Lisa Holland <lholland@kunaid.gov>; Megan Leatherman <mleatherman@adaweb.net>; Nampa Meridian Irrigation District <nmid@nmid.org>; New York Irrigation <terri@nyid.org>; Paul Stevens <PStevens@kunaid.gov>; Perry Palmer <ppalmer@kunafire.com>; Planning Mgr: Ada County Development Services <jboal@adaweb.net>; Wendy Howell <whowell@kunaid.gov>
Subject: [EXTERNAL] Kuna Planning and Zoning Department, Request for Comment - Case Nos. 19-03-AN, 19-02-S & 19-09-DR

--- This email is from an external sender. Be cautious and DO NOT open links or attachments if the sender is unknown. ---

Agency Transmittal (AMMENDED)

Hello,

The applicant has submitted a modified preliminary plat. If you have submitted comments previously on this application, and have no further comment, please let me know. Thank you.

Exhibit C6

August 14, 2019

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

File Number & Case Name:	19-03-AN (Annexation),19-02-S (Preliminary Plat) & 19-09-DR (Design Review) – Chotika Subdivision.
Project Description	On behalf of Don Veasey (owner), Accurate Surveyors requests to annex two parcels consisting of approximately 7.67 acres into Kuna City Limits with an R-6 (Medium Density Residential) zone and to subdivide the 7.67 acres into 37 total lots (thirty-four (34) buildable lots, three (3) common lots). The subject sites are located at 642 S. Ash St and S. Ash St., Kuna, ID 83634, within Section 26, Township 2 North, Range 1 West; (APNs: R5070503050 and R5070502835).
Site Location	642 S. Ash St. and S. Ash St., Kuna, ID 83634
Applicant	**Crystal McDaniel, Accurate Surveyors** 1602 W. Hays St, Suite 306 Boise, ID 83702 208-488-4227 Crystal@accuratesurveyors.com
Representative	**Roger Smith** 1693 S. Coronado Ave Boise, ID 83709 208-870-1015 roger-j-smith@msn.com
Public Hearing Date	Tuesday, **September 24, 2019** 6:00 pm Kuna City Hall is located at 751 W. 4th Street, Kuna, ID 83634
Staff Contact	Jace Hellman, Planner II jhellman@kunaid.gov Phone: 208.922.5274 Fax: 208.922.5989
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.*	

Jace Hellman
Planner II
751 W 4th St
Kuna, ID 83634

ORGANIZED 1918

Nampa & Meridian Irrigation District

1503 FIRST STREET SOUTH
FAX #208-463-0092

NAMPA, IDAHO 83651-4395
nmid.org

OFFICE: Nampa 208-466-7861
SHOP: Nampa 208-466-0663

September 6, 2019

RECEIVED
SEP 09 2019
CITY OF KUNA

Jace Hellman, Planner II
City of Kuna
751 W. 4th Street
Kuna, ID 83634

RE: 19-03-AN, 19-02-S & 19-09-DR/ Chotika Subdivision; 642 S. Ash St. & S. Ash St.

Dear Jace:

Nampa & Meridian Irrigation District (NMID) has no comment on the above referenced application as it lies outside of our district boundaries. Please contact Thomas Ritthaler, Boise Project- Board of Control, at 208-344-1141 or 2465 Overland Road Room 202 Boise, ID 83705-3173.

All private laterals and waste ways must be protected. All municipal surface drainage must be retained on-site. If any surface drainage leaves the site NMID must review drainage plans. Developers must comply with Idaho Code 31-3805.

Sincerely,

Greg G. Curtis
Water Superintendent
Nampa & Meridian Irrigation District
GGC/ gnf

Cc:
Office/ File
T. Ritthaler, BPBOC

Exhibit
CS

City of Kuna
PROOF OF PROPERTY POSTING

City of Kuna
P.O. Box 13
Kuna, Idaho 83634

Phone: (208) 922-5274
Fax: (208) 922-5989
Web: www.kunacity.id.gov

This notice shall confirm that the Public Hearing Notice for Chotika Sub **(NAME OF SUBDIVISION OR ADDRESS)** was posted as required per Kuna City Ordinance 5-1A-8. Sign posted 9/13/19 **(DAY OF THE WEEK, MONTH, DATE AND YEAR)**. *This form is required to be returned three (3) calendar days subsequent to posting and signs are to be removed from the site three (3) calendar days after the hearing.*

DATED this 13 day of September, 2019.

Signature.

Premier Signs Inc on behalf of Accurate Surveyors
Owner/Developer

STATE OF IDAHO)
): ss
County of Ada)

On this 13 day of September, 2019, before me the undersigned, a Notary Public in and for said State, personally appeared before me (Owner, Developer).

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

Notary Public
Residing at 10481 W State St Boise ID 83709
Commission Expires 3/30/2021

HOLLY WEIGEL NOTARY PUBLIC STATE OF IDAHO

Exhibit D3

CITY OF KUNA
PUBLIC HEARING NOTICE
Kuna Planning and Zoning Commission
THE CITY OF KUNA will hold a public hearing on September 24th, 2019 at 6:00 PM, at Kuna City Hall
PURPOSE: Preliminary Plat, Annexation and Zoning - Chotika Subdivision, Approximately 7.66 acres, 33 single-family dwelling lots, 1 commom area lot, Requested Zoning R6
LOCATION: 642 S. Ash Ave (parcel R5070502835) and (Parcel R5070503050) Kuna, Idaho
APPLICATION BY: Accurate Surveying & Mapping
CONTACT: Kuna Planning & Zoning at 208-922-5546

751 West 4th Street
P.O. Box 13
Kuna, ID 83634
Phone: 208-922-5274
Fax: 208-922-5989
www.kunacity.id.gov

CITY OF KUNA

PLANNING & ZONING DEPARTMENT

CERTIFICATE OF MAILING

Date: 9/4/2019

To: ☒ 400' Property Owners ☐ Other _____

Planner: Jace Hellman, Planner II

Case Name: 19-02-S & 19-03-AN – Chotika Subdivision

I HEREBY CERTIFY that on this 4th day of September, 2019, I caused a true and correct copy of the foregoing instrument to be deposited in the United States mail, with prepaid postage.

Signature

Dawn Stephens

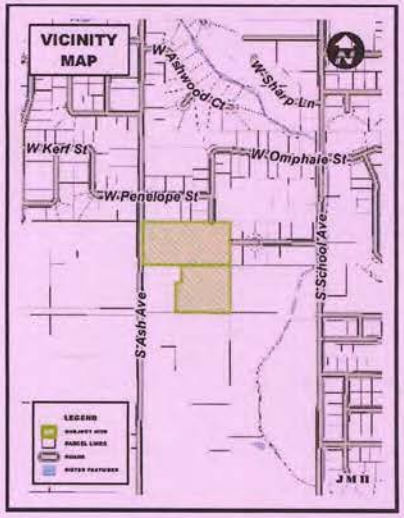
Attest

Exhibit
D4

CITY OF KUNA
PLANNING & ZONING DEPARTMENT
PO Box 13 • 751 W. 4th St • Kuna, Idaho • 83634
Phone (208) 922-5274 • Fax: (208) 922-5989
www.kunacity.id.gov

Dear Property Owner:

NOTICE IS HEREBY GIVEN that the City of Kuna **Planning and Zoning Commission** is scheduled to hold a public hearing on **September 24, 2019,** beginning **at 6:00 pm** on the following case:



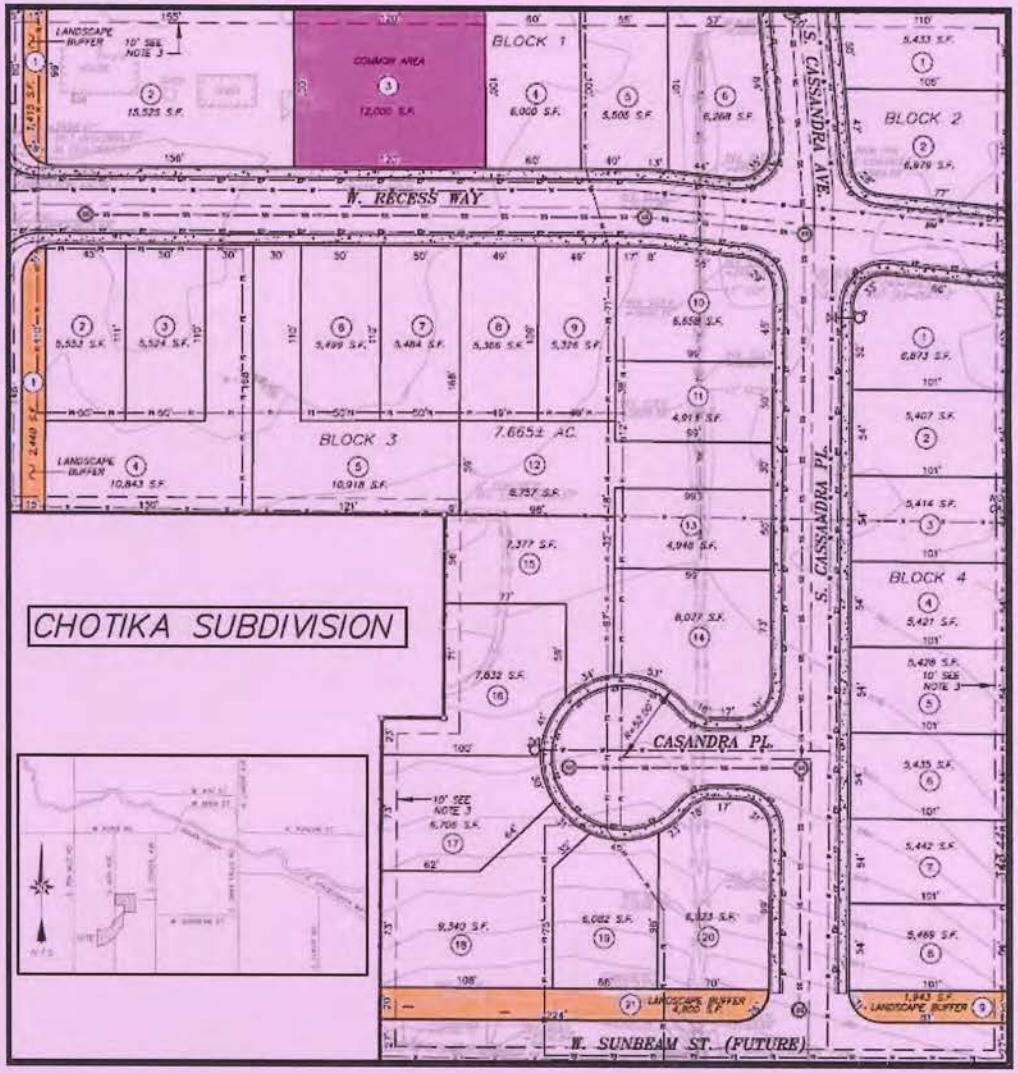
A request from Accurate Surveyors, on behalf of Don Veasey (owner), to annex two parcels consisting of approximately 7.67 acres into Kuna City Limits with an R-6 (Medium Density Residential) zone and to subdivide the 7.67 acres into 38 total lots (thirty-three (33) buildable lots, five (5) common lots). The subject sites are located at 642 S. Ash St and S. Ash St., Kuna, ID 83634, within Section 26, Township 2 North, Range 1 West; (APNs: R5070503050 and R50 70502835).

The hearing will be held **at 6:00 PM in the Council Chambers at City Hall located at 751 W. 4th Street, Kuna, Idaho.**

You are invited to provide oral or written comments. Written testimony received by the close of business on ***September 17, 2019*** will be included in the packet that is distributed to the governing body prior to the hearing. Late submissions (must submit eight (8) copies) will be presented to the governing body at time of the hearing. Please note oral comments made during the public hearing will be restricted to three (3) minutes per person.

Mail written comments to PO Box 13, Kuna, ID 83634 or hand deliver them to City Hall.

If you have questions or need special assistance, please contact the Planning and Zoning Division at (208) 922-5274.



MAILED 9/4/19

Suggestions For Testifying at the Public Hearing:

Be informed . . .
Review the proposal, staff report, applicable provisions of the ordinance, comprehensive plan and Idaho State Code (Title 67, Chapter 65).

All items pertaining to the application can be found the Friday prior to the hearing at **http://kunacity.id.gov/240/Agendas-and-Meeting-Minutes**.

Be on time . . .
Although the item you are interested in may not be first on the agenda, you never know when it will be heard. The governing body has authority to adjust the schedule according to its discretion. Thus, anticipate attending from the beginning.

Speak to the point . . .
The governing body appreciates pertinent, well organized, factual and concise comments. Redundant testimony is prohibited. **The developer or their representative is given 10 minutes to present their project. Others wishing to testify are given three (3) minutes. The developer (or their representative) is given additional time for rebuttal to address issues raised during public testimony.** Long stories, abstract complaints, or generalities may not be the best use of time. Neighborhood groups are encouraged to organize testimony and have one (1) person speak on behalf of the group. The group representative will receive 10 minutes to make comments.

If you don't wish to speak, write . . .
Written testimony submitted one (1) week prior to the hearing will be included in the packet that is distributed to the governing body prior to the hearing. Late submissions must submit eight (8) copies, which will be presented to the governing body at time of hearing. As a reminder, it is unreasonable to submit extensive written comments or information at the hearing and expect them to be reviewed prior to a decision.

City of Kuna
Planning and Zoning
PO Box 13
Kuna, ID 83634

LEGAL NOTICE

CHARLES & CHRISTINE LITTLE
1320 W PENELOPE ST
KUNA, ID 83634

HEATHER MCARTHUR
532 S CASSANDRA AVE
KUNA, ID 83634

DONA & BRYON MCFADDEN
622 S CASSANDRA AVE
KUNA, ID 83634

SANDRA MCKEE
1073 W OMPHALE ST
KUNA, ID 83634

JOSE & ROSA MEZA
328 S ROCKER AVE
KUNA, ID 83634

ALAN MICHAELSON
655 S ASH AVE
KUNA, ID 83634

JACK & CAROL MILLER
940 S ASH AVE
KUNA, ID 83634

MICHAEL & LAURA MINEAR
1180 W PENELOPE ST
KUNA, ID 83634

JUSTIN & KRISTINE MOORE
1070 W RECESS WAY
KUNA, ID 83634

EDUARDO & SHAWNA MORENO
1041 W RECESS WAY
KUNA, ID 83634

DOUGLAS & PEGGY NEWMAN
29776 DAVIS RD
BRUNEAU, ID 83604

OUTPOST HOMEOWNERS ASSOCIATION
PO BOX 214
KUNA, ID 83634

ERNEST POGGETTI FAMILY TRUST
AGREEMNT 7/1/2008
ERNEST POGGETTI TRUSTEE
484 S ASH AVE
KUNA, ID 83634

MICHAEL & JANINE POPE
1321 W PENELOPE ST
KUNA, ID 83634

JAMES PORTER & BARBARA HEITHER
993 W RECESS WAY
KUNA, ID 83634

PTR HOLDINGS II
9756 SUTHERLAND ST
COWAN HEIGHTS, CA 92705

PHILIP & PEGGY REA
620 S ASH AVE
KUNA, ID 83634

RONALD & CLARABELLE ROSALES
1308 W PENELOPE ST
KUNA, ID 83634

JAMES & SHERI RUSSELL
781 S SCHOOL AVE
KUNA, ID 83634

MICHELLE & CHRISTOPHER SAMARTINO
1207 W PENELOPE ST
KUNA, ID 83634

THOMAS & NANCY SKANTER
1046 W RECESS WAY
KUNA, ID 83634

ROBERT & RYNDI SMITH
900 S ASH AVE
KUNA, ID 83634

VERA STRELCHIK
YANA TERESHCHENKO
599 S ASH AVE
KUNA, ID 83634

HEATHER & JOHN TALBOT
625 S ASH AVE
KUNA, ID 83634

ROBERT THIGPEN
1236 W PENELOPE ST
KUNA, ID 83634

THREEHOUSEASHPONDNORTHVIEWGALLAHADGRANGERLLC
PO BOX 140838
GARDEN CITY, ID 83714

TWOPDXMOORESTATEEELDORADO34LLC
PO BOX 140838
GARDEN CITY, ID 83714

RUDY VILLARREAL
FELIDA CARRILLO
1039 W OMPHALE ST
KUNA, ID 83634

FRED & SHARON WHEELER
846 S ASH AVE
KUNA, ID 83634

DALTON & KRYSTAL WHITING
998 W RECESS WAY
KUNA, ID 83634

JOSHUA ALBERS
604 S CASSANDRA AVE
KUNA, ID 83634

KASEY & SHANNON ALDRICH
1365 W PENELOPE ST
KUNA, ID 83634

AMH 2015-1 BORROWER LLC
30601 AGOURA RD STE 200
AGOURA HILLS, CA 91301

ERMA ANDERSON
1342 W PENELOPE ST
KUNA, ID 83634

DANNIEL & STEPHANIE ATKINSON
619 S CASSANDRA AVE
KUNA, ID 83634

CHRISTOPHER & CELESTE AYER
1189 W PENELOPE ST
KUNA, ID 83634

BRYCE & KATHLEEN BAKER
975 W RECESS WAY
KUNA, ID 83634

RODNEY & HOLLY BETTIS
1138 W PENELOPE ST
KUNA, ID 83634

RONALD & KATHLEEN BOLLINGER
980 W RECESS WAY
KUNA, ID 83634

BRANDON & MELISSA DANIELS
1364 W PENELOPE ST
KUNA, ID 83634

JOHN & NATASHA DAVIS
525 S CASSANDRA AVE
KUNA, ID 83634

STEPHANIE & CHRISTOPHER DEANDRADE
1021 W OMPHALE ST
KUNA, ID 83634

DANIELLE DEMARCO
3994 BELL CT
NAMPA, ID 83686

JASON & TARA DOWNS
1343 W PENELOPE ST
KUNA, ID 83634

ANDY ECKENROED
1019 W RECESS WAY
KUNA, ID 83634

TERRY & TRUDY EIGUREN
PO BOX 49
KUNA, ID 83634

THOMAS & ALICIA FLAVEL
1022 W RECESS WAY
KUNA, ID 83634

JEFFFERY & JANICE FOSTER
805 S SCHOOL AVE
KUNA, ID 83634

BART & LOUANN GEORGE
1407 W PENELOPE ST
KUNA, ID 83634

CHARLA HANEY
566 S CASSANDRA AVE
KUNA, ID 83634

KODY & AMANDA HARRISON
1171 W PENELOPE ST
KUNA, ID 83634

KODY & AMANDA HARRISON
1171 W PENELOPE ST
KUNA, ID 83634

TAUSHA HAUSDORF
1162 W PENELOPE ST
KUNA, ID 83634

ERICH HAWKES
1198 W PENELOPE ST
KUNA, ID 83634

DANIEL & JAMIE HENDERSON
1309 W PENELOPE ST
KUNA, ID 83634

MISTY & NOEL HUDON
847 S ASH AVE
KUNA, ID 83634

MICHAEL BRADLEY IHLI &
LINDA MARLENE JOINT LIVING TRUST
625 S SCHOOL AVE
KUNA, ID 83634

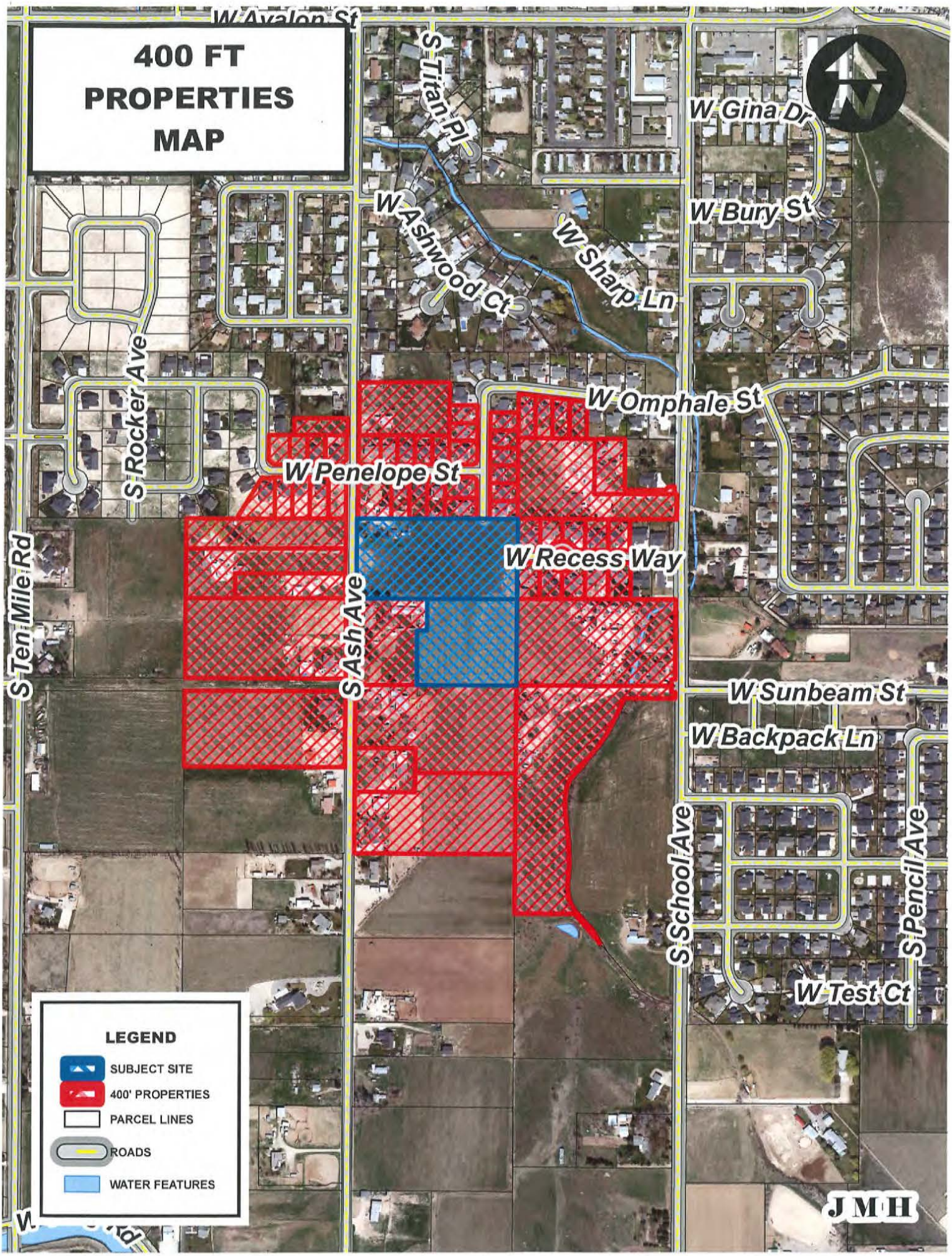
ALLISON & MICHAEL JUDD
543 S CASSANDRA AVE
KUNA, ID 83634

DONALD & LORNA KOLSKY
754 S ASH AVE
KUNA, ID 83634

RONALD LANDIS LIVING TRUST
RONALD LANDIS LIVING TRUSTEE
6212 SYLVAN DR
SIMI VALLEY, CA 93063

DOUGLAS WIEBUSCH
685 S ASH AVE
KUNA, ID 83634

PRIMOWNER	SECOWNER	ADDCONCAT	STATCONCAT
ALBERS JOSHUA		604 S CASSANDRA AVE	KUNA, ID 83634-0000
ALDRICH KASEY JENSEN	ALDRICH SHANNON MARIE	1365 W PENELOPE ST	KUNA, ID 83634-0000
AMH 2015-1 BORROWER LLC		30601 AGOURA RD STE 200	AGOURA HILLS, CA 91301-0000
ANDERSON ERMA ELLEN		1342 W PENELOPE ST	KUNA, ID 83634-0000
ATKINSON DANNIEL MARIE	ATKINSON STEPHANIE D	619 S CASSANDRA AVE	KUNA, ID 83634-0000
AYERS CHRISTOPHER A	AYERS CELESTE DAWN	1189 W PENELOPE ST	KUNA, ID 83634-0000
BAKER BRYCE ROBERT	BAKER KATHLEEN B	975 W RECESS WAY	KUNA, ID 83634-0000
BETTIS RODNEY A	BETTIS HOLLY A	1138 W PENELOPE ST	KUNA, ID 83634-0000
BOLLINGER RONALD W	BOLLINGER KATHLEEN M	980 W RECESS WAY	KUNA, ID 83634-0000
DANIELS BRANDON	DANIELS MELISSA	1364 W PENELOPE ST	KUNA, ID 83634-0000
DAVIS JOHN L	DAVIS NATASHA D	525 S CASSANDRA AVE	KUNA, ID 83634-0000
DEANDRADE STEPHANIE	DEANDRADE CHRISTOPHER	1021 W OMPHALE ST	KUNA, ID 83634-0000
DEMARCO DANIELLE M		3994 BELL CT	NAMPA, ID 83686-0000
DOWNS JASON TIMOTHY	DOWNS TARA ROSE	1343 W PENELOPE ST	KUNA, ID 83634-0000
ECKENROED ANDY		1019 W RECESS WAY	KUNA, ID 83634-0000
EIGUREN TERRY J	EIGUREN TRUDY M	PO BOX 49	KUNA, ID 83634-0000
FLAVEL THOMAS J	FLAVEL ALICIA K	1022 W RECESS WAY	KUNA, ID 83634-0000
FOSTER JEFFERY L	FOSTER JANICE S	805 S SCHOOL AVE	KUNA, ID 83634-1745
GEORGE BART BOONE	GEORGE LOUANN	1407 W PENELOPE ST	KUNA, ID 83634-0000
HANEY CHARLA L		566 S CASSANDRA AVE	KUNA, ID 83634-0000
HARRISON KODY	HARRISON AMANDA	1171 W PENELOPE ST	KUNA, ID 83634-0000
HAUSDORF TAUSHA		1162 W PENELOPE ST	KUNA, ID 83634-0000
HAWKES ERICH D		1198 W PENELOPE ST	KUNA, ID 83634-0000
HENDERSON DANIEL D	HENDERSON JAMIE D	1309 W PENELOPE ST	KUNA, ID 83634-0000
HUDON MISTY D	HUDON NOEL T	847 S ASH AVE	KUNA, ID 83634-0000
IHLI MICHAEL BRADLEY & LINDA MARLENE JOINT LIVING TRUST		625 S SCHOOL AVE	KUNA, ID 83634-0000
JUDD ALLISON R	JUDD MICHAEL R	543 S CASSANDRA AVE	KUNA, ID 83634-0000
KOLSKY DONALD L	KOLSKY LORNA V	754 S ASH AVE	KUNA, ID 83634-2246
LANDIS RONALD J LIVING TRUST	LANDIS RONALD J TRUSTEE	6212 SYLVAN DR	SIMI VALLEY, CA 93063-0000
LITTLE CHARLES W	LITTLE CHRISTINE	1320 W PENELOPE ST	KUNA, ID 83634-0000
MCARTHUR HEATHER R		532 S CASSANDRA AVE	KUNA, ID 83634-0000
MCFADDEN DONA L	MCFADDEN BRYON	622 S CASSANDRA AVE	KUNA, ID 83634-0000
MCKEE SANDRA ANN		1073 W OMPHALE ST	KUNA, ID 83634-0000
MEZA JOSE J	MEZA ROSA M	328 S ROCKER AVE	KUNA, ID 83634-0000
MICHAELSON ALAN M		655 S ASH AVE	KUNA, ID 83634-0000
MILLER JACK E	MILLER CAROL A	940 S ASH AVE	KUNA, ID 83634-1728
MINEAR MICHAEL J	MINEAR LAURA L	1180 W PENELOPE ST	KUNA, ID 83634-0000
MODRELL AARON		550 S CASSANDRA AVE	KUNA, ID 83634-0000
MOORE JUSTIN L	MOORE KRISTINE A	1070 W RECESS WAY	KUNA, ID 83634-0000
MORENO EDUARDO	MORENO SHAWNA NOEL	1041 W RECESS WAY	KUNA, ID 83634-0000
NEWMAN DOUGLAS A	NEWMAN PEGGY S	29776 DAVIS RD	BRUNEAU, ID 83604-5038
OUTPOST HOMEOWNERS ASSOCIATION		PO BOX 214	KUNA, ID 83634-0214
POGGETTI ERNEST A FAMILY TRUST AGREEMENT 7/1/2008	POGGETTI ERNEST A TRUSTEE	484 S ASH AVE	KUNA, ID 83634-0000
POPE MICHAEL	POPE JANINE	1321 W PENELOPE ST	KUNA, ID 83634-0000
PORTER JAMES	HEITHER BARBARA	993 W RECESS WAY	KUNA, ID 83634-0000
PTR HOLDINGS II		9756 SUTHERLAND ST	COWAN HEIGHTS, CA 92705-0000
REA PHILIP M	REA PEGGY S	620 S ASH AVE	KUNA, ID 83634-0000
ROSALES RONALD	ROSALES CLARABELLE	1308 W PENELOPE ST	KUNA, ID 83634-0000
RUSSELL JAMES D	RUSSELL SHERI J	781 S SCHOOL AVE	KUNA, ID 83634-0000
SAMARTINO MICHELLE T	SAMARTINO CHRISTOPHER	1207 W PENELOPE ST	KUNA, ID 83634-0000
SKANTER THOMAS R	SKANTER NANCY JO	1046 W RECESS WAY	KUNA, ID 83634-0000
SMITH ROBERT B	SMITH RYNDI S	900 S ASH AVE	KUNA, ID 83634-1728
STRELCHIK VERA	TERESHCHENKO YANA	599 S ASH AVE	KUNA, ID 83634-0000
TALBOT HEATHER LEA	TALBOT JOHN A	625 S ASH AVE	KUNA, ID 83634-0000
THIGPEN ROBERT		1236 W PENELOPE ST	KUNA, ID 83634-0000
THREEHOUSEASHPONDNORTHVIEWGALLAHADGRANGERLLC		PO BOX 140838	GARDEN CITY, ID 83714-0000
TWOPDXMOORESTATEELDORADO34LLC		PO BOX 140838	GARDEN CITY, ID 83714-0000
VILLARREAL RUDY M	CARRILLO FELIDA	1039 W OMPHALE ST	KUNA, ID 83634-0000
WHEELER FRED N	WHEELER SHARON L	846 S ASH AVE	KUNA, ID 83634-1728
WHITING DALTON R	WHITING KRYSTAL L	998 W RECESS WAY	KUNA, ID 83634-0000
WIEBUSCH DOUGLAS		685 S ASH AVE	KUNA, ID 83634-0000


400 FT
PROPERTIES
MAP
W Avalon St
S Titan Pl
W Gina Dr
W Bury St
W Ashwood Ct
W Sharp Ln
S Rocker Ave
W Omphale St
W Penelope St
W Recess Way
S Ten Mile Rd
S Ash Ave
W Sunbeam St
W Backpack Ln
S School Ave
S Pencil Ave
W Test Ct
LEGEND
SUBJECT SITE
400' PROPERTIES
PARCEL LINES
ROADS
WATER FEATURES
JMH

Jace Hellman

From: Jace Hellman
Sent: Tuesday, August 20, 2019 8:49 AM
To: 'IDAHO PRESS-TRIBUNE'
Subject: City of Kuna Request for Legal Publication
Attachments: Chotika Legal Publication KMN 7.24.19.docx

Greetings:

We would like to request that you publish the attached legal notification in the September 4th, 2019 cycle of the Kuna Melba News on behalf of the City of Kuna, Planning and Zoning Department. This notification needs to only be published for one (1) cycle.

The Kuna P.O. for this request is #8931 (if you need it)
Thank you!

Jace Hellman
Planner II
751 W 4th St
Kuna, ID 83634
jhellman@kunaid.gov

Exhibit
D5

CITY OF KUNA
PO Box 13 - Kuna, ID 83634
Phone: 208.922.5274 - Fax: 208.922.5989

File #'s 19-03-AN & 19-02-S, Chotika Subdivision

NOTICE IS HEREBY GIVEN, that the Kuna City Council will hold a public hearing, **Tuesday, September 24, 2019 at 6:00 pm**, or as soon as can be heard at Kuna City Hall, 751 W. 4th St, Kuna, ID; in connection with an **Annexation (AN)** and **Preliminary Plat (S)** request for Chotika Subdivision. On behalf of Don Veasey (owner), Accurate Surveyors requests to annex two parcels consisting of approximately 7.67 acres into Kuna City Limits with an R-6 (Medium Density Residential) zone and to subdivide the 7.67 acres into 38 total lots (thirty-three (33) buildable lots, five (5) common lots). The subject sites are located at 642 S. Ash St and S. Ash St., Kuna, ID 83634, within Section 26, Township 2 North, Range 1 West; (APNs: R5070503050 and R5070502835).

The public is invited to present written or oral comments. Written testimony received by the close of business on ***September 17, 2019*** will be included in the packets distributed to the governing body. Late submissions (must include eight (8) copies) will be presented to the governing body at the time of the hearing. Please mail written comments to PO Box 13, Kuna, ID 83634, or drop them off at City Hall: 751 West 4th Street, Kuna, ID.

Please do not contact anyone who would be involved in this decision making process, which would include the Planning & Zoning Commissioners, City Council Members, or the Mayor; as such private conversations would be considered ex parte (one sided) and could jeopardize the public hearing process.

If you have any questions or require special accommodations, please contact the Kuna Planning & Zoning Department prior to the meeting at (208) 922-5274.

Kuna Planning & Zoning Department

(No need to print this portion) Please publish one time on ***September 4, 2019****.*

(Sent 8/20/2019)

Kuna P.O. #8931

IDAHO PRESS-TRIBUNE
EMMETT MERIDIAN KUNA BOISE WKLY
C/O ISJ PAYMENT PROCESSING CENTER
PO BOX 1570
POCATELLO ID 83204
(208)467-9251
Fax (208)475-2321

ORDER CONFIRMATION

Salesperson: LEGALS — Printed at 08/22/19 09:42 by sje14

Acct #: 345222 — Ad #: 1937556 — Status: New CHOLD

1 KUNA, CITY OF
P.O. BOX 13
KUNA ID 83634

Start: 09/04/2019 — Stop: 09/04/2019
Times Ord: 1 — Times Run: ***
LEG 1.00 X 72.00 — Words: 294
Total LEG 72.00
Class: 0006 GOVERNMENT NOTICES
Rate: LG — Cost: 58.28
Affidavits: 1

Contact: CHRIS ENGLES
Phone: (208)387-7727
Fax#:
Email: awelker@kunaid.gov; gsmith@k
Agency:

Ad Descrpt: 19-03-AN, 19-02-S
Given by: JACE HELLMAN
P.O. #:
Created: sje14 08/22/19 09:35
Last Changed: sje14 08/22/19 09:42

PUB	ZONE	EDT	TP	RUN DATES
KMN	A	96	S	09/04

AUTHORIZATION

Under this agreement rates are subject to change with 30 days notice. In the event of a cancellation before schedule completion, I understand that the rate charged will be based upon the rate for the number of insertions used.

Jace Hellman
Name (print or type)

Name (signature)

(CONTINUED ON NEXT PAGE)

IDAHO PRESS-TRIBUNE
EMMETT MERIDIAN KUNA BOISE WKLY
C/O ISJ PAYMENT PROCESSING CENTER
PO BOX 1570
POCATELLO ID 83204
(208)467-9251
Fax (208)475-2321

ORDER CONFIRMATION (CONTINUED)

Salesperson: LEGALS Printed at 08/22/19 09:42 by sje14

Acct #: 345222 Ad #: 1937556 Status: New CHOLD CHOI

LEGAL NOTICE

File #'s 19-03-AN & 19-02-S
Chotika Subdivision

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Kuna Planning & Zoning Department

September 4, 2019
1937556

Looks Great!

345222 1937556

1 KUNA, CITY OF

P.O. BOX 13
KUNA ID 83634

RECEIVED
SEP 13 2019
CITY OF KUNA

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO)
)SS.
County of Ada)

Sharon Jessen
of Nampa, Canyon County, Idaho, being first duly sworn, deposes and says:

1. That I am a citizen of the United States, and at all times hereinafter mentioned was over the age of eighteen years, and not a party to the above entitled action.
2. That I am the Principle Clerk of the Kuna Melba News, a weekly newspaper published in the City of Kuna, in the County of Ada, State of Idaho; that the said newspaper is in general circulation in the said County of Ada, and in the vicinity of Kuna and Melba, and has been uninterruptedly published in said County during a period of seventy-eight consecutive weeks prior to the first publication of this notice, a copy of which is hereto attached.
3. That the notice, of which the annexed is a printed copy, was published in said newspaper 1 time(s) in the regular and entire issue of said paper, and was printed in the newspaper proper, and not in a supplement.

That said notice was published the following:
09/04/2019

Sharon Jessen

STATE OF IDAHO)
County of Canyon)
On this 4th day of Septemberin the year of 2019 before me a Notary Public, personally appeared. Sharon Jessen, known or identified to me to be the person whose name is subscribed to the within instrument, and being by me first duly sworn, declared that the statements therein are true, and acknowledge to me that he/she executed the same.

Sheila Thayer

Notary Public for Idaho
Residing at Canyon County
My Commission expires 03/28/2025

SHEILA THAYER
NOTARY PUBLIC
Comm No. 49645
STATE OF IDAHO

LEGAL NOTICE

File #'s 19-03-AN & 19-02-S Chotika Subdivision

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Kuna Planning & Zoning Department

September 4, 2019

1937556

Outpost Subdivision Homeowner's Association
January 14, 2020

received
1.7.2020

Kuna Planning and Zoning Commission

Dear Commissioners,

During the last public meeting regarding the proposed Chotika subdivision, you heard testimony from the Outpost Homeowners Association which is one of the neighborhoods impacted by this planned development. That testimony expressed concerns by existing homeowners and neighbors as to the proposed lot sizes and density of the Chotika subdivision. Safety concerns were also expressed about the increase in traffic through the Outpost and Brandywine subdivisions as residents of the Chotika subdivision would most likely use to them to access S. School Avenue to get to and from their homes, as opposed to using Ash Street which is narrower and lacks developed sidewalks. The decision of this body during that meeting was to ask the developer to reconfigure their proposal to be consistent with an R-4 density which is more appropriate and typical of this part of town.

This newest submission, does improve lot sizes of a few of the lots on the south side of W. Recess Way, but leaves most of the lots on the north, and east sides still much smaller than would allow for homes to be built consistent in size and character with the existing homes. The revised platt does not reflect in character or in fact the direction to redesign to an R-4 density.

The "Envision Kuna" City of Kuna Comprehensive plan published July 19th 2019, section 3.A.2.c states as a matter of policy:

"Develop flexible design standards to encourage infill that preserves valued characteristics of surrounding area and promotes compatible uses."

One of the valued characteristics of this south area of town is the less dense and more rural location and feel. Surrounding the Chotika development site on 3 sides are acreages currently cultivated and utilized for raising hay and livestock. It is these characteristics specifically that attracted most of the homeowners in the area to invest where they did.

Goal 3G in the comprehensive plan cites the need to ensure that local land use policies do not adversely impact property values, and balancing the needs of the community with the private interests of individuals. As homeowners in the immediately adjacent subdivision, we are concerned that allowing the construction of homes on 8 consecutive lots (totaling 44,888 sqft as proposed) on slightly more than 1 acre of land on the east side of S Cassandra Place (lots numbered 1-8 on the Preliminary Platt), which abuts lots 11,000-13,000 sqft in size will detrimentally affect the desirability of the existing homes and negatively impact existing home values. These lots are too small, and too dense for anything but starter homes, or town house style homes.

Additionally, the cul-de-sac proposed as Cassandra Place, shows as having 7 lots surrounding and facing the cul-de-sac. During my survey of nearby and comparable subdivisions on the south side of Kuna, I couldn't find any other which features a cul-de-sac with 7 lots on it. 4 or 5 is typical, with 6 being the maximum. Nowhere are there 7. This again reflects too high of density for this area.

The comprehensive plan also includes the public comment and feedback gathered during its development. In the Public Input Summary Table on page 179 under the section titled "Land Use" the public specifically requested the city to, "Mix up the types of residential home and lots built – not as many starter homes", and also to "Utilize larger lots for new residential development". This sentiment is repeated on page 182 in the Land Use section where it states:

"Recurring themes related to land use include suggestions for mixed development, increased commercial development, and providing larger lots for residential development. Mixed development was mentioned numerous times as being a

Exhibit
E3

positive for the City of Kuna. However, some comments were opposing the mixed development of apartments and condos, especially those in close proximity to other residential communities that were concerned about home values being impacted. It was also continually stated that Kuna residents would like larger lots and larger homes, and to not just be viewed as a community made up of 'starter homes'."

This is reiterated on Page 192 in the Phase 2 outreach summary of themes, with "many respondents indicating a desire for the preservation and development of larger lot homes and subdivisions", and "new home developments have been too dense and lack stylistic diversity leaving neighborhoods without a sense of neighborhood character."

This is consistent with the objective 2.H.1 Ensuring that "Kuna is designed and built for individuals to age in place."

The residents of the Outpost subdivision have, for the most part, lived there since it was built in 2004-2005. Many have raised their families there, and some are now empty nesters. Some have purchased these homes to retire in. These homes have features like room in the back-yard for swing-sets or gardens. Some have built workshops in which to pursue hobbies. Others have small orchards, or raise backyard chickens. Most have room to park recreational vehicles on site. Most of the lots in the Chotika subdivision as currently proposed are not large enough for any of those features or amenities, and will not afford a growing family enough room or flexibility to age in place. We believe Chotika will be one more Kuna "starter home" neighborhood if allowed to proceed as presently configured.

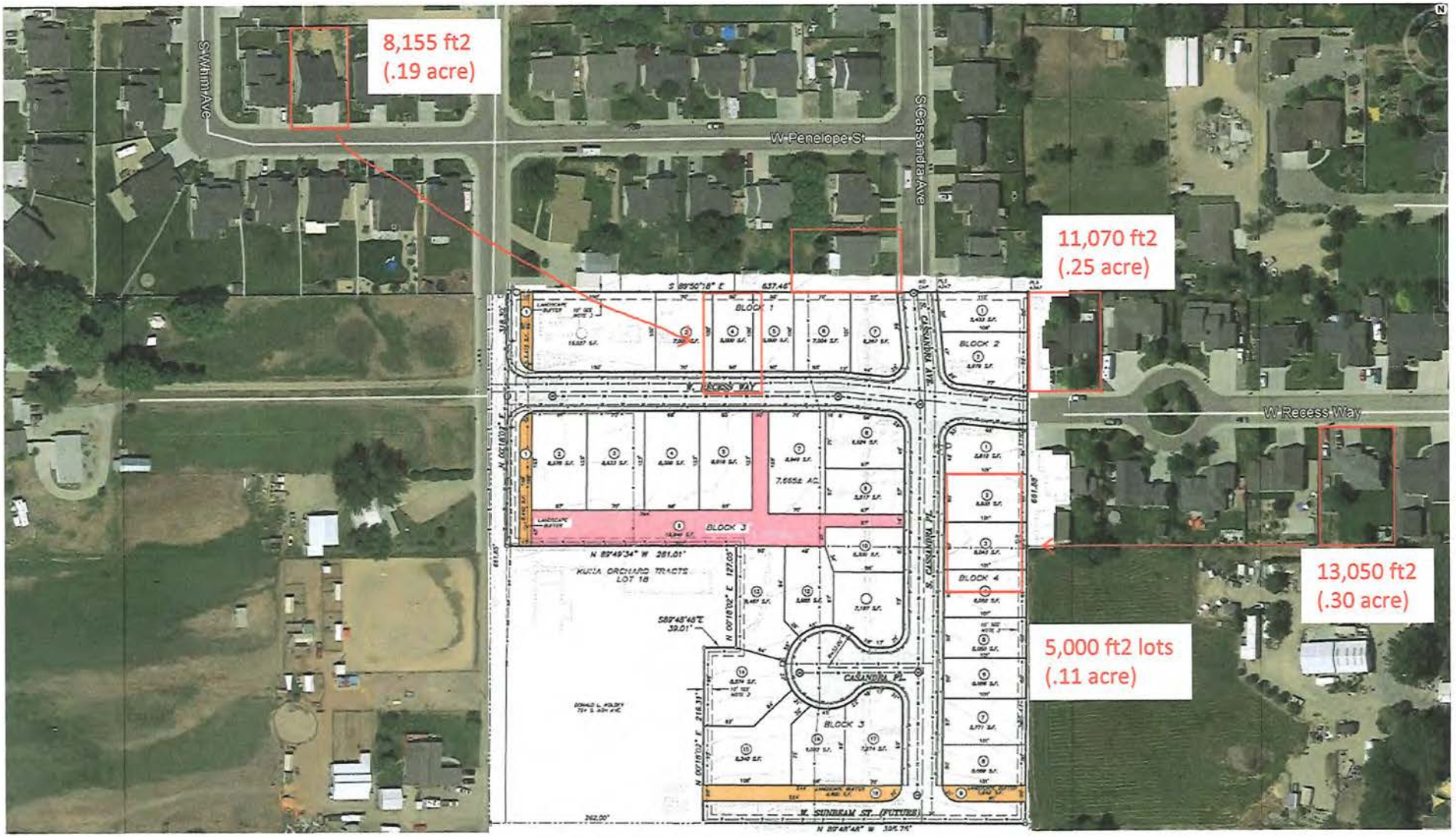
As stated in our previous testimony several months ago, we welcome new neighbors and growth to Kuna. We do not oppose Mr. Veasy's development in principle. Diversity in home options in Kuna doesn't necessarily mean we need more apartments and small more affordable homes. Larger lots allow for larger residences and are more likely to be attractive to other demographics we would like to have consider Kuna as home – business owners, and professional people with growing families, retirees and empty-nesters who want a garden or a place to park their RV or build a shop, people who want a place to put down roots and stay for 20 years or more. These are the anchors of good, strong, and vibrant communities. This is what has made Kuna one of the best places to live in the Treasure Valley, and with the continued oversight and good planning by community minded people like yourselves, it will be far into the future.

Thank you,

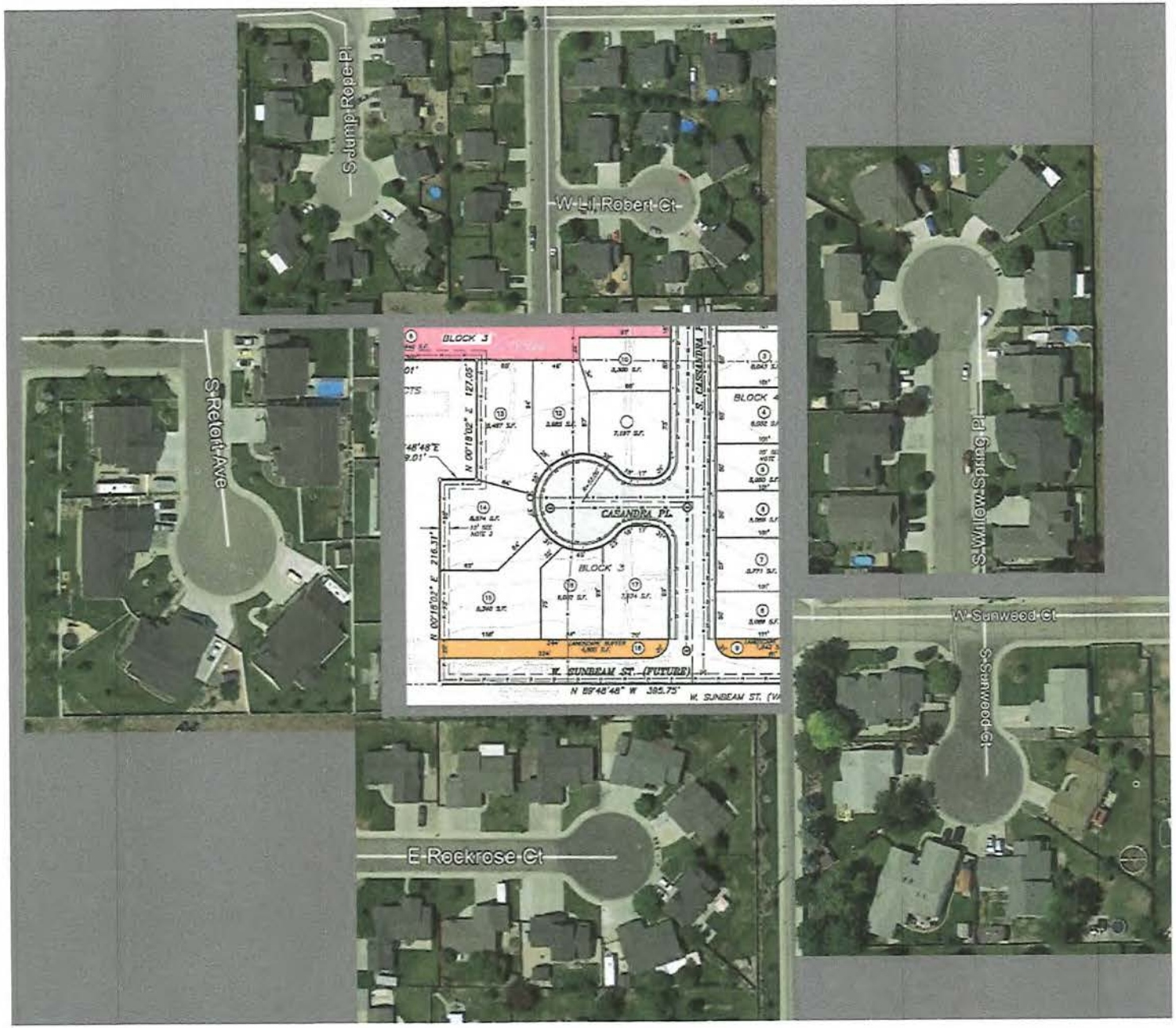
Bryce R. Baker
Representative, Outpost Homeowners Association

Comparison of neighboring lot sizes to proposed Chotika Subdivision Lots

(Red boxes show relative size)



Comparison of surrounding neighborhood Cul-de-Sacs to Chotika Subdivision



No other subdivisions in the surrounding area have more than 6 lots on a Cul-de-sac, but Chotika Subdivision is proposing **7**

S Jump Rope Pl
S Retort Ave
E Rockrose Ct
S Sunwood Ct
S Willow Spring Pl
W Lil Robert Ct

Please allow Bryce Baker to speak on our behalf at the 1/14/20 P&Z meeting

Terry / Trudy Eiguren
1063 W. Recess Way, Kuna
Terry: 208-634-8042
Trudy: 208-634-6698
Please see attached letter

Justin / Kristine Moore
1070 W. Recess Way, Kuna
Jusin: 208-870-9749
Kristine: 208-870-9749

Eddie / Shawna Moreno
1041 W. Recess Way, Kuna
Eddie: 208-713-5598
Shawna: 208-871-7885

Tom / Nancy Skanter
1046 W. Recess Way, Kuna
Tom: 208-559-2044
Nanci: 208-559-2043

Andy / Sherri Eckenroed
1019 W. Recess Way, Kuna
A: 208-941-0028

Jerry / Alicia Flavel
1022 W. Recess Way, Kuna
Jerry: 208-284-5210
Alicia: 208-284-2509

Jim Porter / Barb Heither
993 W. Recess Way, Kuna
Barb: 208-409-7967
Jim: 208-863-5621

Dalton / Krystal Whiting
998 W. Recess Way, Kuna
Dalton: 208-258-5819

Bryce / Kathleen Baker
975 W. Recess Way, Kuna
Bryce: 208-863-3288;
Kathleen: 208-861-3299

Ron / Kathy Bollinger
980 W. Recess Way, Kuna
Ron: 208-520-7759
Kathy: 208-521-6638

Don / Kerri Carlin
951 W. Recess Way, Kuna
Don: 702-686-8163
Kerri: 702-686-4426

Gary / Pat Hinz
954 W. Recess Way, Kuna
Gary 951-733-5110
Pat - 909 519-1215.

699 S. School Ave, Kuna

930 W. Recess Way, Kuna

January 4, 2020

City of Kuna
Planning & Zoning Commission
Kuna City Council
P.O. Box 13
Kuna, ID 83634

Re: Hearings for Chotika Subdivision

To Whom It May Concern,

Please allow our neighbor Bryce Baker from the Outpost Subdivision to speak on our behalf at the hearings regarding the proposed Chotika Subdivision. Bryce understands our concerns and has our permission to speak to you regarding those issues. Unfortunately, we will not be able to attend the hearings.

Thank you!

Sincerely,

Terry J. Eiguren
1063 W. Recess Way
Kuna, ID 83634
(208) 634-8042

Trudy M. Eiguren
1063 W. Recess Way
Kuna, ID 83634
(208) 634-6698

Cc: Bryce Baker

CITY OF KUNA
PLANNING & ZONING COMMISSION

MEETING MINUTES
Tuesday, September 24, 2019

PZ COMMISSION MEMBER	PRESENT	CITY STAFF PRESENT:	PRESENT
Chairman Lee Young	X	Wendy Howell, Planning Director	X
Commissioner Dana Hennis	X	Troy Behunin, Senior Planner	N/A
Commissioner Cathy Gealy	X	Jace Hellman, Planner II	X
Commissioner Stephen Damron	Absent	Sam Weiger, Planner I	X
Commissioner John Laraway	X	Doug Hanson, Planner I	N/A

6:00 pm – COMMISSION MEETING

Chairman Young called the meeting to order at **6:00 pm**.

Call to Order and Roll Call

1. **CONSENT AGENDA**
   Meeting Minutes for September 10, 2019.
   Findings of Fact and Conclusions of Law for 19-24-DR (Design Review) & 19-10-SN (Sign)
   Findings of Fact and Conclusions of Law for 19-08-AN (Annexation), 19-04-S (Preliminary Plat) & 19-19-DR (Design Review)
   Findings of Fact and Conclusions of Law for 19-09-AN (Annexation)
   Findings of Fact and Conclusions of Law for 19-02-ZC (Rezone)

   Commissioner Gealy Motions to approve the consent agenda; Commissioner Laraway Seconds, all aye and motion carried 3-0.

2. **NEW BUSINESS**
   19-25-DR (Design Review) & 19-13-SN (Sign) - The Wendy's Company requests approval of design review for an approximately 2,456 square-foot Wendy's restaurant including landscaping, lighting and a parking lot, within Ensign Subdivision No. 2, Lot 10 Block 1, at 871 North Meridian Road, Kuna, Idaho 83634.

   Sam Weiger: Chairman, commissioners for the record Sam Weiger, Planner I for the City of Kuna 751 W 4th ST. The Wendy's Company requests approval of design review for a new approximately 2,456 square-foot Wendy's restaurant, including landscaping, lighting and a parking lot, within Ensign subdivision No. 2, Lot 10 Block 1, at 871 North Meridian Road, Kuna, Idaho 83634. Staff has determined that this application complies with Title 5 of Kuna City Code; Idaho Code; the Comprehensive Plan and the Future Land Use Map. Staff forwards a recommendation of approval for Case Nos. 19-25-DR & 19-13-SN to the Planning and Zoning Commission. I will now stand for any questions you may have. **Dan Brubaker**: My name is Dan Brubaker, I'm out of Denver, Colorado, I'm the construction manager for this area. I really appreciate the opportunity to be in front of you and answer any questions you might have. Our site is the perfect spot, it is heavily landscaped with earth-tone colors like the rest of the buildings in the area. I'm looking forward to being here, and I can answer any questions. **C/Young**: I think the site is well landscaped, and the structure itself gives building relief, and different finishes. **C/Laraway**: It fits. **C/Hennis**: I see stores like this, and I think they've done a nice job with landscaping. I think they've put more than we're asking in there. **C/Young**: I don't think I have any issues with what's been presented. **C/Hennis**: The monument sign is low key, it's nice. I think it conforms really nicely.

Commissioner Hennis motions to approve Case Nos. 19-25-DR and 19-13-SN with the conditions as outlined in the staff report; Commissioner Gealy seconds, all aye and motion carried 3-0.

18-33-DR-A (Design Review) & 18-17-SN-A (Sign) - On behalf of Toll Brothers (Coleman Homes), Apex Sign Company requests design review approval for two 5-ft tall (approximate) illuminated monument signs for Winfield Springs Subdivision. The subject sites are located at North Sailer Way, Kuna, ID 83634. (APNs: R9466230700 & R9466230020).

Sam Weiger: Chairman, commissioners, for the record Sam Weiger, Planner I, City of Kuna 751 W 4th St. The application before you this evening is for design review consideration for two monument signs for the Winfield Springs Subdivision entrance located near the intersection of Meridian and Deer Flat Road. The proposed signs stand approximately 5 and a half ft tall and 20 ft across at its widest point. The proposed sign copy area is 40 square feet for both signs. Staff has determined the design review application complies with Kuna City Code, title 5, and would recommend that if the proposed project is approved, the applicant be subject to the conditions of approval listed in the staff report and any additional conditions requested by the Planning and Zoning Commission. **Craig Lunsford:** Craig Lunsford, Apex Sign Company, PO Box 2002, Eagle, ID 83616. Just to clarify on the sign area, what we have before you is actually 36 square feet. That is the sign letters themselves. **C/Young**: The existing signs are getting relocated, correct? **Craig Lunsford**: Yes, so Toll Brothers typically has large entry signage. What they have now really fits well with phase five, and not two large entrance signs. I've done half a dozen subdivision signs for them, and they typically aren't flanked on both sides, and they are more horizontal from 15 to 30 feet. They asked me to revisit this, and the plan is to remove the two existing signs and reinstall them into phase five. **C/Hennis**: When you say this is illuminated, is it just back-lit? **Craig Lunsford**: It is internally illuminated. When you see the Sterling Ranch, it's inside and what you see that the letters are mounted out. There's a piece that we call plex, and so the lighting comes through those letters. It's a subtle illumination. **C/Hennis**: It's the insignia that's backlit? **Craig Lunsford**: it's illuminated to what we call a halo. It's kind of subtle and away from you, and it provides a little bit of a halo shape. If you can see the existing signs, it just looks pretty small with that big space. They wanted us to revisit it. **C/Young**: The stone matches what's there, it's just a little bit longer. The entrance is pretty big. **C/Hennis**: It's just a little more appropriate. **C/Young**: Regarding the backlighting on the insignia, that looks good at night.

Commissioner Hennis motions to approve Case Nos. 18-33-DR-A and 18-17-SN-A with the conditions as outlined in the staff report; Commissioner Laraway seconds, all aye and motion carried 3-0.

3. **PUBLIC HEARING**

19-03-AN (Annexation), 19-02-S (Preliminary Plat) & 19-09-DR (Design Review) – Don Veasey (owner) requests to annex two parcels consisting of approximately 7.67 acres into Kuna City Limits with an R-6 (Medium Density Residential) zone and to subdivide the 7.67 acres into 38 total lots (33 buildable lots, 5 common lots). The subject sites are located at 642 S. Ash St. and S. Ash St., Kuna, ID 83634, within Section 26, Township 2 North, Range 1 West; (APNs: R5070503050 and R5070502835).

Jace Hellman: Good Evening, Chairman and Commissioners, for the Record, Jace Hellman, Kuna Planning and Zoning Staff, 751 W 4th St, Kuna, ID 83634. The applications before you this evening are the annexation of approximately 7.67-acres into Kuna City Limits with an R-6 (medium Density Residential) zoning classification, and the subdivision of the 7.67-acre parcel into 33 buildable lots and five common lots including a 12,000 square foot common lot. Additionally, the applicant has submitted a design review application for the projects landscaping and open space. Following review, staff has determined the annexation, preliminary plat and design review requests are within compliance of the Kuna City Code, Idaho State Code and the Kuna Comprehensive Plan.

As a reminder, the annexation and preliminary plat are before you as a recommendation to the City Council, and the Design Review is seeking your decision this evening. If the Commission approves the design review and recommends approval of the annexation/pre plat, Staff would recommend that the applicant be subject to the conditions of approval listed in section "i" of your staff report, as well as any other additional conditions, this decision-making body decides to impose. We did receive one late exhibit, which I have provided a copy for you this evening, and I will read into the record. Let the record show that comments from Cindy Giesen are noted as exhibit D7. Four paragraphs are pertaining to some posting questions with the project that staff is currently working on discussing with Ms. Giesen. We'll start at paragraph four. In particular, I am concerned about 1) the added traffic that a project like this will put on S. Ash and then onto Avalon; 2) the impact of having more homes on the south side of the train tracks which is always a fire/health/emergency rescue issue; 3) the school children's safety and school impact, each time another subdivision is approved; 4) the subdivision street lighting that recently seems to be getting more intense (>3000k) and is on from dusk to dawn, without sensors...; 5) and the impact of more 'white' vinyl fencing city requirements, which reflect even more of this street light into our 'rural;' dark skies. (Please Note: The 2 street lights in the new subdivision (no homes on it yet) on Ten Mile Rd between W. King and Avalon, look like an airplane runway or car with brights on, from my house acres away - due to the brightness of the lights, and it beaming on the white fences - and nobody lives there yet). This project appears to add 1.5x more trip-ends to the existing traffic on S. Ash. THAT IS A HUGE INCREASE FOR ONE PROJECT. South Ash is only wide where recent developments have been added. About 1/3 of S. Ash, nearest Avalon (N) is usually only wide enough for one-way traffic most the time, due to the fact that people park on the street (which they have probably been doing for the life of their homes, so shouldn't be forced to do otherwise). Most of South Ash is not a typical two-way street, it is a rural country road that doesn't even justify a dividing center line. I read there may be more exit/entries in the proposed subdivision, in the future, but we all know how that works out. A sign and rail fence is put up at a dead end road, but the road will not happen until someone decides to sell/develop their adjacent land. It can take years for another exit/entrance to open up, to alleviate the traffic impact. It's worth a study by P&Z to determine how often these promised roads actually happen. And how long did it take. Saying there may be another road in the future, is definitely not a justification for approval for the traffic problems the project generates today. Until there are more road connections, these promises are like promising you can flush a cow paddy down your toilet, without facing any consequences. There will be traffic flow consequences, without the proper infrastructure in place, before giving approval. Please consider my request to postpone the meeting so we can better understand and respond to what is being requested, now that documentation has been provide. Otherwise, please add my comments and concerns to your records for this Planning and Zoning hearing. After which time I can read your minutes and your responses to them, in preparation for the next City Council hearing on the project, if approved by P&Z. Additionally, I realized this morning that comments from the City Engineer were missing a page, so I have provided you with the full document as well, which is exhibit C-8 in your packet. With that, I will stand for any questions you may have. **C/Young**: We will take two-minutes. I do have a question about the City Engineer's report. It ties into the letter on the last page of the packet. In here, the engineer indicates to proceed with the preliminary plat. The letter indicated some concerns with pressurized irrigation, are there any pressure issues in that area? **Jace Hellman**: As far as the City Engineer reporting to the Planning and Zoning Department, there has been no assurance. However, we would be happy to provide documentation on that. As far as where they're at regarding capacity, it's a loop system. **C/Hennis**: How far is the sewer system to it. Is it connectable? **Jace Hellman**: There are some on Ash, and there's one on Cassandra. **C/Hennis**: The engineer doesn't state anything in here as to whether the capacity is the reason or not, though. **Jace Hellman**: Typically, what they would have to do is, once they get to their civil plan review, they'll need to go through and have all density and the QLPE and the serviceability on that. Again, we can reach out and have them provide some specifics on what that capacity looks like. **C/Hennis**: Isn't that kind of the cart before the horse, though? **Jace Hellman**: Yes. **C/Hennis**: I know this is clear on the other side of our sewer plant. The sewer plant is on the upper end of town. Is the old one on the south end of town still functioning? **Jace Hellman**: Yes. **C/Hennis**: Was it at capacity before? **Jace Hellman**: Prior, it was. I'm not too familiar with exactly how they release in

capacity, but there has been some shifting capacity in that station. They were able to switch some stuff to the north treatment plant. **Crystal McDaniel**: I'm Crystal McDaniel, and I'm with Accurate Surveying & Mapping. We've submitted the application for our client, Don Veasey, who is the owner and developer of Chotika. I think Jace has pretty much covered a lot of what I was going to cover, but I'll repeat a few things. The subdivision does consist of 33 buildable lots for single-family homes. There are also five common lots, four are landscape buffers and one is usable open space that will be a shared space with grass and trees. We are requesting a zoning of R-6, which would be six dwellings per acre. The buildable lots range from 4,911 square feet to 15,500 square feet. As noted in the Planning and Zoning staff report, Kuna's Comprehensive Plan encourages a variety of housing types for all incomes. A variety of lot sizes encourages a variety of houses in Chotika Subdivision. To assist with connectivity and the flow of traffic, our plan is to extend Recess Way and Cassandra. That's the plat, which shows the extensions of Recess and Cassandra. Cassandra ties into West Sunbeam, which is a mid-mile collector street. This will help with the traffic. If you look at the recently approved projects within the vicinity, most of those approved subdivisions surrounding are R-6. The closest to our proposal is Deserthawk Subdivision, which is a total of 7.41 acres and 36 total lots, 33 residential lots and three common lots. Ardmore Subdivision is a little bit bigger, it's 9.68 acres with 32 total lots, 30 residential lots and two common lots with an R-6 zoning. For irrigation, the property is currently under Boise Kuna Irrigation, and after this it will be the Kuna Municipal Irrigation System (KMIS). KMIS will make assessments and determine how to provide the service. I'll stand for any questions. **C/Young**: It looks faded in the staff report, but for verification, the entries for the existing lot on the northwest corner, it sits on Ash, will be closed off and that one will have new access off of recess. **Crystal McDaniel**: Are you referring to block 1? **C/Young**: Yes. **Crystal McDaniel**: That will lose its driveway access. **C/Young**: On Ash, but it will have it from Recess. **C/Young**: The common lot no. 3, that common area, you've indicated trees and grass for that. Are there any other amenities for that? Tot lots or a gazebo, for example. **Crystal McDaniel**: No, it's primarily just an open park. **C/Gealy**: Can you explain the rationale for the location of the open space within the subdivision. **Crystal McDaniel**: Yes. The owner has a long-term lease tenant on the abutting lot, the one that has the existing house. Part of the agreement with that tenant was that there would be the common lot placed there. **C/Young**: I'll open the public testimony at 6:37. **Jim Russell**: Jim Russell, 781 S. School Ave. Our property adjoins this in the southeast corner. Future Sunbeam Road is my first concern, which does not exist yet. It belongs to a property owner as previously stated. My second concern is fencing. We have livestock, bulls, and horses that are in the south side of my property. I have a wired fence down to there, and we also burn ditches and pasture. You name it, it's probably going to blow across the street. Number four on my list is irrigation, and that's a real high concern of mine. They put in Brandywine, and they eliminated some ditch work that went to my property, and we had to give the City a right-of-way down through my property. As it stands right at moment, the irrigation comes right down through the middle of this cul-de-sac. There's an irrigation box right there in that yellow area. At present, we use that ditch that comes a half-mile down and it flushes all the way down the property through this subdivision at the moment. I don't know how it ever flushed that line once the ditch disappears. We would need at least a ten-foot right of way to maintain that ditch in that irrigation box. Everything within this property is not the City of Kuna water, it's Boise Kuna Irrigation District. It's also affected water that comes down south and through this property. I just want a little more clarification on how they are going to handle this. Noise restrictions is another big item of mine, hydraulic hammers and dust control. Of course, the traffic situation, which I'll leave to the Bakers here, you've got a small subdivision going through Locust Grove, so whoever gets the traffic light first, whether it be Ash Street or School Street, that's the way the traffic is going. **Bryce Baker**: Mr. Chairman, Commissioners, Bryce Baker, I reside at 975 West Recess Way in Kuna. I am representing a group of homeowners. I do have a submittal, and I would like to pass out a late submission. It also includes a letter that summarizes some of our concerns. As homeowners of the Outpost Subdivision, were not anti-growth, and we're not opposed to the subdivision. We are, however, opposed to the subdivision to that is coming before you, with a proposed R-6 zoning. While it meets the intent of the number of people per acre, when you actually look at those lots, particularly the ones that are facing recess way, they are 50 feet wide or thereabouts, which is pretty narrow. If you flip back a couple of pages, just for context, I've drawn some things to scale here to help you visualize what we're talking about. My home on Recess

Way is one of the smaller homes in the subdivision. **C/Young**: This is now Exhibit D8, for the record. **Bryce Baker**: My home has one of the smaller footprints in the subdivision. I've drawn to scale what my home looks like on this present lot in Recess Way in the Outpost Subdivision. How would fit on a typical lot in the Chotika Subdivision that's 50 feet wide. At best, the dimensions of the lots that are being proposed would severely limit potential architecture for the types of homes that are put on these lots. I've also included some photographs, these are just on Google Earth. I've just selected a couple typical homes in the Outpost Subdivision, Brandywine, and Placerville. The current lots are outlined in blue, and the proposed typical Chotika lot is outlined in red. You can see how that compares with existing homes in lots that are adjacent to this subdivision. None of these smaller homes, including a small 1400 square-foot home in the middle of the Brandywine Subdivision that I've got outlined there, that would fit on this 50-foot-wide lot. That limits the type of homes in size to probably 1100 to 1200 square-foot homes for the most part. I think I'm allowed 10 minutes, because I represent a group, correct? **C/Young**: There are rules for that, you have to submit a list of people you represent at a time and have it issued prior to the hearing. **Bryce Baker**: I apologize, I didn't understand that rule and procedure. The rest of our comments and concerns are outlined in the letter that I submitted to you. I'd appreciate if you take a moment to review those exhibits and images. **Eddie Moreno:** Eddie Moreno, 1041 W Recess Way, Kuna, Idaho. I live in the Outpost Subdivision, and I've been living there since it was built originally. Our builder, Mick, is a long-time resident, who envisioned the south side of Kuna, which back in 2005 when he was building it, hoped that it would blend with the agricultural feel that it is in the south side. Understanding that on the north side, growth will happen. We lived on the north side before and moved to the south side for the agricultural aspect of it. Looking at the design of the subdivision, I question why so many homes are in such a small area. In my opinion, an R-4 designation would be more appropriate for the area. Not only that, all those homes added and a couple more people on Recess Way wouldn't be good. I work in the government sector, so I know about public safety. I see issues on Recess regarding vehicle speed, and it is what it is. It comes with growth. Regarding Ash, I've driven by Ash. To me, it's not all fully developed to what School Road and Recess Way is. In my opinion, if the subdivision gets approved, I think there should be a lot more improvement to Ash, so it can meet the demands of the population moving in there. Regarding issues of public safety, there was an accident on School Road. I ask you to revisit this plan to be more in tune with what we have in the south side. **Jerry Flarel**: 1022 W Recess Way. I agree with the rest of the group that R-4 would be more appropriate. Regarding the subdivision, when you add onto Recess Way, I'm concerned about traffic. I'm also concerned about the lack of sidewalks going up and down Ash. Right there at the end, kids ride their bikes down the street to get onto Avalon. You've got everything on Ten Mile. Wherever we've developed, we've put sidewalks in. To be responsible you need to include sidewalks. One other thing is emergency services. It does concern me to keep adding here. **Crystal McDaniel**: We're using vinyl fence, but are there any other options we would have? **C/Hennis**: Rod iron is also acceptable. **Crystal McDaniel**: As far as irrigation goes, the Boise Project Board of Control gave their feedback as far as irrigation is concerned. There is a requirement that both irrigation and drainage ditches crossing this property in order to serve neighboring properties must remain unobstructed and protected by appropriate easements to address the irrigation concerns and continued access to it. As far as what kind of houses go in, I don't know which houses will go in, that's the next phase. One of the things that I read in the Kuna Comprehensive Plan. The trends section of the Plan says that Kuna continues to grow. 54,000 is the projected population by 2040. Kuna is shifting from agricultural product to government and service sectors. Kuna has the potential to become a thriving community with more local jobs. There is a growing demand for housing in Kuna. This may be partially driven by younger families and professionals seeking out less expensive housing options. This subdivision will maybe provide some housing for those seeking to move there. **C/Young**: I'll close the public testimony at 6:55. That brings up our discussion. Has our fire department has had a chance to reviewed the preliminary plat. **Jace Hellman**: The fire department was sent the entire packet that was submitted to staff. They did not provide on-paper comments. They were a part of the pre-application meeting. They had no comments as far as access. Their only comments were location of fire hydrants and making those accessible. **C/Hennis**: Mr. Russell indicated that the Sunbeam extension was on other property owner's property. Is there an easement there already for the street, or how will that work with what he indicated? **Jace Hellman**: There is no easement on the

property so far. The right-of-way that they'll be dedicating for that portion of Sunbeam will come from their property as far as their half of the road to construct. It will go into a road trust as ACHD is requiring, because as it sits right now, there is no place for it to develop it because the properties around it are undeveloped. There would just be a half of a road section going to nowhere on each side. ACHD has required them to dedicate that right-of-way, which is on their property, for the road trust, which is highlighted at the bottom in that orange. That's the buffer and then below that would be the road section of the right-of-way that they'd be dedicating. **C/Hennis**: I'm concerned about having this many lots in that little area. These are very narrow-fronted lots stubbed with four flag lots. I don't know if I'm concerned as much with traffic, because I think it will access the other way. Ash Street obviously has an issue. It's a small street. I'm also concerned with law enforcement services. We don't have anything on record that they're looking to have substations. They have them on the east side of Kuna, but a lack on the south side. I'm concerned with that. The pressurized irrigation is obviously an issue. Without the sewer hookup, it may not be as big of an issue. We don't know that for sure. **C/Young**: I think the pressure irrigation is alright. For the other subdivisions, they were talking about lift station issues? **C/Hennis**: No, they were talking about the pressurized irrigation, but they irrigate between 3 AM and 8 AM. There was a noticeable performance drop when the systems are in use. **C/Laraway**: A couple weeks ago we had the same scenario, where we had agricultural backing up against the subdivision. A chain-link fence was talked about, I think. We can make a recommendation on that to see what can be done to separate livestock. **C/Young**: A condition to work with the neighbors on a situation to help stabilize and prevent the agricultural interest. **C/Laraway**: This is the first subdivision I've seen that's had so many ingress and egress entrance points. I realize ACHD makes all these trees line up, and we have to have access to them. The lot design is a little bizarre. I don't know if it's designed that way for a reason. That's my personal taste, obviously. They have those long entry points, and I have a question for staff to verify that the fire department is fine with those long driveways going into those back areas. They don't like backing up. **Jace Hellman**: The maximum they're allowed to have is 150 feet, and those driveways are 110. **C/Hennis**: There's five flagpole lots. They're maximizing the amount of lots in there, and I don't know if that's appropriate. **C/Laraway**: I don't know if pushing this to an R-4 would alleviate the flagpole lots. With all those access points, it looks like 50 percent of the traffic is going to go out on School, and the other 50 percent will go out on Ash. Again, we can't stop the access points, that's ACHD. **C/Young**: One nice thing about the existing section of Recess is that there is a roundabout in there to potentially help with that. **C/Young**: Another point up for consideration are the lack of amenities in the common area. **C/Laraway**: Since you've been on Recess, going back to what I was talking about, isn't that roundabout one lane? **C/Young**: Yes, but it still functions as a two-way. **C/Gealy**: Two of my key points are transitional lots and amenities for the people that will live there. It appears that there is a very nice transition for the existing tenant in the home that's there. It appears that there is very little consideration for transitions to many of the surrounding property owners. There is very little consideration for amenities for the people potentially living in this community. When I found myself looking at this plan and asking, is this the best we can do? Surely, we can be more creative. If a promise has been made to the existing tenant to have open space beside them, that's fine. There's no reason why we can't increase the amount of open space that's available to other people living in the neighborhood, and perhaps consider a reconfiguration with additional open space. We don't want to have these flagpole lots, very narrow lots. I understand you really can't predict what size of house is going to go onto a lot, but it's going to be affected somewhat by the size of the lot. I always want to look at transitional lots, transitional lots from existing to proposed. Also, I look at lots within the subdivision. I want to be sure we consider amenities. Is this the best we can do with this piece of property? I think there's a lot more potential then what I see here. I go back to the Comprehensive Plan. We want Kuna to be a desirable place to live. Is this proposed subdivision increasing the desirability of Kuna as a place to live? Or, is this subdivision just increasing the number of houses in Kuna? I think that's two different things. **C/Young**: Would the applicant consider an R-4 designation instead of R-6? **Crystal McDaniel**: That's not something that I can answer at this time. I'd need to have a discussion first. **C/Laraway**: This is not the optimal design. **C/Hennis**: The main is that this doesn't coordinate with the areas around it. We're maximizing the amount that go in here at this point, and it doesn't jive with the properties to the south. I have issues stuffing that many homes in this area, because of safety

services on that side of town. Obviously, we already have issues with irrigation. An R-4 would definitely be something that I think could be accomplished a little bit easier. I just think it's a little more appropriate. It still doesn't buffer the southwest, but it's a start. **C/Young**: We have several options. We can table this and have them come back with a little different layout and have that discussion at that time. We can recommend denial, or recommend approval with conditions to potentially recommend to Council. **C/Laraway**: I'm looking at the technicalities of the area around it. The flagpole lots are a concern. **C/Young**: I think they should come back with a little different configuration. Items we would be looking for are fewer flag lots. Another thing would be adding more amenities in common areas. The fencing along the agricultural uses north of the subdivision would be another. **C/Laraway**: The subdivision to the east is R-4, and the subdivision to the north is R-4. **C/Hennis**: There are even R-2's close. **C/Young**: Is there a thought to having them come back with a different layout we can review? Or will we condition approval with an R-4? **C/Hennis**: We could table it, so we can see what comes back and not just kick it to City Council and let them deal with it. We're interested in how this lays out, figuratively and literally. **Wendy Howell**: Regarding kicking it to City Council, if there's a significant change, as to what was presented to you, it would have to be re-noticed at your level. **C/Hennis**: This would be a more efficient use of the applicant's time if we just tabled it? **C/Young**: It would save Council's time too. **C/Hennis**: I would prefer that. **C/Gealy**: I would like to see further consideration of the open space and amenities in consideration of the people that will be living in the subdivision. I understand they put that lot up there because of an agreement with the existing tenant. I'm more concerned actually about the people that will be living there. I am not by any means an architect. I wonder if you couldn't envision scenarios for some of these homes where there is open space that they could all use, versus that common lot. **C/Hennis**: You're talking about the flagpole lots, correct? **C/Gealy**: Yes. **C/Young**: We'll include amenities, additional fencing for separation between the two. **C/Gealy**: Do we want to configure to an R-4? **C/Young**: I don't know if we can do that at this point, we'll see what they come back with. We can suggest that type of density. **Wendy Howell**: If you're going to recommend that, in order for them to make the changes, I'll have it back to staff by October 1, which is next Tuesday, and I don't know if that's possible to make it in that time frame. We will have to review it, and get it back out to packets for you. The conversation is whether October 8 or October 22 would be more appropriate. That need's to be worked out with the applicant's representative. **C/Young**: I know it takes time for them to reconfigure things. I have another question for the applicant. Could we table this to a certain time? Is there a time frame that you would need to try and make revisions? **C/Hennis:** The main question is, at that point, the next available meeting would be the 8th of October. The following meeting would be more preferred. How quickly would you get on that?

Commissioner Hennis motions to table Case Nos. 19-03-AN and 19-02-S and 19-09-DR until the meeting on October 22nd to give the applicant time to address adding amenities in the open space and possibly redesigning the open space for its usage, preferably to see a new layout of the plat, or possibly an R-4 density to remove some of the flagpole lots and widen some areas, and also to address the fencing to separate the subdivision and the property owner to the east with livestock containment; Commissioner Laraway seconds, all aye and motion carried 3-0.

C/Gealy: I have a question for staff, did we have a landscape plan? **Jace Hellman**: Exhibit B2 in your packet. **C/Gealy**: Have we tabled the preliminary plats, annexation and design review? **C/Hennis**: Yes, I think they're all kind of intertwined enough, just one thing will affect all three.

4. COMMISSION REPORTS

5. ADJOURNMENT

Commissioner Gealy motions to adjourn; Commissioner Laraway Seconds, all aye and motion carried 3-0.

MEETING MINUTES
Tuesday, September 24, 2019

Lee Young, Chairman
Kuna Planning and Zoning Commission

ATTEST:

Wendy I. Howell, Planning and Zoning Director
Kuna Planning and Zoning Department

City of Kuna

Planning and Zoning Commission
Staff Report

P.O. Box 13
Phone: (208) 922-5274
Fax: (208) 922-5989
www.Kunacity.id.gov

To: **Planning and Zoning Commission**

File Numbers: **19-05-SUP** (Special Use Permit); Patricia Johnson Massage Therapy

Location: 1195 West Castro Drive
Kuna, ID 83634

Planner: Doug Hanson, Planner I

Hearing date: January 14, 2020

Owner/Applicants: Patricia Johnson
1195 West Castro Drive
Kuna, ID 83634
208-409-0285
pmjohnson88@gmail.com

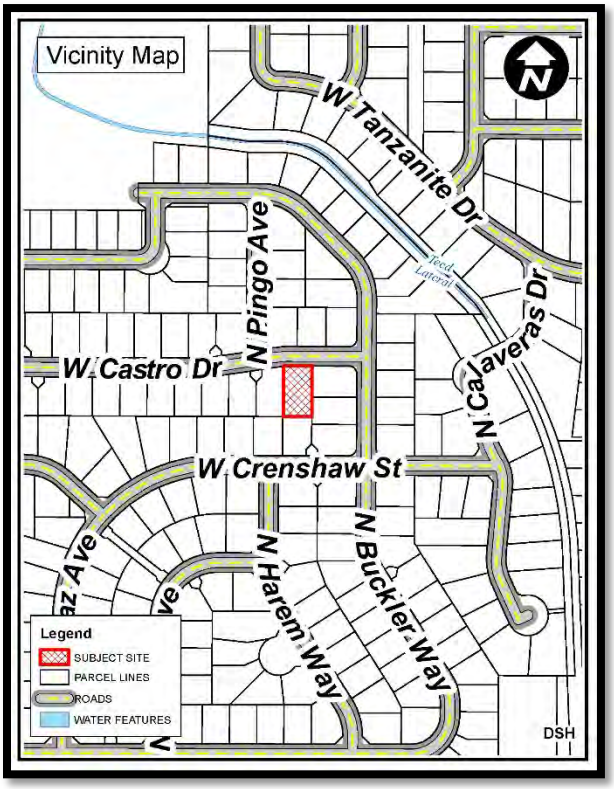


Table of Contents:

A. Course Proceedings
B. Applicants' Request
C. General Project Facts
D. Staff Analysis
E. Applicable Standards
F. Comprehensive Plan Analysis
G. Proposed Decision by the Commission

A) Course of Proceedings:

1. The applicant is proposing to operate a massage therapy business within an existing accessory building located at 1195 West Castro Drive. In accordance with Titles 5-3 and 5-6 (Zoning Districts and Definitions) of Kuna City Code (KCC) this use requires approval of a Special Use Permit (SUP).

2. In accordance with KCC Title 5 and Chapters 3 and 6, the applicant seeks approval of a special use permit (SUP) for a massage therapy business at the subject site.

a. Notifications

i.	Neighborhood Meeting	September 28, 2019 (no attendees)
ii.	Agencies	December 9, 2019
iii.	300' Notice to Property Owners	December 12, 2019
iv.	Kuna Melba Newspaper	December 18, 2019
v.	Site Posted	January 3, 2020

B) Applicants' Request:

The applicant, Patricia Johnson, seeks Special Use Permit approval in order to operate a home massage therapy business from an accessory structure located at 1195 West Castro Drive, Kuna, ID 83634 (APN: R6899690200).

C) General Project Facts:

1. Surrounding Land Uses:

North	R-6	Medium Density Residential – Kuna City
South	R-6	Medium Density Residential – Kuna City
East	R-6	Medium Density Residential – Kuna City
West	R-6	Medium Density Residential – Kuna City

2. Parcel Sizes, Current Zoning, Parcel Numbers:

- Parcel Size: Approximately .22 acres
- Zoning: R-6 (Medium Density Residential)
- Parcel Number: R6899690200

3. Services:

Sanitary Sewer– City of Kuna
Potable Water – City of Kuna
Irrigation District – Kuna Municipal District (KMIS)
Fire Protection – Kuna Rural Fire District
Police Protection – Kuna Police (Ada County Sheriff)
Sanitation Services – J&M Sanitation

4. Existing Structures, Vegetation and Natural Features:

There is currently a single-family home and accessory building that is approximately 80 square feet on the subject site. The existing vegetation on site is associated with that of a single-family home.

5. Transportation / Connectivity:

Current access to the site exists from West Castro Drive via an existing driveway.

6. Environmental Issues:

Apart from being in the nitrate priority area, staff is not aware of any additional environmental issues, health or safety conflicts at this time.

7. Comprehensive Future Land Use Map: The Future Land Use Map identifies this site as Medium Density Residential.

8. Agency Responses:

The following agencies returned comments which are included as exhibits with this case file:

- City Engineer …… Exhibit B1
- DEQ …… Exhibit B2

D) Staff Analysis:

The applicant is proposing to open a home massage therapy business within an approximate 80 square foot accessory structure located in the rear yard of their home (Lot 19 Block 17 of Palomar Heights Subdivision No. 5). The applicant, Patricia Johnson who will be providing the service to customers has been a massage therapist for ten years and is licensed and certified with the state of Idaho.

The business will operate Monday, Wednesday, Thursday, Friday and Saturday starting at 10:00 am with no new after 7:00 pm. Clients will be scheduled by appointment only, there will be no walk-ins. Parking will be provided through use of the driveway and only one client will be serviced at a time in order to avoid any type of added traffic congestion within the subdivision.

Staff has determined that this application complies with Title 5 of KCC; Idaho Code; the Comprehensive Plan and the Future Land Use Map; Staff recommends that if the Planning and Zoning Commission approves Case No. 19-05-SUP that the applicant be subject to the recommended conditions of approval listed in section "G" of this report.

E) Applicable Standards:

1. Kuna City Code, Title 5, Zoning Regulations.
2. City of Kuna Comprehensive Plan.
3. Idaho Code, Title 67, Chapter 65, Local Land Use Planning Act.

F) Comprehensive Plan Analysis:

The Kuna Planning and Zoning Commission may (*accept or reject*) the Comprehensive Plan components, and has determined the requested Special Use Permit for the site (*is/is not*) consistent with the following Comprehensive Plan components as described below:

Goal Area 1: Kuna will be Economically Diverse and Vibrant.

- Goal 1.C: Attract and encourage new and existing businesses.
  - Objective 1.C.2: Create an environment that is friendly to business creation, expansion and relocation.

Goal Area 3: Kuna's Land uses will support a desirable, distinctive and well-designed community.

- Goal 3.G: Respect and protect private property rights.
  - Objective 3.G.1: Ensure land use policies, restrictions, and fees do not violate private property rights.
    - Policy 3.G.1.c: Ensure City land use actions, decisions and regulations do not prevent a private property owner from taking advantage of a fundamental property right. Ensure city actions do not impose a substantial and significant limitation on the use of the property.

G) Proposed Decision and Order by the Commission:

Note: This motion is for approval, conditional approval or denial of this request. If the Planning and Zoning Commission wishes to change specific parts of these conditions as detailed below, those changes must be specified.

Based on the facts outlined in staff's report as presented and public testimony, the Planning and Zoning Commission of Kuna, Idaho, hereby *(approves, conditionally approves or denies)* Case No. 19-05-SUP, a request for a Special Use Permit by Patricia Johnson with the following conditions of approval:

1. The applicant shall obtain a building permit for required building modifications, remodeling, or additions to the existing structure, prior to construction (mechanical, plumbing or electrical modifications are considered modifications under this condition; and is required).
2. The applicant shall maintain a Kuna City Business License through Kuna City Clerk's office once the Special Use Permit is acquired.
3. Signs, banners, flags or other means to advertise, attract attention, or identify the site as a business are not allowed, in accordance with Kuna City Code 5-5-4 (K).
4. Parking on site shall comply with Kuna City Code 5-5-4-K-3-g (Except as specifically approved otherwise).
5. The Special Use Permit is not transferrable between parcels.
6. This Special Use Permit is valid if the conditions of approval are adhered to continuously. In the event the conditions are not continuously followed; the Special Use Permit approval may be revoked.
7. The applicants shall follow all staff and agency recommendations.
8. The applicants shall comply with all local, state and federal laws.

DATED this 14th day of January, 2020.

City of Kuna

Kuna Planning and Zoning Commission
Proposed Findings of Fact and Conclusions of Law

P.O. Box 13
Phone: (208) 922-5274
Fax: (208) 922-5989
www.Kunacity.id.gov

Based upon the record contained in Case No. 19-05-SUP including the Comprehensive Plan, Kuna City Code, Staff's Memorandums, the exhibits, and the testimony during the public hearing, the Kuna Planning and Zoning Commission hereby *(approves/conditionally approves/denies)* Case No. 19-05-SUP, a request from Patricia Johnson to operate a home massage therapy business. The site is located at 1195 West Castro Drive, Kuna, ID 83634.

If the Planning and Zoning Commission wishes to approve, deny or modify specific parts of the Findings of Facts and Conclusions of Law as detailed below, those changes must be specified.

1. Based on the evidence contained in Case Nos. 19-05-SUP, this proposal ***does/does not*** generally comply with the City Code.

   Staff Finding: *The applicants have submitted a complete application, and following staff review for technical compliance the application appears to be in general compliance with the special use standards, supplementary conditions and safeguards in Kuna City Code Title 5.*

2. Based on the evidence contained in Case Nos. 19-05-SUP, this proposal ***does/does not*** generally comply with the Comprehensive Plan.

   Staff Finding: *The current zoning district is R-6 (Medium Density Residential). The Comp Plan Map designates this property as Medium Density Residential.*

3. The home massage therapy business ***does/does not*** constitute a special use as established on the official schedule of district regulations for the zoning district involved.

   Staff Finding: *According to the official schedule of district regulations, a home massage therapy business does constitute a special use for an R-6 zoning district when conducted in an accessory building.*

4. The applicant ***does/does not*** plan to keep the residence harmonious within the subdivision.

   Staff Finding: *The massage therapy business will take one client at a time, the residence driveway features two parking spots, and the hours of operation will not interfere with quiet hours.*

5. The public notice requirements were met and the public hearing was conducted within the guidelines of applicable Idaho Code and City Ordinances.

   Staff Finding: *As noted in the process and noticing sections, notice requirements were met to hold a public hearing on January 14th, 2020.*

DATED this 14th day of January, 2020.

Aerial Map
W Tanzanite Dr
N Pingo Ave
Teed Lateral
N Calaveras Dr
W Castro Dr
W Crenshaw St
N Harem Way
N Buckler Way
Legend
SUBJECT SITE
ROADS
WATER FEATURES
DSH

received
10.31.19

CityofKuna
Planning& Zoning
Department
P.O. Box 13
Kuna, Idaho 83634
208.922.5274
Fax: 208.922.5989
Website: www.kunacity.id.gov

Commission & Council Review Application

Note: Engineering fees shall be paid by the applicant if required.

*Please submit the appropriate checklist (s) with application

For Office Use Only	
File Number (s)	19-05-SUP
Project name	PATRICIA JOHNSON MASSAGE THERAPY
Date Received	10.31.19
Date Accepted/ Complete	
Cross Reference Files	
Commission Hearing Date	
City Council Hearing Date	

Type of Review (check all that apply):

- ☐ Annexation
- ☐ Appeal
- ☐ Comprehensive Plan Amendment
- ☐ Design Review
- ☐ Development Agreement
- ☐ Final Planned Unit Development
- ☐ Final Plat
- ☐ Lot Line Adjustment
- ☐ Lot Split
- ☐ Planned Unit Development
- ☐ Preliminary Plat
- ☐ Rezone
- ☑ Special Use
- ☐ Temporary Business
- ☐ Vacation
- ☐ Variance

Contact/Applicant Information

Owners of Record: Patricia Johnson	Phone Number: (208)409-0285
Address: 1195 W. Castro Dr.	E-Mail: pmjohnson88@gmail.com
City, State, Zip: Kuna, ID 83634	Fax #:
Applicant (Developer): Same	Phone Number:
Address:	E-Mail:
City, State, Zip:	Fax #:
Engineer/Representative:	Phone Number:
Address:	E-Mail:
City, State, Zip:	Fax #:

Subject Property Information

Site Address: 1195 W. Castro Dr. Kuna, ID 83634
Site Location (Cross Streets): Castro / Buckler
Parcel Number (s): R6899160200
Section, Township, Range: 2N1W14
Property size : 0.22
Current land use: RESIDENTIAL — Proposed land use: HOME OCCUPATION
Current zoning district: R-6 — Proposed zoning district: R-6

Project Description

Project / subdivision name: Studio Zen / Palomar Sub.

General description of proposed project / request: Practicing massage therapy from Studio (shed) on property.

Type of use proposed (check all that apply):

- ☐ Residential
- ☐ Commercial
- ☐ Office
- ☐ Industrial
- ☑ Other Home occupation

Amenities provided with this development (if applicable):

Residential Project Summary (if applicable)

Are there existing buildings? ☑ Yes ☐ No

Please describe the existing buildings: Shed into massage studio

Any existing buildings to remain? ☑ Yes ☐ No

Number of residential units: Number of building lots:

Number of common and/or other lots:

Type of dwellings proposed:

- ☐ Single-Family
- ☐ Townhouses
- ☐ Duplexes
- ☐ Multi-Family
- ☑ Other

Minimum Square footage of structure (s):

Gross density (DU/acre-total property): Net density (DU/acre-excluding roads):

Percentage of open space provided: Acreage of open space:

Type of open space provided (i.e. landscaping, public, common, etc.):

Non-Residential Project Summary (if applicable)

Number of building lots: Other lots:

Gross floor area square footage: Existing (if applicable):

Hours of operation (days & hours): Building height:

Total number of employees: 1 Max. number of employees at one time: 1

Number and ages of students/children: Seating capacity:

Fencing type, size & location (proposed or existing to remain):

Proposed Parking:

a. Handicapped spaces: Dimensions:
b. Total Parking spaces: Dimensions:
c. Width of driveway aisle:

Proposed Lighting:

Proposed Landscaping (berms, buffers, entrances, parking areas, common areas, etc.):

Applicant's Signature: Patricia Johnson Date: 10/29/19

received
10.25.19

City of Kuna
Planning & Zoning
Department
P.O. Box 13
Kuna, Idaho 83634
208.922.5274
Fax: 208.922.5989
Website: www.kunacity.id.gov

Special Use Checklist

Special Use requires a public hearing with the Planning & Zoning Commission. A public hearing sign will be required to be posted by the applicant for the meeting. Sign posting regulations are available online.

Project name:	Applicant:
Studio Zen LLC	Patricia Johnson

All applications are required to contain one copy of the following:

Applicant (√)	Description	Staff (√)
✓	Completed and signed Commission & Council Review Application.	
✓	Detailed submittal letter explaining how the project enhances and beautifies the community and types of services the project will provide.	
	Legal description of the property: Include a metes & bounds description to the section line of all adjacent roadways stamped & signed by a registered professional land surveyor with a calculated closure sheet & a map showing the boundaries of the legal description.	
✓	Proof of ownership—A copy of your deed and Affidavit of Legal Interest (for all interested parties).	
	8 1/2 x 11 vicinity map showing streets, driveways, property lines, etc.	
	Landscape plan drawn to scale as the same size as the site development plan with the following details: ◊ Type, size and location of all existing & proposed plant materials and other ground covers. The size of plants at planting and maturity should be included. ◊ Existing vegetation labeled to remain or to be removed with landscaping on adjacent properties by area (s) to be considered. ◊ Method of irrigation. ◊ Cross-sections through areas of special features, berms, retaining walls, etc. ◊ Footprints of all structures to be constructed.	
✓	Site development plan on 24x36 to scale (not smaller than 1=30 unless otherwise approved) with the following information: ◊ Building locations—existing and proposed with spare-footages. ◊ Fences—existing, surrounding and proposed. ◊ Off-street parking, circulation and driveway locations and types. ◊ Location and size of adjacent streets and driveways. ◊ North arrow and property lines. ◊ Drawings of major exterior elevations. ◊ Building materials and color scheme. ◊ Existing grades and proposed new grades. ◊ Existing lighting and proposed lighting.	
✓	Commitment of Property Posting form signed by the applicant/agent.	
✓	Neighborhood meeting certification (certification & neighborhood meeting list forms shall accompany this application).	

Note: Only one copy of the above items need to be submitted when applying for multiple applications.

This application shall not be considered complete (nor will a Public Hearing be set) until staff has received all required information. Once the application is deemed complete, staff will notify the applicant of the scheduled hearing date, fees due, additional copies needed, etc.

To whom it may concern:

My intention in applying for this special use permit is so that I can provide an affordable option for therapeutic massage. I have been a massage therapist for 10 years now. I am licensed and certified through the State of Idaho. I will only accept scheduled appointments and not provide my address to avoid walk-in clients. Therefore, disruption to the traffic in my subdivision will not be a problem. I will only work M,W,TH, F, Sa between the hours of 10 a.m. -8 p.m. (accepting my last client of the day at 7). I would like to be able to offer the community of Kuna the benefit of health and wellness that comes from therapeutic massage.

Sincerely,

Patricia Johnson

City of Kuna
P.O. Box 13
Kuna, Idaho 83634

Phone: (208) 922-5274
Fax: (208) 922-5989
Web: www.kunacity.id.gov

City of Kuna

COMMITMENT TO PROPERTY POSTING

Per City Code 5-1A-8, the applicant for all applications requiring a public hearing shall post the subject property not less than ten (10) days prior to the hearing. The applicant shall post a copy of the public hearing notice or the application(s) on the property under consideration.

The applicant shall submit proof of property posting in the form of a notarized statement and a photograph of the posting to the City no later than seven (7) days prior to the public hearing attesting to where and when the sign(s) were posted. Unless such Certificate is received by the required date, the hearing will be continued.

The sign(s) shall be removed no later than three (3) days after the end of the public hearing for which the sign(s) had been posted.

I am aware of the above requirements and will comply with the posting requirements as stated in Kun a City Code 5-1A-8.

Applicant/agent signature: _____ Date: 10/29/2019

Neighborhood Meeting Certification

CITY OF KUNA PLANNING & ZONING * 763 W. Avalon, Kuna, Idaho, 83634 * www.kunacity.id.gov * (208) 922-5274 * Fax: (208) 922-5989

GENERAL INFORMATION:

You must conduct a neighborhood meeting prior to application for variance, conditional use, zoning ordinance map amendment, expansion or extension of a nonconforming use, and/or a subdivision. Please see Section 5-1A-2 of the Kuna City Code or ask one of our planners for more information on neighborhood meetings.

The meeting must be held either on a weekend between 10 a.m. and 7 p.m., or a weekday between 6 p.m. and 8 p.m. Meetings cannot be conducted on holidays, holiday weekends, or the day before or after a holiday or holiday weekend. The meeting must be held at one of the following locations:

- The Subject Property;
- The nearest available public meeting place (Examples include fire stations, libraries and community centers);
- An office space within a 1-mile radius of the subject property.

The meeting cannot take place more than 2 months prior to acceptance of the application and the application will not be accepted before the neighborhood meeting is conducted. You are required to send written notification of your meeting, allowing a reasonable amount of time before your meeting for property owners to plan to attend. Contacting and/or meeting individually with residents will not fulfill Neighborhood Meeting requirements.

You may request a list of the people you need to invite to the neighborhood meeting from our department. This list includes property owners within 300 feet of the subject property. Once you have held your neighborhood meeting, please complete this certification form and include it with your application.

Please Note: The neighborhood meeting must be conducted in one location for attendance by all neighboring residents. Contacting and/or meeting individually with residents does not comply with the neighborhood meeting requirements.

Please include a copy of the sign-in sheet for your neighborhood meeting, so we have written record of who attended your meeting and the letter of intent sent to each recipient. In addition, provide any concerns that may have been addressed by individuals that attended the meeting.

Description of proposed project: Massage Therapy from Home

Date and time of neighborhood meeting: 9/28/19 10-11 a.m.

Location of neighborhood meeting: 1195 W. Castro Dr., Kuna, ID 83634

SITE INFORMATION:

Location: Quarter: ____ Section: ____ Township: ____ Range: ____ Total Acres: ____

Subdivision Name: Palomar Lot: ____ Block: ____

Site Address: 1195 W. Castro Dr. Kuna, ID 83634 Tax Parcel Number(s): ____

Please make sure to include **all** parcels & addresses included in your proposed use.

CURRENT PROPERTY OWNER:

Name: Crestin, Patricia Johnson

Address: 1195 W. Castro Dr. City: Kuna State: Idaho Zip: 83634

CONTACT PERSON (Mail recipient and person to call with questions):

Name: Patricia Johnson Business (if applicable): Studio Zen LLC

Address: 1195 W. Castro Dr. City: Kuna State: ID Zip: 83634

PROPOSED USE:

I request a neighborhood meeting list for the following proposed use of my property (check all that apply):

Application Type	*Brief Description*
Annexation	
Re-zone	
Subdivision (Sketch Plat and/or Prelim. Plat)	
✓Special Use	Practice massage therapy from Home
Variance	
Expansion of Extension of a Nonconforming Use	
Zoning Ordinance Map Amendment	

APPLICANT:

Name: Patricia Johnson

Address: 1195 W. Castro Dr.

City: Kuna State: ID Zip: 83634

Telephone: (208)409-0285 Fax: _____

I certify that a neighborhood meeting was conducted at the time and location noted on this form and in accord with Section 5-1A-2 of the Kuna City Code

Signature: (Applicant) Patricia Johnson Date 9/28/19

NEIGHBORHOOD MEETING MINUTES

Meeting Date: 9/28/19 Number of Attendees: 1 (host)

Meeting Location: 1195 W. Castro Dr.
Kuna, ID 83634

Description of Project Presented:
As a certified, licensed, and insured massage therapist, Patricia Johnson would like to practice her trade in a shed that has been transformed into a massage studio, on her property. The highlights of proposal are listed in attached letter that was sent to neighbors.

Attendee's comments:
n/a

I hereby certify that the above information is complete and correct to the best of by knowledge.

Patricia Johnson
Printed Name

Patricia Johnson
Signature

9/28/19
Date

SIGN IN SHEET

PROJECT NAME: Studio Zen LLC

Date: 9/28/19

	Name	Address	Zip	Phone
1	Patricia Johnson	1195 W. Castro Dr.	83634	(208)409-0285
2				
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NEIGHBORHOOD MEETING

My name is Patricia Johnson and I am a NEIGHBOR of yours in the Palomar Subdivision located at 1195 W. Castro Dr. I am a licensed and professional massage therapist. The passion that I have for helping others is the reason that I am hoping to start an at home massage therapy business. Below are some highlights to address any concerns on your part.

- I WILL ONLY ACCEPT ONE CLIENT AT A TIME (THEREFORE, PARKING WILL NOT BE A DISTURBANCE)
- I WILL ONLY ACCEPT SCHEDULED MASSAGE APPOINTMENTS. (I WILL NOT LIST MY ADDRESS ON MY BUSINESS CARD TO PREVENT WALK-IN CLIENTELE.)
- MY HOURS OF OPERATION WILL BE M, W, TH, F, SA 10A.M.-8.PM (I WILL ACCEPT MY LAST CLIENT OF THE DAY AT 7 P.M.)
- MY RATES ARE $35 FOR A 55 MINUTE MASSAGE (INCLUDING THE INTAKE IT WILL TAKE APPROXIMATELY AN HOUR.)

To address any further questions or concerns about this business, please come to our community meeting. It will be held outside my house at the address of my business.

Date: 9/28/2019

Time: 10 a.m.-11 a.m.

Location: 1195 W. Castro Dr.

Kuna, ID 83634

1883 PINGO LLC		1873 N TAMMY PL	MERIDIAN, ID 83646-0000
AH4R PROPERTIES TWO LLC		30601 AGOURA RD STE 200	AGOURA HILLS, CA 91301-0000
ALLEN DEANN		1255 W CASTRO DR	KUNA, ID 83634-0000
AMERICAN HOMES 4 RENT PROPERTIES NINE LLC		30601 AGOURA RD STE 200	AGOURA HILLS, CA 91301-0000
ARAGON JASON	ARAGON STEFANIE	1107 W CRENSHAW ST	KUNA, ID 83634-0000
BABBITT CURTIS	BABBITT KELLI	1787 N CALAVERAS DR	KUNA, ID 83634-0000
BARRETT CHRIS	BARRETT BILLY	1691 N CALAVERAS PL	KUNA, ID 83634-0000
BARTOL ROBERT M		23041 BUSKIRK DR	MIDDLETON, ID 83644-5677
BASTIAN TARA E	BASTIAN RAYMOND K	1807 N CALAVERAS DR	KUNA, ID 83634-0000
BELL RUTH	BELL RICHARD	1235 W CRENSHAW ST	KUNA, ID 83634-0000
BOXALL ROBERT	BOXALL DONNA	PO BOX 1582	MERIDIAN, ID 83630-0000
BROCKEL RICHARD J	BROCKEL WHITNEY A	3249 E DOWLING MILL CT	BOISE, ID 83706-0000
BROOKS CHRISTA L		1268 W HAVER ST	KUNA, ID 83634-0000
CAMPBELL KELLY		1170 W CASTRO DR	KUNA, ID 83634-0000
CHAPMAN DANIEL	CHAPMAN ADINA	8300 SAN MARCOS RD	ATASCADERO, CA 93422-4062
CLARK NICHOLAS G		1252 W HAVER ST	KUNA, ID 83634-0000
COMPTON BLAIR L	COMPTON CHRISTINE D	1768 N BUCKLER WAY	KUNA, ID 83634-0000
CORNEJO MARIA		1309 W CASTRO DR	KUNA, ID 83634-0000
DAVIDSON STEPHEN V		1239 W CASTRO DR	KUNA, ID 83634-0000
DAY MARCUS J	DAY KIMBERLY J	1698 N HAREM WAY	KUNA, ID 83634-3338
DB DEVELOPMENT LLC		2228 W PIAZZA ST	MERIDIAN, ID 83646-0000
DUNICAN CATHERINE A		1283 W CRENSHAW ST	KUNA, ID 83634-0000
FARLEY JESSICA N		1304 W CRENSHAW ST	KUNA, ID 83634-0000
FARMER CODY J	FARMER TERRA ANNE	1879 N BUCKLER WAY	KUNA, ID 83634-0000
GOERS GEORGE F	GOERS MARILYN Y	1899 N BUCKLER WAY	KUNA, ID 83634-0000
GRAVES MICHAEL	GRAVES MARIA JESANDRA	1675 N BUCKLER WAY	KUNA, ID 83634-0000
GREENFIELD JEAN M		2745 W AMITY RD	MERIDIAN, ID 83642-6811
HATHHORN ROBIN T		1177 W CASTRO DR	KUNA, ID 83634-0000
HESTER-SNIDER MONIQUE ASHANNA	SNIDER DENNIS D	1799 N CALAVERAS DR	KUNA, ID 83634-0000
HEWKO WASYL	HEWKO DEBBIE L	1216 W CRENSHAW ST	KUNA, ID 83634-0000
HOLBROOK STEVEN M		1824 N BUCKLER WAY	KUNA, ID 83634-0000
HOWARD DAVID & RUTH FAMILY TRUST	HOWARD DAVID L TRUSTEE	1096 W CRENSHAW ST	KUNA, ID 83634-0000
HOWARD GREGORY SCOTT		1206 W CASTRO DR	KUNA, ID 83634-0000
JACKSON KENNETH AREON	JACKSON LINDA W	1840 N BUCKLER WAY	KUNA, ID 83634-0000

JACKSON LARRY E	JACKSON TONI N	1854 N BUCKLER WAY	KUNA, ID 83634-0000
JOHNSON COREY M	JOHNSON CHRISTINA	1882 N BUCKLER WAY	KUNA, ID 83634-0000
JOHNSON CRESTIN	JOHNSON PATRICIA	1195 W CASTRO DR	KUNA, ID 83634-0000
JONES KEVIN M	JONES TIFFANY A	1751 N BUCKLER WAY	KUNA, ID 83634-9698
KANE DAVID A	KANE SUSAN M	1292 W CRENSHAW ST	KUNA, ID 83634-0000
KENNEDY MICHAEL			, 00000-0000
LARSON CODY A		1282 W CASTRO DR	KUNA, ID 83634-0000
LINSENMANN JOYCE K		1663 N BUCKLER WAY	KUNA, ID 83634-0000
LUJAN GREGORY F	LUJAN DEBBIE	1234 W HAVER ST	KUNA, ID 83634-0000
MARKEL DANA A		1213 W CASTRO DR	KUNA, ID 83634-0000
MARTINEZ ALONDRA B	MARTINEZ CHRISTOPHER	1715 N BUCKLER WAY	KUNA, ID 83634-0000
MARTINEZ REFUGIO	MARTINEZ JOHNNA	1277 W CASTRO DR	KUNA, ID 83634-0000
MCAULEY JEFF A		1692 N BUCKLER WAY	KUNA, ID 83634-0000
MCCRAW TAMARISK	MCCRAW JACOB	1091 W CRENSHAW ST	KUNA, ID 83634-0000
MILBURN TRACEE D	MILBURN HEIDI R	1264 W CASTRO DR	KUNA, ID 83634-0000
MONROE GREGORY	MONROE LINDA	1894 N BUCKLER WAY	KUNA, ID 83634-0000
NEDDO LARRY	NEDDO ANGELA	1788 N BUCKLER WAY	KUNA, ID 83634-0000
PALMER MARTHA A		1240 W CASTRO DR	KUNA, ID 83634-0000
PALOMAR HEIGHTS HOA INC		2180 W SR 434 STE 5000	LONGWOOD, FL 32779-0000
PARKERVILLE LLC		PO BOX 401	KUNA, ID 83634-0000
PATTERSON MATTHEW		1293 W CASTRO DR	KUNA, ID 83634-0000
PAULEY TRAVIS	YOUNG JENNIFER L	1276 W CRENSHAW ST	KUNA, ID 83634-0000
PIPER NICHOLAS	PIPER MALIA	1652 N HAREM WAY	KUNA, ID 83634-0000
PIPER WILLIAM		1110 W CRENSHAW ST	KUNA, ID 83634-0000
PYNE CLARESE		1852 N PINGO AVE	KUNA, ID 83634-0000
RHODES GALEN		1192 W CASTRO DR	KUNA, ID 83634-0000
SAMSON SHAWN E		1806 N BUCKLER WAY	KUNA, ID 83634-0000
SEANEY ERIC C	SEANEY MINDI L	1867 N PINGO AVE	KUNA, ID 83634-0000
SIELAFF ALLEN M	SIELAFF MICHELE M	1697 N BUCKLER WAY	KUNA, ID 83634-0000
SIMPSON JENNIFER	SIMPSON KRISTOPHER	1908 N BUCKLER WAY	KUNA, ID 83634-0000
SPENCER JASON L	MANNLEIN CHELSEE B	1866 N BUCKLER WAY	KUNA, ID 83634-0000
STOHLER JASON C	STOHLER KATELYN J	1773 N BUCKLER WAY	KUNA, ID 83634-0000
WALKER BRIAN S		1254 W CRENSHAW ST	KUNA, ID 83634-0000
WICK INVESTMENT PROPERTIES LLC		8421 S TEN MILE RD	MERIDIAN, ID 83642-0000

WILSON PEGGY S	6220 S LINDER RD	MERIDIAN, ID 83642-0000
WOODALL CARINA L	1676 N HAREM WAY	KUNA, ID 83634-0000
YOUNG DANIEL M	1868 N PINGO AVE	KUNA, ID 83634-0000

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.cityofkuna.com

State of Idaho)
) ss.
County of Ada)

I, Patricia Johnson (**Name**), 1195 N. Castro Dr. (**Address**), Kuna (**City**), Idaho (**State**) 83634 (**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 _____ (Name) _____ (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 25th day of October, 2019

Patricia Johnson
Signature

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

Dilan Christensen
Notary Public
State of Idaho
Commission No. 2018-0668

Notary Public for Idaho

Residing at: KUNA, IDAHO

My commission expires: APRIL 16, 2024

ADA COUNTY RECORDER Christopher D. Rich
BOISE IDAHO Pgs=2 LISA BATT
PIONEER TITLE COMPANY OF ADA COUNTY

2018-014531
02/16/2018 11:23 AM
$15.00

PioneerTitleCo.
GOING BEYOND

5680 E. Franklin Rd., Ste. 250
Nampa, ID 83687

ELECTRONICALLY RECORDED-DO NOT REMOVE THE COUNTY STAMPED FIRST PAGE AS IT IS NOW INCORPORATED AS PART OF THE ORIGINAL DOCUMENT

File No. 641823 CA/PP

WARRANTY DEED

For Value Received Kirk Worthen and Juli Worthen, husband and wife

hereinafter referred to as Grantor, does hereby grant, bargain, sell, warrant and convey unto

Crestin Johnson and Patricia Johnson, husband and wife Husband and wife

hereinafter referred to as Grantee, whose current address is 1195 West Castro Drive Kuna, ID 83634

The following described premises, to-wit:

See Exhibit A attached hereto and made a part hereof.

To HAVE AND TO HOLD the said premises, with their appurtenances unto the said Grantee(s), and Grantees(s) heirs and assigns forever. And the said Grantor(s) does (do) hereby covenant to and with the said Grantee(s), the Grantor(s) is/are the owner(s) in fee simple of said premises; that said premises are free from all encumbrances EXCEPT those to which this conveyance is expressly made subject and those made, suffered or done by the Grantee(s); and subject to U.S. Patent reservations, restrictions, dedications, easements, rights of way and agreements, (if any) of record, and current years taxes, levies, and assessments, includes irrigation and utility assessments, (if any) which are not yet due and payable, and that Grantor(s) will warrant and defend the same from all lawful claims whatsoever.

Dated: February 9, 2018

Kirk Worthen

Juli Worthen

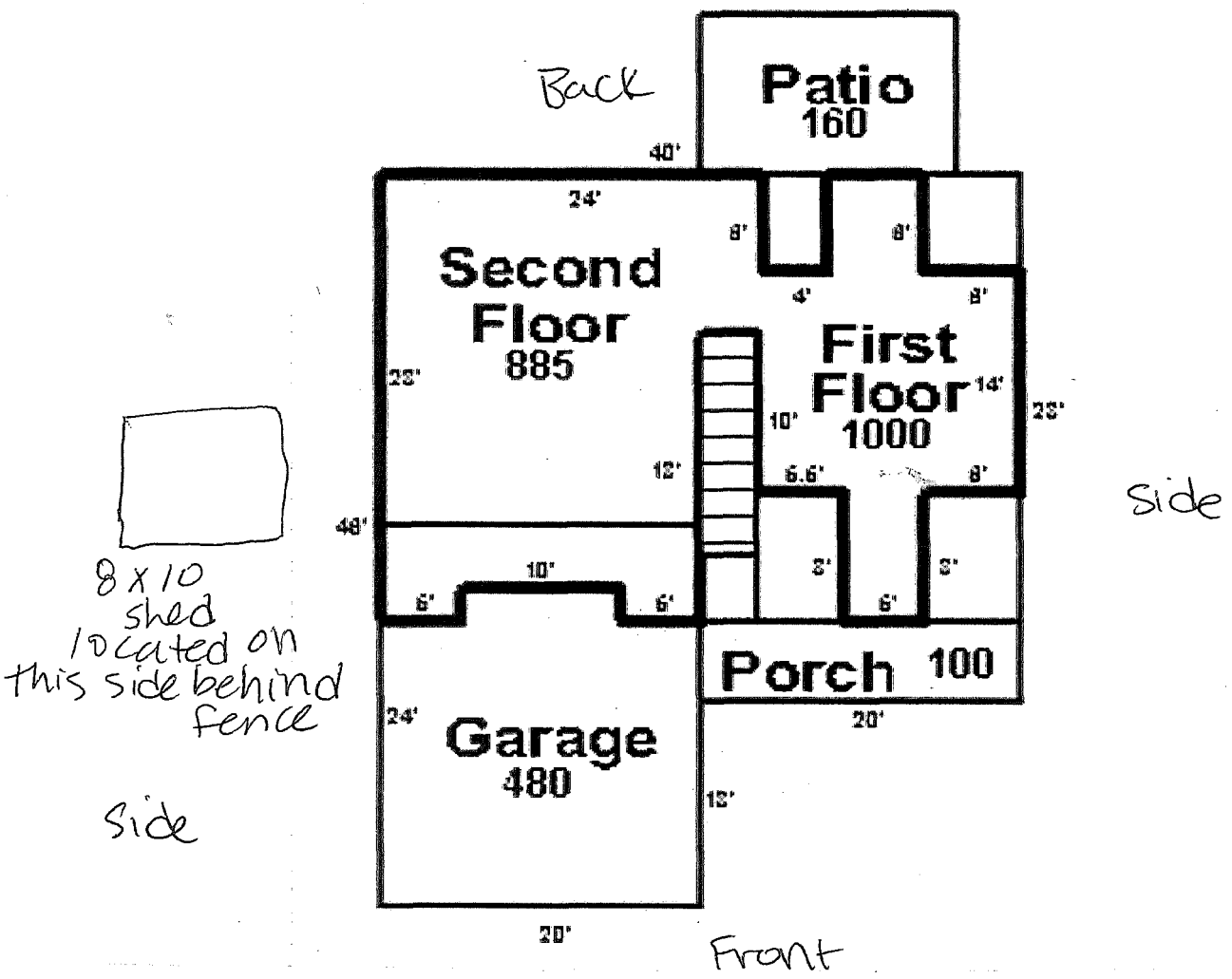
State of Idaho , County of ~~Canyon~~ Ada

This record was acknowledged before me on February 15, 2018 by Kirk Worthen and Juli Worthen

Signature of notary public

Commission Expires: ~~3/9/2022~~ 5/5/2023

SUSAN J. MERRITT
NOTARY PUBLIC
STATE OF IDAHO


Back
Patio
160
40'
24'
8'
8'
4'
8'
Second
Floor
885
First
Floor
1000
14'
23'
23'
10'
12'
6.6'
8'
48'
10'
6'
6'
3'
3'
6'
Porch 100
20'
24'
Garage
480
12'
20'
Front
Side
8 x 10
shed
located on
this side behind
fence
Side

751 West 4th Street
P.O. Box 13
Kuna, ID 83634
Phone: 208-922-5274
Fax: 208-922-5989
www.kunacity.id.gov

CITY OF KUNA

PLANNING & ZONING DEPARTMENT

CERTIFICATE OF MAILING

Date: 12/12/2019

To: ☑ 300' Property Owners ☐ Other _____

Planner: Doug Hanson, Planner I

Case Name: 19-05-SUP Patricia Johnson Massage Therapy

I HEREBY CERTIFY that on this 12th day of December, 2019, I caused a true and correct copy of the foregoing instrument to be deposited in the United States mail, with prepaid postage.

Signature

Attest

CITY OF KUNA
PLANNING & ZONING DEPARTMENT
PO Box 13 • 751 W. 4th St • Kuna, Idaho • 83634
Phone (208) 922-5274 • Fax: (208) 922-5989
www.kunacity.id.gov

Dear Property Owner:

NOTICE IS HEREBY GIVEN that the City of Kuna **Planning and Zoning Commission** is scheduled to hold a public hearing on **January 14, 2020,** beginning **at 6:00 pm** on the following case:

A Special Use Permit request from Patricia Johnson to operate a Home Massage Therapy Business located at 1195 West Castro Drive, Kuna, Idaho (APN #: R6899690200). The hearing will be held **at 6:00 PM in the Council Chambers at City Hall located at 751 W. 4th Street, Kuna, Idaho.**

You are invited to provide oral or written comments. Written testimony received by the close of business on ***January 7, 2020*** will be included in the packet that is distributed to the governing body prior to the hearing. Late submissions (must submit eight (8) copies) will be presented to the governing body at time of the hearing. Please note oral comments made during the public hearing will be restricted to three (3) minutes per person. Mail written comments to PO Box 13, Kuna, ID 83634 or hand deliver them to City Hall.

If you have questions or need special assistance, please contact the Planning and Zoning Division at (208) 922-5274.

MAILED 12/12/19

Suggestions For Testifying at the Public Hearing:

Be informed . . .
Review the proposal, staff report, applicable provisions of the ordinance, comprehensive plan and Idaho State Code (Title 67, Chapter 65).

All items pertaining to the application can be found the Friday prior to the hearing at **http://kunacity.id.gov/240/Agendas-and-Meeting-Minutes.**

Be on time . . .
Although the item you are interested in may not be first on the agenda, you never know when it will be heard. The governing body has authority to adjust the schedule according to its discretion. Thus, anticipate attending from the beginning.

Speak to the point . . .
The governing body appreciates pertinent, well organized, factual and concise comments. Redundant testimony is prohibited. **The developer or their representative is given 10 minutes to present their project. Others wishing to testify are given three (3) minutes. The developer (or their representative) is given additional time for rebuttal to address issues raised during public testimony.** Long stories, abstract complaints, or generalities may not be the best use of time. Neighborhood groups are encouraged to organize testimony and have one (1) person speak on behalf of the group. The group representative will receive 10 minutes to make comments.

If you don't wish to speak, write . . .
Written testimony submitted one (1) week prior to the hearing will be included in the packet that is distributed to the governing body prior to the hearing. Late submissions must submit eight (8) copies, which will be presented to the governing body at time of hearing. As a reminder, it is unreasonable to submit extensive written comments or information at the hearing and expect them to be reviewed prior to a decision.

LEGAL NOTICE

City of Kuna
Planning and Zoning
PO Box 13
Kuna, ID 83634

IDAHO PRESS-TRIBUNE
EMMETT MERIDIAN KUNA BOISE WKLY
C/O ISJ PAYMENT PROCESSING CENTER
PO BOX 1570
POCATELLO ID 83204
(208)467-9251
Fax (208)475-2321

ORDER CONFIRMATION

Salesperson: LEGALS — Printed at 12/13/19 10:06 by sje14

Acct #: 345222 — Ad #: 1976408 — Status: New

1 KUNA, CITY OF
P.O. BOX 13
KUNA ID 83634

Start: 12/18/2019 — Stop: 12/18/2019
Times Ord: 1 — Times Run: ***
LEG 1.00 X 59.00 — Words: 231
Total LEG 59.00
Class: 0006 GOVERNMENT NOTICES
Rate: LG — Cost: 48.66
Affidavits: 1

Contact: CHRIS ENGLES
Phone: (208)387-7727
Fax#:
Email: awelker@kunaid.gov; gsmith@k
Agency:

Ad Descrpt: PH 1/14/2020
Given by: DOUG HANSON
P.O. #:
Created: sje14 12/13/19 10:01
Last Changed: sje14 12/13/19 10:05

PUB	ZONE	EDT	TP	RUN DATES
KMN	A	96	S	12/18

AUTHORIZATION

Under this agreement rates are subject to change with 30 days notice. In the event of a cancellation before schedule completion, I understand that the rate charged will be based upon the rate for the number of insertions used.

DOUG HANSON
Name (print or type)

Name (signature)

(CONTINUED ON NEXT PAGE)

IDAHO PRESS-TRIBUNE
EMMETT MERIDIAN KUNA BOISE WKLY
C/O ISJ PAYMENT PROCESSING CENTER
PO BOX 1570
POCATELLO ID 83204
(208)467-9251
Fax (208)475-2321

ORDER CONFIRMATION (CONTINUED)

Salesperson: LEGALS Printed at 12/13/19 10:06 by sje14

Acct #: 345222 Ad #: 1976408 Status: New

LEGAL NOTICE

Case # 19-05-SUP
(Special Use Permit)

NOTICE IS HEREBY GIVEN, the Kuna Planning and Zoning Commission will hold a public hearing, **Tuesday January 14, 2020, at 6:00 pm**, or as soon as can be heard at Kuna City Hall, 751 W. 4th Street, Kuna, ID; in connection with a Special Use Permit request from Patricia Johnson to operate a Home Massage Therapy Business located at 1195 West Castro Drive, Kuna, Idaho (APN #: R6899690200).

The public is invited to present written or oral comments. Written testimony received by the close of business on **January 7, 2020** will be included in the packets distributed to the governing body. Late submissions (must include eight (8) copies) will be presented to the governing body at the time of the hearing. Please mail written comments to PO Box 13, Kuna, ID 83634, or drop them off at City Hall: 751 West 4th Street, Kuna, ID.

Please do not contact anyone who would be involved in this decision making process, which would include the Planning & Zoning Commissioners, City Council Members, or the Mayor; as such private conversations would be considered ex parte (one sided) and could jeopardize the public hearing process.

If you have any questions or require special accommodations, please contact the Kuna Planning & Zoning Department prior to the meeting at 922-5274.

Kuna Planning & Zoning Department

December 18, 2019
1976408

345222 1976408

1 KUNA, CITY OF

P.O. BOX 13
KUNA ID 83634

LEGAL NOTICE

Case # 19-05-SUP
(Special Use Permit)

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If you have any questions or require special accommodations, please contact the Kuna Planning & Zoning Department prior to the meeting at 922-5274.

Kuna Planning & Zoning Department

December 18, 2019
1976408

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO)
)SS.
County of Ada)

Sharon Jessen
of Nampa, Canyon County, Idaho, being first duly sworn, deposes and says:

1. That I am a citizen of the United States, and at all times hereinafter mentioned was over the age of eighteen years, and not a party to the above entitled action.
2. That I am the Principle Clerk of the Kuna Melba News, a weekly newspaper published in the City of Kuna, in the County of Ada, State of Idaho; that the said newspaper is in general circulation in the said County of Ada, and in the vicinity of Kuna and Melba, and has been uninterruptedly published in said County during a period of seventy-eight consecutive weeks prior to the first publication of this notice, a copy of which is hereto attached.
3. That the notice, of which the annexed is a printed copy, was published in said newspaper 1 time(s) in the regular and entire issue of said paper, and was printed in the newspaper proper, and not in a supplement.

That said notice was published the following:
12/18/2019

Sharon Jessen

STATE OF IDAHO)
County of Canyon)
On this 18th day of December in the year of 2019 before me a Notary Public, personally appeared. Sharon Jessen, known or identified to me to be the person whose name is subscribed to the within instrument, and being by me first duly sworn, declared that the statements therein are true, and acknowledge to me that he/she executed the same.

Colleen R. Nielsen

Notary Public for Idaho
Residing at Canyon County
My Commission expires 06/28/2023

COLLEEN R. NIELSEN
NOTARY
PUBLIC
Comm No. 70215
STATE OF IDAHO

CITY OF KUNA
P.O. BOX 13
KUNA, ID 83634
www.kunacity.id.gov

Paul A. Stevens, P.E.
Kuna City Engineer

MEMORANDUM

Date: **10 December 2019**

From: **Paul A. Stevens, P.E.**

To: **Wendy Howell, Planning and Zoning Director**

RE: **Patricia Johnson Massage Therapy 19-05-SUP**

The Patricia Johnson Massage Therapy 19-05-SUP request received 31 October 2019 has been reviewed. These comments apply to the expected effect of the in-home studio from a Public Works perspective. These comments do not address parking, increased activity, and associated concerns normally addressed by the Planning and Zoning Department.

The special use permit application requests a permit to place a business in a converted shed on the applicant's property in a residential zone. Current zoning is R-6 medium density residential.

The following comments apply:

1. **General**
   a. Patricia Johnson Massage Therapy 19-05-SUP proposes to add a massage therapy studio on property zoned for a residential home. The additional activity will have a commensurate impact on the City of Kuna's water and sewer utilities and will increase area traffic. However, impacts from the massage therapy studio to the immediate surrounding area, based on the applicant's testimony are expected to be negligible.
   b. Access to the Patricia Johnson Massage Therapy is through the subdivision and the home's driveway.
   c. Final construction modifications to the shed must meet or exceed the requirements for a massage therapy studio.

2. **Inspection Fees**
   a. Building Department, electrical, and plumbing inspection fees may be incurred by merit of remodeling the shed to a massage therapy studio.

3. **Right-of-Way**
   a. Patricia Johnson Massage Therapy is in an established subdivision. No changes to right of way or access will occur as a result of this project.

4. **Sanitary Sewer & Potable Water**
    a. The applicant's home is connected to City services.
    b. If the water supply proves inadequate, and a larger water service and meter is needed. The applicant will be responsible for all costs to modify the water service to an acceptable size and configuration. Additional connection fees for the increased portion of the service apply.
    c. All plumbing modifications must satisfy (meet or exceed) the Idaho plumbing code.
    d. All electrical modifications must satisfy (meet or exceed) the Idaho electrical code.

5. **Pressurized Irrigation**
    a. The applicant's property is connected to the City pressurized irrigation system. There is no additional load to the irrigation system with the salon project as described in the SUP application.

6. **Grading and Storm Drainage**
    a. This section has no bearing on the project.

7. **As-Built Drawings**
    a. As-built drawings should be developed in conjunction with the massage therapy studio upgrades.

8. **Property Description**
    a. This property is designated as a single family lot within a platted subdivision. The applicant provided a vicinity map and a general layout of the shed in relation to the existing home.

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1445 North Orchard • Boise, ID 83706 • (208) 373-0550

Brad Little, Governor
John H. Tippets, Director

December 19, 2019

Doug Hanson
City of Kuna
P.O. Box 13
Kuna, Idaho 83634

RE: Patricia Johnson Massage Therapy, 19-05-SUP

Thank you for the opportunity to respond to your request for comment. While DEQ does not review projects on a project-specific basis, we attempt to provide the best review of the information provided. DEQ encourages agencies to review and utilize the Idaho Environmental Guide to assist in addressing project-specific conditions that may apply. This guide can be found at: deq.idaho.gov/assistance-resources/environmental-guide-for-local-govts.

The following information does not cover every aspect of this project; however, we have the following general comments to use as appropriate:

1. **Air Quality**
   - Please review IDAPA 58.01.01 for all rules on Air Quality, especially those regarding fugitive dust (58.01.01.651), trade waste burning (58.01.01.600-617), and odor control plans (58.01.01.776).

     For questions, contact David Luft, Air Quality Manager, at (208) 373-0550.

   - IDAPA 58.01.01.201 requires an owner or operator of a facility to obtain an air quality permit to construct prior to the commencement of construction or modification of any facility that will be a source of air pollution in quantities above established levels. DEQ asks that cities and counties require a proposed facility to contact DEQ for an applicability determination on their proposal to ensure they remain in compliance with the rules.

     For questions, contact the DEQ Air Quality Permitting Hotline at 1-877-573-7648.

2. **Wastewater and Recycled Water**
   - DEQ recommends verifying that there is adequate sewer to serve this project prior to approval. Please contact the sewer provider for a capacity statement, declining balance report, and willingness to serve this project.

   - IDAPA 58.01.16 and IDAPA 58.01.17 are the sections of Idaho rules regarding wastewater and recycled water. Please review these rules to determine whether this or future projects will require DEQ approval. IDAPA 58.01.03 is the section of Idaho rules regarding subsurface

disposal of wastewater. Please review this rule to determine whether this or future projects will require permitting by the district health department.

All projects for construction or modification of wastewater systems require preconstruction approval. Recycled water projects and subsurface disposal projects require separate permits as well.

- DEQ recommends that projects be served by existing approved wastewater collection systems or a centralized community wastewater system whenever possible. Please contact DEQ to discuss potential for development of a community treatment system along with best management practices for communities to protect ground water.

- DEQ recommends that cities and counties develop and use a comprehensive land use management plan, which includes the impacts of present and future wastewater management in this area. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation.

  For questions, contact Valerie Greear, Engineering Manager, at (208) 373-0550.

3. <u>Drinking Water</u>

- DEQ recommends verifying that there is adequate water to serve this project prior to approval. Please contact the water provider for a capacity statement, declining balance report, and willingness to serve this project.

- IDAPA 58.01.08 is the section of Idaho rules regarding public drinking water systems. Please review these rules to determine whether this or future projects will require DEQ approval.

  All projects for construction or modification of public drinking water systems require preconstruction approval.

- DEQ recommends verifying if the current and/or proposed drinking water system is a regulated public drinking water system (refer to the DEQ website at: deq.idaho.gov/water-quality/drinking-water.aspx). For non-regulated systems, DEQ recommends annual testing for total coliform bacteria, nitrate, and nitrite.

- If any private wells will be included in this project, we recommend that they be tested for total coliform bacteria, nitrate, and nitrite prior to use and retested annually thereafter.

- DEQ recommends using an existing drinking water system whenever possible or construction of a new community drinking water system. Please contact DEQ to discuss this project and to explore options to both best serve the future residents of this development and provide for protection of ground water resources.

- DEQ recommends cities and counties develop and use a comprehensive land use management plan which addresses the present and future needs of this area for adequate, safe, and sustainable drinking water. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation.

For questions, contact Valerie Greear, Engineering Manager, at (208) 373-0550.

4. Surface Water

- A DEQ short-term activity exemption (STAE) from this office is required if the project will involve de-watering of ground water during excavation and discharge back into surface water, including a description of the water treatment from this process to prevent excessive sediment and turbidity from entering surface water.

- Please contact DEQ to determine whether this project will require a National Pollution Discharge Elimination System (NPDES) Permit. If this project disturbs more than one acre, a stormwater permit from EPA may be required.

- If this project is near a source of surface water, DEQ requests that projects incorporate construction best management practices (BMPs) to assist in the protection of Idaho's water resources. Additionally, please contact DEQ to identify BMP alternatives and to determine whether this project is in an area with Total Maximum Daily Load stormwater permit conditions.

- The Idaho Stream Channel Protection Act requires a permit for most stream channel alterations. Please contact the Idaho Department of Water Resources (IDWR), Western Regional Office, at 2735 Airport Way, Boise, or call (208) 334-2190 for more information. Information is also available on the IDWR website at: http://www.idwr.idaho.gov/WaterManagement/StreamsDams/Streams/AlterationPermit/AlterationPermit.htm

- The Federal Clean Water Act requires a permit for filling or dredging in waters of the United States. Please contact the US Army Corps of Engineers, Boise Field Office, at 10095 Emerald Street, Boise, or call 208-345-2155 for more information regarding permits.

  For questions, contact Lance Holloway, Surface Water Manager, at (208) 373-0550.

5. Hazardous Waste And Ground Water Contamination

- **Hazardous Waste.** The types and number of requirements that must be complied with under the federal Resource Conservations and Recovery Act (RCRA) and the Idaho Rules and Standards for Hazardous Waste (IDAPA 58.01.05) are based on the quantity and type of waste generated. Every business in Idaho is required to track the volume of waste generated, determine whether each type of waste is hazardous, and ensure that all wastes are properly disposed of according to federal, state, and local requirements.

- No trash or other solid waste shall be buried, burned, or otherwise disposed of at the project site. These disposal methods are regulated by various state regulations including Idaho's Solid Waste Management Regulations and Standards, Rules and Regulations for Hazardous Waste, and Rules and Regulations for the Prevention of Air Pollution.

- **Water Quality Standards.** Site activities must comply with the Idaho Water Quality Standards (IDAPA 58.01.02) regarding hazardous and deleterious-materials storage, disposal, or accumulation adjacent to or in the immediate vicinity of state waters (IDAPA 58.01.02.800);

and the cleanup and reporting of oil-filled electrical equipment (IDAPA 58.01.02.849); hazardous materials (IDAPA 58.01.02.850); and used-oil and petroleum releases (IDAPA 58.01.02.851 and 852).

Petroleum releases must be reported to DEQ in accordance with IDAPA 58.01.02.851.01 and 04. Hazardous material releases to state waters, or to land such that there is likelihood that it will enter state waters, must be reported to DEQ in accordance with IDAPA 58.01.02.850.

- **Ground Water Contamination.** DEQ requests that this project comply with Idaho's Ground Water Quality Rules (IDAPA 58.01.11), which states that "No person shall cause or allow the release, spilling, leaking, emission, discharge, escape, leaching, or disposal of a contaminant into the environment in a manner that causes a ground water quality standard to be exceeded, injures a beneficial use of ground water, or is not in accordance with a permit, consent order or applicable best management practice, best available method or best practical method."

  For questions, contact Albert Crawshaw, Waste & Remediation Manager, at (208) 373-0550.

6. **Additional Notes**
   - If an underground storage tank (UST) or an aboveground storage tank (AST) is identified at the site, the site should be evaluated to determine whether the UST is regulated by DEQ. EPA regulates ASTs. UST and AST sites should be assessed to determine whether there is potential soil and ground water contamination. Please call DEQ at (208) 373-0550, or visit the DEQ website deq.idaho.gov/waste-mgmt-remediation/storage-tanks.aspx for assistance.

   - If applicable to this project, DEQ recommends that BMPs be implemented for any of the following conditions: wash water from cleaning vehicles, fertilizers and pesticides, animal facilities, composted waste, and ponds. Please contact DEQ for more information on any of these conditions.

We look forward to working with you in a proactive manner to address potential environmental impacts that may be within our regulatory authority. If you have any questions, please contact me, or any of our technical staff at (208) 373-0550.

Sincerely,

Aaron Scheff
Regional Administrator
Boise Regional Office

ec: CM#2019AEK236

received
12.24.19

ORGANIZED 1904

Nampa & Meridian Irrigation District

1503 FIRST STREET SOUTH
FAX #208-463-0092

NAMPA, IDAHO 83651-4395
nmid.org

OFFICE: Nampa 208-466-7861
SHOP: Nampa 208-466-0663

December 18, 2019

Doug Hanson, Planner I
City of Kuna
751 W. 4th Street
Kuna, ID 83634

RE: 19-05-SUP/ Home Massage Therapy; 1195 W. Castro Drive

Dear Doug:

Nampa & Meridian Irrigation District (NMID) has no comment on the above referenced application as it lies outside of our district boundaries. Please contact Thomas Ritthaler, Boise Project- Board of Control, at 208-344-1141 or 2465 Overland Road Room 202 Boise, ID 83705-3173.

All private laterals and waste ways must be protected. All municipal surface drainage must be retained on-site. If any surface drainage leaves the site NMID must review drainage plans. Developers must comply with Idaho Code 31-3805.

Sincerely,

David T. Duvall
Asst. Water Superintendent
Nampa & Meridian Irrigation District
DTD/ gnf

Cc:
Office/ file
T. Ritthaler, Board of Control

APPROXIMATE IRRIGABLE ACRES
RIVER FLOW RIGHTS - 23,000
BOISE PROJECT RIGHTS - 40,000

CITY OF KUNA
PLANNING & ZONING DEPARTMENT

751 West 4th Street
P.O. Box 13
Kuna, ID 83634
Phone: 208-922-5274
Fax: 208-922-5989
www.kunacity.id.gov

November 15, 2019

Patricia Johnson
1195 West Castro Drive
Kuna, ID 83634
208-409-0285
pmjohnson@gmail.com

Completeness Letter

19-05-SUP – Patricia Johnson Massage Therapy – 1195 West Castro Drive, Kuna, ID (APN# R6899690200)

Dear Patricia:

On *November 15, 2019,* Kuna's Planning and Zoning Staff finished reviewing the submitted the Special Use Permit application for the parcel referenced above. This letter is to notify you the City will consider the application complete, subject to the following application items and fees being sent to the City. The Planning and Zoning Commission public hearing date for your case is tentatively scheduled for **January 14, 2019,** here at City Hall at 6:00 pm.

If our office does not receive critical agency final reports and/or responses related to this project in time to include them with our staff report, the hearing may be delayed.

The following application fees are requested at this time:

Planning and Zoning Department
Special Use (Massage Therapy): $800.00

Total Fees Now Due: $800.00

The site must be posted for the public hearing on or before *January 3, 2019*, with an 11" X 17" sign, following the guidelines listed in KCC 5-1A-8. The site must be posted on an ALL – WEATHER sign (and a rigid surface) and shall be viewable from both drive directions (sign must be perpendicular to the road).

The posting must be photographed and a statement confirming the posting must be *notarized* and sent in to our office within *seven days* of the site posting. The sign must be *removed* within three days after the hearing is held.

If you have any questions regarding this information, please contact me at 922.5274 or by e-mail at dhanson@Kunaid.gov.

Respectfully,

Doug Hanson
Planner I
Kuna Planning and Zoning Department

Cc: Wendy Howell, Director of Planning Services

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

City of Kuna
Planning & Zoning Department

Agency Transmittal

December 9, 2019

Notice is hereby given by the City of Kuna the following actions are under consideration**:**

FILE NUMBER:	19-05-SUP, (Special Use Permit) – Patricia Johnson Massage Therapy
PROJECT DESCRIPTION	The applicant is seeking special use permit approval to operate a home massage therapy business from an accessory building. (APN: R6899690200)
SITE LOCATION	1195 W. Castro Dr., Kuna, Idaho 83634.
APPLICANT	*Patricia Johnson* 1195 W. Castro Dr. Kuna, ID 83634 208.409.0285
SCHEDULED HEARING DATE	Tuesday, **January 14, 2020.** 6:00 P.M.
STAFF CONTACT	Doug Hanson Dhanson@KunaId.Gov Phone**:** 922.5274 Fax**:** 922.5989

We have enclosed information to assist you with your consideration and response. *No response within 15 business days will indicate you have no objection or comments for this project.* We would appreciate any information as to how this action would affect the service(s) your agency provides. The hearing is scheduled to begin at 6:00 p.m. or as soon as it may be heard. Kuna City Hall is located at 751 W. 4th Street, Kuna, ID 83634. Please contact staff with questions. ***If your agency needs different plans or paper copies to review, notify our office know and we will send them. Please notify our office who future packets should be sent to, included their email as well.*** If your agency needs additional time for review, please let our office know ASAP.

RECEIPT

DATE 11/21/19 No. 561786

RECEIVED FROM PATRICIA JOHNSON $ 800 00

EIGHT HUNDRED AND 00/100 DOLLARS

○ FOR RENT
✓ FOR PATRICIA JOHNSON MASSAGE SUP

ACCOUNT		
PAYMENT	89	
BAL. DUE		

○ CASH
✓ CHECK
○ MONEY ORDER
○ CREDIT CARD

FROM _____ TO _____

BY [signature]

3-11

City of Kuna
PROOF OF PROPERTY POSTING

City of Kuna
P.O. Box 13
Kuna, Idaho 83634

Phone: (208) 922-5274
Fax: (208) 922-5989
Web: www.kunacity.id.gov

This notice shall confirm that the Public Hearing Notice for 1195 W. Castro Dr. (**NAME OF SUBDIVISION OR ADDRESS**) was posted as required per Kuna City Ordinance 5-1A-8. Sign posted Monday, 12/30/19 (**DAY OF THE WEEK, MONTH, DATE AND YEAR**). *This form is required to be returned three (3) calendar days subsequent to posting and signs are to be removed from the site three (3) calendar days after the hearing.*

DATED *this* 30th *day of* December, 2019.

Signature,

Owner/Developer

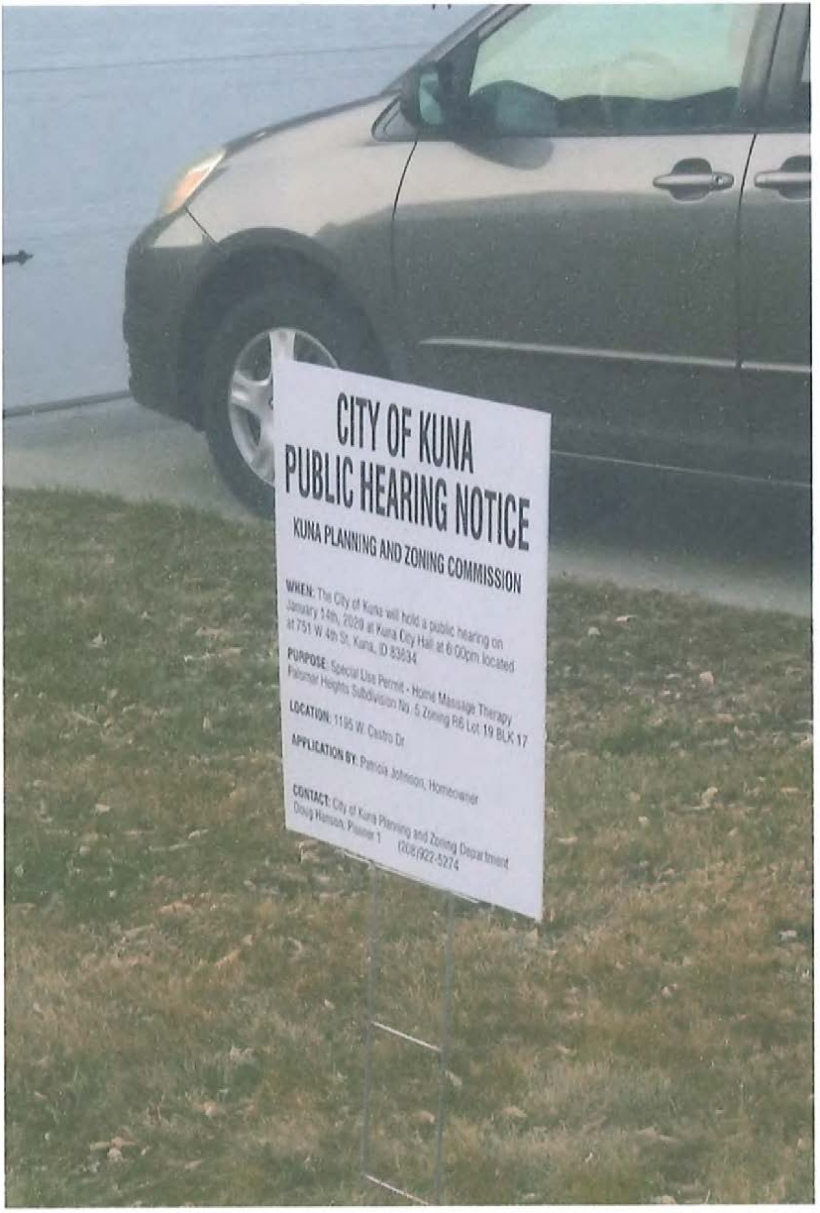
STATE OF IDAHO)
): ss
County of Ada)

On this 30th *day of* December, 2019, *before me the undersigned, a Notary Public in and for said State, personally appeared before me (Owner, Developer).*

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

Notary Public
Residing at Kuna, ID
Commission Expires 08-03-2024

LUZ LARA
NOTARY PUBLIC
Comm No. 2018-142
STATE OF IDAHO


CITY OF KUNA
PUBLIC HEARING NOTICE
KUNA PLANNING AND ZONING COMMISSION
WHEN: The City of Kuna will hold a public hearing on January 14th, 2020 at Kuna City Hall at 6:00pm located at 751 W 4th St, Kuna, ID 83634
PURPOSE: Special Use Permit - Home Massage Therapy
Palomar Heights Subdivision No. 5 Zoning R6 Lot 19 BLK 17
LOCATION: 1195 W. Castro Dr
APPLICATION BY: Patricia Johnson, Homeowner
CONTACT: City of Kuna Planning and Zoning Department
Doug Hanson, Planner 1 (208)922-5274

CITY OF KUNA
UBLIC HEARING NOTICE

UNA PLANNING AND ZONING COMMISSION

HEN: The City of Kuna will hold a public hearing on nuary 14th, 2020 at Kuna City Hall at 6:00pm located 751 W 4th St, Kuna, ID 83634.

URPOSE: Special Use Permit - Home Massage Therapy alomar Heights Subdivision No. 5 Zoning R6 Lot 19 BLK 17

OCATION: 1195 W. Castro Dr.

APPLICATION BY: Patricia Johnson, Homeowner

CONTACT: City of Kuna Planning and Zoning Department
Doug Hanson, Planner 1 (208)922-5274

CITY OF KUNA
PUBLIC HEARING NOTICE

KUNA PLANNING AND ZONING COMMISSION

WHEN: The City of Kuna will hold a public hearing on January 14th, 2020 at Kuna City Hall at 6:00pm located at 751 W 4th St, Kuna, ID 83634.

PURPOSE: Special Use Permit - Home Massage Therapy Palomar Heights Subdivision No. 5 Zoning R6 Lot 19 BLK 17

LOCATION: 1195 W. Castro Dr.

APPLICATION BY: Patricia Johnson, Homeowner

CONTACT: City of Kuna Planning and Zoning Department
Doug Hanson, Planner 1 (208)922-5274

CITY OF KUNA
PUBLIC HEARING NOTICE
KUNA PLANNING AND ZONING COMMISSION

City of Kuna

P.O. Box 13
Phone: (208) 922-5274
Fax: (208) 922-5989
Kunacity.id.gov

Planning & Zoning Staff Report

To: Planning and Zoning Commission

Case Numbers: 19-10-AN (Annex), 19-01-PUD (Planned Unit Development), 19-06-S (Subdivision), 19-23-DR (Design Review) & a Development Agreement for the: *Spring Rock Subdivision*

Location: Southwest Corner (SEC) of Hubbard and Kay Ave. Roads, Kuna, Idaho 83634

Planner: Troy Behunin, Planner III

Hearing Date: *January 14, 2020*

Applicant(s): ***Dave Yorgason***
Ten Mile Creek, LLC
Boise, ID 83706
208.850.1070
dyorgason6@gmail.com

Engineer: ***David Powell***
Riveridge Engineers
2447 S. Vista Ave.
Boise, ID 83705
208.344.1180
dpowell@rvrdg.com

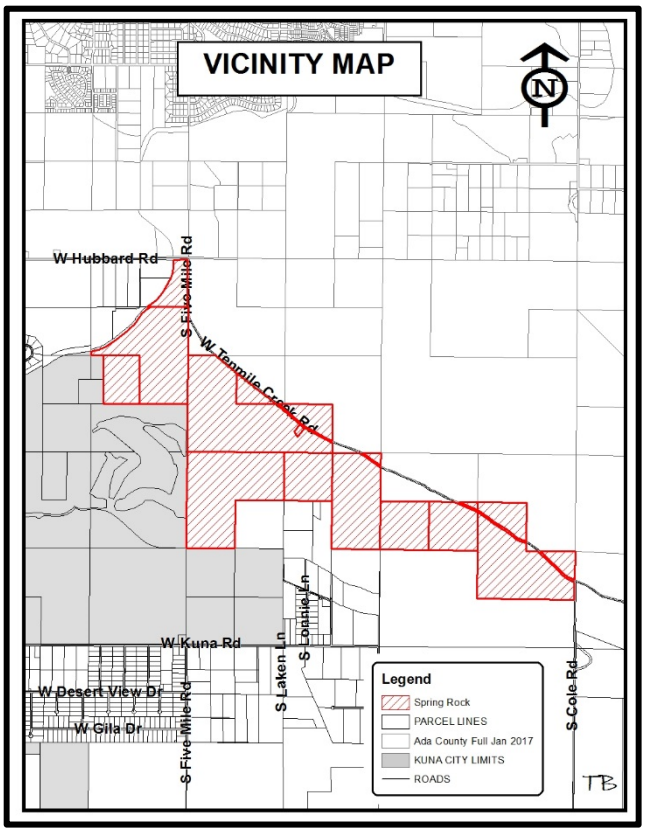


Table of Contents:

A. Process and Noticing
B. Applicants Request
C. Site History
D. General Project Facts
E. Staff Analysis
F. Applicable Standards
G. Proposed Comprehensive Plan Analysis
H. Proposed Kuna City Code Analysis
I. Commission's Recommendation
J. Recommended Conditions of Approval

A. Process and Noticing:

1. Kuna City Code (KCC), Title 1, Chapter 14, Section 3, states that design reviews are designated as *public meetings*, with the Planning and Zoning Commission (acting as the Design Review Board) as the decision-making body; and that annexations, PUD's and subdivision applications are designated as *public hearings*, with the Planning and Zoning Commission as the recommending body, and the City Council as the decision-making body. These land use applications were given proper public notice and have followed the requirements set forth in Idaho Code, Chapter 65, Local Land Use Planning Act (LLUPA).

a. Notifications

i. Neighborhood Meeting — June 24, 2019 (Fifteen persons attended)

ii.	Agencies	August 2, 2019
iii.	800' Property Owners	December 20, 2019
iv.	Kuna, Melba Newspaper	December 12, 2019 and January 8, 2020

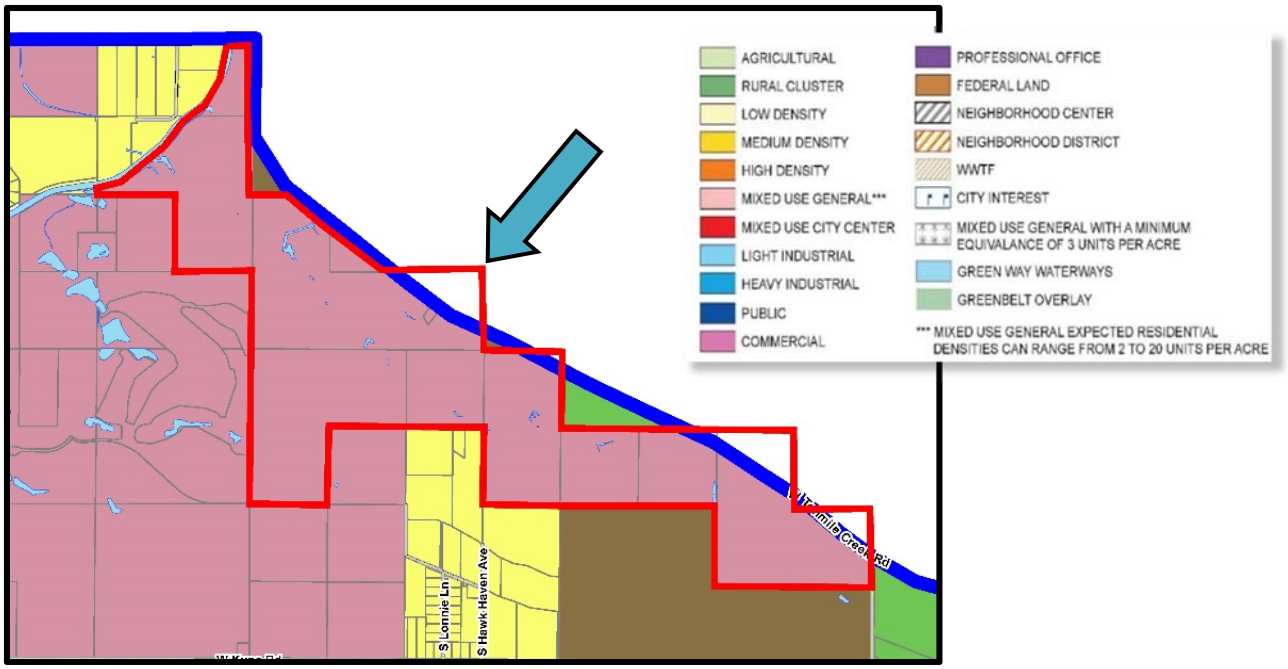
B. Applicant Request:

1. The applicant, Ten Mile Creek, LLC, requests approval for Annexation**,** Planned Unit Development (PUD), Preliminary Plat, Development Agreement and Design Review. Applicant requests to annex approximately 761 ac. into Kuna City limits, with a variety of zones throughout the project; including R-6 (Medium Density Residential), R-12 (High Density Residential), R-20 (High Density Residential), C-1 (Neighborhood Commercial) and the C-2 (Area Commercial) zones. This is a multi-phased, Master-Planned Development proposing *up to* 2,274 dwelling units (Single Family [1,886] and Multi-Family [388]). Applicant requests Preliminary Plat approval in order to subdivide approximately 477 of the 761.44 acres into 757 Single family and 136 Multi-family lots, 34 common lots, 7 commercial lots, one school lot and two public facility lots. The remaining lands (approx. 284 ac.) will be developed in the future with separate applications. The project site is in Sections 14, 15, 23 & 24, all in T2N, R1E, near the northeast corner of Cloverdale and Kuna Roads.

C. Site History: The subject site is comprised of multiple parcels; totaling approximately 761.50 acres. All parcels are currently in Ada County and zoned Rural Residential (RR), however, they are contiguous to Kuna City limits on the east and southern sides, and has historically been used for a single family residence and for Agricultural purposes. Parcel two has also historically been used for Ag purposes, without a residence, and is already in Kuna City limits, zoned Agriculture.

D. General Projects Facts:

1. **Comprehensive Plan Designation:** The Future Land Use Map (Comp Plan Map) is intended to serve as a *guide* for the decision-making body for the City. The Comp Plan map indicates land use designations generally speaking, it is not the actual zone. The Future Land Use Map identifies the approx. 39.33-acre site as Medium Density Residential (4-8 DUA).



2. **Kuna Recreation and Pathways Master Plan Map:**
The Kuna Recreation and Master Pathways Plan map identifies two (2) future bike in the northwest part of the project and on the south side of the project. See Master Plan behind this report.

3. **Surrounding Existing Land Uses and Zoning Designations:**

North	RR & RP	Rural Residential, Rural Preservation – Ada County
South	R-6, RP & RR	Medium Density Residential - Kuna City, Rural Preserve, Rural Residential – Ada County
East	RP	Rural Preservation – Ada County
West	R-6 & RR	Medium Density Residential – KUNA CITY, & Rural Residential – Ada County

4. **Parcel Sizes, Current Zoning, Parcel Numbers:**

Property Owner	Parcel Size – Approx.	Current Zone	Parcel Number
James L. Whitmore	18.05 acres	RR - Rural Residential	S1415110103
James L. Whitmore	94.3 acres	RR - Rural Residential	S1415141900
James L. Whitmore	30.19 acres	RR - Rural Residential	S1415427805
James L. Whitmore	135.43 acres	RR - Rural Residential	S1414336000
James L. Whitmore	10.68 acres	RR - Rural Residential	S1414315000
James L. Whitmore	1 acre	RR - Rural Residential	S1414438900
James L. Whitmore	19.34 acres	RP - Rural Preservation	S1414438400
Gilmore Keith H. & Ruth E. Living Trust	120 acres	RR - Rural Residential	S1423211000
James L. Whitmore	40 acres	RR - Rural Residential	S1423120000
James L. Whitmore	77.60 acres	RR - Rural Residential	S1423110000
James L. Whitmore	2.4 acres	RR - Rural Residential	S1423111000
James L. Whitmore	40 acres	RP - Rural Preservation	S1424233600
Davis Jay C. & Robert A. Rev. Trust	40 acres	RP - Rural Preservation	S1424240000
James L. Whitmore	120 acres	RP - Rural Preservation	S1424131800

5. **Services:**

Sanitary Sewer– City of Kuna
Potable Water – Suez Water Company
Pressurized Irrigation– On Site Wells - HOA
Fire Protection – Kuna Rural Fire District
Police Protection – Kuna City Police (A.C.S.O.)
Sanitation Services – J & M Sanitation

6. **Existing Structures, Vegetation and Natural Features:** Currently there are two residence on the Davis property. One on the north side of Tenmile Creek Road, and on one the south side with approximately six (6) accompanying out-buildings, with agriculture uses on site. One of the Whitmore properties appears to have two (2) outbuildings in the northwest corner of the project and various Ag uses throughout the remainder. The Gilmore parcel appears to be free of a residence and used for Ag purposes with an accompanying pond (irrigation source). There is some topographical variation that appears to run east-west through most of the south part of the overall project. A large portion of the topography appears to be steep with elevation changes that are at, or exceed 80 feet in elevation difference. The vast majority of the site appears to be relatively flat and suitable for development.

Transportation / Connectivity: The site has significant frontage along Tenmile Creek Road and a large part of the overall project straddles both sides of Tenmile Creek. This project has significant frontage along Five Mile

Road on the north side of the site. The project has limited frontage along Hubbard Road. Applicant shall connect to existing roads as required in Kuna City Code (KCC) and provide stubs for future connections for to serve the connection/traffic needs of the site. Applicant shall satisfy Kuna City and ACHD's requirements for roadway improvements, including but not limited to, road widening and vertical/rolled curb, gutter and sidewalks appropriately. *When the FINAL ACHD report for the first preliminary plat is available it will be included with the packet and staff may have additional comments at that time concerning the transportation items for the application.*

Staff notes that the *DRAFT* report from ACHD on the preliminary plat identifies a number of improvements placed on the applicant on and off/site. Through discussions with the applicant, they are prepared to do what is necessary to comply with the ACHD requirements, including significant on and off site roadwork, and the re-aligning of a portion of Five Mile Road as it runs through the south part of the site, due to topography.

7. **Environmental Issues:** Staff is not aware of any environmental issues, health or safety conflicts. Idaho Department of Environmental Quality (DEQ) has provided recommendations for surface and groundwater protection practices and requirements for development of the site. The applicant is in process of obtaining a conditional letter of map revision from FEMA.

8. **Agency Responses:** The following responding agency comments are included as exhibits with this case file:

• City Engineer (Paul Stevens) -	Exhibit B 1
• Ada County Highway District (ACHD) PUD -	Exhibit B 2
• Ada County Highway District (ACHD) Pre Plat -	Exhibit X X *(NOT AVAILABLE AT TIME OF*
• Boise Project Board of Control –	Exhibit B 4 *PACKET PREPARATION)*
• Central District Health Department (CDHD) –	Exhibit B 5
• COMPASS (Community Planning Association) -	Exhibit B 6
• Department of Environmental Quality (DEQ) –	Exhibit B 7
• Idaho Transportation Department (ITD) –	Exhibit B 8
• Kuna Rural Fire District (KRFD) -	Exhibit B 9
• Kuna School District No. 3 (KSD 3) -	Exhibit B 10
• Kuna Police Department -	Exhibit B 11
• Suez Water Systems -	Exhibit B 12
• Ada County Commissioners	Exhibit B 13
• West Ada School District -	Exhibit B 14
• Ada County Commissioner Rick Visser -	Exhibit B 15
• Boise Police Department -	Exhibit B 16

E. Staff Analysis:

The subject site begins at the southwest corner (SWC) of Hubbard and Five Mile Roads, then follows the curve of Five Mile as it turns into Tenmile Creek and ends at Cole Road. The applicants request is in line with the Comprehensive Plan (Comp Plan) and the Comprehensive Plan Map (CPM) designation of *Mixed-Use* by proposing three residential zones and two commercial zones throughout the subject site. This request will complement the development to its west and will provide project wide continuity as a multi-phased, master Planned Unit Development (PUD), consisting of approximately 761.44 acres.

The applicant requests annexation into Kuna City limits applying the Category "A" process for approximately 761.44 acres. The lands in this application touch City limits on the west side of the site and are therefore eligible for annexation. Applicant has submitted an application for annexation for 761.44 acres (approximately) and is seeking five (5) different zoning designations for these proposed annexing parcels: as follows:

- Approximately 660.78 acres are proposed to be annexed with a zone change from Rural Residential (RR) & Rural Preservation (RP) ***TO*** R-6 Medium Density Residential (MDR),
- Approximately 33.67 acres from Rural Residential (RR), ***TO*** R-12, High Density Residential (HDR),
- Approximately 18.89 acres from Rural Preservation (RP), ***TO*** R-20, High Density (HDR),
- Approximately 12.21 acres from Rural Residential (RR), ***TO*** C-1 , Neighborhood Commercial,
- Approximately 35.87 acres from Rural Preservation (RP), ***TO*** C-2, Area Commercial.

Kuna's Comprehensive Plan (Comp Plan), encourages a variety of housing types for all income levels numerous times throughout the document. Additionally, the City attempts to balance all housing types within the City. Pertinent sections of the Comp Plan that address housing types are included below, in Section J (Comp Plan Analysis) of this report.

The applicant seeks to apply the PUD process and proposes a mix of various uses throughout the project to include; zones for commercial, zones for medium and high density residential uses, (single family and multi-family lots), a school site, commercial lots, public service lots, open spaces to include several City parks, multiple private parks, with a considerable pathway network (*85.00 acres of open space in the first preliminary plat, or 17.8% in the first preliminary plat*). The applicant proposes a master-planned community for all ages. The applicant is proposing all public streets that will be built to Kuna and ACHD standards (curb, gutters & sidewalks) and must meet Kuna Fire Department requirements. Proposing a large network of biking and walking pathways, will help reduce vehicle trips for basic needs, recreation and even daily services. Using the PUD process and exceeding the required 10% usable open space, the applicant is eligible to request relief from certain development standards to accommodate mixed-uses and design criteria to create a unique and different development.

A Development Agreement (DA) accompanies this application to guide the entire development of this master-planned community from start to finish. Staff has met multiple times with the applicant and has sought direction from the City's legal Counsel to discuss the contents of the DA. The DA before you tonight is the end product of negotiations between staff, legal counsel and the applicant. As allowed through the PUD process, the applicant proposes a number of changes to City standards and requirements and have listed those items they seek relief from in an exhibit of the DA. That list is included for your review. The requested changes are presented side-by-side to show current code, compared with the *requested* changes and are listed as Exhibit E as a companion to the DA. Staff highlights the following specific items for the Commission to consider during the hearing:

- Page 3 of 12; KCC 5-10-4–O-4 – *Subdivision Advertising*,
- Page 4 of 12; 6-2-3-J-1 and 2 – *Pre Plat approval timeframes*, and 6-3-3-G - Cul-de-sac lengths: staff recommends that the applicant be conditioned to work with the KRFD for acceptable lengths,
- Page 5 of 12; 6-3-4-D – ***Minimum road width***,
- Page 7 of 12; 6-3-9-G– *Flag Lots*: noting that the City Engineer prefers no more than 3 contiguous lots on a flag lot,
- Page 9 of 12; 6-4-2-S – *Streets and Alleys*: staff recommends that the applicant be conditioned to work with the KRFD for acceptable lengths.

Within the DA is discussion about a funding mechanism called a CID (Community Improvement District). This is a different funding mechanism than the previous LID (Local Improvement District). The City of Kuna and its current residents will not be exposed or at risk as this funding mechanism reimburses the investors of the project, and a leaves a bank/lending institution out of the equation. Staff recommends that if this project is approved, the applicant return and go through the CID processes in order to establish that district.

Staff has reviewed the preliminary plat application and it appears to follow KCC standards and requirements. All roads will be public and will be built to Kuna City and ACHD standards, except those specific streets which may receive limited KCC relief if the proposals are approved as noted in the applicants request (listed above). Staff notes that through discussions with the City Engineer that narrowing the back-of-curb to back-of-curb section of public roads is generally supported for specific situations and not intended to be an overall

approval. Staff recommends that in the event this application is approved, any narrowing of public streets within this project will need specific prior approval from the City Engineer and will be limited to a case by case scenario. Staff also highlights that along arterial roads, KCC calls for full roadway improvements, including curb/gutter, road widening, and sidewalks at eight feet (either separated or attached). The City does not allow for borrow ditches for any roads, unless a classified road does not meet the ACHD standards/policies for vertical curb. If the need arises for borrow ditches on classified roads *and* if ACHD does not specifically allow vertical curb, the applicant shall be conditioned to obtain a license agreement from ACHD to provide grass and watering source in the borrow ditches as allowed. Gravel and bare ground is not an allowed ground cover. Staff notes that the subject property will be connected to the City's public sewer facilities, and will connect to Suez Water Systems for potable water and use existing on-site wells for a private pressure irrigation system.

A design review application for common area landscaping and open space was included as a part of the overall application. Staff finds the proposed landscaping, buffers and open space generally to be in compliance with Kuna City Code. Staff notes that if this project is approved, at the time of civil plan development, landscaping cannot be placed within ten (10) feet of any and all meter pits, pressurized irrigation valves, and/or ACHD underground facilities and must honor all vision triangles. Applicant shall be conditioned to follow all landscape codes and planting requirements to insure field conditions do not change after approval is given. Staff notes that a monument sign for the subdivision was not included with the design review application noting that all monument signs are required to go through design review. This process can be accomplished at a later date without any delay to the project. Staff also notes that the planting details should be changed to reflect KCC; which are requested in the proposed conditions of approval (Condition #13).

The applicant met with the Kuna School District (KSD) on Friday January 10, 2020, and the result of this late meeting produced a second school site within the KSD boundaries and will be a 10 acre elementary site.

Staff has determined the preliminary plat and design review generally complies with the goals and policies for Kuna City, Title 5 and Title 6 of the Kuna City Code; Idaho Statute § 67-6511; and the Kuna Comprehensive Plan. Staff recommends that if the Planning and Zoning Commission recommends approval of Case No's 19-10-AN (Annexation) 1901-PUD and 19-06-S (Preliminary Plat) and approves Case No. 19-23-DR (Design Review), the applicant be subject to the conditions of approval listed in section K of this report, as well as any additional conditions by the Planning and Zoning Commission.

F. <u>Applicable Standards:</u>

1. City of Kuna Zoning Ordinance Title 5.
2. City of Kuna Subdivision Ordinance Title 6.
3. City of Kuna Comprehensive Plan.
4. Idaho Code, Title 67, Chapter 65- the Local Land Use Planning Act.

G. <u>Proposed Comprehensive Plan Analysis:</u>

Kuna Planning and Zoning Commission may (**accept or reject**) the Comprehensive Plan components, and shall determine if the proposed annexation, PUD and preliminary plat requests for the site (***are/are not***) consistent with the following Comprehensive Plan components as described below:

<u>Goal Area 3: Kuna's land uses will support a desirable, distinctive and well-designed community.</u>

- Goal 3.D: Encourage development of housing options and strong neighborhoods.
  - Objective 3.D.1: Encourage development of housing options for all citizens.
    - Policy 3.D.1.a: Encourage preservation and development of housing that meets demand for household sizes, lifestyles and settings.
- Goal 3.G: Respect and protect private property rights.
  - Objective 3.G.1: Ensure land use policies, restrictions, and fees do not violate private property rights.

- Policy 3.G.1.b: Ensure City land use actions, decisions and regulations will not cause an unconstitutional regulatory taking of private property; and do not effectively eliminate all economic value of the subject property.
- Policy 3.G.1.c: Ensure City land use actions, decisions and regulations do not prevent a private property owner from taking advantage of a fundamental property right. Ensure city actions do not impose a substantial and significant limitation on the use of the property.

Goal Area 4: Kuna will be a connected community through strong transportation and infrastructure systems.

- Goal 4.D: Promote a connected street network that incorporates mid-mile collectors and crossing for improved neighborhood connectivity.
  - Objective 4.D.2: Ensure the continued expansion/development of mid-mile collector system throughout the community.
    - Policy 4.D.2.a: Extend and expand mid-mile roads as growth occurs.
    - Policy 4.D.1.b: Preserve adequate right-of-way along all mid-mile roads or other approved alternative locations to align roads.

H. Proposed Kuna City Code Analysis:

1. This request **appears/doesn't appear** to be consistent **and/or** in compliance with Kuna City Code (KCC).
   Comment: *The proposed project meets the land use and area standards in Chapter 3, Title 5 of KCC. Staff also finds that the proposed project meets all applicable requirements of Title 6 of KCC.*

2. The site **is / is not** physically suitable for a subdivision.
   Comment: *The approx. 761.44 acre subdivision has sufficient size to include a mix of lot sizes, community landscape buffer(s).*

3. The annexation and subdivision uses **are / are not** likely to cause substantial environmental damage or avoidable injury to wildlife or their habitat.
   Comment: *The land to be annexed is not used as wildlife habitat. Roads, homes and open spaces are planned for construction according the City requirements and best practices. Staff is not aware of any environmental damage or loss of habitat associated with the proposed development.*

4. The annexation and subdivision application **is / is not** likely to cause adverse public health problems.
   Comment: *The annexation of the property requires a zoning designation per Kuna Code 5-13-9. The medium density zone requires connection to public sewer and water, therefore eliminating the occurrence of adverse public health problems. Through correspondence with public service providers and application evaluation, this project appears to avoid detriment to surrounding uses.*

5. The application **does / does not** appear to avoid detriment to the present and potential surrounding uses; to the health, safety, and general welfare of the public taking into account the physical features of the site, public facilities and existing adjacent uses.
   Comment: *The annexation, PUD and subdivision design did consider the location of the property, classified roadways and the system. The subject property can be connected to the City's public sewer facilities, and will connect to Suez Water Systems for potable water and use existing on-site wells for a private pressure irrigation system. The adjacent uses are complimentary uses (Kuna) as proposed in the Kuna Comprehensive Plan Future Land Use Map.*

6. The existing and proposed streets and utility services in proximity to the site **are/are not** suitable and adequate for residential purposes predicated on approved designs to extend and/or improve each accordingly.

I. Recommendation of the Commission to Council:

*Note: These motions are for a recommendation of **approval / conditional approval / denial** of the annexation, PUD, preliminary plat and DA applications to the City Council, and for **approval / conditional approval / denial** of the design review application However, if the planning and Zoning Commission wishes to approve or deny specific parts of these requests as detailed in the report, those changes must be specified.*

Based upon the record contained in Case No's 19-10-AN, 19-01-PUD, 19-06-S and a DA including the Comprehensive Plan, Kuna City Code, Staff's Memorandums, including the exhibits, and the testimony during the public hearing, the Kuna Commission hereby recommends ***approval/ conditional approval/denial*** *of* the Findings of Fact and Conclusions of Law, and conditions of approval for Case No's 19-10-AN, 19-01-PUD, 19-06-S and a DA a request for annexation, rezone and preliminary plat approval by Providence Properties, LLC.:

Based upon the record contained in Case No. 19-23-DR including the Comprehensive Plan, Kuna City Code, Staff's Memorandums, including the exhibits, and the testimony during the public hearing, the Kuna Commission hereby ***approves/ conditionally approves/denies*** the conditions of approval for Case No. 19-23-DR a request for Design Review approval by Ten Mile Creek, LLC.:

J. Recommended Conditions of Approval:

1. The applicant and/or owner shall obtain written approval on letterhead or may be written/stamped on the approved plans of the construction plans from the agencies noted below. All submittals are required to include the lighting, landscaping, drainage, and development plans. All site improvements are prohibited prior to approval of the following agencies:
    a. The City Engineer shall approve the sewer hook-ups.
    b. The City Engineer shall approve drainage and grading plans.
    c. Central District Health Department recommends the plan be designed and constructed in conformance with standards contained in, "Catalog for Best Management Practices for Idaho Cities and Counties".
    d. No construction, grading, filling, clearing or excavation of any kind shall be initiated until the applicant has received approval of the drainage plan.
    e. The Kuna Fire District shall approve fire flow requirements and/or building plans. Installation of fire protection facilities as required by Kuna Fire District is required.
    f. The *Boise Project and Board of Control* shall approval any modifications to the existing irrigation system.
    g. Approval from Ada County Highway District shall be obtained and Impact Fees must be paid prior to issuance of any building permit.
    h. Idaho Transportation Department. No public street construction may be commenced without the approval and permit from Ada County Highway District and Idaho Transportation Department.
    i. All public rights-of-way shall be dedicated and constructed to standards of the City and Ada County Highway District,
2. Installation of utility service facilities shall comply with requirements of the public utility or irrigation district providing services. All utilities shall be installed underground, see KCC 6-4-2-W.
3. Compliance with Idaho Code, Section §31-3805 pertaining to irrigation waters is required. Irrigation/drainage waters shall not be impeded by any construction on site.
4. Street lighting shall use LED lights, with spacing and wattages meeting KCC 5-4-6; applicant shall coordinate a street light plan for P & Z approval in concert with the prepared construction drawings for the project.
5. Parking within the site shall comply with KCC 5-9-3.
6. Fencing within and around the site shall comply with Kuna City standards – KCC 5-5-5- A-J and KCC 6-4-2-E.
7. A sign permit is required prior to subdivision entrance sign construction and shall comply with KCC 5-10-4. *Monument signs will require a separate design review.*

8. All required landscaping shall be permanently maintained in a healthy growing condition. The property owner shall remove and replace unhealthy or dead plant material within three days or as the planting season permits as required to meet KCC 5-17-7 standards. Maintenance and planting within public rights-of-way shall be approved from the public entities owning the property.
9. The land owner/applicant/developer and any future assigns having an interest in the subject property, shall fully comply with all conditions of development as approved by the Commission and/or Council, or seek amending them through public hearing processes.
10. The applicant's proposed preliminary plat (dated May 2019) shall be considered a binding site plan, *or as modified and approved* through the public hearing process.
11. The applicant's proposed Landscape Plan (dated 07.01.2019) shall be considered a binding site plan, *or as modified and approved* through the public hearing process.
12. Applicant shall follow staff, city engineer and other agency recommended requirements as applicable.
13. Applicant shall add the following notes to the landscape plans and resubmit a PDF for Planning and Zoning approved plans, bearing the changes.
    13.1 – Landscape contractor shall remove all twine/ropes and burlap from root balls.
    13.2 – Landscape contractor shall remove the wire basket from the top 1/2 of the root ball.
    13.3 – Grass and a water source shall be placed in any ACHD required borrow ditches and a license agreement obtained from ACHD.
    13.4 - Landscaping cannot be placed within ten (10) feet of any and all meter pits, pressurized irrigation valves, and/or ACHD underground facilities and must honor all vision triangles
14. Compliance with all local, state and federal laws is required.

P.O. Box 13
Phone: (208) 922-5274
Fax: (208) 922-5989
www.Kunacity.id.gov

Based upon the record contained in Case No's 19-10-AN, 19-01-PUD, 19-06-S and a DA, including the Comprehensive Plan, Kuna City Code, Staff's Memorandums, including the exhibits, and the testimony during the public hearing, the Kuna Commission hereby recommends ***approval/conditional approval/denial*** of the Findings of Fact and Conclusions of Law, and conditions of approval for Case No's 19-10-AN, 19-01-PUD, 19-06-S and a DA, a request for annexation PUD, preliminary plat from Ten Mile Creek, LLC:

1. *The Kuna Commission approves the facts as outlined in the staff report, the public testimony and the supporting evidence list presented.*

   Comment: *The Kuna Commission held a public hearing on the subject applications on January 14, 2020, to hear from City staff, the applicant and to accept public testimony. The decision by the Commission is based on the application, staff report and public testimony, both oral and written.*

2. *Based on the evidence contained in Case No's* 19-10-AN, 19-01-PUD, 19-06-S and a DA*, this proposal generally complies with the Comprehensive Plan and City Code.*

   Comment: *The Comp Plan has listed numerous goals for promoting and supporting a diverse and sustainable economy that will allow more Kuna residents to work in their community and encouraging a balance of land uses to ensure that Kuna remains desirable, stable and a self-sufficient community.*

3. *Based on the evidence contained in Case No's* 19-10-AN, 19-01-PUD, 19-06-S and a DA*, this proposal generally complies with the Kuna City Code.*

   Comment: *The applicant has submitted a complete application, and following staff review the application appears to be in general compliance with the design requirements, public improvement requirements, objectives and considerations listed in Kuna City Code Title 5 and Title 6.*

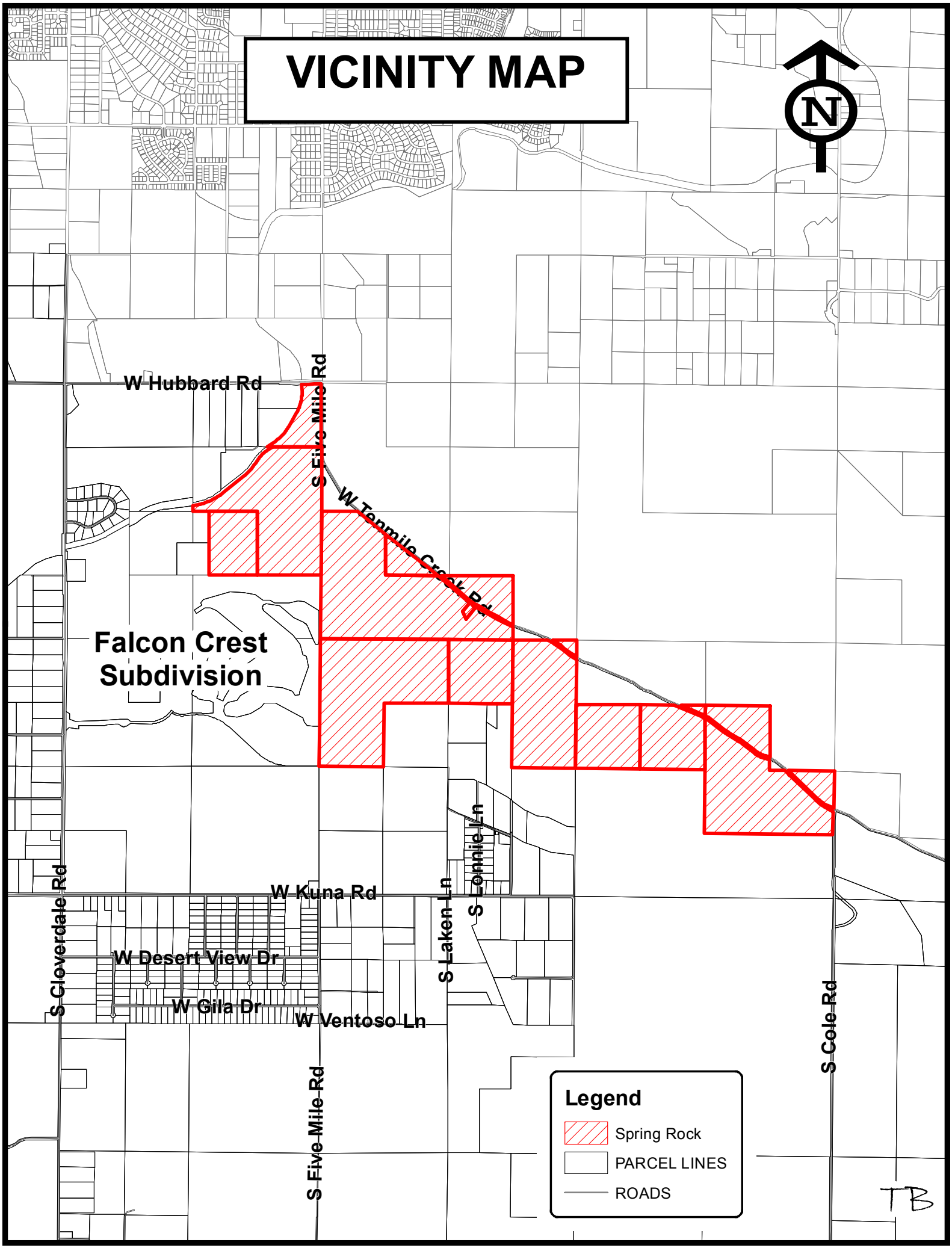
4. *The Commission has the authority* to recommend ***approval/conditional approval*** for *Case No's* 19-10-AN, 19-01-PUD, 19-06-S and a DA.

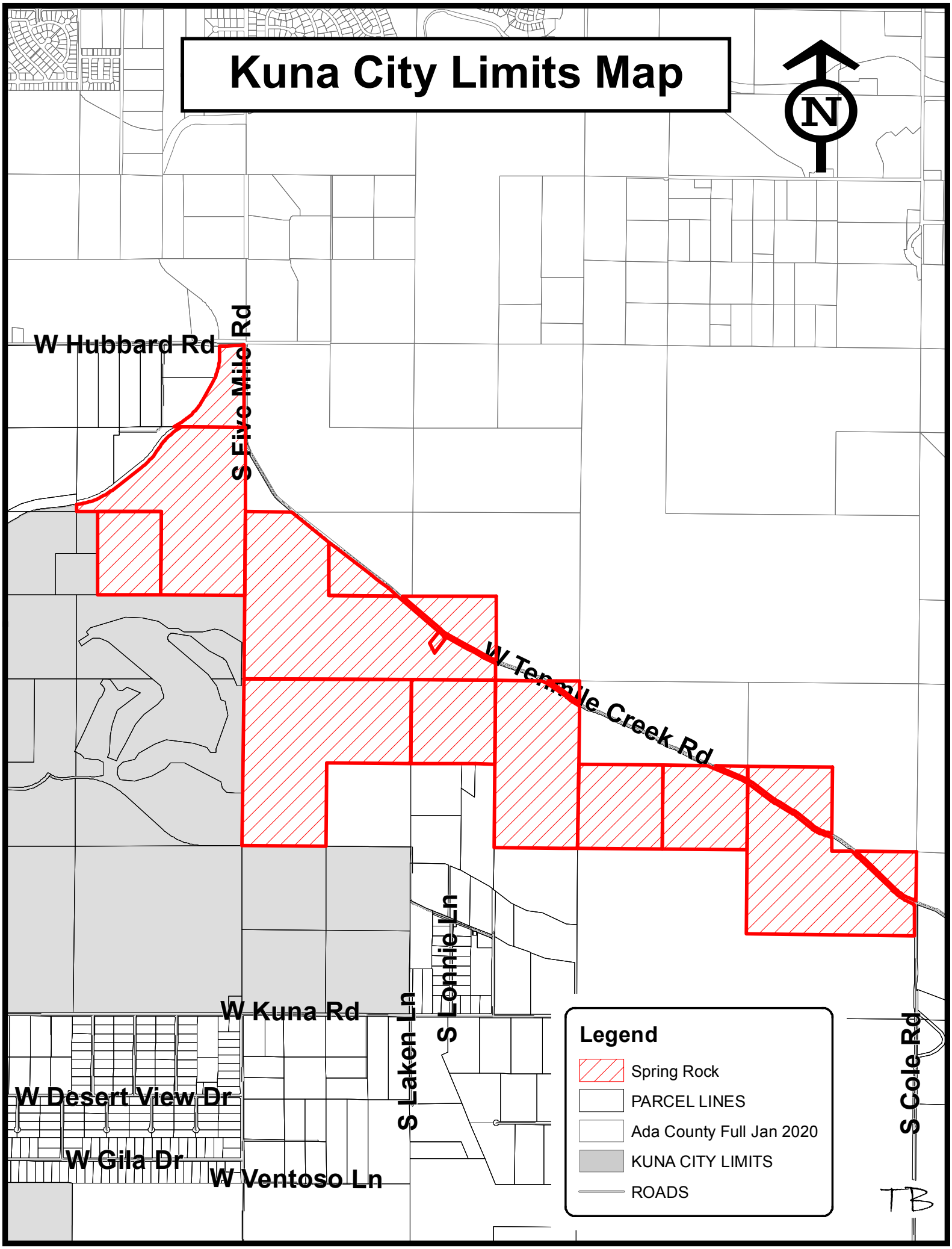
   Comment: *On January 14, 2020, the Kuna Commission may vote* to recommend ***approval/conditional approval/denial*** *for Case No's* 19-10-AN, 19-01-PUD, 19-06-S and a DA.

5. The public notice requirements have been met and the neighborhood meeting was conducted within the guidelines of applicable Idaho Code and City Ordinances.

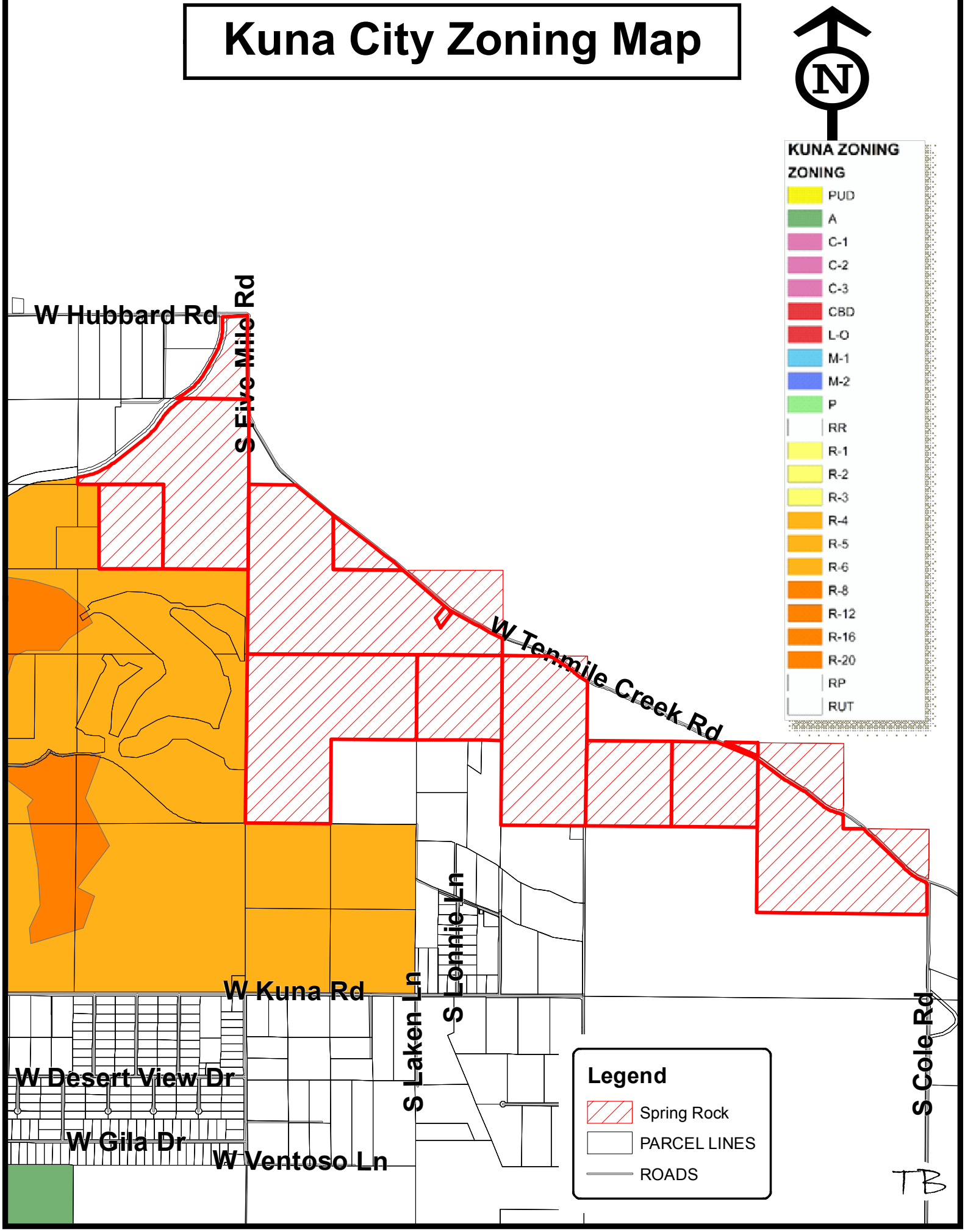
   Comment: *Neighborhood Notices were mailed out to residents within 800-FT of the proposed project site on December 20,,2019, and a legal notice was published in the Kuna Melba Newspaper on December 20, 2019 and January 2020. The applicant placed a sign on the property on January 3, 2020.*

DATED: this _____ day of _____, 2020.

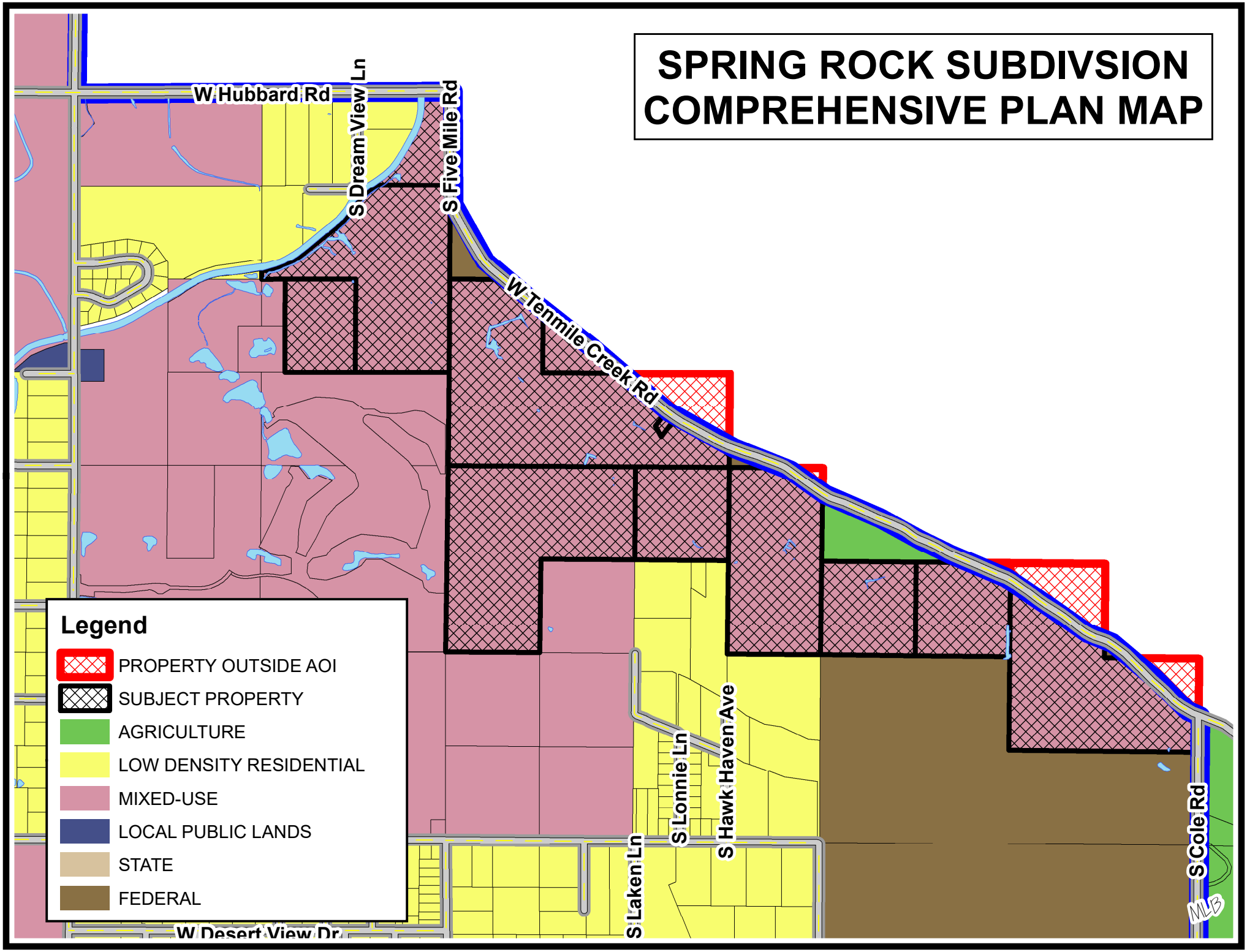

VICINITY MAP
N
W Hubbard Rd
S Five Mile Rd
W Tenmile Creek Rd
Falcon Crest Subdivision
S Lonnie Ln
S Laken Ln
W Kuna Rd
S Cloverdale Rd
W Desert View Dr
W Gila Dr
W Ventoso Ln
S Five Mile Rd
S Cole Rd
Legend
Spring Rock
PARCEL LINES
ROADS
TB


Kuna City Limits Map
N
W Hubbard Rd
S Five Mile Rd
W Ternple Creek Rd
W Kuna Rd
S Lonnie Ln
S Laken Ln
S Cole Rd
W Desert View Dr
W Gila Dr
W Ventoso Ln
Legend
Spring Rock
PARCEL LINES
Ada County Full Jan 2020
KUNA CITY LIMITS
ROADS
TB

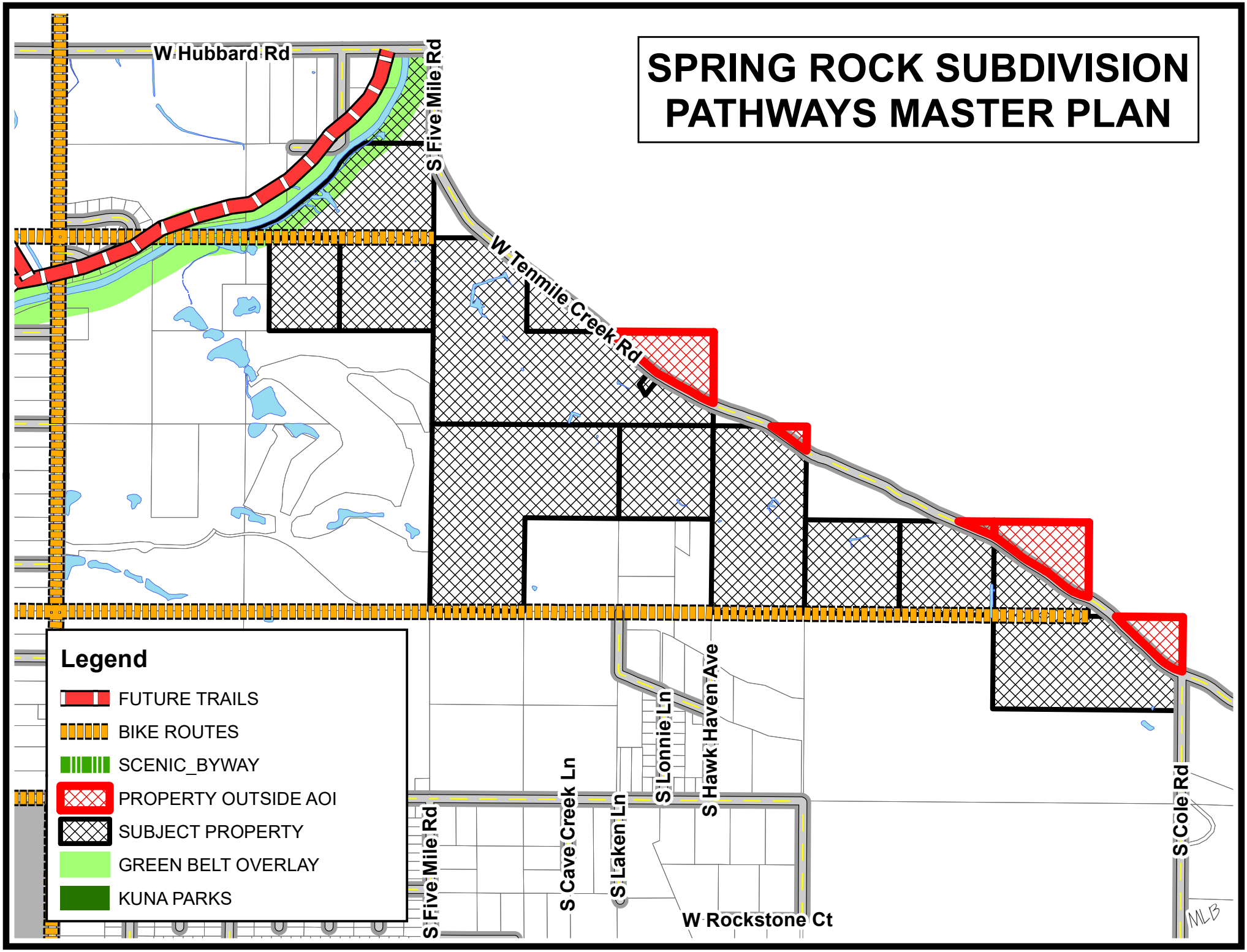
Kuna City Zoning Map



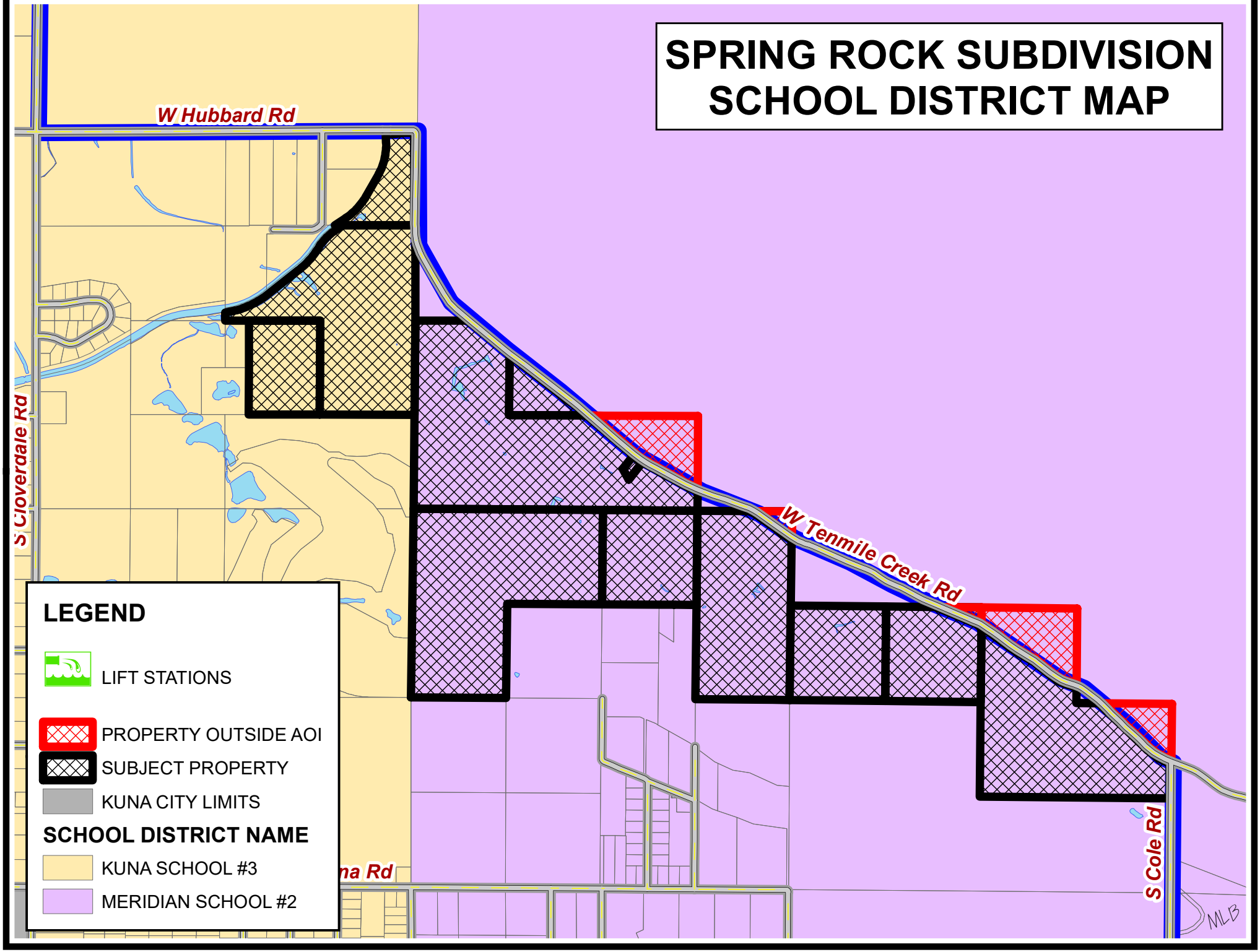
SPRING ROCK SUBDIVSION COMPREHENSIVE PLAN MAP



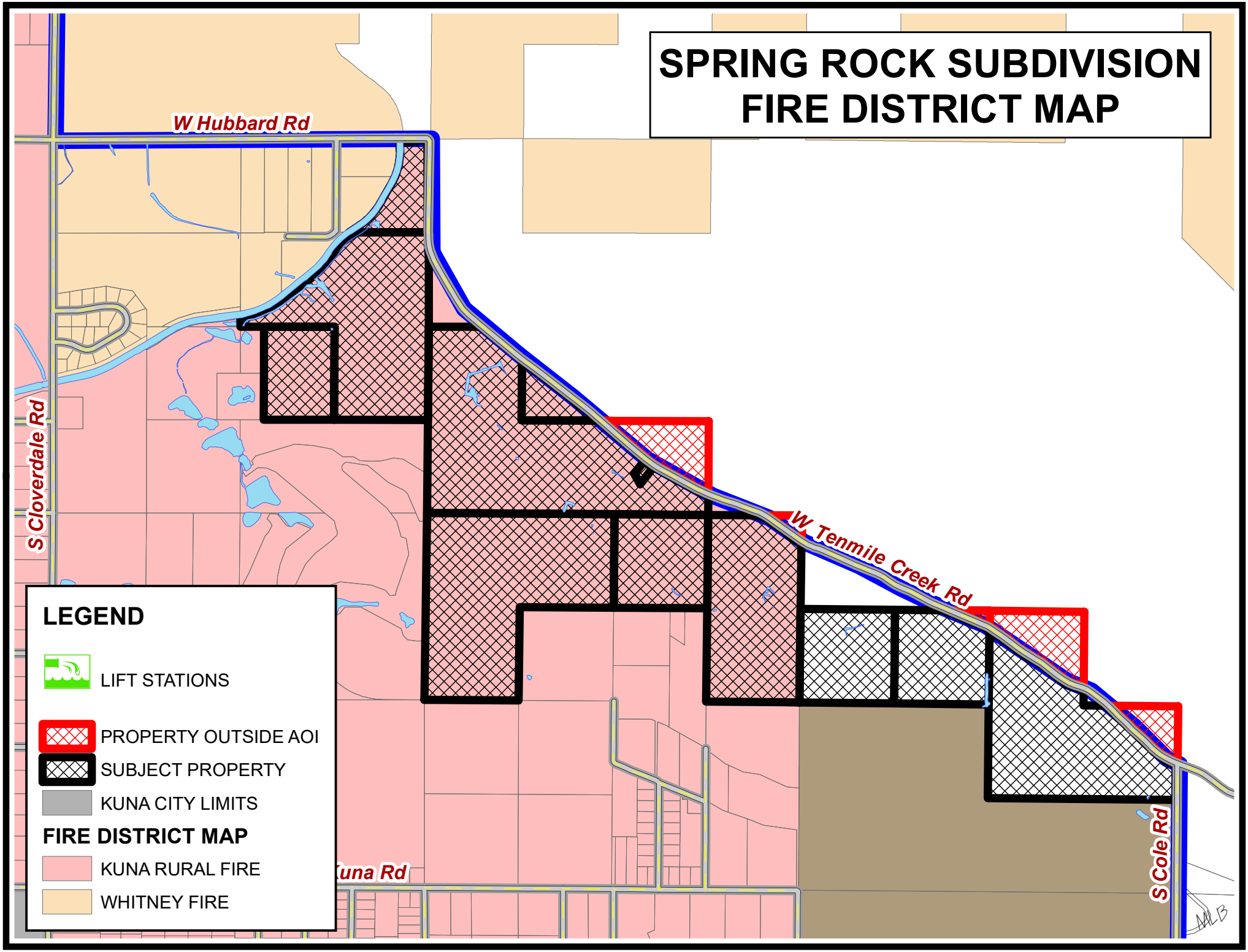
SPRING ROCK SUBDIVISION PATHWAYS MASTER PLAN



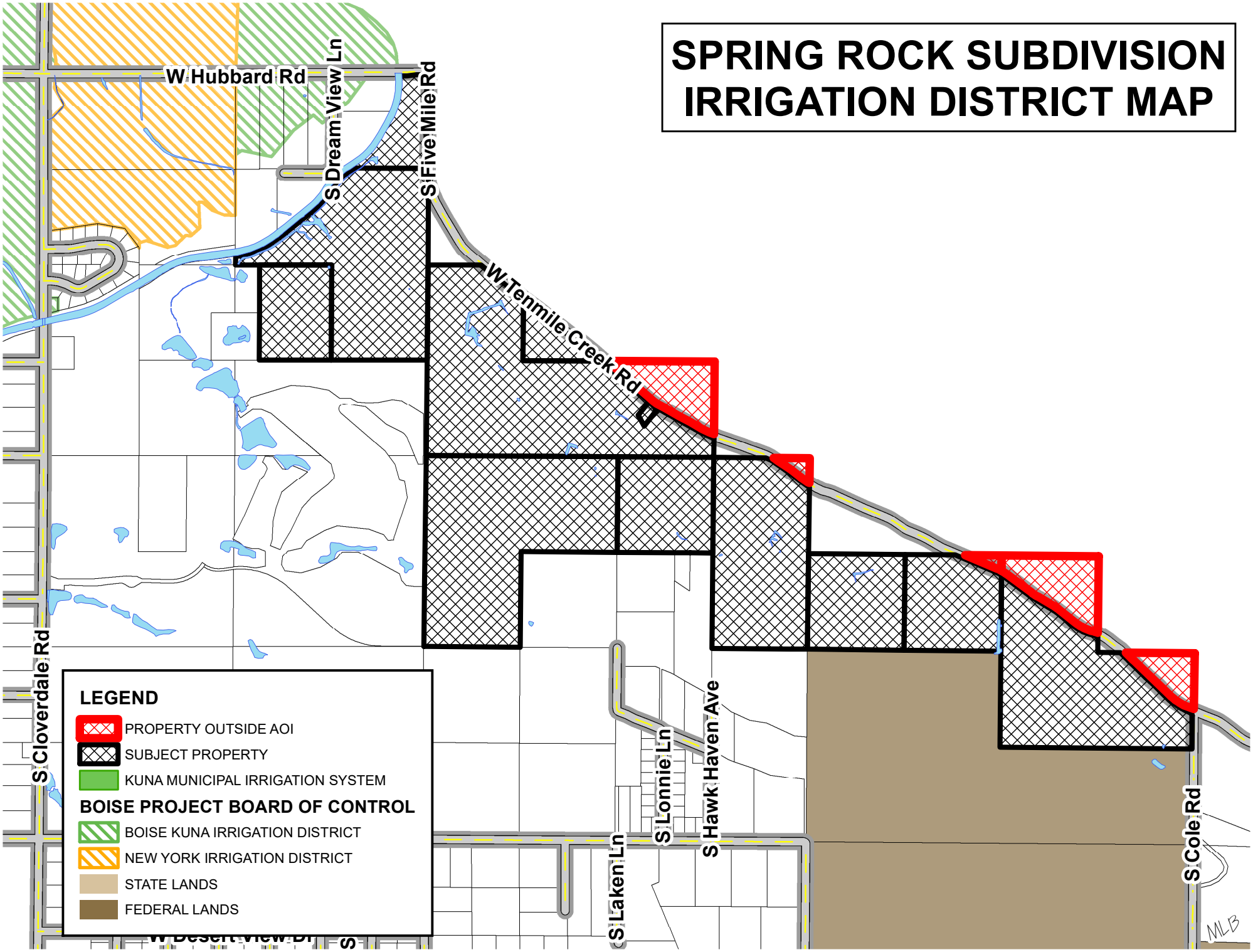
SPRING ROCK SUBDIVISION
SCHOOL DISTRICT MAP

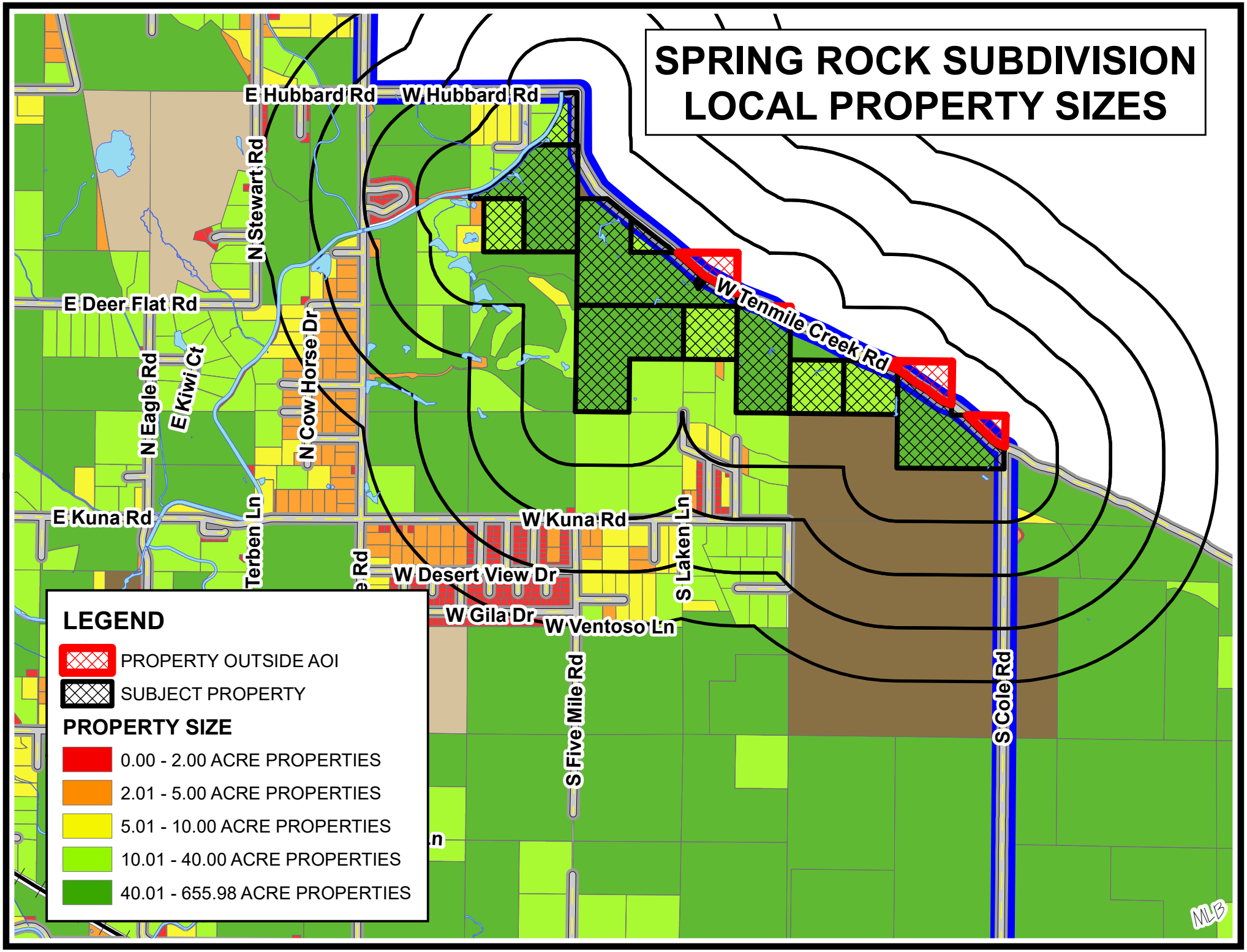


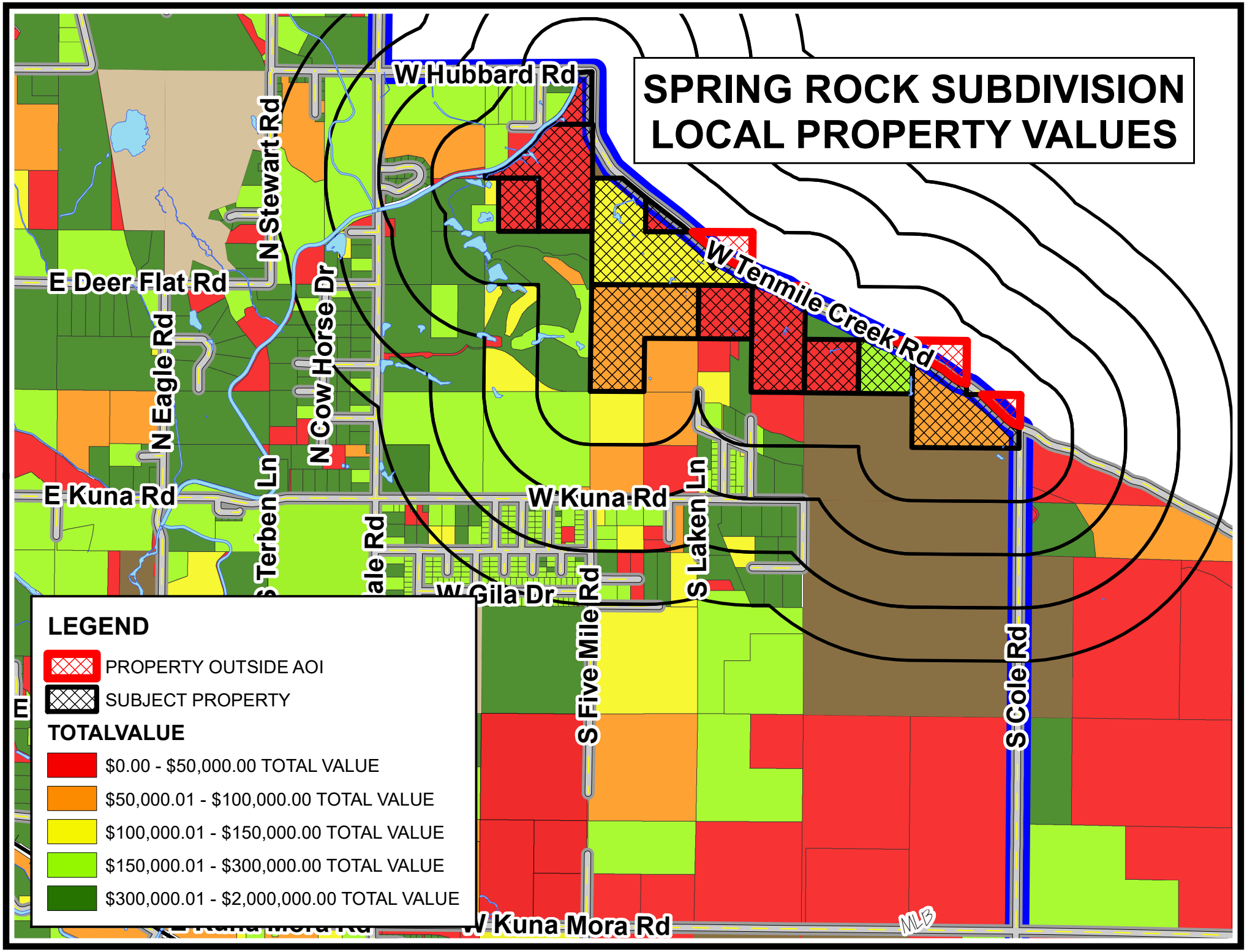
SPRING ROCK SUBDIVISION FIRE DISTRICT MAP



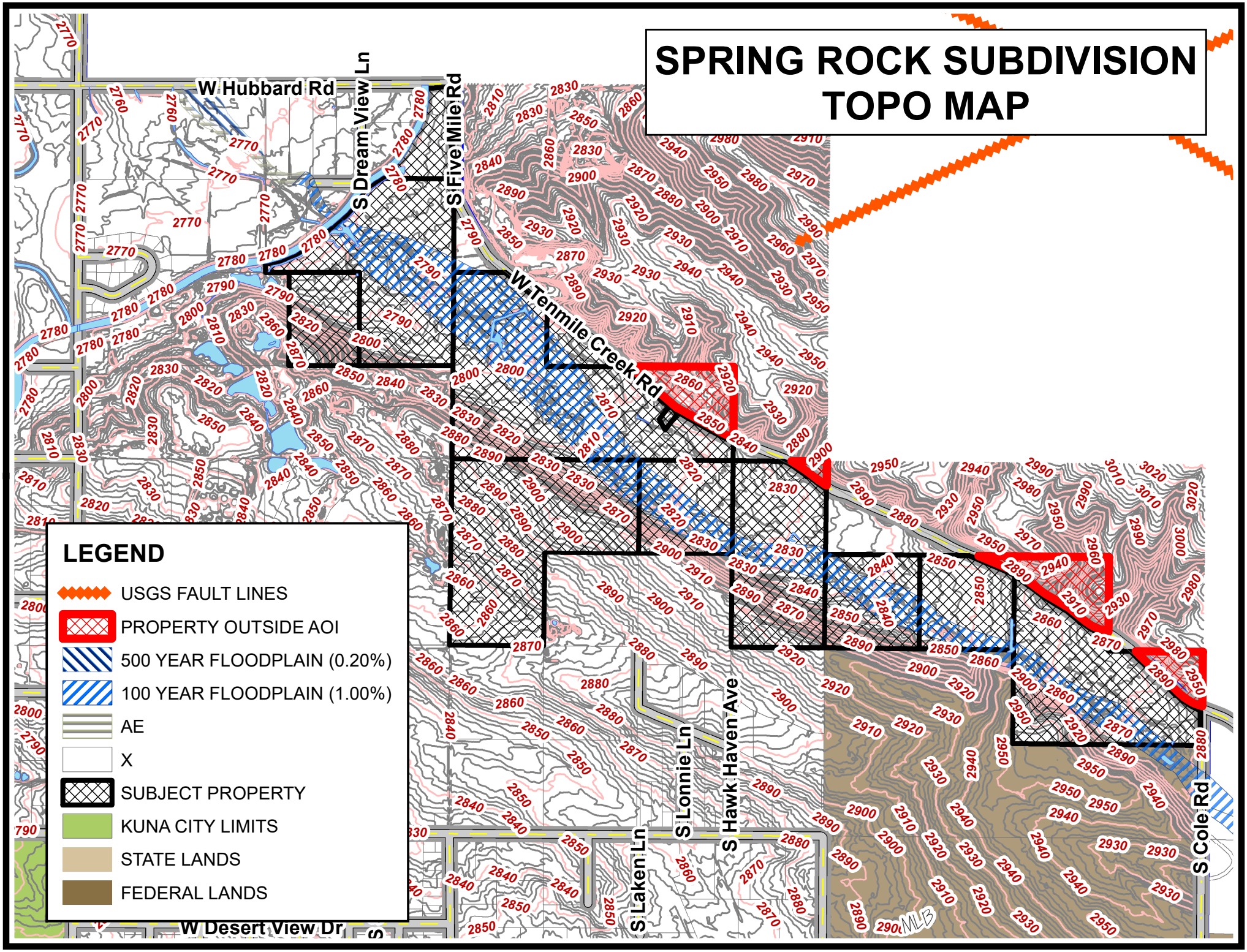
SPRING ROCK SUBDIVISION IRRIGATION DISTRICT MAP



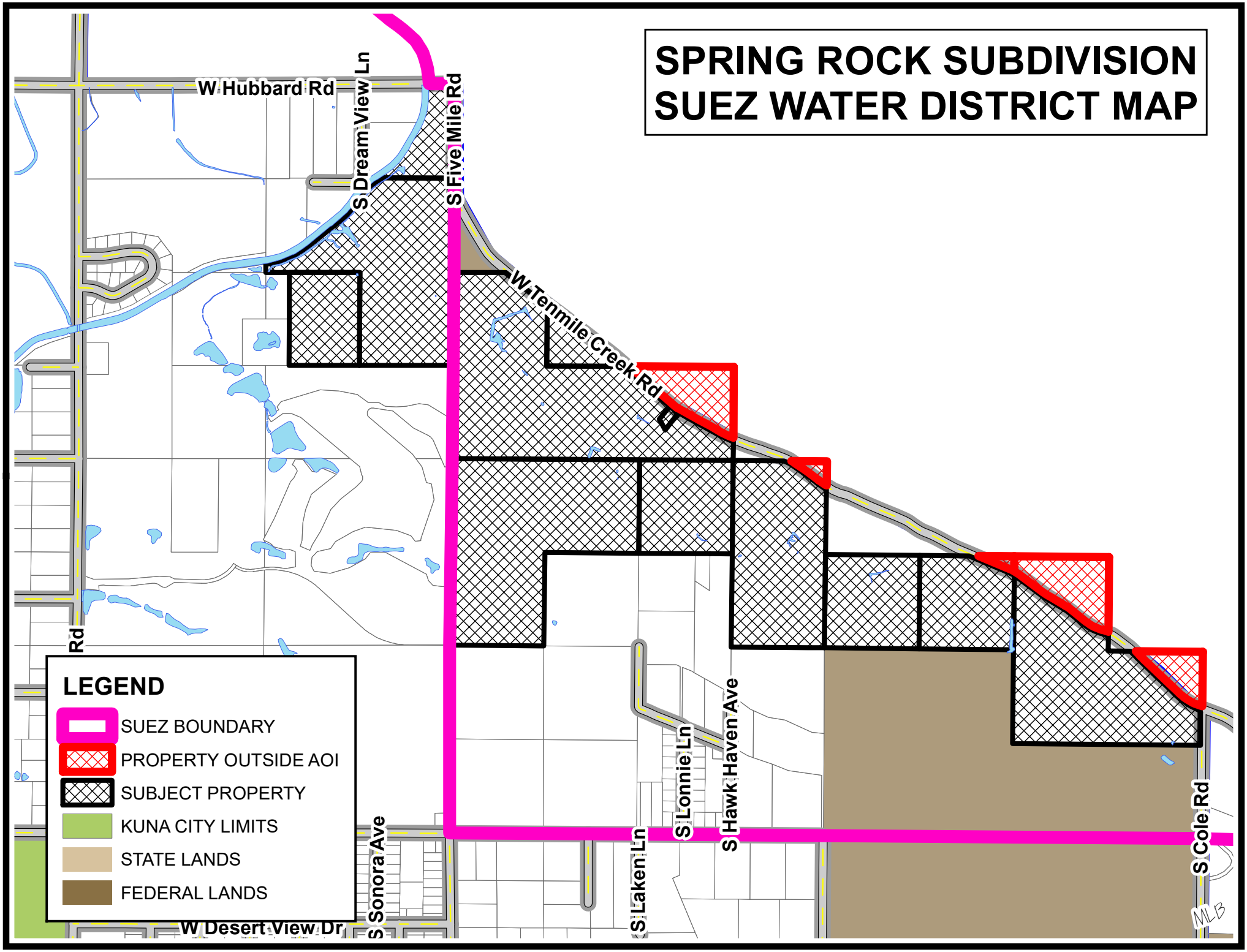

SPRING ROCK SUBDIVISION
LOCAL PROPERTY SIZES
E Hubbard Rd
W Hubbard Rd
N Stewart Rd
E Deer Flat Rd
N Eagle Rd
E Kiwi Ct
N Cow Horse Dr
W Tenmile Creek Rd
E Kuna Rd
Terben Ln
W Kuna Rd
S Laken Ln
W Desert View Dr
W Gila Dr
W Ventoso Ln
S Five Mile Rd
S Cole Rd
LEGEND
PROPERTY OUTSIDE AOI
SUBJECT PROPERTY
PROPERTY SIZE
0.00 - 2.00 ACRE PROPERTIES
2.01 - 5.00 ACRE PROPERTIES
5.01 - 10.00 ACRE PROPERTIES
10.01 - 40.00 ACRE PROPERTIES
40.01 - 655.98 ACRE PROPERTIES
MLB


SPRING ROCK SUBDIVISION
LOCAL PROPERTY VALUES
W Hubbard Rd
N Stewart Rd
N Cow Horse Dr
E Deer Flat Rd
N Eagle Rd
W Tenmile Creek Rd
E Kuna Rd
W Kuna Rd
S Terben Ln
S Laken Ln
W Gila Dr
S Five Mile Rd
S Cole Rd
W Kuna Mora Rd
LEGEND
PROPERTY OUTSIDE AOI
SUBJECT PROPERTY
TOTALVALUE
$0.00 - $50,000.00 TOTAL VALUE
$50,000.01 - $100,000.00 TOTAL VALUE
$100,000.01 - $150,000.00 TOTAL VALUE
$150,000.01 - $300,000.00 TOTAL VALUE
$300,000.01 - $2,000,000.00 TOTAL VALUE

SPRING ROCK SUBDIVISION TOPO MAP



SPRING ROCK SUBDIVISION
SUEZ WATER DISTRICT MAP



Falcon Crest Subdivision

Spring Rock Subdivision

S Cloverdale Rd

Kuna Rd

10 Mile Creek Rd

W Tenmile Creek Rd

W Gila Dr

W Ventoso Ln

Kuna Rd

S Maple Grove Rd

S Cole Rd

2019 Google

July 18, 2019

City of Kuna
751 W. 4th Street
Kuna, ID 83634

RE: SPRING ROCK SUBDIVISION – ANNEXATION, REZONE, DEVELOPMENT AGREEMENT, PLANNED UNIT DEVELOPMENT, PRELIMINARY PLAT AND DESIGN REVIEW

To Whom It May Concern:

We are pleased to submit to the City this request for Annexation, Rezone, Development Agreement, Planned Unit Development, Preliminary Plat and Design Review for the Spring Rock Subdivision generally located on the south side of Ten mile Creek Road in Kuna, Idaho. A legal description and maps are included with this application to show the total boundary and master plan for this new community.

Annexation

With the recent annexation of the Falcon Crest Subdivision, the current city limits of Kuna touch the southwestern parcels of our development and created a contiguous annexation path of annexation for the proposed project.

We are requesting annexation of approximately 761 acres into the incorporated city limits of Kuna, Idaho with this application. The annexation application will provide entitlements for a multi-phase residential and mixed-use development.

Due to the lower elevation of the site, the developer will install a sewer wastewater lift station on the western boundary of the site and extend a sewer force main line down Hubbard Road to the west and connect to the existing City sewer line(s) near the Patagonia subdivision. The development is primarily in the Suez Water service area as defined by the Idaho Department of Water resources and Suez has stated they will serve domestic drinking water to this development. The developer will be required to install all water infrastructure throughout the community. Emergency services will be available through the Kuna Police Department and Kuna Fire District. A pressurized irrigation system will be provided by onsite irrigation wells currently being used for agricultural use and would irrigate common areas and public parks throughout the community. Storm water will be retained on site and designed by a civil engineer in accordance with City of Kuna and ACHD requirements.

Parcels

The parcels that are included within this application are:

Parcel S1415110103
Parcel S1415427805
Parcel S1415141900
Parcel S1414336000
Parcel S1414315000
Parcel S1414438400
Parcel S1414438900
Parcel S1423120000
Parcel S1423110000
Parcel S1423111000
Parcel S1424233600
Parcel S1424131800
Parcel S1423211000
Parcel S1424240000

Rezone

The rezone request is for the entire development. Currently, all parcels are zoned RR (Ada County Zone Rural Residential). A master zoning map is included in this application to show the different requested zoning areas. This request is to annex all 761 acres into the incorporated city limits of Kuna, Idaho and to zone 660.78 acres from RR (Ada County Zone, Rural Residential) to R-6 (Medium Density Residential), and 13.00 acres from RR (Ada County Zone, Rural Residential) to R-12 (High Density Residential), and 18.89 acres from RR (Ada County Zone, Rural Residential) to R-20 (High Density Multi-Family Residential), and 12.21 acres from RR (Ada County Zone, Rural Residential) to C-1 (Neighborhood Commercial District), and 10.34 acres from RR (Ada County Zone, Rural Residential) to C-2 (Area Commercial District). Portions of the rezoned areas will be developed within a preliminary plat application which is included with this submittal, as well as future preliminary plats.

The annexation application will provide entitlements for a multi-phase residential and mixed-use development for the entire site. The C-1 neighborhood commercial area will have approximately 21,000 square feet of building that will include neighborhood office, restaurant and other uses that are intended to support the new residences. The overall buildout, including future preliminary plats, is estimated to have approximately 60,000 square feet of buildings. To further support the future residential homes, a coffee shop with gathering place will be added. Additionally, a small convenience store, a cell tower site, and a mini-storage facility are potential uses in the future C-1 and C-2 areas.

Development Agreement

A draft development agreement has been submitted with this application in accordance with Title 5, Chapter 14 of the Kuna City Code. Upon approval of these applications, this development agreement will be updated with the conditions of development determined by Kuna City Council and ACHD and will include an updated concept plan that reflects those requirements.

Within the Development Agreement are proposed financing policies and procedures for a Community Infrastructure District (CID) that upon City Council approval will setup a structure to help pay for some of the significant public and/or offsite improvements. The property owners responsible to be a part of this CID are only the property owners within this application.

Attachments in the development agreement include the overall master plan, annexation request, (as shown on the color master plans and landscape plan), dimensional requirements and community infrastructure district financing guidelines.

Planned Unit Development

The planned unit development proposes a mix of uses including commercial, residential and recreational uses.

The design of the project is intended to provide a variety of housing product types and cluster the residential units to provide a variety of open space areas. The overall 761 acres will be divided into various development areas and phases as shown on the enclosed master plan. These different areas will include single-family residential, multi-family residential, commercial areas (ie neighborhood office, mini-self storage, potential cell tower site, etc), an elementary school site, and private and public common area open spaces. The amenities within the common area open spaces will include: parks, pathways, trails, and swimming pools for the Spring Rock residents. The open space and the landscaping will be in compliance with the provisions listed in Kuna City Code and will be subject to Design Review. The parks and pathways will include combinations of active and passive amenities. There are 2 large proposed city parks that will be dedicated to the City of Kuna: one for fishing and the other to be a large area for soccer, football and other sports. The pathways will be open to the public even though a portion of them will be owned and maintained by the private homeowners association.

The overall development plan categorizes the areas as follows:

Preliminary Plat #1

Area Description	Gross Acres	Lot/Unit Count
Commercial	10	
Residential	150	791/893
School	10	
Roads	45	
Open space	85	
Future Development Area	177	
Totals	**477**	

Overall Master Plan

Area Description	Est. Gross Acres	Lot/Unit Count
Commercial	44	
Residential (SF & MF) (includes roads)	547	1,954/2,274
School	10	
Open Space	160	
Total	**761**	

For the first Preliminary Plat, the gross density is 1.9 Dwelling Units per Acre (893 units / 477 acres) and the net density (excluding roads) is 2.57. The gross density for the overall master plan site is 2.99 Dwelling Units per Acre (2,274/761) and the net density (excluding roads is 4.5 unknown at this time as the final layout is to be determined.

The proposed development is designed to meet all requirements outlined in Kuna City Code Title 5, Chapter 7 in regard to Planned Unit Developments. Amenities to be provided include: a large community park, a fishing pond, local and regional pathways and trails with access to BLM lands, and private swimming pools for Spring Rock community residents that will be constructed to accommodate all age groups and will meet ADA accessibility standards. The project will contain open space totaling a minimum of 20% of the gross project acreage. Private common area open spaces, amenities, and private driveways (for a portion of multi-family and commercial areas) will all be owned and maintained by the Homeowner's Association as outlined in the Development Agreement and Covenants, Conditions and Restrictions that will be recorded with this development and each phase as it progresses. Additionally, street lights will be dark sky compliant and actual light fixture specifications will be provided to the city for further review and approval.

Access to the development will be provided at various points along Ten Mile Creek Road and Hubbard Road. The development will extend Five Mile Road from north to South to make a connection to the future extension of Five Mile Road to Kuna Road when installed by the Falcon Crest developer. We are working with ACHD and are proposing a new round about at the intersection of Ten Mile Creek Road and Five Mile Road to slow down speed traffic in the area. Additionally, there will be a residential collector road connecting Ten Mile Creek Road to Five Mile Road within the development to provide connectivity within the project and to filter traffic throughout, rather than guide all traffic out to the main roads. Many of the trips for food service, recreation, and basic commercial services will be within walking, biking, or a golf cart ride from the residences in the community.

A traffic impact study by CR Engineering, Inc. has been submitted to ACHD for review. Upon completion of their review ACHD will provide a final staff report to the city to be considered during the application review and hearing process.

PUD – Code Change Request

The developer is also requesting certain code changes to Kuna City Code Title 5, Chapter 7, Chapter 10 and Chapter 17 and Title 6, Chapter 2, Chapter 3, and Chapter 4. The code changes are outlined in Exhibit E of the Development Agreement. The changes requested, which are similar to and fewer than the code change requests for the Falcon Crest subdivision, refer to total required open space, structure separation, performance bonding, subdivision signage, landscaping, allowable uses, potable water source, and various subdivision requirements. These changes will accommodate the proposed mixed-use layout.

Preliminary Plat

The first preliminary plat proposed within this Planned Unit Development consists of 476.76 acres, includes the C-1, C-2, R-6 and R-12 zoning designations and will be divided into 825 lots. This will include 7 commercial lots (6 buildable and 1 future commercial lot), 791 residential lots (893 dwelling units), 23 common lots, 1 school lot, 1 future MF lot, and 2 public utility lots. There are also 3 common private accesses (not separate lots) that will be used for the commercial area, a portion of the northern 4-plex area and the multi-family area. The common area for the first preliminary plat will incorporate 85 acres, which is 17.8% of the platted area. The average lot size is 8,267 square feet. Though the overall density for the entire development will be 2.99 dwelling units per acre, to show a commitment to provide more active and developed open space up front within the development the density for the first preliminary plat is only 1.9 dwelling units per acre.

There will be common driveways or private streets to access the commercial areas and a small portion of the multifamily area. This first preliminary plat will occur in approximately 13

phases and will begin with phase 1 taking access from Five Mile Road. This preliminary plat area is intended to provide future residents with a variety of housing types that will range from 4-plex rentals to traditional single-family homes to custom homes. We intend to own and/or manage the 4-plex rentals to ensure long-term quality and upkeep. Additionally, several of the single-family homesites are intended to have smaller yards due to the significant open space and clustering the homesites in the master plan design as the general public is moving towards healthy and social living.

Design Review

The landscaping proposed in this development includes elements that are outlined in Chapter 17 of the Kuna City Code. The elements that have been designed are the required numbers and species of trees and bushes within the 20' – 25' landscape buffers and internal open (common) space areas, around the pool areas, pathways, and includes irrigation and fencing. The proposed fencing ranges from a 4' solid and/or 6' wrought iron along the pathways and other common areas and 6' solid privacy fencing around at the back of the landscape buffers and residences.

As noted on the enclosed plans, the landscaping shall be installed in accordance with Chapter 17 of the Kuna City Code. On-site stormwater retention methods will be explored further at the time of final plat and construction review. Proposed structures will be evaluated as building permits are requested for the recorded lots. Maintenance will be provided by the homeowner's association for the development.

Overall Development Schedule

Development is planned to proceed immediately following project and engineering approvals. Development of the first preliminary plat will occur in phases over the course of 5-10 years depending on market conditions. We anticipate developing 1-2 phases per year in the first preliminary plat and continuing to develop various portions of the property over the course of 20+ years at a pace that is determined by the market.

The enclosed applications have been submitted in accordance with the requirements of the City of Kuna and will comply with all applicable local, state and federal requirements. The development has been designed in accordance with the City of Kuna's Code and Comprehensive Plan. Please contact me at 208-850-1070 if you have any questions regarding this application.

Sincerely,

Dave Yorgason

received
7.18.19

CityofKuna
Planning& Zoning
Department
P.O. Box 13
Kuna, Idaho 83634
208.922.5274
Fax: 208.922.5989
Website: www.kunacity.id.gov

Commission & Council Review Application

Note: Engineering fees shall be paid by the applicant if required.

*Please submit the appropriate checklist (s) with application

For Office Use Only	
File Number (s)	19-06-S, 19-10-AN, 19-05-ZC, 19-01-PUD, 19-23-DR
Project name	Springrock Sub
Date Received	7.18.19
Date Accepted/ Complete	
Cross Reference Files	
Commission Hearing Date	
City Council Hearing Date	

Type of Review (check all that apply):

- [X] Annexation
- [ ] Appeal
- [ ] Comprehensive Plan Amendment
- [X] Design Review
- [X] Development Agreement
- [ ] Final Planned Unit Development
- [ ] Final Plat
- [ ] Lot Line Adjustment
- [ ] Lot Split
- [X] Planned Unit Development
- [X] Preliminary Plat
- [X] Rezone
- [ ] Special Use
- [ ] Temporary Business
- [ ] Vacation
- [ ] Variance

Contact/Applicant Information

Owners of Record: See Affidavits Address: City, State, Zip:	Phone Number: E-Mail: Fax #:
Applicant (Developer): Ten Mile Creek LLC Address: 1211 N Happy Dr. City, State, Zip: Boise ID 83706	Phone Number: 208-850-1070 E-Mail: dyorgason6@gmail.com Fax #:
Engineer/Representative: RiveRidge Engineering Address: 2447 S Vista City, State, Zip: Boise ID 83705	Phone Number: 208-344-1180 E-Mail: dpowell@rvrdg.com Fax #:

Subject Property Information

Site Address: Ten Mile Creek Rd

Site Location (Cross Streets): Hubbard Rd & Five Mile Rd, Ten Mile Creek & Cole

Parcel Number (s): See Parcels List attached

Section, Township, Range: Township: 2N Range: 1E

Property size : 761 Acres

Current land use: Agriculture — Proposed land use: Residential, Commercial

Current zoning district: AG — Proposed zoning district: R-6, R-12, C-1 R-20, C-2

Project Description

Project / subdivision name: Spring Rock Subdivision

General description of proposed project / request: Master Plan includes residential, multi-family, neighborhood commercial, City pond & parks, elementary school site.

Type of use proposed (check all that apply):

- [X] Residential
- [X] Commercial
- [ ] Office
- [ ] Industrial
- [ ] Other

Amenities provided with this development (if applicable): Pathways, active outdoor features, City pond & parks, HOA community pools.

Residential Project Summary (if applicable)

Are there existing buildings? [X] Yes [X] No

Please describe the existing buildings: Existing residence

Any existing buildings to remain? [X] Yes [X] No Existing residence

Number of residential units: 893 Prelim-Plat Number of building lots: 791-Prelim Plat

Number of common and/or other lots: 34

Type of dwellings proposed:

- [X] Single-Family
- [ ] Townhouses
- [ ] Duplexes
- [X] Multi-Family
- [ ] Other

Minimum Square footage of structure (s): NA

Gross density (DU/acre-total property): 2.99 Net density (DU/acre-excluding roads): 4.5

Percentage of open space provided: 20% Acreage of open space: 160 (see narrative)

Type of open space provided (i.e. landscaping, public, common, etc.): Landscaping buffers along collector & arterial streets, public pathways & parks

See App's SLC Open Units breakdown.

Non-Residential Project Summary (if applicable)

Number of building lots: 6 Other lots: 4

Gross floor area square footage: 21,000 Existing (if applicable):

Hours of operation (days & hours): Building height:

Total number of employees: Max. number of employees at one time:

Number and ages of students/children: Seating capacity:

Fencing type, size & location (proposed or existing to remain):

Proposed Parking:

a. Handicapped spaces: Dimensions:
b. Total Parking spaces: Dimensions:
c. Width of driveway aisle:

Proposed Lighting:

Proposed Landscaping (berms, buffers, entrances, parking areas, common areas, etc.):

Applicant's Signature: Date: 7/19/2019

City of Kuna

Planned Unit Development (PUD) Application

P.O. Box 13
Kuna, Id 83634
(208) 922-5274
Fax: (208) 922-5989
Website: www.kunacity.id.gov

File No. : 19-06-S, 19-10-AN, 19-05-ZC, 19-01-PUD, 19-23-DR

Cross Ref. : _____

File Name: _____

The City of Kuna has adopted a Planned Unit Development (PUD) process whose purpose is to make Kuna a pleasant and comfortable place to live and work. This PUD process is based on standards and guidelines found in PUD Ordinance No. 2008-15. This document can be found online (www.cityofkuna.com) or can be picked up in the City's Planning and Zoning department is located at 763 W Avalon, Kuna ID. Staff is glad to assist you with your application form.

The Planned Unit Development application applies to the following land use actions:

- ▶Multi- family dwellings (3 or more)
- ▶Commercial
- ▶Technical Uses
- ▶Office
- ▶Common Area
- ▶Subdivision
- ▶Variety of Building Types and Densities
- ▶Common Open Space Variations
- ▶Clustered Development and Recreational Facilities

Application Submittal Requirements

Applicant Use		Staff Use
X	Date of pre-application meeting: 6/13/2019 *Note: Pre-Applications are valid for a period of three (3) months.*	☐
X	A complete Planned Unit Development Application form *Note: It is the applicant's responsibility to use a current application.*	☐
X	Detailed letter of explanation or justification for the application, describing the project and design elements, and how the project complies with the Planned Unit Development.	☐
X	One (1) Vicinity Map (8 ½" x 11") at 1" = 300' scale (or similar), label the location of the property and adjacent streets. Show all relevant current conditions (no older than one (1) year)	☐
X	One 8 ½" x 11" colored aerial photo depicting proposed site, street names, and surrounding area within five-hundred feet (500'). The purpose of this photo is to view the site for existing features and adjacent sites.	☐
X	Copy of Deed; **and an original** notarized Affidavit of Legal Interest for all parties involved	☐

Exhibit A7

[X] **Preliminary Development Plan**; which shall include drawings and supplementary written narrative materials to include: [ ]

- [X] Sketches or illustrations portraying the proposed character of the development; and sketches or illustrations of items subject to design review [ ]
- [X] Description of how the PUD relates to surrounding land uses [ ]
- [X] Vicinity map identifying neighborhood features within ½ mile of the location [ ]
- [X] The nature of other land use actions requested [ ]
- [X] If the PUD involves a preliminary plat, ***include the number of phases and a description of each one*** [ ]
- [X] A narrative identifying and addressing the following: [ ]
  - X Land use allocation by type ___
  - X Percentage ___
  - X Density ___
  - X Open Space ___
  - X Roads ___
  - NA Parking ___
  - X Housing ___
  - NA Commercial ___
  - X Services provided and public or private ownership and other information that may be pertinent and or material. ___

[X] **Preliminary Drawings**; at a minimum scale of 1" = 100' displaying the following: [ ]

- [X] The name of the proposed PUD [ ]
- [X] Date, north point and scale of drawing and identity of the person(s) preparing the drawing [ ]
- [X] A boundary survey legal description of the PUD [ ]
- [X] Names, addresses and telephone numbers of the controller and any of the following involved in the project: architect, landscape architect, designer, engineer, planner and nurseryman [ ]
- [X] Date of survey and name of surveyor [ ]

Appropriate identification of the drawing(s) as a preliminary plan

[X] **Natural Features Map**; showing an inventory of existing site features including: [ ]

- [X] Ground elevation shown by contour lines at two foot (2') intervals or less – five foot (5') intervals may be accepted for slopes greater than ten percent (10%) [ ]
- [X] General soil types as documented by a soils engineer or engineering geologist [ ]
- [X] **Hydrology;** Analysis of natural drainage patterns and water resources including an analysis of streams, natural drainage swales, wetlands, floodplain areas or other areas subject to flooding, poorly drained areas, permanent high ground water areas and seasonally high ground water areas as they may be located on site or be affected by on-site activity: [ ]
  - X Proposed and existing storm water facilities ___
  - X Water conveyance facilities ___
  - X Water features, such as ponds, wetlands and permanent or intermittent watercourses ___
  - X Areas subject to flooding ___
- [X] Natural features, such as trees, vegetation and ground cover, historic sites, major rock outcroppings, and similar type amenities. [ ]
- [X] Sanitary sewer, storm drainage and water supply facilities. ***If such facilities are not on or abutting the site, indicate the direction and distance to the nearest such facilities.*** [ ]
- [X] Width, location and purpose of all existing easements of record on/and abutting the site. [ ]
- [X] A map describing land areas contiguous within three hundred feet (300') and adjacent to the proposed PUD, including zoning classifications, land uses, densities, circulation systems, public facilities, unique natural features, and approximate locations of nearby structures. [ ]

[X] **Site Plan**; which shall include: [ ]

- [X] North arrow [ ]
- [X] To scale drawing (minimum 1" = 100') [ ]
- [X] All drawings need to be signed and stamped by a licensed engineer; and dated with contact information. ***With the exception of concept drawings and residential structures that do not require a licensed engineer's review.*** [ ]
- [X] Name of project [ ]
- [X] The locations of all existing and proposed dwelling units and/or individual lots [ ]
- [X] Location of major streets [ ]
- [X] The proposed yard requirements or locations of single family homes for individual lots [ ]
- [X] The existing and proposed traffic circulation system serving the PUD including: [ ]
  - NA Off-street parking and maneuvering ____
  - X Points of access to existing public rights-of-way ____
  - X A plan notation or description narrative outlining ownership of streets ____
  - NA Parking areas ____
- [X] The existing and proposed pedestrian and bicycle circulation system [ ]
- [X] Conceptual plans for all services including their location and whether the services will be publicly or privately owned and maintained including location of utility connections. ***Note: Any services intended to be privately owned (sewer, water, street, etc.) requires the City Engineer's prior review and approval*** [ ]
- [X] Proposed location and treatment of any public or private common areas or structures including open spaces, park or recreation areas, and school sites [ ]
- [X] The general landscape treatment proposed along the site's periphery and in accordance with provisions of the City's landscape ordinance [ ]
- [X] The approximate amount, location and type of buffering and/or landscaping [ ]
- [ ] Proposed architectural styles [ ]
- [X] The subdivider may be required to submit proposed restrictive covenants, in outline form [ ]

[X] Environmental assessment, traffic study, grading plan or other studies as may be appropriate for the proposed site as determined by the Commission or Director. [ ]

[X] If the applicant is requesting preliminary subdivision plat approval concurrent with the preliminary PUD approval, a **Preliminary Subdivision Plat** shall be submitted along with the PUD conceptual site plan. [ ]

[X] Development Schedule: A development schedule indicating the approximate date on which construction of all phases of the entire project can be expected to begin. If the schedule is approved by the Commission it shall become a part of the final development plan. [ ]

[X] Additional Information as may be required by City staff or deciding bodies. [ ]

Planned Unit Development Application

Applicant: Ten Mile Creek LLC Phone: 208-850-1070

[ ] Owner [X] Purchaser [ ] Lessee Fax/Email: dyorgason6@gmail.com

Applicant's Address: 1211 N Happy Dr.

Boise ID Zip: 83706

Owner: Whitmore Family,Gilmore Living Trust Phone:
Davis Family Revocable Trust

Owner's Address: Email:

Zip:

Represented By: *(if different from above)* Applicant Phone:

Address: Email:

Zip:

Address of Property: Ten Mile Creek Rd. (Five Mile east to Cole Rd.)
See list of parcel numbers

Distance from Major Cross Street: adjacent to Five Mile & Hubbard RD Street Name(s): Five Mile & Hubbard Rd's

Please Check the box that reflects the amenities used :

X **Active recreational amenities such as playgrounds; basketball or tennis courts; baseball, soccer or rugby fields; swimming pools; natatoriums; walking/ running paths; clubhouse; school sites; etc.**

X **Other amenities appropriate to the size and uses intended in the PUD**

X **Pedestrian and bicycle pathway systems within and through the project (exclusive of required sidewalks adjacent to public right-of-way) and designed to connect into existing or planned pedestrian or bicycle routes outside the PUD.**

This Planned Unit Development application is a request to construct, add or change the following: *(Briefly explain the nature of the request.)*
This is a mixed use development that incorporates various residential lot sizes,neighborhood commercial,multi-family and City parks, school site

1. Dimension of Property: 761 acres(approx 477 Acres in Prelim-Plat
2. Current Land Use(s): Agriculture
3. What are the land uses of the adjoining properties?
   North: BLM,RP, RR
   South: Golf Course,R-6, RR
   East: Agriculture
   West: Golf Course, R-6, RR
4. Is the project intended to be phased, if so what is the phasing time period? Yes
   Please explain: Overall 20-25 years
   First Preliminary Plat, Phase 1-12 2020-2024
5. Are there any irrigation ditches/canals on or adjacent to the property? Yes.New York Canal
   If yes, do you know the name of the irrigation or drainage provider? Boise Project Board of Controls
6. Fencing: *(Please provide information about new fencing material as well as any existing fencing material)*
   Mixture of wrought iron and solid privacy
   Type: Vinyl,Wood
   Size: 4-6 feet
   Location: Wrought iron around Golf Course, solid privacy for residences & streets
   (Please note that the City has height limitations for fencing material and requires a fence permit to be obtained prior to installation)
7. Storm Drainage:
   Proposed Method of On-site Drainage Retention/Detention:
   On-site drainage will be in ponds and seepage beds
8. Percentage of Site Devoted to Building Coverage: Overall Master Plan extends beyond current
   % of Site Devoted to Landscaping: Greater than 10% Square Footage: tbd Plat request
   % of Site that is hard Surfaces
   (paving, driveways, walkways, etc.): tbd Square Footage: tbd
   % of Site Devoted to Other Uses: tbd
   Describe: 11.4 acre public fishing pond, 5.3 acres C-1, Future City parks
   % of landscaping within the parking lot (landscaped islands, etc.): *(Please see Kuna City Ordinance 2006-100)*
   tbd
9. For details, please provide dimensions of landscaped areas within public right-of-way:
   NA
10. Are there any existing trees of 4" or greater in caliper on the property? *(Please provide the information on the site plans.)*
    If yes, what type, size and the general location? *(The City's goal is to preserve existing trees with greater than a four inch (4") caliper whenever possible):*
    None
11. Pedestrian Amenities: *(bike racks, receptacles, drinking fountains, benches, etc.)*
    Walking & biking pathways throughout, benches/lookouts and neighbor connectivity to amenities and public (BLM) property adjacent
12. Parking requirements: NA
    Total Number of Parking Spaces: NA Width and Length of Spaces:
    Total Number of Compact Spaces (8'x17'):
13. Is any portion of the property subject to flooding conditions? Yes X No
    (If yes, you must submit a Floodplain Development Permit Application with this Design Review application.)

IF THE PLANNING DIRECTOR OR DESIGNEE, THE COMMISSION AND/OR THE CITY COUNCIL DETERMINE THAT ADDITIONAL AND/OR REVISED INFORMATION IS NEEDED, AND/OR IF OTHER UNFORESEEN CIRCUMSTANCES ARISE, ANY DATES OUTLINED FOR PROCESSING MAY BE RESCHEDULED BY THE CITY. APPLICANT/REPRESENTATIVE MUST ATTEND ALL SCHEDULED MEETINGS.

The Ada County Highway District may also conduct public meetings regarding this application. If you have questions about the meeting date or the traffic that this development may generate or the impact of that traffic on streets in the area, please contact the Ada County Highway District at 387-6170. In order to expedite your request, please have ready the file number indicated in this notice.

Signature of Applicant _____ Date_____
City staff comments:

Signature of receipt by City Staff_____ Date_____

FOR ADDITIONAL INFORMATION:
(Please list page number and item in reference)

See narrative

FOR ADDITIONAL INFORMATION:

(Please list page number and item in reference)

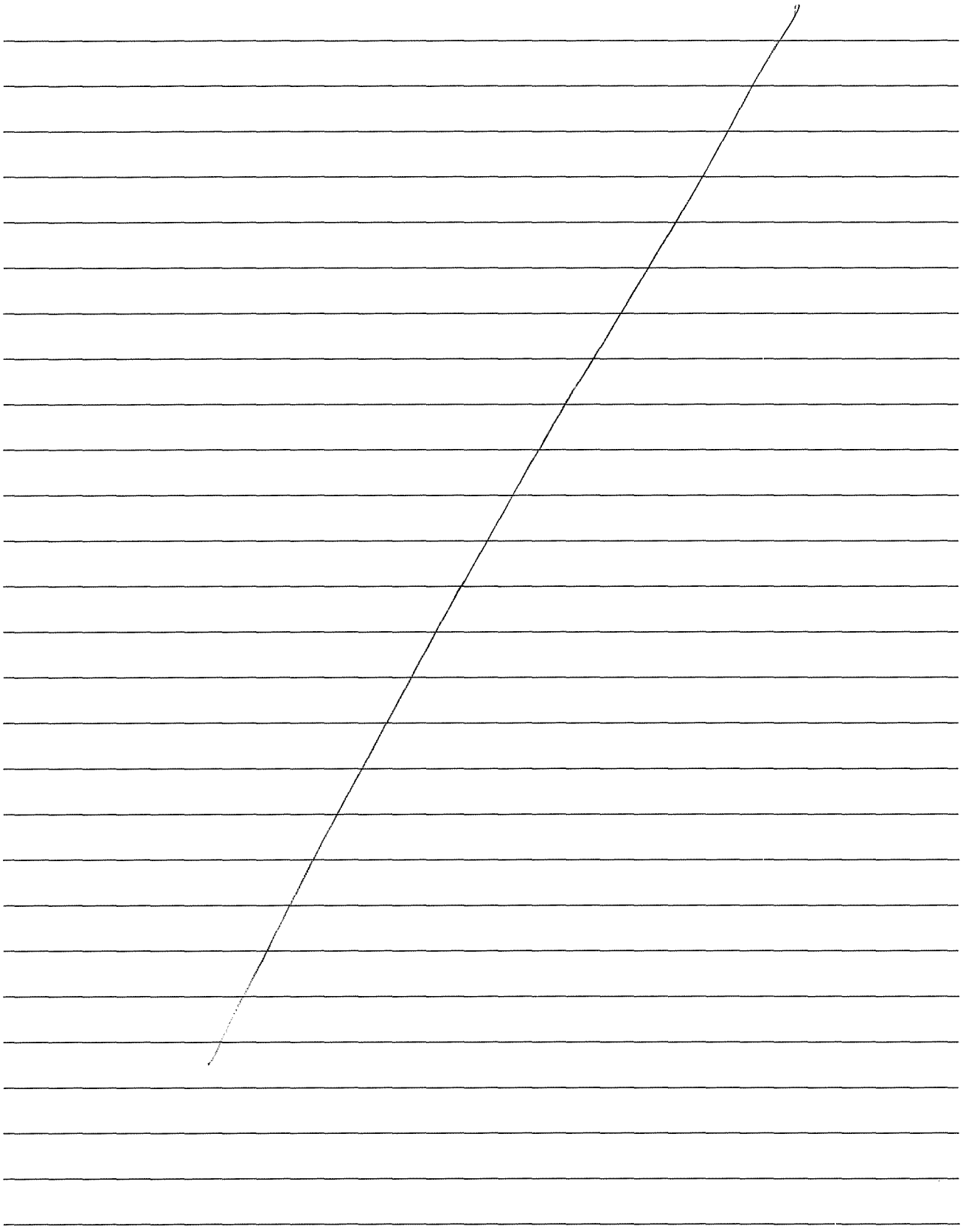
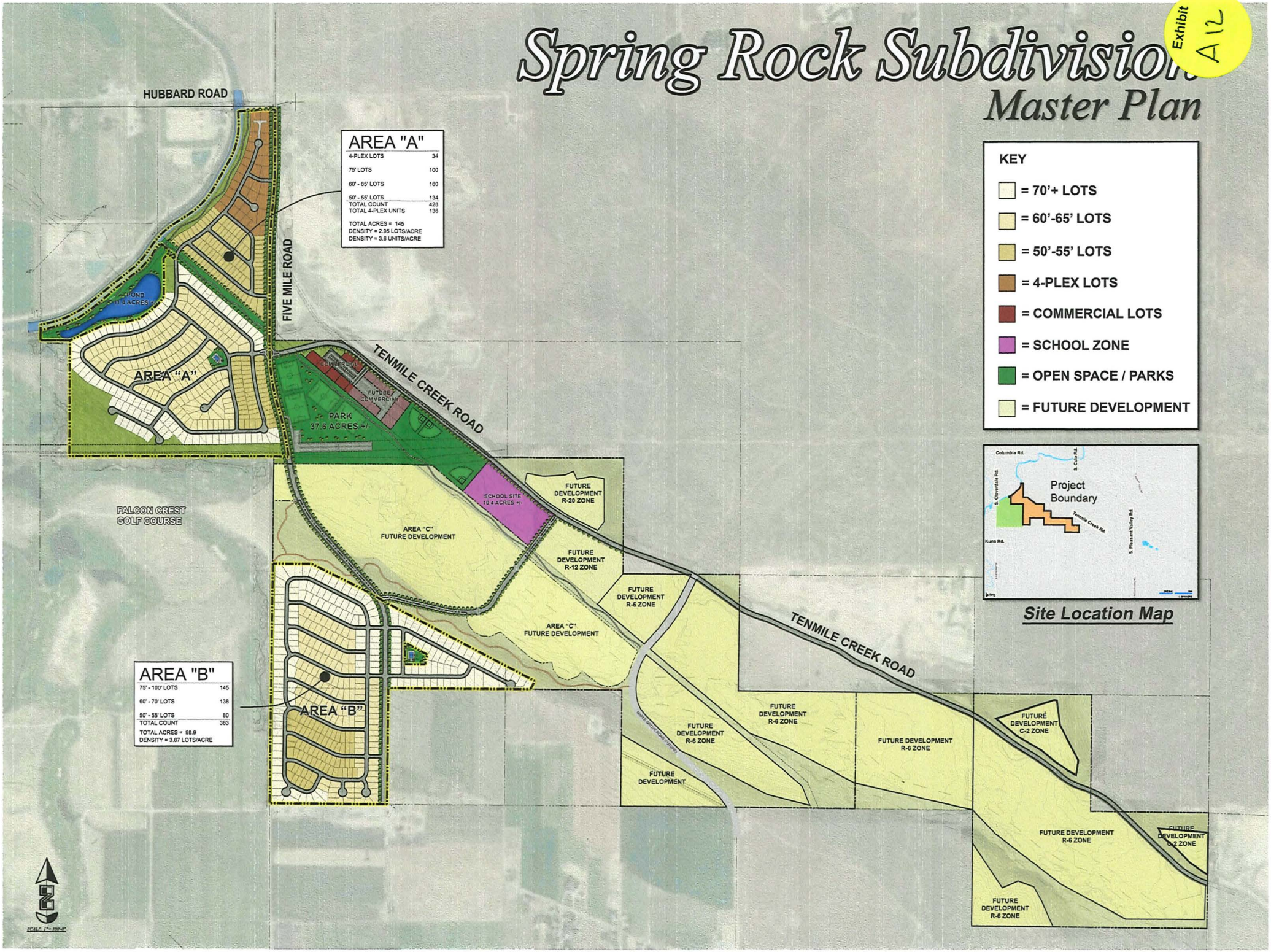


Exhibit A12

Spring Rock Subdivision
Master Plan



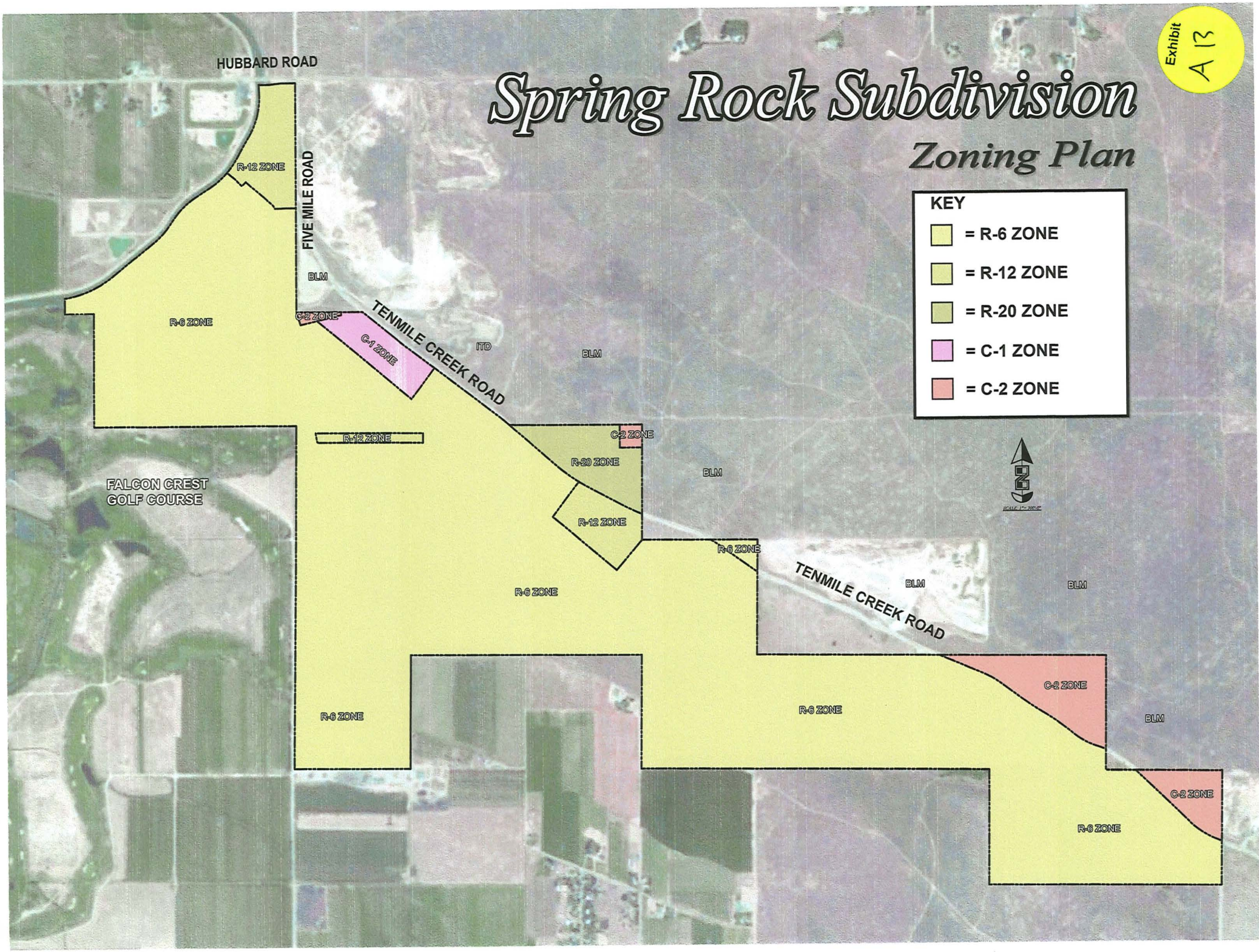


Exhibit A 13
Spring Rock Subdivision
Zoning Plan
KEY
= R-6 ZONE
= R-12 ZONE
= R-20 ZONE
= C-1 ZONE
= C-2 ZONE
HUBBARD ROAD
FIVE MILE ROAD
TENMILE CREEK ROAD
TENMILE CREEK ROAD
FALCON CREST GOLF COURSE
R-12 ZONE
R-6 ZONE
C-2 ZONE
C-1 ZONE
ITD
BLM
R-12 ZONE
C-2 ZONE
R-20 ZONE
BLM
R-12 ZONE
R-6 ZONE
R-6 ZONE
BLM
BLM
C-2 ZONE
R-6 ZONE
BLM
C-2 ZONE
R-6 ZONE

PUD / DR Parcel List

Parcel Number	Acreage	Owner
#1. Parcel S1415110103	18.05 Acres	Whitmore
#2. Parcel S1415427805	30.1950 Acres	Whitmore
#3. Parcel S1415141900	94.30 Acres	Whitmore
#4. Parcel S1414336000	135.43 Acres (partial)	Whitmore
#5. Parcel S1423211000	120 Acres	Gilmore

Annexation, Zoning Parcel List

Parcel Number	Acreage	Owner
#1. Parcel S1415110103	18.05 Acres	Whitmore
#2. Parcel S1415427805	30.1950 Acres	Whitmore
#3. Parcel S1415141900	94.30 Acres	Whitmore
#4. Parcel S1414336000	135.43 Acres	Whitmore
#5. Parcel S1414315000	10.68 Acres	Whitmore
#6. Parcel S1414438400	19.34 Acres	Whitmore
#7. Parcel S1414438900	1.0 Acre	Whitmore
#8. Parcel S1423120000	40 Acres	Whitmore
#9. Parcel S1423110000	77.60 Acres	Whitmore
#10. Parcel S1423111000	2.4 Acres	Whitmore
#11. Parcel S1424233600	40 Acres	Whitmore
#12. Parcel S1424131800	120 Acres	Whitmore
#13. Parcel S1423211000	120 Acres	Gilmore
#14. Parcel S1424240000	40 Acres	Davis

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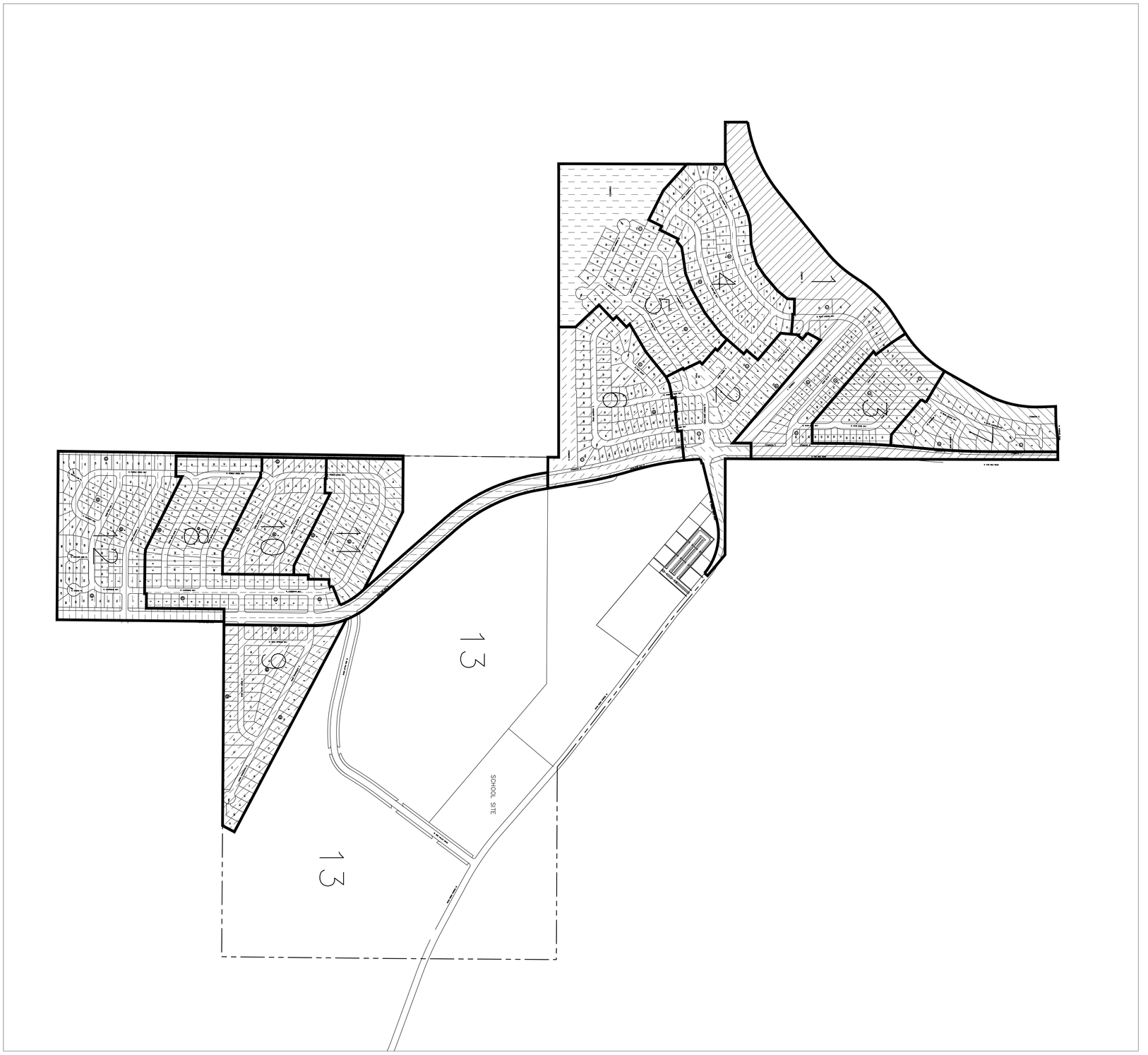


Phasing Plan

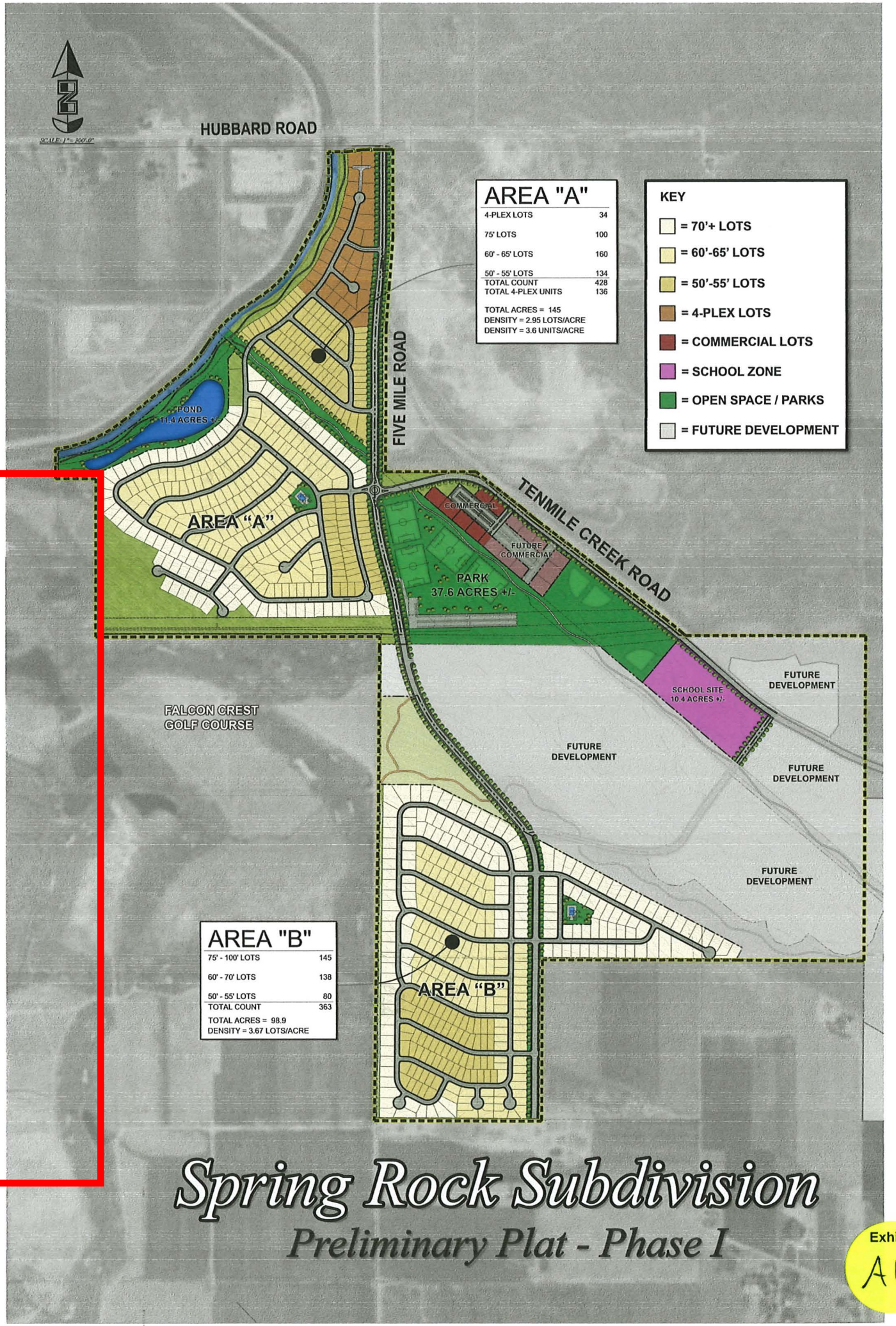
PROJECT PHASING PLAN

SPRING ROCK
PRELIMINARY PLAT

REVISIONS			E-FILE NAME
NO.	ITEM	DATE	
			DESIGNED
			DRAWN
			CHECKED
			APPROVED

RiveRidge Engineering Company
2447 S. Vista Ave. Boise, Idaho 83705
Ph. (208) 344-1180, Fax (208) 344-1182

DATE: MAY-2019
PROJECT: 18042
SHEET 1 OF 1



Spring Rock Subdivision

Preliminary Plat - Phase I

Exhibit A11

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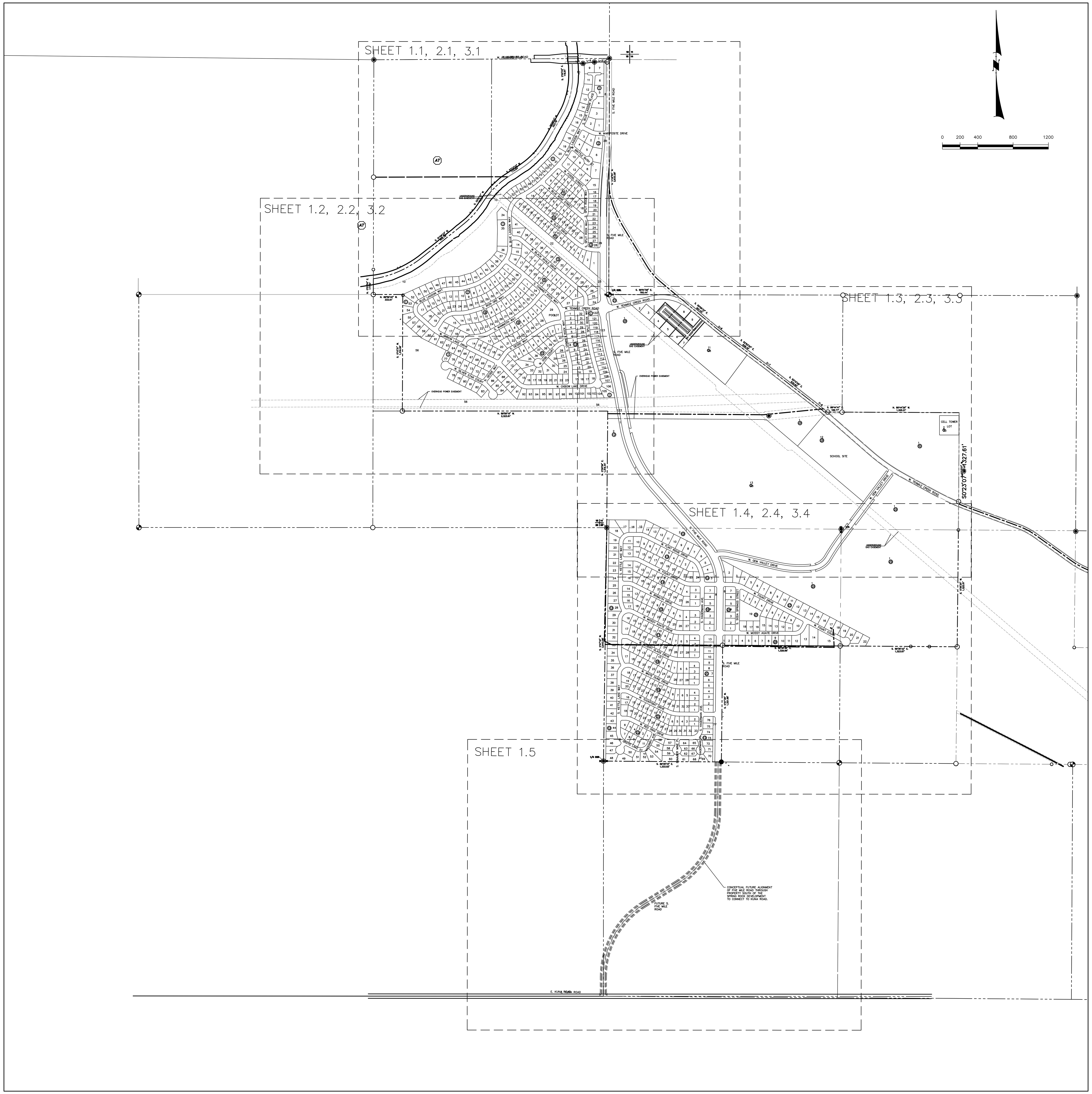


DRAWING INDEX

SHEET	DESCRIPTION
1.0	COVER SHEET
1.1	AREA 1 SITE PLAN
1.2	AREA 2 SITE PLAN
1.3	AREA 3 SITE PLAN
1.4	AREA 4 SITE PLAN
1.5	AREA 4 SITE PLAN
1.6	TYPICAL ROADWAY DETAILS
2.1	AREA 1 GRADING AND DRAINAGE PLAN
2.2	AREA 2 GRADING AND DRAINAGE PLAN
2.3	AREA 3 GRADING AND DRAINAGE PLAN
2.4	AREA 4 GRADING AND DRAINAGE PLAN
3.1	AREA 1 UTILITY PLAN
3.2	AREA 2 UTILITY PLAN
3.3	AREA 3 UTILITY PLAN
3.4	AREA 4 UTILITY PLAN

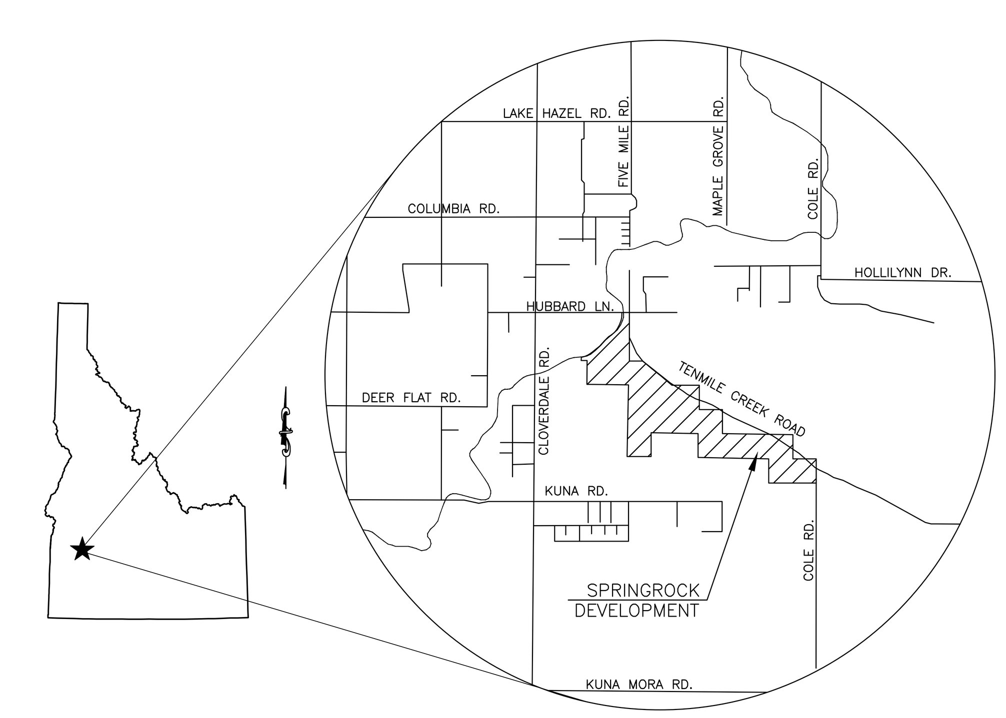
ENGINEER:
RIVERIDGE ENGINEERING COMPANY
2447 S. Vista Avenue
Boise, Idaho 83705
(208) 344-1180

SURVEYOR:
IDAHO SURVEY GROUP
9955 W. Emerald Street
Boise, Idaho 83704
(208) 846-8570

DEVELOPER:
TENMILE CREEK LLC
1211 Happy Drive
Boise, Idaho 83706
(208) 850-1070

LEGEND

- FOUND 1/2" IRON PIN
- FOUND 5/8" IRON PIN
- FOUND BRASS CAP
- FOUND ALUMINUM CAP MONUMENT
- SET ALUMINUM CAP MONUMENT
- SET 5/8" IRON PIN WITH CAP
- CALCULATED POINT
- PROPERTY BOUNDARY
- PARCEL LINE
- SECTION LINE
- RIGHT-OF-WAY LINE
- CENTERLINE
- EASEMENT LINE
- BLOCK NUMBER
- LOT NUMBER



VICINITY MAP
NTS

RiveRidge Engineering Company
2447 S. Vista Ave. Boise, Idaho 83705
Ph. (208) 344-1180, Fax (208) 344-1182

E-FILE NAME | DESIGNED | DRAWN | CHECKED | APPROVED | DATE

REVISIONS | NO. | ITEM

PROFESSIONAL ENGINEER REGISTERED 5756 STATE OF IDAHO DAVID G. POWELL

SPRING ROCK PRELIMINARY PLAT

COVER SHEET

LOCATED IN THE S1/2 OF SECTION 14, THE E1/2 OF SECTION 15 AND THE N1/2 OF SECTION 23 TOWNSHIP 1 NORTH, RANGE 1 EAST, BOISE MERIDIAN, ADA COUNTY, IDAHO

DATE: MAY,2019
PROJECT: 18042

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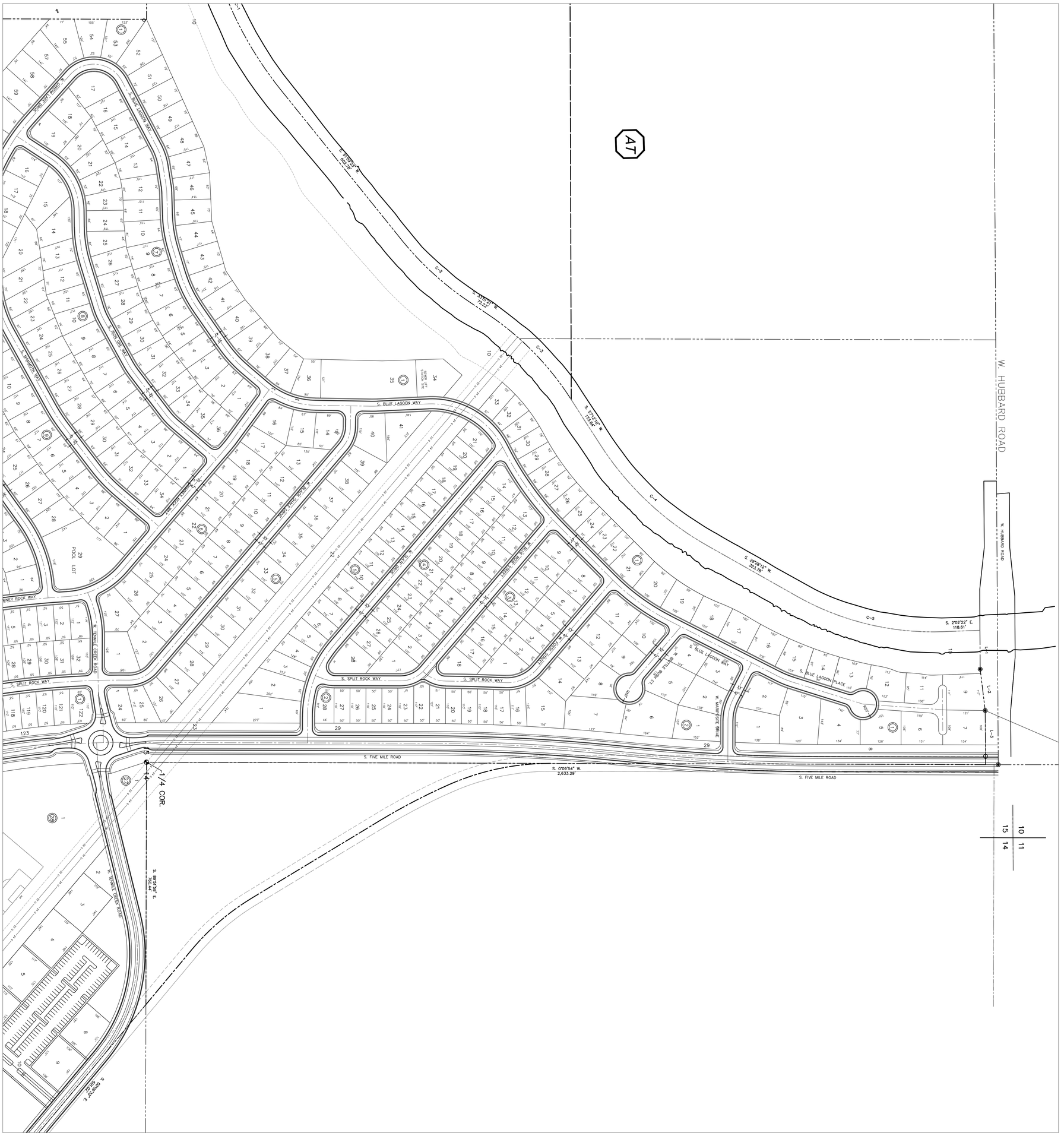

SHEET 1.1 OF 15	SITE LAYOUT PLAN	**SPRING ROCK**	RiveRidge Engineering Company
DATE: MAY/2019	SHEET 1 OF 6	**PRELIMINARY PLAT**	2447 S. Vista Ave. Boise, Idaho 83705
PROJECT: 19042			Ph. (208) 344-1180, Fax (208) 344-1182

REVISIONS

NO.	ITEM	DATE

E-FILE NAME

DESIGNED

DRAWN

CHECKED

APPROVED

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SHEET 1.2 OF 15

DATE: MAY/2018
PROJECT: 18042

SITE LAYOUT PLAN

SHEET 2 OF 6

SPRING ROCK
PRELIMINARY PLAT

REVISIONS

NO.	ITEM	DATE

E-FILE NAME
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APPROVED

RiveRidge Engineering Company
2447 S. Vista Ave. Boise, Idaho 83705
Ph. (208) 344-1180, Fax (208) 344-1182

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SHEET 1.3 OF 15	
DATE:	MAY/2019
PROJECT:	18042

SITE LAYOUT PLAN

SHEET 3 OF 6

SPRING ROCK
PRELIMINARY PLAT

REVISIONS			E-FILE NAME
NO.	ITEM	DATE	
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RiveRidge Engineering Company
2447 S. Vista Ave. Boise, Idaho 83705
Ph. (208) 344-1180, Fax (208) 344-1182

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SITE LAYOUT PLAN

SHEET 4 OF 6

SPRING ROCK
PRELIMINARY PLAT

REVISIONS			E-FILE NAME
NO.	ITEM	DATE	
			DESIGNED
			DRAWN
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RiveRidge Engineering Company
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SHEET 1.4 OF 15
DATE: MAY 2019
PROJECT: 18042

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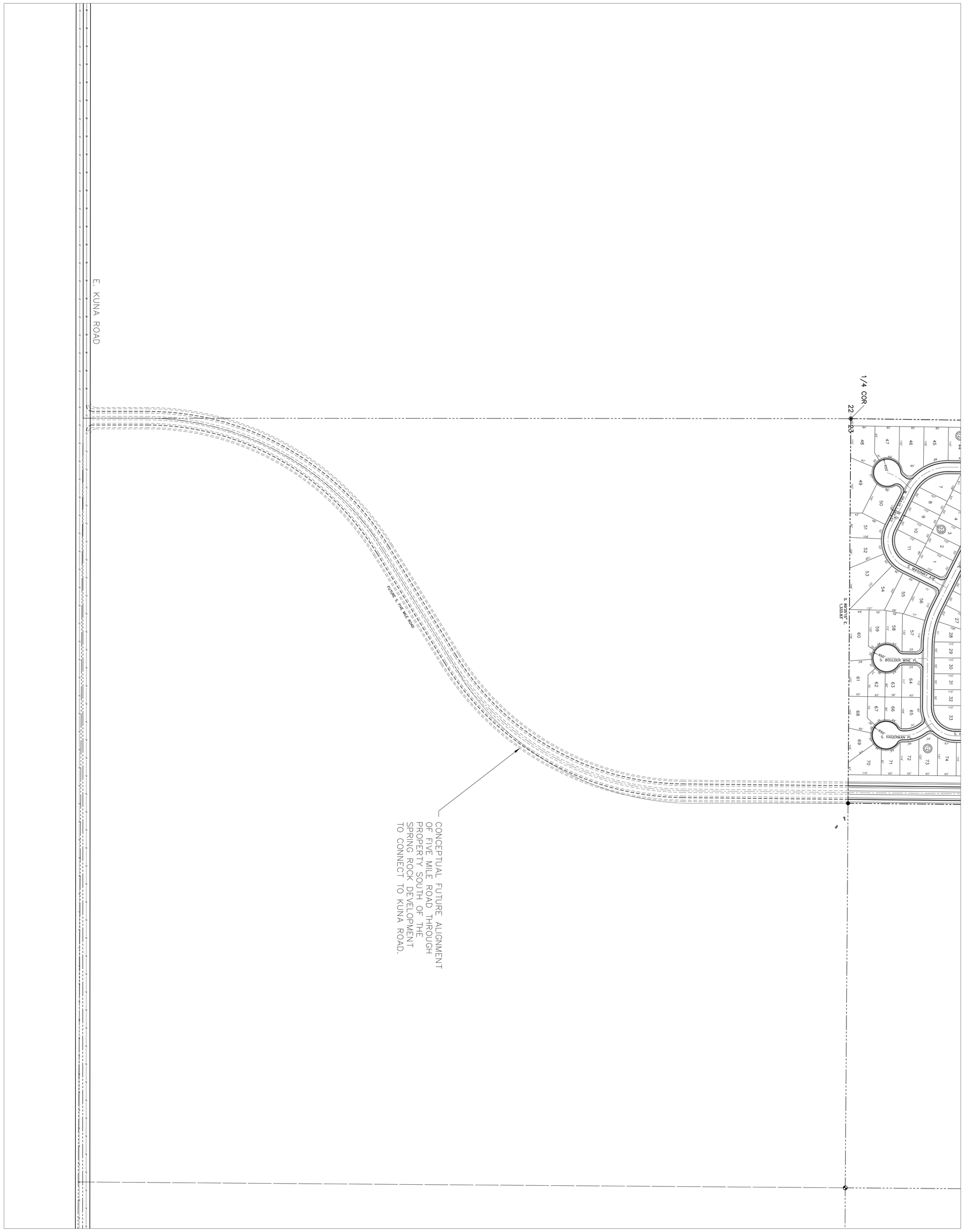

SITE LAYOUT PLAN

SHEET 5 OF 6

SPRING ROCK
PRELIMINARY PLAT

REVISIONS			E-FILE NAME
NO.	ITEM	DATE	
			DESIGNED
			DRAWN
			CHECKED
			APPROVED

RiveRidge Engineering Company
2447 S. Vista Ave. Boise, Idaho 83705
Ph. (208) 344-1180, Fax (208) 344-1182

DATE: MAY.2019
PROJECT: 18042
SHEET 1.5 OF 15

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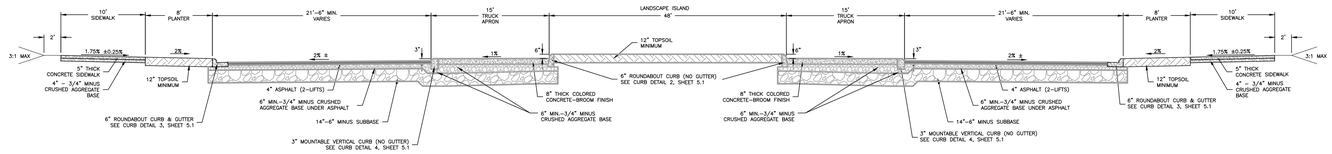
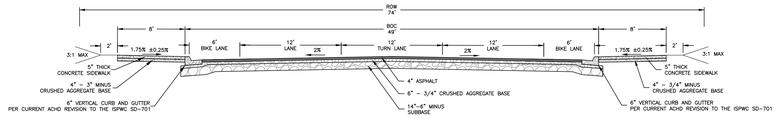


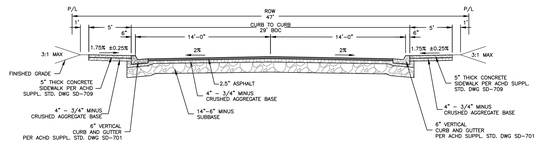
TYPICAL ROUNDABOUT SECTION
N. FIVE MILE ROAD AND E. TEN MILE ROAD

SCALE: NONE



TRAILWOOD WAY
S. FIVE MILE ROAD, E. TENMILE ROAD,
W. GEM VALLEY DRIVEW

SCALE: NONE



ALL INTERNAL STREETS

SCALE: NONE

RiveRidge Engineering Company
2447 S. Vista Ave. Boise, Idaho 83705
Ph. (208) 344-1180, Fax (208) 344-1182

REVISIONS				E-FILE NAME
NO.	ITEM	DATE	DESIGNED	
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			CHECKED	
			APPROVED	

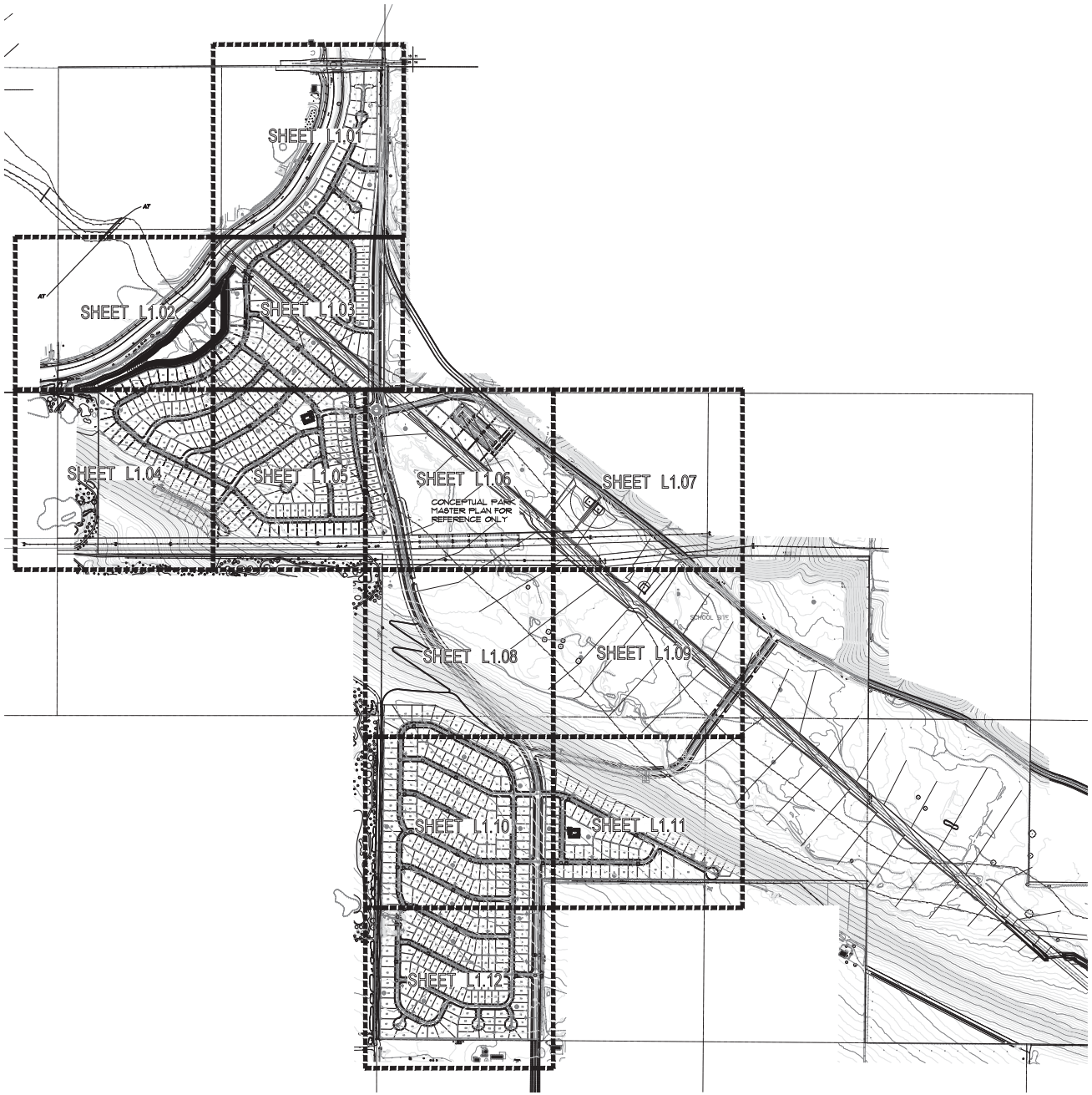
PROFESSIONAL ENGINEER REGISTERED 5756 5-15-19 STATE OF IDAHO DAVID G. POWELL

SPRING ROCK
PRELIMINARY PLAT

ROADWAY TYPICAL SECTIONS

SHEET 5 OF 6

DATE: MAY.2019
PROJECT: 18042
SHEET 1.6 OF 15



OVERALL LANDSCAPE PLAN

SCALE 1" = 300'-0"

NORTH

VICINITY MAP

SCALE NTS

NORTH

LANDSCAPE CALCULATIONS:

- ROADWAY LANDSCAPE BUFFERS:
  - FIVE MILE ROAD (WEST) - MINUS ROADWAY INTERSECTIONS = 7,567 LF
    - 159 SHADE TREES REQUIRED AT 2 PER 100 LF.
    - 159 SHADE TREES PROPOSED
    - 236 CONIFER TREES REQUIRED AT 3 PER 100 LF.
    - 239 CONIFERS PROPOSED
    - 984 SHRUBS REQUIRED AT 12 PER 100 LF.
    - 1613 SHRUBS PROPOSED
  - FIVE MILE ROAD (EAST) - MINUS ROADWAY INTERSECTIONS = 807 LF
    - 16 SHADE TREES REQUIRED AT 2 PER 100 LF.
    - 16 SHADE TREES PROPOSED
    - 24 CONIFER TREES REQUIRED AT 3 PER 100 LF.
    - 24 CONIFERS PROPOSED
    - 97 SHRUBS REQUIRED AT 12 PER 100 LF.
    - 169 SHRUBS PROPOSED
  - TEMPLE CREEK ROAD - MINUS ROADWAY INTERSECTIONS = 2,849 LF (COMMERCIAL ZONE WITH NO BUFFER REQUIREMENTS)
    - 51 SHADE TREES PROPOSED AT 1 TREE PER 50'
- ACRES OF DEDICATED OPEN SPACE:
  - APPROXIMATE TOTAL ACREAGE: 4,164,942 SF OR 94 ACRES (DOES NOT INCLUDE ROADWAY BUFFERS)
- COMMON OPEN SPACE TREES: 4,164,942SF MINUS 3,824,381 SF OF NATIVE LANDSCAPING TO REMAIN, GAS LINE EASEMENT AND PARK SPACE = 280,561 SF OF OPEN SPACE REQUIRING TREES.
  - 281 TREES REQUIRED AT 1 PER 1000 S.F.
  - 281 TREES PROPOSED
  - (DOES NOT INCLUDE IN ROAD FRONTAGE COMMON AREAS)
- MITIGATION FOR REMOVAL OF EXISTING TREES: N/A (ALL EXISTING TREES TO BE REMOVED ARE OF UNDESIRABLE SPECIES OR IN POOR HEALTH.)

DEVELOPMENT FEATURES

- ACREAGE
  - TOTAL PARCEL: 477 ACRES
  - TOTAL LOTS: 871
  - BUILDABLE LOTS: 803
  - COMMON LOTS: 14
  - DENSITY DU/ACRE: 1.68
  - COMMON AREA: 94 ACRES (19.71%)
- ZONING
  - EXISTING:
  - PROPOSED:
- SEWAGE DISPOSAL
  - KUNA CITY SEWER
- WATER SUPPLY
  - KUNA CITY WATER
- CITY
  - CITY OF KUNA
- SCHOOL DISTRICT
  - KUNA
- FIRE DISTRICT
  - KUNA FIRE
- IRRIGATION DISTRICT
  - N/A

SEE CIVIL PLANS FOR GRADING AND DRAINAGE

STAMP: PRELIMINARY NOT FOR CONSTRUCTION

DATE: 11/1/2019

SOUTH BECK & BAIRD — South Landscape Architecture P.C. dba South Beck & Baird Landscape Architecture P.C.

REVISIONS: NO.	ITEM	DATE

CONSULTANTS:

RiveRidge Engineering Company
2447 S. Vista Ave. Boise, Idaho 83705
Ph: (208) 344-1180, Fax (208) 344-1182

PRELIMINARY PLAT LANDSCAPE PLANS

Spring Rock Subdivision - Phase 1

IDAHO

KUNA

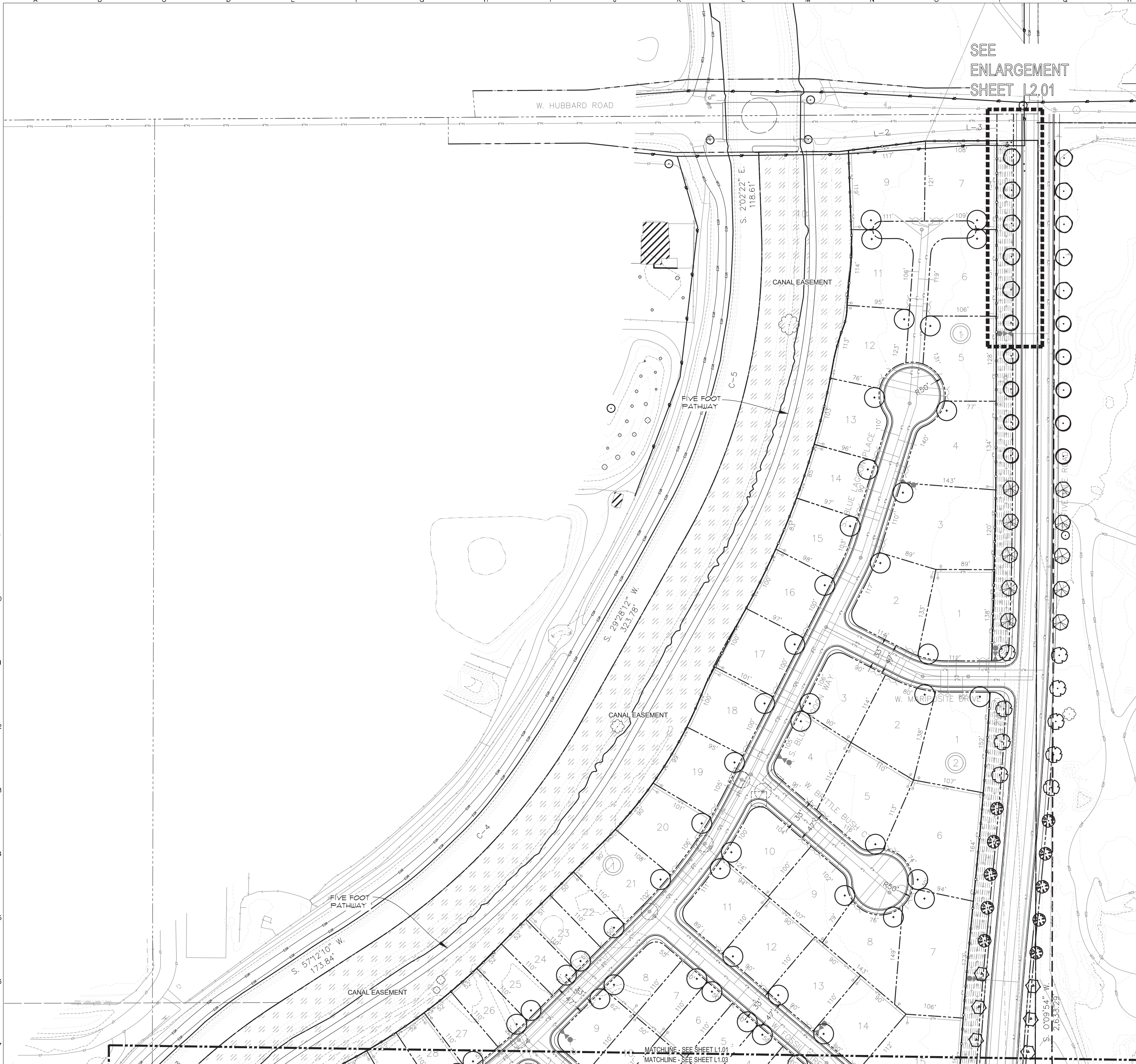
DRAWN BY: AJJ

CHECKED BY: JDR

PROJECT NUMBER: 19-046

SHEET: L1.00

OWNER REVIEW



LANDSCAPE PLAN - AREA ONE

SCALE: 1" = 50'-0"

NORTH

LEGEND:

- LAWN AREA - Dwarf Turf Type Tall Fescue
- NATIVE LANDSCAPE AREA - No disturbance shall take place in these areas. Existing vegetation to remain as is.
- PROPOSED FENCING LOCATION, HEIGHT AND TYPE TO BE DETERMINED. (SEE DETAILS 10-12/L2.03)
- LANDSCAPE CUT EDGE (SEE DETAIL 2/L2.03)

RESIDENTIAL STREET TREE LIST

BOTANICAL NAME / COMMON NAME	PLANTING SIZE	MATURE SIZE
TREES		
Acer platanoides 'Fairview' / Fairview Maple	2" B&B	45' hgt. 35' wide
Fraxinus pennsylvanica 'Urbanite' / Urbanite Green Ash	2" B&B	35' hgt. 30' wide
Pyrus calleryana 'Holmford' / Bradford Flowering Pear	2" B&B	35' hgt. 30' wide
Quercus rubra / Red Oak	2" B&B	30' hgt. 25' wide

NOTE - ONE RESIDENTIAL STREET TREE PER LOT SHALL BE SELECTED FROM THE ABOVE LIST AND INSTALLED BY LOT OWNER/DEVELOPER AT TIME HOMES ARE BUILT ON EACH LOT.

PLANT SCHEDULE

KEY	BOTANICAL NAME / COMMON NAME (*NOTE: ALL TREES TO BE GRADE #1)	PLANTING SIZE	MATURE SIZE	CLASS
	TREES			
	Acer platanoides 'Columnar' / Columnar Norway Maple	2" B&B	25' hgt. 15' wide	CLASS II
	Acer platanoides 'Ezestre' / Easy Street Maple	2" B&B	25' hgt. 25' wide	CLASS II
	Acer platanoides 'Deborah' / Deborah Maple	2" B&B	35' hgt. 30' wide	CLASS II
	Betula nigra / River Birch	2" B&B	35' hgt. 25' wide	CLASS II
	Fraxinus americana 'Junginger' / Autumn Purple Ash	2" B&B	35' hgt. 30' wide	CLASS II
	Gleditsia triacanthos 'Shademaster' / Shademaster Honeylocust	2" B&B	35' hgt. 30' wide	CLASS II
	Zelkova serrata 'Schmidtlow' / Wireless Zelkova	2" B&B	24' hgt. 35' wide	CLASS II
	Tillia americana 'Boulevard' / Boulevard Linden	2" B&B	35' hgt. 30' wide	CLASS II
	Malus x 'Red Baron' / Red Barron Crabapple	2" B&B	15' hgt. 10' wide	CLASS I
	Pyrus calleryana 'Jackzam' / Jack Pear	2" B&B	16' hgt. 10' wide	CLASS I
	Malus x 'Spring Snow' / Spring Snow Crabapple	2" B&B	25' hgt. 15' wide	CLASS I
	Prunus sargentii 'Columnaris' / Columnar Sargent Cherry	2" B&B	30' hgt. 15' wide	CLASS I
	Picea pungens 'Bacheri' / Bacheri Spruce	8'-10' hgt. B&B	15' hgt. 8' wide	CONIF.
	Picea glauca 'Densata' / Black Hills Spruce	6' B&B	20' hgt. 10' wide	CONIF.
	Pinus nigra / Austrian Pine	8'-10' B&B	40' hgt. 20' wide	CONIF.
	Picea pungens 'glauca' / Colorado Blue Spruce	8'-10' B&B	35' hgt. 15' wide	CONIF.

NOTE - SEE SHEET L2.02 FOR FULL PLANT LIST

NOTE - SEE DETAILS 6-8/L2.03 FOR ADDITIONAL TREE PLANTING REQUIREMENTS.

STAMP: PRELIMINARY NOT FOR CONSTRUCTION

DATE: 7/1/2015

SOUTH BECK & BAIRD
South Landscape Architecture P.C.
dba South Beck & Baird Landscape Architecture P.C.

REVISIONS: NO. | ITEM | DATE

CONSULTANTS:

RiveRidge Engineering Company
2447 S. Vista Ave. Boise, Idaho 83705
Ph. (208) 344-1180, Fax (208) 344-1182

PRELIMINARY PLAT LANDSCAPE PLANS
Spring Rock Subdivision - Phase 1
KUNA IDAHO

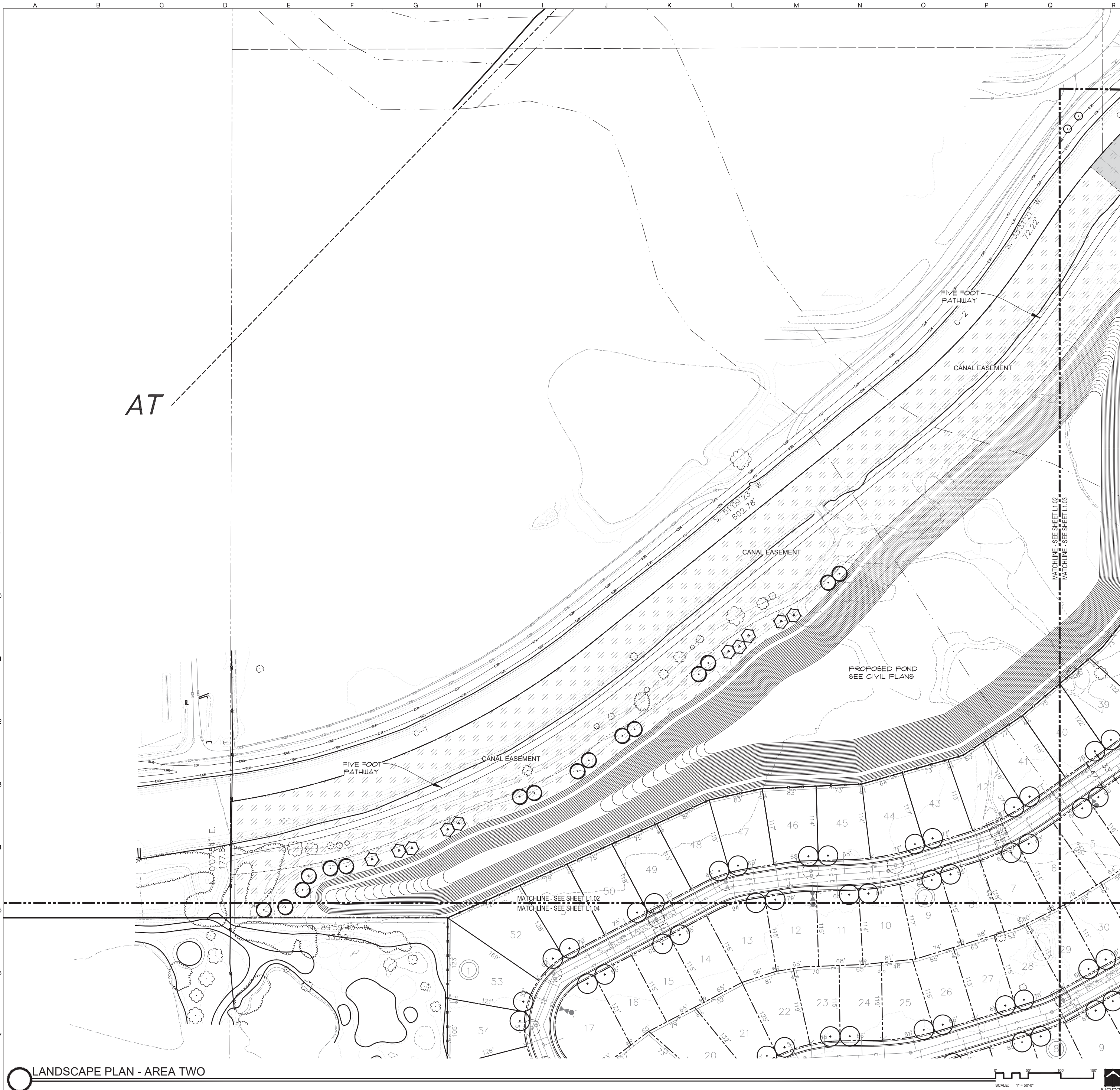
DRAWN BY: AWJ

CHECKED BY: JDR

PROJECT NUMBER: 15-046

SHEET: L1.01

OWNER REVIEW



LEGEND:

LAWN AREA - Dwarf Turf Type Tall Fescue

NATIVE LANDSCAPE AREA - No disturbance shall take place in these areas. Existing vegetation to remain as is.

PROPOSED FENCING LOCATION, HEIGHT AND TYPE TO BE DETERMINED. (SEE DETAILS 10-12/L2.03)

LANDSCAPE CUT EDGE (SEE DETAIL 2/L2.03)

RESIDENTIAL STREET TREE LIST

BOTANICAL NAME / COMMON NAME	PLANTING SIZE	MATURE SIZE
TREES		
Acer platanoides 'Fairview' / Fairview Maple	2" B&B	45' hgt. 35' wide
Fraxinus pennsylvanica 'Urbanite' / Urbanite Green Ash	2" B&B	35' hgt. 30' wide
Pyrus calleryana 'Holmford' / Bradford Flowering Pear	2" B&B	35' hgt. 30' wide
Quercus rubra / Red Oak	2" B&B	30' hgt. 25' wide

NOTE - ONE RESIDENTIAL STREET TREE PER LOT SHALL BE SELECTED FROM THE ABOVE LIST AND INSTALLED BY LOT OWNER/DEVELOPER AT TIME HOMES ARE BUILT ON EACH LOT.

PLANT SCHEDULE

KEY	BOTANICAL NAME / COMMON NAME (*NOTE: ALL TREES TO BE GRADE #1)	PLANTING SIZE	MATURE SIZE	CLASS
	TREES			
	Acer platanoides 'Columnar' / Columnar Norway Maple	2" B&B	25' hgt. 15' wide	CLASS II
	Acer platanoides 'Ezestre' / Easy Street Maple	2" B&B	25' hgt. 25' wide	CLASS II
	Acer platanoides 'Deborah' / Deborah Maple	2" B&B	35' hgt. 30' wide	CLASS II
	Betula nigra / River Birch	2" B&B	35' hgt. 25' wide	CLASS II
	Fraxinus americana 'Junginger' / Autumn Purple Ash	2" B&B	35' hgt. 30' wide	CLASS II
	Gleditsia triacanthos 'Shademaster' / Shademaster Honeylocust	2" B&B	35' hgt. 30' wide	CLASS II
	Zelkova serrata 'Schmidtlow' / Wireless Zelkova	2" B&B	24' hgt. 35' wide	CLASS II
	Tillia americana 'Boulevard' / Boulevard Linden	2" B&B	35' hgt. 30' wide	CLASS II
	Malus x 'Red Baron' / Red Barron Crabapple	2" B&B	15' hgt. 10' wide	CLASS I
	Pyrus calleryana 'Jackzam' / Jack Pear	2" B&B	16' hgt. 10' wide	CLASS I
	Malus x 'Spring Snow' / Spring Snow Crabapple	2" B&B	25' hgt. 15' wide	CLASS I
	Prunus sargentii 'Columnaris' / Columnar Sargent Cherry	2" B&B	30' hgt. 15' wide	CLASS I
	Picea pungens 'Bacheri' / Bacheri Spruce	8'-10' hgt. B&B	15' hgt. 8' wide	CONIF.
	Picea glauca 'Densata' / Black Hills Spruce	6' B&B	20' hgt. 10' wide	CONIF.
	Pinus nigra / Austrian Pine	8'-10' B&B	40' hgt. 20' wide	CONIF.
	Picea pungens 'glauca' / Colorado Blue Spruce	8'-10' B&B	35' hgt. 15' wide	CONIF.

NOTE - SEE SHEET L2.02 FOR FULL PLANT LIST

NOTE - SEE DETAILS 6-8/L2.03 FOR ADDITIONAL TREE PLANTING REQUIREMENTS.

STAMP: STATE OF IDAHO JOHN D. ROTERS LANDSCAPE ARCHITECT PRELIMINARY NOT FOR CONSTRUCTION

DATE: 7/1/2019

SOUTH BECK & BAIRD
2002 S. Vista Ave
Boise, ID 83705
208.342.2999 Office
sla@slaboise.com
www.slaboise.com
South Landscape Architecture P.C.
Dba South Beck & Baird Landscape Architecture P.C.

811 Know what's below. Call before you dig. CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

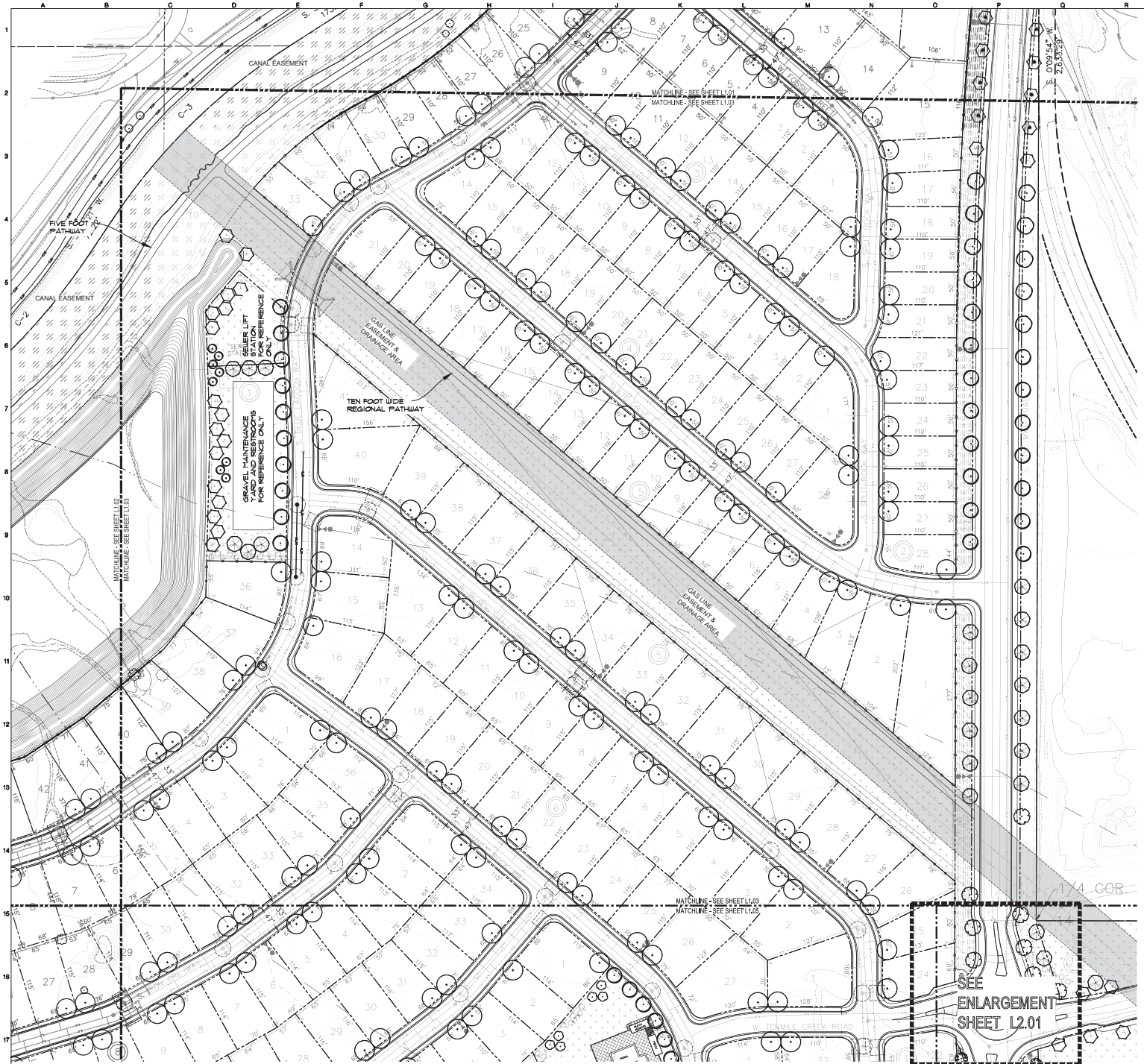
REVISIONS: NO. | ITEM | DATE

CONSULTANTS:
RiveRidge Engineering Company
2447 S. Vista Ave. Boise, Idaho 83705
Ph. (208) 344-1180, Fax (208) 344-1182

PRELIMINARY PLAT LANDSCAPE PLANS
Spring Rock Subdivision - Phase 1
KUNA IDAHO

DRAWN BY: A.W.J.
CHECKED BY: J.D.R.
PROJECT NUMBER 18-046
SHEET: L1.02

OWNER REVIEW



LANDSCAPE PLAN - AREA THREE

SCALE: 1" = 50'-0"

NORTH

LEGEND:

LAWN AREA - Dwarf Turf Type Tall Fescue

NATIVE LANDSCAPE AREA - No disturbance shall take place in these areas. Existing vegetation to remain as is.

PROPOSED FENCING LOCATION, HEIGHT AND TYPE TO BE DETERMINED. (SEE DETAILS Ø-12/L2.03)

LANDSCAPE CUT EDGE (SEE DETAIL 2/L2.03)

RESIDENTIAL STREET TREE LIST

BOTANICAL NAME / COMMON NAME	PLANTING SIZE	MATURE SIZE
TREES		
Acer platanoides 'Fairview' Fairview Maple	2" B&B	45' hgt. 35' wide
Fraxinus pennsylvanica 'Urbanite' Urbanite Green Ash	2" B&B	35' hgt. 30' wide
Pyrus calleryana 'Holmford' Bradford Flowering Pear	2" B&B	35' hgt. 30' wide
Quercus rubra Red Oak	2" B&B	30' hgt. 25' wide

NOTE - ONE RESIDENTIAL STREET TREE PER LOT SHALL BE SELECTED FROM THE ABOVE LIST AND INSTALLED BY LOT OWNER/DEVELOPER AT THE HOMES ARE BUILT ON EACH LOT.

PLANT SCHEDULE

KEY	BOTANICAL NAME / COMMON NAME (*NOTE: ALL TREES TO BE GRADE #)	PLANTING SIZE	MATURE SIZE	CLASS
TREES				
	Acer platanoides 'Columnar' Columnar Norway Maple	2" B&B	25' hgt. 15' wide	CLASS II
	Acer platanoides 'Emerald Queen' Emerald Queen Maple	2" B&B	25' hgt. 25' wide	CLASS II
	Acer platanoides 'Deborah' Deborah Maple	2" B&B	35' hgt. 30' wide	CLASS II
	Betula nigra River Birch	2" B&B	35' hgt. 25' wide	CLASS II
	Fraxinus americana 'Junginger' Autumn Purple Ash	2" B&B	35' hgt. 30' wide	CLASS II
	Gleditsia triacanthos 'Shademaster' Shademaster Honeylocust	2" B&B	35' hgt. 30' wide	CLASS II
	Zelkova serrata 'Schmidtiou' Wireless Zelkova	2" B&B	24' hgt. 35' wide	CLASS II
	Tilia americana 'Boulevard' Boulevard Linden	2" B&B	35' hgt. 30' wide	CLASS II
	Malus x 'Red Baron' Red Baron Crabapple	2" B&B	15' hgt. 10' wide	CLASS I
	Pyrus calleryana 'Jackson' Jack Pear	2" B&B	16' hgt. 10' wide	CLASS I
	Malus x 'Spring Snow' Spring Snow Crabapple	2" B&B	25' hgt. 15' wide	CLASS I
	Prunus sargentii 'Columnaris' Columnar Sargent Cherry	2" B&B	30' hgt. 15' wide	CLASS I
	Picea pungens 'Bacheri' Bacheri Spruce	8'-10" hgt. B&B	15' hgt. 8' wide	CONIF.
	Picea glauca 'Densata' Black Hills Spruce	6' B&B	30' hgt. 10' wide	CONIF.
	Pinus nigra Austrian Pine	8'-10' B&B	40' hgt. 20' wide	CONIF.
	Picea pungens 'glauca' Colorado Blue Spruce	8'-10' B&B	35' hgt. 15' wide	CONIF.

NOTE - SEE SHEET L2.00 FOR FULL PLANT LIST

NOTE - SEE DETAILS 6-8/L2.03 FOR ADDITIONAL TREE PLANTING REQUIREMENTS.

STAMP:

DATE: 1/1/2018

SOUTH BECK & BAIRD
1003 S. 10th Ave.
Kuna, ID 83634
208.342.2999 Office
www.sbbinc.com
South Landscape Architecture P.C.
dba South Beck & Baird Landscape Architecture P.C.

DATE	ITEM

REVISIONS: NO.

CONSULTANTS:
RiveRidge Engineering Company
2447 S. Vista Ave. Boise, Idaho 83705
Ph: (208) 344-1180, Fax (208) 344-1182

PRELIMINARY PLAT LANDSCAPE PLANS

Spring Rock Subdivision - Phase 1

IDAHO

KUNA

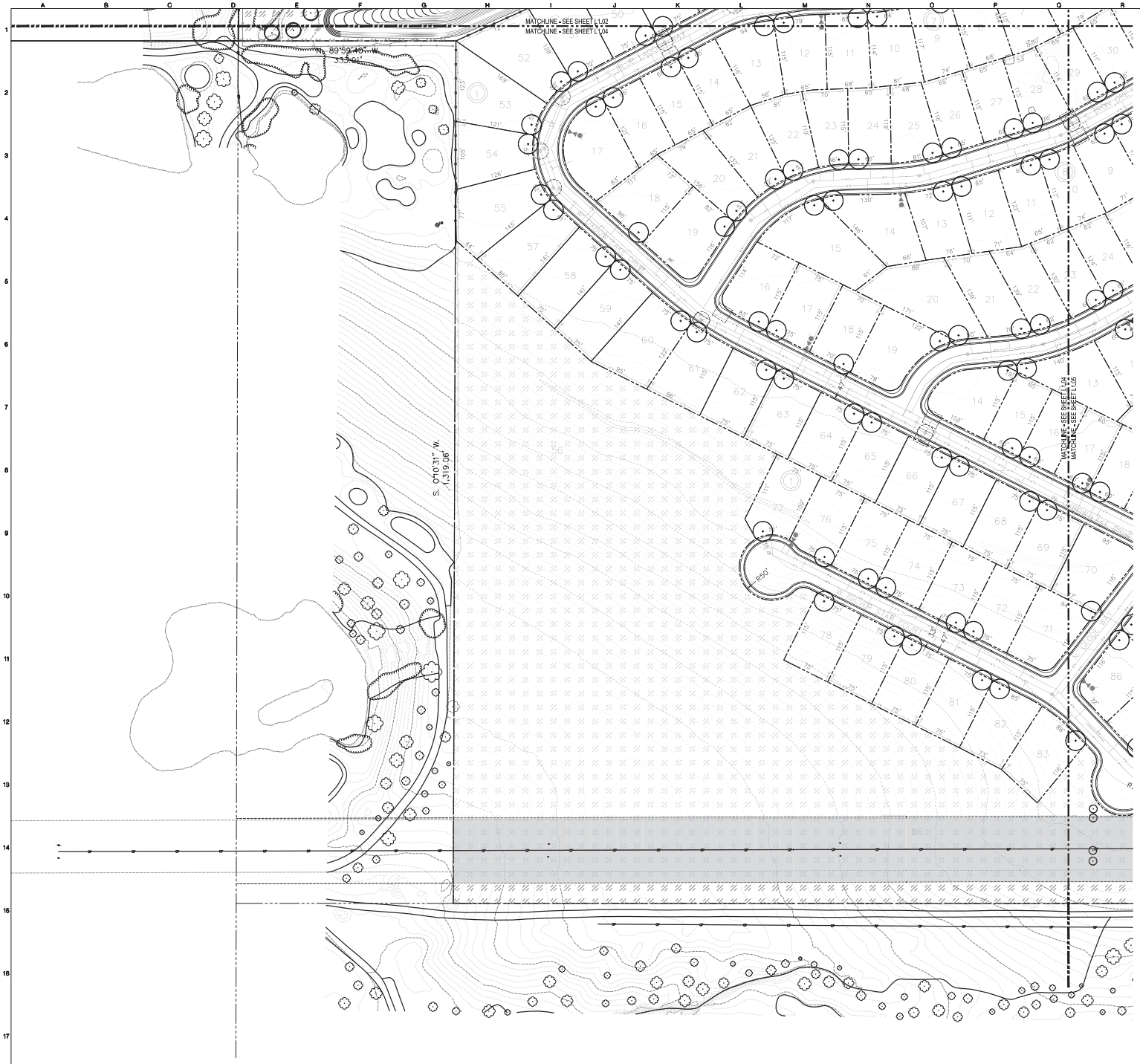
DRAWN BY: AJJ

CHECKED BY: JDR

PROJECT NUMBER: 19-046

SHEET: L1.03

OWNER REVIEW



LANDSCAPE PLAN - AREA FOUR

SCALE: 1" = 50'-0"

NORTH

LEGEND:

LAWN AREA - Dwarf Turf Type Tall Fescue

NATIVE LANDSCAPE AREA - No disturbance shall take place in these areas. Existing vegetation to remain as is.

PROPOSED FENCING LOCATION, HEIGHT AND TYPE TO BE DETERMINED. (SEE DETAILS Ø-12/L2.03)

LANDSCAPE CUT EDGE (SEE DETAIL 2/L2.03)

RESIDENTIAL STREET TREE LIST

BOTANICAL NAME / COMMON NAME	PLANTING SIZE	MATURE SIZE
TREES		
Acer platanoides 'Fairview' Fairview Maple	2" B&B	45' hgt. 35' wide
Fraxinus pennsylvanica 'Urbanite' Urbanite Green Ash	2" B&B	35' hgt. 30' wide
Pyrus calleryana 'Holmford' Bradford Flowering Pear	2" B&B	35' hgt. 20' wide
Quercus rubra Red Oak	2" B&B	30' hgt. 25' wide

NOTE - ONE RESIDENTIAL STREET TREE PER LOT SHALL BE SELECTED FROM THE ABOVE LIST AND INSTALLED BY LOT OWNER/DEVELOPER AT THE HOMES ARE BUILT ON EACH LOT.

PLANT SCHEDULE

KEY	BOTANICAL NAME / COMMON NAME (*NOTE: ALL TREES TO BE GRADE #)	PLANTING SIZE	MATURE SIZE	CLASS
	TREES			
	Acer platanoides 'Columnar' Columnar Norway Maple	2" B&B	25' hgt. 15' wide	CLASS II
	Acer platanoides 'Emerald Queen' Emerald Queen Maple	2" B&B	25' hgt. 25' wide	CLASS II
	Acer platanoides 'Deborah' Deborah Maple	2" B&B	35' hgt. 30' wide	CLASS II
	Betula nigra River Birch	2" B&B	35' hgt. 25' wide	CLASS II
	Fraxinus americana 'Junginger' Autumn Purple Ash	2" B&B	35' hgt. 30' wide	CLASS II
	Gleditsia triacanthos 'Shademaster' Shademaster Honeylocust	2" B&B	35' hgt. 30' wide	CLASS II
	Zelkova serrata 'Schmidtlou' Wireless Zelkova	2" B&B	24' hgt. 35' wide	CLASS II
	Tilia americana 'Boulevard' Boulevard Linden	2" B&B	35' hgt. 30' wide	CLASS II
	Malus x 'Red Baron' Red Baron Crabapple	2" B&B	15' hgt. 10' wide	CLASS I
	Pyrus calleryana 'Jaczam' Jack Pear	2" B&B	16' hgt. 10' wide	CLASS I
	Malus x 'Spring Snow' Spring Snow Crabapple	2" B&B	25' hgt. 15' wide	CLASS I
	Prunus sargentii 'Columnaris' Columnar Sargent Cherry	2" B&B	30' hgt. 15' wide	CLASS I
	Picea pungens 'Bacheri' Bacheri Spruce	8'-10' hgt. B&B	15' hgt. 8' wide	CONIF.
	Picea glauca 'Densata' Black Hills Spruce	6' B&B	30' hgt. 10' wide	CONIF.
	Pinus nigra Austrian Pine	8'-10' B&B	40' hgt. 20' wide	CONIF.
	Picea pungens 'glauca' Colorado Blue Spruce	8'-10' B&B	35' hgt. 15' wide	CONIF.

NOTE - SEE SHEET L2.00 FOR FULL PLANT LIST

NOTE - SEE DETAILS 6-8/L2.03 FOR ADDITIONAL TREE PLANTING REQUIREMENTS.

STAMP:

DATE: 1/1/2018

SOUTH BECK & BAIRD
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dba South Beck & Baird Landscape Architecture P.C.

REVISIONS: NO.	ITEM	DATE

CONSULTANTS:

RiveRidge Engineering Company
2447 S. Vista Ave. Boise, Idaho 83705
Ph. (208) 344-1180, Fax (208) 344-1182

PRELIMINARY PLAT LANDSCAPE PLANS

Spring Rock Subdivision - Phase 1

IDAHO

KUNA

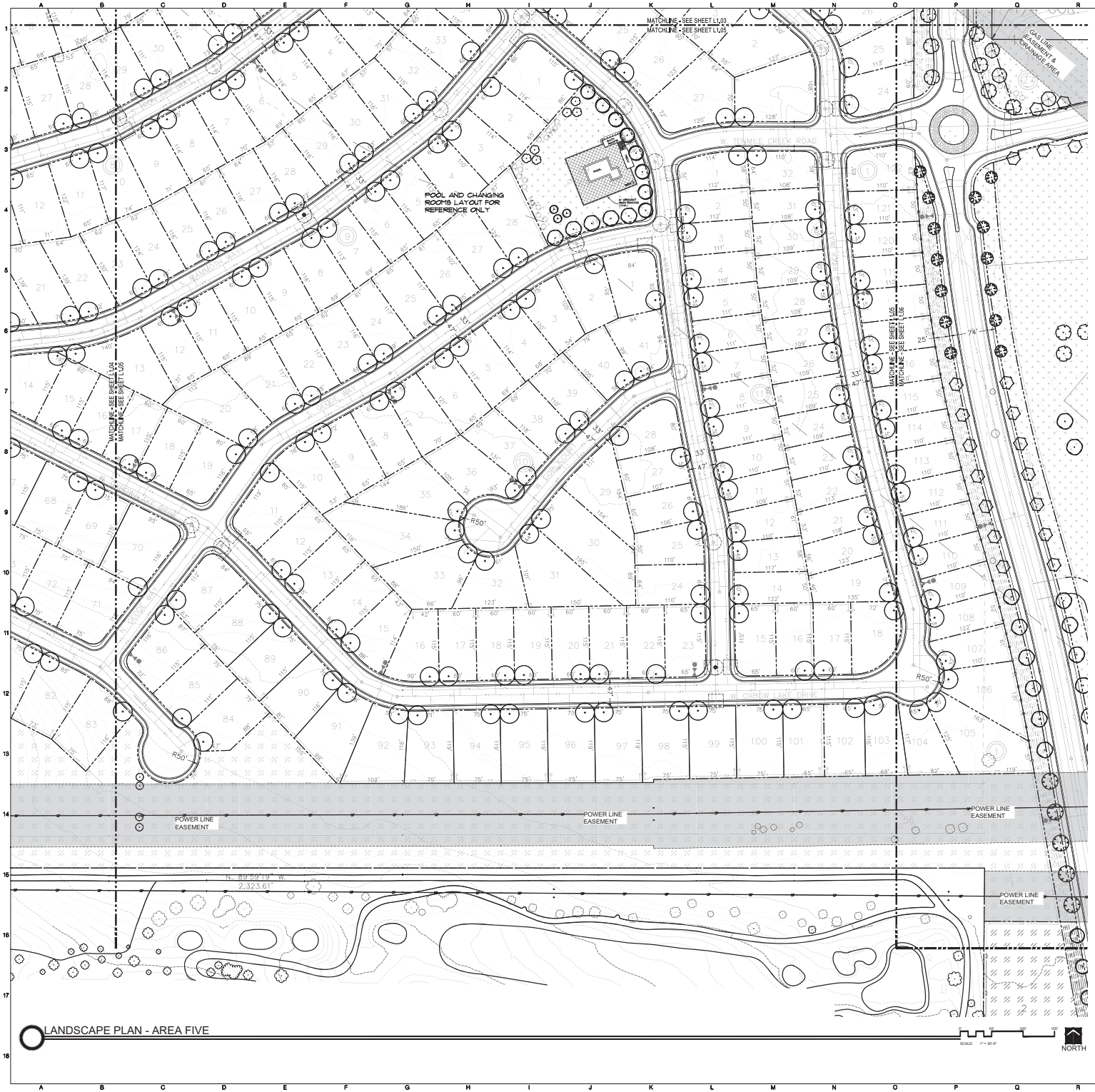
DRAWN BY: AJJ

CHECKED BY: JDR

PROJECT NUMBER: 19-0946

SHEET: L1.04

OWNER REVIEW



LEGEND:

LAWN AREA - Dwarf Turf Type Tall Fescue

NATIVE LANDSCAPE AREA - No disturbance shall take place in these areas. Existing vegetation to remain as is.

PROPOSED FENCING LOCATION, HEIGHT AND TYPE TO BE DETERMINED. (SEE DETAILS Ø-12/L2.03)

LANDSCAPE CUT EDGE (SEE DETAIL 2/L2.03)

RESIDENTIAL STREET TREE LIST

BOTANICAL NAME / COMMON NAME	PLANTING SIZE	MATURE SIZE
TREES		
Acer platanoides 'Fairview' Fairview Maple	2" B&B	45' hgt. 35' wide
Fraxinus pennsylvanica 'Urbanite' Urbanite Green Ash	2" B&B	35' hgt. 30' wide
Pyrus calleryana 'Holmford' Bradford Flowering Pear	2" B&B	35' hgt. 30' wide
Quercus rubra Red Oak	2" B&B	30' hgt. 25' wide

NOTE - ONE RESIDENTIAL STREET TREE PER LOT SHALL BE SELECTED FROM THE ABOVE LIST AND INSTALLED BY LOT OWNER/DEVELOPER AT THE HOMES ARE BUILT ON EACH LOT.

PLANT SCHEDULE

KEY	BOTANICAL NAME / COMMON NAME (NOTE: ALL TREES TO BE GRADE #)	PLANTING SIZE	MATURE SIZE	CLASS
TREES				
	Acer platanoides 'Columnar' Columnar Norway Maple	2" B&B	25' hgt. 15' wide	CLASS II
	Acer platanoides 'Emerald Queen' Emerald Queen Maple	2" B&B	25' hgt. 25' wide	CLASS II
	Acer platanoides 'Deborah' Deborah Maple	2" B&B	35' hgt. 30' wide	CLASS II
	Betula nigra River Birch	2" B&B	35' hgt. 25' wide	CLASS II
	Fraxinus americana 'Junginger' Autumn Purple Ash	2" B&B	35' hgt. 30' wide	CLASS II
	Gleditsia triacanthos 'Shademaster' Shademaster Honeylocust	2" B&B	35' hgt. 30' wide	CLASS II
	Zelkova serrata 'Schmidtlow' Wireless Zelkova	2" B&B	24' hgt. 35' wide	CLASS II
	Tilia americana 'Boulevard' Boulevard Linden	2" B&B	35' hgt. 30' wide	CLASS II
	Malus x 'Red Baron' Red Baron Crabapple	2" B&B	15' hgt. 10' wide	CLASS I
	Pyrus calleryana 'Jaczam' Jack Pear	2" B&B	16' hgt. 10' wide	CLASS I
	Malus x 'Spring Snow' Spring Snow Crabapple	2" B&B	25' hgt. 15' wide	CLASS I
	Prunus sargentii 'Columnaris' Columnar Sargent Cherry	2" B&B	30' hgt. 15' wide	CLASS I
	Picea pungens 'Bacheri' Bacheri Spruce	8'-10" hgt. B&B	15' hgt. 8' wide	CONIF.
	Picea glauca 'Densata' Black Hills Spruce	6' B&B	35' hgt. 10' wide	CONIF.
	Pinus nigra Austrian Pine	8'-10' B&B	40' hgt. 20' wide	CONIF.
	Picea pungens glauca' Colorado Blue Spruce	8'-10' B&B	35' hgt. 15' wide	CONIF.

NOTE - SEE SHEET L2.00 FOR FULL PLANT LIST

NOTE - SEE DETAILS 6-8/L2.03 FOR ADDITIONAL TREE PLANTING REQUIREMENTS.

STAMP:

DATE: 1/1/2019

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REVISIONS: NO.	ITEM	DATE

CONSULTANTS:

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Ph. (208) 344-1180, Fax (208) 344-1182

PRELIMINARY PLAT LANDSCAPE PLANS

Spring Rock Subdivision - Phase 1

IDAHO

KUNA

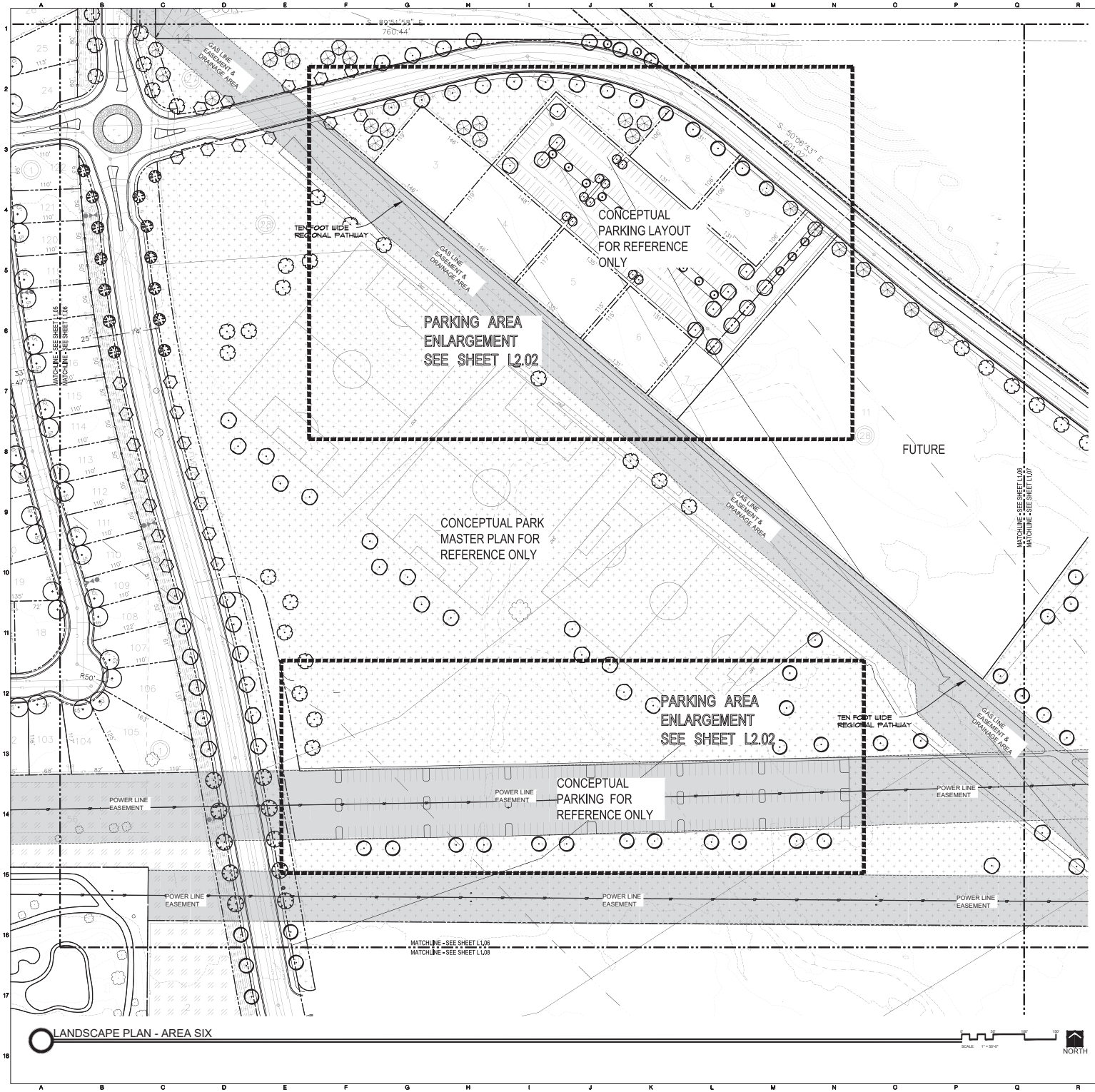
DRAWN BY: AJJ

CHECKED BY: JDR

PROJECT NUMBER: 19-046

SHEET: L1.05

OWNER REVIEW



LANDSCAPE PLAN - AREA SIX

SCALE: 1" = 50'-0"

LEGEND:

LAWN AREA - Dwarf Turf Type Tall Fescue

NATIVE LANDSCAPE AREA - No disturbance shall take place in these areas. Existing vegetation to remain as is.

PROPOSED FENCING LOCATION, HEIGHT AND TYPE TO BE DETERMINED, (SEE DETAILS Ø-12/L2.03)

LANDSCAPE CUT EDGE (SEE DETAIL 2/L2.03)

RESIDENTIAL STREET TREE LIST

BOTANICAL NAME / COMMON NAME	PLANTING SIZE	MATURE SIZE
TREES		
Acer platanoides 'Fairview' Fairview Maple	2" B&B	45' hgt. 35' wide
Fraxinus pennsylvanica 'Urbanite' Urbanite Green Ash	2" B&B	35' hgt. 30' wide
Pyrus calleryana 'Holmford' Bradford Flowering Pear	2" B&B	35' hgt. 30' wide
Quercus rubra Red Oak	2" B&B	30' hgt. 25' wide

NOTE - ONE RESIDENTIAL STREET TREE PER LOT SHALL BE SELECTED FROM THE ABOVE LIST AND INSTALLED BY LOT OWNER/DEVELOPER AT THE HOMES ARE BUILT ON EACH LOT.

PLANT SCHEDULE

KEY	BOTANICAL NAME / COMMON NAME (*NOTE: ALL TREES TO BE GRADE #)	PLANTING SIZE	MATURE SIZE	CLASS
	TREES			
	Acer platanoides 'Columnar' Columnar Norway Maple	2" B&B	25' hgt. 15' wide	CLASS II
	Acer platanoides 'Emerald' Emerald Queen Maple	2" B&B	25' hgt. 25' wide	CLASS II
	Acer platanoides 'Deborah' Deborah Maple	2" B&B	35' hgt. 30' wide	CLASS II
	Betula nigra River Birch	2" B&B	35' hgt. 25' wide	CLASS II
	Fraxinus americana 'Junginger' Autumn Purple Ash	2" B&B	35' hgt. 30' wide	CLASS II
	Gleditsia triacanthos 'Shademaster' Shademaster Honeylocust	2" B&B	35' hgt. 30' wide	CLASS II
	Zelkova serrata 'Schmidtiou' Wireless Zelkova	2" B&B	24' hgt. 35' wide	CLASS II
	Tilia americana 'Boulevard' Boulevard Linden	2" B&B	35' hgt. 30' wide	CLASS II
	Malus x 'Red Baron' Red Baron Crabapple	2" B&B	15' hgt. 10' wide	CLASS I
	Pyrus calleryana 'Jackson' Jack Pear	2" B&B	16' hgt. 10' wide	CLASS I
	Malus x 'Spring Snow' Spring Snow Crabapple	2" B&B	25' hgt. 15' wide	CLASS I
	Prunus sargentii 'Columnaris' Columnar Sargent Cherry	2" B&B	30' hgt. 15' wide	CLASS I
	Picea pungens 'Bacheri' Bacheri Spruce	8'-10" hgt. B&B	15' hgt. 8' wide	CONIF.
	Picea glauca 'Densata' Black Hills Spruce	6' B&B	30' hgt. 10' wide	CONIF.
	Pinus nigra Austrian Pine	8'-10' B&B	40' hgt. 20' wide	CONIF.
	Picea pungens 'glauca' Colorado Blue Spruce	8'-10' B&B	35' hgt. 15' wide	CONIF.

NOTE - SEE SHEET L2.00 FOR FULL PLANT LIST

NOTE - SEE DETAILS 6-8/L2.03 FOR ADDITIONAL TREE PLANTING REQUIREMENTS.

STAMP:

DATE: 1/1/2018

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South Landscape Architecture P.C.
dba South Beck & Baird Landscape Architecture P.C.

DATE:

ITEM

REVISIONS:
NO.

CONSULTANTS:

RiverRidge Engineering Company
2447 S. Vista Ave. Boise, Idaho 83705
Ph: (208) 344-1180, Fax (208) 344-1182

PRELIMINARY PLAT LANDSCAPE PLANS

Spring Rock Subdivision - Phase 1

IDAHO

KUNA

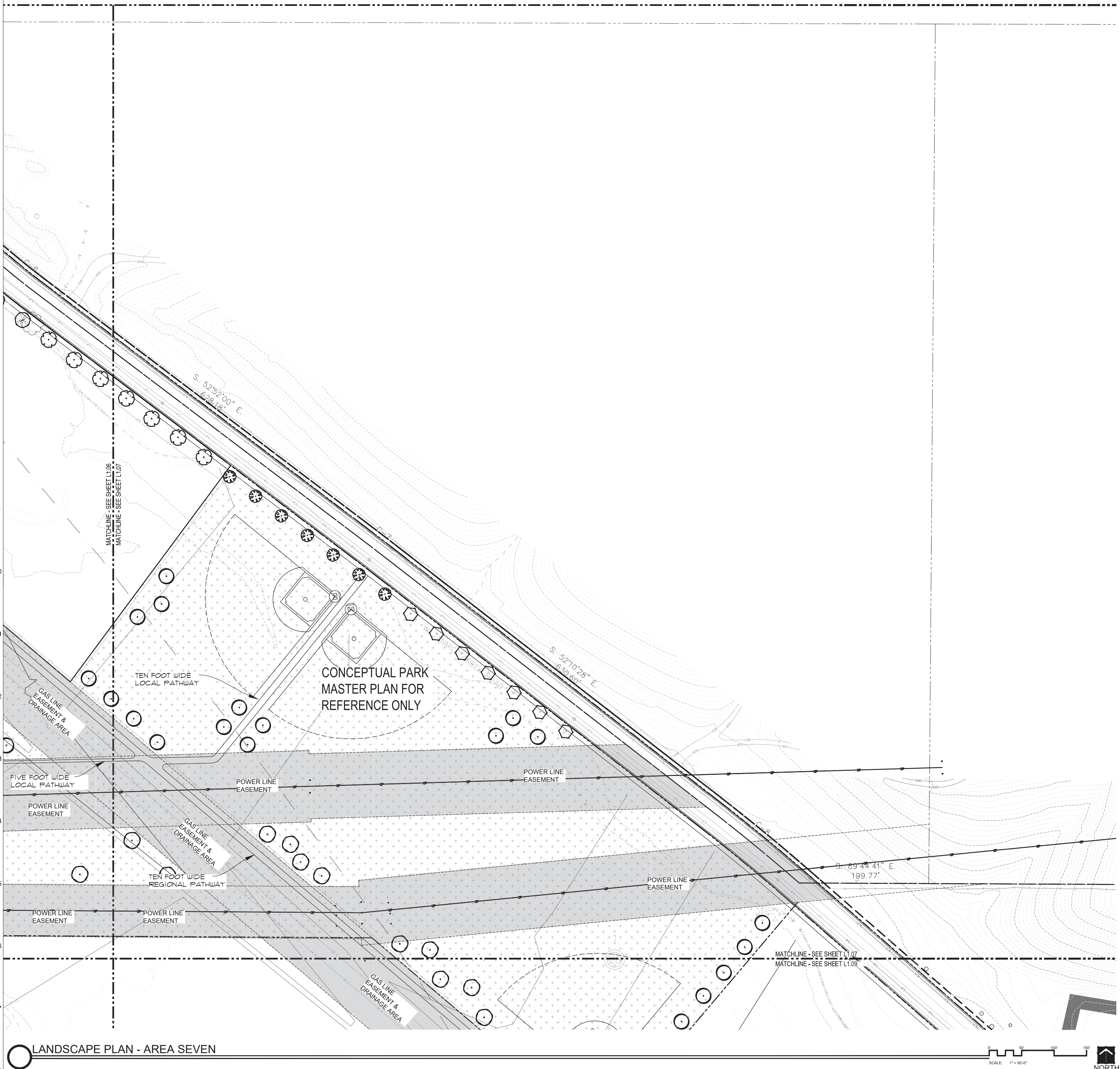
DRAWN BY: AJJ

CHECKED BY: JDR

PROJECT NUMBER: 19-0946

SHEET: L1.06

OWNER REVIEW



LANDSCAPE PLAN - AREA SEVEN

SCALE: 1" = 50'-0"

NORTH

LEGEND:

LAWN AREA - Dwarf Turf Type Tall Fescue

NATIVE LANDSCAPE AREA - No disturbance shall take place in these areas. Existing vegetation to remain as is.

PROPOSED FENCING LOCATION, HEIGHT AND TYPE TO BE DETERMINED. (SEE DETAILS 10-12/L2.03)

LANDSCAPE CUT EDGE (SEE DETAIL 2/L2.03)

RESIDENTIAL STREET TREE LIST

BOTANICAL NAME / COMMON NAME	PLANTING SIZE	MATURE SIZE
TREES		
Acer platanoides 'Fairview' / Fairview Maple	2" B&B	45' hgt. 35' wide
Fraxinus pennsylvanica 'Urbanite' / Urbanite Green Ash	2" B&B	35' hgt. 30' wide
Pyrus calleryana 'Holmford' / Bradford Flowering Pear	2" B&B	35' hgt. 30' wide
Quercus rubra / Red Oak	2" B&B	30' hgt. 25' wide

NOTE - ONE RESIDENTIAL STREET TREE PER LOT SHALL BE SELECTED FROM THE ABOVE LIST AND INSTALLED BY LOT OWNER/DEVELOPER AT TIME HOMES ARE BUILT ON EACH LOT.

PLANT SCHEDULE

KEY	BOTANICAL NAME / COMMON NAME (*NOTE: ALL TREES TO BE GRADE #1)	PLANTING SIZE	MATURE SIZE	CLASS
	TREES			
	Acer platanoides 'Columnar' / Columnar Norway Maple	2" B&B	25' hgt. 15' wide	CLASS II
	Acer platanoides 'Ezestre' / Easy Street Maple	2" B&B	25' hgt. 25' wide	CLASS II
	Acer platanoides 'Deborah' / Deborah Maple	2" B&B	35' hgt. 30' wide	CLASS II
	Betula nigra / River Birch	2" B&B	35' hgt. 25' wide	CLASS II
	Fraxinus americana 'Junginger' / Autumn Purple Ash	2" B&B	35' hgt. 30' wide	CLASS II
	Gleditsia triacanthos 'Shademaster' / Shademaster Honeylocust	2" B&B	35' hgt. 30' wide	CLASS II
	Zelkova serrata 'Schmidtlow' / Wireless Zelkova	2" B&B	24' hgt. 35' wide	CLASS II
	Tillia americana 'Boulevard' / Boulevard Linden	2" B&B	35' hgt. 30' wide	CLASS II
	Malus x 'Red Baron' / Red Barron Crabapple	2" B&B	15' hgt. 10' wide	CLASS I
	Pyrus calleryana 'Jackzam' / Jack Pear	2" B&B	16' hgt. 10' wide	CLASS I
	Malus x 'Spring Snow' / Spring Snow Crabapple	2" B&B	25' hgt. 15' wide	CLASS I
	Prunus sargentii 'Columnaris' / Columnar Sargent Cherry	2" B&B	30' hgt. 15' wide	CLASS I
	Picea pungens 'Bacheri' / Bacheri Spruce	8'-10' hgt. B&B	15' hgt. 8' wide	CONIF.
	Picea glauca 'Densata' / Black Hills Spruce	6' B&B	20' hgt. 10' wide	CONIF.
	Pinus nigra / Austrian Pine	8'-10' B&B	40' hgt. 20' wide	CONIF.
	Picea pungens 'glauca' / Colorado Blue Spruce	8'-10' B&B	35' hgt. 15' wide	CONIF.

NOTE - SEE SHEET L2.02 FOR FULL PLANT LIST

NOTE - SEE DETAILS 6-8/L2.03 FOR ADDITIONAL TREE PLANTING REQUIREMENTS.

STAMP: PRELIMINARY NOT FOR CONSTRUCTION

DATE: 7/1/2018

SOUTH BECK & BAIRD

South Landscape Architecture P.C. dba South Beck & Baird Landscape Architecture P.C.

REVISIONS: NO. | ITEM | DATE

CONSULTANTS:

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PRELIMINARY PLAT LANDSCAPE PLANS

Spring Rock Subdivision - Phase 1

KUNA IDAHO

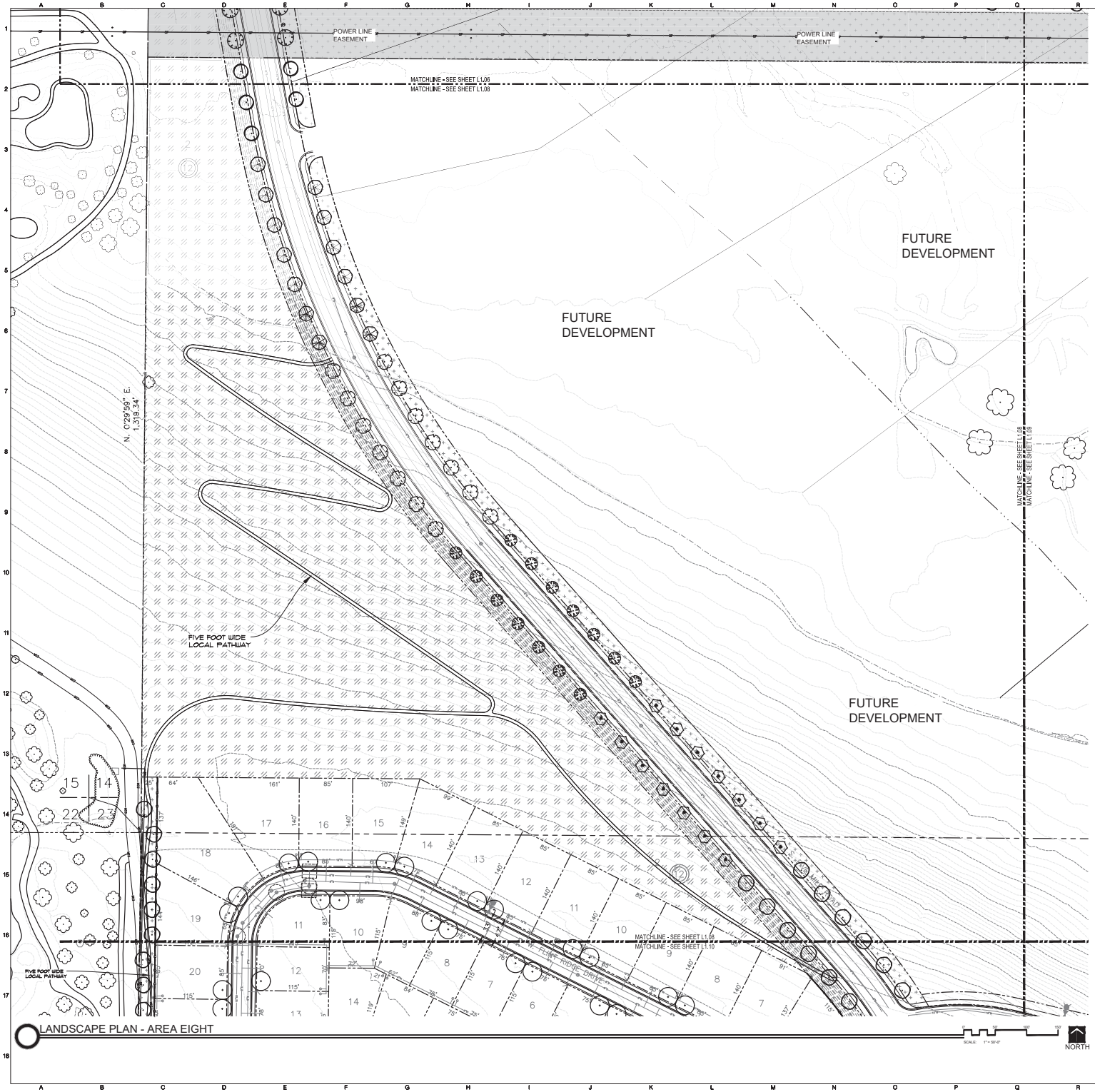
DRAWN BY: AWJ

CHECKED BY: JDR

PROJECT NUMBER: 18-046

SHEET: L1.07

OWNER REVIEW



LEGEND:

LAWN AREA - Dwarf Turf Type Tall Fescue

NATIVE LANDSCAPE AREA - No disturbance shall take place in these areas. Existing vegetation to remain as is.

PROPOSED FENCING LOCATION, HEIGHT AND TYPE TO BE DETERMINED. (SEE DETAILS Ø-12/L2.03)

LANDSCAPE CUT EDGE (SEE DETAIL 2/L2.03)

RESIDENTIAL STREET TREE LIST

BOTANICAL NAME / COMMON NAME	PLANTING SIZE	MATURE SIZE
TREES		
Acer platanoides 'Fairview' Fairview Maple	2" B&B	45' hgt. 35' wide
Fraxinus pennsylvanica 'Urbanite' Urbanite Green Ash	2" B&B	35' hgt. 30' wide
Pyrus calleryana 'Holmford' Bradford Flowering Pear	2" B&B	35' hgt. 30' wide
Quercus rubra Red Oak	2" B&B	30' hgt. 25' wide

NOTE - ONE RESIDENTIAL STREET TREE PER LOT SHALL BE SELECTED FROM THE ABOVE LIST AND INSTALLED BY LOT OWNER/DEVELOPER AT THE HOMES ARE BUILT ON EACH LOT.

PLANT SCHEDULE

KEY	BOTANICAL NAME / COMMON NAME (*NOTE: ALL TREES TO BE GRADE #)	PLANTING SIZE	MATURE SIZE	CLASS
TREES				
	Acer platanoides 'Columnar' Columnar Norway Maple	2" B&B	25' hgt. 15' wide	CLASS II
	Acer platanoides 'Emerald Elegance' Elegance Street Maple	2" B&B	25' hgt. 25' wide	CLASS II
	Acer platanoides 'Deborah' Deborah Maple	2" B&B	35' hgt. 30' wide	CLASS II
	Betula nigra River Birch	2" B&B	35' hgt. 25' wide	CLASS II
	Fraxinus americana 'Junginger' Autumn Purple Ash	2" B&B	35' hgt. 30' wide	CLASS II
	Gleditsia triacanthos 'Shademaster' Shademaster Honeylocust	2" B&B	35' hgt. 30' wide	CLASS II
	Zelkova serrata 'Schmidtiana' Unalaska Zelkova	2" B&B	24' hgt. 35' wide	CLASS II
	Tilia americana 'Boulevard' Boulevard Linden	2" B&B	35' hgt. 30' wide	CLASS II
	Malus x 'Red Baron' Red Baron Crabapple	2" B&B	15' hgt. 10' wide	CLASS I
	Pyrus calleryana 'Jackson' Jack Pear	2" B&B	16' hgt. 10' wide	CLASS I
	Malus x 'Spring Snow' Spring Snow Crabapple	2" B&B	25' hgt. 15' wide	CLASS I
	Prunus sargentii 'Columnaris' Columnar Sargent Cherry	2" B&B	30' hgt. 15' wide	CLASS I
	Picea pungens 'Bakeri' Bakeri Spruce	8'-10" hgt. B&B	15' hgt. 8' wide	CONIF.
	Picea glauca 'Densata' Black Hills Spruce	6' B&B	30' hgt. 10' wide	CONIF.
	Pinus nigra Austrian Pine	8'-10" B&B	40' hgt. 20' wide	CONIF.
	Picea pungens 'glauca' Colorado Blue Spruce	8'-10" B&B	35' hgt. 15' wide	CONIF.

NOTE - SEE SHEET L2.00 FOR FULL PLANT LIST

NOTE - SEE DETAILS 6-8/L2.03 FOR ADDITIONAL TREE PLANTING REQUIREMENTS.

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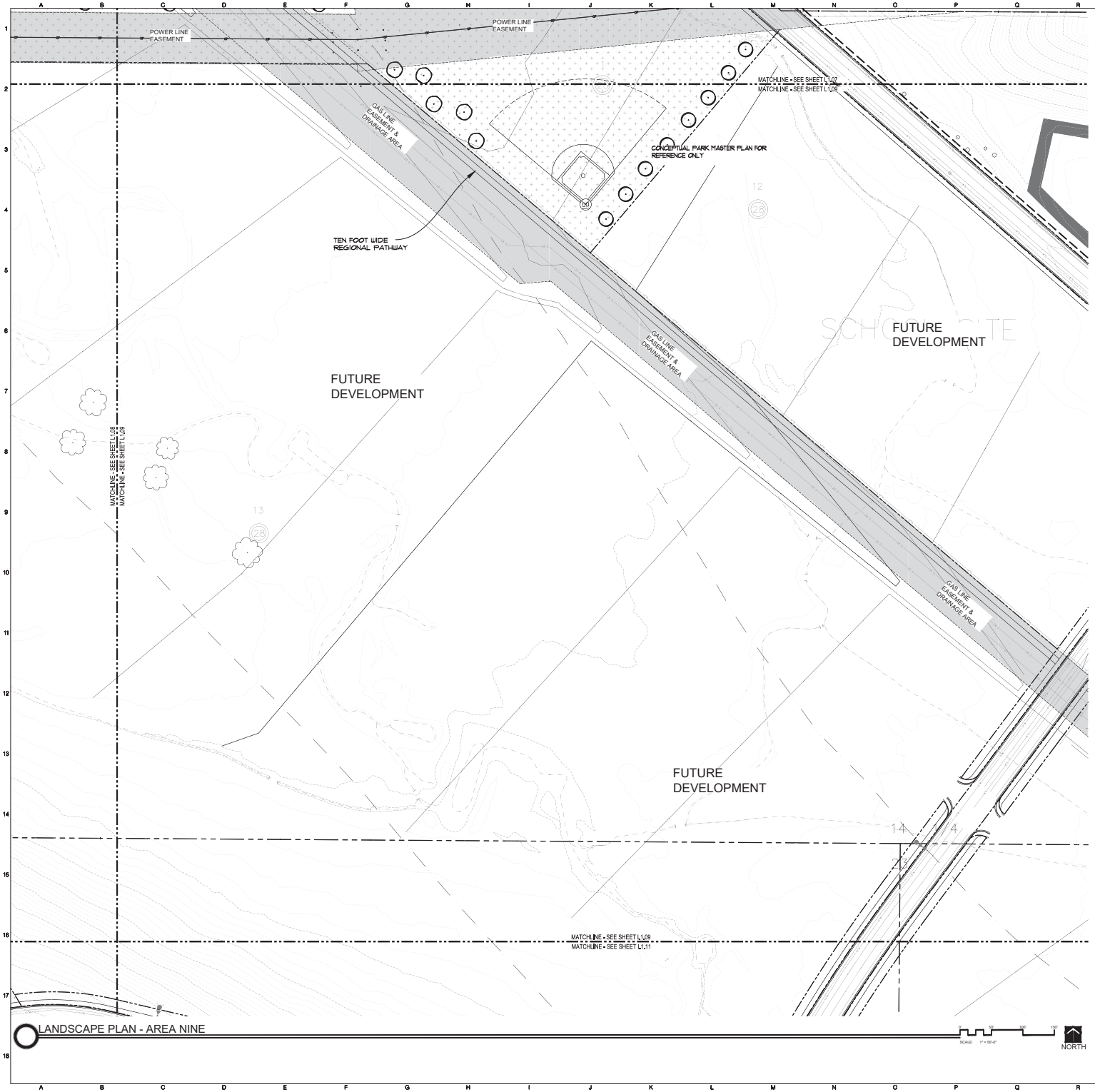
PRELIMINARY PLAT LANDSCAPE PLANS

Spring Rock Subdivision - Phase 1

KUNA IDAHO

DRAWN BY: AJJ
CHECKED BY: JDR
PROJECT NUMBER: 19-6946
SHEET: L1.08

OWNER REVIEW



LANDSCAPE PLAN - AREA NINE

SCALE 1" = 50'-0"

NORTH

LEGEND:

LAWN AREA - Dwarf Turf Type Tall Fescue

NATIVE LANDSCAPE AREA - No disturbance shall take place in these areas. Existing vegetation to remain as is.

PROPOSED FENCING LOCATION, HEIGHT AND TYPE TO BE DETERMINED. (SEE DETAILS Ø-12/L2.03)

LANDSCAPE CUT EDGE (SEE DETAIL 2/L2.03)

RESIDENTIAL STREET TREE LIST

BOTANICAL NAME COMMON NAME	PLANTING SIZE	MATURE SIZE
TREES		
Acer platanoides 'Fairview' Fairview Maple	2" B&B	45' hgt. 35' wide
Fraxinus pennsylvanica 'Urbanite' Urbanite Green Ash	2" B&B	35' hgt. 30' wide
Pyrus calleryana 'Holmford' Bradford Flowering Pear	2" B&B	35' hgt. 30' wide
Quercus rubra Red Oak	2" B&B	30' hgt. 25' wide

NOTE - ONE RESIDENTIAL STREET TREE PER LOT SHALL BE SELECTED FROM THE ABOVE LIST AND INSTALLED BY LOT OWNER/DEVELOPER AT THE HOMES ARE BUILT ON EACH LOT.

PLANT SCHEDULE

KEY	BOTANICAL NAME COMMON NAME (*NOTE: ALL TREES TO BE GRADE #)	PLANTING SIZE	MATURE SIZE	CLASS
TREES				
	Acer platanoides 'Columnar' Columnar Norway Maple	2" B&B	25' hgt. 15' wide	CLASS II
	Acer platanoides 'Emerald Queen' Emerald Queen Maple	2" B&B	25' hgt. 25' wide	CLASS II
	Acer platanoides 'Deborah' Deborah Maple	2" B&B	35' hgt. 30' wide	CLASS II
	Betula nigra River Birch	2" B&B	35' hgt. 25' wide	CLASS II
	Fraxinus americana 'Junginger' Autumn Purple Ash	2" B&B	35' hgt. 30' wide	CLASS II
	Gleditsia triacanthos 'Shademaster' Shademaster Honeylocust	2" B&B	35' hgt. 30' wide	CLASS II
	Zelkova serrata 'Schmidtlow' Wireless Zelkova	2" B&B	24' hgt. 35' wide	CLASS II
	Tilia americana 'Boulevard' Boulevard Linden	2" B&B	35' hgt. 30' wide	CLASS II
	Malus x 'Red Baron' Red Baron Crabapple	2" B&B	15' hgt. 10' wide	CLASS I
	Pyrus calleryana 'Jackson' Jack Pear	2" B&B	16' hgt. 10' wide	CLASS I
	Malus x 'Spring Snow' Spring Snow Crabapple	2" B&B	25' hgt. 15' wide	CLASS I
	Prunus sargentii 'Columnaris' Columnar Sargent Cherry	2" B&B	30' hgt. 15' wide	CLASS I
	Picea pungens 'Bacheri' Bacheri Spruce	8'-10" hgt. B&B	15' hgt. 8' wide	CONIF.
	Picea glauca 'Densata' Black Hills Spruce	6' B&B	30' hgt. 10' wide	CONIF.
	Pinus nigra Austrian Pine	8'-10' B&B	40' hgt. 20' wide	CONIF.
	Picea pungens 'glauca' Colorado Blue Spruce	8'-10' B&B	35' hgt. 15' wide	CONIF.

NOTE - SEE SHEET L2.02 FOR FULL PLANT LIST

NOTE - SEE DETAILS 6-8/L2.03 FOR ADDITIONAL TREE PLANTING REQUIREMENTS.

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dba South Beck & Baird Landscape Architecture P.C.

PRELIMINARY PLAT LANDSCAPE PLANS

Spring Rock Subdivision - Phase 1

KUNA IDAHO

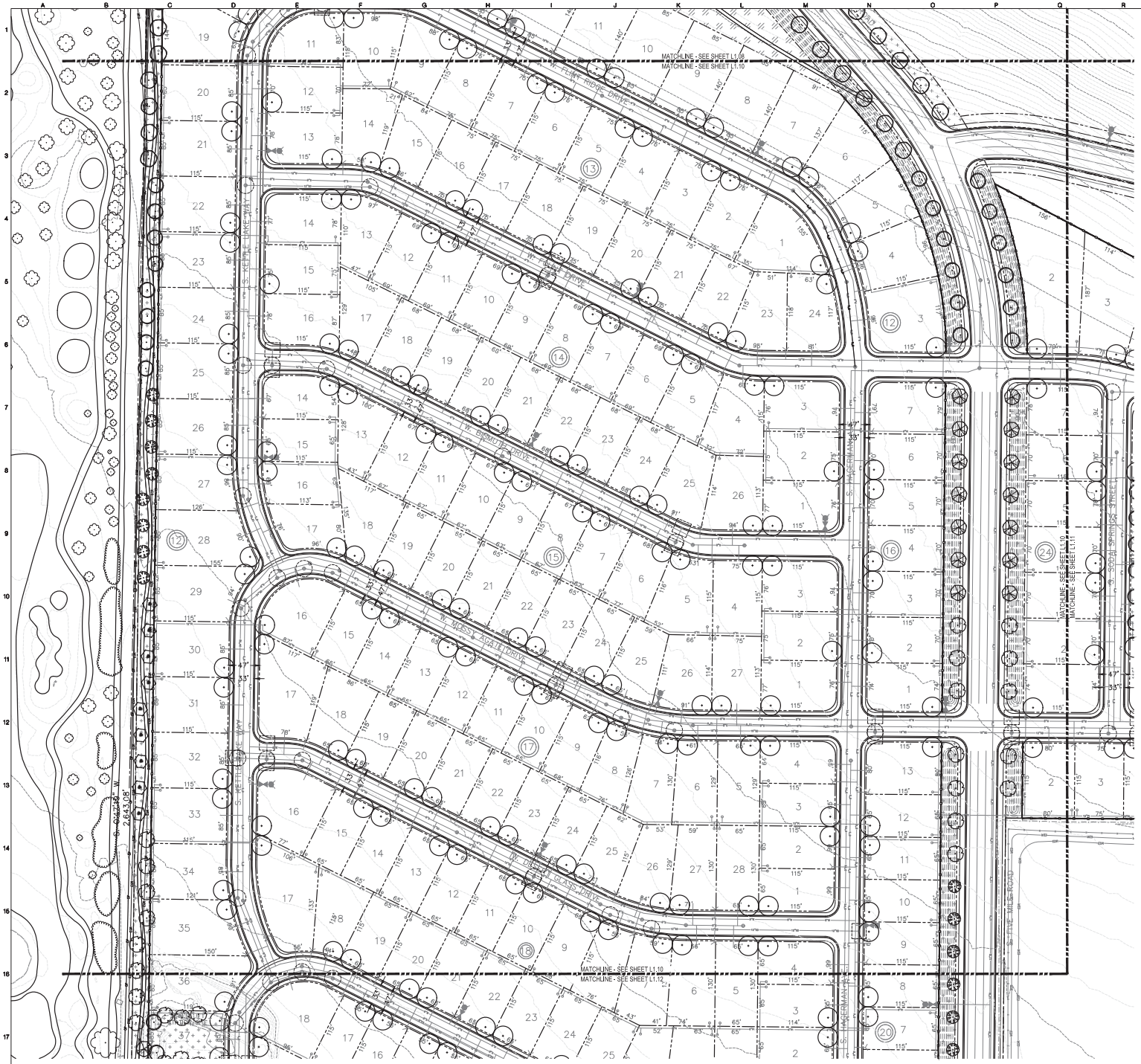
DRAWN BY: AJJ

CHECKED BY: JDR

PROJECT NUMBER 19-6946

SHEET: L1.09

OWNER REVIEW



LANDSCAPE PLAN - AREA TEN

SCALE: 1" = 50'-0"

NORTH

LEGEND:

LAWN AREA - Dwarf Turf Type Tall Fescue

NATIVE LANDSCAPE AREA - No disturbance shall take place in these areas. Existing vegetation to remain as is.

PROPOSED FENCING LOCATION, HEIGHT AND TYPE TO BE DETERMINED. (SEE DETAILS Ø-12/L2.03)

LANDSCAPE CUT EDGE (SEE DETAIL 2/L2.03)

RESIDENTIAL STREET TREE LIST

BOTANICAL NAME / COMMON NAME	PLANTING SIZE	MATURE SIZE
TREES		
Acer platanoides 'Fairview' Fairview Maple	2" B&B	45' hgt. 35' wide
Fraxinus pennsylvanica 'Urbanite' Urbanite Green Ash	2" B&B	35' hgt. 30' wide
Pyrus calleryana 'Holmford' Bradford Flowering Pear	2" B&B	35' hgt. 30' wide
Quercus rubra Red Oak	2" B&B	30' hgt. 25' wide

NOTE - ONE RESIDENTIAL STREET TREE PER LOT SHALL BE SELECTED FROM THE ABOVE LIST AND INSTALLED BY LOT OWNER/DEVELOPER AT THE HOMES ARE BUILT ON EACH LOT.

PLANT SCHEDULE

KEY	BOTANICAL NAME / COMMON NAME (*NOTE: ALL TREES TO BE GRADE #)	PLANTING SIZE	MATURE SIZE	CLASS
TREES				
	Acer platanoides 'Columnar' Columnar Norway Maple	2" B&B	25' hgt. 15' wide	CLASS II
	Acer platanoides 'Emerald' Emerald Queen Maple	2" B&B	25' hgt. 25' wide	CLASS II
	Acer platanoides 'Deborah' Deborah Maple	2" B&B	35' hgt. 30' wide	CLASS II
	Betula nigra River Birch	2" B&B	35' hgt. 25' wide	CLASS II
	Fraxinus americana 'Junginger' Autumn Purple Ash	2" B&B	35' hgt. 30' wide	CLASS II
	Gleditsia triacanthos 'Shademaster' Shademaster Honeylocust	2" B&B	35' hgt. 30' wide	CLASS II
	Zelkova serrata 'Schicklou' Wireless Zelkova	2" B&B	24' hgt. 35' wide	CLASS II
	Tilia americana 'Boulevard' Boulevard Linden	2" B&B	35' hgt. 30' wide	CLASS II
	Malus x 'Red Baron' Red Baron Crabapple	2" B&B	15' hgt. 10' wide	CLASS I
	Pyrus calleryana 'Jackson' Jack Pear	2" B&B	16' hgt. 10' wide	CLASS I
	Malus x 'Spring Snow' Spring Snow Crabapple	2" B&B	25' hgt. 15' wide	CLASS I
	Prunus sargentii 'Columnaris' Columnar Sargent Cherry	2" B&B	30' hgt. 15' wide	CLASS I
	Picea pungens 'Bacheri' Bacheri Spruce	8'-10" hgt. B&B	15' hgt. 8' wide	CONIF.
	Picea glauca 'Densata' Black Hills Spruce	6' B&B	30' hgt. 10' wide	CONIF.
	Pinus nigra Austrian Pine	8'-10' B&B	40' hgt. 20' wide	CONIF.
	Picea pungens 'glauca' Colorado Blue Spruce	8'-10' B&B	35' hgt. 15' wide	CONIF.

NOTE - SEE SHEET L2.00 FOR FULL PLANT LIST

NOTE - SEE DETAILS 6-8/L2.03 FOR ADDITIONAL TREE PLANTING REQUIREMENTS.

STAMP:

DATE: 1/1/2019

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South Landscape Architecture P.C.
dba South Beck & Baird Landscape Architecture P.C.

REVISIONS: NO.	ITEM	DATE

CONSULTANTS:

RiveRidge Engineering Company
2447 S. Vista Ave. Boise, Idaho 83705
Ph: (208) 344-1180, Fax (208) 344-1182

PRELIMINARY PLAT LANDSCAPE PLANS

Spring Rock Subdivision - Phase 1

IDAHO

KUNA

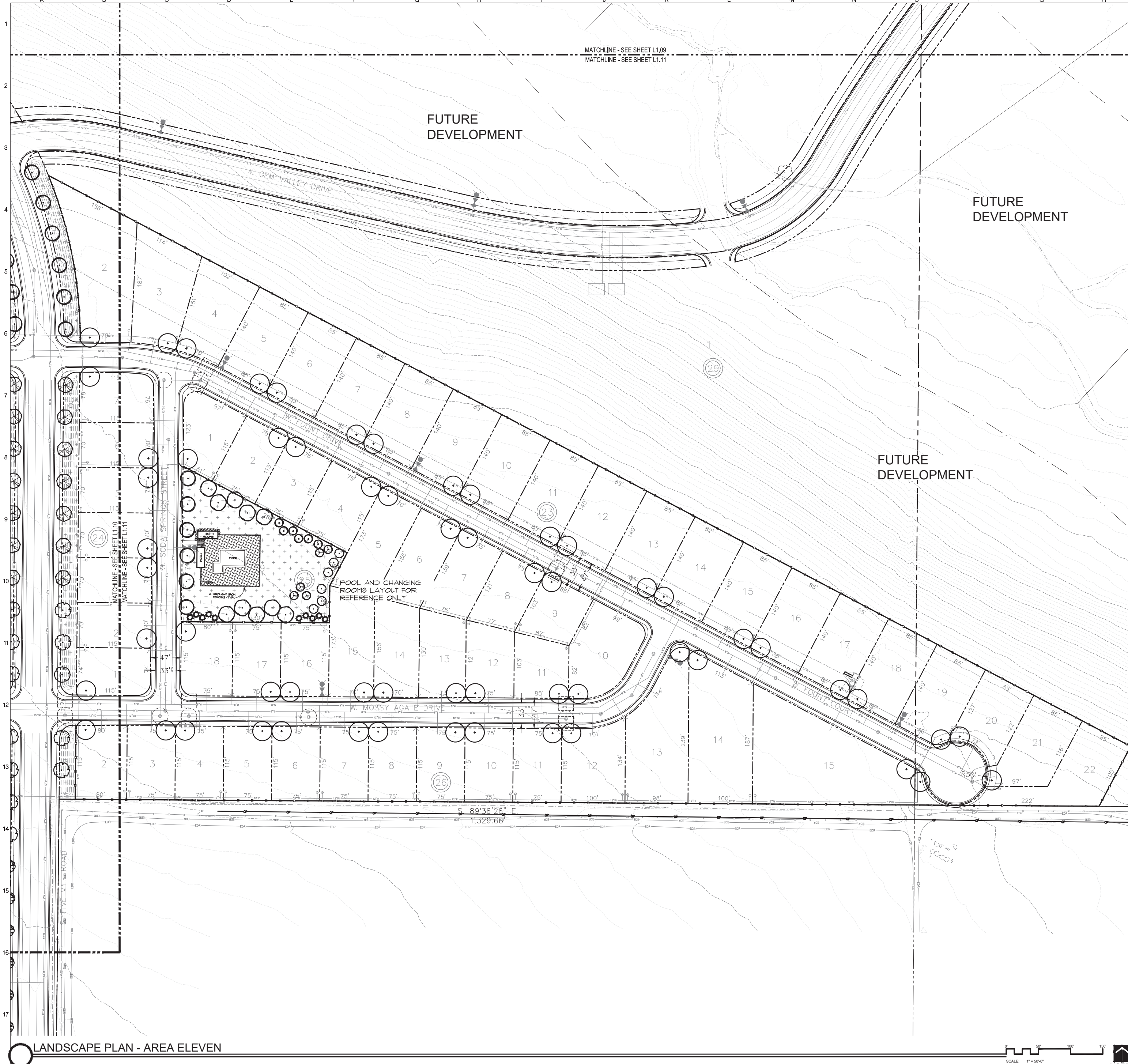
DRAWN BY: AJJ

CHECKED BY: JDR

PROJECT NUMBER: 19-6946

SHEET: L1.10

OWNER REVIEW



LANDSCAPE PLAN - AREA ELEVEN

LEGEND:

- LAWN AREA - Dwarf Turf Type Tall Fescue
- NATIVE LANDSCAPE AREA - No disturbance shall take place in these areas. Existing vegetation to remain as is.
- PROPOSED FENCING LOCATION, HEIGHT AND TYPE TO BE DETERMINED. (SEE DETAILS 10-12/L2.03)
- LANDSCAPE CUT EDGE (SEE DETAIL 2/L2.03)

RESIDENTIAL STREET TREE LIST

BOTANICAL NAME / COMMON NAME	PLANTING SIZE	MATURE SIZE
TREES		
Acer platanoides 'Fairview' / Fairview Maple	2" B&B	45' hgt. 35' wide
Fraxinus pennsylvanica 'Urbanite' / Urbanite Green Ash	2" B&B	35' hgt. 30' wide
Pyrus calleryana 'Holmford' / Bradford Flowering Pear	2" B&B	35' hgt. 30' wide
Quercus rubra / Red Oak	2" B&B	30' hgt. 25' wide

NOTE - ONE RESIDENTIAL STREET TREE PER LOT SHALL BE SELECTED FROM THE ABOVE LIST AND INSTALLED BY LOT OWNER/DEVELOPER AT TIME HOMES ARE BUILT ON EACH LOT.

PLANT SCHEDULE

KEY	BOTANICAL NAME / COMMON NAME (*NOTE: ALL TREES TO BE GRADE #1)	PLANTING SIZE	MATURE SIZE	CLASS
	TREES			
	Acer platanoides 'Columnar' / Columnar Norway Maple	2" B&B	25' hgt. 15' wide	CLASS II
	Acer platanoides 'Ezestre' / Easy Street Maple	2" B&B	25' hgt. 25' wide	CLASS II
	Acer platanoides 'Deborah' / Deborah Maple	2" B&B	35' hgt. 30' wide	CLASS II
	Betula nigra / River Birch	2" B&B	35' hgt. 25' wide	CLASS II
	Fraxinus americana 'Junginger' / Autumn Purple Ash	2" B&B	35' hgt. 30' wide	CLASS II
	Gleditsia triacanthos 'Shademaster' / Shademaster Honeylocust	2" B&B	35' hgt. 30' wide	CLASS II
	Zelkova serrata 'Schmidtlow' / Wireless Zelkova	2" B&B	24' hgt. 35' wide	CLASS II
	Tilia americana 'Boulevard' / Boulevard Linden	2" B&B	35' hgt. 30' wide	CLASS II
	Malus x 'Red Baron' / Red Barron Crabapple	2" B&B	15' hgt. 10' wide	CLASS I
	Pyrus calleryana 'Jackzam' / Jack Pear	2" B&B	16' hgt. 10' wide	CLASS I
	Malus x 'Spring Snow' / Spring Snow Crabapple	2" B&B	25' hgt. 15' wide	CLASS I
	Prunus sargentii 'Columnaris' / Columnar Sargent Cherry	2" B&B	30' hgt. 15' wide	CLASS I
	Picea pungens 'Bacheri' / Bacheri Spruce	8'-10' hgt. B&B	15' hgt. 8' wide	CONIF.
	Picea glauca 'Densata' / Black Hills Spruce	6' B&B	20' hgt. 10' wide	CONIF.
	Pinus nigra / Austrian Pine	8'-10' B&B	40' hgt. 20' wide	CONIF.
	Picea pungens 'glauca' / Colorado Blue Spruce	8'-10' B&B	35' hgt. 15' wide	CONIF.

NOTE - SEE SHEET L2.02 FOR FULL PLANT LIST

NOTE - SEE DETAILS 6-8/L2.03 FOR ADDITIONAL TREE PLANTING REQUIREMENTS.

PRELIMINARY NOT FOR CONSTRUCTION

South Beck & Baird Landscape Architecture P.C.

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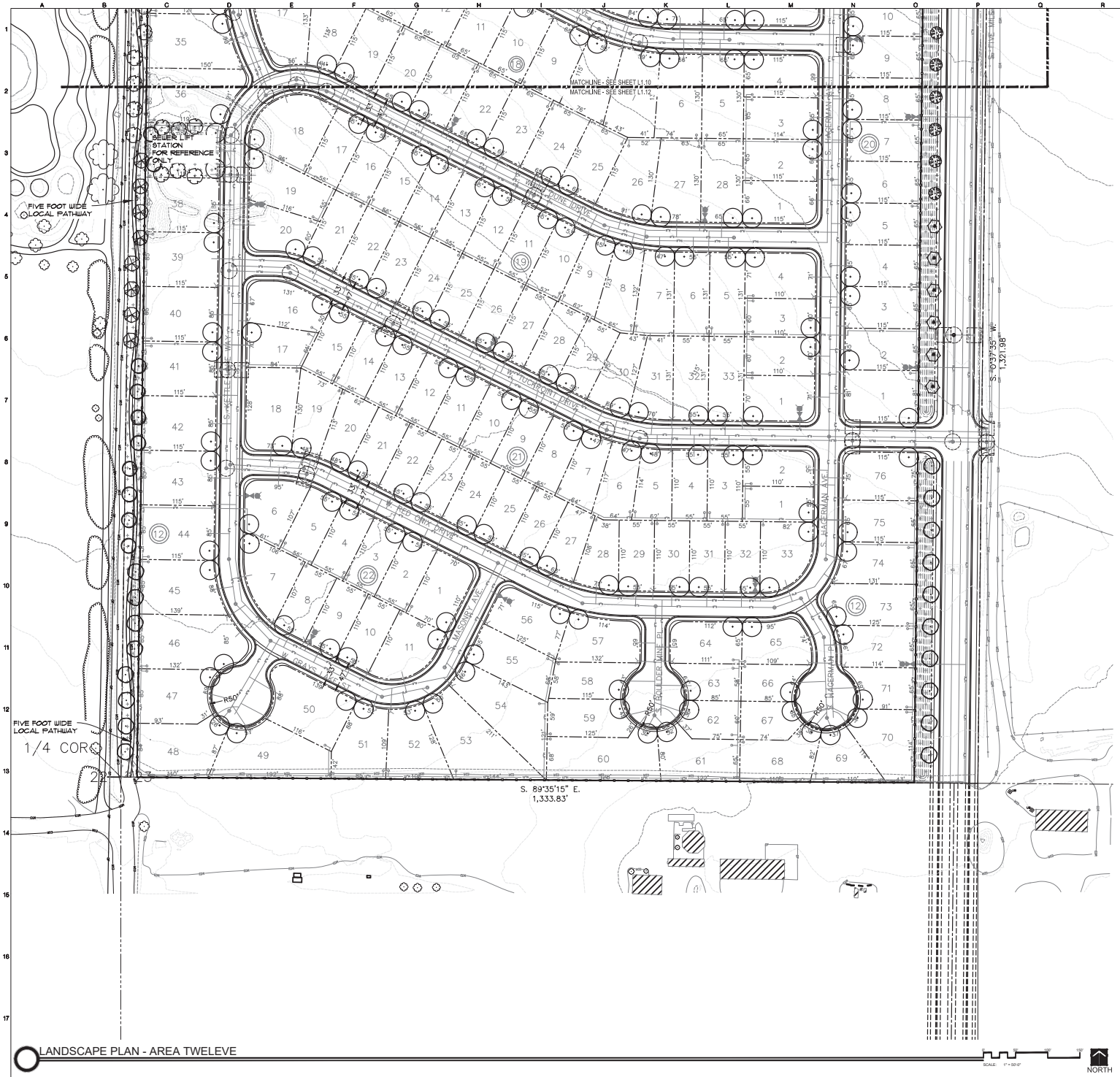
PRELIMINARY PLAT LANDSCAPE PLANS
Spring Rock Subdivision - Phase 1
KUNA IDAHO

DRAWN BY: A.W.J.
CHECKED BY: J.D.R.
PROJECT NUMBER 19-046
SHEET: L1.11
OWNER REVIEW



LEGEND:

LAWN AREA - Dwarf Turf Type Tall Fescue

NATIVE LANDSCAPE AREA - No disturbance shall take place in these areas. Existing vegetation to remain as is.

PROPOSED FENCING LOCATION, HEIGHT AND TYPE TO BE DETERMINED. (SEE DETAILS Ø-12/L2.03)

LANDSCAPE CUT EDGE (SEE DETAIL 2/L2.03)

RESIDENTIAL STREET TREE LIST

BOTANICAL NAME / COMMON NAME	PLANTING SIZE	MATURE SIZE
TREES		
Acer platanoides 'Fairview' Fairview Maple	2" B&B	45' hgt. 35' wide
Fraxinus pennsylvanica 'Urbanite' Urbanite Green Ash	2" B&B	35' hgt. 30' wide
Pyrus calleryana 'Holmford' Bradford Flowering Pear	2" B&B	35' hgt. 30' wide
Quercus rubra Red Oak	2" B&B	30' hgt. 25' wide

NOTE - ONE RESIDENTIAL STREET TREE PER LOT SHALL BE SELECTED FROM THE ABOVE LIST AND INSTALLED BY LOT OWNER/DEVELOPER AT THE HOMES ARE BUILT ON EACH LOT.

PLANT SCHEDULE

KEY	BOTANICAL NAME / COMMON NAME (*NOTE: ALL TREES TO BE GRADE #)	PLANTING SIZE	MATURE SIZE	CLASS
TREES				
	Acer platanoides 'Columnar' Columnar Norway Maple	2" B&B	25' hgt. 15' wide	CLASS II
	Acer platanoides 'Emerald' Emerald Queen Maple	2" B&B	25' hgt. 25' wide	CLASS II
	Acer platanoides 'Deborah' Deborah Maple	2" B&B	35' hgt. 30' wide	CLASS II
	Betula nigra River Birch	2" B&B	35' hgt. 25' wide	CLASS II
	Fraxinus americana 'Junginger' Autumn Purple Ash	2" B&B	35' hgt. 30' wide	CLASS II
	Gleditsia triacanthos 'Bradenester' Bradenester Honeylocust	2" B&B	35' hgt. 30' wide	CLASS II
	Zelkova serrata 'Schicklou' Wireless Zelkova	2" B&B	24' hgt. 35' wide	CLASS II
	Tilia americana 'Boulevard' Boulevard Linden	2" B&B	35' hgt. 30' wide	CLASS II
	Malus x 'Red Baron' Red Baron Crabapple	2" B&B	15' hgt. 10' wide	CLASS I
	Pyrus calleryana 'Jackson' Jack Pear	2" B&B	16' hgt. 10' wide	CLASS I
	Malus x 'Spring Snow' Spring Snow Crabapple	2" B&B	25' hgt. 15' wide	CLASS I
	Prunus sargentii 'Columaris' Columnar Sargent Cherry	2" B&B	30' hgt. 15' wide	CLASS I
	Picea pungens 'Bacheri' Bacheri Spruce	8'-10" hgt. B&B	15' hgt. 8' wide	CONIF.
	Picea glauca 'Densata' Black Hills Spruce	6' B&B	30' hgt. 10' wide	CONIF.
	Pinus nigra Austrian Pine	8'-10" B&B	40' hgt. 20' wide	CONIF.
	Picea pungens 'glauca' Colorado Blue Spruce	8'-10" B&B	35' hgt. 15' wide	CONIF.

NOTE - SEE SHEET L2.00 FOR FULL PLANT LIST

NOTE - SEE DETAILS 6-8/L2.03 FOR ADDITIONAL TREE PLANTING REQUIREMENTS.

STAMP:

DATE: 1/1/2018

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dba South Beck & Baird Landscape Architecture P.C.

DATE	ITEM

REVISIONS:
NO.

CONSULTANTS:
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Ph. (208) 344-1180, Fax (208) 344-1182

PRELIMINARY PLAT LANDSCAPE PLANS

Spring Rock Subdivision - Phase 1

KUNA IDAHO

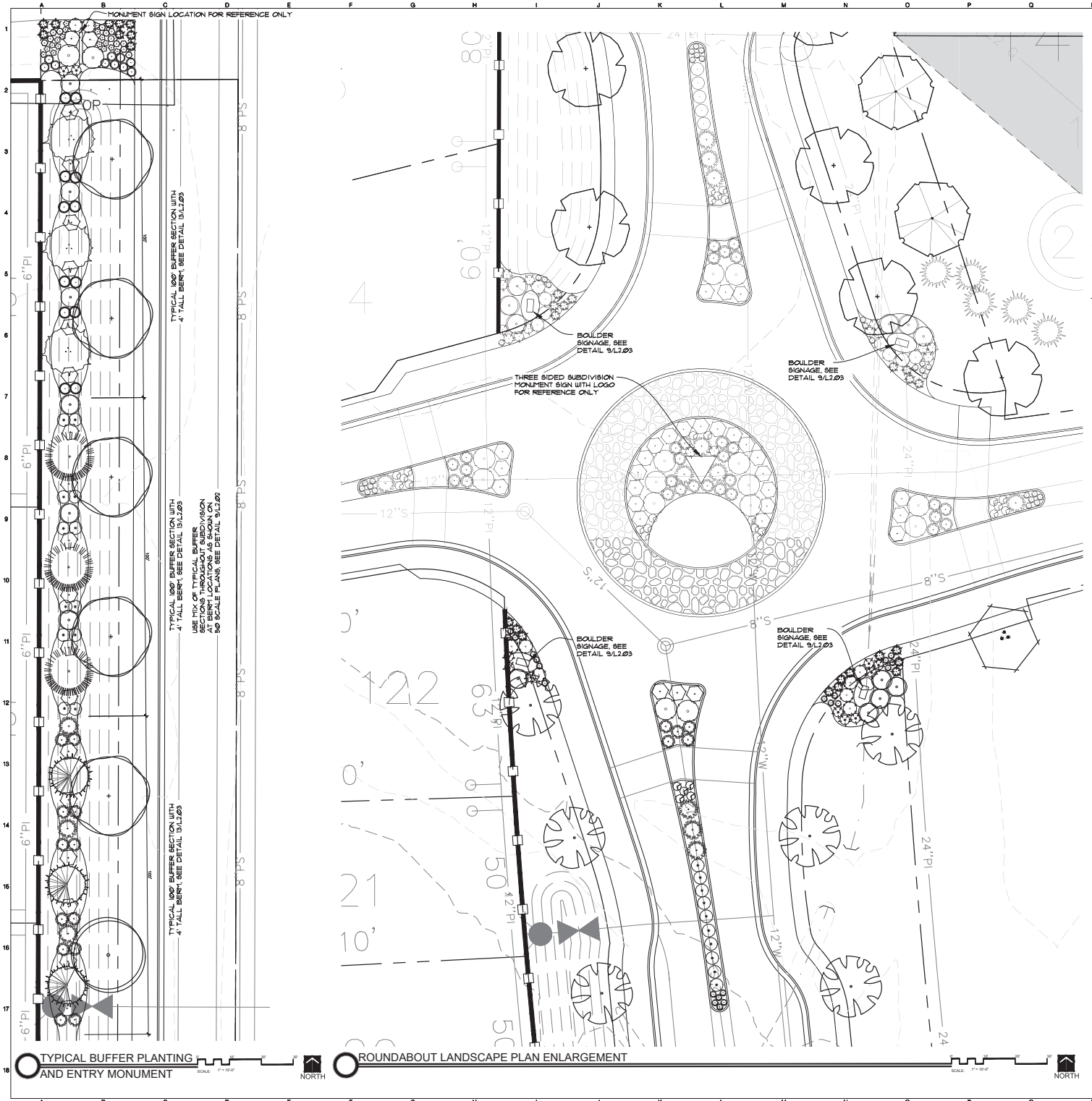
DRAWN BY: AJJ

CHECKED BY: JDR

PROJECT NUMBER: 19-6946

SHEET: L1.12

OWNER REVIEW



TYPICAL BUFFER PLANTING AND ENTRY MONUMENT

SCALE: 1" = 10'-0"

NORTH

ROUNDABOUT LANDSCAPE PLAN ENLARGEMENT

SCALE: 1" = 10'-0"

NORTH

LEGEND:

- LAWN AREA - Dwarf Turf Type Tall Fescue
- STAMPED AND COLORED CONCRETE TO BE APPROVED BY OWNER
- PROPOSED FENCING LOCATION, HEIGHT AND TYPE TO BE DETERMINED. (SEE DETAILS 10-12/L2.03)
- LANDSCAPE CUT EDGE (SEE DETAIL 2/L2.03)

PLANT SCHEDULE

KEY	BOTANICAL NAME / COMMON NAME (*NOTE: ALL TREES TO BE GRADE #1)	PLANTING SIZE	MATURE SIZE	CLASS
TREES				
	Picea pungens 'Bacheri' Bacheri Spruce	8'-10' hgt. B+B	15' hgt. 8' wide	CONIF.
	Picea glauca 'Densata' Black Hills Spruce	6' B+B	25' hgt. 10' wide	CONIF.
	Pinus nigra Austrian Pine	8'-10' B+B	40' hgt. 20' wide	CONIF.
	Picea pungens 'glauca' Colorado Blue Spruce	8'-10' B+B	35' hgt. 15' wide	CONIF.

KEY:		PLANTING SIZE	MATURE SIZE
SHRUBS			
	Euonymus alatus 'Compactus' Dwarf Burning Bush	2 Gal.	4' hgt. x 4' wide
	Buxus x 'Green Gem' Green Gem Boxwood	2 Gal.	3' hgt. x 3' wide
	Berberis thunbergii 'Helmond Pillar' Helmond Pillar Barberry	2 Gal.	2' hgt. x 2' wide
	Cornus alba 'Bailhalo' Ivory Halo Dogwood	5 Gal.	6' hgt. x 6' wide
	Cornus sericea 'Isanti' Isanti Red-Osier Dogwood	5 Gal.	6' hgt. x 6' wide
	Juniperus horizontalis ' Blue Chip' Blue Chip Juniper	2 Gal.	6" hgt. x 4' wide
	Juniperus scopulorum 'Medora' Medora Juniper	5'-6' Hgt.	10' hgt. x 3' wide
	Picea pungens 'Globosa' Dwarf Globe Blue Spruce	5 Gal.	4' hgt. x 6' wide
	Pinus strobus 'Blue Shag' Blue Shag Eastern White Pine	5 Gal.	4' hgt. x 4' wide
	Physocarpus opulus 'Summer Wine' Summer Wine Ninebark	5 Gal.	4' hgt. x 4' wide
	Rhus aromatica 'Grow Low' Grow Low Sumac	2 Gal.	2' hgt. x 6' wide
	Rosa x 'Noaschmee' White Groundcover Rose	2 Gal.	3' hgt. x 4' wide
	Rosa x 'Flower Carpet' Pariet Flower Carpet Rose	2 Gal.	3' hgt. x 4' wide
	Spiraea japonica 'Neon Flash' Neon Flash Spiraea	2 Gal.	3 hgt. x 3' wide
	Weigela florida 'Minuet' Minuet Weigela	2 Gal.	3 hgt. x 3' wide
GROUND COVERS/ GRASSES/ PERENNIALS			
	Calamagrostis x acutiflora 'Karl Foerster' Foerster's Feather Reed Grass	1 Gal. @ 36" O.C.	3' hgt. x 2' wide
	Festuca ovina glauca 'Elijah' Elijah Blue Fescue	1 Gal. @ 36" O.C.	18" hgt. x 18" wide
	Hemerocallis x 'Stella De Oro' Stella De Oro Daylily	1 Gal. @ 48" O.C.	18" hgt. x 2' wide
	Lavendula angustifolia 'Dilly Dilly' Dilly Dilly Lavender	1 Gal. @ 36" O.C.	12" hgt. x 18" wide
	Rudbeckia 'Little Goldstar' Little Goldstar Black Eyed Susan	1 Gal. @ 36" O.C.	2' hgt. x 2' wide
	Phlox subulata 'Emerald Blue' Emerald Blue Creeping Phlox	1 Gal. @ 36" O.C.	6" hgt. x 3' wide

NOTE -
SEE SHEET L2.02 FOR FULL PLANT LIST
SEE DETAILS 6-8/L2.03 FOR ADDITIONAL TREE PLANTING REQUIREMENTS.
SEE DETAIL 3/L2.03 FOR ADDITIONAL SHRUB PLANTING REQUIREMENTS.
SEE DETAILS 4/5/L2.03 FOR ADDITIONAL PERENNIAL AND GROUNDCOVER PLANTING REQUIREMENTS.

STAMP:

DATE: 1/1/2018

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Dba South Beck & Baird Landscape Architecture P.C.

DATE	ITEM

REVISIONS:
NO.

CONSULTANTS:
RiveRidge Engineering Company
2447 S. Vista Ave. Boise, Idaho 83705
Ph: (208) 344-1180, Fax (208) 344-1182

PRELIMINARY PLAT LANDSCAPE PLANS

Spring Rock Subdivision - Phase 1

IDAHO

TUNA

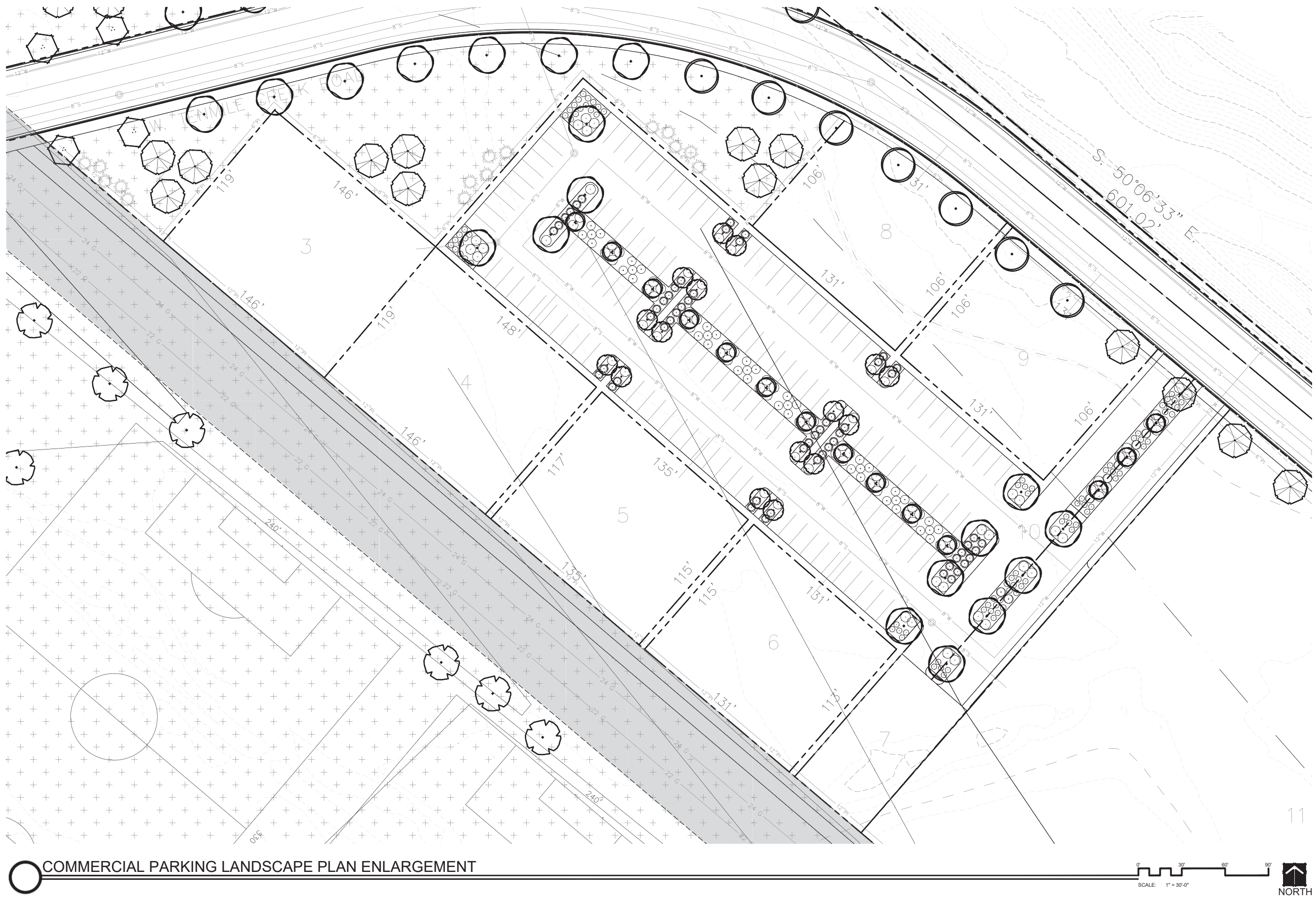
DRAWN BY: AJJ

CHECKED BY: JDR

PROJECT NUMBER 19-6946

SHEET: L2.01

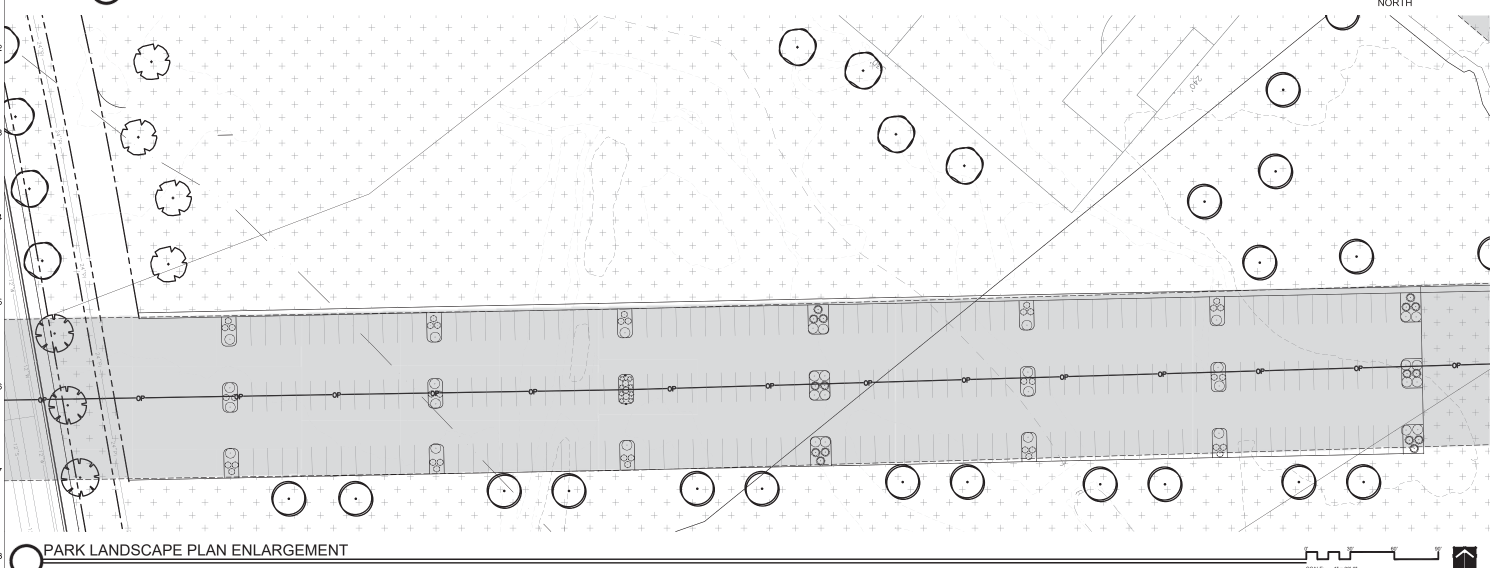
OWNER REVIEW



COMMERCIAL PARKING LANDSCAPE PLAN ENLARGEMENT

SCALE: 1" = 30'-0"

NORTH



PARK LANDSCAPE PLAN ENLARGEMENT

SCALE: 1" = 30'-0"

NORTH

LEGEND:

LAWN AREA - Dwarf Turf Type Tall Fescue

PROPOSED FENCING LOCATION, HEIGHT AND TYPE TO BE DETERMINED. (SEE DETAILS 10-12/L2.03)

LANDSCAPE CUT EDGE (SEE DETAIL 2/L2.03)

RESIDENTIAL STREET TREE LIST

BOTANICAL NAME / COMMON NAME	PLANTING SIZE	MATURE SIZE
TREES		
Acer platanoides 'Fairview' / Fairview Maple	2" B&B	45' hgt. 35' wide
Fraxinus pennsylvanica 'Urbanite' / Urbanite Green Ash	2" B&B	35' hgt. 30' wide
Pyrus calleryana 'Holmford' / Bradford Flowering Pear	2" B&B	35' hgt. 30' wide
Quercus rubra / Red Oak	2" B&B	30' hgt. 25' wide

NOTE - ONE RESIDENTIAL STREET TREE PER LOT SHALL BE SELECTED FROM THE ABOVE LIST AND INSTALLED BY LOT OWNER/DEVELOPER AT TIME HOMES ARE BUILT ON EACH LOT.

PLANT SCHEDULE

KEY	BOTANICAL NAME / COMMON NAME (*NOTE: ALL TREES TO BE GRADE #1)	PLANTING SIZE	MATURE SIZE	CLASS
	TREES			
	Acer platanoides 'Columnar' / Columnar Norway Maple	2" B&B	25' hgt. 15' wide	CLASS II
	Acer platanoides 'Ezestre' / Easy Street Maple	2" B&B	25' hgt. 25' wide	CLASS II
	Acer platanoides 'Deborah' / Deborah Maple	2" B&B	35' hgt. 30' wide	CLASS II
	Betula nigra / River Birch	2" B&B	35' hgt. 25' wide	CLASS II
	Fraxinus americana 'Junginger' / Autumn Purple Ash	2" B&B	35' hgt. 30' wide	CLASS II
	Gleditsia triacanthos 'Shademaster' / Shademaster Honeylocust	2" B&B	35' hgt. 30' wide	CLASS II
	Zelkova serrata 'Schmidtlow' / Wireless Zelkova	2" B&B	24' hgt. 35' wide	CLASS II
	Tillia americana 'Boulevard' / Boulevard Linden	2" B&B	35' hgt. 30' wide	CLASS II
	Malus x 'Red Baron' / Red Barron Crabapple	2" B&B	15' hgt. 10' wide	CLASS I
	Pyrus calleryana 'Jackzam' / Jack Pear	2" B&B	16' hgt. 10' wide	CLASS I
	Malus x 'Spring Snow' / Spring Snow Crabapple	2" B&B	25' hgt. 15' wide	CLASS I
	Prunus sargentii 'Columnaris' / Columnar Sargent Cherry	2" B&B	30' hgt. 15' wide	CLASS I
	Picea pungens 'Bacheri' / Bacheri Spruce	8'-10' hgt. B&B	15' hgt. 8' wide	CONIF.
	Picea glauca 'Densata' / Black Hills Spruce	6' B&B	20' hgt. 10' wide	CONIF.
	Pinus nigra / Austrian Pine	8'-10' B&B	40' hgt. 20' wide	CONIF.
	Picea pungens 'glauca' / Colorado Blue Spruce	8'-10' B&B	35' hgt. 15' wide	CONIF.

KEY	BOTANICAL NAME / COMMON NAME	PLANTING SIZE	MATURE SIZE
	SHRUBS		
	Euonymous alatus 'Compactus' / Dwarf Burning Bush	2 Gal.	4' hgt. x 4' wide
	Buxus x 'Green Gem' / Green Gem Boxwood	2 Gal.	3' hgt. x 3' wide
	Berberis thunbergii 'Helmond Pillar' / Helmond Pillar Barberry	2 Gal.	2' hgt. x 2' wide
	Cornus alba 'Bailhalo' / Ivory Halo Dogwood	5 Gal.	6' hgt. x 6' wide
	Cornus sericea 'Isanti' / Isanti Red-Osier Dogwood	5 Gal.	6' hgt. x 6' wide
	Juniperus horizontalis ' Blue Chip' / Blue Chip Juniper	2 Gal.	6" hgt. x 4' wide
	Juniperus scopulorum 'Medora' / Medora Juniper	5'-6' Hgt.	10' hgt. x 3' wide
	Picea pungens 'Globosa' / Dwarf Globe Blue Spruce	5 Gal.	4' hgt. x 6' wide
	Pinus strobus 'Blue Shag' / Blue Shag Eastern White Pine	5 Gal.	4' hgt. x 4' wide
	Physocarpus opulus 'Summer Wine' / Summer Wine Ninebark	5 Gal.	4' hgt. x 4' wide
	Rhus aromatica 'Grow Low' / Grow Low Sumac	2 Gal.	2' hgt. x 6' wide
	Rosa x 'Naoschnee' / White Groundcover Rose	2 Gal.	3' hgt. x 4' wide
	Rosa x 'Flower Carpet' / Merlot Flower Carpet Rose	2 Gal.	3' hgt. x 4' wide
	Spiraea japonica 'Neon Flash' / Neon Flash Spiraea	2 Gal.	2 hgt. x 3' wide
	Weigela florida 'Minuet' / Minuet Weigela	2 Gal.	3 hgt. x 3' wide
	GROUND COVERS/ GRASSES/ PERENNIALS		
	Calamagrostis x acutiflora 'Karl Foerster' / Foerster's Feather Reed Grass	1 Gal. @ 36" O.C.	3' hgt. x 2' wide
	Festuca ovina glauca 'Elijah' / Elijah Blue Fescue	1 Gal. @ 36" O.C.	18" hgt. x 18" wide
	Hemerocallis x 'Stella De Oro' / Stella De Oro Daylilly	1 Gal. @ 48" O.C.	18" hgt. x 2' wide
	Lavandula angustifolia 'Dilly Dilly' / Dilly Dilly Lavender	1 Gal. @ 36" O.C.	12" hgt. x 18" wide
	Rudbeckia 'Little Goldstar' / Little Goldstar Black Eyed Susan	1 Gal. @ 36" O.C.	2' hgt. x 2' wide
	Phlox subulata 'Emerald Blue' / Emerald Blue Creeping Phlox	1 Gal. @ 36" O.C.	6" hgt. x 3' wide

NOTE -
SEE DETAILS 6-8/L2.03 FOR ADDITIONAL TREE PLANTING REQUIREMENTS.
SEE DETAIL 3/L2.03 FOR ADDITIONAL SHRUB PLANTING REQUIREMENTS.
SEE DETAILS 4&5/L2.03 FOR ADDITIONAL PERENNIAL AND GROUNDCOVER PLANTING REQUIREMENTS.

STAMP: PRELIMINARY NOT FOR CONSTRUCTION

DATE: 7/1/2019

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South Landscape Architecture P.C.
Dba South Beck & Baird Landscape Architecture P.C.

Know what's below. Call before you dig. CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

REVISIONS: NO. | ITEM | DATE

CONSULTANTS:
RiveRidge Engineering Company
2447 S. Vista Ave. Boise, Idaho 83705
Ph. (208) 344-1180, Fax (208) 344-1182

PRELIMINARY PLAT LANDSCAPE PLANS
Spring Rock Subdivision - Phase 1
KUNA IDAHO

DRAWN BY: A.W.J.

CHECKED BY: J.D.R.

PROJECT NUMBER: 19-046

SHEET: L2.02

OWNER REVIEW

LANDSCAPE NOTES

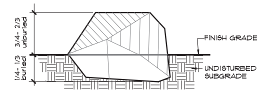
1. ALL PLANT MATERIAL SHALL CONFORM TO THE AMERICAN NURSERYMAN STANDARDS FOR TYPE AND SIZE SHOWN. PLANTS WILL BE REJECTED IF NOT IN A SOUND AND HEALTHY CONDITION. ALL PLANT MATERIAL SHALL BE GRADE #1 OR BETTER.
2. ALL PLANTING BEDS AND TREE WELLS IN LAWN AREAS (WELLS TO BE 3' IN DIAMETER) SHALL BE COVERED WITH A MINIMUM OF 3" OF SMALL BARK CHIPS, MATCH EXISTING. SUBMIT SAMPLE FOR APPROVAL.
3. ALL LAWN AREAS SHALL BE SODDED OR HYDRO-SEEDED WITH 100% TURF TYPE TALL FESCUE, 100% BLUE RYE MIX OR SIMILAR. LAWN TO BE SEEDED @ A RATE OF 8 LBS. PER 1000 SQ. FT. OR PER SEED MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL PROVIDE (AT TIME OF BID) AN ADD/ALTERNATE PRICE PER SQUARE FOOT FOR SOD IN PLACE OF LAWN SEEDING AND COORDINATE INSTALLATION WITH THE OWNER.
4. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR BEGINNING AT THE DATE OF ACCEPTANCE BY OWNER. REPLACE ALL PLANT MATERIAL FOUND DEAD OR NOT IN A HEALTHY CONDITION IMMEDIATELY WITH THE SAME SIZE AND SPECIES AT NO COST TO THE OWNER.
5. PLANTING BACKFILL FOR TREES AND PLANTING BEDS SHALL BE 5 PARTS TOPSOIL AND 1 PART COMPOST WITH STRAW. STAKE ALL TREES PER DETAILS.
6. ALL LAWN AREAS SHALL HAVE 6" OF TOPSOIL AND ALL PLANTING BEDS SHALL HAVE 12" OF TOPSOIL. TOPSOIL SHALL BE A LOOSE, FRIABLE, SANDY LOAM, CLEAN AND FREE OF TOXIC MATERIALS, NOXIOUS WEEDS, WEED SEEDS, ROCKS, GRASS, OR OTHER FOREIGN MATERIAL LARGER THAN 1" IN ANY DIMENSION, A PH FROM 5.5 TO 7.0. TOP SOIL FROM SITE SHALL BE USED, IF MEETING THESE STANDARDS. PLACE 1/2" COMPOST OVER ALL LANDSCAPED AREAS AND ROTOTILL INTO TOP 4". SPREAD, COMPACT, AND FINE GRADE TOPSOIL TO A SMOOTH AND UNIFORM GRADE, 1" BELOW SURFACE OF WALKS AND CURBS IN AREAS TO BE SODDED OR SEEDED AND 3" IN PLANTING BED AREAS.
7. FERTILIZE ALL TREES AND SHRUBS WITH 'AGRIFORM" PLANTING TABLETS, 21 GRAM. QUANTITY PER MANUFACTURER'S RECOMMENDATION.
8. PLANT MATERIAL SHALL NOT BE SUBSTITUTED WITHOUT THE WRITTEN PERMISSION OF OWNER. SUBMIT NAMES OF THREE SUPPLIERS CONTACTED IF SUBSTITUTION IS REQUESTED AND PLANT MATERIAL SPECIFIED IS NOT AVAILABLE.
9. SHRUB PLANTING BEDS SHALL BE SHOVEL EDGED TO CREATE A DISTINCT SEPARATION OF LANDSCAPE TYPES.
10. IMMEDIATELY CLEAN UP ANY TOPSOIL, OR OTHER DEBRIS ON SITE CREATED FROM LANDSCAPE OPERATION AND DISPOSE OF PROPERLY OFF SITE.
11. ALL LANDSCAPE AREAS SHALL HAVE AN STATE OF THE ART (2-WIRE) AUTOMATIC UNDERGROUND SPRINKLER SYSTEM WHICH INSURES COMPLETE COVERAGE AND IS PROPERLY ZONED FOR REQUIRED WATER USES AND HAS A WEATHER STATION CAPABLE OF TURNING OFF FOR RAIN/FREEZE EVENTS. ALL SHRUB ZONES, SPRAY ZONES AND GEAR DRIVEN ZONES SHALL BE PLACED ON SEPARATE ZONES. DO NOT EXCEED A MAXIMUM OF 5 FPS IN ALL MAINLINE AND LATERAL LINES.
12. THIS IRRIGATION SYSTEM SHALL BE DESIGN BUILT BY A QUALIFIED IRRIGATION CONTRACTOR. THE CONTRACTOR SHALL PROVIDE PROFESSIONAL DESIGNED IRRIGATION CONSTRUCTION DRAWINGS TO THE OWNER BEFORE CONSTRUCTION (FOR REVIEW BY THE LANDSCAPE ARCHITECT). THE DRAWINGS SHALL CONTAIN ALL THE COMPONENTS IN A PROFESSIONAL IRRIGATION SYSTEM INCLUDING BUT NOT LIMITED TO: MAINLINES, LATERAL LINES, ZONES, VALVES, SHUT-OFF VALVES, DRAIN VALVES, FILTERING, DRIP VALVE MANIFOLDS, WIRING ROUTES, POC CONNECTIONS, AND DETAILS. ALL PRODUCTS SHALL BE FROM HUNTER INDUSTRIES AND "COMMERCIAL" GRADE COMPONENTS AS DETERMINED BY THE MANUFACTURER. NO RESIDENTIAL GRADE COMPONENTS WILL BE ACCEPTED. IF THE CONTRACTOR HAS QUESTIONS ON IRRIGATION PRODUCTS CALL SOUTH LANDSCAPE ARCHITECTURE 208.342.2999 BEFORE BIDDING.
13. COORDINATE ALL DRAINAGE AREAS AND UTILITIES WITH TREE LOCATIONS AND ADJUST PER FIELD CONDITIONS.
14. NO TREES SHALL BE PLANTED WITHIN THE 10 FOOT CLEAR ZONE OF ALL STORM DRAIN PIPE, STRUCTURES, OR FACILITIES.
15. SEEPAGE BEDS MUST BE PROTECTED FROM ANY AND ALL CONTAMINATION DURING THE CONSTRUCTION AND INSTALLATION OF THE LANDSCAPE IRRIGATION SYSTEM.
16. ALL TREES TO BE LOCATED A MINIMUM OF 5 FEET OR GREATER FROM THE BACK OF ANY SIDEWALK.
17. KEEP ALL SAND WINDOWS IN DRAINAGE AREAS OPEN AT ALL TIMES.

PATHWAYS:

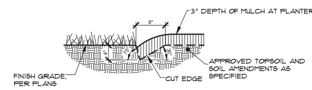
1. 10 FOOT PATHWAYS TO BE ASPHALT, 5-FOOT LOCAL PATHWAYS IN NATIVE AREAS - COMPACTED NATIVE DIRT, 5-FOOT PATHWAYS IN COMMON AREAS - CONCRETE

FENCING:

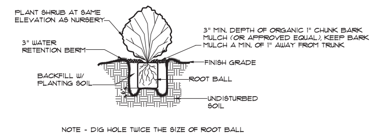
1. FENCING ALONG ALL ARTERIAL ROADWAYS TO BE 6' SOLD FENCING
2. FENCING ALONG ALL COMMON OPEN SPACES TO BE 4' SOLID FENCING AND/OR 4'-6' WROUGHT IRON OPEN FENCING.
3. SEE TYPICAL DETAILS ON SHEET L2.03



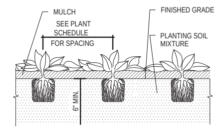
1 BOULDER PLACEMENT DETAIL
NO SCALE



2 PLANTER BED CUT EDGE
NO SCALE

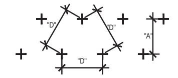


3 SHRUB PLANTING DETAIL
NO SCALE

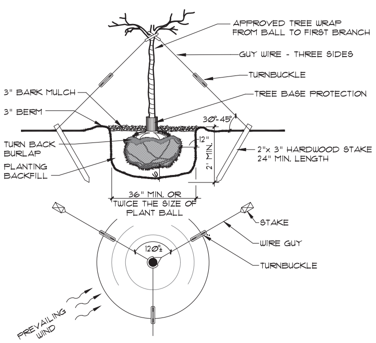


4 GROUNDCOVER PLANTING
NO SCALE

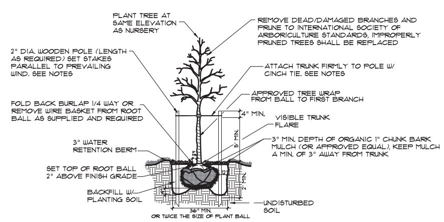
SPACING "D"	ROW "A"	NO. OF PLANTS	AREA UNIT
6" O.C.	5.2"	4	1 SQ. FT.
8" O.C.	6.93"	2.25	1 SQ. FT.
10" O.C.	8.66"	1.45	1 SQ. FT.
12" O.C.	10.4"	1	1 SQ. FT.
15" O.C.	13.0"	.64	1 SQ. FT.
18" O.C.	15.6"	.44	1 SQ. FT.
24" O.C.	20.8"	.25	1 SQ. FT.
30" O.C.	26.0"	.16	1 SQ. FT.
36" O.C.	31.2"	.11	1 SQ. FT.



5 GROUNDCOVER SPACING CHART
NO SCALE

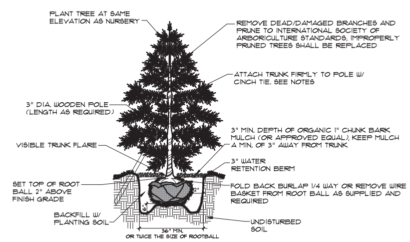


6 RELOCATED TREE GUYING DETAIL
NO SCALE



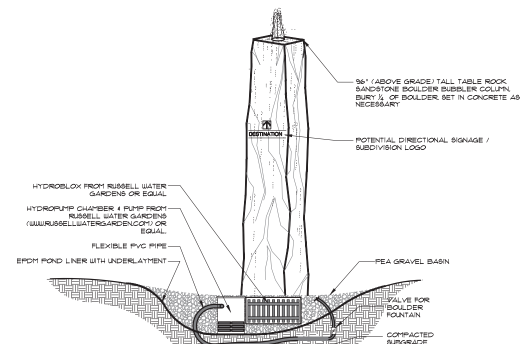
NOTES:
1. THE STAKING OF TREES IS TO BE THE CONTRACTOR'S OPTION HOWEVER, THE CONTRACTOR IS RESPONSIBLE TO INSURE THAT ALL TREES ARE PLANTED STRAIGHT AND THAT THEY REMAIN STRAIGHT FOR THE TERM OF THE WARRANTY.
2. WRAP RUBBER CINCH TIE (OR APPROVED EQUAL) AROUND THE TREE TRUNKS AND STAKES USING EITHER THE STANDARD OR FIGURE EIGHT METHOD. SECURE THE TIES TO THE STAKES WITH GALVANIZED NAILS TO PREVENT MOVEMENT.
3. WATER IN BACKFILL BELOW THE ROOT BALL PRIOR TO SETTING TREE (TO INSURE NO SETTLING WILL OCCUR).
4. DEEP SOAK TREE TWICE WITHIN THE FIRST 48 HOURS.

7 DECIDUOUS TREE PLANTING DETAIL
NO SCALE



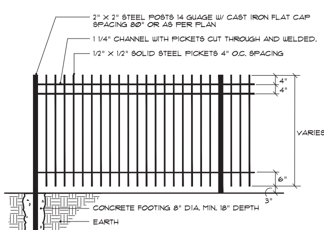
NOTES:
1. THE STAKING OF TREES IS TO BE THE CONTRACTOR'S OPTION HOWEVER, THE CONTRACTOR IS RESPONSIBLE TO INSURE THAT ALL TREES ARE PLANTED STRAIGHT AND THAT THEY REMAIN STRAIGHT FOR THE TERM OF THE WARRANTY.
2. WRAP RUBBER CINCH TIE (OR APPROVED EQUAL) AROUND THE TREE TRUNKS AND STAKES USING EITHER THE STANDARD OR FIGURE EIGHT METHOD. SECURE THE TIES TO THE STAKES WITH GALVANIZED NAILS TO PREVENT MOVEMENT.
3. WATER IN BACKFILL BELOW THE ROOT BALL PRIOR TO SETTING TREE (TO INSURE NO SETTLING WILL OCCUR).
4. DEEP SOAK TREE TWICE WITHIN THE FIRST 48 HOURS.

8 CONIFEROUS TREE PLANTING DETAIL
NO SCALE



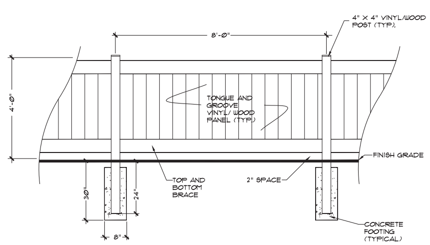
NOTES:
1. ADD AUTO FILL VALVE TO COMPENSATE FOR LOSS OF WATER DUE TO EVAPORATION.
2. DRAWING IS CONCEPTUAL IN NATURE, CONTRACTOR IS RESPONSIBLE FOR PUMP SIZE AND ALL FITTINGS AND CONNECTIONS.

9 BOULDER OUTCROP WATER FEATURE AND SIGNAGE CONCEPT
NO SCALE

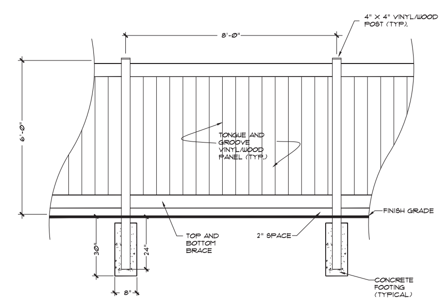


10 4'-5'-6' WROUGHT IRON FENCE
NO SCALE

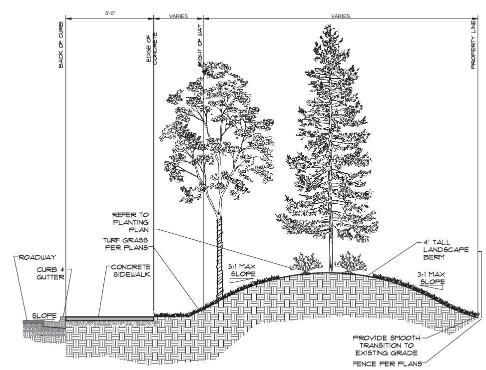
NOTES:
ALL METAL TO BE DEGREASED, PHOSPHATIZED WITH RUST RETARDANT UNDERCOAT AND DIP COATED WITH TWO COATS OF INDUSTRIAL GRADE FLAT BLACK ENAMEL.



11 4' HIGH VINYL/WOOD FENCE
NO SCALE



12 6' HIGH VINYL/WOOD FENCE
NO SCALE



13 TYPICAL BUFFER SECTION
NO SCALE

STAMP: STATE OF IDAHO, JOHN D. ROTERS, LANDSCAPE ARCHITECT — PRELIMINARY NOT FOR CONSTRUCTION

DATE: 7/1/2019

811 Know what's below. Call before you dig. CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

SOUTH BECK & BAIRD
2002 S. Vista Ave
Boise, ID 83705
208.342.2999 Office
sla@slaboise.com
www.slaboise.com
South Landscape Architecture P.C.
Dba South Beck & Baird Landscape Architecture P.C.

REVISIONS: NO.	ITEM	DATE

CONSULTANTS:

RiveRidge Engineering Company
2447 S. Vista Ave. Boise, Idaho 83705
Ph. (208) 344-1180, Fax (208) 344-1182

PRELIMINARY PLAT LANDSCAPE PLANS
Spring Rock Subdivision - Phase 1
KUNA IDAHO

DRAWN BY: A.W.J.
CHECKED BY: J.D.R.
PROJECT NUMBER: 18-046
SHEET: L2.03

OWNER REVIEW

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LEGEND

DRAINAGE NOTES:

1. THE DRAINAGE FROM ALL RESIDENTIAL LOTS AND PUBLIC ROADWAYS WILL BE COLLECTED IN A PUBLIC GRAVITY COLLECTION SYSTEM THAT WILL DISCHARGE TO MULTIPLE SUBSURFACE DRAIN BEDS, OR TO THE LOWER LAKE WITHIN THE PROJECT. ALL DRAINAGE DESIGN WILL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF KUNA AND THE ADA COUNTY HIGHWAY DISTRICT. NO DRAINAGE WILL LEAVE THE SITE WITHOUT PRIOR APPROVAL AND WITHOUT MEETING THE PRE-DEVELOPMENT DISCHARGE RATES AND REQUIRED WATER QUALITY LEVELS.
2. ONCE INSTALLED AND APPROVED BY ADA COUNTY HIGHWAY DISTRICT, THE ENTIRE STORMWATER MANAGEMENT SYSTEM, THE SPRING ROCK HOME OWNERS ASSOCIATION WILL BE REQUIRED TO PROVIDE ALL ROUTINE MAINTENANCE OF THE FACILITIES AS SHOWN IN A REQUIRED OPERATION AND MAINTENANCE MANUAL FOR THIS SYSTEM.

GRADING AND DRAINAGE PLAN

SHEET 1 OF 4

SPRING ROCK

PRELIMINARY PLAT

REVISIONS			E-FILE NAME
NO.	ITEM	DATE	
			DESIGNED
			DRAWN
			CHECKED
			APPROVED

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DATE: MAY/2019
PROJECT: 18042
SHEET 2.1 OF 15

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LEGEND

- FOUND 1/2" IRON PIN
- FOUND 5/8" IRON PIN
- FOUND BRASS CAP
- FOUND ALUMINUM CAP MONUMENT
- SET ALUMINUM CAP MONUMENT
- SET 5/8" IRON PIN WITH CAP
- CALCULATED POINT
- PROPERTY BOUNDARY
- PARCEL LINE
- SECTION LINE
- RIGHT-OF-WAY LINE
- CENTERLINE
- EASEMENT LINE
- BLOCK NUMBER
- LOT NUMBER
- 2' EXISTING CONTOUR INTERVAL
- 10' EXISTING CONTOUR INTERVAL
- 2' DESIGN CONTOUR INTERVAL
- 10' DESIGN CONTOUR INTERVAL
- STORM DRAIN PIPE MANHOLE AND DROP INLET

GRADING AND DRAINAGE PLAN

SHEET 2 OF 4

SPRING ROCK

PRELIMINARY PLAT

SHEET 2.2 OF 15
DATE: MAY-2019
PROJECT: 18042

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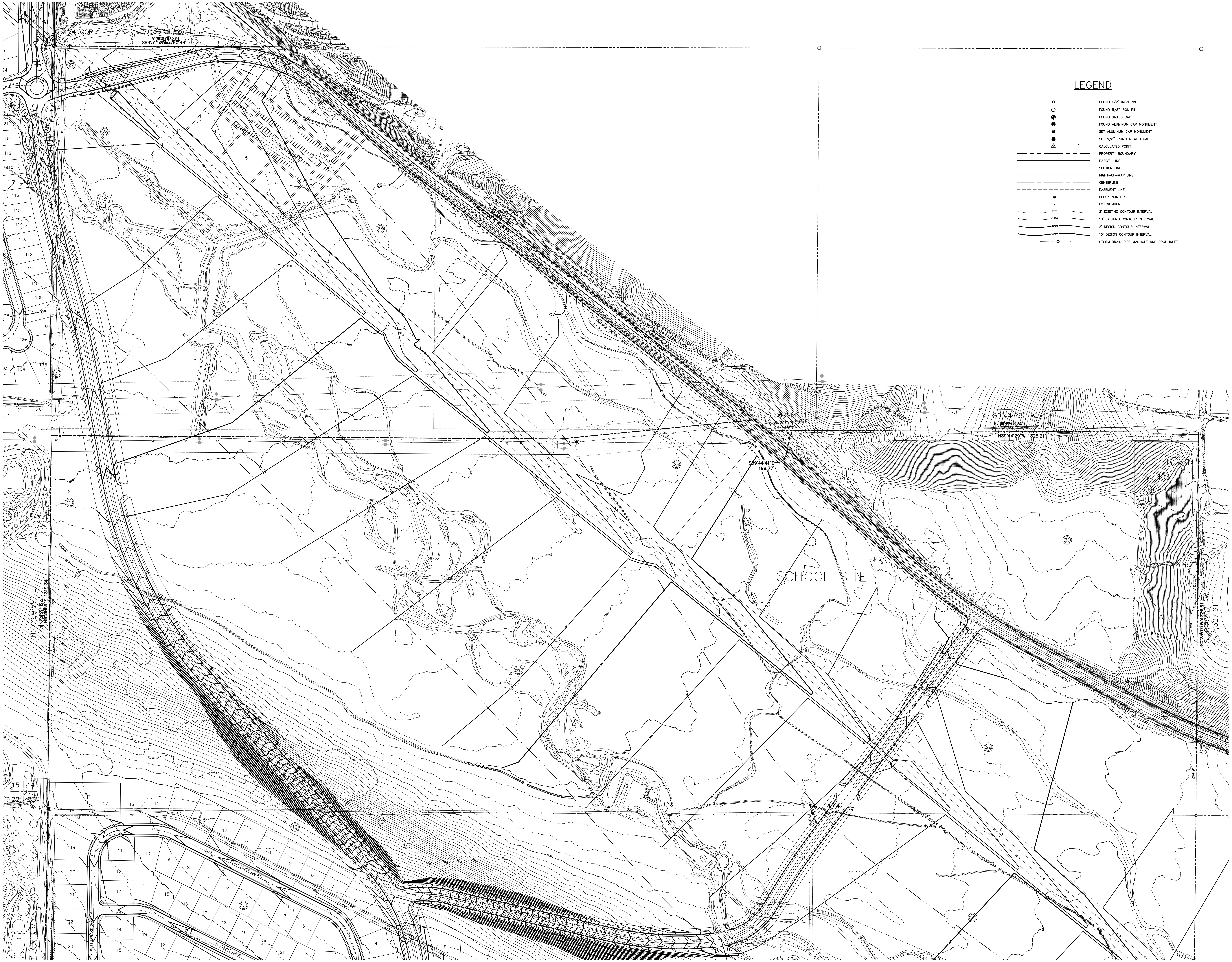

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SPRING ROCK
PRELIMINARY PLAT

GRADING AND DRAINAGE PLAN
SHEET 3 OF 4

DATE: MAY,2019
PROJECT: 18042
SHEET 2.3 OF 15

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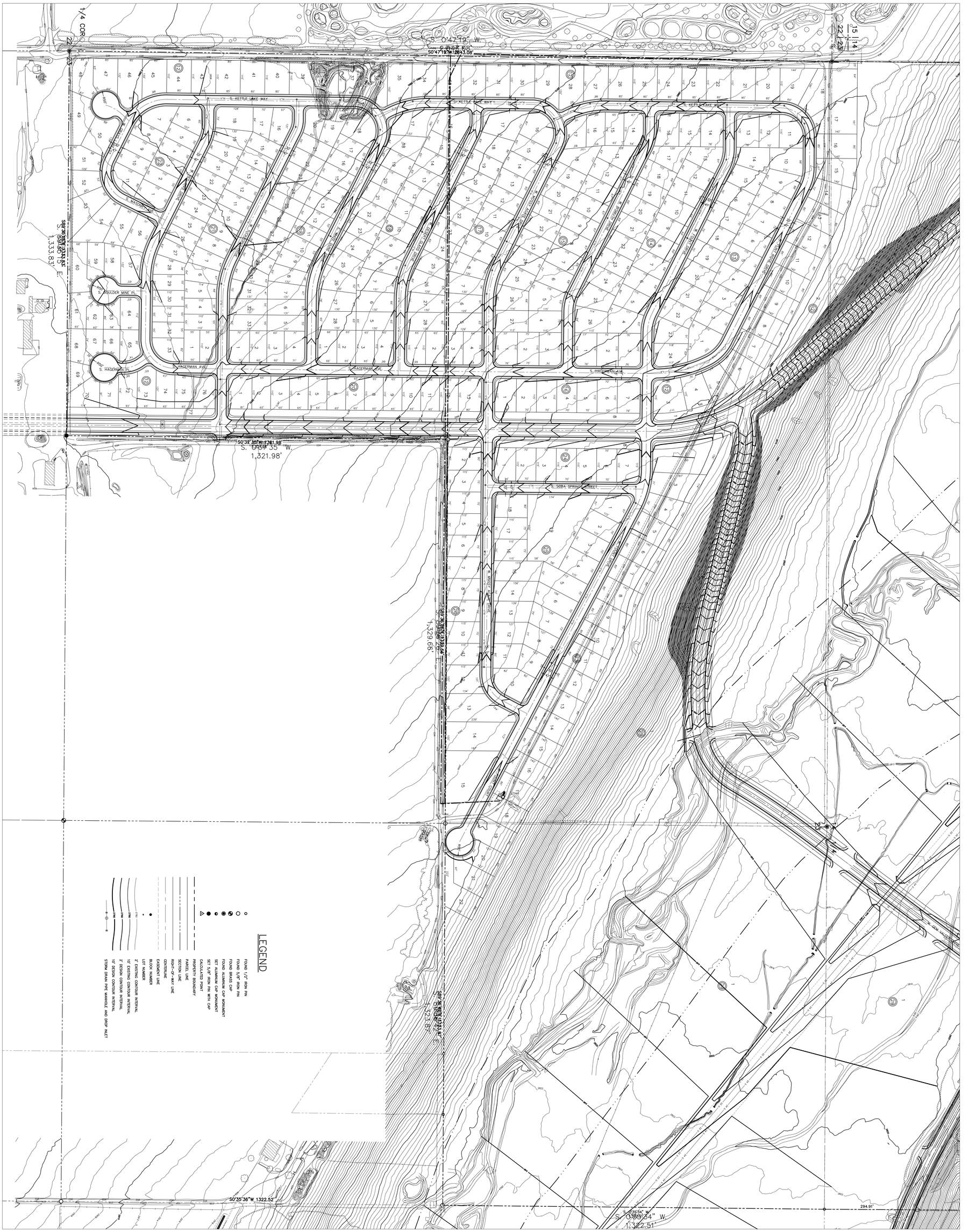

GRADING AND DRAINAGE PLAN

SHEET 4 OF 4

SHEET 2.4 OF 15

DATE: MAY/2019

PROJECT: 19042

SPRING ROCK

PRELIMINARY PLAT

REVISIONS

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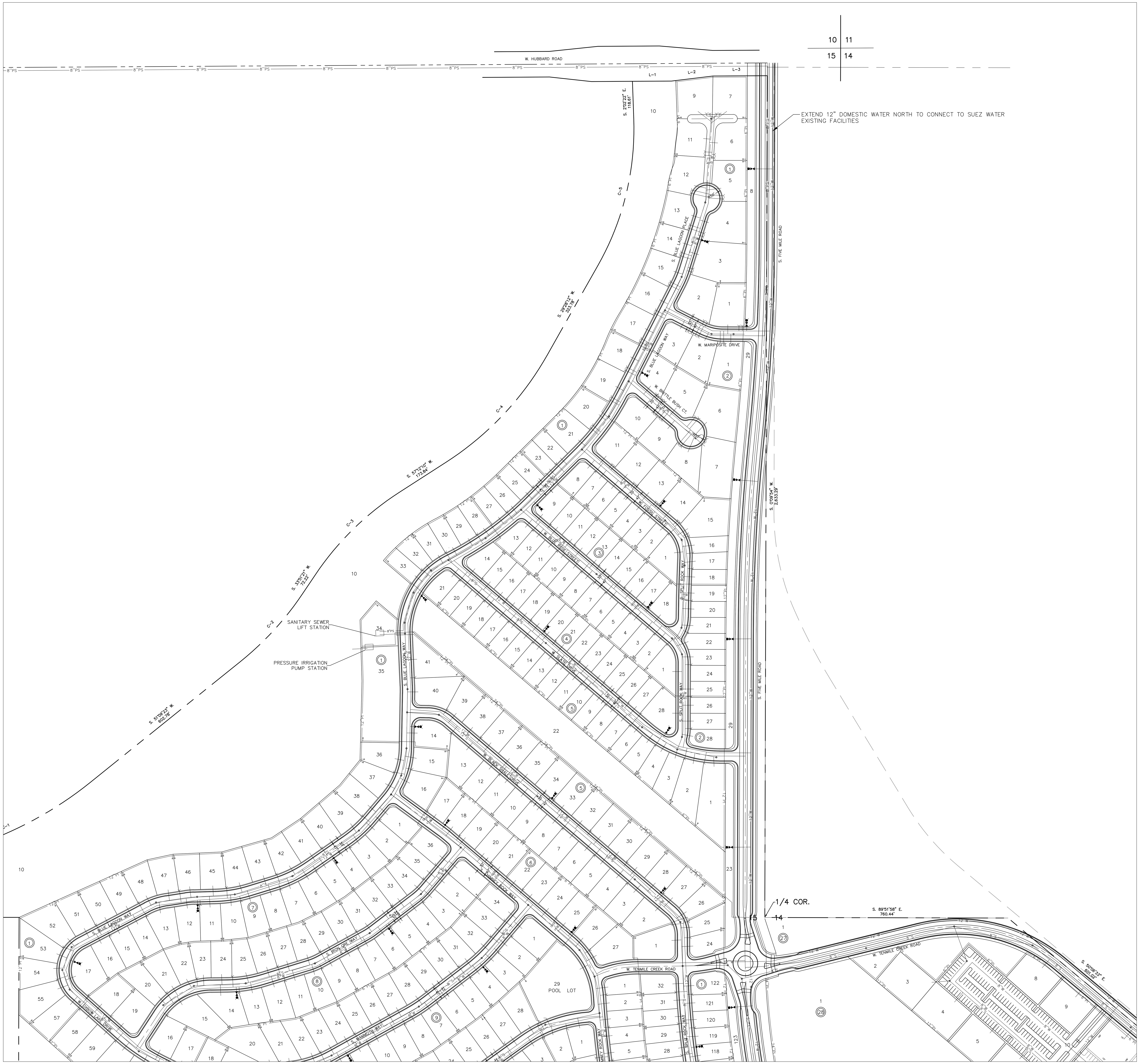

LEGEND

- PROPOSED SANITARY SEWER MAIN, MANHOLE AND SERVICE
- PROPOSED DOMESTIC WATER MAIN, SERVICE AND FIRE HYDRANT
- PROPOSED STORM DRAIN MAIN, MANHOLE AND INLET
- PROPOSED PRESSURE IRRIGATION MAIN AND SERVICE
- PROPOSED RIGHT OF WAY
- PROPOSED PUBLIC UTILITIES EASEMENT
- PROPOSED DITCH
- PROPOSED 30' STREET LIGHT
- EXISTING/FUTURE WATER MAIN, SIZE, SERVICE AND FIRE HYDRANT
- EXISTING/FUTURE 8" SANITARY SEWER MAIN, MANHOLE AND SERVICE
- EXISTING/FUTURE STORM DRAIN MAIN, MANHOLE & INLET
- EXISTING/FUTURE PRESSURE IRRIGATION MAIN AND SERVICES
- EXISTING DITCH
- EXISTING STREET LIGHT

0 50 100 200 300

UTILITY NOTES:

1. ALL PROPOSED GRAVITY SANITARY SEWER COLLECTION SYSTEM, SEWER LIFT STATION AND PRESSURE SEWER MAINS WILL BE DESIGNED TO THE REQUIRED STANDARDS OF THE CITY OF KUNA AND ALL FACILITIES WILL BE LOCATED ON LAND TO BE DONATED TO THE CITY OF KUNA, OR LOCATED WITHIN PUBLIC RIGHTS-OF-WAY. THE OFF-SITE PRESSURE SEWER MAINS WILL EXTEND TO THE WEST TO EXISTING CITY OF KUNA INFRASTRUCTURE WITHIN THE PATAGONIA SUBDIVISION, OR OTHER DESIGNATED LOCATION CAPABLE OF RECEIVING AND CONVEYING WASTE WATER TO THE KUNA SANITARY SEWER TREATMENT PLANT LOCATED AT 6950 S. TEN MILE ROAD.
2. PRESSURE IRRIGATION SERVICE IS PROPOSED FOR ALL RESIDENTIAL LOTS OF THE DEVELOPMENT AND FOR THE PROPOSED COMMON AREAS AND NEW CITY PARK LANDS. THE SYSTEM WILL BE SERVED FROM GROUNDWATER DELIVERY TO THE REQUIRED IRRIGATION AMENITY PONDS TO BE LOCATED WITHIN THE PROJECT BOUNDARIES. ALL IMPROVEMENTS WILL MEET THE REQUIRED STANDARDS OF THE CITY OF KUNA.
3. DOMESTIC WATER DISTRIBUTION WILL BE PROVIDED BY SUEZ WATER OF IDAHO. THE SYSTEM DESIGN AND CONSTRUCTION OF ALL REQUIRE INFRASTRUCTURE, INCLUDING STORAGE AND BOOSTING FACILITIES, WILL BE DESIGNED BY THE DEVELOPER AND APPROVED BY SUEZ WATER OF IDAHO. ALL IMPROVEMENTS WILL BE INSTALLED BY THE DEVELOPER AND TURNED OVER TO SUEZ WATER OF IDAHO FOR OWNERSHIP AND CONTINUED SERVICE TO THE PROJECT.
4. IDAHO POWER WILL PROVIDE ALL REQUIRED POWER IMPROVEMENTS AND SERVICE TO THE DEVELOPMENT. SERVICE WILL CONSIST OF THE EXTENSION OF PRIMARY HIGH VOLTAGE SERVICE WITH THROUGH EXTENSION OF OVERHEAD POWER LINES TO REMOTE TRANSFORMER LOCATIONS. RESIDENTIAL SERVICE WILL BE EXTENDED FROM THESE REMOTE TRANSFORMERS THROUGH AN UNDERGROUND JOINT TRENCH THAT WILL ALSO INCLUDE COMMUNICATIONS AND GAS DISTRIBUTION,

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PROFESSIONAL ENGINEER REGISTERED 5756 STATE OF IDAHO DAVID G. POWELL

SPRING ROCK PRELIMINARY PLAT

UTILITY SHEET 1 OF 4

DATE: MAY,2019
PROJECT: 18042
SHEET 3.1 OF 15

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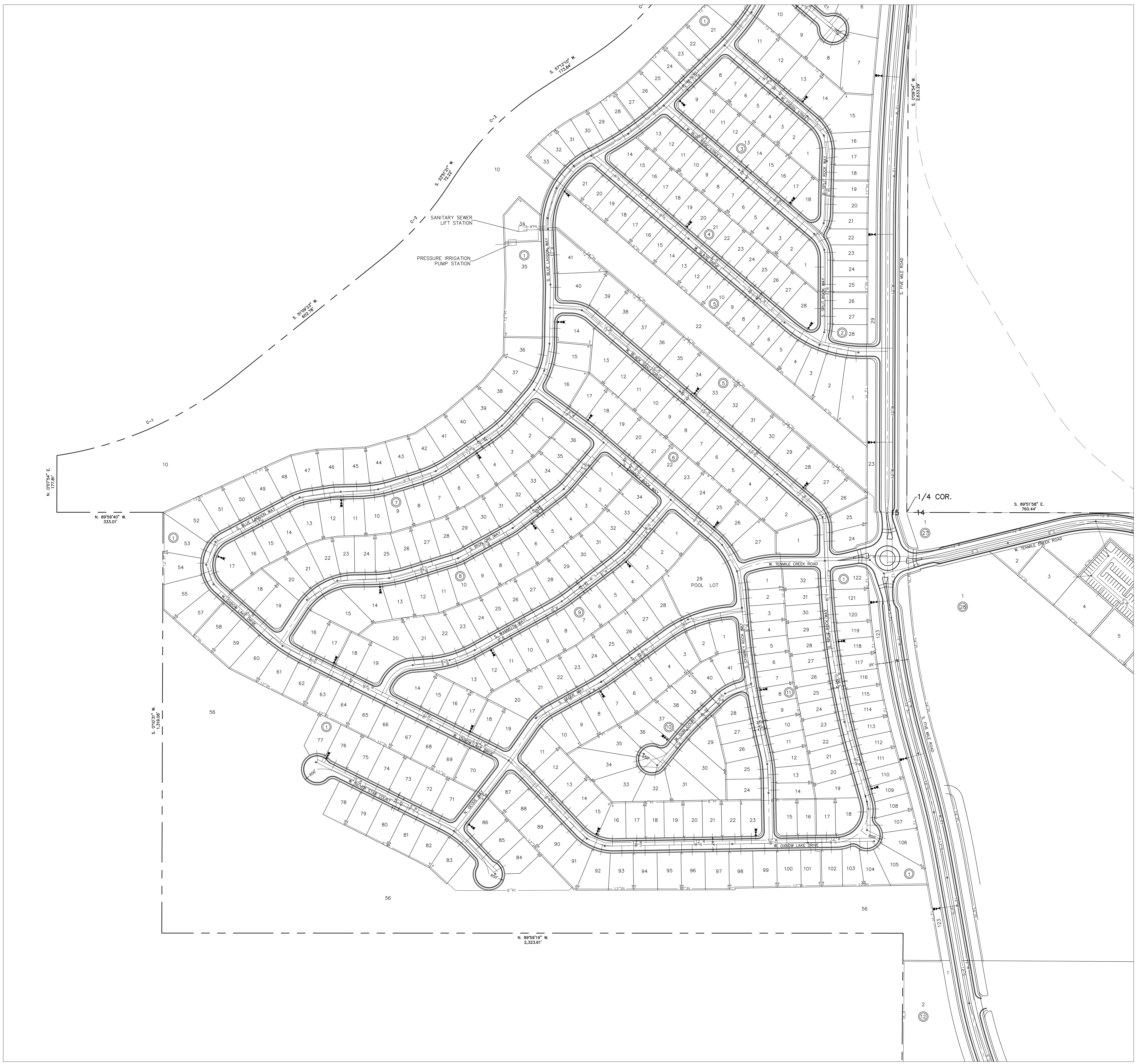

LEGEND

8"S	PROPOSED SANITARY SEWER MAIN, MANHOLE AND SERVICE
8"W	PROPOSED DOMESTIC WATER MAIN, SERVICE AND FIRE HYDRANT
12"SD	PROPOSED STORM DRAIN MAIN, MANHOLE AND INLET
4" PI	PROPOSED PRESSURE IRRIGATION MAIN AND SERVICE
	PROPOSED RIGHT OF WAY
	PROPOSED PUBLIC UTILITIES EASEMENT
	PROPOSED DITCH
	PROPOSED 30' STREET LIGHT
8"W	EXISTING/FUTURE WATER MAIN, SIZE, SERVICE AND FIRE HYDRANT
8"S	EXISTING/FUTURE 8" SANITARY SEWER MAIN, MANHOLE AND SERVICE
12"SD	EXISTING/FUTURE STORM DRAIN MAIN, MANHOLE & INLET
4" PI	EXISTING/FUTURE PRESSURE IRRIGATION MAIN AND SERVICES
	EXISTING DITCH
	EXISTING STREET LIGHT

0 50 100 200 300

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SPRING ROCK
PRELIMINARY PLAT

UTILITY SHEET 2 OF 4

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SHEET 3.2 OF 15

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LEGEND

- PROPOSED SANITARY SEWER MAIN, MANHOLE AND SERVICE
- PROPOSED DOMESTIC WATER MAIN, SERVICE AND FIRE HYDRANT
- PROPOSED STORM DRAIN MAIN, MANHOLE AND INLET
- PROPOSED PRESSURE IRRIGATION MAIN AND SERVICE
- PROPOSED RIGHT OF WAY
- PROPOSED PUBLIC UTILITIES EASEMENT
- PROPOSED DITCH
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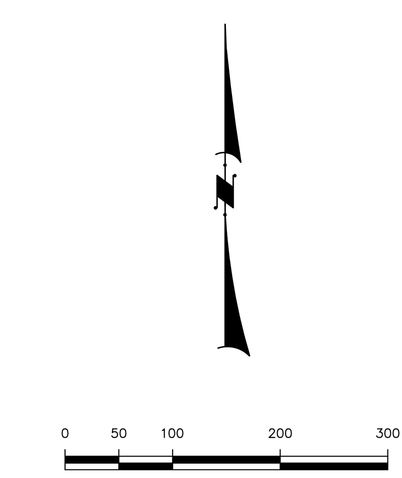
- EXISTING/FUTURE WATER MAIN, SIZE, SERVICE AND FIRE HYDRANT
- EXISTING/FUTURE 8" SANITARY SEWER MAIN, MANHOLE AND SERVICE
- EXISTING/FUTURE STORM DRAIN MAIN, MANHOLE & INLET
- EXISTING/FUTURE PRESSURE IRRIGATION MAIN AND SERVICES
- EXISTING DITCH
- EXISTING STREET LIGHT



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REVISIONS		
NO.	ITEM	DATE

PROFESSIONAL ENGINEER, REGISTERED, 5756, 5-15-19, STATE OF IDAHO, DAVID G. POWELL

SPRING ROCK
PRELIMINARY PLAT

UTILITY SHEET 3 OF 4

DATE: MAY,2019
PROJECT: 18042

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SPRING ROCK PRELIMINARY PLAT

UTILITY SHEET 4 OF 4

DATE: MAY,2019
PROJECT: 18042
SHEET 3.4 OF 15

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WFG Draft: 12/21/2019
Staff DRAFT 1.8.2020

Recording Requested By and When Recorded Return to:

City of Kuna
Attn: City Clerk
751 W. 4th Street
Kuna, Idaho 83634

SPACE ABOVE THIS LINE FOR RECORDER'S USE ONLY

City of Kuna / Ten Mile Creek LLC / Jay & Roberta Davis, Gilmore Keith H. and Ruth E. Living Trust, & Anne C., George W. and James L. Whitmore

DEVELOPMENT AGREEMENT

[Idaho Code § 67-6511A and Chapter 14 of Title 5 Kuna City Code]

Parties to the Agreement:

City of Kuna	"**City**"	City Hall 751 W. 4th Street Kuna, ID 83634
Ten Mile Creek LLC	"**Developer**"	Attn: Chris Findlay 1211 N Happy Dr Boise, ID 83706
Davis Jay C & Roberta A Family Revocable Trust and	"**Owner**"	P.O. Box 16232 Boise, ID 83715
Gilmore Keith H & Ruth E Living Trust 1-1-13 and		Attn: Janet Kell Co-trustee or Germain R. Tarrant Co-trustee 3154 E. Rivernest Dr. Boise, ID 83706
Anne C. Whitmore, and George Whitmore, and James L. Whitmore		3431 W. Meadow Dr. Boise, ID 83706

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LIST OF EXHIBITS

EXHIBIT A:	ANNEXATION ORDINANCE
EXHIBIT B:	MASTER PLAN ~~(list all Master plans out specifically)~~
EXHIBIT C:	OFFSITE SEWERAGE
EXHIBIT D:	OFFSITE POTABLE WATER
EXHIBIT E:	PUD MODIFICATIONS
EXHIBIT F:	SUBJECT REAL PROPERTY LEGAL DESCRIPTION
EXHIBIT G:	COMMUNITY INFRASTRUCTURE FINANCING GUIDELINES
EXHIBIT H:	PUBLIC PARKS & TRAILS PLAN

DEVELOPMENT AGREEMENT
City of Kuna/Ten Mile Creek LLC/
Davis Jay C & Roberta A Family Revocable Trust, Gilmore Keith H and Ruth E Living Trust, & Anne C., George W. and James L. Whitmore

Spring Rock

THIS DEVELOPMENT AGREEMENT (this "**Agreement**") is entered into by and between the CITY OF KUNA, a municipal corporation organized and existing under the laws of the state of Idaho, by and through its Mayor ("**City**") and Davis Jay C & Roberta A Family Revocable Trust, Gilmore Keith H and Ruth E Living Trust, & Anne C., George W. and James L. Whitmore, ("**Owner**") and Ten Mile Creek LLC, an Idaho limited liability company ("**Developer**") and its successors and/or assigns.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged and agreed, and in consideration of the Recitals and Definitions, and in consideration of the premises and the mutual representations, covenants and agreements hereinafter contained, City, Developer and Owner represent, covenant and agree as follows:

SECTION 1
DEFINITIONS

For all purposes of this Agreement, the following words in **bold** print that appear in this Agreement have the definitions as herein provided in this Section unless the context of the term clearly requires otherwise and is not capitalized:

1.1 **ACHD:** Means and refers to the Ada County Highway District, a countywide highway district organized and existing pursuant to Chapter 14 of Title 40, Idaho Code.

1.2 **Act:** Means and refers to the Local Land Use Planning Act as codified in Chapter 65 of Title 67, Idaho Code**.**

1.3 **Ada County:** Means and refers to Ada County, Idaho**.**

1.4 **Additional Property:** Means and refers to real property, not within the Subject Real Property on the Effective Date, that lies adjacent to the Subject Real Property. Additional properties/lands are required to go through the public hearing process, including any required development agreement modifications, new annexations, new preliminary plats or other land use applications as necessary.

1.5 **Agreement:** Means and refers to this "**City of Kuna / Ten Mile Creek LLC / Davis Jay C. & Roberta A. Family Revocable Trust, Gilmore Keith H. and Ruth E. Living Trust, & Anne C., George W. and James L. Whitmore *Development Agreement*,**" which may be referred to and cited as the "**Spring Rock Development Agreement**."

1.6 Annexation Application: Means and refers to Developer's application to the City regarding the Subject Real Property requesting its annexation into the City**.**

1.7 Annexation Ordinance: Means and refers to the annexation ordinance of the City which annexes the Subject Real Property into the City, a true and correct copy of which is attached marked ***Exhibit A***.

1.8 Applications: Means and refers collectively to all of Developer's applications to the City regarding the Subject Real Property inclusive of: Annexation Application, Zoning Application, Planned Unit Development Application, Subdivision Application, Special Use Permit and Design Review Application**.**

1.9 CC&Rs: Means and refers to the written and recorded covenants, conditions and restrictions that shall encumber portions of the Subject Real Property through one or more Owners' Associations that establish quality control, operation and maintenance both during development and during maturing of the Project**.**

1.10 CID: Means one or more Community Infrastructure Districts established by the owner pursuant to Chapter 31 Title 50 Idaho Code [Community Infrastructure District Act]~~.~~ ~~Idaho Code 50-3101 et seq.~~

1.11 City: Means and refers to the City of Kuna, an Idaho Municipal Corporation and Party to this Agreement**.**

1.12 City Council: Means and refers to the City Council of the City**.**

1.13 City Fees: Means and refers to the fees for services as established and charged by the City.

1.14 Comprehensive Plan: Means and refers to the City of Kuna Comprehensive Plan, as it exists on the Effective Date**.**

1.15 Design Review Application: Means and refers to any application by the Developer for any development of the Subject Real Property requiring Design Review by the City.

1.16 Design Review Ordinance: Means and refers to the planning, design guidelines and regulations of the Design Review Overlay District of the City as set forth in Chapter 4 of the Zoning Ordinance**.**

1.17 Developed: Means and refers to the completion of development of the Project or phases of the Project by the Developer, including the establishment of the Owners' Association and the CC&Rs associated therewith, and including the acceptance by the City or ACHD of any part of the Project in accordance with the provisions of this Agreement**.**

1.18 Developer: Means and refers to Ten Mile Creek LLC, an Idaho limited liability company, authorized to do business in the state of Idaho, which is developing the Project with the permission of the Owner and is a Party to this Agreement**.**

1.19 Developer's Representative: Means and refers to the representative for the Developer, which is originally David Yorgason and is inclusive of any designee appointed by Developer as provided herein.

1.20 Development Rights: Means and refers to the Subject Real Property land use and development rights in connection with entitlements as provided in this Agreement and as provided in the Permits issued by the City in the process of the Applications.

~~**1.21 District:** Means the Community Infrastructure District established pursuant to Idaho Code 50-3101.~~

1.21~~2~~ Drainage System: Means and refers to a drainage and flood control system and facilities for collection, diversion, detention, retention, dispersal, use and discharge of drain water.

1.22~~3~~ Effective Date: Means and refers to the date upon which this Agreement takes effect, which is the same date that the City's Annexation Ordinance and Rezone Ordinance upon annexation take effect.

1.23~~4~~ Existing Uses: Means and refers to the existing uses of the Subject Real Property on the Effective Date, which is as follows: agriculture and ancillary related use,.

1.24~~5~~ Fire District: Means and refers to the Kuna Rural Fire District (formerly known as the Kuna Rural Fire Protection District).

1.25~~6~~ Green Space: Means and refers to real property Developed within the Project that is partly or completely covered with grass, trees, shrubs, or other vegetation and may include buildings, equipment, pathways and trails for recreational use and is accessible to the residents, guests and property owners within the Project. This term may appear in this Agreement in the singular or the plural.

1.26~~7~~ Impact Area: Means and refers to the impact area of the City, as of the Effective Date, which lies outside of the City limits and within the unincorporated area of Ada County, as established with Ada County pursuant to the Act.

1.27~~8~~ Infrastructure Master Plan: Means and refers to any of the Infrastructure Master Plans as provided in Section 5 of this Agreement. This term may appear in this Agreement in the singular or the plural.

1.28~~9~~ Infrastructure Systems: Means and refers collectively to Public Streets, Travel Appurtenances, Developer Potable Water System Improvements, Pressure Irrigation System, Sewerage System Improvements, Drainage Systems, Green Space, Public Green Space and Public Park as provided for in this Agreement.

1.2930 Master Plan: Means and refers to the Master Plan for the Project and the use of the Subject Real Property by the Developer and the Owner in accordance with the Applications attached hereto as ***Exhibit B***.

1.301 Maximum Density: Means and refers to the maximum number of residential units within designated areas of the Subject Real Property as stated in the Master Plan which Maximum Density is approximately 2.99 2.25 dwelling units/acre or a total of 2,274 2,322 dwelling units.

1.312 Maximum Phase Density: Means and refers to a maximum gross residential density for each Phase subject to the limitation on the Maximum Density allowed within each Phase as set forth in the Master Plan and subject to reallocation of density as allowed in this Agreement.

1.323 Mortgage: Means and refers to any lien placed upon the Subject Real Property, or any portion thereof, including the lien of any mortgage or deed of trust, as a pledge of real property to a creditor as security for performance of an obligation or repayment of a debt.

1.334 Offsite Sewerage: Means and refers to any sewer improvements, including, without limitation, gravity lines, pressure lines, lift station, borings, manholes, and engineering, to connect the Subject Real Property to the existing terminus of the City's sewer system, the alignment of which is shown on ***Exhibit C***.

1.345 Offsite Potable Water: Means and refers to any potable water supply network, located outside the boundary of the Subject Real Property, to connect the Project Potable Water System to the Suez Water System, the alignment of which is shown on ***Exhibit D***.

1.356 Open Space: Means and refers to any portion of the Subject Real Property that is designated for recreation, agriculture, habitat, scenic or similar uses and inclusive of, without limitation, developed or natural areas; Open Space must be usable space as reasonably determined at the time of preliminary plat by the City planning and zoning director, and may include:

- Green Space and Public Parks;
- fishing ponds;
- sports fields, and trails;
- floodplains and floodways;
- wetlands, wildlife habitat, stream corridors, and
- conservation easements or permanent open space on private lands or lots. Open Space may be publicly or privately owned and may be accessible or inaccessible to the public and as identified on the final plat.

1.367 Ordinances: Means and refers to an ordinance passed by the City Council in accordance with the provisions of this Agreement. This term may appear in this Agreement in the singular or the plural.

1.378 Owner: Means and refers to **Davis Jay C & Roberta A Family Revocable Trust, Gilmore Keith H and Ruth E Living Trust, & Anne C., George W. and James L. Whitmore** who are the owners of the Subject Real Property on the Effective Date and Party to this Agreement, and after the Effective Date of this Agreement shall refer to the owner or owners of the Subject Real Property.

1.389 Owners' Association: Means and refers to any non-profit entity created or to be created by Developer, to be responsible for the perpetual maintenance and operation and management of Private Roads, Green Space, Pressure Irrigation System, and Common Areas as such are set forth in the CC&Rs.

1.3940 Parcel: Means and refers to tract or parcel of distinctly legally described real property located within the Subject Real Property. This term may appear in this Agreement in the singular or the plural.

1.401 Party or Parties: Means and refers to the City and/or the Owner and/or the Developer, as the Parties to this Agreement, depending upon the context of the term as used in this Agreement.

1.421 Phase: Means and refers to a portion of the Subject Real Property, as so identified and designated on the Master Plan as a "**Phase**." This term may appear in this Agreement in the singular or the plural.

1.423 Planned Unit Development Application: Means and refers to the Developer's application to the City regarding Developed phases of the Project requesting a Planned Unit Development Permit.

1.434 Planning & Zoning Commission: Means and refers to the City's Planning & Zoning Commission.

1.445 Potable Water Provider: Means and refers to Suez Water.~~the private water Companyknown as the Suez Water District.. Applicant must have a separate agreement with Suez Water District for potable water services.~~

1.456 Potable Water System: Means and refers to the Suez Water's domestic potable water system which includes, without limitation, all wells, storage tanks, distribution mains and pump stations necessary to provide Potable Water to users of the Suez Water's Potable Water System.

1.467 Pressure Irrigation System: Means and refers to the pressure irrigation system designed and built by the Developer, and owned and maintained by the Owners' Association as set forth in the CC&Rs.

1.478 Private Road: Means and refers to any road to be Developed as a part of the Project that will remain private and not be dedicated to ACHD and is intended for perpetual maintenance by the Developer or an Owners' Association. This term may appear in this Agreement in the singular or the plural.

1.489 Project: Means and refers to the intended development of the Subject Real Property in accordance with the Master Plan and as governed by this Agreement.

1.4950 Project Potable Water System: Means and refers to the wells, storage tanks and distribution lines, offsite main lines and pumps planned, designed and constructed by the Developer to serve the Project with potable water, to Suez Www ater's District standards and provide an inter tie-in to the City of Kuna's Water System.

1.501 Project Sewerage System: Means and refers to the Sewerage System [not including Offsite Sewerage] designed and constructed by the Developer to serve the Project.

1.513 Public Infrastructure: Means and refers to the infrastructure facilities and services improvements, including, without limitation, underlying lands and improvements that are owned or to be conveyed to and owned by the City.

1.524 Public Park: Means and refers to real property that is partly or completely covered with grass, trees, shrubs, or other vegetation, and may include buildings, equipment pathways and trails used for recreation and accessible to the public and owned and maintained by the City. This term may appear in this Agreement in the singular or the plural.

1.535 Public Street: Means and refers to any street to be developed as a part of the Project that will be dedicated to and intended for acceptance for perpetual maintenance by ACHD. This term may appear in this Agreement in the singular or the plural.

1.546 PUD: Means and refers to a planned unit development as defined and by the PUD Ordinance.

1.557 PUD Modifications: Those portions of the Subdivision Ordinance and Zoning Ordinance that are being modified as allowed pursuant to the City's Subdivision Ordinance and are attached as Exhibit ***E***.

1.568 PUD Ordinance: Means and refers to the planned unit development regulations of the City as a part of the Zoning Ordinance codified in Chapter 7 of Title 5 of Kuna City Code as it exists on the Effective Date.

1.579 PUD Standards: Means and refers to the standards in the PUD Ordinance as amended by the PUD Modifications as of the Effective Date.

1.5860~~59~~ Rezone Ordinance: Means and refers to a zoning ordinance which rezones the Subject Real Property as R-6, R-12, R-20, C-1 and C-2~~C-2, C-1, R-6, and R-12, and R-20~~ City zones (as amended by the PUD) in accordance with the provisions of this Agreement.

1.5961 Sewer Provider: Means and refers to City providing sewerage ~~sewage~~ conveyance and treatment service through the Wastewater System.

1.602 Sewerage System: Means and refers to any or all or any combination of the following depending upon the context of this term in the Agreement including, without limitation: intercepting sewers, force mains, collecting sewers, lift stations, structures, buildings, machinery, equipment connections and other appurtenances used for the collection, and transportation to the City's Wastewater System treatment facilities for the treatment and disposal of sewage.

1.613 Special Use Permit: Means and refers to a permit granting a special use by the City pursuant to the Special Uses Ordinance.

1.624 Special Use Ordinance: Means and refers to Chapter 6 of Title 5 of Kuna City Code, as it exists on the Effective Date, which provides for the processing of application for special use permits.

1.635 Spring Rock: Means and refers to the name of the Project, which is constructed and used pursuant to the Development Rights and which may subsequently include some or all of the Additional Property.

1.646 Subdivision Application: Means and refers to the Developer's application to the City regarding the subdivision of the Subject Real Property.

1.657 Subdivision Ordinance: Means and refers to the subdivision regulations of the City codified in Title 6 Kuna City Code, as it exists on the Effective Date.

1.668 Subject Real Property: Means and refers to 761 acres more or less located in Ada County, Idaho, legally described and depicted in ***Exhibit F***.

1.679 Suez Water: Means and refers to Suez Water Idaho, Inc. an Idaho corporation who is the Potable Water Provider to the Subject Real Property pursuant to the *2019 Kuna - Suez Water Service Area Agreement.*

1.689 Term: Means and refers to the duration of this Agreement as set forth herein unless the word 'term" is not capitalized.

1.6970 Wastewater System: Means and refers to the City's Sewerage System including, without limitation, all collection lines, lift stations, treatment plants and all appurtenances thereto necessary to provide sewerage service to users of the City's Sewerage System.

1.701 Zoning Administrator: Means and refers to the planning & zoning director of the City.

1.71 Zoning Application: Means and refers to the Developer's application to the City regarding the rezoning of Subject Real Property upon the Subject Real Property's annexation into the City.

1.7223 Zoning Ordinance: Means and refers to the zoning regulations of the City codified in Title 5 Kuna City Code, as amended by the PUD Modifications, as it exists on the Effective Date.

SECTION 2
RECITALS

The Parties recite and declare:

2.1 **Municipal Corporation.** City is a municipal corporation established in accordance with Article XII of the Constitution of the State of Idaho and Title 50 Idaho Code; and

2.2 **Authority.** City is authorized, under the Act [I.C. § 67-6503], to exercise the powers conferred by the Act; and

2.3 **Comprehensive Plan.** City has the power and duty under the Act [I.C. § 67-6508] to conduct a comprehensive planning process, and to prepare, implement, review and update a comprehensive plan and is exercising its power and duties under the Act and has established a Comprehensive Plan; and

2.4 **Zoning Ordinance.** City has enacted its Zoning Ordinance, pursuant to its power and duty under the Act [I.C. § 67-6511]; and has established within its boundaries one (1) or more zones or zoning districts with established standards of land use regulation in conformance with its Comprehensive Plan; and

2.5 **PUD Ordinance.** City, pursuant to its authority under the Act [I.C. § 67-6515], has enacted as a part of its Zoning Ordinance, the PUD Ordinance, providing for the regulation and processing of applications for planned unit development permits for an area of land under a single ownership or control, which a variety of residential, commercial, industrial, and other land uses may be provided with requirements for minimum area, permitted uses, ownership, common open space, utilities, density, arrangements of land uses on a site; and

2.6 **Development Agreement.** City has the power under the Act [I.C. § 67-6511A], by ordinance, to require or permit as a condition of rezoning of real property that Owner or Developer make written commitment concerning the use or development of the Subject Real Property; and

2.7 **Subdivision.** City has power and duty under the Act [I.C. § 67-6513] and has enacted the Subdivision Ordinance, which provides for standards and processing of the subdivision of real property under Idaho Code Sections 50-1301 - 50-1329; and

2.8 **Sewer.** City, has and is exercising its power to construct reconstruct, improve, better and extend within and partially outside ~~of the~~of the City and operate pursuant to Idaho Code Sections 50-1028 - 50-1040 a domestic sewerage system; and

2.9 **Potable Water.** To be provided by the Suez Water ~~District~~ and memorialized through ~~—~~a separate document recorded with the County Recorders' office with ~~. And~~ a copy of said ~~—~~agreement to ~~shall~~ be provided to the City of Kuna; and

2.10~~9~~ Ownership. Owner owns the Subject Real Property to which the Developer has an option to purchase and which the Developer seeks to develop in accordance with the approved PUD Master Plan; and

2.11~~0~~ Impact Area. The Subject Real Property is within the Impact Area; and

2.12~~1~~ Development. Developer seeks to develop and annex the Subject Real Property into the City in accordance with the Master Plan; and

2.13~~2~~ Planning Benefits. The development of the Subject Real Property pursuant to this Agreement shall result in significant planning and economic benefits to the City and the Developer by, without limitation:

- encouraging investment in and commitment to comprehensive planning for efficient utilization of the City and other public resources to secure quality planning, growth and protection of the environment;
- requiring development of the Subject Real Property consistent with the Comprehensive Plan, the Master Plan, the Kuna City Code, and this Agreement;
- providing for the planning, design, engineering, construction, acquisition, and/or installation of Public Infrastructure in order to support anticipated development of the Subject Real Property and Additional Property;
- increasing tax and other revenues to the City based on a strengthened tax base of improvements to be constructed on and in reasonable proximity to the Subject Real Property;
- creating employment through development of the Subject Real Property consistent with this Agreement; and
- creating quality housing, employment, recreation and other land uses on the Subject Real Property for the residents of the City.

2.14~~3~~ Assurances. This Agreement promotes and encourages the development of the Subject Real Property by providing Developer and Developer's creditors with general permitting and financing assurances of Developer's intentions to develop the Subject Real Property in accordance with the approved PUD Master Plan; and

2.15~~4~~ Existing Uses. Improvements have been made to the Subject Real Property as of the Effective Date which include without limitation underground utilities, drainage, farming and ancillary uses, which provide regional as well as local benefits and it is the mutual intention of the Parties that the Existing Uses and improvements as of the Effective Date are allowed to continue their use subject to conformance with the approved PUD Master Plan.

2.165 Master Plan. It is the intention of the Parties that the Developer develop the Subject Real Property in accordance with the approved PUD Master Plan and the Infrastructure Master Plans; and

2.176 Annexation. In order for the Developer to develop the Subject Real Property in accordance with the Master Plan, the Subject Real Property must be annexed into the corporate limits of the City; and

2.187 Applications. Developer with the Owner's consent has filed the Annexation Application and the Applications for approval of its development and use of the Subject Real Property in accordance with the Master Plan; and

2.198 City Process. City will process all of the Applications in accordance with its Zoning Ordinance, Subdivision Ordinance, PUD Ordinance, Special Uses Ordinance and the Act; and

2.2019 Zoning Designations. The zoning designations contained in the Master Plan are the appropriate City zoning designations for the Subject Real Property and are consistent with the Comprehensive Plan; and

2.210 Written Commitment. It is the intention and purpose of the Parties by entering into this Agreement to establish the requirements and conditions as a condition of rezoning the Subject Real Property that the Developer and the Owner are making a written commitment to improve, finance, develop and use the Subject Real Property in accordance with zoning designations of the Rezone Ordinance, the approved PUD, Special Use Permit, Preliminary Plat, Design Review and Final Plat Approvals by the City in accordance with the Master Plan all of which are intended to establish proper and beneficial land use designations and regulations, densities, provisions for Public Infrastructure, design regulations, procedures for administration and implementation and other matters related to the development of the Subject Real Property in accordance with the Master Plan; and

2.221 CID. The Owner will petition the City for the approval of CID/CIDs within the Subject Real Property for the funding of Community Infrastructure improvements of the Project. ~~See the standalone recorded agreement/document as approved by the City Council.~~

2.232 Mutual Benefits. The Parties agree that the mutual benefits received pursuant to the terms of this Agreement and the rights granted by the City and secured to and required of the Developer and the Owner hereunder constitute sufficient consideration to support the covenants and agreements of the City, the Developer, and the Owner.

SECTION 3
ANNEXATION

3.1 Annexation Application. Developer, with the Owner's consent, has filed an Annexation Application, which the City has processed.

3.2 Annexation Approval. City Council, together with approving this Agreement, has approved the Annexation Ordinance of the Subject Real Property.

3.3 Annexation Ordinance. The Annexation Ordinance, approved by the City Council, takes effect on the Effective Date.

SECTION 4
PROJECT ZONING AND LAND USE APPROVALS

4.1 Zoning Application. Developer, with the Owner's consent, has filed Applications for R-6, R-12, R-20, C-1 and C-2 zoning of the Subject Real Property, in accordance with the Zoning Application, which the City has processed together with the Annexation Ordinance.

4.2 Rezone Approval. City Council approved Rezone Ordinance.

4.3 Annexation Ordinance. The Annexation Ordinance, approved by the City Council, will take effect on the Effective Date.

4.4 General Terms. The following terms and conditions apply to the use and development of the Subject Real Property in accordance with the designations on the PUD Master Plan:

4.4.1 Existing Uses. The Existing Uses are allowed and may continue unless there is a change in use by the Developer in accordance with this Agreement.

4.4.2 No Change to Existing Uses. Developer/Owner shall not change any Existing Uses unless the Developer/Owner files the appropriate Applications with the City in accordance with the Developer/Owner's ability to proceed with its phases of development of the Property in accordance with the PUD Master Plan and in that regard:

4.4.2.1 File a Planned Unit Development Application for those areas within the Subject Real Property which are identified on the PUD Master Plan with the word "**Phase**" which the City shall process in accordance with and under the provisions of the PUD; and

4.4.2.2 File a Subdivision Application for plats which the City shall process in accordance with and under the provisions of the Subdivision Ordinance; and

4.4.2.3 File Applications for any needed Special Use Permits which the City shall process in accordance with and under the provisions of the Special Uses Ordinance; and

4.4.2.4 File a Design Review Application which the City shall process in accordance with and under the provisions of the Design Review Ordinance.

4.5 Development Densities. Subject only to the Maximum Density, the following applies to the terms and conditions of any permitting to be issued by the City as those permits are required by Section 4.4.2 of this Agreement:

4.5.1 Allocation of Density. Developer shall have the right to allocate residential density, and the Development Rights associated with such residential density, from Parcels or Phases as shown on the PUD Master Plan to other Phases as shown on the PUD Master Plan at any time, and Developer may reallocate any unused residential density originally allocated to a Phase in the event that the preliminary or final platting of a Phase results in unused residential density, provided such allocation:

4.5.1.1 does not exceed the allowed underlying Maximum Density for that zone, for each phase of the entire Subject Real Property; and

4.5.1.2 does not allow a use otherwise prohibited; or

4.5.1.3 does not cause a material change to this Agreement without prior amendment to this Agreement as required by City Code and compliance with the notice and hearing requirements thereof.

4.5.2 Allocation Between Phases. Any allocation of residential density between Phases must be consistent with the planning efforts to encourage planning flexibility based on physical and market conditions while protecting private property rights and changing market conditions in accordance with the Master Plan. Densities for each phase must not exceed the zone in which it is located.

4.5.3 No Formal Amendment. Developer shall deliver notice to the City that an allocation of residential density shall be made from one Phase to another Phase and shall provide the City with a statement of the number of residential units per gross acre being allocated and to which Phase. Any allocation in compliance with this Section does not necessitate a formal amendment to this Agreement and shall be retained in the City's official file for the Project.

4.5.4 No Reduction of Maximum Density. The approval of any Phase that contains less density than is allocated to that area on the Master Plan shall not have the effect of reducing the Project's overall Maximum Density.

4.6 PUD Modifications. Modifications of the requirements of the City's development density, lot size and setback standards, as set forth in the Zoning Ordinance and/or the Subdivision Ordinance, as PUD Modifications, are attached as ***Exhibit E***.

4.7 Conveyance Subject to this Agreement. Conveyances from the Developer/Owner of any real property and/or easement together with any improvements thereon shall be subject to the development of the same in accordance with this Agreement.

4.8 ~~City Cooperation.~~ ~~City shall cooperate with the Developer, as is reasonably necessary for the Developer to construct any improvements upon the Subject Real Property as permitted by the City, to provide temporary encroachment permits and or temporary construction easements for the City real property or right-of-way so long as the same is not an unreasonable interference with the City's use thereof and only to the extent reasonably necessary.~~

~~4.8.1 Temporary Permits.~~ ~~Temporary encroachment permits and temporary construction easements shall identify the term, describe the use and provide that the Developer shall substantially restore such easements and rights-of-way to their condition prior to the Developer's entry upon and completion of such construction, repair or maintenance.~~

4.9 ~~Prior Easement Dedication.~~ ~~To the extent permitted by law and subject to obtaining an encroachment permit from the City (or other applicable governmental jurisdiction), the prior dedication of any easements or rights-of-way shall not affect or limit the Developer's right to finance through the CID or to construct, install, and/or provide Public Infrastructure thereon or there over.~~

4.10 Land Uses. The uses of the Subject Real Property shall be in accordance with the Existing Uses and/or uses permitted by the City pursuant to this Agreement and the following uses will be allowed as conditions of the City permitting as is applicable to the Project to be governed by the permit:

4.10.1 Sales Offices. Sales offices, including marketing trailers, model home complexes and construction trailers shall be allowed during the marketing phase of the Project Development.

4.10.2 Model Homes. Upon Developer's notice of approval from the Fire District, City Public Works and ACHD of the all-weather access and fire protection, the City will issue building permits for the construction of model homes and community facilities in compliance with Kuna City Code. Developer shall be allowed up to Six (6) building permits for model homes prior to the recordation of the Final Plat of a subdivision within the Project. Developer and the City agree that the model homes and community facilities cannot be operated as model homes and/or community facilities until Developer completes the Public Infrastructure and the City issues a certificate of occupancy for the model homes and/or community facilities. During the construction of the model homes and/or community facilities, Developer shall provide to the Fire District, the City, and ACHD access in accordance with their standards.

4.11 CID Formation. Upon the Developer's submittal of the CID petition and related documents pursuant to Idaho Code 50-3103, the City will take all actions necessary to establish CID~~the District~~(s) pursuant to the Community Infrastructure Financing Guidelines include hereto as ***Exhibit G***. A CID may be approved by City Council through a separate document to be recorded with the County Recorders' office.

SECTION 5
PROJECT INFRASTRUCTURE SYSTEMS AND SERVICES

5.1 ~~Private Roads and~~ Public Streets.

5.1.1 Developer Responsibility. Developer shall:

5.1.1.1 Include in the PUD Master Plan for approval, a Developer ~~Private Roads and~~ Public Streets System Infrastructure Master Plan, defined below, designating the location of the ~~Private Roads (which may be in the multi-family and commercial areas) and~~ Public Streets that will serve the Project, as it is fully Developed including considerations that Additional Property may be added to the Project (the "**Developer ~~Private Roads and~~ Public Streets System Infrastructure Master Plan**"). Developer ~~Private Roads and~~ Public Streets System Infrastructure Master Plan is satisfied by the inclusion of the attached ***Exhibit B***.

5.1.1.2 The location of Public Streets depicted on the Master Plan is conceptual and may be subject to change during the subdivision approval process by the City and ACHD, as the Project is developed. The Project will be served primarily by Public Streets ~~and will have some Private Roads~~ or driveways serving the multi-family and commercial areas; said driveways will be owned and maintained by Developer and/or an Owners' Association;~~.~~

5.1.1.3 The final designation of the Project's Public Streets and Private Roads will be determined in the Subdivision permitting process by the City and ACHD, as the Project is developed.

5.1.1.4 Public Streets shall be designed and constructed to meet City of Kuna and ACHD standards for acceptance and in accordance with the ~~approved Master~~approved Master Plan as approved in the subdivision approval process.

5.1.1.5 ~~Private~~ All Roads shall be designed and constructed as approved in the subdivision approval process subject to the following:

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5.1.1.5.1 Constructed by the Developer to the City and all ACHD applicable engineering standards including the ACHD storm water manual. Private Roads may modify curb, drainage, storm water retention, widths, parking and other standards in accordance with the PUD Modifications and the City's Subdivision Ordinance.

5.1.1.5.2 ~~Private roads, p~~Private driveways, drive aisles, or private parking lots shall be maintained by Developer and/or an Owners' Association; and

5.1.1.5.3 May be constructed with limited access, through access control structures with gated accesses subject to review and approval of the City, ACHD, Fire District and Ada County Ambulance District; and

5.1.1.5.4 Owned by the Developer until Developed and may subsequently be conveyed to one or more Owners' Associations as designated in each Developed phase of the Project as approved by the City of Kuna; and

5.1.1.5.5 Identified on the preliminary and final plats of the Subject Real Property; and

5.1.1.5.6 Accessible to all public service agency providers including, without limitations, police, fire, ambulance, garbage collection, electrical, gas, cable and telephone line installation and repair, and future utilities, domestic and irrigation water or sewer line installation and repair, and other similar public purposes

5.1.1.6 Parking, pedestrian, bicycle, sidewalks and/or other facilities intended to be used for non-motorized vehicular traffic and/or for e-bicycles and scooters used for ingress and egress to and from or within the Project ("**Travel Appurtenances**"), not included in Private Roads or Public Streets, and Developed within a phase of the Project, shall include, as is relevant and as required by the City, the following:

5.1.1.6.1 ~~Public Street and Private Road l~~Lighting for all roads, streets, drive aisles and parking lots shall be served with underground electric service distribution; all ~~Private~~ Roads and Street striping, traffic signals, sign posts, name signs, stop signs, speed limit signs, and all other directional/warning/advisory traffic signage in accordance with the Manual on Uniform Traffic Control Devices.

5.1.1.7 All Public Streets and related appurtenances are eligible Public Infrastructure costs that may be financed through the CID.

5.2 Potable Water. In the permitting process of the development of the Project, it is intended that the Project, as permitted and ~~developed, and~~developed, will be ~~-~~served by a Suez Water~~private water company~~. All onsite and offsite improvements are the responsibility of the Developer and/or the Suez Water~~private water company~~. See separate agreement with Suez Water ~~District~~ for inter tie-in.

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5.3 Irrigation. In the permitting process of the development of the Project, it is intended that each phase of the Project, as permitted and developed, will be served, owned and operated by a Developer Pressure Irrigation System in accordance with the provisions of this Section. All onsite and offsite improvements are the responsibility of the Developer.

5.3.1 Developer Responsibility. Developer shall:

5.3.1.1 Prepare and submit to the City, for its approval, a Developer Pressure Irrigation System Infrastructure Master Plan, designating the location of Developer Pressure Irrigation System Improvements that will service the Project, as it is fully developed.

5.3.1.2 Retain all irrigation water rights related to irrigation of the Subject Real Property and those water rights shall continue to be utilized for irrigation of Existing Uses and Green Spaces and Public Parks and shall not be used to serve any other properties not within the Subject Real Property without demonstrating that there are adequate irrigation water rights to serve the Subject Real Property.

5.4 Wastewater Treatment. In the permitting process of the development of the Project, it is intended that the Project as permitted and developed will be served by the City of Kuna Wastewater System in accordance with the provisions of this Section.

5.4.1 Developer Responsibility. Developer shall:

5.4.1.1 Prepare and submit to the City, for its approval, a Wastewater System Infrastructure Master Plan designating the approximate location of the Sewerage System main lines, including Offsite sewer lines and lift stations, that will service the Project, as required by the City in order for the City to be the Sewer Provider to the Project as it is fully Developed including considerations that Additional Property may, be added to the Project (the "**Sewer Master Plan**").

5.4.1.2 Developer, at Developer's expense, shall construct the City-approved ("**Project Sewerage System**") within the Project and shall construct Offsite Sewerage depicted on ***Exhibit C*** from the Patagonia Lift Station/Main Line to the Subject Real Property to serve the Project as determined by the City Engineer

5.4.1.2.1 The Offsite Sewerage, provided by Developer, may follow the Hubbard Road alignment or traverse private property, provided that easements, in a form satisfactory to the City, are provided by the owners of any such private properties.

5.4.1.3 Design of Developer-constructed Offsite Sewerage must ensure that, upon completion of the Offsite Sewerage, the Subject Real Property will be served by the Sewer Provider with a capacity to serve the Maximum Density of the approved Project.

5.4.1.4 **Developer shall secure all offsite** ~~wastewater treatment~~wastewater treatment easements.

5.4.2 City Responsibility.

5.4.2.1 Following the Developer's construction and installation of the Developer Sewerage System Improvements in accordance with the Sewer Master Plan including easements and acceptance by the City, the City will become the Sewer Provider for the Project as it is developed and in accordance with the City of Kuna ~~wastewater treatment~~wastewater treatment Master Plan

5.4.2.2 City shall be the Sewer Provider as the Project is developed in accordance with the following:

5.4.2.2.1 City will provide a "**Will-Serve**" letter for each phase of the Project as it is developed and based on available capacity

5.4.2.2.2 City has recorded easements for the portion of Offsite Sewerage between the Patagonia Lift Station and Stroebel Road.

5.4.2.2.3 For the portion of the Offsite Sewerage on Kuna Hubbard Road from approximately Locust Grove to the Property, Developer shall be eligible for reimbursement of the portion of the cost of the Offsite Sewerage in excess of the capacity needed to serve the Developed Project. Reimbursement amounts shall be calculated and paid in accordance with the applicable City reimbursement policy in effect when construction commences. A late-comer agreement will be a stand-alone document and/or agreement. Alternatively, these improvements, or a portion thereof, may be funded by the CID~~District~~ in which case the costs funded by the CID~~District~~ would not be subject to reimbursement through the City's reimbursement policy.

5.4.2.2.4 ~~For a portion of the Offsite Sewerage from the Orchard Patagonia Lift Station to the intersection of Kuna Road and Locust Grove Roads, Developer shall be eligible for the reimbursement of 100% of the cost(s) including engineering and a management fee of 5% of the cost(s). The~~

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~~reimbursement shall come from Capital Improvement Plan Funds and be paid back to the Developer within five (5) years of completion of such portion of Offsite Sewerage. City will also adopt a latecomer provision that will be adapted as a separate document and/or agreement.~~

5.5 Drainage System. Developer shall:

5.5.1 Drainage Master Plan. Prepare and submit to the City, for its approval, a Drainage System Infrastructure Master Plan designating the location of the "**Developer Drainage System Improvements**" that will service the Project, as it is fully developed including considerations that Additional Property may, ~~in the future,~~ be added to the Project (the "**Drainage Master Plan**").

5.5.2 Private Drainage. ~~The Drainage Master Plan shall d~~Designate areas with private Drainage Systems to be conveyed to and accepted by and maintained by Developer or a designated Owners' Association and must meet or exceed ACHD's storm water requirements and must be reviewed and approved by the City of Kuna. ~~.~~

5.5.3 ACHD Standards. Developer Drainage System Improvements shall be designed and constructed, as the Project phases are developed, to meet ACHD standards on Public Streets, City and any applicable State standards as is relevant to the intended ownership and maintenance of the constructed Developer Drainage System Improvements.

5.6 Project Public Park(s) and Green Space Infrastructure Master Plan. The Project shall contain Green Space and Public Park areas totaling a minimum of 16 % of the gross Project acreage in accordance with the following:

5.6.1 Platting. Each final plat within the Project ~~shall contain a minimum of 5% of its total gross acres~~ must maintain or exceed an overall 5% as Green Space, and/or Public Park(s)~~., unless at the time of each final plat the Project contains a proportionate amount of Green Space and/or Public Park(s) compared to the percentage of the Project previously developed,.~~

5.6.2 Master Plan. The Project Public Park(s) and Green Space Infrastructure Master Plan for the Project, attached as ***Exhibit H***, depicts the intent of Project development to link Phases to various common areas and recreational and school uses.

5.6.3 Pathways. The pathways and trails shall be located along and ~~within all~~within all Public Park(s) and Green Space corridors and provide connectivity to schools and adjacent properties.

5.6.4 Developer to Designate. Developer shall specifically designate Public Parks and Green Spaces upon submission of each preliminary and final plat in accordance with the Project Public Park(s) and Green Space Infrastructure Master Plan.

5.6.5 Ownership. The ownership of the Public Parks and Green Spaces shall be owned and maintained as follows:

5.6.5.1 Public Parks by the City;

5.6.5.2 Green Spaces by Developer/Owners' Association and shall be dedicated for public use

5.6.6 Pathways. Project Public Park(s) and Green Space Infrastructure Master Plan (***Exhibit H***) shows a pathway network to be constructed with the Project. The pathways and trails on ***Exhibit H*** are all depicted within Green Space and/or Public Parks and shall be constructed in approved phases.

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5.6.~~7~~8 Project Public Parks. The Kuna City Parks & Pathways Master Plan calls for a minimum of one Public Park to be a minimum of ten [10] acres in size and dedicated to the City.

5.6.~~7~~8.1 The location of the Public Park(s) may be modified from the location shown on the Kuna City Parks & Pathways Master Plan Master Plan, but shall be located adjacent to a main Public Road in a central location to maximize public access and be compatible with the intent of the Project Public Park(s) and Green Space Infrastructure Master Plan.

5.6.~~7~~8.2 The Public Park shall include at least three (3) active amenities such as by way of example:

- Playing fields, playground, basketball court, volleyball court, tennis court, pickle ball courts, a picnic shelter, etc.

5.6.~~7~~8.3 Developer and the City will work together on the final design of all Public Park(s).

5.6.8~~9~~ Public Park Impact Fee Credits. If Developer, at no cost or expense to the City, develops and conveys to the City any Public Park within the Subject Real Property, upon approval from City Parks & Recreation Director of the Public Park improvement costs, including the current fair market value of the land ("**Approved Public Park Costs**"), the Developer or the owner of any real property within the Subject Real Property shall be entitled to the issuance of a credit against the City's Public Park impact fee from Project impact fees as will be negotiated with the City Parks & Recreation Director in accordance with the provisions of Kuna City Code Section 12-1-6 including any other applicable provisions of Chapter 1 of Title 12 Kuna City Code. These improvements, or a portion thereof, may be funded by the CID in which case the costs funded by the CID would not be subject to reimbursement through the City's reimbursement policy.

5.6.9~~10~~ Green Space Ownership. Developer shall identify, as phases of the Project are Developed, an Owners' Association or other entity that will own and maintain each Green Space and all improvements within the phase of the Project then being Developed.

5.6.10~~1~~ Improvements Within Utility Easements. The City shall not require the Developer to install any landscape improvements within a utility easement(s) in any Phase until such time as allowed by the utility company that controls the easement. The City and Developer recognize the utility company may limit the improvements that are allowed to be installed in these easement areas. The Developer intends to improve the utility easement areas and shall work with the utility company to enable the installation of any improvements, including grass, trees, shrubs, sprinklers, and/or pathways, if possible.

SECTION 6
INFRASTRUCTURE SYSTEMS DEVELOPMENT CONSTRUCTION STANDARDS

6.1 Infrastructure Systems Development Standards. Developer/Owner will, in the course of development of each phase of the Project, construct and install all Infrastructure Systems, including any portion thereof that is Offsite, in accordance with the then current relevant engineering and City, ISPWC, IDEQ, ACHD, Ada County, state of Idaho and Federal agency standards.

SECTION 7
INFRASTRUCTURE SYSTEMS CONSTRUCTION ACCESS AND OPERATIONS

7.1 Easements. Developer and/or CIDDistrict shall have the right, upon application and issuance of a license or permit from the City or other applicable governmental jurisdiction, subject to their approval, to enter and remain upon and cross over any City-held (or other applicable governmental jurisdiction, if they approve) easements or rights-of-way, to the extent necessary to facilitate Infrastructure Systems construction, or to perform necessary maintenance or repairs of such Infrastructure Systems subject to:

7.1.1 No Adverse Effect. Developer's use of such license or permit in a manner that will not impede or adversely affect the City or other applicable governmental jurisdiction's use and enjoyment thereof, and

7.1.2 Restoration. Developer shall restore such easements and rights-of-way to their condition prior to the Developer's entry upon and completion of such Infrastructure Systems construction, repair or maintenance.

7.2 City Cooperation. City, as is necessary for the Developer and/or DistrictCID to construct and install Infrastructure Systems, shall cooperate as is necessary and as the City is legally able, in compliance with City's approval of the applicable Infrastructure Systems plan, as follows:

7.3 Operations During Construction. Owner's and Developer's mineral and/or royalty rights on minerals located on or under the Subject Real Property are reserved and the Developer, may as reasonably needed, conduct mining (for purposes of on-site material usage), blasting and batch plant operations on site during each developing phase of the Project in accordance with the procedures of Kuna City Code , all State and Federal Rules and regulations, and this Agreement.

7.3.1 Review of Construction Operations. The location of construction operations shall be subject to review and approval by the appropriate governmental agencies that have jurisdiction over such operations.

SECTION 8
ADDITIONAL PROPERTY

8.1 Additional Property. In the event the Developer acquires any real property within the Additional Property (the "**Acquired Additional Property**") and desires to subject such Acquired Additional Property to the benefits and obligations of this Agreement, Developer may request that the City annex the Acquired Additional Property into the corporate boundaries of the City (if such Acquired Additional Property is not already within City limits) as well as the CID and shall seek amendment of this Agreement through the public hearing process to include such Acquired Additional Property.

8.2 **Revised Utilities Master Plan.** Upon such request, the City shall process the annexation of the Acquired Additional Property, after payment of the City Fees for annexation, zoning, PUD and any other relevant fees, in accordance with the requirements of the City and the state of Idaho. Any such request by the Developer must include a revision of the approved Master Plan(~~s) which~~s) which are consistent with and a continuation of the Master Plan and the City approved Infrastructure Master Plans for the Subject Real Property.

8.3 **Amendment to Agreement.** In connection with annexation of any such Acquired Additional Property, the amendment to this Agreement shall reflect either the then-existing residential density and/or commercial uses and intensities of such Acquired Additional Property, or, if requested by the Developer, additional residential density and/or commercial uses and intensities consistent with any zoning or plan approvals for the Acquired Additional Property. *Will be rewritten to follow KCC.*

8.5 **Alternative Plans.** An amendment to this Agreement in connection with the annexation of Acquired Additional Property may include alternative plans and land use designations or other planning or entitlement documents according to KCC.

SECTION 9
TERM

9.1 **Term.** The Term of this Agreement shall commence on the Effective Date and shall automatically terminate on the 20th anniversary of the Effective Date.

9.1.1 **Additional Property.** The annexation of any Additional Property shall not extend the Term of this Agreement unless the Agreement is amended to extend the Term.

9.1.2 **Automatic Extension.** If more than 75% of the residential units or acres within the Master Plan have been built by the 20th anniversary of the Effective Date, this Agreement shall automatically extend, without necessary notice, agreement, or recording by or between the Parties, by an additional ten (10) years, for a total of thirty (30) years, at which time this Agreement shall automatically terminate as to the Project.

9.1.3 **Partial Termination upon Dedication and Acceptance by Public Agency.** Upon completion of Developed Phases of the Project, which include dedications and or conveyance to and acceptance by the City, ACHD or any other public agency, the Developer may then submit to the City an Application for Partial Termination of provisions of this Agreement ("**Application for Partial Termination**") as they apply to certain legally described real property within a Developed phases of the Project dedicated, conveyed and accepted by the City, ACHD or by any other public agency.

9.1.3.1 Through the public hearing process, the City Council shall consider an Application for Partial Termination of some of the relevant provisions of this Agreement, only when a phase of the Project has been completely developed and the Developer shall specifically identify the provisions of the Agreement to be terminated in this regard and the subject real property to which it applies. Notwithstanding the foregoing, any such applicable partial termination shall not have any effect on the obligations of the City or the Developer with respect to the any Reimbursement Agreements or obligations of the City to reimburse any fee or costs to the Developer in accordance with this Agreement.

9.1.3.2 A completed Application submitted by the Developer for Partial Termination shall be reviewed by the Planning and Zoning Director, Public Works Director and the Parks and Recreation Director for consideration for approval by the City Council.

9.1.3.3 If approved by City ~~Council Application~~Council Application for Partial Termination shall be by an order which shall specify:

- The legal description of the portion of the Subject Real Property to which it applies; and
- The provisions of the Agreement which are terminated.

9.1.3.4 City Clerk shall certify, acknowledge and record a copy of the order with the Ada County Recorder's Office.

SECTION 10
AGREEMENT MODIFICATIONS

10.1 Effect of New Laws. In the event State or Federal laws or regulations are enacted and/or there is a decision issued by a court of competent jurisdiction which prevents or precludes a Party's compliance with one or more provisions of this Agreement (individually or collectively, "**New Law**"), the provisions, in whole or in part, as applicable, of this Agreement shall be modified or suspended as may be necessary to comply with such New Law.

10.1.1 Action. During the time that the Parties are conferring on such modification or suspension of this Agreement or challenge to the New Law, the Parties may take reasonable action to comply with such New Law.

10.1.2 Declaration. Should the Parties be unable to agree to a modification or suspension of this Agreement, either may petition a court of competent jurisdiction for an appropriate declaratory judgment for modification or suspension of this Agreement.

10.1.3 Ability to Challenge. Developer and the City each or together shall have the right to challenge the New Law which prevents their compliance with the terms of this Agreement. In the event that such challenge is successful, this Agreement shall remain unmodified and in full force and effect.

10.2 Technical Amendments. Technical amendments of this Agreement may be necessary or appropriate from time to time limited to and in accordance with the following:

10.2.1 Minor Alteration. Technical amendments are those which only involve minor alteration to the Master Plan such as circulation, Parcel or Phase area boundaries, Green Space boundaries, pathway or trail alignments.

10.2.2 In Writing. Technical amendments must be in writing and may be approved by the City Council upon recommendation of the Planning and Zoning Director, Public Works Director and the Parks and Recreation Director without prior or further review by the Planning & Zoning Commission or other public hearings unless such review and public hearings are required by law or by the provisions of any permit issued for the development of any phase of the Project.

10.2.3 Recordation. Technical ~~amendments shall~~amendments shall be recorded with Ada County Recorders' office.

10.2.4 Diligence. The Parties will diligently pursue efforts to process any proposed technical amendments to this Agreement.

10.3 Limited Termination Amendments. Any amendment to this Agreement involving a limited termination of the Agreement is governed under Section 9.1.2.

SECTION 11
ZONING AND PUD STANDARDS

11.1 Applicable to Subject Real Property. Zoning Ordinance, which includes PUD Standards, as they exist on the Effective Date, shall apply to the Subject Real Property for the Term of this Agreement except as modified by those PUD Modifications shown on ***Exhibit E***.

11.2 Not Applicable to Additional Property. This Section does not apply to the Additional Property.

SECTION 12
VESTED RIGHTS

12.1 Vested Rights. Upon the Effective Date, the Developer/Owner shall have vested rights to develop and use the Subject Real Property consistent with this Agreement.

12.2 Consideration. The determinations of the City memorialized in this Agreement, together with the assurances provided to the Developer in this Agreement, including this Section, are bargained for and is a consideration for the undertakings of the Developer as set forth herein and contemplated by this Agreement, and are intended to be and have been relied upon by the Developer.

SECTION 13
INFRASTRUCTURE SYSTEMS OWNERSHIP AND MAINTENANCE

13.1 Ownership. The Infrastructure Systems, provided for in this Agreement, upon their construction, installation, approval and acceptance shall be owned and maintained as follows:

13.1.1 ***By ACHD:***

- Public Streets; and
- Drainage associated with Public Streets.

13.1.2 ***By City:***

- Public Wells and Offsite Water Lines, if any, and
- Public Developer Water System Improvements, if any; and
- Developer Sewerage System Improvements; and

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- As designated in the Drainage Infrastructure Master Plan, Developer Drainage System Improvements accepted and approved by the City; and
- Public Parks.

13.1.3 ***By Developer and/or Owners' Association:***

- Private Roads; and
- Drainage associated with Private Roads; and
- Developer Pressure Irrigation System Improvements; and
- Green Spaces.

13.2 Owners Associations. Developer, in the process of each Developed phase of the Project, shall create, establish, staff and register with the Secretary of State of the state of Idaho a legal entity under Idaho Law ("**Owners' Association**") and prepare and record with the Ada County Recorder's office appropriate CC&Rs which are consistent with the approved Master Plans.

13.2.1 Binding on Owners. The CC&Rs, for each Developed phase of the Project, shall bind all present and future owners of real property within each Developed phase of the Project in order to provide for the perpetual support and maintenance of each of the common improvements within the Developed phase as provided in this Agreement.

13.2.2 Quality Control. Each Owners' Association shall establish and perform quality control, maintenance and operation throughout their Developed phase of the Project during development and during maturing of the Developed phase of the Project and continuing in perpetuity.

13.2.3 Developer Discretion. Developer shall have the sole and absolute discretion over the content, approval and enforcement rights of the Declarant or other governing agent or agency, formation and adoption of the CC&Rs so long as the same is consistent with the provisions of this Agreement.

SECTION 14
DEFAULT

14.1 Enforcement of Terms and Conditions of the Agreement. The enforcement of the terms and conditions of this Agreement and any permits issued by the City pursuant to this Agreement are as follows:

14.1.1 Default. The failure of the Developer, Owner, Owners' Association, or the failure of the City to comply or perform, in accordance with the terms and conditions of this Agreement or the terms and conditions of any permit issued by the City, pursuant to this Agreement, shall be a default of this Agreement and processed as follows:

14.1.2 City Default Claims. A claim of default by the City may be made against the Developer, Owner, Owners' Association by the City's Director of Public Works, Zoning Administrator or Parks and Recreation Director, ("**City Director**"), depending upon the default.

14.1.3 Developer, Owner or Owners' Association Default Claims: A claim of default may be made by the Developer, Owner, Owners' Association against the City, depending upon the default.

14.1.4 Claimant and Accused. For purposes of this Section of the Agreement, a claim of default is made by a ("**Claimant**") against an ("**Accused**").

14.1.5 Default Written Notice of Intent. The Claimant shall serve the Accused with a Default Written Notice of Intent ("**Notice of Intent**").

14.1.5.1 The written Notice of Intent shall include the matters and facts which form the basis for the notice and a stated reasonable time within which the Accused is to correct and remedy the default. Such reasonable time frame shall depend upon the exigencies surrounding the matters and facts set forth in said Notice.

14.1.5.2 The written Notice of Intent shall state the factual and legal reasons for the claim of default, the actions to be taken by the Accused to cure the claim of default and a demand that the Accused respond in writing, within a reasonable stated time, as to whether or not the Accused consents to comply with the Notice of Intent of denies the claim of default.

14.1.5.3 The Accused shall have a minimum of thirty (30) days to remedy any default. If the default is such that more than thirty (30) days would reasonably be required to cure default, then the Accused shall have such additional time as may be necessary to perform or comply so long as the Accused commences performance within such thirty (30) day period and diligently proceeds to complete such performance and timely cures any exigent circumstance of the claim of default that affects public health and safety.

14.1.5.4 The Notice of Intent shall be served as follows upon:

- *Developer:* by U.S. Mail to the address herein designated by Developer; and

- *Owners' Association:* by U.S. Mail to the address of its registered agent; and

- *Real Property Owner:* By U.S. Mail at their address as listed by the Ada County Assessor's office; and

- *City:* by U.S. Mail to the address herein designated by the City.

14.1.6 Notice to Show Cause. In the event the Accused fails to correct and remedy a default or noncompliance, within the reasonable time designated in the Notice of Intent, to the satisfaction of the Claimant, the Claimant shall then request the City Council [or the Planning & Zoning Commission only in the event the Commission has original jurisdiction by reason of a permit which is at issue in the matter] or otherwise request the City Council to proceed to set a hearing and provide written notice of the hearing to show cause to the Accused of the request to take action as identified in the Notice of Intent and to enforce the terms of this Agreement.

14.1.6.1 The written notice of the hearing to show cause shall be served upon the Claimant and the Accused at least twenty-eight (28) days in advance of the hearing.

14.1.6.2 At the hearing to show cause, the Accused may present evidence as to why it or they are not in default.

14.1.6.3 Following any presentation of evidence by the Accused and any rebuttal by the Claimant and any other interested persons, the Planning & Zoning Commission and/or the City Council, as the case may be, shall determine the matter and issue Findings of Fact, Conclusions of Law and an Order of Decision in accordance with the evidence presented at the Show Cause hearing.

14.1.6.4 Any determination made by the Planning & Zoning Commission may be appealed to the City Council. A notice of appeal must be filed within fourteen (14) days of the final decision of the Planning & Zoning Commission.

14.1.6.5 The Findings of Fact, Conclusions of Law and Order of Decision issued by the City Council shall be the final administrative remedy of any claim of default under this Agreement and the Parties may thereafter seek legal action in a court of competent jurisdiction for any legal or equitable remedy, including, without limitation, declaratory relief and or specific performance of this Agreement as the case may be, but the Parties shall not be entitled to consequential damages in any such action.

14.1.7 Prevailing Party. In the event any Party shall file suit or action at law or equity to interpret or enforce this Agreement, the provisions of Idaho Code Section 12-117, or any subsequent amendment or recodification of the same, shall apply to the determination of the prevailing Party and the award of reasonable attorney's fees, witness fees and other reasonable expenses.

SECTION 15
MORTGAGES

15.1 Senior to Mortgage. This Agreement shall be superior and senior to any Mortgage of the interests of the Developer or property owner of any real property within the Subject Real Property of record recorded subsequent to this Agreement.

15.1.1 No Impairment. No default of this Agreement by the Developer or property owner shall invalidate or impair a Mortgage made in good faith and for value; and

15.1.2 Subject to Agreement. Any acquisition or acceptance of title or any right or interest in or with respect to the Subject Real Property, or any portion thereof, by a mortgagee (herein defined to include a beneficiary under a deed of trust), whether under or pursuant to a mortgage foreclosure, trustee's sale or deed in lieu of foreclosure or trustee's sale, or otherwise, except that the same shall be subject to all of the terms and conditions contained in this Agreement.

15.2 No Mortgage Obligation. No mortgagee shall have an obligation or duty under this Agreement to perform the Developer's obligations or other affirmative covenants of the Developer hereunder, or to guarantee such performance; except that to the extent that any covenant to be performed by the Developer is a condition to the performance of a covenant by the City, the performance thereof shall continue to be a condition precedent to the City's performance hereunder.

SECTION 16
SHARED LEGAL DEFENSE OF THIS AGREEMENT

16.1 Shared Agreement Legal Defense Costs. In the event that any legal or equitable action or other proceeding is instituted by a third-party challenging the validity of any provision of this Agreement, the Parties will cooperate in defense of such action or proceeding. The City and the Developer may agree to select mutually agreeable legal counsel to defend such action or proceeding with the Parties sharing equally in the cost of such joint legal counsel, or each Party may select its own legal counsel at each Party's expense. All other costs of such defense(s) shall be shared equally by the Parties. Each Party retains the right to pursue its own independent legal defense.

SECTION 17
NOTICES AND FILINGS

17.1 Manner of Serving. All notices, filings, consents, approvals and other communications provided for herein or delivered in connection herewith shall be validly delivered, filed, made, or served if in writing and delivered personally or delivered by a nationally

recognized overnight courier or sent by certified United States Mail, postage prepaid, return receipt requested, if to:

City:	**Developer:**
City of Kuna Attn: Mayor 751 W. 4th Street Kuna, ID 83634	Ten Mile Creek LLC Attn: Chris Findlay 1211 N Happy Drive Boise, ID 83706
With a copy to: William F. Gigray, III WHITE PETERSON 5700 E. Franklin Rd., Suite 200 Nampa, ID 83687	*With a copy to:* David Yorgason 14254 W. Battenberg Drive Boise, ID 83713

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Owners:

David Jay C & Roberta A Family Revocable Trust
P.O. Box 16232
Boise, ID 83715

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Gilmore Keith H & Ruth E Living Trust
Attn: Janet Kell Co-trustee or
Germain R. Tarrant Co-trustee
3154 E. Rivernest Dr.
Boise, ID 83706

Anne C. Whitmore, and
George Whitmore, and
James L. Whitmore
3431 W. Meadow Dr.
Boise, ID 83706

or to such other addresses as either Party hereto may from time to time designate in writing and delivery in a like manner.

17.2 **Mailing Effective.** Notices, filings, consents, approvals and communication given by mail shall be deemed delivered immediately if personally delivered, 24 hours following deposit with a nationally recognized courier, or 72 hours following deposit in the U.S. mail, postage prepaid and addressed as set forth above.

17.3 **City Notice Prior to Entry on Subject Real Property:** The Developer, Owner and the City will establish a process of reasonable notice by the City to the Developer and Owner for permission to enter and access the Subject Real Property that facilitates the City's need to timely inspect and administer the City's permits which are granted for this Project. ~~**City Notice Prior to Entry of Property.** City agrees to notify Owner prior to entry or access on to Owner's property while Owner is the owner of their property.~~

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SECTION 18
DEVELOPER ASSIGNMENT OF AGREEMENT RIGHTS

18.1 Developer Assignment: The assignment of any of the Developer's rights and obligations of this Agreement shall in accordance with the following:

18.1.1 Complete Assignment of Developer's rights. A total assignment of the Developer's rights and obligations under this Agreement in connection with all undeveloped portions of the Subject Real Property shall be assigned upon written consent of the City Council which shall not be unreasonably withheld, conditioned or delayed subject only to the following conditions:

18.1.1.1 Prior written notice from the Developer to the City Council together with the identification of the proposed assignee together with the proposed assignee's written affirmation of their intentions and ability to perform the conditions of this Agreement; and

18.1.1.2 Developer is not in default of this Agreement or the Assignee tenders to the City a guarantee of the Assignee's performance of the Developer's default upon assignment; and

18.1.1.3 The total assignment by the Developer shall be by a written instrument including the acceptance of the assignee to the terms and conditions of this Agreement, and the City Council's written consent and shall then be recorded in the official records of Ada County, Idaho, expressly assigning such rights and obligations.

18.1.1.4 In the event of such total assignment of the Developer's rights and obligations hereunder, the Developer's liability under this Agreement shall then terminate.

18.1.2 Successors and Assigns. Notwithstanding any other provisions of this Agreement, the Developer many ~~assign~~assigns all or part of the Developer's rights and duties under this Agreement as collateral to any financial institution from which the Developer has borrowed funds for use in developing the Property. Such an assignment shall not relieve the Developer from any obligations of this Agreement.

SECTION 19
MISCELLANEOUS

19.1 Agreement runs with the Subject Real Property. The burdens of this Agreement are binding upon, and the benefits inure to, all successors in interest of the Parties to this Agreement and constitute covenants that run with the Subject Real Property. Each commitment and restriction of this Agreement on the Subject Real Property shall be a burden on the Subject Real Property and shall be appurtenant to and for the benefit of the Subject Real Property and shall run with the land.

19.1.1 This Agreement shall be binding on the Developer and the Owner, and their respective heirs, administrators, executors, agents, legal representatives, successors, and assigns; provided, however, that the purchasers, from the Owner and/or Developer, of individual lots within Developed phases of the Project are not subject to the obligations arising under this Agreement except for any obligations of the Owners' Association to which they are a member.

19.2 Choice of Law. This Agreement shall be construed in accordance with the laws of the state of Idaho in effect on the Effective Date. Any action brought in connection with this Agreement shall be brought in a court of competent jurisdiction located in Ada County, Idaho.

19.3 Construction. All Parties hereto have either been represented by separate legal counsel or have had the opportunity to be so represented. Thus, in all cases, the language herein shall be constructed simply in accord with its fair meaning and not strictly for or against a Party, regardless of whether such Party prepared or caused the preparation of this Agreement.

19.4 Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together constitute one and the same instrument. The signature pages from one or more counterparts may be removed from such counterparts and such signature pages all attached to a single document so that the signatures of all Parties may be physically attached to a single document.

19.5 Entire Agreement. This Agreement constitutes the entire agreement between the Parties, except for any permits and or approvals issued pursuant to this Agreement, pertaining to the subject matter hereof. All prior and contemporaneous agreements, representations and understandings of the Parties, oral or written, are hereby superseded and merged herein. No modification or amendment to this Agreement of any kind whatsoever shall be made or claimed by Developer or City shall have any force or effect whatsoever unless the same shall be endorsed in writing and signed by the Party against which the enforcement of such modification or amendment is sought, and then only to the extent set forth in such instrument. Such approved amendment shall be recorded in the Official Records of Ada County, Idaho.

19.6 Exhibits and Recitals. Any exhibit attached hereto shall be deemed to have been incorporated herein with the same force and effect as if fully set forth in the body hereof. The Recitals set forth at the beginning of this Agreement are hereby acknowledged and incorporated herein and the Parties hereby confirm the accuracy thereof. The Definitions set forth prior to the Recitals are hereby acknowledged and incorporated herein.

19.7 Further Acts. Each of the Parties shall promptly execute and deliver all such documents and perform all such acts as reasonably necessary, from time to time, to carry out the matters contemplated by this Agreement.

19.8 Good Standing; Authority. Each of the Parties represents to the other as follows:

19.8.1 **Developer.** Developer represents that it is an Idaho limited liability company duly qualified to do business in Idaho; and

19.8.2 **City.** City represents that it is an Idaho municipal corporation in the state of Idaho; and

19.8.3 **Owner.** Owner represents that it is an Idaho limited liability company.

19.8.4 **Authority**. Each Party represents to the other that the individual(s) executing this Agreement on behalf of the Parties are authorized and empowered to bind the Party on whose behalf each such individual is signing.

19.9 Headings. This Agreement shall be construed according to its fair meaning and as if prepared by both Parties hereto. Table of Contents, titles and captions are for convenience only and shall not constitute a portion of this Agreement. As used in this Agreement, masculine, feminine or neuter gender and the singular or plural number shall each be deemed to include the others wherever and whenever the context so dictates.

19.10 Names and Plans. Developer shall be the sole owner of all names, titles, plans, drawings, specifications, ideas, programs, designs and work products of every nature at any time developed, formulated or prepared by or at the request of the Developer in connection with the Property and the Project; provided, however, that in connection with any conveyance of portions of the Subject Real Property to the City, such rights pertaining to the portions of the Subject Real Property so conveyed shall be assigned to the City to the extent that such rights are assignable.

19.11 No Developer Preliminary Representations. Nothing contained herein shall be deemed to initially obligate the Developer to complete any part or all of the development of the Project within a specific time line, phasing schedule or other schedules, or any other plan, and this Agreement shall not be deemed a representation unless required as a condition of any permit issued pursuant to this Agreement or required by any Master Plan approved by the City pursuant to this Agreement.

19.12 No Partnership; Third-Parties. It is hereby specifically understood, acknowledged and agreed that neither the City nor the Developer shall be deemed to be an agent of the other for any purpose whatsoever. It is not intended by this Agreement to, and nothing contained in this Agreement shall, create any partnership, joint venture or other arrangement between the Developer and the City. No term or provision of this Agreement is intended to, or shall, be for the benefit of any third-party, person, firm, organization or legal entity not a Party hereto, and no such other third-party, person, firm, organization or legal entity shall have any right to cause of action hereunder.

19.13 Parties' Intent. It is the Parties' express intention that the terms and conditions be construed and applied as provided herein, to the fullest extent possible. It is the Parties' further intention that, to the extent any such term or condition is found to constitute an impermissible restriction of the police power of the City, such term or condition shall be construed and applied in such lesser fashion as may be necessary to not restrict the police power of the City.

19.14 Recordation. After its execution, this Agreement shall be recorded in the real property records of Ada County, Idaho by the City.

19.15 Severability. If any provision of this Agreement is declared void or unenforceable, such provision shall be severed from this Agreement, which shall otherwise remain in full force and effect.

19.16 Time of Essence. Time is of the essence in implementing the terms of this Agreement.

19.17 Waiver. No delay in exercising any right or remedy shall constitute a waiver by either Party thereof, and no waiver by the City or the Developer of the breach of any covenant or condition of this Agreement shall be construed as a waiver of any preceding or succeeding breach of the same or any other covenant or condition of this Agreement.

[signatures on following page]

IN WITNESS WHEREOF, the Parties hereto, having been duly authorized, have executed this Development Agreement to be effective on the Effective Date.

CITY:

CITY OF KUNA, Idaho, a municipal corporation organized and existing under the laws of the State of Idaho

By:_____

Joe Stear, Mayor

Attest:

By: _____

Chris Engels, City Clerk

CITY ATTORNEY APPROVAL AS TO FORM AND AUTHORITY

The foregoing Agreement has been received by the undersigned attorney, who has opined that it is in proper form and within the power and authority granted under the laws of the State of Idaho to the City of Kuna

_____

Wm. F. Gigray, III, City Attorney

DEVELOPER:

Ten Mile Creek LLC., an Idaho limited liability company

By: _____

David Yorgason, Member

By: _____

Chris Findlay, Member

By: _____

Patt Duynslager, Member

OWNER:

Davis Jay C & Roberta A Family Revocable Trust

By:

_____

Jay Davis

By:

_____

Roberta Davis

OWNER:
Gilmore Keith H & Ruth E Living Trust

By:

_____

Janet Kell Co-trustee

_____

Germain R. Tarrant Co-trustee

OWNER:

Anne C. Whitmore, and
George W. Whitmore, and
James L. Whitmore

By: _____
Anne C. Whitmore

By: _____
George W. Whitmore

By: _____
James L. Whitmore

STATE OF IDAHO)
) ss.
COUNTY OF ADA)

On this ____ day of _____, 20~~18~~, before me, the undersigned, a Notary Public in and for said State, personally appeared **Joe Stear**, known or identified to me to be the Mayor of the City of Kuna, the municipal corporation that executed the instrument or the person who executed the instrument on behalf of said municipal corporation, and acknowledged to me that such municipal corporation executed the same.

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

Notary Public for Idaho
[seal] My Commission expires: _____

STATE OF _____)
) ss.
COUNTY OF _____)

On this ____ day of _____, 202018, before me, the undersigned, a Notary Public in and for said State, personally appeared _____, Members of Ten Mile Creek LLC, an Idaho limited liability company, the limited liability company that executed the instrument, or the person who executed the instrument on behalf of said limited liability company, and acknowledged to me that such limited liability company executed the same.

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

Notary Public for _____
[seal] My Commission expires: _____

STATE OF IDAHO)
) ss.
COUNTY OF ADA)

On this ____ day of _____, 202018, before me, the undersigned, a Notary Public in and for said State, personally appeared _____, known or identified to me to be the Trustees of Davis Jay C & Roberta A Family Revocable Trust, that executed the instrument or the person who executed the instrument on behalf of said Trust, and acknowledged to me that such Trust executed the same.

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

Notary Public for Idaho
[seal] My Commission expires: _____

STATE OF IDAHO)
) ss.
COUNTY OF ADA)

On this ____ day of _____, 20202018, before me, the undersigned, a Notary Public in and for said State, personally appeared _____, known or identified to me to be the Co-Trustee of Gilmore Keith H and Ruth E Living, that executed the instrument or the person who executed the instrument on behalf of said Trust, and acknowledged to me that such Trust executed the same.

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

Notary Public for Idaho
[seal] My Commission expires: _____

STATE OF IDAHO)
) ss.
COUNTY OF ADA)

On this ____ day of _____, 20202018, before me, the undersigned, a Notary Public in and for said State, personally appeared _____, known or identified to me to be the Co-Trustee of Gilmore Keith H and Ruth E Living, that executed the instrument or the person who executed the instrument on behalf of said Trust, and acknowledged to me that such Trust executed the same.

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

Notary Public for Idaho
[seal] My Commission expires: _____

STATE OF IDAHO)
) ss.
COUNTY OF ADA)

On this ____ day of _____, 20~~18~~, before me, the undersigned, a Notary Public in and for said State, personally appeared _____, known or identified to me to be Anne C. Whitmore, the persons who executed the instrument.

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

Notary Public for Idaho
[seal] My Commission expires: _____

STATE OF IDAHO)
) ss.
COUNTY OF ADA)

On this ____ day of _____, 20~~18~~, before me, the undersigned, a Notary Public in and for said State, personally appeared _____, known or identified to me to be George W. Whitmore, the persons who executed the instrument.

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

Notary Public for Idaho
[seal] My Commission expires: _____

STATE OF IDAHO)
) ss.
COUNTY OF ADA)

On this ____ day of _____, 202018, before me, the undersigned, a Notary Public in and for said State, personally appeared _____, known or identified to me to be James L. Whitmore, the persons who executed the instrument.

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

Notary Public for Idaho
[seal] My Commission expires: _____

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EXHIBIT A
Annexation Ordinance

EXHIBIT B
”Master Plan”

EXHIBIT C
”Offsite Sewerage”

EXHIBIT D

EXHIBIT D
”As Needed”

EXHIBIT E
PUD Modification

EXHIBIT F

EXHIBIT F
Subject Real Property Legal Description

EXHIBIT G
Community Infrastructure District Financing Guidelines

EXHIBIT H
Public Parks & Trails Plan

EXHIBIT E
PUD Modifications

5-3-3: - OFFICIAL HEIGHT AND AREA STANDARDS:

MINIMUM YARD AND SQUARE FOOTAGE REQUIREMENTS

Zoning District	Maximum Height	Recommended Minimum Street Frontage*	Front Yard Setback On A Local Road	Front Yard Setback On A Local Road To Residence Or Side Load Garage	Front Yard Setback On An Arterial Or Collector Street	Rear Yard Setback	Interior Side Yard Setback	Street Side Yard Setback	Maximum Lot Coverage	Minimum Lot Size
R-6	35'	~~45'~~ 40'	20'	12' ^***	30'****	~~15'~~ 10'	5'*****	20'	~~40%~~ N/A	~~4,500 SF*~~ N/A
R-12	40'	40'	20'	5'	30'****	~~15'~~ 10'	5'*****	20'	~~60%~~ N/A	~~2,200 SF~~ N/A
R-20	~~40'~~ 48'	40'	20'	20'	30'****	15'	5'	20'	60%	1300 SF
C-1	35'	0**	15'	15'	0	5'	0	10'	100% DR	2,000 SF
C-2	60'	0**	0	0	0	0	0	0	100% DR	1,300 SF

The city has discontinued the R-1, R-3 and R-5 zones and converted these discontinued zones to the following: R-1 see R-2; R-3 see R-4 and R-5 see R-6. The M-3 zone, which is limited to mining uses, has been consolidated with the M-2 zone.

The terms property owner, applicant, controller and developer are used interchangeably.

* The city encourages creativity in the design of its subdivisions; the Planning and Zoning Director may allow the reduction of the street frontage and minimum lot size recommendation after reviewing the entire subdivision plat, which shall consider the overall layout of streets and lots.

** It is presumed the parcel's frontage will be of sufficient width to accommodate the placement of a driveway entrance for those uses fronting on a street where they have driveway access.

*** Building heights above sixty (60) feet, and especially habitable spaces located above that height, may require the procuring of special safety equipment or fire apparatus.

**** Residential access to a functionally classified roadway is limited.

^ Front setbacks that are less than fifteen feet (15') when on a radius corner lot will need approval from the city to confirm that there is not a site distance issue.

Original Code	Redline Changes to Code
5-7-3: - PLANNED UNIT DEVELOPMENT STANDARDS: M. *Structures*: Attached and detached dwelling units are permitted in PUD's in accordance with the city's adopted Uniform Building Code (UBC) requirements. The minimum separation distance between detached dwelling units shall be ten (10) feet, unless fire or building codes required greater separation distances. The separation distance of uninhabitable accessory buildings (from dwelling units, lot lines and easements) will be according to city and fire district requirements (see KCC 5-3-4-5:I).	5-7-3: - PLANNED UNIT DEVELOPMENT STANDARDS: M. *Structures*: Attached and detached dwelling units are permitted in PUD's in accordance with the city's adopted ~~Uniform~~ International Building Code (~~U~~IBC) requirements. The minimum separation distance between detached dwelling units shall be ten (10) feet, unless fire or building codes required greater separation distances. The separation distance of uninhabitable accessory buildings (from dwelling units, lot lines and easements) will be according to city and fire district requirements (see KCC 5-3-4-5:I). (Ord. No. 2011-10, Sec. 1, 12-20-2011; Ord. No. 2018-08, Sec. 2, 3-6-2018)
5-7-24: -IMPROVEMENT GUARANTEES: D. The applicant shall file with the agreement one (1) of the following to assure their full and faithful performance: 1. Certified check; 2. An irrevocable letter of credit issued by a financial institution authorized to do business in the State of Idaho;	5-7-24: -IMPROVEMENT GUARANTEES: D. The applicant shall file with the agreement one (1) of the following to assure their full and faithful performance: 1. Certified check; 2. An irrevocable letter of credit issued by a financial institution authorized to do business in the State of Idaho; 3. Other surety acceptable to the city. (Ord. No. 2011, Sec. 1, 12-20-2011)

5-10-4: -GENERAL REQUIREMENTS FOR ALL SIGNS AND DISTRICTS: O. Subdivision signs: 2. Subdivision signs shall not exceed six (6) feet in height and the sign area shall not exceed forty (40) square feet per side.	5-10-4: -GENERAL REQUIREMENTS FOR ALL SIGNS AND DISTRICTS: O. Subdivision signs: 2. Subdivision signs shall not exceed six (6) feet in height and the sign area shall not exceed forty (40) square feet per side unless approved by the planning department. Subdivision signs shall also not be placed in the vision triangle. Any denial from the planning department may be appealed to the city council.
4. Subdivision advertising: Any sign advertising a commercial enterprise, including real estate developers or subdividers, in a district zoned residential shall not exceed twelve (12) square feet in area and shall advertise only the names of the owners, trade names, products sold and/or the business or activity conducted on the premises where such sign is located. Signage installed along a residential subdivision's street frontage for advertising purposes shall be limited to the installation of two (2) in ground signs that do not exceed twelve (12) square feet in area or ten (10) feet in height. The signs shall advertise only names, products sold and/or the business or activity conducted on the premises where such sign is located. The signs shall be maintained in good condition and removed when ninety-five (95) percent of the subdivision's lots have been sold.	4. Subdivision advertising: Any sign advertising a commercial enterprise, including real estate developers or subdividers, in a district zoned residential shall not exceed ~~twelve~~ forty-eight (~~12~~ 48) square feet in area and shall advertise only the names of the owners, trade names, products sold and/or the business or activity conducted on the premises where such sign is located. Signage installed along a residential subdivision's street frontage for advertising purposes shall be limited to the installation of ~~two~~ four (~~2~~ 4) in ground signs that do not exceed ~~twelve~~ forty-eight (~~12~~ 48) square feet in area or ten (10) feet in height. The signs shall advertise only names, products sold and/or the business or activity conducted on the premises where such sign is located. The signs shall be maintained in good condition and removed when ninety-five (95) percent of the subdivision's lots have been sold.
5-17-12: -BUFFER AREAS; COMMON LOTS: C. *Common area landscapes:* New residential subdivision common area landscapes shall be comprised of the following: 2. A minimum of one (1) deciduous shade tree per one thousand (1,000) square feet of site.	5-17-12: -BUFFER AREAS; COMMON LOTS: C. *Common area landscapes:* New residential subdivision common area landscapes shall be comprised of the following: 2. A minimum of one (1) deciduous shade tree per one thousand (1,000) square feet of site except in park areas where there are turf play fields or other activities that may not warrant densely planted areas.

6-2-3: -PRELIMINARY PLAT: *Note:* Subdivider and developer are intended to be interchangeable terms. *J. Approval period, phased development, time extension, and expiration:* 1. A preliminary plat approval shall be valid for two (2) years from the date of approval of the findings of facts and conclusions of law by city council, unless extended as provided for herein.	6-2-3: -PRELIMINARY PLAT: *Note:* Subdivider and developer are intended to be interchangeable terms. *J. Approval period, phased development, time extension, and expiration:* 1. A preliminary plat approval shall be valid for ~~two~~ three (~~2~~ 3)years from the date of approval of the findings of facts and conclusions of law by city council, unless extended as provided for herein.
2. In the event that the preliminary plat is approved in construction phases (more than one (1) phase), the subdivider shall have two (2) years to complete the plat's first phase from the time the council approves the plat's findings of fact. When the preliminary plat includes phases, each successive phase is to be completed within one (1) year of the preceding phase's recording date.	~~2. In the event that the preliminary plat is approved in construction phases (more than one (1) phase), the subdivider shall have two (2) years to complete the plat's first phase from the time the council approves the plat's findings of fact. When the preliminary plat includes phases, each successive phase is to be completed within one (1) year of the preceding phase's recording date.~~ 2. In the event that the preliminary plat is approved in construction phases (more than one (1) phase), the subdivider shall have two (2) years to complete a phase from the time the council approves the plat's findings of fact. When the preliminary plat includes phases, a phase must be completed within three (3) years of a preceding phase's recording date. When a project or master planned community contains multiple plats, a phase must be completed within three (3) years of a preceding phase's recording date within the entire project for all preliminary plats within the project not to expire.
6-3-3: -LOCATION: Street and road location shall conform to the following: G. C*ul-de-sac streets:* Cul-de-sac streets shall not be more than five hundred (500) feet in length and shall terminate with an adequate turnaround having a minimum radius of fifty (50) feet for right-of-way (Ord. 231, 12-7-1977; Ord. 439, 2-20-1996; Ord. No. 2018-08, Sec. 3, 3-6-2018)	6-3-3: -LOCATION: Street and road location shall conform to the following: G. *Cul-de-sac streets:* Cul-de-sac streets shall not be more than ~~five hundred~~ seven hundred (~~500~~ 700) feet in length and shall terminate with an adequate turnaround having a minimum radius of fifty (50) feet for right-of-way; cul-de-sacs may be extended further with approval from Kuna Rural Fire Department and emergency access. (Ord. 231, 12-7-1977; Ord. 439, 2-20-1996; Ord. No. 2018-08, Sec. 3, 3-6-2018)

6-3-4: -SPECIFICATIONS A. *Street right-of-way widths:* Street and road right-of-way widths shall conform to the adopted major street plan or comprehensive development plan and the rules of the state department of highways and the highway district or department having jurisdiction. Minimum right-of-way standards are as follows: (Ord. 231, 12-7-1977; Ord. 439, 2-20-1996; Ord. 639, 5-28-2003; Ord. 2007-02, 2-20-2007; Ord. No. 2012-24, Sec. 1, 11-6-2012; Ord. No. 2017-1, Sec. 1, 1-17-2017)	6-3-4: -SPECIFICATIONS A. *Street right-of-way widths:* Public Street and road right-of-way widths shall conform to the adopted major street plan or comprehensive development plan and the rules of the state department of highways and the highway district or department having jurisdiction. Minimum right-of-way standards are as follows: D. *Minimum road width*: The minimum road width within the Kuna city limits on public roads and shall be thirty-three (33) feet back of curb to back of curb for parking on both sides of the street and twenty-seven (27) feet for parking on one side, in all zoning districts. Exceptions may be considered by the public works director, city engineer and/or the planning and zoning director on a case-by-case basis. (Ord. 231, 12-7-1977; Ord. 439, 2-20-1996; Ord. 639, 5-28-2003; Ord. 2007-02, 2-20-2007; Ord. No. 2012-24, Sec. 1, 11-6-2012; Ord. No. 2017-1, Sec. 1, 1-17-2017)
6-3-9: -BLOCKS: Every block shall be so designed as to provide two (2) tiers of lots, except where lots back onto an arterial street, natural feature or subdivision boundary. (Ord. 414, 2-1-1994)	6-3-9: -BLOCKS: Every block shall be so designed as to provide two (2) tiers of lots, except where lots back onto an arterial street, collector street, natural feature, open space or subdivision boundary. (Ord. 414, 2-1-1994)

6-4-2: -REQUIRED PUBLIC IMPROVEMENTS: E. *Fencing:* Fencing shall be installed according to the approved fencing plan. The subdivision shall feature permanent fencing along its outer perimeter with the exception of those portions of its perimeter that feature common open space or park area accessible from the street. The fencing that is placed next to an arterial or collector road shall be punctuated with a minimum three (3) feet of parallel fencing offset, every two hundred fifty (250) linear feet [maximum] to minimize the monotony of the fence's facade. Fences shall be a maximum six (6) feet in height (measured from the crest of the road), permanent in nature and maintenance free. Fencing shall be constructed of metal, rock or vinyl materials with an approved post hole footing. Wood and chain link fencing is not permitted in a subdivision, except for school related purposes. The school authority may rely upon a powder coated or vinyl coated chain link type fencing for security related purposes. Ditch or irrigation fencing shall be determined with input from the irrigation purveyor. Fencing placed along a subdivision's internal pathways shall be of a see-through type construction to minimize tunneling effects and provide for pedestrian safety. If fencing is used in combination with a landscaped berm, the fence shall be placed behind the berm, and under no circumstances, placed on the berm.	6-4-2: -REQUIRED PUBLIC IMPROVEMENTS: E. *Fencing:* Fencing shall be installed according to the approved fencing plan. The subdivision shall feature permanent fencing along its outer perimeter with the exception of those portions of its perimeter that feature common open space or park area accessible from the street. The fencing that is placed next to an arterial or collector road shall be punctuated with a minimum three (3) feet of parallel fencing offset, every ~~two hundred fifty~~ five hundred (~~250~~ 500) linear feet [maximum] to minimize the monotony of the fence's facade. Fences shall be a maximum six (6) feet in height ~~(measured from the crest of the road)~~, permanent in nature and maintenance free. Fencing shall be constructed of metal, rock or vinyl materials with an approved post hole footing. Wood and chain link fencing is not permitted in a subdivision, except for school related purposes. The school authority may rely upon a powder coated or vinyl coated chain link type fencing for security related purposes. Ditch or irrigation fencing shall be determined with input from the irrigation purveyor. Fencing placed along a subdivision's internal pathways shall be of a see-through type construction to minimize tunneling effects and provide for pedestrian safety. If fencing is used in combination with a landscaped berm, the fence shall be placed behind the berm, and under no circumstances, placed on the berm.

G. *Flaglot:* Residential subdivision flag lots shall be developed via a common private driveway access that connects with a public street. The driveway shall not extend more than one hundred fifty (150) feet from the public street right-of-way. A common [or shared] driveway shall be relied upon to access the lots contained within the flag lot configuration, with a maximum of three (3) contiguous lots contained within a flag lot. A cross-access driveway agreement qualifying the methods of common driveway care and maintenance responsibility shall be recorded with each lot of the flag lot. The pole portion of the flag lot and designed and constructed with a minimum twenty-foot-wide curb cut to include a concrete apron. The common driveway shall be constructed of a material approved by the city engineer. The flag lot is subject to street frontage improvements. The area of the flag lot pole is exclusive of each lot's minimum square footage. Each flag lot shall meet the zoning conditions of the underlying zone. Structure(s) placed on the flag lot shall face the public street and be setback a minimum of twenty (20) feet from edge of driveway. Commercial flag lots shall be evaluated on a case by case basis.	G. *Flaglot:* Residential subdivision flag lots shall be developed via a common private driveway access that connects with a public street. The driveway shall not extend more than one hundred fifty (150) feet from the public street right-of-way. A common [or shared] driveway shall be relied upon to access the lots contained within the ~~flag~~ common lot configuration, with a maximum of ~~three~~ six (~~3~~ 6) contiguous lots ~~contained within a flag lot~~ accessed by a single common driveway that shall not extend more than two hundred (200) feet. A cross-access driveway agreement qualifying the methods of common driveway care and maintenance responsibility shall be recorded with each lot ~~of the flag lot~~ accessing via the common driveway. The pole portion of the flag lot and designed and constructed with a minimum twenty-foot-wide curb cut to include a concrete apron. The common driveway shall be constructed of a material approved by the city engineer. The flag lot and common drive is subject to street frontage improvements. The area of the flag lot pole is exclusive of each lot's minimum square footage. Each flag lot shall meet the zoning conditions of the underlying zone. Structure(s) placed on the flag lot shall face the public street and be setback a minimum of twenty (20) feet from edge of driveway. Commercial flag lots shall be evaluated on a case by case basis.
I. *Irrigation system:* The city engineer is authorized to establish rules, regulations and standards for pressurized irrigation systems and these systems shall comply with those standards, rules and regulations. Pressure irrigation systems shall be constructed in accordance with the specifications of the city's adopted pressure irrigation plan. The subdivider is obligated to annex the subdivision's lands into the Kuna Municipal Irrigation District [KMID]. Pressure irrigation facilities shall be constructed and dedicated to the city, in compliance with KMID standards and requirements. The irrigation system's design and functionality shall follow the requirements of the irrigation entity that will own, operate and maintain the system. Subdivisions shall rely upon a nonportable water source for all irrigation and watering purposes. The subdivider shall provide an underground conduit to provide pressurized irrigation water to every lot within the subdivision. Potable municipal water may not be used for subdivision irrigation purposes.	I. *Irrigation system*: The city engineer is authorized to establish rules, regulations and standards for pressurized irrigation systems and these systems shall comply with those standards, rules and regulations. Pressure irrigation systems shall be constructed in accordance with the specifications of the city's adopted pressure irrigation plan. The subdivider ~~is obligated to~~ may at subdivider's discretion annex the subdivision's lands into the Kuna Municipal Irrigation District [KMID]. Pressure irrigation facilities shall be constructed ~~and dedicated to the city,~~ in compliance with KMID standards and requirements. The irrigation system's design and functionality shall follow the requirements of the irrigation entity that will own, operate and maintain the system. Subdivisions shall rely upon a nonportable water source for all irrigation and watering purposes. If adequate water supply is not available then subdivider may use alternative water source to meet development needs. The subdivider shall provide an underground conduit to provide pressurized irrigation water to every lot within the subdivision. Potable municipal water may not be used for subdivision irrigation purposes.

N. *Pathways:* A pathway is intended to connect people to and through a subdivision as opposed to a sidewalk that is intended to protect people from the adjoining roadway. Pathways shall be centered in a public easement and be at least ten (10) feet in width. The pathway surface shall be a minimum five (5) feet in width and constructed of an impervious surface that is acceptable to the city engineer and in compliance with Americans with Disabilities Act [ADA] accessibility guidelines.	N. *Pathways:* A pathway is intended to connect people to and through a subdivision as opposed to a sidewalk that is intended to protect people from the adjoining roadway. Pathways shall be centered in a public easement and be at least ten (10) feet in width or in a public or private right-of-way with a minimum of five (5) feet of landscaping on both sides combined. The pathway surface shall be a minimum five (5) feet in width and constructed of an impervious surface that is acceptable to the city engineer and in compliance with Americans with Disabilities Act [ADA] accessibility guidelines.
Q. *Sidewalk:* Attached or detached sidewalks shall be constructed on both sides of the subdivision's streets except where its average street lot frontage is more than one hundred (100) feet in width. In this circumstance, a sidewalk is only required on one (1) side of the street, unless there is an overriding health or safety concern that would dictate sidewalk placement on both sides of the street. Additionally, ACHD has a minor local street section whose usage affords the placement of a sidewalk on one (1) side of the street, unless there is an overriding consideration requiring sidewalk placement on both sides of the street. Sidewalks shall be designed and built to Americans with Disabilities Act [ADA] accessibility guidelines, and in accordance with ACHD and city engineer standards and specifications. The minimum width of any city sidewalk shall be (5) feet. Arterial or collector streets shall feature eight-foot detached sidewalks on both sides of the street frontage regardless of subdivision lot widths. The accompanying parking strip shall also be eight (8) feet wide and landscaped with an irrigation system. A public easement shall accompany any sidewalk placed outside the right-of-way. The placement of a sidewalk outside the right-of-way requires city approval. Sidewalks constructed as part of a curb cut installation shall be designed to accommodate the additional loading requirements placed upon it.	Q. *Sidewalk:* Attached or detached sidewalks shall be constructed on both sides of the subdivision's streets except where its average street lot frontage is more than one hundred (100) feet in width. In this circumstance, a sidewalk is only required on one (1) side of the street, unless there is an overriding health or safety concern that would dictate sidewalk placement on both sides of the street. Additionally, ACHD has a minor local street section whose usage affords the placement of a sidewalk on one (1) side of the street, unless there is an overriding consideration requiring sidewalk placement on both sides of the street. Sidewalks shall be designed and built to Americans with Disabilities Act [ADA] accessibility guidelines, and in accordance with ACHD and city engineer standards and specifications. The minimum width of any city sidewalk shall be (5) feet. Arterial or collector streets shall feature eight-foot detached sidewalks on both sides of the street frontage, or five (5) feet on one side and ten (10) feet on the other side, regardless of subdivision lot widths. The accompanying parking strip shall also be eight (8) feet wide and landscaped with an irrigation system. A public easement shall accompany any sidewalk placed outside the right-of-way. The placement of a sidewalk outside the right-of-way requires city approval. Sidewalks constructed as part of a curb cut installation shall be designed to accommodate the additional loading requirements placed upon it.

S. *Street and alleys*: All streets and alleys shall be constructed in accordance with the standards and specifications adopted by the City of Kuna [city], Ada County Highway District [ACHD] and Idaho Transportation Department [ITD]. Street functionality shall be determined according to the city's adopted "2030 Functional Classified Road Map." The street right-of-way widths shall be according to the street typologies identified in Kuna City Code section 6-3-4. The distance separation for the edge of the street pavement to the developer's right-of-way requires a landscape treatment. For distance separation distances of less than ten (10) feet, provide a city approved landscape treatment to include a nonpotable underground irrigation source. For distance separations of greater than ten (10) feet, provide the remainder of the area separation with a rock application treatment acceptable to the city and the transportation authority. The developer shall enter into a license agreement with the transportation authority for landscape maintenance within the public right-of-way. Highway treatment applications will be determined on a case by case basis. A subdivider shall provide a nonconnecting [dead end] subdivision street, whose length is longer than five hundred (500) feet, with a secondary access. If the nonconnecting street terminates in a turn around, the maximum five hundred-foot street length is to be measured from the center point of the turn around to the point where it intersects with an intersecting street. Should the fire district approve a longer roadway length, the city may defer to their judgement. The city prohibits private streets and alleys unless there is a hardship circumstance that warrants this consideration and not of the controller's making. In the limited circumstances where they are approved, private streets and alleyways shall be owned and maintained by private individuals or entities and not by government agencies.	S. *Street and alleys*: All public streets and alleys shall be constructed in accordance with the standards and specifications adopted by the City of Kuna [city], Ada County Highway District [ACHD] and Idaho Transportation Department [ITD]. Street functionality shall be determined according to the city's adopted "2030 Functional Classified Road Map." The public street right-of-way widths shall be according to the street typologies identified in Kuna City Code section 6-3-4. The distance separation for the edge of the street pavement to the developer's right-of-way requires a landscape treatment. For distance separation distances of less than ten (10) feet, provide a city approved landscape treatment to include a nonpotable underground irrigation source. For distance separations of greater than ten (10) feet, provide the remainder of the area separation with a rock application treatment acceptable to the city and the transportation authority. The developer shall enter into a license agreement with the transportation authority for landscape maintenance within the public right-of-way. Highway treatment applications will be determined on a case by case basis. A subdivider shall provide a nonconnecting [dead end] subdivision street, whose length is longer than ~~five~~ seven hundred (~~500~~ 700) feet (not including any private streets), with a secondary access. If the nonconnecting street terminates in a turn around, the maximum ~~five~~ seven hundred-foot street length is to be measured from the center point of the turn around to the point where it intersects with an intersecting street. Should the fire district approve a longer roadway length, the city may defer to their judgement. ~~The city prohibits private streets and alleys unless there is a hardship circumstance that warrants this consideration and not of the controller's making. In the limited circumstances where they are approved,~~ Private streets and alleyways shall be owned and maintained by private individuals or entities and not by government agencies.

T. *Street lighting:* Street lights shall be installed within the subdivision at intersections, fire hydrants, cul-de-sacs and other types of turn around, pedestrian shelters and bus stops and according to the approved lighting plan. The subdivider shall place lighting facilities a maximum spacing of two hundred fifty (250) feet and proportionately dispersed throughout the interior and exterior of the subdivision. The street lighting shall alternate along the course of the subdivision roadways from one (1) side of the road to the other at maximum two hundred fifty-foot intervals. The subdivider shall conform to street lighting standards, as adopted by resolution of the city council. Lighting facilities shall be designed and installed according to "Dark Skies" standards. Lighting facilities will be reviewed by city staff to assure they are energy efficient, and if not, the subdivider shall provide an alternative lighting product acceptable to the city. The street lighting facilities shall be of a design standard that makes them easily exchangeable with minimal replacement cost outlay.	T. *Street lighting:* Street lights shall be installed within the subdivision at intersections, fire hydrants, cul-de-sacs and other types of turn around, pedestrian shelters and bus stops and according to the approved lighting plan. The subdivider shall place lighting facilities a maximum spacing of ~~two hundred fifty~~ three hundred twenty-five (~~250~~ 325) feet and proportionately dispersed throughout the interior and exterior of the subdivision. The street lighting shall alternate along the course of the subdivision roadways from one (1) side of the road to the other at maximum two hundred fifty-foot intervals. The subdivider shall conform to street lighting standards, as adopted by resolution of the city council. Lighting facilities shall be designed and installed according to "Dark Skies" standards. Lighting facilities will be reviewed by city staff to assure they are energy efficient, and if not, the subdivider shall provide an alternative lighting product acceptable to the city. The street lighting facilities shall be of a design standard that makes them easily exchangeable with minimal replacement cost outlay.

X. *Water supply system:* The city engineer is authorized to establish rules, regulations and standards for water supply systems and these systems shall comply with those standards rules and regulations. Each public water supply systems shall be constructed in accordance with the specifications of the city's adopted water plan. Subdivision water supply systems shall be installed as an extension of the city's public system. Buildable subdivision lots shall have a water service capable of supplying the site with potable water in sufficient volume and pressure for domestic use, and fire protection in accordance with City Code and Kuna Fire District requirements. Water supply shall meet the International Fire Code's minimum fire flow requirements. The water rights appurtenant to a tract of land, subject to subdivision, shall be dedicated to the city in sufficient water quantities to offset the subdivision's potential water demands as determined by the city engineer. The subdivision's water rights shall not be sold, abandoned, or transferred outside the city or its area of city impact. Condominium units shall have individual water meters. Planned unit development [PUD] and master planned communities require a master utility plan that addresses potable water issues. IC Sec. 50-1326 requires all water plans to be submitted to the Idaho State Department of Environmental and Community Services or its authorized agent for approval. The city engineer, or their designate, shall serve as the Idaho State's qualified licensed professional engineer [QLPE] for purposes of reviewing the city's water plan submittals. (Ord. 231, 12-7-1977; and. 1985 Code; Ord. 359, 9-3-1991; Ord. 439, 2-20-1996; Ord. 550, 8-28-2000; Ord. 553, 1-22-2001; Ord. 2006-100, 12-19-2006; and. Ord. 2007-03, 2-6-2007; Ord. 2007-02, 2-20-2007; Ord. No. 2010-15, Sec. 1, 8-3-2010; Ord. No. 2014-20, Sec. 1, 10-21-2014; Ord. No. 2016-08, Sec. 1, 4-5-2016)	X. *Water supply system:* The city engineer is authorized to establish rules, regulations and standards for water supply systems and these systems shall comply with those standards rules and regulations. Each public water supply system shall be constructed in accordance with the specifications of the city's adopted water plan, unless approved by the city. Subdivision water supply systems shall be installed as an extension of the city's public system unless approved by the city. Buildable subdivision lots shall have a water service capable of supplying the site with potable water in sufficient volume and pressure for domestic use, and fire protection in accordance with City Code and Kuna Fire District requirements. Water supply shall meet the International Fire Code's minimum fire flow requirements. ~~The water rights appurtenant to a tract of land, subject to subdivision, shall be dedicated to the city in sufficient water quantities to offset the subdivision's potential water demands as determined by the city engineer.~~ The subdivision's water rights shall not be sold, abandoned, or transferred outside the city or its area of city impact. Condominium units shall have individual water meters. Planned unit development [PUD] and master planned communities require a master utility plan that addresses potable water issues. IC Sec. 50-1326 requires all water plans to be submitted to the Idaho State Department of Environmental and Community Services or its authorized agent for approval. The city engineer, or their designate, shall serve as the Idaho State's qualified licensed professional engineer [QLPE] for purposes of reviewing the city's water plan submittals. (Ord. 231, 12-7-1977; and. 1985 Code; Ord. 359, 9-3-1991; Ord. 439, 2-20-1996; Ord. 550, 8-28-2000; Ord. 553, 1-22-2001; Ord. 2006-100, 12-19-2006; and. Ord. 2007-03, 2-6-2007; Ord. 2007-02, 2-20-2007; Ord. No. 2010-15, Sec. 1, 8-3-2010; Ord. No. 2014-20, Sec. 1, 10-21-2014; Ord. No. 2016-08, Sec. 1, 4-5-2016)

6-4-3: -FINANCIAL GUARANTEE RELATING TO COMPLETION OF SUBDIVISION IMPROVEMENTS: C. *Methods of financial guarantee:* Financial guarantees shall be submitted to and accepted by the city engineer prior to any city signatures on the final plat according to the following protocol: 2. The city engineer's estimated cost of the remaining work shall be determined, in part, from the detailed bids provided by the subdivider's contractors on contractor's letterhead. To the initial one hundred ten (110) percent estimated cost may be added sums for the following considerations: Three (3) to ten (10) percent for inflation; ten (10) to fifteen (15) percent for the city's bidding disadvantage; and twelve (12) percent to twenty (20) percent for city project management as determined by the city engineer. (Ord. 21=31, 12-7-1977; Ord. 2007-02, 2-20-2007; Ord. No. 2010-14, Sec. 1, 8-3-2010)	6-4-3: -FINANCIAL GUARANTEE RELATING TO COMPLETION OF SUBDIVISION IMPROVEMENTS: C. *Methods of financial guarantee:* Financial guarantees shall be submitted to and accepted by the city engineer prior to any city signatures on the final plat according to the following protocol: 2. The city engineer's estimated cost of the remaining work shall be determined, in part, from the detailed bids provided by the subdivider's contractors on contractor's letterhead. To the initial one hundred ten (110) percent estimated cost may be added sums for the following considerations: Three (3) to ten (10) percent for inflation; ten (10) to fifteen (15) percent for the city's bidding disadvantage; and twelve (12) percent to twenty (20) percent for city project management as determined by the city engineer. In no event shall the final amount be more than one hundred twenty (120) percent of the detailed bids provided by the subdivider. (Ord. 21=31, 12-7-1977; Ord. 2007-02, 2-20-2007; Ord. No. 2010-14, Sec. 1, 8-3-2010)

Annexation Description for
Spring Rock Subdivision
July 17, 2019

A parcel of land situated within the South 1/2 of Section 14, the East 1/2 of Section 15, the North 1/2 of Section 23, and Section 24, Township 2 North, Range 1 East, B.M., Ada County, Idaho, more particularly described as follows:

BEGINNING at an aluminum cap monument, marking the corner common to said Sections 10, 11, 14, and 15;

thence South 00°09'54" West, 2,673.29 feet to a brass cap monument, marking the 1/4 corner common to said Sections 14 and 15;

thence along the east-west centerline of said Section 14, South 89°51'58" East, 760.44 feet to the centerline of W. Ten Mile Creek Road;

thence along said centerline the following six (6) courses and distances:

South 50°06'33" East, 601.02 feet;

48.13 feet along the arc of curve to the left having a radius of 1,000.00 feet, a central angle of 02°45'27" and a long chord which bears South 51°29'16" East, 48.12 feet;

South 52°52'00" East, 628.18 feet;

60.41 feet along the arc of curve to the right having a radius of 5,000.00 feet, a central angle of 00°41'32" and a long chord which bears South 52°31'14" East, 60.41 feet;

South 52°10'28" East, 630.60 feet;

173.53 feet along the arc of curve to the right having a radius of 3,000.00 feet, a central angle of 03°18'51" and a long chord which bears South 50°31'02" East, 173.51 feet to the North boundary line of the Southeast 1/4 of the Southwest 1/4 of said Section 14;

thence along said North boundary line, South 89°44'41" East, 199.77 feet to 5/8" iron pin, PLS 5461, marking the Center-South 1/16 corner of said Section 14;

thence South 89°44'23" East, 1,325.21 feet to the Southeast 1/16 corner of said Section 14;

thence South 00°23'07" West, 1,327.65 feet to a 1/2" iron pin, no cap, marking the East 1/16 corner common to said Sections 14 and 23;

thence South 89°37'22" East, 1,326.43 feet to an aluminum cap monument marking the section corner common to said Sections 13, 14, 23, and 24;

thence South 00°43'11" West, 1,322.80 feet to a 1/2" iron pin, marking the North 1/16 corner common to said Sections 23 and 24;

thence South 89°20'53" East, 2,676.34 feet to the Center-North 1/16 corner of said Section 24;

thence South 89°22'11" East, 1,342.21 feet to a 5/8" iron pin, PLS 4431, marking the Northeast 1/16 corner of said Section 24;

thence South 00°31'46" West, 1,326.44 feet to the Center-East 1/16 corner of said Section 24;

thence South 89°18'12" East, 1,341.68 feet to an aluminum cap monument, marking the 1/4 corner common to Section 19, Township 2 North, Range 2 East, B.M., and said Section 24;

thence South 00°43'11" West, 1,323.25 feet to the South 1/16 corner common to said Sections 24 and 19;

thence North 89°24'54" West, 2,678.41 feet to the Center-South 1/16 corner of said Section 24;

thence North 00°30'23" East, 1,328.47 feet to the Center 1/4 corner of said Section 24;

thence North 89°18'12" West, 2,681.27 feet to a brass cap monument, marking the 1/4 corner common to said Sections 23 and 24;

thence North 89°36'00" West, 1,320.59 feet to a 5/8" iron pin, marking the Center-East 1/16 corner of Section 23;

thence North 00°35'36" East, 1,322.52 feet to a 5/8" iron pin, marking the North-East 1/16 corner of Section 23;

thence North 89°36'42" West, 1,323.87 feet to a 5/8" iron pin, PLS 1923, marking the Center-North 1/16 corner of said Section 23;

thence North 89°36'26" West, 1,329.66 feet to a 5/8" iron pin, marking the North-West 1/16 corner of said Section 23;

thence South 00°37'35" West, 1,321.98 feet to the Center-West 1/16 corner of said Section 23;

thence North 89°35'15" West, 1,333.83 feet to an aluminum cap monument, marking the 1/4 corner common to Section 22, Township 2 North, Range 1 East, B.M., and said Section 23;

thence North 00°47'19" East, 2,643.08 feet to an aluminum cap monument, marking the corner common to said Sections 14, 15, 22, and 23;

thence North 00°29'59" East, 1,319.34 feet to a 1/2" iron pin, PLS 2471, marking the South 1/16 corner common to said Sections 14 and 15;

thence on the South boundary line of the North 1/2 of the Southeast 1/4 of said Section 15, North 89°59'19" West, 2,323.61 feet to a 5/8" iron pin on the East boundary line of the West 1/2 of the West 1/2 of the Northwest 1/4 of the Southeast 1/4 of said Section 15;

thence on said East boundary line, North 00°10'31" East, 1,319.06 feet to the East-West centerline of said Section 15;

thence along said East-West centerline, North 89°59'40" West, 333.01 feet to a 5/8" iron pin, PLS 4998, marking the Center 1/4 of said Section 15;

thence on the North-South centerline of said Section 15, North 00°07'54" East, 177.81 feet to the centerline of the New York Canal;

thence along said centerline the following ten (10) courses and distances:

613.35 feet along the arc of a curve to the left having a radius of 1,165.00 feet, a central angle of 30°09'54" and a long chord which bears North 66°14'17" East, 606.29 feet;

North 51°09'23" East, 602.78 feet;

288.36 feet along the arc of curve to the left having a radius of 955.00 feet, a central angle of 17°18'02" and a long chord which bears North 42°30'22" East, 287.27 feet;

North 33°51'21" East, 72.22 feet;

PROFESSIONAL LAND SURVEYOR REGISTERED 11779 7/17/17 STATE OF IDAHO CODY M. McCAMMON

370.81 feet along the arc of curve to the right having a radius of 910.00 feet, a central angle of 23°20'49" and a long chord which bears North 45°31'45" East, 368.25 feet;

North 57°12'10" East, 173.84 feet;

464.67 feet along the arc of curve to the left having a radius of 960.00 feet, a central angle of 27°43'58" and a long chord which bears North 43°20'11" East, 460.15 feet;

North 29°28'12" East, 323.78 feet;

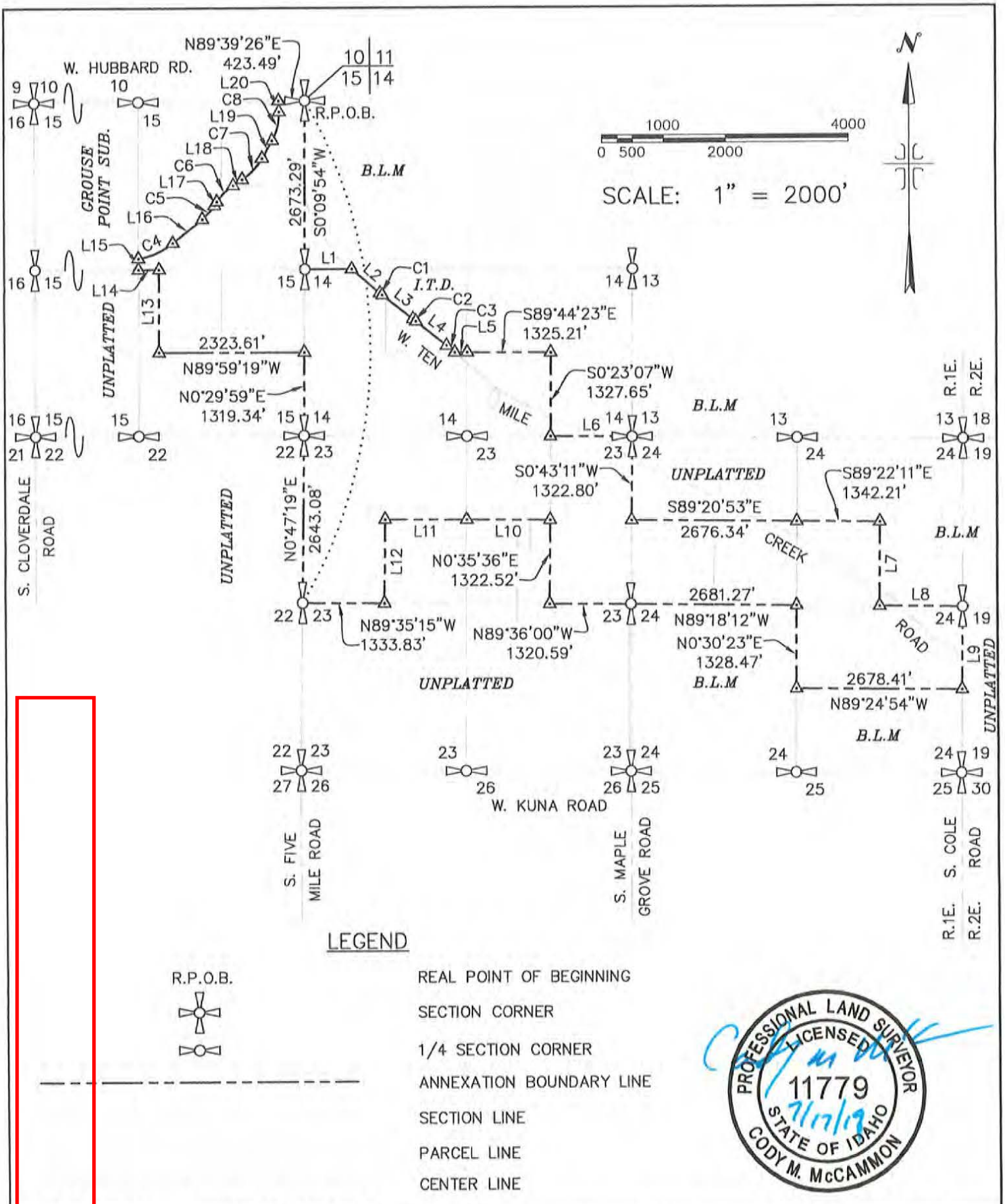
475.70 feet along the arc of curve to the left having a radius of 865.00 feet, a central angle of 31°30'34" and a long chord which bears North 13°42'55" East, 469.73 feet;

North 02°02'22" West, 173.63 feet to the centerline of W. Hubbard Road;

Thence along said centerline, North 89°39'26" East, 423.49 feet to the **REAL POINT OF BEGINNING**.

Containing 761.44 acres, more or less.

End of Description



LEGEND

R.P.O.B.	REAL POINT OF BEGINNING
	SECTION CORNER
	1/4 SECTION CORNER
- - - - - - - - - -	ANNEXATION BOUNDARY LINE
	SECTION LINE
	PARCEL LINE
	CENTER LINE

PROFESSIONAL LAND SURVEYOR LICENSED 11779 STATE OF IDAHO CODY M. McCAMMON 7/17/19

P:\Spring Rock Sub 19-192\dwg\Springrock Annexation Exhibit.dwg 7/17/2019 2:30:08 PM

IDAHO SURVEY GROUP, LLC
9955 W. EMERALD ST.
BOISE, IDAHO 83704
(208) 846-8570

EXHIBIT MAP FOR SPRING ROCK SUBDIVISION ANNEXATION

LOCATED IN THE S 1/2 OF SECTION 14, THE E 1/2 OF SECTION 15, THE N 1/2 OF SECTION 23, AND SECTION 24, T.2N., R.1E., B.M., ADA COUNTY, IDAHO

JOB NO. 19-192
SHEET NO. 1 OF 2
DWG. DATE 7/17/2019

Preliminary Plat Boundary Description for

Spring Rock Subdivision

July 17, 2019

A parcel of land situated within the South 1/2 of Section 14, the East 1/2 of Section 15, and the North 1/2 of Section 23, Township 2 North, Range 1 East, B.M., Ada County, Idaho, more particularly described as follows:

Commencing at an aluminum cap monument, marking the corner common to said Sections 10, 11, 14, and 15; thence along the West boundary line of said Section 15, South 00°09'54" West, 40.00 feet to the **REAL POINT OF BEGINNING**;

thence continuing along said West boundary line, South 00°09'54" West, 2,633.29 feet to a brass cap monument, marking the 1/4 corner common to said Sections 14 and 15;

thence along the east-west centerline of said Section 14, South 89°51'58" East, 760.44 feet to the centerline of W. Ten Mile Creek Road;

thence along said centerline the following six (6) courses and distances:

South 50°06'33" East, 601.02 feet;

48.13 feet along the arc of curve to the left having a radius of 1,000.00 feet, a central angle of 02°45'27" and a long chord which bears South 51°29'16" East, 48.12 feet;

South 52°52'00" East, 628.18 feet;

60.41 feet along the arc of curve to the right having a radius of 5,000.00 feet, a central angle of 00°41'32" and a long chord which bears South 52°31'14" East, 60.41 feet;

South 52°10'28" East, 630.60 feet;

173.53 feet along the arc of curve to the right having a radius of 3,000.00 feet, a central angle of 03°18'51" and a long chord which bears South 50°31'02" East, 173.51 feet to the North boundary line of the Southeast 1/4 of the Southwest 1/4 of said Section 14;

thence along said North boundary line, South 89°44'41" East, 199.77 feet to 5/8" iron pin, PLS 5461, marking the Center-South 1/16 corner of said Section 14;

thence South 89°44'23" East, 1,325.21 feet to the Southeast 1/16 corner of said Section 14;

thence South 00°23'07" West, 1,327.65 feet to a 1/2" iron pin, no cap, marking the East 1/16 corner common to said Sections 14 and 23;

thence South 00°35'36" West, 1,322.53 feet to a 5/8" iron pin, no cap, marking the Northeast 1/16 corner to said Section 23;

thence North 89°36'42" West, 1,323.87 feet to a 5/8" iron pin, PLS 1923, marking the Center-North 1/16 corner of said Section 23;

thence North 89°36'26" West, 1,329.66 feet to a 5/8" iron pin, marking the North-West 1/16 corner of said Section 23;

thence South 00°37'35" West, 1,321.98 feet to the Center-West 1/16 corner of said Section 23;

thence North 89°35'15" West, 1,333.83 feet to an aluminum cap monument, marking the 1/4 corner common to Section 22, Township 2 North, Range 1 East, B.M., and said Section 23;

thence North 00°47'19" East, 2,643.08 feet to an aluminum cap monument, marking the corner common to said Sections 14, 15, 22, and 23;

thence North 00°29'59" East, 1,319.34 feet to a 1/2" iron pin, PLS 2471, marking the South 1/16 corner common to said Sections 14 and 15;

thence on the South boundary line of the North 1/2 of the Southeast 1/4 of said Section 15, North 89°59'19" West, 2,323.61 feet to a 5/8" iron pin on the East boundary line of the West 1/2 of the West 1/2 of the Northwest 1/4 of the Southeast 1/4 of said Section 15;

thence on said East boundary line, North 00°10'31" East, 1,319.06 feet to the East-West centerline of said Section 15;

thence along said East-West centerline, North 89°59'40" West, 333.01 feet to a 5/8" iron pin, PLS 4998, marking the Center 1/4 of said Section 15;

thence on the North-South centerline of said Section 15, North 00°07'54" East, 177.81 feet to the centerline of the New York Canal;

thence along said centerline the following ten (10) courses and distances:

613.35 feet along the arc of a curve to the left having a radius of 1,165.00 feet, a central angle of 30°09'54" and a long chord which bears North 66°14'17" East, 606.29 feet;

North 51°09'23" East, 602.78 feet;

288.36 feet along the arc of curve to the left having a radius of 955.00 feet, a central angle of 17°18'02" and a long chord which bears North 42°30'22" East, 287.27 feet;

North 33°51'21" East, 72.22 feet;

370.81 feet along the arc of curve to the right having a radius of 910.00 feet, a central angle of 23°20'49" and a long chord which bears North 45°31'45" East, 368.25 feet;

North 57°12'10" East, 173.84 feet;

464.67 feet along the arc of curve to the left having a radius of 960.00 feet, a central angle of 27°43'58" and a long chord which bears North 43°20'11" East, 460.15 feet;

North 29°28'12" East, 323.78 feet;

475.70 feet along the arc of curve to the left having a radius of 865.00 feet, a central angle of 31°30'34" and a long chord which bears North 13°42'55" East, 469.73 feet;

North 02°02'22" West, 118.61 feet to the South right-of-way line of W. Hubbard Road;

thence along said South right-of-way line the following three (3) courses and distances:

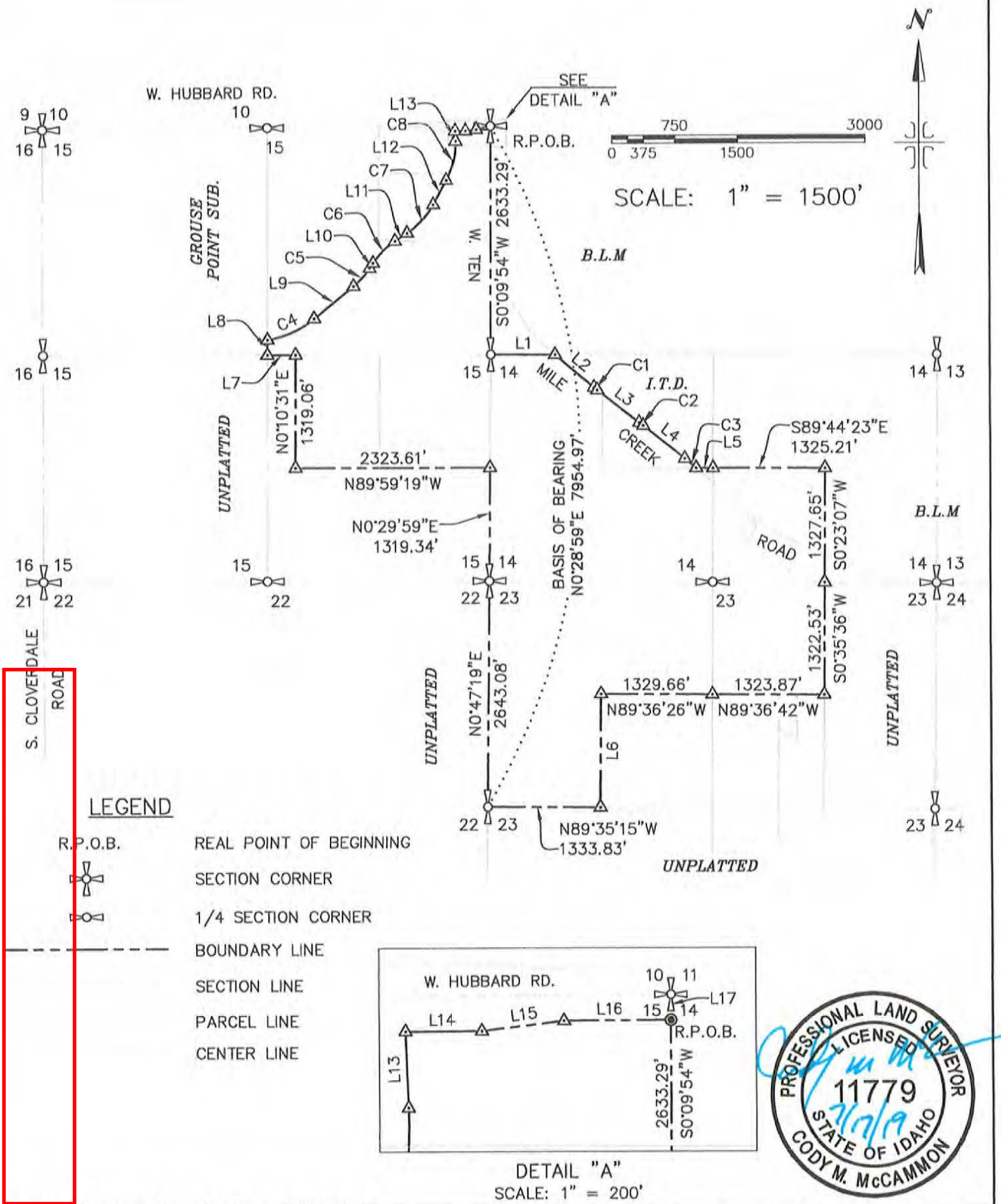
North 89°39'26" East, 121.85 feet;

North 83°04'31" East, 130.86 feet;

North 89°39'26" East, 169.66 feet to the **REAL POINT OF BEGINNING**.

Containing 476.76 acres, more or less.

End of Description.



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IDAHO SURVEY GROUP, LLC
9955 W. EMERALD ST.
BOISE, IDAHO 83704
(208) 846-8570

PRELIMINARY PLAT BOUNDARY EXHIBIT MAP FOR SPRING ROCK SUBDIVISION

LOCATED IN THE S 1/2 OF SECTION 14, THE E 1/2 OF SECTION 15, AND THE N 1/2 OF SECTION 23, T.2N., R.1E., B.M., ADA COUNTY, IDAHO

JOB NO. 19-192
SHEET NO. 1 OF 2
DG. DATE 7/17/2019

C-1 Zone Description for

Spring Rock Subdivision

July 17, 2019

A parcel of land situated within the Southwest 1/4 of Section 14, Township 2 North, Range 1 East, B.M., Ada County, Idaho, more particularly described as follows:

Commencing at a brass cap monument marking the 1/4 corner common to said Section 14 and Section 15, Township 2 North, Range 1 East, B.M., from which an aluminum cap monument marking the corner common to Sections 10, 11, 14 and 15, Township 2 North, Range 1 East, B.M., bears North 00°09'54" East, 2,673.29 feet; thence on the East-West centerline of said Section 14; South 89°51'58" East, 513.30 feet to the **REAL POINT OF BEGINNING;**

thence continuing on said East-West centerline, South 89°51'58" East, 247.13 feet to the centerline of W. Ten Mile Creek Road;

thence on said centerline the following three (3) courses and distances:

South 50°06'33" East, 601.02 feet;

48.13 feet along the arc of a curve to the left, having a radius of 1,000.00 feet, a central angle of 02°45'27" and a long chord which bears South 51°29'16" East, 48.12 feet;

South 52°52'00" East, 405.30 feet;

thence leaving said centerline, South 36°33'37" West, 446.10 feet;

thence North 49°41'09" West, 1,417.19 feet;

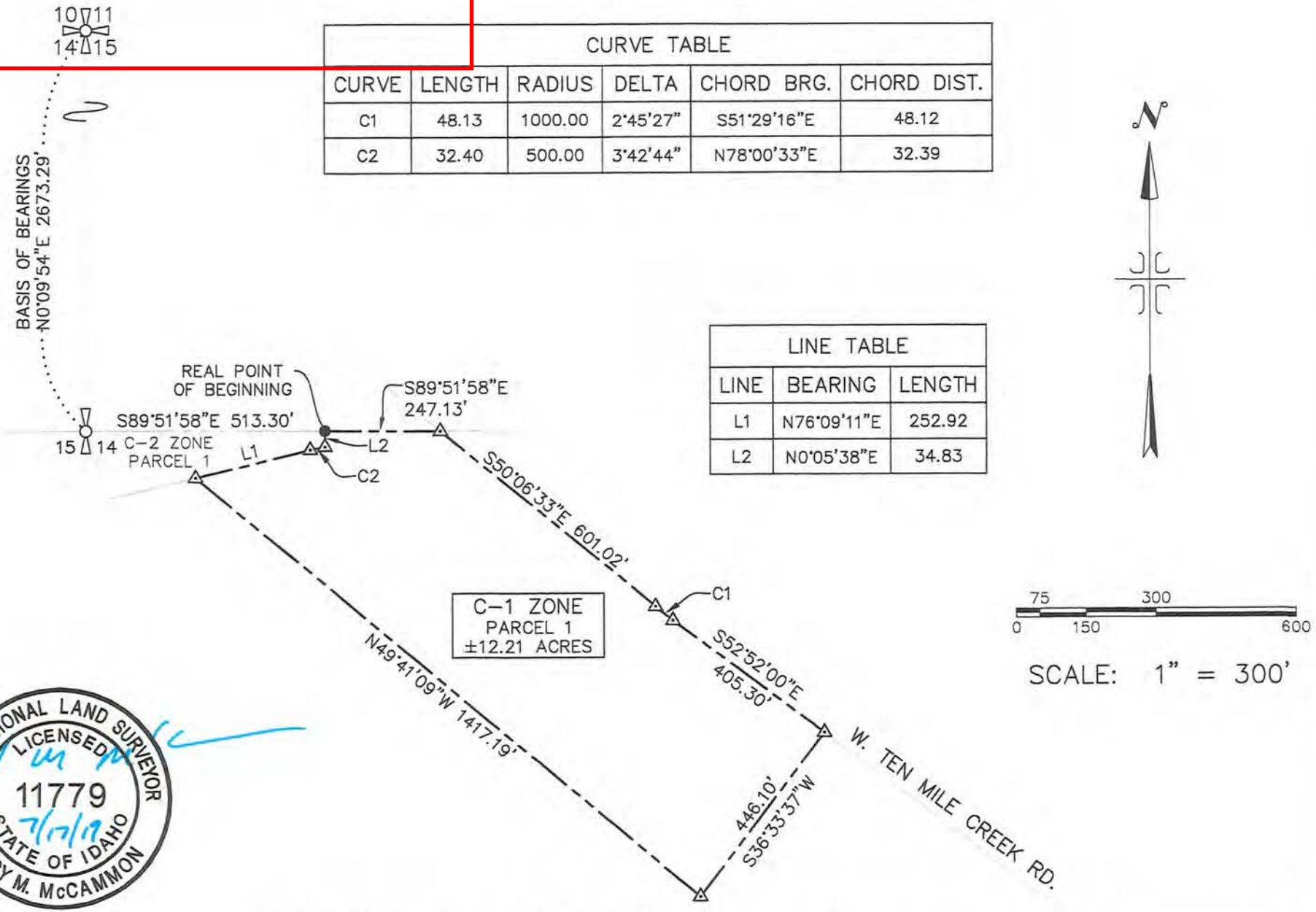
thence North 76°09'11" East, 252.92 feet;

thence 32.40 feet along the arc of a curve to the right, having a radius of 500.00 feet, a central angle of 03°42'44" and a long chord which bears North 78°00'33" East, 32.39 feet;

thence North 00°05'38" East, 34.83 feet to the **REAL POINT OF BEGINNING**.

Containing 12.21 acres, more or less.

End of Description.



CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD BRG.	CHORD DIST.
C1	48.13	1000.00	2°45'27"	S51°29'16"E	48.12
C2	32.40	500.00	3°42'44"	N78°00'33"E	32.39

LINE TABLE		
LINE	BEARING	LENGTH
L1	N76°09'11"E	252.92
L2	N0°05'38"E	34.83

PROFESSIONAL LAND SURVEYOR
LICENSED
11779
7/17/19
STATE OF IDAHO
CODY M. McCAMMON

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IDAHO SURVEY GROUP, LLC
9955 W. EMERALD ST.
BOISE, IDAHO 83704
(208) 846-8570

SPRING ROCK SUBDIVISION
EXHIBIT ___ DRAWING FOR
C-1 ZONE

LOCATED IN THE SW 1/4 OF SECTION 14,
T.2N., R.1E., B.M., ADA COUNTY, IDAHO

JOB NO. 19-192
SHEET NO. 1 OF 1
DWG. DATE 7-14-19

C-2 Zone Description for

Spring Rock Subdivision

July 17, 2019

Parcel 1

A parcel of land situated within the Northwest 1/4 of the Southwest 1/4 of Section 14, Township 2 North, Range 1 East, B.M., Ada County, Idaho, more particularly described as follows:

BEGINNING at a brass cap monument marking the 1/4 corner common to said Section 14 and Section 15, Township 2 North, Range 1 East, B.M., from which an aluminum cap monument marking the corner common to Sections 10, 11, 14 and 15, Township 2 North, Range 1 East, B.M., bears North 00°09'54" East, 2,673.29 feet;

thence on the east-west centerline of said Section 14, South 89°51'58" East, 513.30 feet;

thence leaving said east-west centerline, South 00°05'38" West, 34.83 feet;

thence 32.40 feet along the arc of a curve to the left, having a radius of 500.00 feet, a central angle of 03°42'44" and a long chord which bears South 78°00'33" West, 32.39 feet;

thence South 76°09'11" West, 409.30 feet;

thence 38.16 feet along the arc of a curve to the right, having a radius of 500.00 feet, a central angle of 04°22'22" and a long chord which bears South 78°20'22" West, 38.15 feet;

thence North 17°29'55" West, 155.63 feet to the **REAL POINT OF BEGINNING**.

Containing 1.06 acres, more or less.

AND

Parcel 2

A parcel of land situated within the Southwest 1/4 of the Southeast 1/4 of Section 14, Township 2 North, Range 1 East, B.M., Ada County, Idaho, more particularly described as follows:

Commencing at an aluminum cap monument marking the corner common to Sections 13, 14, 23 and 24, Township 2 North, Range 1 East, B.M., from which an aluminum cap monument marking the 1/4 corner common to said Sections 14 and 23, bears North 89°37'22" West, 2,652.85 feet; thence North 89°37'22" West, 1,326.43 feet to a 1/2" iron pin, no cap, marking the East 1/16 corner common to said Sections 14 and 23; thence on the East boundary line of the Southwest 1/4 of the Southeast 1/4 of said Section 14, North 00°23'07" East, 1063.07 feet to the **REAL POINT OF BEGINNING;**

thence leaving said East boundary line, South 90°00'00" West, 255.53 feet;

thence North 00°00'00" East, 265.74 feet to the North boundary line of the Southwest 1/4 of the Southeast 1/4 of said Section 14;

thence on said North boundary line, South 89°44'23" East, 257.32 feet to the Southeast 1/16 corner of said Section 14;

thence on the East boundary line of the Southwest 1/4 of the Southeast 1/4 of said Section 14, South 00°23'07" West, 264.58 feet to the **REAL POINT OF BEGINNING**.

Containing 1.56 acres, more or less.

AND

Parcel 3

A parcel of land situated within the Southwest 1/4 of the Northeast 1/4 and the Southeast 1/4 of the Northwest 1/4 of Section 24, Township 2 North, Range 1 East, B.M., Ada County, Idaho, more particularly described as follows:

Commencing at an aluminum cap monument marking the 1/4 corner common to said Section 24 and Section 19, Township 2 North, Range 1 East, B.M., from which a brass cap monument marking the corner common to Sections 19, 24, 25 and 30, Township 2 North, Range 1 East, B.M., bears South 00°44'13" West, 2,646.71 feet; thence on the east-west centerline of said Section 24, North 89°18'12" West, 1341.68 feet to the Center-East 1/16 corner of said Section 24; thence on the East boundary line of the Southwest 1/4 of the Northeast 1/4, North 00°31'46" East, 237.78 feet to the centerline of W. Ten Mile Creek Road and the **REAL POINT OF BEGINNING;**

thence on said centerline the following eight (8) courses and distances:

104.70 feet along the arc of a curve to the left, having a radius of 1,025.00 feet, a central angle of 05°51'08" and a long chord which bears North 69°20'09" West, 104.65 feet;

307.21 fee along the arc of a curve to the right, having a radius of 800.00 feet, a central angle of 22°00'08" and a long chord which bears North 61°15'40" West, 305.32 feet;

466.89 feet along the arc of a curve to the left, having a radius of 3,000.00 feet, a central angle of 08°55'01" and a long chord which bears North 54°43'07" West, 466.42 feet;

252.60 feet along the arc of a curve to the right, having a radius of 2,500.00 feet, a central angle of 05°47'21" and a long chord which bears North 56°16'56" West, 252.50 feet;

North 53°23'16" West, 302.04 feet;

252.98 feet along the arc of a curve to the left, having a radius of 1,093.00 feet, a central angle of 13°15'42" and a long chord which bears North 60°01'06" West, 252.42 feet;

North 66°38'57" West, 323.90 feet;

209.06 feet along the arc of a curve to the left, having a radius of 22,600.00 feet, a central angle of 00°31'48" and a long chord which bears North 66°54'51" West, 209.06 feet to the North boundary line of the Southeast 1/4 of the Northwest 1/4 of Section 24;

thence along said North boundary line, South 89°20'53" East, 575.15 feet to the Center-North 1/16 corner of said Section 24;

thence on the North boundary line of the Southwest 1/4 of the Northeast ¼, South 89°22'11" East, 1,342.21 feet to a 5/8" iron pin, PLS 4431, marking the Northeast 1/16 corner of said Section 24;

thence on the East boundary line of the Southwest 1/4 of the Northeast 1/4, South 00°31'46" West, 1,088.66 feet to the **REAL POINT OF BEGINNING**.

Containing 22.91 acres, more or less.

AND

Parcel 4

A parcel of land situated within the Northeast 1/4 of the Southeast 1/4 of Section 24, Township 2 North, Range 1 East, B.M., Ada County, Idaho, more particularly described as follows:

BEGINNING at an aluminum cap monument marking the 1/4 corner common to said Section 24 and Section 19, Township 2 North, Range 1 East, B.M., from which a brass cap monument marking the corner common to Sections 19, 24, 25 and 30, Township 2 North, Range 1 East, B.M., bears South 00°44'13" West, 2,646.71 feet;

thence on the section line common to said Sections 19 and 24, South 00°43'11" West, 808.23 feet to the centerline of W. Ten Mile Creek Road;

thence on said centerline the following three (3) courses and distances:

North 69°39'03" West, 32.90 feet;

404.18 feet along the arc of a curve to the right, having a radius of 978.00 feet, a central angle of 23°40'44" and a long chord which bears North 57°48'42" West, 401.31 feet;

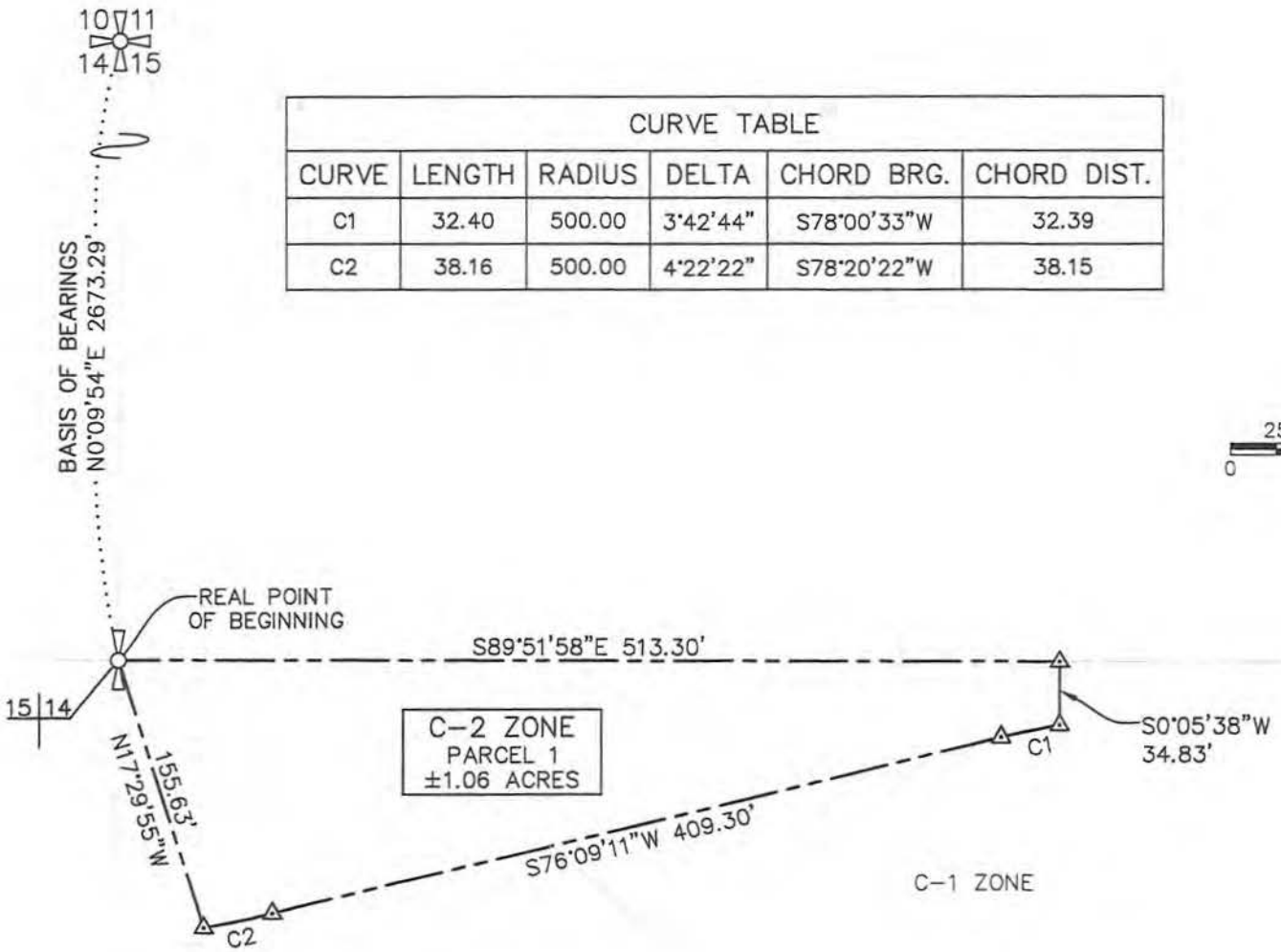
North 45°58'20" West, 856.19 feet to the east-west centerline of said Section 24;

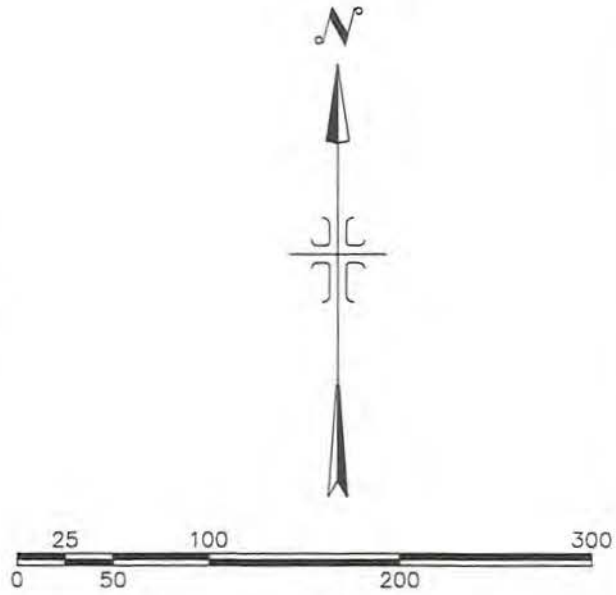
thence on said east-west centerline, South 89°18'12" East, 996.30 feet to the **REAL POINT OF BEGINNING**.

Containing 10.34 acres, more or less.

End of Description.

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD BRG.	CHORD DIST.
C1	32.40	500.00	3°42'44"	S78°00'33"W	32.39
C2	38.16	500.00	4°22'22"	S78°20'22"W	38.15





SCALE: 1" = 100'

PROFESSIONAL LAND SURVEYOR
LICENSED
11779
7/17/19
STATE OF IDAHO
CODY M. McCAMMON

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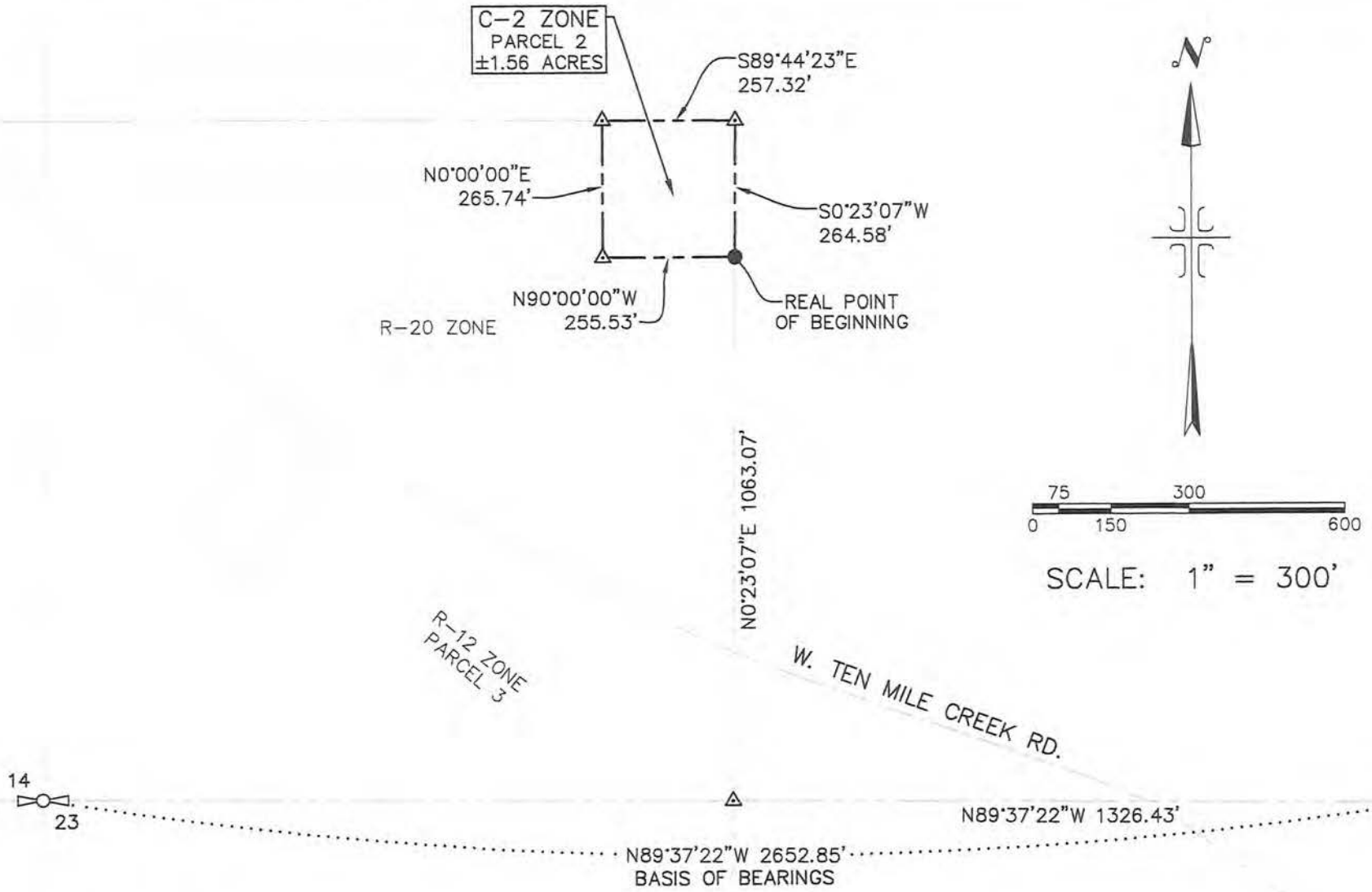
IDAHO SURVEY GROUP, LLC
9955 W. EMERALD ST.
BOISE, IDAHO 83704
(208) 846-8570

SPRING ROCK SUBDIVISION
EXHIBIT ___ DRAWING FOR
C-2 ZONE (PARCEL 1)

LOCATED IN THE NW 1/4 OF THE SW 1/4 OF SECTION 14, T.2N., R.1E., B.M., ADA COUNTY, IDAHO

JOB NO. 19-192
SHEET NO. 1 OF 3
DWG. DATE 7-14-19



PROFESSIONAL LAND SURVEYOR
LICENSED
11779
7/17/19
STATE OF IDAHO
CODY M. McCAMMON

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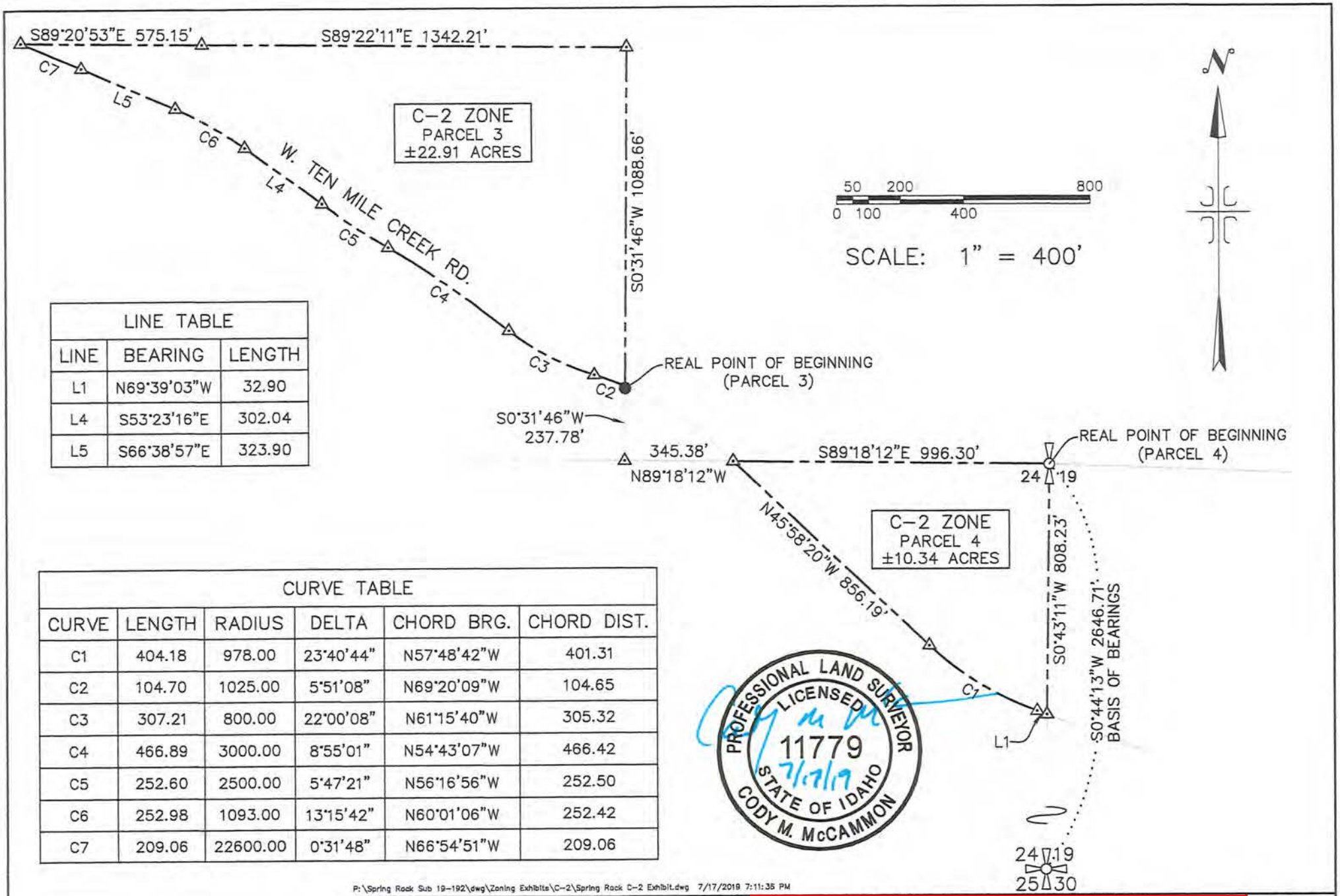
IDAHO SURVEY GROUP, LLC
9955 W. EMERALD ST.
BOISE, IDAHO 83704
(208) 846-8570

SPRING ROCK SUBDIVISION
EXHIBIT ___ DRAWING FOR
C-2 ZONE (PARCEL 2)

LOCATED IN THE SW 1/4 OF THE SE 1/4 OF SECTION 14, T.2N., R.1E., B.M., ADA COUNTY, IDAHO

JOB NO. 19-192
SHEET NO. 2 OF 3
DWG. DATE 7-12-19



LINE TABLE		
LINE	BEARING	LENGTH
L1	N69°39'03"W	32.90
L4	S53°23'16"E	302.04
L5	S66°38'57"E	323.90

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD BRG.	CHORD DIST.
C1	404.18	978.00	23°40'44"	N57°48'42"W	401.31
C2	104.70	1025.00	5°51'08"	N69°20'09"W	104.65
C3	307.21	800.00	22°00'08"	N61°15'40"W	305.32
C4	466.89	3000.00	8°55'01"	N54°43'07"W	466.42
C5	252.60	2500.00	5°47'21"	N56°16'56"W	252.50
C6	252.98	1093.00	13°15'42"	N60°01'06"W	252.42
C7	209.06	22600.00	0°31'48"	N66°54'51"W	209.06

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IDAHO SURVEY GROUP, LLC
9955 W. EMERALD ST.
BOISE, IDAHO 83704
(208) 846-8570

SPRING ROCK SUBDIVISION
EXHIBIT ___ DRAWING FOR
C-2 ZONE (PARCEL'S 3 AND 4)

LOCATED IN THE NW 1/4, THE NE 1/4 AND THE SE 1/4 OF SECTION 24, T.2N., R.1E., B.M., ADA COUNTY, IDAHO

JOB NO. 19-192
SHEET NO. 3 OF 3
DWG. DATE 7-14-19

R-6 Zone Description for

Spring Rock Subdivision

July 17, 2019

A parcel of land situated within the South 1/2 of Section 14, the East 1/2 of Section 15, the North 1/2 of Section 23, and Section 24, Township 2 North, Range 1 East, B.M., Ada County, Idaho, more particularly described as follows:

BEGINNING at a brass cap monument marking the 1/4 corner common to said Sections 14 and 15, from which an aluminum cap monument marking the corner common to said Sections 10, 11, 14 and 15 bears North 00°09'54" East, 2,673.29 feet;

thence South 17°29'55" East, 155.63 feet;

thence 38.16 feet along the arc of a curve to the left, having a radius of 500.00 feet, a central angle of 04°22'22" and a long chord which bears North 78°20'22" East, 38.15 feet;

thence North 76°09'11" East, 156.38 feet;

thence South 49°41'09" East, 1,417.19 feet;

thence North 36°33'37" East, 446.10 feet to the centerline of W. Ten Mile Creek Road;

thence on said centerline the following six (6) courses and distances:

South 52°52'00" East, 222.88 feet;

60.41 feet along the arc of a curve to the right, having a radius of 5,000.00 feet, a central angle of 00°41'32" and a long chord which bears South 52°31'14" East, 60.41 feet;

South 52°10'28" East, 630.60 feet;

173.53 feet along the arc of a curve to the right, having a radius of 3,000.00 feet, a central angle of 03°18'51" and a long chord which bears South 50°31'02" East, 173.51 feet;

South 48°51'37" East, 696.89 feet;

335.01 feet along the arc of a curve to the left, having a radius of 2,100.00 feet, a central angle of 09°08'25" and a long chord which bears South 53°25'49" East, 334.66 feet;

thence leaving said centerline, South 36°45'08" West, 503.97 feet;

thence South 49°44'00" East, 957.46 feet;

thence North 40°17'57" East, 453.64 feet to a 1/2" iron pin, no cap, marking the East 1/16 corner common to said Sections 14 and 23;

thence South 89°37'22" East, 1,326.43 feet to an aluminum cap monument marking the section corner common to said Sections 13, 14, 23, and 24;

thence South 00°43'11" West, 1,322.80 feet to a 1/2" iron pin, marking the North 1/16 corner common to said Sections 23 and 24;

thence on the North boundary of the South 1/2 of the Northwest 1/4 of said Section 24, South 89°20'53" East, 2,101.19 feet to said centerline;

thence on said centerline the following eight (8) courses and distances:

209.06 feet along the arc of a curve to the right, having a radius of 22,600.00 feet, a central angle of 00°31'48" and a long chord which bears South 66°54'51" East, 209.06 feet;

South 66°38'57" East, 323.90 feet;

252.98 feet along the arc of a curve to the right, having a radius of 1,093.00 feet, a central angle of 13°15'42" and a long chord which bears South 60°01'06" East, 252.42 feet;

South 53°23'16" East, 302.04 feet;

252.60 feet along the arc of a curve to the left, having a radius of 2,500.00 feet, a central angle of 05°47'21" and a long chord which bears South 56°16'56" East, 252.50 feet;

466.89 feet along the arc of a curve to the right, having a radius of 3,000.00 feet, a central angle of 08°55'01" and a long chord which bears South 54°43'07" East, 466.42 feet;

307.21 feet along the arc of a curve to the left, having a radius of 800.00 feet, a central angle of 22°00'08" and a long chord which bears South 61°15'40" East, 305.32 feet;

104.70 feet along the arc of a curve to the right, having a radius of 1,025.00 feet, a central angle of 05°51'08" and a long chord which bears South 69°20'09" East, 104.65 feet to the West boundary line of the Southeast 1/4 of the Northeast 1/4 of said Section 24;

thence on said West boundary line, South 00°31'46" West, 237.78 feet to the Center-East 1/16 corner of said Section 24;

thence along the South boundary line of the Southeast 1/4 of the Northeast 1/4, South 89°18'12" East, 345.38 feet to said centerline;

thence on said centerline the following three (3) courses and distances:

South 45°58'20" East, 856.19 feet;

404.18 feet along the arc of a curve to the left, having a radius of 978.00 feet, a central angle of 23°40'44" and a long chord which bears South 57°48'42" East, 401.31 feet;

South 69°39'03" East, 32.90 feet;

thence South 00°43'11" West, 515.02 feet to the South 1/16 corner common to said Sections 24 and 19;

thence North 89°24'54" West, 2,678.41 feet to the Center-South 1/16 corner of said Section 24;

thence North 00°30'23" East, 1,328.47 feet to the Center 1/4 corner of said Section 24;

thence North 89°18'12" West, 2,681.27 feet to a brass cap monument, marking the 1/4 corner common to said Sections 23 and 24;

thence North 89°36'00" West, 1,320.59 feet to a 5/8" iron pin, marking the Center-East 1/16 corner of Section 23;

thence North 00°35'36" East, 1,322.52 feet to a 5/8" iron pin, marking the North-East 1/16 corner of Section 23;

thence North 89°36'42" West, 1,323.87 feet to a 5/8" iron pin, PLS 1923, marking the Center-North 1/16 corner of said Section 23;

thence North 89°36'26" West, 1,329.66 feet to a 5/8" iron pin, marking the North-West 1/16 corner of said Section 23;

thence South 00°37'35" West, 1,321.98 feet to the Center-West 1/16 corner of said Section 23;

thence North 89°35'15" West, 1,333.83 feet to an aluminum cap monument, marking the 1/4 corner common to Section 22, Township 2 North, Range 1 East, B.M., and said Section 23;

thence North 00°47'19" East, 2,643.08 feet to an aluminum cap monument, marking the corner common to said Sections 14, 15, 22, and 23;

thence North 00°29'59" East, 1,319.34 feet to a 1/2" iron pin, PLS 2471, marking the South 1/16 corner common to said Sections 14 and 15;

thence on the South boundary line of the North 1/2 of the Southeast 1/4 of said Section 15, North 89°59'19" West, 2,323.61 feet to a 5/8" iron pin on the East boundary line of the West 1/2 of the West 1/2 of the Northwest 1/4 of the Southeast 1/4 of said Section 15;

thence on said East boundary line, North 00°10'31" East, 1,319.06 feet to the East-West centerline of said Section 15;

thence along said East-West centerline, North 89°59'40" West, 333.01 feet to a 5/8" iron pin, PLS 4998, marking the Center 1/4 of said Section 15;

thence on the North-South centerline of said Section 15, North 00°07'54" East, 177.81 feet to the centerline of the New York Canal;

thence along said centerline the following seven (7) courses and distances:

613.35 feet along the arc of a curve to the left, having a radius of 1,165.00 feet, a central angle of 30°09'54" and a long chord which bears North 66°14'17" East, 606.29 feet;

North 51°09'23" East, 602.78 feet;

288.36 feet along the arc of curve to the left, having a radius of 955.00 feet, a central angle of 17°18'02" and a long chord which bears North 42°30'22" East, 287.27 feet;

North 33°51'21" East, 72.22 feet;

370.81 feet along the arc of curve to the right, having a radius of 910.00 feet, a central angle of 23°20'49" and a long chord which bears North 45°31'45" East, 368.25 feet;

North 57°12'10" East, 173.84 feet;

281.01 feet along the arc of a curve to the left, having a radius of 960.00 feet, a central angle of 16°46'18" and a long chord which bears North 48°49'01" East, 280.01 feet;

thence leaving said centerline, South 49°34'07" East, 120.73 feet;

thence South 44°13'49" East, 110.01 feet;

thence 64.97 feet along the arc of a curve to the left, having a radius of 2,209.12 feet, a central angle of 01°41'06" and a long chord which bears North 44°33'14" East, 64.97 feet;

thence South 47°22'15" East, 67.48 feet;

thence South 49°31'42" East, 320.01 feet;

thence 70.09 feet along the arc of a curve to the right, having a radius of 148.50 feet, a central angle of 27°02'36" and a long chord which bears South 36°00'24" East, 69.44 feet;

thence North 87°11'27" East, 124.76 feet;

thence South 89°50'06" East, 116.03 feet;

thence South 00°09'54" West, 1,194.06 feet to the **REAL POINT OF BEGINNING.**

EXCEPTING therefrom the following described parcel:

A parcel of land situated within the South 1/2 of the Southwest 1/4 of Section 14, Township 2 North, Range 1 East, B.M., Ada County, Idaho, more particularly described as follows:

Commencing at a brass cap monument marking the 1/4 corner common to said Section 14 and Section 15, Township 2 North, Range 2 East, B.M., from which an aluminum cap monument marking the corner common to Sections 10, 11, 14 and 15, Township 2 North, Range 1 East B.M. bears North 00°09'54" East, 2,673.29 feet; thence South 00°29'59" West, 1,319.34 feet to a 1/2" iron pin, PLS 2471, marking the South 1/16 corner common to said Sections 14 and 15; thence South 68°45'14" East, 237.33 feet to the **REAL POINT OF BEGINNING "B";**

thence South 89°39'22" East, 1,235.10 feet;

thence South 00°00'00" East, 111.41 feet;

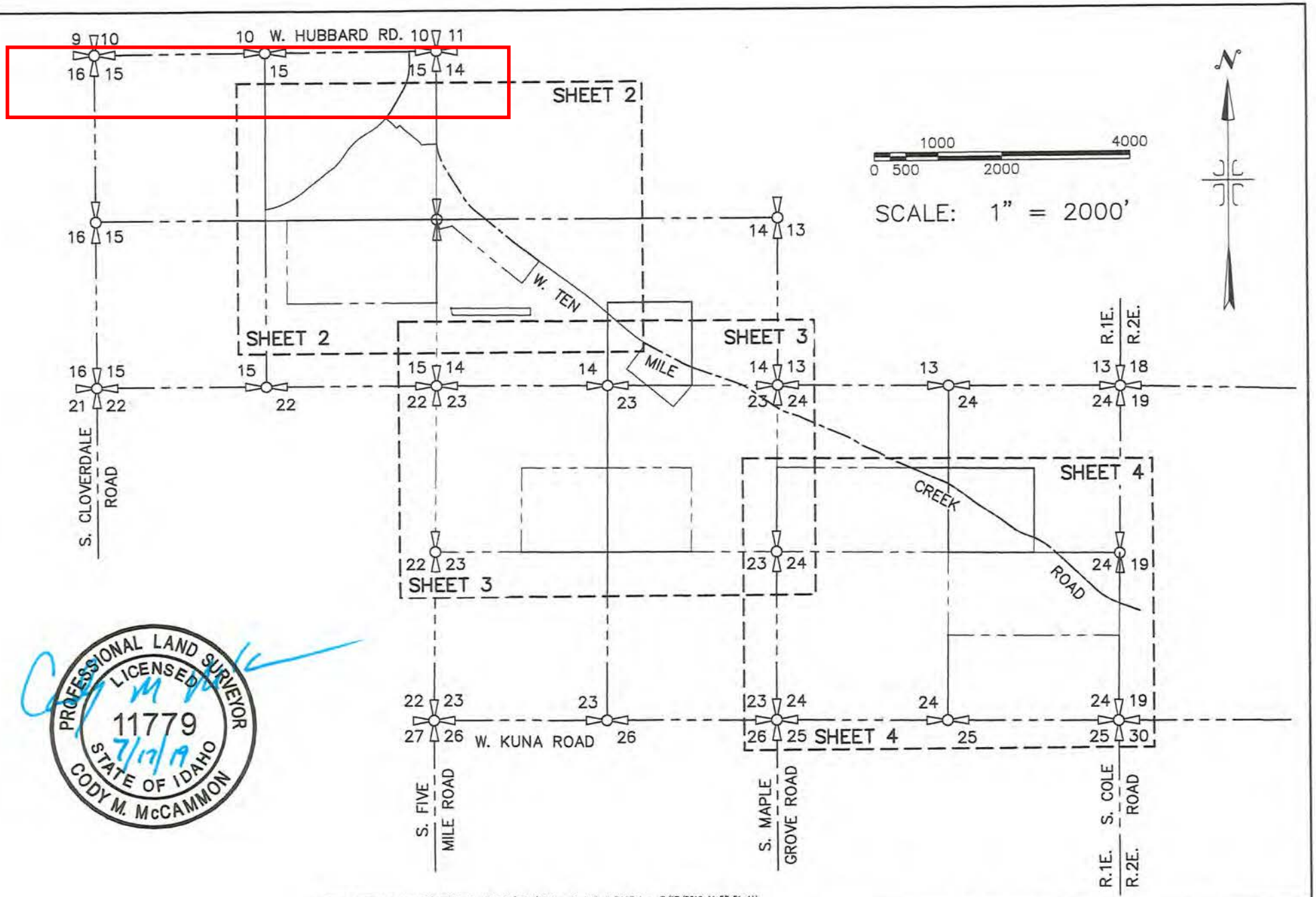
thence North 89°36'03" West, 1,199.11 feet;

thence 26.36 feet along the arc of a curve to the right, having a radius of 20.00 feet, a central angle of 75°31'42" and a long chord which bears North 51°50'51" West, 24.50 feet;

thence North 09°57'29" West, 96.79 feet to the **REAL POINT OF BEGINNING "B".**

Containing 660.78 acres, more or less.

End of Description.



PROFESSIONAL LAND SURVEYOR
LICENSED
11779
STATE OF IDAHO
CODY M. McCAMMON
7/17/19

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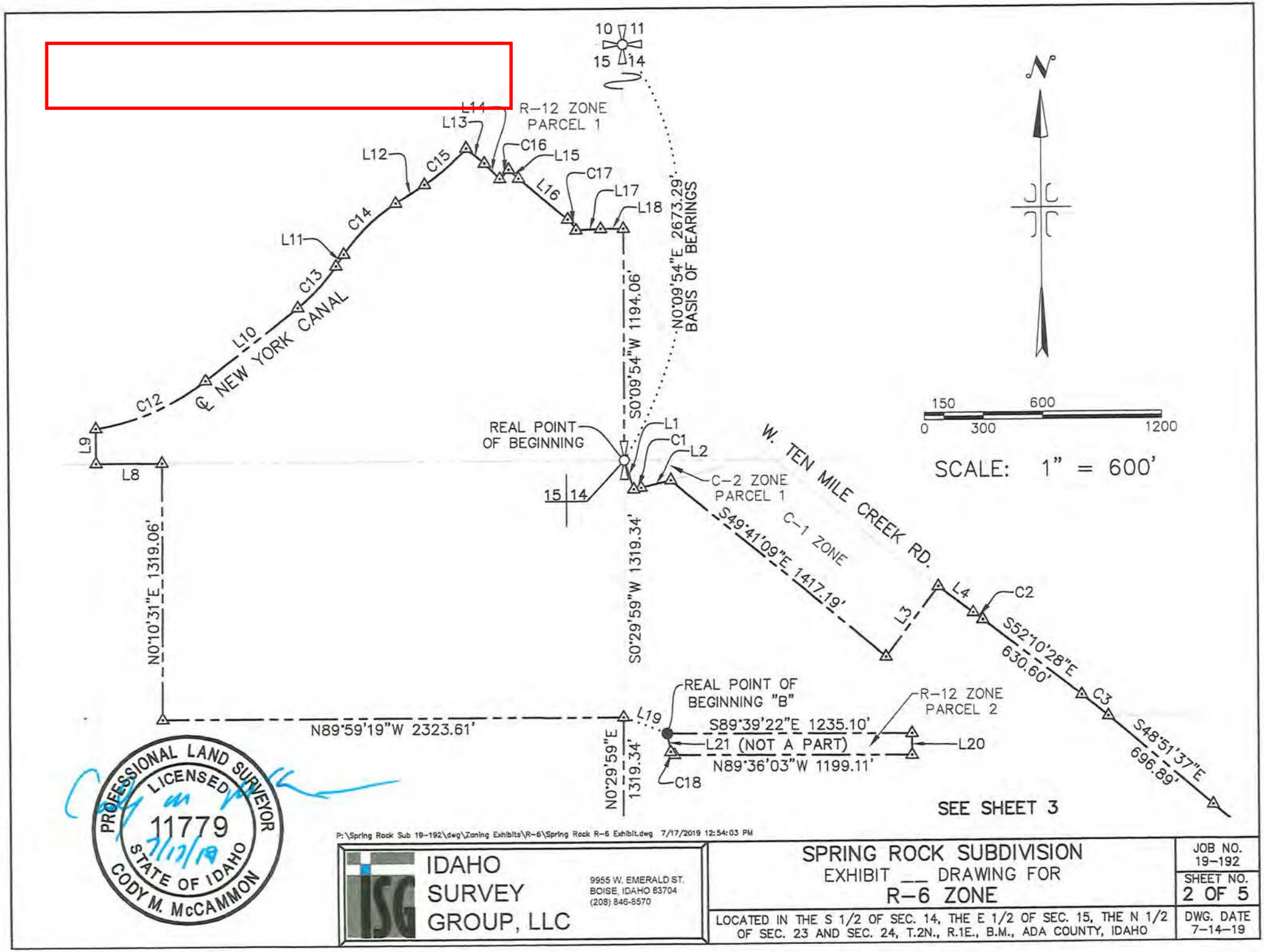
IDAHO SURVEY GROUP, LLC
9955 W. EMERALD ST.
BOISE, IDAHO 83704
(208) 846-8570

SPRING ROCK SUBDIVISION
EXHIBIT ___ DRAWING FOR
R-6 ZONE

LOCATED IN THE S 1/2 OF SEC. 14, THE E 1/2 OF SEC. 15, THE N 1/2 OF SEC. 23 AND SEC. 24, T.2N., R.1E., B.M., ADA COUNTY, IDAHO

JOB NO. 19-192
SHEET NO. 1 OF 5
DWG. DATE 7-14-19



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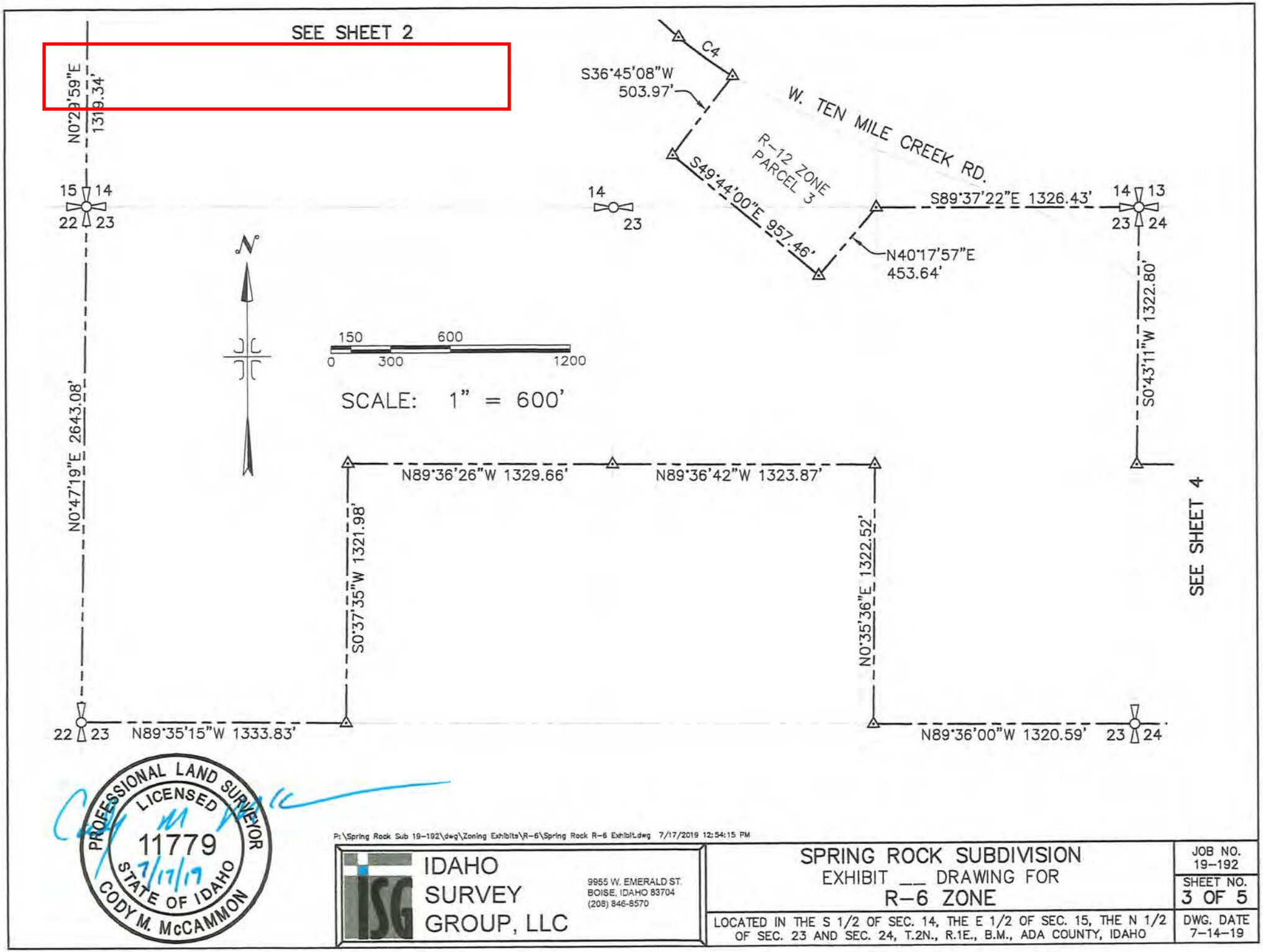
IDAHO SURVEY GROUP, LLC
9955 W. EMERALD ST.
BOISE, IDAHO 83704
(208) 846-8570

SPRING ROCK SUBDIVISION
EXHIBIT ___ DRAWING FOR
R-6 ZONE

LOCATED IN THE S 1/2 OF SEC. 14, THE E 1/2 OF SEC. 15, THE N 1/2 OF SEC. 23 AND SEC. 24, T.2N., R.1E., B.M., ADA COUNTY, IDAHO

JOB NO. 19-192
SHEET NO. 2 OF 5
DWG. DATE 7-14-19


SEE SHEET 2
C4
S36°45'08"W
503.97'
W. TEN MILE CREEK RD.
R-12 ZONE
PARCEL 3
S49°44'00"E 957.46'
N40°17'57"E
453.64'
S89°37'22"E 1326.43'
N0°29'59"E
1319.34'
15 14
22 23
14
23
14 13
23 24
N
150 600
0 300 1200
SCALE: 1" = 600'
N0°47'19"E 2643.08'
S0°43'11"W 1322.80'
N89°36'26"W 1329.66'
N89°36'42"W 1323.87'
S0°37'35"W 1321.98'
N0°35'36"E 1322.52'
SEE SHEET 4
22 23
N89°35'15"W 1333.83'
N89°36'00"W 1320.59'
23 24
PROFESSIONAL LAND SURVEYOR
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7/17/19
STATE OF IDAHO
CODY M. McCAMMON
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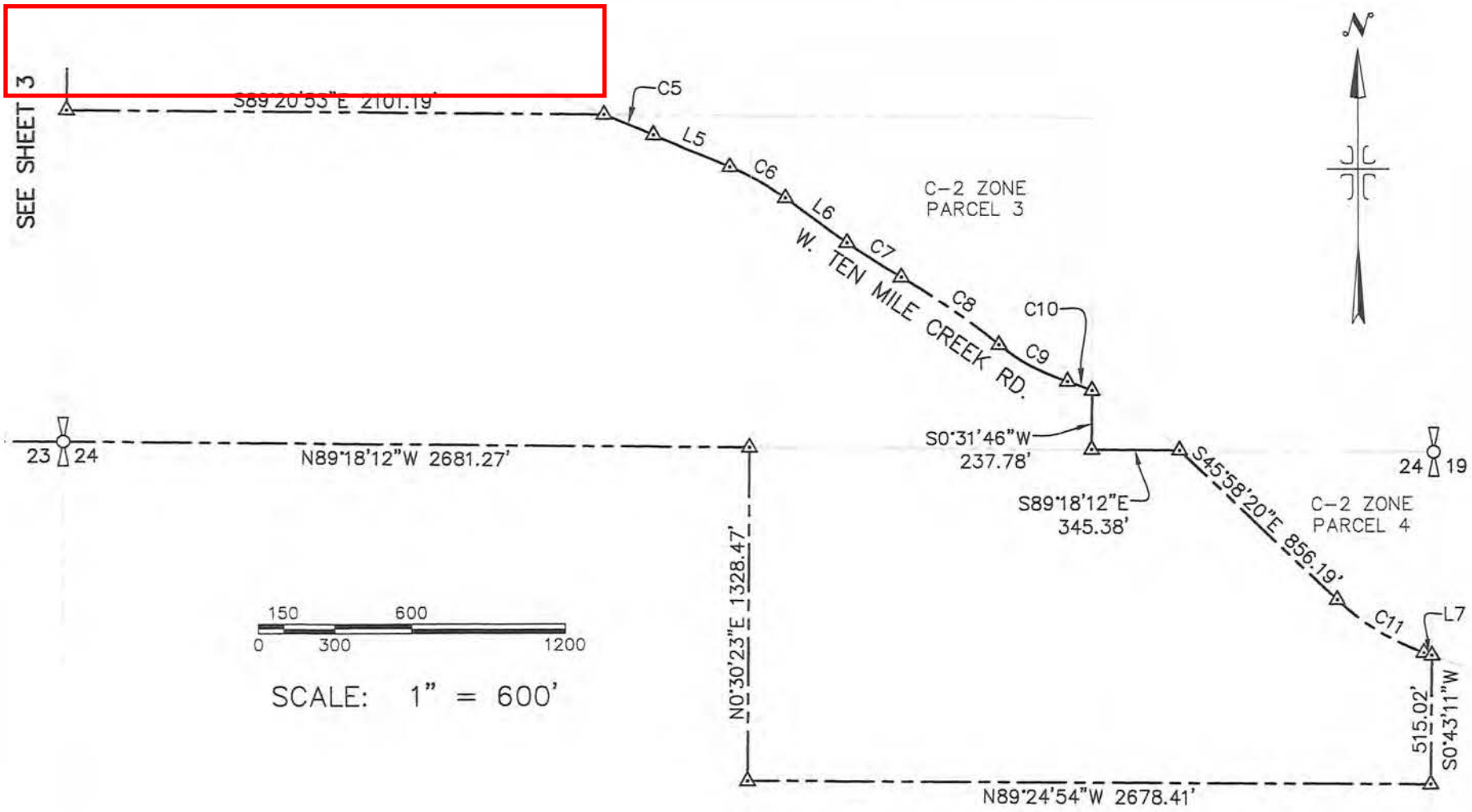
IDAHO SURVEY GROUP, LLC
9955 W. EMERALD ST.
BOISE, IDAHO 83704
(208) 846-8570
SPRING ROCK SUBDIVISION
EXHIBIT __ DRAWING FOR
R-6 ZONE
LOCATED IN THE S 1/2 OF SEC. 14, THE E 1/2 OF SEC. 15, THE N 1/2 OF SEC. 23 AND SEC. 24, T.2N., R.1E., B.M., ADA COUNTY, IDAHO
JOB NO. 19-192
SHEET NO. 3 OF 5
DWG. DATE 7-14-19



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7/17/19
STATE OF IDAHO
CODY M. McCAMMON

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IDAHO SURVEY GROUP, LLC
9955 W. EMERALD ST.
BOISE, IDAHO 83704
(208) 846-8570

SPRING ROCK SUBDIVISION
EXHIBIT __ DRAWING FOR
R-6 ZONE

LOCATED IN THE S 1/2 OF SEC. 14, THE E 1/2 OF SEC. 15, THE N 1/2 OF SEC. 23 AND SEC. 24, T.2N., R.1E., B.M., ADA COUNTY, IDAHO

JOB NO. 19-192
SHEET NO. 4 OF 5
DWG. DATE 7-14-19

LINE TABLE		
LINE	BEARING	LENGTH
L1	S17°29'55"E	155.63
L2	N76°09'11"E	156.38
L3	N36°33'37"E	446.10
L4	S52°52'00"E	222.88
L5	S66°38'57"E	323.90
L6	S53°23'16"E	302.04
L7	S69°39'03"E	32.90
L8	N89°59'40"W	333.01
L9	N0°07'54"E	177.81
L10	N51°09'23"E	602.78
L11	N33°51'21"E	72.22

LINE TABLE		
LINE	BEARING	LENGTH
L12	N57°12'10"E	173.84
L13	S49°34'07"E	120.73
L14	S44°13'49"E	110.01
L15	S47°22'15"E	67.48
L16	S49°31'42"E	320.01
L17	N87°11'27"E	124.76
L18	S89°50'06"E	116.03
L19	S68°45'14"E	237.33
L20	S0°00'00"E	111.41
L21	N9°57'29"W	96.79

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD BRG.	CHORD DIST.
C1	38.16	500.00	4°22'22"	N78°20'22"E	38.15
C2	60.41	5000.00	0°41'32"	S52°31'14"E	60.41
C3	173.53	3000.00	3°18'51"	S50°31'02"E	173.51
C4	335.01	2100.00	9°08'25"	S53°25'49"E	334.66
C5	209.06	22600.00	0°31'48"	S66°54'51"E	209.06
C6	252.98	1093.00	13°15'42"	S60°01'06"E	252.42
C7	252.60	2500.00	5°47'21"	S56°16'56"E	252.50
C8	466.89	3000.00	8°55'01"	S54°43'07"E	466.42
C9	307.21	800.00	22°00'08"	S61°15'40"E	305.32
C10	104.70	1025.00	5°51'08"	S69°20'09"E	104.65
C11	404.18	978.00	23°40'44"	S57°48'42"E	401.31
C12	613.35	1165.00	30°09'54"	N66°14'17"E	606.29
C13	288.36	955.00	17°18'02"	N42°30'22"E	287.27
C14	370.81	910.00	23°20'49"	N45°31'46"E	368.25
C15	281.01	960.00	16°46'18"	N48°49'01"E	280.01
C16	64.97	2209.12	1°41'06"	N44°33'14"E	64.97
C17	70.09	148.50	27°02'36"	S36°00'24"E	69.44
C18	26.36	20.00	75°31'42"	N51°50'51"W	24.50

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STATE OF IDAHO
CODY M. McCAMMON
7/17/19

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IDAHO SURVEY GROUP, LLC
9955 W. EMERALD ST.
BOISE, IDAHO 83704
(208) 846-8570

SPRING ROCK SUBDIVISION
EXHIBIT ___ DRAWING FOR
R-6 ZONE

LOCATED IN THE S 1/2 OF SEC. 14, THE E 1/2 OF SEC. 15, THE N 1/2 OF SEC. 23 AND SEC. 24, T.2N., R.1E., B.M., ADA COUNTY, IDAHO

JOB NO. 19-192
SHEET NO. 5 OF 5
DWG. DATE 7-14-19

R-12 Zone Description for

Spring Rock Subdivision

July 17, 2019

Parcel 1

A parcel of land situated in the Northeast 1/4 of Section 15, Township 2 North, Range 1 East, B.M., Ada County, Idaho, more particularly described as follows:

BEGINNING at an aluminum cap monument marking the corner common to Sections 10, 11, 14 and 15, Township 2 North, Range 1 East, B.M., from which a brass cap monument marking the 1/4 corner common to Sections 14 and 15, Township 2 North, Range 1 East, B.M., bears South 00°09'54" West, 2,673.29 feet;

thence on the East boundary line of said Section 15, South 00°09'54" West, 1,479.23 feet

thence leaving said East boundary line, North 89°50'06" West, 116.03 feet;

thence South 87°11'27" West, 124.76 feet;

thence 70.09 feet along the arc of a curve to the left, having a radius of 148.50 feet, a central angle of 27°02'36" and a long chord which bears North 36°00'24" West, 69.44 feet;

thence North 49°31'42" West, 320.01 feet;

thence North 47°22'15" West, 67.48 feet;

thence 64.97 feet along the arc of a curve to the right, having a radius of 2,209.12 feet, a central angle of 01°41'06" and a long chord which bears South 44°33'14" West, 64.97 feet;

thence North 44°13'49" West, 110.01 feet;

thence North 49°34'07" West, 120.73 feet to the centerline of the New York Canal;

thence on said centerline the following four (4) courses and distances:

183.66 feet along the arc of a curve to the left, having a radius of 960.00 feet, a central angle of 10°57'41" and a long chord which bears North 34°57'02" East, 183.38 feet;

North 29°28'12" East, 323.78 feet;

475.70 feet along the arc of a curve to the left, having a radius of 865.00 feet, a central angle of 31°30'34" and a long chord which bears North 13°42'55" East, 469.73 feet;

PROFESSIONAL LAND SURVEYOR REGISTERED 11779 STATE OF IDAHO 7/17/19

North 02°02'22" West, 173.63 feet to the North boundary line of said Section 15;

thence on said North Boundary line, North 89°39'26" East, 423.49 feet the **REAL POINT OF BEGINNING**.

Containing 17.55 acres, more or less.

AND

Parcel 2

A parcel of land situated within the South 1/2 of the Southwest 1/4 of Section 14, Township 2 North, Range 1 East, B.M., Ada County, Idaho, more particularly described as follows:

Commencing at a brass cap monument marking the 1/4 corner common to said Section 14 and Section 15, Township 2 North, Range 2 East, B.M., from which an aluminum cap monument marking the corner common to Sections 10, 11, 14 and 15, Township 2 North, Range 1 East B.M. bears North 00°09'54" East, 2,673.29 feet; thence South 00°29'59" West, 1,319.34 feet to a 1/2" iron pin, PLS 2471, marking the South 1/16 corner common to said Sections 14 and 15; thence South 68°45'14" East, 237.33 feet to the **REAL POINT OF BEGINNING;**

thence South 89°39'22" East, 1,235.10 feet;

thence South 00°00'00" East, 111.41 feet;

thence North 89°36'03" West, 1,199.11 feet;

thence 26.36 feet along the arc of a curve to the right, having a radius of 20.00 feet, a central angle of 75°31'42" and a long chord which bears North 51°50'51" West, 24.50 feet;

thence North 09°57'29" West, 96.79 feet to the **REAL POINT OF BEGINNING**.

Containing 3.12 acres, more or less.

AND

Parcel 3

A parcel of land situated within the Southwest 1/4 of the Southeast 1/4 of Section 14 and the Northwest 1/4 of the Northeast 1/4 of Section 23, Township 2 North, Range 1 East, B.M., Ada County, Idaho, more particularly described as follows:

PROFESSIONAL LAND SURVEYOR REGISTERED 11779 STATE OF IDAHO CODY M. MCCLAMROCK 7/11/22

Commencing at an aluminum cap monument marking the corner common to Sections 13, 14, 23 and 24, Township 2 North, Range 1 East, B.M., from which an aluminum cap monument marking the 1/4 corner common to said Sections 14 and 23, bears North 89°37'22" West, 2,652.85 feet; thence North 89°37'22" West, 1,326.43 feet to a 1/2" iron pin, no cap, marking the East 1/16 corner common to said Sections 14 and 23 and the **REAL POINT OF BEGINNING;**

thence South 40°17'57" West, 453.64 feet;

thence North 49°44'00" West, 957.46 feet;

thence North 36°45'08" East, 503.97 feet to the centerline of W. Ten Mile Creek Road;

thence on said centerline the following three (3) courses and distances:

128.37 feet along the arc of a curve to the left, having a radius of 2,100.00 feet, a central angle of 03°30'09" and a long chord which bears South 59°45'06" East, 128.35 feet;

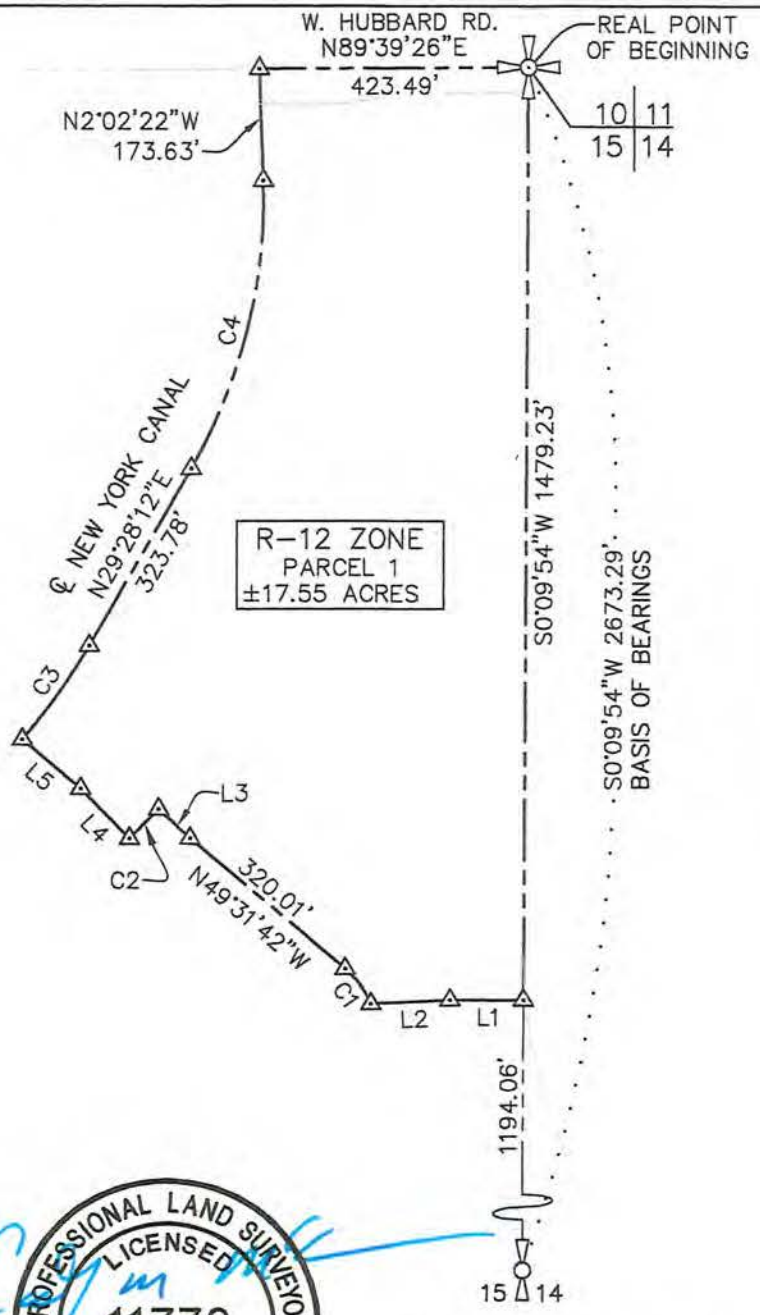
South 61°30'11" East, 410.41 feet;

280.56 feet along the arc of a curve to the left, having a radius of 2,800.00 feet, a central angle of 05°44'28" and a long chord which bears South 64°22'24" East, 280.44 feet to the East boundary line of the Southwest 1/4 of the Southeast 1/4 of said Section 14;

thence on said East boundary line, South 00°23'07" West, 294.91 feet to the **REAL POINT OF BEGINNING**.

Containing 13.00 acres, more or less.

End of Description.



SCALE: 1" = 300'

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD BRG.	CHORD DIST.
C1	70.09	148.50	27°02'36"	N36°00'24"W	69.44
C2	64.97	2209.12	1°41'06"	S44°33'14"W	64.97
C3	183.66	960.00	10°57'41"	N34°57'02"E	183.38
C4	475.70	865.00	31°30'34"	N13°42'55"E	469.73

LINE TABLE		
LINE	BEARING	LENGTH
L1	N89°50'06"W	116.03
L2	S87°11'27"W	124.76
L3	N47°22'15"W	67.48
L4	N44°13'49"W	110.01
L5	N49°34'07"W	120.73

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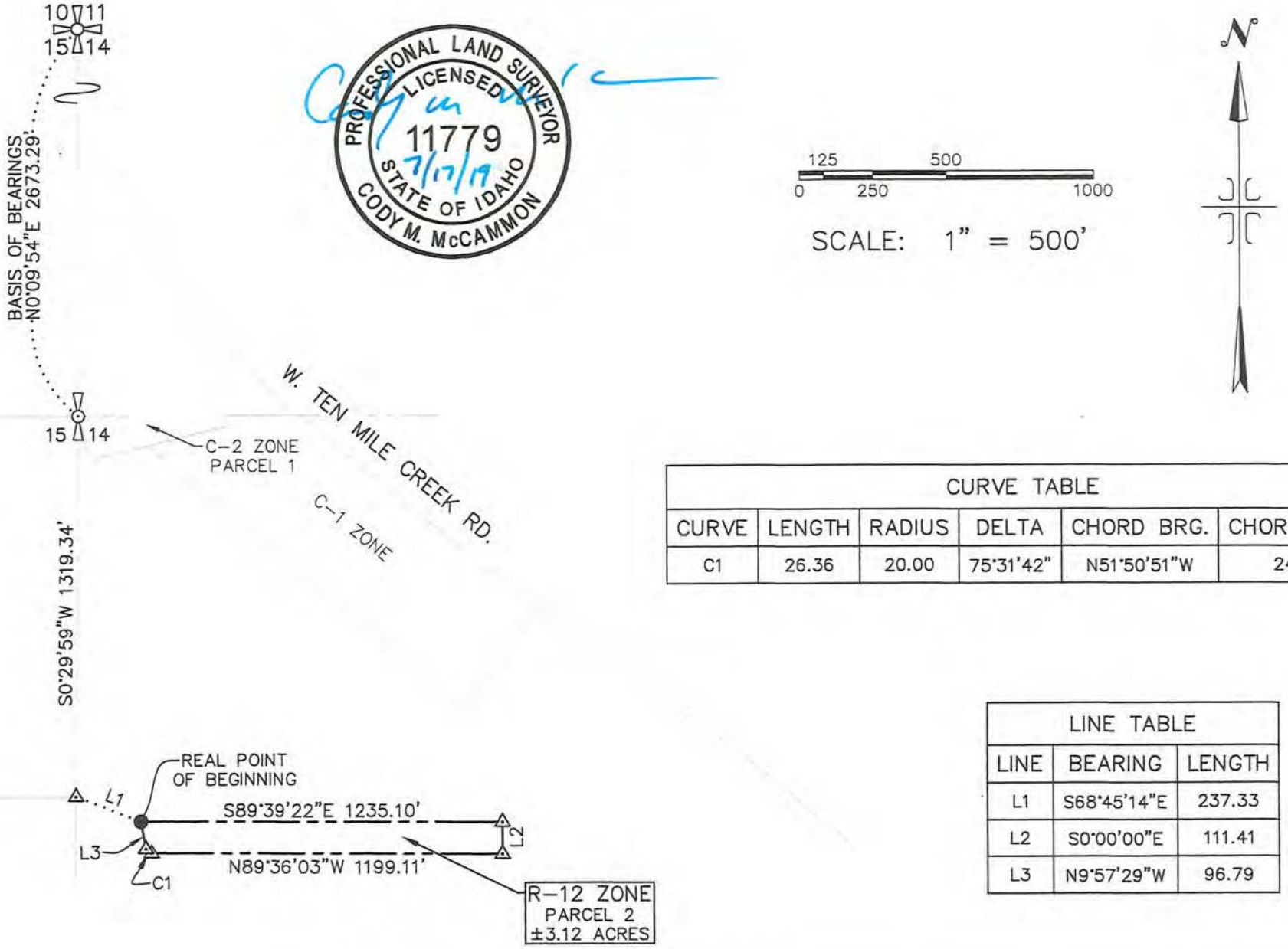
IDAHO SURVEY GROUP, LLC
9955 W. EMERALD ST.
BOISE, IDAHO 83704
(208) 846-8570

SPRING ROCK SUBDIVISION
EXHIBIT ___ DRAWING FOR
R-12 ZONE (PARCEL 1)

LOCATED IN THE NE 1/4 OF SECTION 15, T.2N., R.1E., B.M., ADA COUNTY, IDAHO

JOB NO. 19-192
SHEET NO. 1 OF 3
DWG. DATE 7-14-19



CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD BRG.	CHORD DIST.
C1	26.36	20.00	75°31'42"	N51°50'51"W	24.50

LINE TABLE		
LINE	BEARING	LENGTH
L1	S68°45'14"E	237.33
L2	S0°00'00"E	111.41
L3	N9°57'29"W	96.79

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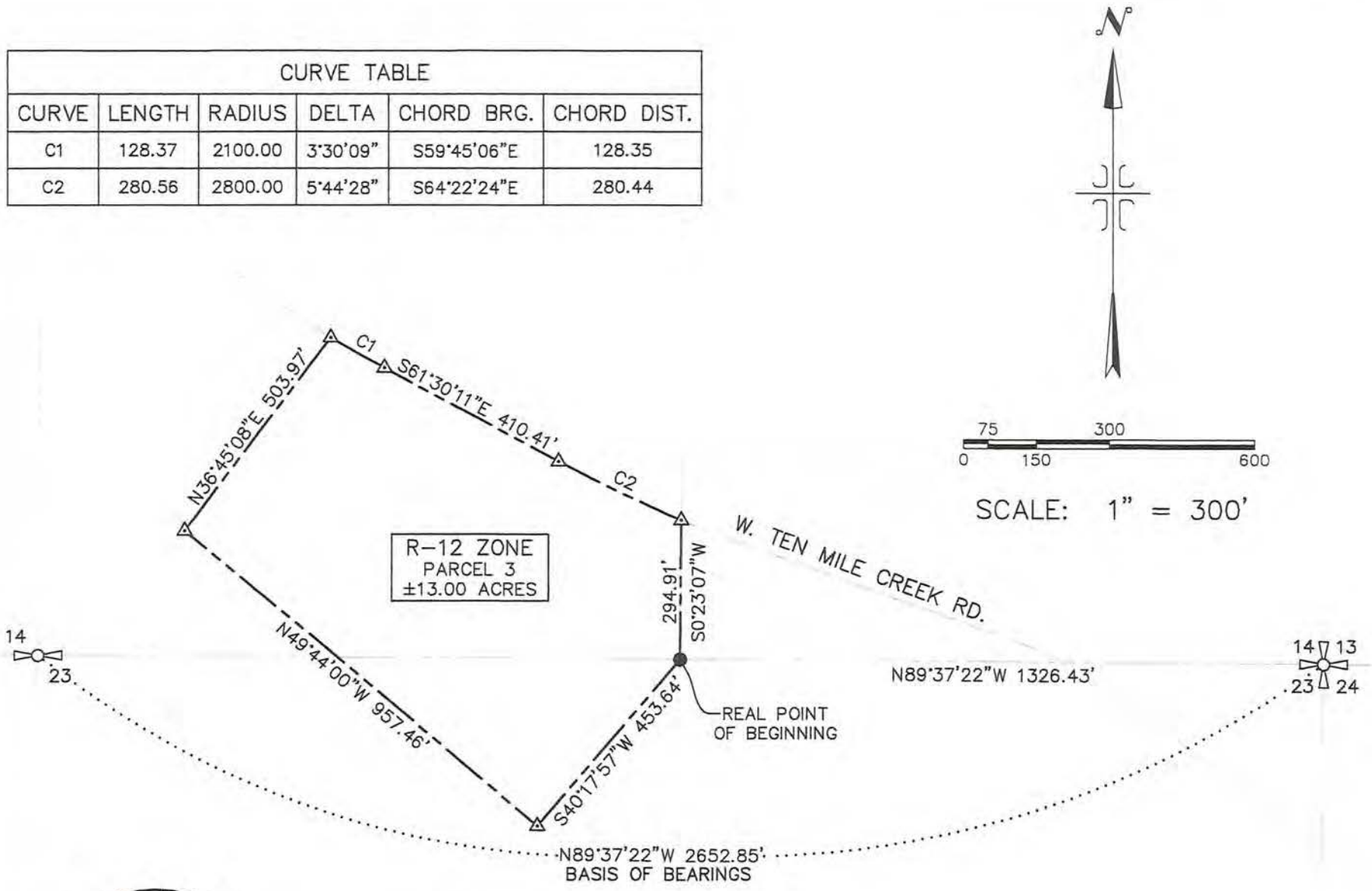
IDAHO SURVEY GROUP, LLC
9955 W. EMERALD ST.
BOISE, IDAHO 83704
(208) 846-8570

SPRING ROCK SUBDIVISION
EXHIBIT __ DRAWING FOR
R-12 ZONE (PARCEL 2)

LOCATED IN THE SOUTH 1/2 OF THE SOUTHWEST 1/4 OF SECTION 14, T.2N., R.1E., B.M., ADA COUNTY, IDAHO

JOB NO. 19-192
SHEET NO. 2 OF 3
DWG. DATE 7-14-19

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD BRG.	CHORD DIST.
C1	128.37	2100.00	3°30'09"	S59°45'06"E	128.35
C2	280.56	2800.00	5°44'28"	S64°22'24"E	280.44



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7/17/19
STATE OF IDAHO
CODY M. McCAMMON

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IDAHO SURVEY GROUP, LLC
9955 W. EMERALD ST.
BOISE, IDAHO 83704
(208) 846-8570

SPRING ROCK SUBDIVISION
EXHIBIT ___ DRAWING FOR
R-12 ZONE (PARCEL 3)

LOCATED IN THE SE 1/4 OF SECTION 14 AND THE NE 1/4 OF SECTION 23, T.2N., R.1E., B.M., ADA COUNTY, IDAHO

JOB NO. 19-192
SHEET NO. 3 OF 3
DWG. DATE 7-14-19

R-20 Zone Description for

Spring Rock Subdivision

July 17, 2019

A parcel of land situated within the South 1/2 of Section 14, Township 2 North, Range 1 East, B.M., Ada County, Idaho, more particularly described as follows:

Commencing at an aluminum cap monument marking the corner common to Sections 13, 14, 23 and 24, Township 2 North, Range 1 East, B.M., from which an aluminum cap monument marking the 1/4 corner common to said Sections 14 and 23, bears North 89°37'22" West, 2,652.85 feet; thence North 89°37'22" West, 1,326.43 feet to a 1/2" iron pin, no cap, marking the East 1/16 corner common to said Sections 14 and 23; thence North 00°23'07" East, 294.91 feet to the centerline of W. Ten Mile Creek Road and the **REAL POINT OF BEGINNING;**

thence on said centerline the following four (4) courses and distances:

280.56 feet along the arc of a curve to the right, having a radius of 2,800.00 feet, a central angle of 05°44'28" and a long chord which bears North 64°22'24" West, 280.44 feet;

North 61°30'11" West, 410.41 feet;

463.38 feet along the arc of a curve to the right, having a radius of 2,100.00 feet, a central angle of 12°38'34" and a long chord which bears North 55°10'54" West, 462.44 feet;

North 48°51'37" West, 696.89 feet to the North boundary line of the Southeast 1/4 of the Southwest 1/4 of said Section 14;

thence on said North boundary line, South 89°44'41" East, 199.77 feet to 5/8" iron pin, PLS 5461, marking the Center-South 1/16 corner of said Section 14;

thence on the North boundary line of the Southwest 1/4 of the Southeast 1/4 of said Section 14, South 89°44'23" East, 1,067.90 feet;

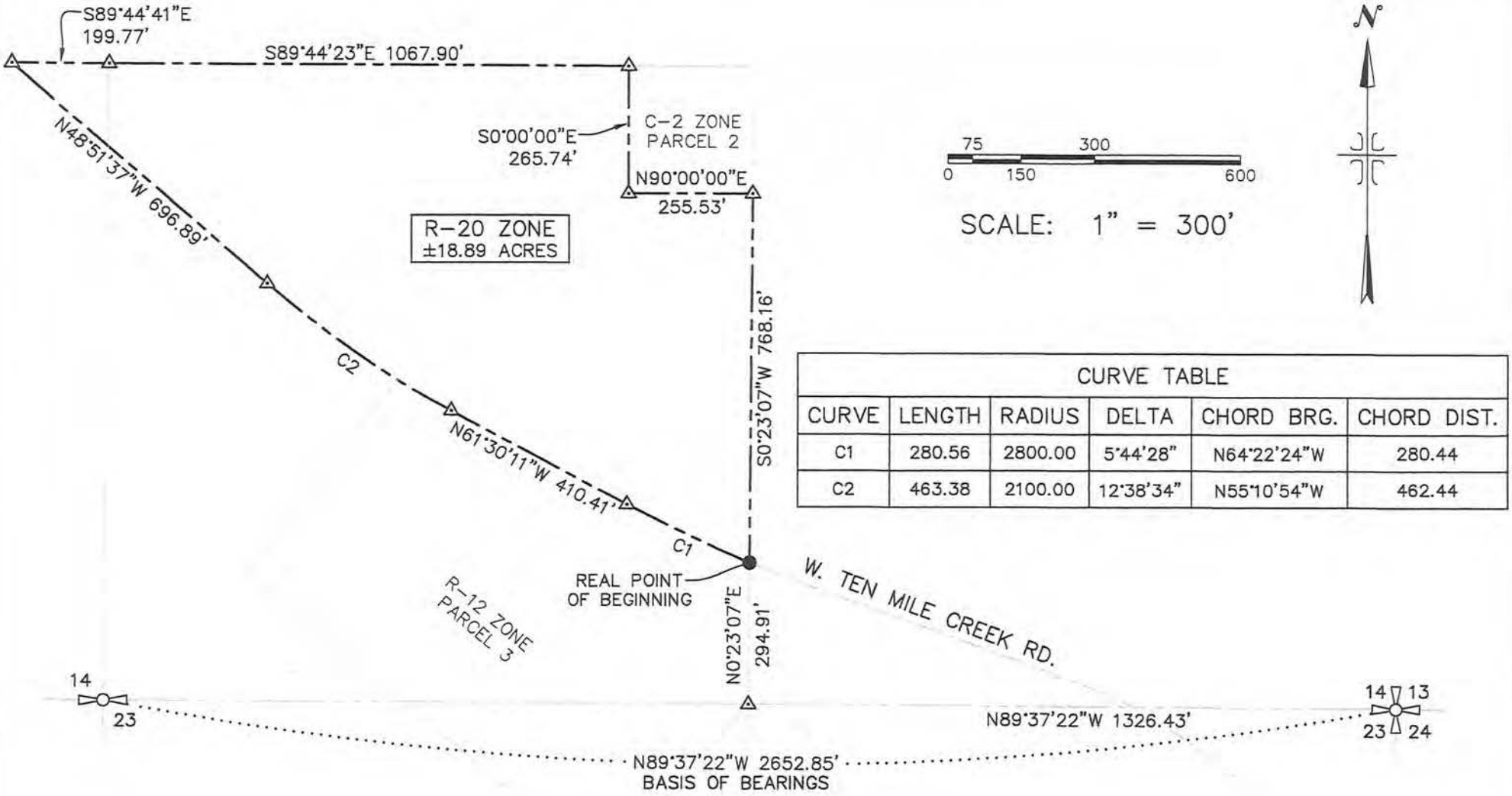
thence leaving said North boundary line, South 00°00'00" East, 265.74 feet;

thence North 90°00'00" East, 255.53 feet to the East boundary line of the Southwest 1/4 of the Southeast 1/4 of said Section 14;

thence on said North boundary line, South 00°23'07" West, 768.16 feet to the **REAL POINT OF BEGINNING**.

Containing 18.89 acres, more or less.

End of Description.



CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD BRG.	CHORD DIST.
C1	280.56	2800.00	5°44'28"	N64°22'24"W	280.44
C2	463.38	2100.00	12°38'34"	N55°10'54"W	462.44

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STATE OF IDAHO
CODY M. McCAMMON
7/17/19

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IDAHO SURVEY GROUP, LLC
9955 W. EMERALD ST.
BOISE, IDAHO 83704
(208) 846-8570

SPRING ROCK SUBDIVISION
EXHIBIT __ DRAWING FOR
R-20 ZONE

LOCATED IN THE S 1/2 OF SECTION 14,
T.2N., R.1E., B.M., ADA COUNTY, IDAHO

JOB NO. 19-192
SHEET NO. 1 OF 1
DWG. DATE 7-14-19

Mr. Chris Findlay
Ten Mile Creek LLC
1211 Happy Drive
Boise, ID 83706
208-867-3884

Re: Limited Geotechnical Engineering Report
Ten Mile Creek Development
South of Ten Mile Creek Road & Hubbard Road
Kuna, ID

Dear Mr. Findlay:

In compliance with your instructions, MTI has conducted a limited soils exploration for the above referenced development. Fieldwork for this investigation was conducted on 12 and 19 February 2019. The proposed development is in the eastern portion of the City of Kuna, Ada County, ID, and occupies portions of Sections 14, 23, and 24, Township 2 North, Range 1 East, Boise Meridian. This project is expected to consist of a new master plan community with 2,500 to 3,000 building lots. Currently, the total area planned for development is roughly 709 acres in size. The development will consist of approximately 500 acres of single-family residential land, 125 acres of parks and/or pathways, 20 acres of commercial lots, 15 acres of multi-family apartments, and a 30 acre school site.

Authorization

Authorization to perform this exploration and analysis was given in the form of a written authorization to proceed from Mr. Chris Findlay of Ten Mile Creek LLC to Nick Stevens of Materials Testing and Inspection (MTI), on 13 November 2018. Said authorization is subject to terms, conditions, and limitations described in the Professional Services Contract entered into between Ten Mile Creek LLC and MTI. Our scope of services for the proposed development has been provided in our proposal dated 7 November 2018 and repeated below.

Regional Geology

The project site is located within the western Snake River Plain of southwestern Idaho and eastern Oregon. The plain is a northwest trending rift basin, about 45 miles wide and 200 miles long, that developed about 14 million years ago (Ma) and has since been occupied sporadically by large inland lakes. Geologic materials found within and along the plain's margins reflect volcanic and fluvial/lacustrine sedimentary processes that have led to an accumulation of approximately 1 to 2 km of interbedded volcanic and sedimentary deposits within the plain. Along the margins of the plain, streams that drained the highlands to the north and south provided coarse to fine-grained sediments eroded from granitic and volcanic rocks, respectively. About 2 million years ago the last of the lakes was drained and since that time fluvial erosion and deposition has dominated the evolution of the landscape.

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Exhibit A10

The northern (lower) portion of the project site is underlain by "Sandy Alluvium of Side-Stream Valleys and Gulches" as mapped by Othberg and Stanford (1993). Locally, these deposits are composed of medium to coarse sand interbedded with silty fine sand and silt and are mostly derived from weathered granite and reworked Tertiary sediments of the Boise Foothills. The thickness of this unit is variable. Because of the relative youthfulness of these deposits they contain only minor pedogenic clay and calcium carbonate.

The southern (upper) portion of the project site is underlain by "Tenmile Gravel" (Othberg and Stanford, 1993) thought to have been deposited at about the time of the Pliocene-Pleistocene boundary (~5 Ma). Deposits consist of sandy pebble and cobble gravel grading westward to sandy pebble gravel and pebbly sand at depth and extending to a unit thickness of about 45 feet. Tenmile Gravel makes up the eighth terrace above the modern Boise River floodplain in the eastern Boise Valley whereas remnants in the western Boise Valley form the fifth terrace above the floodplain. Side slopes of terrace remnants expose underlying Glenns Ferry Fm. Several normal faults offset these deposits and are exposed in local gravel pits and road cuts. The surface of the terrace shows prominent NW-trending gulches and gently sloping fault-line escarpments. Much of the Tenmile Gravel is mantled with loess that can be 3-6 feet thick, contains up to 50% pedogenic clay, and exhibits a well developed duripan horizon up to 6 feet thick.

The very southwest extent of the project site may be underlain by "Basalt Flows of Indian Creek, Undivided" as mapped by Othberg and Stanford (1993). This volcanic deposit is composed of multiple flows of medium to dark gray olivine basalt. These flows erupted from numerous vents found south of the Boise River and north of the Snake River, southeast of the City of Boise, Idaho. At the time of eruption lavas flowed into and down ancestral Indian Creek and Boise River valleys. Northwest-trending, gently sloping escarpments suggest faulting of the basalt. These basalts are mantled with loess 2-12 feet thick that contains about 35% pedogenic clay and a duripan that can be 3 feet thick.

General Site Characteristics

This proposed development is approximately 709 acres in size. Roughly 465 acres of the site encompasses a near level to gently sloping, northwest trending valley that contains the braided channel of Ten Mile Creek. Ten Mile Creek is a perennial stream that is comprised of multiple dry channel beds and numerous year-round springs. The creek is fed by Blacks Creek Reservoir and crosses the New York Canal at the northwest corner of the site. The New York Canal is generally southwest trending and follows the northwest site boundary. The drainage valley portion of the property is currently used for ranching and surficial soils mostly consist of sandy lean clays. Vegetation throughout the drainage floor consists of mature trees, shrubs, bunchgrass, and other native grass varieties typical of arid to semi-arid environments.

The Ten Mile Creek drainage is bordered to the south by a near level plateau throughout the southern portion of the property. Slopes rise to the south above the drainage floor and range from 2.5 feet horizontal to 1 foot vertical (2.5:1) to 8:1, gradually leveling out onto the bench. Within the southwest portion of the site, land use is predominantly agricultural and is currently planted with winter wheat crops. Slopes above the drainage floor and portions of the bench further to the south and east within the project site are relatively undisturbed and vegetated with native sagebrush, bunchgrass, and other native grass varieties typical of arid to semi-arid environments.

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An east to west trending ridgeline rises above the project site and Ten Mile Creek Road to the north. Sections of the project site ranging from 1.98 to 20.47 acres in size are located to the north of Ten Mile Creek Road. These portions of the project site are predominantly sloping terrain, with slopes rising above Ten Mile Creek Road at 2:1 to 4:1 gradients. A majority of this land is currently undeveloped and is covered with native vegetation.

Regional drainage is north and west toward the Boise River via Ten Mile Creek. Stormwater drainage for the site is achieved by both sheet runoff and percolation through surficial soils. Runoff predominates for the steeper slopes while percolation prevails across the gently sloping and near level areas. From the north, northeast, and southeast, intermittent off-site stormwater may drain onto the project site. Natural stormwater drainage collection is achieved on the project site via Ten Mile Creek and is limited to culvert crossing along Ten Mile Creek Road.

Exploration and Sampling Procedures

Field exploration conducted to determine engineering characteristics of subsurface materials included a reconnaissance of the project site and investigation by test pit. Test pit locations were selected by Chris Findlay of Ten Mile Creek LLC and provided to MTI via a site map. Actual test pit sites were located in the field by means of a Global Positioning System (GPS) device and are reportedly accurate to within ten feet. Upon completion of investigation, each test pit was backfilled with loose excavated materials. Re-excavation and compaction of these test pit areas are required prior to construction of overlying structures.

In addition, samples were obtained from representative soil strata encountered. Samples obtained have been visually classified in the field by professional staff, identified according to test pit number and depth, placed in sealed containers, and transported to our laboratory for additional testing. Subsurface materials have been described in detail on logs provided in the **Enclosures** section. Results of field and laboratory tests are also presented in the **Enclosures** section. MTI recommends that these logs **not** be used to estimate fill material quantities.

Laboratory Testing Program

Along with our field investigation, a supplemental laboratory testing program was conducted to determine additional pertinent engineering characteristics of subsurface materials necessary in an analysis of anticipated behavior of the proposed structures. Laboratory tests were conducted in accordance with current applicable American Society for Testing and Materials (ASTM) specifications, and results of these tests are to be found on the accompanying logs located in the **Enclosures** section. The laboratory testing program for this report included: Atterberg Limits Testing – ASTM D4318 and Grain Size Analysis – ASTM C117/C136.

Soil and Sediment Profile

The profile below represents a generalized interpretation for the project site. Note that on site soils strata, encountered between test pit locations, may vary from the individual soil profiles presented in the logs, which can be found in the **Enclosures** section.

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Ten Mile Creek Drainage (Lower Portion)

The materials encountered during exploration were quite typical for the geologic area mapped as Sandy Alluvium of Side-Stream Valleys and Gulches. Surficial soils were predominately sandy lean clays and borderline lean clays with sand/sandy lean clays. Clays were brown to dark brown, dry to slightly moist, and soft to very stiff, with fine to medium-grained sand. In test pits 6 and 7, sandy lean clays also contained fine to coarse gravels. Sandy silt soils were encountered beneath surficial soils in test pit 1. These fine-grained soils were gray to light brown, slightly moist to moist, and stiff to very stiff, with fine to medium-grained sand. Intermittent weak calcium carbonate cementation was noted throughout this horizon. Organic materials were often noted to depths of roughly 1.6 feet if encountered, and frozen soils usually reached a depth of 0.4 foot if present.

At depth, various sand/gravel sediments with varying silt and clay content were noted across the site. Poorly graded sands were tan to gray, moist to saturated, and medium dense to dense, with fine to coarse-grained sand and 4-inch minus cobbles. Poorly graded gravels were tan to brown or gray in color. These sediments ranged from dry to saturated and medium dense to very dense. Fine to coarse-grained sand and 14-inch minus boulders were noted throughout. Varying amounts of silt and clay were observed throughout poorly graded gravel and sand sediments.

Southern Bench (Upper Portion)

The materials encountered during exploration were quite typical for the geologic area mapped as Tenmile Gravel and at the southwest extent (near test pit 12) as Basalt Flows of Indian Creek, Undivided. Surficial materials were predominately sandy lean clay with gravel fills. In test pit 9, silty sand with gravel fill materials were noted below these surficial fills. Fill materials were tan to dark brown and gray, dry to slightly moist, and soft to very stiff/medium dense. Fine to coarse-grained sand, 6-inch minus cobbles, and some garbage debris were noted within these materials. Organic materials were noted at limited test pit sites, and reached depths up to 1.0 foot below ground surface where encountered. Lean clay soils were encountered beneath fill materials within test pits 11 through 13. Lean clays were brown to dark brown, dry to slightly moist, and stiff to very stiff. Across the site, sandy silt with gravel soils were encountered below fill materials and lean clay soils. Sandy silts with gravel varied from tan to whitish-tan and whitish-pink. These fine-grained soils were dry throughout. The consistency of this horizon was hard and contained some degree of calcium carbonate cementation (hardpan).

In many of the more deeply developed soils, poorly graded gravel with sand sediments were encountered. Poorly graded gravels with sand were most often classified as orangish-tan to gray, dry, and varied in relative density from dense to very dense. Hardpan cementation also extended through the upper zone of this horizon. Lenses of poorly graded sand with silt sediments were noted throughout the poorly graded gravels and were also encountered at depth in test pit 13. These sediments were tan, dry, and loose to medium dense, with fine to coarse-grained sand. Some fine to coarse gravel and excessive sidewall caving was observed throughout. In test pit 12, basalt rock was noted at depth. Basalt was noted as black to gray, fresh to slightly weathered, widely to closely fractured, and moderately strong to very strong. Hand specimens contained calcic veining and some vesicles.

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Competency of test pit walls varied little across the site. In general, fine-grained soils remained stable while more granular sediments readily sloughed. However, moisture contents will also affect wall competency with saturated soils having a tendency to readily slough when under load and unsupported.

Groundwater

Ten Mile Creek Drainage (Lower Portion)

During this field investigation, groundwater was encountered in test pits throughout the Ten Mile Creek drainage (test pits 1 through 8) at depths ranging from 5.0 to 7.1 feet bgs. Soil moistures in the test pits were generally dry to slightly moist within surficial soils. Within the varying poorly graded sands and poorly graded gravel sediments, soil moistures graded from slightly moist to saturated as the water table was approached and penetrated. In the vicinity of the lower portion of the site, groundwater levels are controlled in large part by the stage and flow of Ten Mile Creek and seasonal precipitiation. Ten Mile Creek is considered a perennial stream and will have continuous, variable flow in portions of the drainage year-round. In the proximity of the Ten Mile Creek drainage, groundwater levels could be as shallow as ground surface during portions of the year. Since this is an estimated depth and seasonal groundwater levels fluctuate, actual levels should be confirmed by periodic groundwater data collected from piezometers installed in test pits 1 through 8. If desired, MTI is available to perform this monitoring.

Southern Plateau (Upper Portion)

During this field investigation, groundwater was not encountered in the southern (upper) portion of the site (test pits 9 through 13) in test pits excavated to depths up to 17.4 feet bgs. Soil moistures in test pits were generally dry to slightly moist throughout. In the vicinity of the upper portion of the project site, groundwater levels are controlled in large part by commercial (agricultural) irrigation activity and leakage from nearby canals. Maximum groundwater elevations likely occur during the later portion of the irrigation season. According to Idaho Department of Water Resources (IDWR) well logs and United States Geological Survey (USGS) monitoring well data within approximately ¼-mile of the project site, groundwater was measured at depths ranging between 107 to 324 feet bgs. For construction purposes, groundwater depth can be assumed to remain greater than 20 feet bgs throughout the year.

Soil Infiltration Rates

Soil permeability, which is a measure of the ability of a soil to transmit a fluid, was not tested in the field. Given the absence of direct measurements, for this report an estimation of infiltration is presented using generally recognized values for each soil type and gradation. Of soils comprising the generalized soil profile for this study, lean clay soils generally offer little permeability, with typical hydraulic infiltration rates of less than 2 inches per hour. Sandy silt with gravel soils will commonly exhibit infiltration rates from 2 to 4 inches per hour; though calcium carbonate cementation may reduce this value to near zero. Poorly graded sand and gravel sediments typically exhibit infiltration values in excess of 12 inches per hour. However, varying clay and silt content within these sediments may reduce infiltration rates variably. Infiltration rates through basalt rock can be highly variable, ranging from nearly zero to greater than 6 inches per hour in some cases.

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Warranty and Limiting Conditions

MTI warrants that findings and conclusions contained herein have been formulated in accordance with generally accepted professional engineering practice in the fields of foundation engineering, soil mechanics, and engineering geology only for the site and project described in this report. These engineering methods have been developed to provide the client with information regarding apparent or potential engineering conditions relating to the site within the scope cited above and are necessarily limited to conditions observed at the time of the site visit and research. Field observations and research reported herein are considered sufficient in detail and scope to form a reasonable basis for the purposes cited above.

Exclusive Use

This report was prepared for exclusive use of the property owner(s), at the time of the report, and their retained design consultants ("Client"). Conclusions and recommendations presented in this report are based on the agreed-upon scope of work outlined in this report together with the Contract for Professional Services between the Client and Materials Testing and Inspection ("Consultant"). Use or misuse of this report, or reliance upon findings hereof, by parties other than the Client is at their own risk. Neither Client nor Consultant make representation of warranty to such other parties as to accuracy or completeness of this report or suitability of its use by such other parties for purposes whatsoever, known or unknown, to Client or Consultant. Neither Client nor Consultant shall have liability to indemnify or hold harmless third parties for losses incurred by actual or purported use or misuse of this report. No other warranties are implied or expressed.

Report Recommendations are Limited and Subject to Misinterpretation

There is a distinct possibility that conditions may exist that could not be identified within the scope of the investigation or that were not apparent during our site investigation. Findings of this report are limited to data collected from noted explorations advanced and do not account for unidentified fill zones, unsuitable soil types or conditions, and variability in soil moisture and groundwater conditions. To avoid possible misinterpretations of findings, conclusions, and implications of this report, MTI should be retained to explain the report contents to other design professionals as well as construction professionals.

Since actual subsurface conditions on the site can only be verified by earthwork, note that construction recommendations are based on general assumptions from selective observations and selective field exploratory sampling. Upon commencement of construction, such conditions may be identified that require corrective actions, and these required corrective actions may impact the project budget. Therefore, construction recommendations in this report should be considered preliminary, and MTI should be retained to observe actual subsurface conditions during earthwork construction activities to provide additional construction recommendations as needed.

Since geotechnical reports are subject to misinterpretation, **do not** separate the soil logs from the report. Rather, provide a copy of, or authorize for their use, the complete report to other design professionals or contractors. Locations of exploratory sites referenced within this report should be considered approximate locations only. For more accurate locations, services of a professional land surveyor are recommended.

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This report is also limited to information available at the time it was prepared. In the event additional information is provided to MTI following publication of our report, it will be forwarded to the client for evaluation in the form received.

Environmental Concerns

Comments in this report concerning either onsite conditions or observations, including soil appearances and odors, are provided as general information. These comments are not intended to describe, quantify, or evaluate environmental concerns or situations. Since personnel, skills, procedures, standards, and equipment differ, a geotechnical investigation report is not intended to substitute for a geoenvironmental investigation or a Phase II/III Environmental Site Assessment. If environmental services are needed, MTI can provide, via a separate contract, those personnel who are trained to investigate and delineate soil and water contamination.

General Comments

Often, questions arise concerning soil conditions because of design and construction details that occur on a project. MTI would be pleased to continue our role as geotechnical engineers during project implementation. Additionally, MTI can provide materials testing and special inspection services during construction of this project. If you will advise us of the appropriate time to discuss these engineering services, we will meet with you at your convenience.

MTI appreciates this opportunity to be of service to you and looks forward to working with you in the future. If you have questions, please call (208) 376-4748.

Respectfully Submitted,
Materials Testing & Inspection

Nick Stevens, G.I.T.
Staff Geologist

Reviewed by: Monica Sacilles, P.E.
Senior Geotechnical Engineer

PROFESSIONAL ENGINEER LICENSED 14919 2-27-19 STATE OF IDAHO MONICA SACILLES

Reviewed by: Clint Wyllie, G.I.T.
Staff Geologist

Enclosures:
Geotechnical General Notes
Geotechnical Investigation Test Pit Logs
Vicinity Map
Site Map

GEOTECHNICAL GENERAL NOTES

RELATIVE DENSITY AND CONSISTENCY CLASSIFICATION			
Coarse-Grained Soils	**SPT Blow Counts (N)**	**Fine-Grained Soils**	**SPT Blow Counts (N)**
Very Loose:	< 4	Very Soft:	< 2
Loose:	4-10	Soft:	2-4
Medium Dense:	10-30	Medium Stiff:	4-8
Dense:	30-50	Stiff:	8-15
Very Dense:	>50	Very Stiff:	15-30
		Hard:	>30

Moisture Content	
Description	**Field Test**
Dry	Absence of moisture, dusty, dry to touch
Moist	Damp but not visible moisture
Wet	Visible free water, usually soil is below water table

Cementation	
Description	**Field Test**
Weakly	Crumbles or breaks with handling or slight finger pressure
Moderately	Crumbles or beaks with considerable finger pressure
Strongly	Will not crumble or break with finger pressure

PARTICLE SIZE					
Boulders:	>12 in.	Coarse-Grained Sand:	5 to 0.6 mm	Silts:	0.075 to 0.005 mm
Cobbles:	12 to 3 in.	Medium-Grained Sand:	0.6 to 0.2 mm	Clays:	<0.005 mm
Gravel:	3 in. to 5 mm	Fine-Grained Sand:	0.2 to 0.075 mm		

UNIFIED SOIL CLASSIFICATION SYSTEM			
Major Divisions		**Symbol**	**Soil Descriptions**
Coarse-Grained Soils <50% passes No.200 sieve	Gravel & Gravelly Soils <50% coarse fraction passes No.4 sieve	GW	Well-graded gravels; gravel/sand mixtures with little or no fines
		GP	Poorly-graded gravels; gravel/sand mixtures with little or no fines
		GM	Silty gravels; poorly-graded gravel/sand/silt mixtures
		GC	Clayey gravels; poorly-graded gravel/sand/clay mixtures
	Sand & Sandy Soils >50% coarse fraction passes No.4 sieve	SW	Well-graded sands; gravelly sands with little or no fines
		SP	Poorly-graded sands; gravelly sands with little or no fines
		SM	Silty sands; poorly-graded sand/gravel/silt mixtures
		SC	Clayey sands; poorly-graded sand/gravel/clay mixtures
Fine Grained Soils >50% passes No.200 sieve	Silts & Clays LL < 50	ML	Inorganic silts; sandy, gravelly or clayey silts
		CL	Lean clays; inorganic, gravelly, sandy, or silty, low to medium-plasticity clays
		OL	Organic, low-plasticity clays and silts
	Silts & Clays LL > 50	MH	Inorganic, elastic silts; sandy, gravelly or clayey elastic silts
		CH	Fat clays; high-plasticity, inorganic clays
		OH	Organic, medium to high-plasticity clays and silts
Highly Organic Soils		PT	Peat, humus, hydric soils with high organic content

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GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-1 **Date Advanced:** 12 Feb 2019 **Logged by:** Nick Stevens, G.I.T.
Excavated by: Struckman's Backhoe Service **Location:** See Site Map Plates
Latitude: 43.51015 **Longitude:** -116.32144
Depth to Water Table: 6.5 Feet bgs **Total Depth:** 7.7 Feet bgs
Notes: Piezometer installed to 7.7 feet bgs.

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-2.7	Sandy Lean Clay (CL): *Brown to dark brown, dry to slightly moist, stiff to very stiff, with fine to medium-grained sand.* *--Frozen soils noted to 0.4 foot bgs.* *--Organic materials noted to 0.9 foot bgs.*			2.0-2.25	
2.7-4.1	Sandy Silt (ML): *Gray to light brown, slightly moist to moist, stiff to very stiff, with fine to medium-grained sand.* *--Intermittent weak calcium carbonate cementation noted throughout.*				
4.1-7.7	Poorly Graded Sand with Gravel (SP): *Tan to gray, moist to saturated, medium dense to dense, with fine to coarse-grained sand and 4-inch minus cobbles.*				

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GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-2 **Date Advanced:** 12 Feb 2019 **Logged by:** Nick Stevens, G.I.T.
Excavated by: Struckman's Backhoe Service **Location:** See Site Map Plates
Latitude: 43.51161 **Longitude:** -116.31945
Depth to Water Table: 5.0 Feet bgs **Total Depth:** 5.5 Feet bgs
Notes: Piezometer installed to 5.5 feet bgs.

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-1.6	Sandy Lean Clay (CL): *Brown to dark brown, dry to slightly moist, soft to medium stiff, with fine to medium-grained sand.* *--Frozen soils noted to 0.3 foot bgs.* *--Organic materials noted throughout.*			0.25-0.5	
1.6-5.5	Poorly Graded Gravel with Sand (GP): *Tan to gray, slightly moist to saturated, medium dense to dense, with fine to coarse-grained sand and 10-inch minus cobbles.*				

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❑ Environmental Services ❑ Geotechnical Engineering ❑ Construction Materials Testing ❑ Special Inspections

GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-3 **Date Advanced:** 12 Feb 2019 **Logged by:** Nick Stevens, G.I.T.
Excavated by: Struckman's Backhoe Service **Location:** See Site Map Plates
Latitude: 43.50944 **Longitude:** -116.31553
Depth to Water Table: 5.0 Feet bgs **Total Depth:** 5.9 Feet bgs
Notes: Piezometer installed to 5.9 feet bgs.

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-2.9	Borderline Lean Clay with Sand/Sandy Lean Clay (CL): *Brown to dark brown, dry to slightly moist, soft to medium stiff, with fine to medium-grained sand.* *--Frozen soils noted to 0.2 foot bgs.* *--Organic materials noted to 1.0 foot bgs.*	GS	0.5-1.0	0.25-0.5	A
2.9-5.9	Poorly Graded Gravel with Silt and Sand (GP-GM): *Light brown to brown, gray, slightly moist to saturated, medium dense to dense, with fine to coarse-grained sand and 8-inch minus cobbles.* *--Intermittent 6 to 20-inch thick lenses of silty sand sediments noted throughout.*				

Lab Test ID	M	LL	PI	Sieve Analysis				
-	%	-	-	#4	#10	#40	#100	#200
A	24.8	29	12	100	100	97	87	69.2

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GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-4 **Date Advanced:** 12 Feb 2019 **Logged by:** Nick Stevens, G.I.T.
Excavated by: Struckman's Backhoe Service **Location:** See Site Map Plates
Latitude: 43.50944 **Longitude:** -116.31553
Depth to Water Table: 5.4 Feet bgs **Total Depth:** 6.2 Feet bgs
Notes: Piezometer installed to 6.2 feet bgs.

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-4.2	Sandy Lean Clay (CL): *Brown to dark brown, dry to moist, soft to stiff, with fine to medium-grained sand.* *--Frozen soils noted to 0.2 foot bgs.* *--Organic materials noted to 1.0 foot bgs.*			0.5-1.75	
4.2-6.2	Poorly Graded Sand with Silt (SP-SM): *Tan to gray, moist to saturated, medium dense to dense, with fine to coarse-grained sand.*				

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GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-5 **Date Advanced:** 12 Feb 2019 **Logged by:** Nick Stevens, G.I.T.
Excavated by: Struckman's Backhoe Service **Location:** See Site Map Plates
Latitude: 43.50203 **Longitude:** -116.30441
Depth to Water Table: 7.1 Feet bgs **Total Depth:** 7.8 Feet bgs
Notes: Piezometer installed to 7.8 feet bgs.

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-1.4	Sandy Lean Clay (CL): *Brown to dark brown, dry to moist, stiff to very stiff, with fine to medium-grained sand.* *--Frozen soils noted to 0.1 foot bgs.* *--Organic materials noted to 0.4 foot bgs.*			1.75-2.25	
1.4-7.8	Poorly Graded Gravel with Clay and Sand (GP-GC): *Light brown to brown, gray, dry to saturated, medium dense to very dense, with fine to coarse-grained sand and 8-inch minus cobbles.*				

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GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-6 **Date Advanced:** 12 Feb 2019 **Logged by:** Nick Stevens, G.I.T.
Excavated by: Struckman's Backhoe Service **Location:** See Site Map Plates
Latitude: 43.49877 **Longitude:** -116.29747
Depth to Water Table: 6.8 Feet bgs **Total Depth:** 16.6 Feet bgs
Notes: Piezometer installed to 16.6 feet bgs.

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-2.1	Sandy Lean Clay with Gravel (CL): *Brown to dark brown, dry to slightly moist, soft to stiff, with fine to medium-grained sand and fine to coarse gravel.* *--Frozen soils noted to 0.2 foot bgs.* *--Organic materials noted to 1.3 feet bgs.*			0.25-1.0	
2.1-16.6	Poorly Graded Gravel with Clay and Sand (GP-GC): *Light brown or gray, dry to saturated, medium dense to dense, with fine to coarse-grained sand and 14-inch minus boulders.* *--Varying clay content noted throughout.* *--Lens of clayey gravel with sand sediments noted from 6.1 to 6.6 feet bgs.* *--Groundwater was observed slowly seeping through sidewalls as test pit was advanced.*				

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GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-7 **Date Advanced:** 12 Feb 2019 **Logged by:** Nick Stevens, G.I.T.
Excavated by: Struckman's Backhoe Service **Location:** See Site Map Plates
Latitude: 43.49859 **Longitude:** -116.29214
Depth to Water Table: 6.1 Feet bgs **Total Depth:** 7.8 Feet bgs
Notes: Piezometer installed to 7.8 feet bgs.

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-2.2	Sandy Lean Clay with Gravel (CL): *Brown to dark brown, dry to moist, stiff to very stiff, with fine to medium-grained sand and fine to coarse gravel.* *--Frozen soils noted to 0.1 foot bgs.* *--Organic materials noted to 0.7 foot bgs.*			1.5-2.25	
2.2-7.8	Poorly Graded Gravel with Silt and Sand (GP-GM): *Light brown to gray, slightly moist to saturated, medium dense to very dense, with fine to coarse-grained sand and 14-inch minus boulders.*				

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GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-8 **Date Advanced:** 12 Feb 2019 **Logged by:** Nick Stevens, G.I.T.
Excavated by: Struckman's Backhoe Service **Location:** See Site Map Plates
Latitude: 43.49577 **Longitude:** -116.28413
Depth to Water Table: 6.9 Feet bgs **Total Depth:** 8.3 Feet bgs
Notes: Piezometer installed to 8.3 feet bgs.

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-2.6	Sandy Lean Clay (CL): *Dark brown, slightly moist to moist, soft to medium stiff, with fine to medium-grained sand.* *--Frozen soils noted to 0.2 foot bgs.* *--Organic materials noted to 1.3 feet bgs.*	GS	1.0-1.5	0.25-0.75	B
2.6-8.3	Poorly Graded Gravel with Clay and Sand (GP-GC): *Light brown to brown to gray, slightly moist to saturated, medium dense to very dense, with fine to coarse-grained sand and 10-inch minus cobbles.*				

Lab Test ID	M	LL	PI	Sieve Analysis				
-	%	-	-	#4	#10	#40	#100	#200
B	23.0	31	16	88	86	78	66	56.9

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GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-9 **Date Advanced:** 19 Feb 2019 **Logged by:** Nick Stevens, G.I.T.
Excavated by: Struckman's Backhoe Service **Location:** See Site Map Plates
Latitude: 43.50286 **Longitude:** -116.31264
Depth to Water Table: Not Encountered **Total Depth:** 12.4 Feet bgs

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-1.4	Sandy Lean Clay with Gravel Fill (CL-FILL): *Dark brown, dry to slightly moist, soft to medium stiff, with fine to medium-grained sand and fine to coarse-gravel.* *--Organic materials noted to 1.0 foot bgs.*			0.5-0.75	
1.4-3.0	Silty Sand with Gravel Fill (SM-FILL): *Tan to gray, dry, medium dense, with fine to coarse-grained sand and fine to coarse gravel.*				
3.0-5.2	Sandy Silt with Gravel (ML): *Tan, dry, hard, with fine to medium-grained sand and 8-inch minus cobbles.* *--Weak to moderate calcium carbonate cementation noted throughout.*				
5.2-12.4	Poorly Graded Gravel with Sand (GP): *Tan to gray, dry, dense to very dense, with fine to coarse-grained sand and 11-inch minus cobbles.* *--Weak to moderate calcium carbonate cementation noted from 5.2 to 6.2 feet bgs.* *--Layer of loose to medium dense poorly graded sand with silt sediments from 7.2 to 9.1 feet bgs.* *--Excessive sidewall caving noted from 7.2 to 9.1 feet bgs.*				

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GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-10 **Date Advanced:** 19 Feb 2019 **Logged by:** Nick Stevens, G.I.T.
Excavated by: Struckman's Backhoe Service **Location:** See Site Map Plates
Latitude: 43.50289 **Longitude:** -116.312439
Depth to Water Table: Not Encountered **Total Depth:** 12.9 Feet bgs

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-2.1	Sandy Lean Clay with Gravel Fill (CL-FILL): *Dark brown to tan, dry to slightly moist, medium stiff to stiff, with fine to medium-grained sand and 6-inch minus cobbles.* *--Organic materials noted to 0.5 foot bgs.*			0.75-1.75	
2.1-4.2	Sandy Silt with Gravel (ML): *Whitish-pink, dry, hard, with fine to coarse-grained sand and fine to coarse gravel.* *--Strong calcium carbonate cementation noted throughout.*				
4.2-12.9	Poorly Graded Gravel with Sand (GP): *Tan to gray, dry, dense to very dense, with fine to coarse-grained sand and 10-inch minus cobbles.* *--Intermittent weak calcium carbonate cementation noted from 4.2 to 4.5 feet bgs.* *--Intermittent 10 to 16 inch thick lenses of loose to medium dense poorly graded sand with silt sediments noted throughout.* *--Excessive sidewall caving noted within poorly graded sand with silt and gravel sediments.*				

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GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-11 **Date Advanced:** 19 Feb 2019 **Logged by:** Nick Stevens, G.I.T.
Excavated by: Struckman's Backhoe Service **Location:** See Site Map Plates
Latitude: 43.49864 **Longitude:** -116.31435
Depth to Water Table: Not Encountered **Total Depth:** 17.4 Feet bgs

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-1.4	Sandy Lean Clay with Gravel Fill (CL-FILL): *Dark brown to tan, dry to slightly moist, stiff to very stiff, with fine to medium-grained sand and fine to coarse gravel.*			1.25-2.5	
1.4-2.9	Lean Clay (CL): *Brown to dark brown, dry to slightly moist, stiff to very stiff.*	GS	1.6-2.1	2.0-3.0	C
2.9-4.5	Sandy Silt with Gravel (ML): *Whitish-tan, dry, hard, with fine to coarse-grained sand and fine to coarse gravel.* *--Strong calcium carbonate cementation noted throughout.*				
4.5-17.4	Poorly Graded Gravel with Sand (GP): *Orangish-tan to gray, dry, very dense, with fine to coarse-grained sand and 12-inch minus cobbles.* *--Intermittent weak calcium carbonate cementation noted from 4.5 to 6.7 feet bgs.* *--Some clay content noted from 4.5 to 9.0 feet bgs.* *--Intermittent 20-inch minus boulders noted throughout.*				

Lab Test ID	M	LL	PI	Sieve Analysis				
-	%	-	-	#4	#10	#40	#100	#200
C	25.2	35	20	98	97	92	89	85.8

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GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-12 **Date Advanced:** 19 Feb 2019 **Logged by:** Nick Stevens, G.I.T.
Excavated by: Struckman's Backhoe Service **Location:** See Site Map Plates
Latitude: 43.49572 **Longitude:** -116.31439
Depth to Water Table: Not Encountered **Total Depth:** 11.8 Feet bgs

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-1.8	Sandy Lean Clay with Gravel Fill (CL-FILL): *Dark brown to tan, dry to slightly moist, stiff to very stiff, with fine to medium-grained sand and 4-inch minus cobbles*			1.75-3.0	
1.4-2.9	Lean Clay (CL): *Brown to dark brown, dry to slightly moist, very stiff.*			2.5-3.5	
3.4-11.8	Sandy Silt with Gravel (ML): *Whitish-tan, dry, very stiff to hard, with fine to coarse-grained sand and fine to coarse gravel.* *--Moderate to strong calcium carbonate cementation noted from 3.4 to 10.6 feet bgs.*				
Below 11.8	Basalt: *Black to gray, fresh to slightly weathered, widely to closely fractured, moderately strong to very strong.* *--Calcic veining and some vesicles noted on hand specimens.*				

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GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-13 **Date Advanced:** 19 Feb 2019 **Logged by:** Nick Stevens, G.I.T.
Excavated by: Struckman's Backhoe Service **Location:** See Site Map Plates
Latitude: 43.49924 **Longitude:** -116.30942
Depth to Water Table: Not Encountered **Total Depth:** 13.2 Feet bgs

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-0.8	Sandy Lean Clay with Gravel Fill (CL-FILL): *Dark brown to tan, dry to slightly moist, stiff to very stiff, with fine to medium-grained sand and 4-inch minus cemented clasts.* *--Some garbage and debris noted throughout.*				
0.8-2.4	Lean Clay (CL): *Brown to dark brown, dry to slightly moist, stiff to very stiff.*			1.5-2.25	
2.4-5.6	Sandy Silt with Gravel (ML): *Whitish-tan, dry, hard, with fine to coarse-grained sand and fine to coarse gravel.* *--Moderate to strong calcium carbonate cementation noted throughout.*				
5.6-7.9	Poorly Graded Gravel with Sand (GP): *Tan to gray, dry, very dense, with fine to coarse-grained sand and 10-inch minus cobbles.* *--Strong calcium carbonate cementation noted from 5.6 to 7.9 feet bgs.*				
7.9-13.2	Poorly Graded Sand with Silt (SP-SM): *Tan, dry, loose to medium dense, with fine to coarse-grained sand.* *--Some fine to coarse gravel noted throughout.* *--Excessive sidewall caving noted throughout.*				

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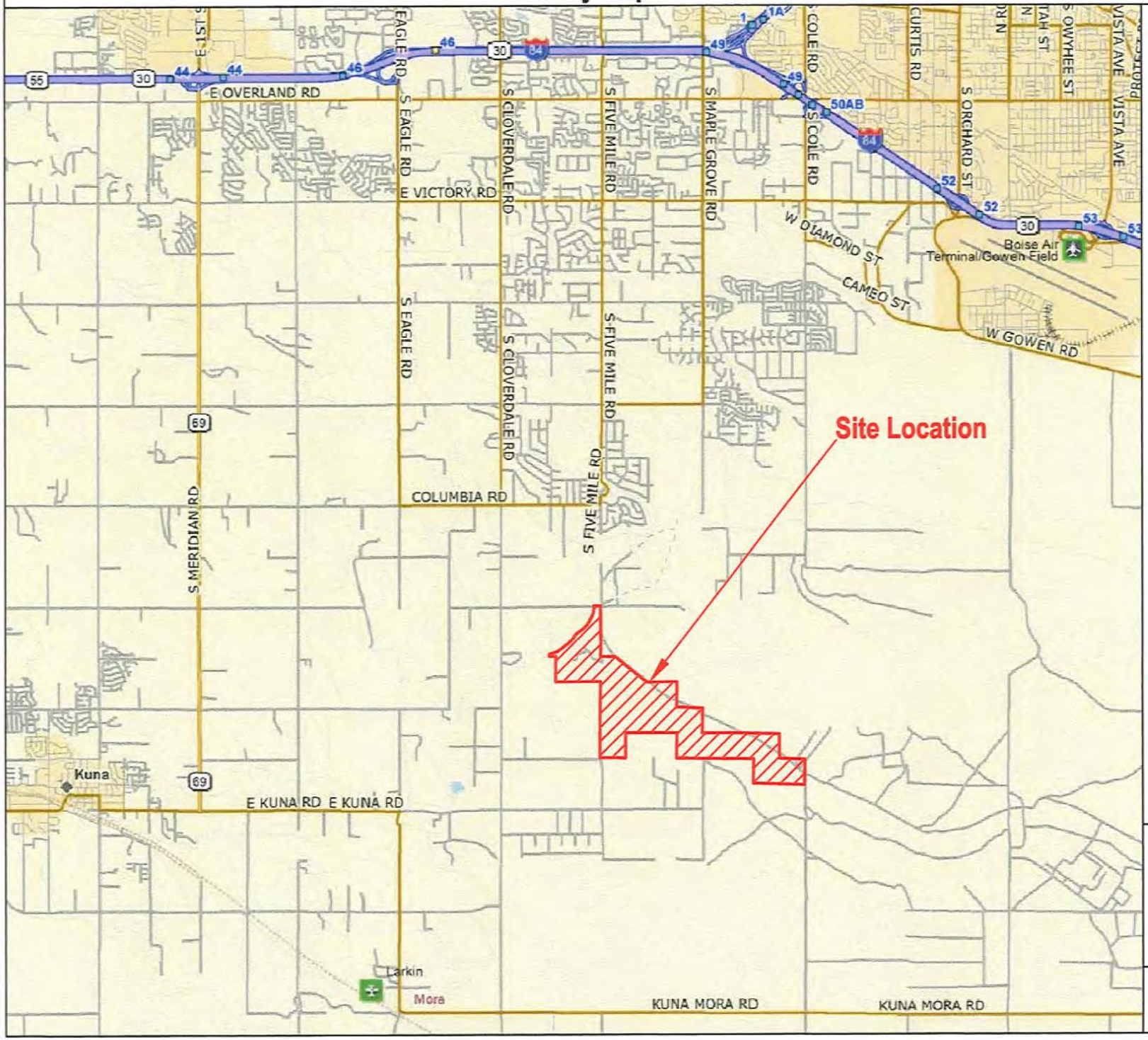
Vicinity Map

Plate 1



MAP NOTES:

- Delorme Street Atlas
- Not to Scale

LEGEND

Approximate Site Location

N

Ten Mile Creek Development
South of Ten Mile Creek Road
and Hubbard Road
Kuna, ID

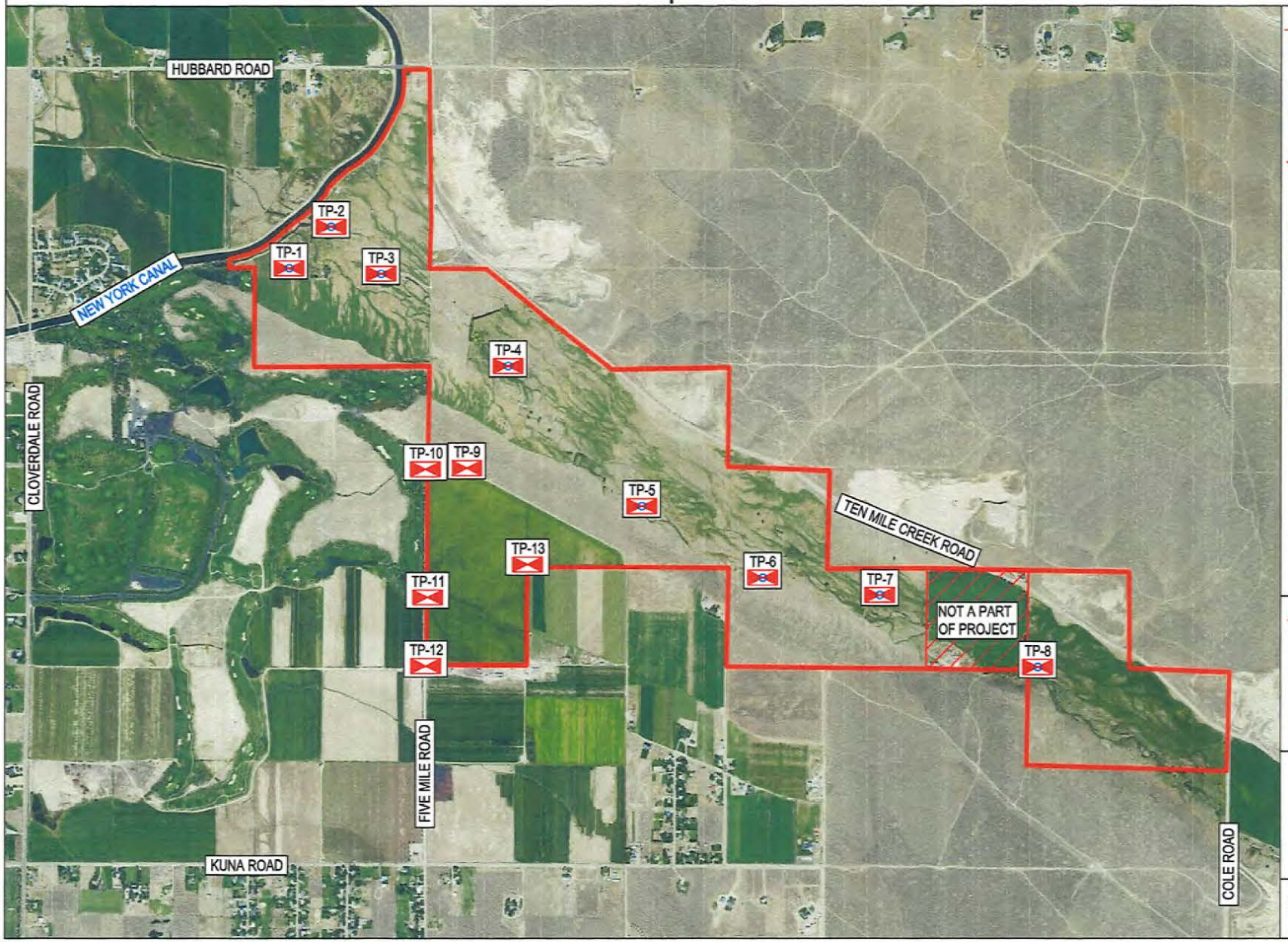
Modified from DeLorme by: NGS
25 February 2019
Drawing: B181928g

MATERIALS TESTING & INSPECTION
AN ATLAS COMPANY

2791 S. Victory View Way
Boise, ID 83709-2835
Phone: 208 376-4748
Fax: 208 322-6515
E-mail: mti@mti-id.com

Site Map

Plate 2



NOTES:

- Not to Scale
- Aerial photography by USDA-FSA

LEGEND

Approximate Site Boundary

Approximate MTI Test Pit Location

Approximate MTI Test Pit Location with Piezometer

N

Ten Mile Creek Development
South of Ten Mile Creek Road
and Hubbard Road
Kuna, ID

Modified by: NGS
25 February 2019
Drawing: B181928g

MATERIALS TESTING & INSPECTION
AN ATLAS COMPANY

2791 S Victory View Way
Boise, ID 83709

Phone: 208 376-4748
Fax: 208 322-6515
E-mail: mti@mti-id.com

Jerry Hastings

From: Sub Name Mail
Sent: Friday, March 22, 2019 5:04 PM
To: David Yorgason
Cc: codym@idahosurvey.com
Subject: Spring Rock Subdivision Name Reservation

March 25, 2019

Cody McCammon, Idaho Survey Group
Dave Yorgason, Ten Mile Creek LLC

RE: Subdivision Name Reservation: **SPRING ROCK SUBDIVISION**

At your request, I will reserve the name **Spring Rock Subdivision** for your project.
Due to the size of this development, the name reservation is subject to conditions. The use of this name is subject to the current Ada County Subdivision Name Policy & requirements of Idaho Code 50-1307.
The following items are included in the current policy, but are reiterated herein for emphasis.

1. Subsequent phases of this development must be adjoining. If the plat boundary phases are not adjoining, the primary name "**SPRING ROCK**" may be used but a new secondary name must be chosen and reserved prior to the plat being submitted to the Ada County Surveyor's office.
2. The use of this name across Ten Mile Creek Road may not be allowed, unless the Ten Mile Creek Road right-of-way is included in the plat. Without a review of all of the deeds, it would appear that Ten Mile Creek Road appears to be a prescriptive (as opposed to dedicated) right-of-way.

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 either 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 others.

Sincerely,

Jerry L. Hastings, PLS 5359
County Surveyor
Deputy Clerk Recorder
Ada County Development Services
200 W. Front St., Boise, ID 83702
(208) 287-7912 *office*
(208) 287-7909 *fax*
E-mail: jhastings@adacounty.id.gov

-----Original Message-----
From: David Yorgason [mailto:dyorgason6@gmail.com]
Sent: Thursday, March 21, 2019 11:31 AM
To: Sub Name Mail
Cc: Dave Yorgason
Subject: Subdivision Name Request: Springrock

Subdivision Naming:

We are requesting the name Springrock for a subdivision name. Please let us know if this is approved. Here is the information you need:

Parcels:	Township Range Sections
S1415110103	T2N R1&2E Sec 15
S1415427805	T2N R1E Sec 15
S1415141900	T2N R1E Sec 15
S1414336000	T2N R1&2E Sec 14
S1414315000	T2N R1E Sec 14
S1414438400	T2N R1E Sec 14
S1414438900	T2N R1E Sec 14
S1423120000	T2N R1E Sec 23
S1423110000	T2N R1E Sec 23
S1423111000	T2N R1E Sec 23
S1424233600	T2N R1E Sec 24
S1424131800	T2N R1E Sec 24
S1424240000	T2N R1E Sec 24 (Davis)
S1423211000	T2N R1E Sec 23 (Gilmore)

Surveyor: Idaho Survey Group (Cody McCammon)

Developer: Ten Mile Creek, LLC (contact Dave Yorgason)

Please advise if you need more info.

Thanks,
Dave Yorgason
208-850-1070

Glen Smallwood

From: Sub Name Mail
To: David Yorgason; Sub Name Mail
Cc: Cody McCammon
Subject: RE: [EXTERNAL] Re: Springrock Subdivision Name Reservation

Since the name was already accepted, we changed the name in our system, adding a space.
I have modified the original letter and re-attached it.

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

From: David Yorgason [mailto:dyorgason6@gmail.com]
Sent: Tuesday, July 2, 2019 4:30 PM
To: Sub Name Mail
Cc: Cody McCammon; Dave Yorgason
Subject: [EXTERNAL] Re: Springrock Subdivision Name Reservation

Jerry / Subdivision Naming Group,

Thank you again for approving the name for our subdivision. We are getting feedback that it would be better to have this name as two words if possible … can you change the name of our subdivision and approve it as Spring Rock Subdivision?

Thanks,
Dave Yorgason

On Mar 25, 2019, at 11:50 AM, Sub Name Mail <subnamemail@adacounty.id.gov> wrote:

March 25, 2019

Cody McCammon, Idaho Survey Group
Dave Yorgason, Ten Mile Creek LLC

RE: Subdivision Name Reservation: **SPRINGROCK SUBDIVISION**

At your request, I will reserve the name **Springrock Subdivision** for your project.
Due to the size of this development, the name reservation is subject to conditions. The use of this name is subject to the current Ada County Subdivision Name Policy & requirements of Idaho Code 50-1307.
The following items are included in the current policy, but are reiterated herein for emphasis.

1. Subsequent phases of this development must be adjoining. If the plat boundary phases are not adjoining, the primary name "**SPRINGROCK**" may be used but a new secondary name must be chosen and reserved prior to the plat being submitted to the Ada County Surveyor's office.
2. The use of this name across Ten Mile Creek Road may not be allowed, unless the Ten Mile Creek Road right-of-way is included in the plat. Without a review of all of the deeds, it would appear that Ten Mile Creek Road appears to be a prescriptive (as opposed to dedicated) right-of-way.

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 either 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 others.

Sincerely,

<image001.png>

Jerry L. Hastings, PLS 5359
County Surveyor
Deputy Clerk Recorder
Ada County Development Services
200 W. Front St., Boise, ID 83702
(208) 287-7912 *office*
(208) 287-7909 *fax*
E-mail: jhastings@adacounty.id.gov

-----Original Message-----
From: David Yorgason [mailto:dyorgason6@gmail.com]
Sent: Thursday, March 21, 2019 11:31 AM
To: Sub Name Mail
Cc: Dave Yorgason
Subject: Subdivision Name Request: Springrock

Subdivision Naming:

We are requesting the name Springrock for a subdivision name. Please let us know if this is approved. Here is the information you need:

Parcels:	Township Range Sections
S1415110103	T2N R1&2E Sec 15
S1415427805	T2N R1E Sec 15
S1415141900	T2N R1E Sec 15
S1414336000	T2N R1&2E Sec 14
S1414315000	T2N R1E Sec 14
S1414438400	T2N R1E Sec 14
S1414438900	T2N R1E Sec 14
S1423120000	T2N R1E Sec 23
S1423110000	T2N R1E Sec 23
S1423111000	T2N R1E Sec 23
S1424233600	T2N R1E Sec 24
S1424131800	T2N R1E Sec 24
S1424240000	T2N R1E Sec 24 (Davis)
S1423211000	T2N R1E Sec 23 (Gilmore)

Surveyor: Idaho Survey Group (Cody McCammon)

Developer: Ten Mile Creek, LLC (contact Dave Yorgason)

Please advise if you need more info.

Thanks,
Dave Yorgason
208-850-1070

Exhibit B 1

CITY OF KUNA
P.O. BOX 13
KUNA, ID 83634
www.kunacity.id.gov

Paul A. Stevens, P.E.
Kuna City Engineer

MEMORANDUM

Date: **20 August 2019**

From: **Paul A. Stevens, P.E.**

To: **Wendy Howell, Planning and Zoning Director**

RE: **Spring Rock Subdivision 19-10-AN, 19-01-PUD, 19-06-S, & DEVELOPMENT AGREEMENT.**

The Spring Rock 19-10-AN, 19-01-PUD, 19-06-S, DA dated 18 June 2019 has been reviewed. The application provides a preliminary plat, a narrative explaining the developers vision for the subdivision, a landscape plan, various explanatory maps and pictures, and a draft Development Agreement (DA). These comments apply to the preliminary plat and the rezone as they affect public works infrastructure. Landscaping, population density, parking requirements, emergency access, intense pedestrian and vehicular traffic in the proposed R 20 zone and similar topics are evaluated by the Planning and Zoning Department. Review and evaluation of civil design drawings is accomplished separately, when received.

These comments may be expanded or refined based on future land-use actions. The following comments apply considering current, effective requirements:

1. **General**
   a. The Spring Rock Subdivision site is approximately 761 acres and is currently zoned RR (ADA County Zone Rural Residential).
   b. Rezone requests:
      a. 660.78 acres R-6 (City of Kuna (COK) Medium Density Residential).
      b. 13 acres R-12 (COK High Density Residential).
      c. 18.89 acres R-20 (COK High Density Multi-Family Residential).
      d. 12.21 acres C-1 (COK Neighborhood Commercial District).
      e. 10.34 acres C-2 (COK Area Commercial District).
      f. An average Dwelling Units per Acre (DUA) for the overall project was not provided.
   c. Typical dwelling units are reckoned at approximately 3.18 people per household. At this rate the projected population for this subdivision will be approximately 14,000 people or 21 people per acre.
   d. A commensurate impact on the City of Kuna's, sewer, will result.
   e. Pressurized irrigation will be provided by the development utilizing existing wells.
   f. Potable water is recommended to be furnished by SUEZ because this property lies within their service boundary.
   g. A commensurate impact to traffic volumes and densities will follow.

h. Access to Spring Rock Subdivision is from W Ten Mile Creek Road.
i. Areas for outside activities are incorporated into the project. Connection to the City of Kuna pathways presents a long term goal that should be considered.
j. A plan approval letter will be required if this project affects any local irrigation districts.
k. Verify that existing and proposed elevations match at property boundaries such that a slope burden is not imposed on adjacent properties.
l. State the vertical datum used for elevations on all drawings.
m. Provide engineering certification on all final engineering drawings.

2. Inspection Fees

a. An inspection fee will be levied for City inspection of water, sewer and irrigation facilities construction associated with this development. The current inspection fee is $1.00 per lineal foot of sewer, water and pressure irrigation pipe. Payment is due and payable prior to City's approval of final construction plans.
b. The developer shall retain a qualified responsible, Idaho registered professional engineer to provide sufficient inspection to certify to DEQ that the project was completed in accordance with approved plans and specifications and to provide accurate as-built drawings to the City. IDAPA 10.01.02 lists the professional engineer's project responsibilities.
c. The developer's engineer and the City's inspector are encouraged to coordinate inspections.

3. Right-of-Way

a. Spring Rock Subdivision will impact travel on W Ten Mile Creek Road and adjoining roads.
a. All street construction must meet or exceed ACHD and City of Kuna development standards.
b. Sufficient right-of-way for existing and future classified streets shall be provided pursuant to City & ACHD standards.
c. Approaches onto classified streets must comply with ACHD and City of Kuna approach policies.
d. Sidewalk, curb and gutter, street widening and any related storm drainage facilities, consistent with city code and policies, shall be provided in connection with property development.
e. All city mainlines crossing proposed lots, running along the back of lots and sides of lots shall have easements that allow the City of Kuna to access and maintain the utilities.
f. All mainlines owned by the development shall be placed in easements large enough to allow maintenance and repairs.

4. Sanitary Sewer & Potable Water

a. It is recommended that this application be conditioned to conform to the sewer and water master plans as applicable.
b. Even though it is recommended that SUEZ will provide water to the development, water system improvements must meet or exceed the quality requirements of the City of Kuna.
c. If SUEZ is approved to be the water provider, an emergency intertie between SUEZ and City of Kuna with written agreement is required.
d. The applicant's property is not connected to City services and is subject to connection fees for the ultimate connected sewer load as provided in the City's Standard Tables. City Code (6-4-2) requires connection to the City sewer system for all sanitary sewer needs.
e. All sewer infrastructure must meet or exceed City of Kuna requirements.

f. Sewer flows from this development are expected to be substantial and will exceed the capacity of the receiving sewer lift stations (Patagonia then on to Memory). It is expected that the development shall provide the additional lift station capacity needed to serve the property.
g. Sewer collection pipe shall be evaluated and a determination made regarding adequacy for the projected sewage flows. Upsizing and or participation in a main trunk line construction project may be needed.
h. Water and sewer flow models will be required to verify adequate water supply and fire suppression and sewage removal.
i. Sewer and water connection fees apply to each lot containing a home or other facility.
j. All existing sewage treatment facilities (septic tank and drain field) must be decommissioned in accordance with Idaho Department of Environmental Quality requirements. Documentation shall be provided to the City of Kuna.
k. Decommission wells as needed, in accordance with Idaho Department of Water Resources (IDWR) requirements. Documentation shall be provided to the City of Kuna.

5. Pressurized Irrigation

a. It is recommended that this application be conditioned to conform to the Pressure Irrigation Master Plan.
b. The applicant's property is not connected to the City's pressurized irrigation system. Relying on drinking water for irrigation purposes conflicts with City Code (6-4-2).
c. All pressurized irrigation infrastructure shall meet or exceed City of Kuna standards.
d. Irrigation of Spring Rock subdivision shall be from on site, existing irrigation wells.
e. Existing irrigation ditches (supply & drain) must be relocated as needed and as approved by the irrigation ditch company/users.
f. Pressurized irrigation flow model will be required to verify adequate pressurized irrigation supply.

6. Grading and Storm Drainage

a. Verify that existing and proposed elevations match at property boundaries such that a slope burden is not imposed on adjacent properties. Slopes shall not be steeper than 3:1 on lots adjacent to a street or common lot and no steeper than 4:1 for lots with common rear lot lines.
b. Provide a grading and drainage plan which supports and maintains all upstream drainage rights and all downstream irrigation delivery rights as they presently exist for this property.
c. The City of Kuna relies on the ACHD Stormwater Policy Manual to establish the requirements for design of private storm water disposal systems.
d. Provide a storm water disposal & treatment plan which accounts for increased storm water runoff volumes. Provide detailed drawings of drainage & treatment facilities with supporting calculations for review and approval.
e. Runoff from public right-of-way is regulated by ACHD. On site storm water retention shall be reviewed by the City Engineer in conjunction with the Civil Engineering construction improvements review.

7. As-Built Drawings

a. As-built drawings are required at the conclusion of any public facility construction project and are the responsibility of the developer's engineer. The city may help track changes but will not be responsible for the finished product. As-built drawings will be required before occupancy or final plat approval is granted.

8. Property Description

a. The applicant provided a preliminary plat and supporting documents as part of the application.

This report is the Master Plan Report. The Preliminary Plat Report will be a separate report.

Exhibit B 2

Rebecca W. Arnold, President
Mary May, 1st Vice-President
Sara M. Baker, 2nd Vice-President
Jim D. Hansen, Commissioner
Kent Goldthorpe, Commissioner

December 12, 2019

To: Dave Yorgason
Ten Mile Creek, LLC
1211 North Happy Drive
Boise, ID 83706

Subject: MAS19-0002/ Spring Rock Master Plan

On December 12, 2019 the Ada County Highway District Commission acted on your application for the above referenced project.

If you have any questions, please feel free to contact me at (208) 387-6178.

Sincerely,

Mindy Wallace, AICP
Planning Review Supervisor
Development Services

cc: City of Kuna

This report is the Master Plan Report. The Preliminary Plat Report will be a separate report.

Exhibit B 2

Sara M. Baker, President
Rebecca W. Arnold, Vice President
Jim D. Hansen, Commissioner
Kent Goldthorpe, Commissioner
Paul Woods, Commissioner

December 11, 2019

To: Dave Yorgason
Ten Mile Creek, LLC
1211 North Happy Drive
Boise, ID 83706

Subject: Spring Rock Master Plan Community

Application Information & Introduction

The applicant, Ten Mile Creek LLC, is requesting approval of a Master Planned Community, Spring Rock Subdivision.

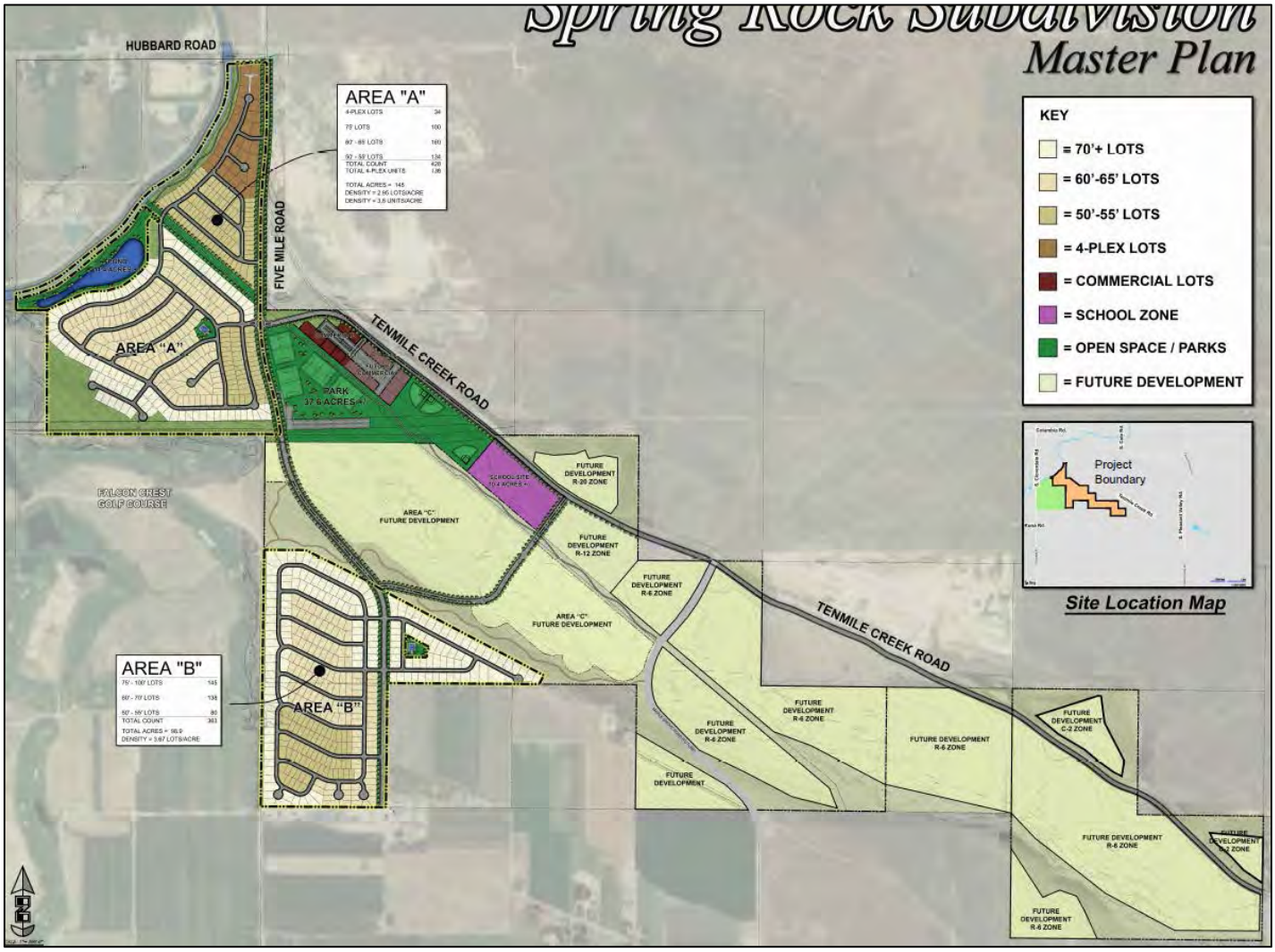
The Master Plan is for 761 acres and includes all the land that is anticipated to be incorporated into this project. The applicant has requested commercial, high density multi-family and medium and high-density residential designations as part of their application. The site will be divided into various development areas. Those areas include single family and multi-family residential, office, restaurants, mini-self storage, elementary school, pathways, private parks and public parks. The site is located south of and adjacent to Ten Mile Creek Road extending between Pleasant Valley Road west, to west of Five Mile Road to the New York Canal and Falcon Crest Golf Course. The applicant intends to submit preliminary plats for the individual phases of the 761 acres. As individual preliminary plats are submitted under this Plan, the Ada County Highway District (ACHD) will provide detailed analysis of impacts to the transportation system, mitigation, street layout, street design and construction, and will be a signatory on the plat.

For the current application, ACHD is a commenting agency to the City of Kuna. ACHD has no objections to the application and will review preliminary plat applications and provide site specific conditions of approval with each future preliminary plat prior to any roadway construction, or scheduling of a final plat for signature.

This report is the Master Plan Report. The Preliminary Plat Report will be a separate report.

Exhibit B 2

Vicinity Map and Conceptual Site Plan



ACHD Comments to the City of Kuna

1. **Capital Improvement Plan (CIP)/Integrated Five Year Work Plan (IFYWP)**
   The following improvements are scheduled in ACHD's IFYWP or listed in the CIP:

   - The intersection of Lake Hazel Road and Cloverdale Road is scheduled in the IFYWP to be widened to 5-lanes on the north leg, 5-lanes on the south, 6-lanes east, and 5-lanes on the west leg and is scheduled for 2024. (Project #49)
   - The intersection of Amity Road and Cloverdale Road is listed in the CIP to be replaced with a multi-lane roundabout with 4-lanes on the north leg, 4-lanes on the south, 2-lanes east, 2-lanes on the west leg between 2021 and 2025. (Project #2)
   - The intersection of Cloverdale Road and Columbia Road is listed in the CIP to be replaced with a single-lane roundabout with 3-lanes on the north leg, 2-lanes on the south, 2-lanes east, 3-lanes on the west leg with a westbound right turn bypass lane between 2026 and 2030. (Project #20)
   - The intersection of Cloverdale Road and Kuna Road is listed in the CIP to be replaced with a single-lane roundabout with 2-lanes on the north leg, 2-lanes on the south, 2-lanes east, 2-lanes on the west leg with a westbound right turn bypass lane between 2031 and 2035. (Project #47)
   - Cloverdale Road is listed in the CIP to be widened to 3-lanes from Kuna Road to Deer Flat Road between 2031 and 2035. (Project #17)
   - Cloverdale Road is listed in the CIP to be widened to 3-lanes from Deer Flat Road to Hubbard Road between 2031 and 2035. (Project #18)
   - Cloverdale Road is listed in the CIP to be widened to 3-lanes from Hubbard Road to Columbia Road between 2031 and 2035. (Project #19)
   - Cloverdale Road is listed in the CIP to be widened to 5-lanes from Columbia Road to Lake Hazel Road between 2026 and 2030. (Project #20)
   - Cloverdale Road is listed in the CIP to be widened to 5-lanes from Lake Hazel Road to Amity Road between 2026 and 2030. (Project #21)

Due to current and future budgets forecasts ACHD may be unable to complete the improvements necessary to the north/south corridors.

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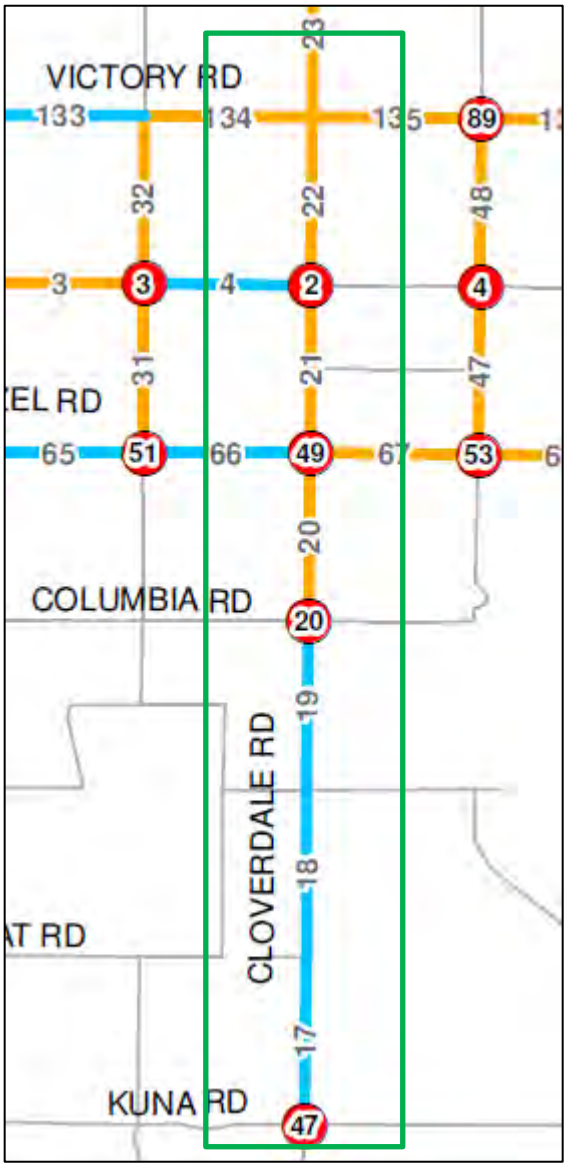
Exhibit B 2

CIP Project Map



2. Traffic Impact Study

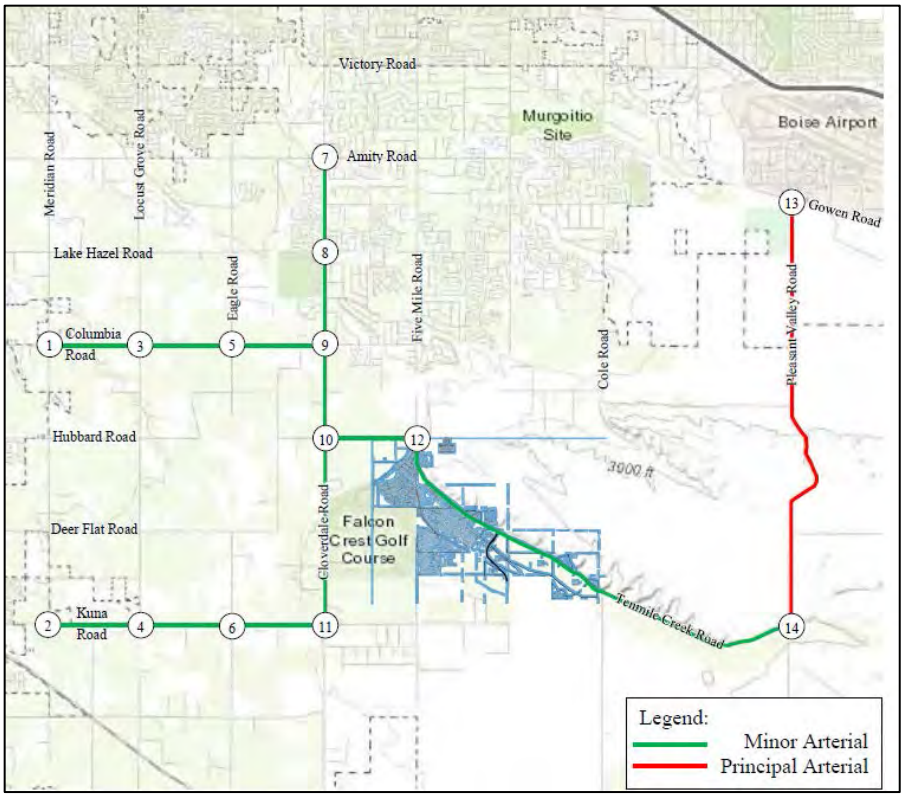
The purpose of the study was to provide a planning level roadway analysis for the full build out of the Spring Rock Master Plan and to highlight roadway improvements due to site generated traffic at full build out of the site.

Traffic Impact Study Area

With the traffic impact study for the Spring Rock Master Plan the study area was extended to beyond the roadways adjacent to the development to allow for analysis of all the traffic impacts. The study area included the following roadway segments:

- Cloverdale Road – Kuna Road to Amity Road
- Columbia Road – Meridian Road to Cloverdale Road
- Kuna Road – Meridian Road to Cloverdale Road
- Hubbard Road – Cloverdale Road to Five Mile Road
- Ten Mile Creek Road – Five Mile Road to Pleasant Valley Road
- Pleasant Valley Road – Gowen Road to Ten Mile Creek Road

A planning level analysis for intersections was not recommended as part of planning level analysis for the Spring Rock Master Plan. There are several intersections in the study area identified for improvements in ACHD's (Capital Improvement Plan) and intersections will be identified and studied as part of future traffic impact studies for individual preliminary plat phases.



The applicant's TIS analyzed the impacts of the subject development alone and identified the street improvements necessary to address the projected impacts. A complete

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Exhibit B 2

executive summary of the study is included as Attachment C. Below is an identification of the scope:

- Trip Generation of the proposed developments
- Site traffic distribution and traffic assignment
- Planning level threshold roadway capacity analysis
- Recommended roadway sizes and improvements to serve the site in 2040

ACHD Comment: District Traffic Services and Planning Review staff have reviewed the submitted traffic impact study for accuracy in results and assumptions as well as for completeness. ACHD comments and recommendations are noted below.

a. Build-Out Year and Off-Site Traffic Projections
The projected build-out year for the Spring Rock Master Plan development is 2040. The study provides an analysis of the 2040 traffic conditions with and without the Spring Rock Master Plan development and provides a comparison of the improvements necessary to mitigate the site generated traffic impacts to the improvements listed in ACHD's CIP.

b. Offsite Improvements
The planning level roadway analysis includes 14 roadway segments in the study area. The current CIP has roadway improvements planned through 2035 and only has planned improvements for 6 miles of Cloverdale Road between Deer Flat Road and Overland Road. No other study area roadways are currently planned for improvements.

The tables below identify the study roadway segments, the number of lanes the roadways are anticipated to have in 2040 based on the CIP and notes whether the roadways will be over capacity for 2040 total traffic conditions with the background and site generated traffic.

Table 5.5 – Roadway Segment Level of Service Analysis – 2040 Background Plus Build-Out Site Traffic

Roadway	Segment	Functional Classification (No. of Lanes) (CIP Lanes)	ACHD LOS Planning Threshold [vph]	Peak Hour Directional Volume [vph]		Meets LOS Planning Threshold? (Need Lanes)
				AM Peak	PM Peak	
Cloverdale Rd	Amity Rd to Lake Hazel Rd	Minor Arterial (5)	LOS E 1,540	1,700	1,815	No (7)
	Lake Hazel Rd to Columbia Rd	Minor Arterial (5)	LOS E 1,540	1,845	2,067	No (7)
	Columbia Rd to Hubbard Rd	Minor Arterial (3)	LOS E 720	1,757	1,743	No (7)
Pleasant Valley Rd	Gowen Rd to Hollilynn Dr	Principal Arterial (2)	LOS E 690	851	861	No (3)
	Hollilynn Dr to Tenmile Creek Rd	Principal Arterial (2)	LOS E 690	621	785	No (3)
Columbia Rd	Meridian Rd to Locust Grove Rd	Minor Arterial (2)	LOS E 575	594	735	No (5)
	Locust Grove Rd to Eagle Rd	Minor Arterial (2)	LOS E 575	708	785	No (5)
	Eagle Rd to Cloverdale Rd	Minor Arterial (2)	LOS E 575	718	914	No (5)
Hubbard Rd	Five Mile Rd to Cloverdale Rd	Minor Arterial (2)	LOS E 575	995	1,029	No (5)
Five Mile Rd	Tenmile Creek Rd to Hubbard Rd	Minor Arterial (3)	LOS E 720	991	1,027	No (5)
Tenmile Creek Rd	Five Mile Rd to Pleasant Valley Rd	Minor Arterial (3/2)	LOS E 720/575	529	721	Yes
Kuna Rd	Meridian Rd to Locust Grove Rd	Minor Arterial (2)	LOS E 575	589	789	No (5)
	Locust Grove Rd to Eagle Rd	Minor Arterial (2)	LOS E 575	505	731	No (5)
	Eagle Rd to Cloverdale Rd	Minor Arterial (2)	LOS E 575	530	695	No (3)

The following lists roadway segments anticipated to need widening beyond the CIP under 2040 total traffic conditions:

- Cloverdale Road between Amity Road and Hubbard Road – widen from 3/5 to 7 lanes.
- Pleasant Valley Road between Gowen Road and Ten Mile Creek Road – widen from 2 to 3 lanes.
- Columbia Road between Meridian Road and Cloverdale Road – Widen from 2 to 5 lanes.
- Hubbard Road between Five Mile Road and Cloverdale Road – widen from 2 to 5 lanes.
- Five Mile Road between Ten Mile Creek Road and Hubbard Road – widen from 2 to 5 lanes.

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Exhibit B 2

- Kuna Road between Meridian Road and Eagle Road – widen from 2 to 5 lanes.

- Kuna Road between Eagle Road and Cloverdale Road – widen from 2 to 3 lanes.

ACHD Comment: Due to the changes in land use assumptions in the City of Kuna and throughout Ada County, changes to ACHD's CIP may be warranted as part of the next CIP updated, planned for 2020. The current Integrated Five Year Work Plan (IFYWP) does not include any planned roadway improvements in the study area.

The traffic impact study identifies the following roadway segments as needing improvements to accommodate the building of the Spring Rock Master Plan development in 2040:

- Cloverdale Road between Amity Road and Hubbard Road – widen from 3/5 to 7 lanes.

- Pleasant Valley Road between Gowen Road and Ten Mile Creek Road – widen from 2 to 3 lanes.

- Columbia Road between Meridian Road and Cloverdale Road – Widen from 2 to 5 lanes.

- Hubbard Road between Five Mile Road and Cloverdale Road – widen from 2 to 5 lanes.

- Five Mile Road between Ten Mile Creek Road and Hubbard Road – widen from 2 to 5 lanes.

- Kuna Road between Meridian Road and Eagle Road – widen from 2 to 5 lanes.

- Kuna Road between Eagle Road and Cloverdale Road – widen from 2 to 3 lanes.

If improvements are not made to impacted roadway segments and intersections, the applicant may need to make improvements or wait for ACHD to make them.

All roadway improvements necessary to serve the site will be verified through traffic impact studies submitted with future preliminary plat applications.

In Table 5.5 above, the TIS states the future number of lanes needed on Cloverdale Road is 7. At this time ACHD has no plans to widen Cloverdale Road between Columbia Road and Amity Road beyond the 5 lanes currently listed in ACHD's CIP and Master Street Map.

ACHD has no planned improvements for Ten Mile Creek Road, Pleasant Valley Road, Columbia Road, Hubbard Road, Five Mile Road, or Kuna Road within the study area.

3. Trip Generation and Trip Capture

a. Land Use Assumptions

i. 2,297 dwelling units

1. 1,925 single-family detached housing
2. 252 Multi-family housing (low-rise)
3. 120 Multi-family housing (mid-rise)

ii. 83,000 square feet of commercial/office

1. Includes 60,000 square feet of small office uses
2. Includes 23,000 square feet of commercial uses

iii. Elementary School – 600 students

b. Total Trip Generation

i. At the time of full build-out in 2040 the Spring Rock Master Plan is anticipated to generate:

1. 26,351 vehicles per day, and
2. 2,563 vehicles per hour during the PM peak hour

c. Propose Trip Capture Percentages

i. The submitted traffic impact study estimates that approximately 12% of the site generated traffic will be retained within the development due to the proposed mixed uses.

ACHD Comment: District Traffic Services staff has reviewed the methodology utilized by CR Engineering, Inc. for the Spring Rock Master Plan trip capture, and is supportive of the methodology utilized, as the applicant's engineer used the procedure outlined in the ITE Trip Generation Handbook for calculating the trip captured as required by ACHD. The applicant's engineer estimated 12% of the daily trips would be captured within the site. ACHD agrees with the 12% trip capture rate presented by the applicant's engineer. The actual trip capture rate will need to be verified with each revised traffic study.

d. ACHD Recommendation for Trip Capture Rates

i. Each preliminary plat must include actual traffic counts of all phases to date, plus the projected traffic for the proposed phase.

ii. No assumed trip capture or reductions will be allowed at this time, only actual verified trip capture may be utilized for the existing phases at the time of the future studies. Estimated trip capture will only be allowed for the proposed future phase based on ITE standards. The future evaluation must utilize the trip capture methodology outlined in the ITE Trip Generation Handbook.

iii. The traffic impacts will be evaluated with the updated traffic impact studies described above and the applicable street improvements will be required with each preliminary plat phase that necessitates the street improvement.

4. Trip Distribution

a. The submitted traffic impact study estimates that over 70% of site generated traffic will travel east/west on Hubbard Road and north/south on Cloverdale Road, and 30% will travel east/west on Ten Mile Creek Road. From those points, the traffic was distributed based on COMPASS's 2040 regional travel demand model.

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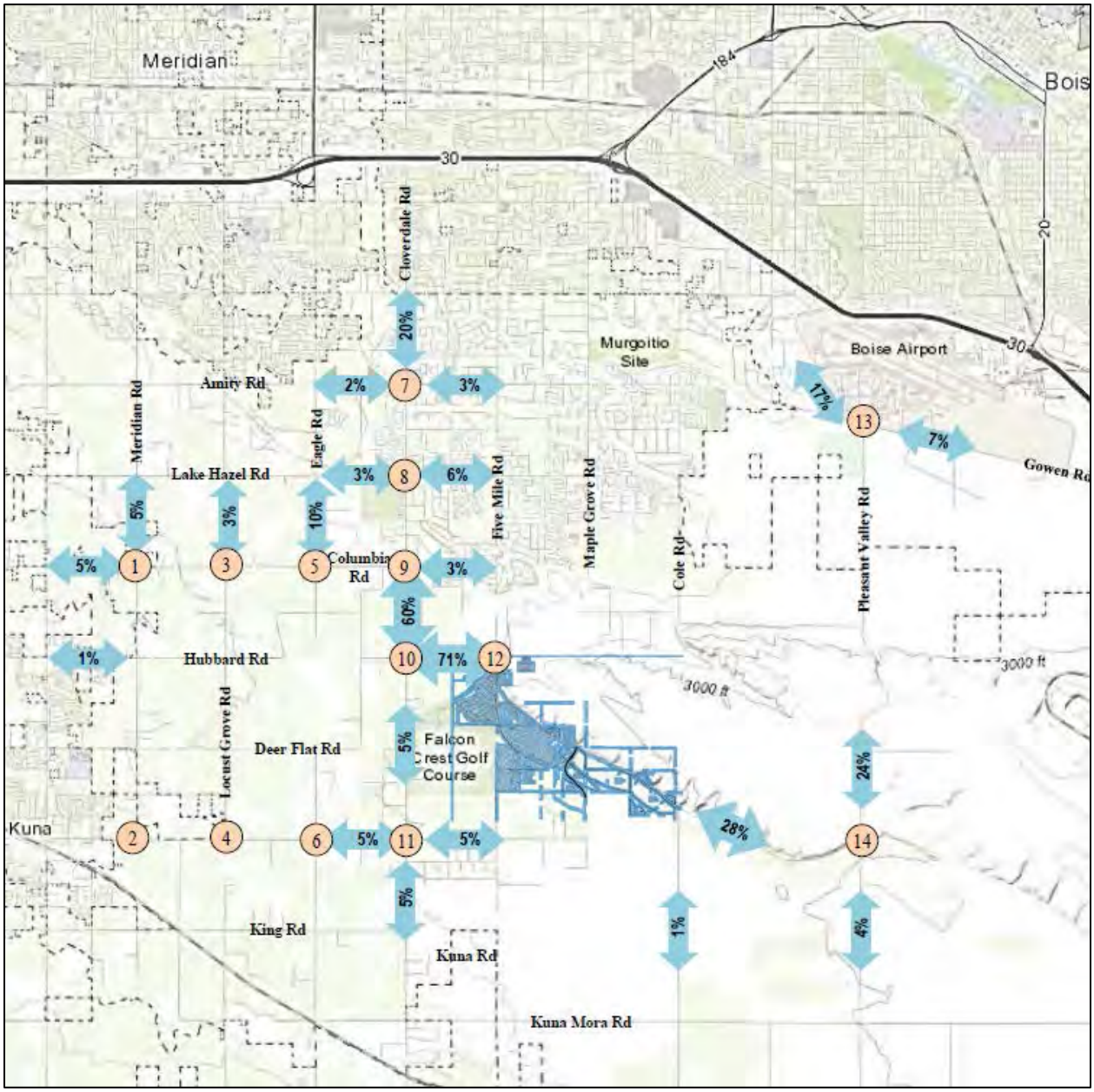
b. ACHD Comment: ACHD will require that the site traffic distribution be reviewed with each phase and preliminary plat submittal as part of the required future traffic impact studies. This will allow ACHD to evaluate whether additional mitigation measures are necessary if site traffic distribution is not as estimated in the TIS by the applicant's consultant.



5. Phasing Plan/Future Traffic Impact Studies

a. A phasing plan for the entire Spring Rock Master Plan was not provided as part of this application; however, the application materials indicate that the Spring Rock Master Planned Community is proposed to be constructed in multiple phases over the next 20+ years depending on market conditions. The first preliminary plat within the development consists of 791 residential lots, 7

commercial lots, 23 common lots, 1 school lot, 1 multi-family lot, and 2 public utility lots. A traffic impact study with specific findings and recommendations for the first final plat was submitted to ACHD for review and approval. District policy 7106.7.2 states that for large scale developments, like planned communities or specific area plans, ACHD will require that a phasing analysis be submitted with the initial TIS or with the first preliminary plat submittal. This phasing analysis shall include the size and type of the proposed land uses within each phase and the anticipated mitigation measures necessary with each phase. Prior to the approval for each subsequent phase of the development, the applicant shall submit an updated TIS. The updated TIS shall include information from the built environment to date including actual traffic counts and actual trip capture; projected traffic for the current phase and anticipated trip capture based on development of applicable land uses, and necessary mitigation measures for the current phase. In addition, the updated TIS shall include updated traffic counts for the impacted roadway segments and intersections consistent with Section 7106.6.

b. Comments/ Recommendations: Consistent with District policy, the applicant should be required to provide an updated traffic impact study with each phase of the development. In addition, a TIS should be required with all development applications that include a change to the Planned Unit Development that may alter traffic impact projections at the sole discretion of ACHD. All TIS submittals, including updates to the TIS, must meet ACHD policy requirements at the time of submittal.

TIS Update Requirements: An update to the TIS should include the following items:

- Updated traffic counts for the impacted roadway segments and intersections listed in the previous TIS;
- Information from the built development to date including actual traffic counts and actual measured trip capture;
- Projected trip generation, trip distribution and assignment, and anticipated trip capture for the current phase under consideration (preliminary plat application), based on development of the applicable land uses;
- Necessary mitigation measures for the current phase;
- Updates to all analysis, conclusions and recommendation found to be out of date or in need of correction based on the updated information
- Meet all ACHD policy requirements for a TIS at the time of submittal.

6. Arterial Roads – Ten Mile Creek Road, Hubbard Road, and Five Mile Road

a. Street Section and Right-of-Way Width Policy: District Policy 7205.2.1 & 7205.5.2 states that the standard 3-lane street section shall be 46-feet (back-of-curb to back-of-curb) within 70 feet of right-of-way. This width typically accommodates a

single travel lane in each direction, a continuous center left-turn lane, and bike lanes.

Street Section and Right-of-Way Width Policy: District Policies 7205.2.1 & 7205.5.2 state that the standard 5-lane street section shall be 72-feet (back-of-curb to back-of-curb) within 96-feet of right-of-way. This width typically accommodates two travel lanes in each direction, a continuous center left-turn lane, and bike lanes on a minor arterial and a safety shoulder on a principal arterial.

ACHD Master Street Map: ACHD Policy Section 3111.1 requires the Master Street Map (MSM) guide the right-of-way acquisition, arterial street requirements, and specific roadway features required through development. The segments of Five Mile Road and Ten Mile Creek Road abutting the site are designated in the MSM as Rural Arterials with 3-lanes, a 46-foot street section within 74-feet of right-of-way. The segment of Hubbard Road abutting the site is designated in the MSM as a Residential Arterial with 5-lanes and on-street bike lanes, a 72-foot street section with 96-feet of right-of-way.

b. Comments/Recommendations:

Ten Mile Creek Road: ACHD's MSM identifies Ten Mile Creek Road as a future 3-lane rural arterial roadway between Pleasant Valley Road and Hubbard Road. This is consistent with the traffic impact study, which notes that Pleasant Valley Road is anticipated to be at the maximum level of service planning threshold for a 3-lane arterial at build-out of the development in 2040.

Based on information provided in the traffic impact study and the MSM, if the City approves the rezone, the MSM will need to be modified to change Ten Mile Creek Road to a future 3-lane residential arterial roadway from Pleasant Valley Road to Hubbard Road.

To accommodate the construction of future 3-lane roadway additional right-of-way dedication will be necessary. Due to slope constraints and land ownership (BLM) on the north side of Ten Mile Creek Road across from the site and that the Spring Rock Master Plan development is necessitating the need for the widening of Ten Mile Creek Road to 3-lanes, staff recommends that all of the additional right-of-way dedication come from the south side of the roadway abutting the site. Therefore, the applicant will be required to dedicate 24-feet of additional right-of-way to totaling 49-feet of right-of-way from centerline of Ten Mile Creek Road abutting the site with the first preliminary plat. Preserving right-of-way for future roadways will ensure the roadways will accommodate future traffic volumes and provide design options for the future roadway.

The traffic impact study notes that in 2040 with build-out of the development Pleasant Valley Road is anticipated to be at the maximum level of service planning threshold for a 3-lane arterial. The need for additional roadway widening on Ten Mile Creek Road will need to be evaluated as part of future traffic impact studies to ensure that the roadway operates at an acceptable planning level of service threshold at build-out of the development in 2040.

Hubbard Road: ACHD's MSM identifies Hubbard Road as a future 5-lane residential arterial roadway from the site west to Cloverdale Road. The submitted traffic impact study indicates that Hubbard Road between Five Mile Road and Cloverdale Road will need to be widened to 5-lanes to accommodate the site

generated traffic under 2040 total traffic conditions. This segment of Hubbard Road is not scheduled in the IFYWP or CIP.

To accommodate the construction of future 5 lane roadway, the applicant will be required to dedicate 48-feet of right-of-way from centerline of Hubbard Road abutting the site with the first preliminary plat. Preserving right-of-way for future roadways will ensure the roadways will accommodate future traffic volumes and provide design options for the future roadway.

Five Mile Road: ACHD's MSM identifies Five Mile Road as a future 3-lane residential arterial roadway between the site's south property and Ten Mile Creek Road. North of Ten Mile Creek Road to Hubbard Road the MSM designation changes to a 3-lane rural arterial. However, the submitted traffic impact study indicates that Five Mile Road will need a 5-lane roadway between Ten Mile Creek Road and Hubbard Road to accommodate site generated traffic at build out of the development in 2040.

Based on information provided in the traffic impact study, if the City approves the rezone, the MSM will need to be modified to change Five Mile Road to a future 5-lane residential arterial roadway from Ten Mile Creek Road north to Hubbard Road.

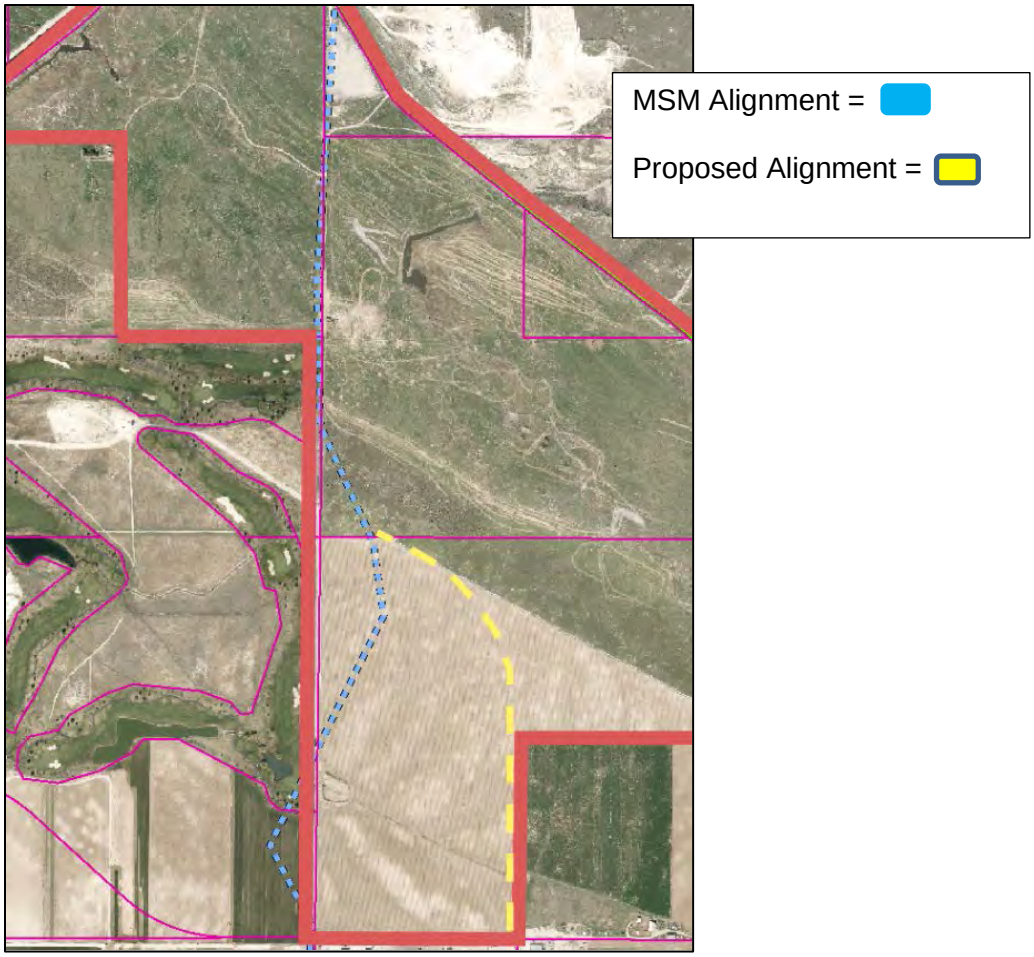
To accommodate the construction of future 5 lane roadway, the applicant will be required to dedicate 48-feet of right-of-way from centerline of Five Mile Road abutting the site between Ten Mile Creek Road and Hubbard Road and to accommodate the construction of a 3 lane roadway, dedicate 37-feet from the centerline of Five Mile Road from Ten Mile Creek Road south to the site's south property line with the first preliminary plat. Preserving right-of-way for future roadways will ensure the roadways will accommodate future traffic volumes and provide design options for the future roadway.

7. Five Mile Road – Alignment

a. Applicant's proposal: The applicant has proposed an alternative alignment for the extension of Five Mile Road though the site stubbing to the south property line. The applicant's proposal is consistent with the re-alignment of Five Mile Road previously approved as part of Falcon Crest Master Plan planning are in 2018.

This report is the Master Plan Report. The Preliminary Plat Report will be a separate report.

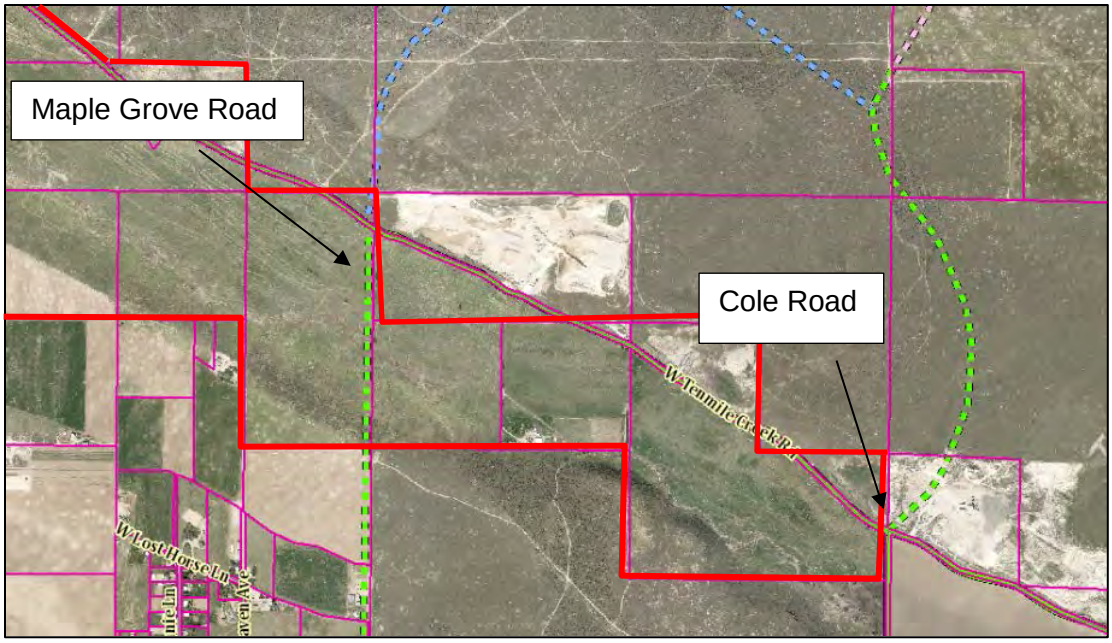
Exhibit B 2



b. Staff Comments/Recommendations: The applicant's proposal is consistent with the re-alignment of Five Mile Road previously approved as part of Falcon Crest Master Plan planning in 2018 and should be approved, as proposed. The exact alignment and design of Five Mile Road at the south property line should be coordinated with the applicant of the Falcon Crest Master Plan, M3 Companies.

8. Arterial Roadway Extensions – Maple Grove Road and Cole Road

a. Staff Comments: ACHD's MSM and the COMPASS 2040 Functional Classification map both identify the extension of Maple Grove Road and Cole Road from their current terminus south of Lake Hazel Road through the site south to Kuna Mora Road.



b. Maple Grove Road – Staff Recommendations: The MSM identifies the segment of Maple Grove Road through the site as a future 3-lane residential arterial, north of Ten Mile Creek Road and a future 3-lane rural arterial south of Ten Mile Creek Road. Staff recommends a modification to the MSM to change the designation of Maple Grove Road south of Ten Mile Creek Road to Kuna Road from a rural arterial to a 3-lane residential arterial roadway, a 46-foot street section within 74-feet of right-of-way. Staff's recommendation is due to land uses proposed within the Spring Rock Master Plan planning area, which include urban residential densities of R-6 and R-4 in the vicinity of the Maple Grove extension area.

To accommodate the future extension of Maple Grove Road, the applicant should be required to dedicate 74-feet of right-of-way and to construct roadway improvements necessary to serve the site; including, but not limited to 2-travel lanes, gravel shoulder, barrow ditch, and detached concrete sidewalks as part of a future preliminary plat application.

c. Cole Road – Staff Recommendations: The MSM identifies the segment of Cole Road through the site as a future 3-lane rural arterial. Staff recommends a modification to the MSM to change the designation of Cole Road south of Ten Mile Creek Road to Kuna Road from a rural arterial to a 3-lane residential arterial roadway, a 46-foot street section within 74-feet of right-of-way. Staff's recommendation is due to land uses proposed within the Spring Rock Master Plan planning area, which include urban residential densities of R-6 in the vicinity of the Cole Road extension area.

To accommodate the future extension of Cole Road, the applicant should be required to dedicate 74-feet of right-of-way and to construct roadway improvements necessary to serve the site; including, but not limited to 2-travel lanes, gravel shoulder, barrow ditch, and detached concrete sidewalks as part of a future preliminary plat application.

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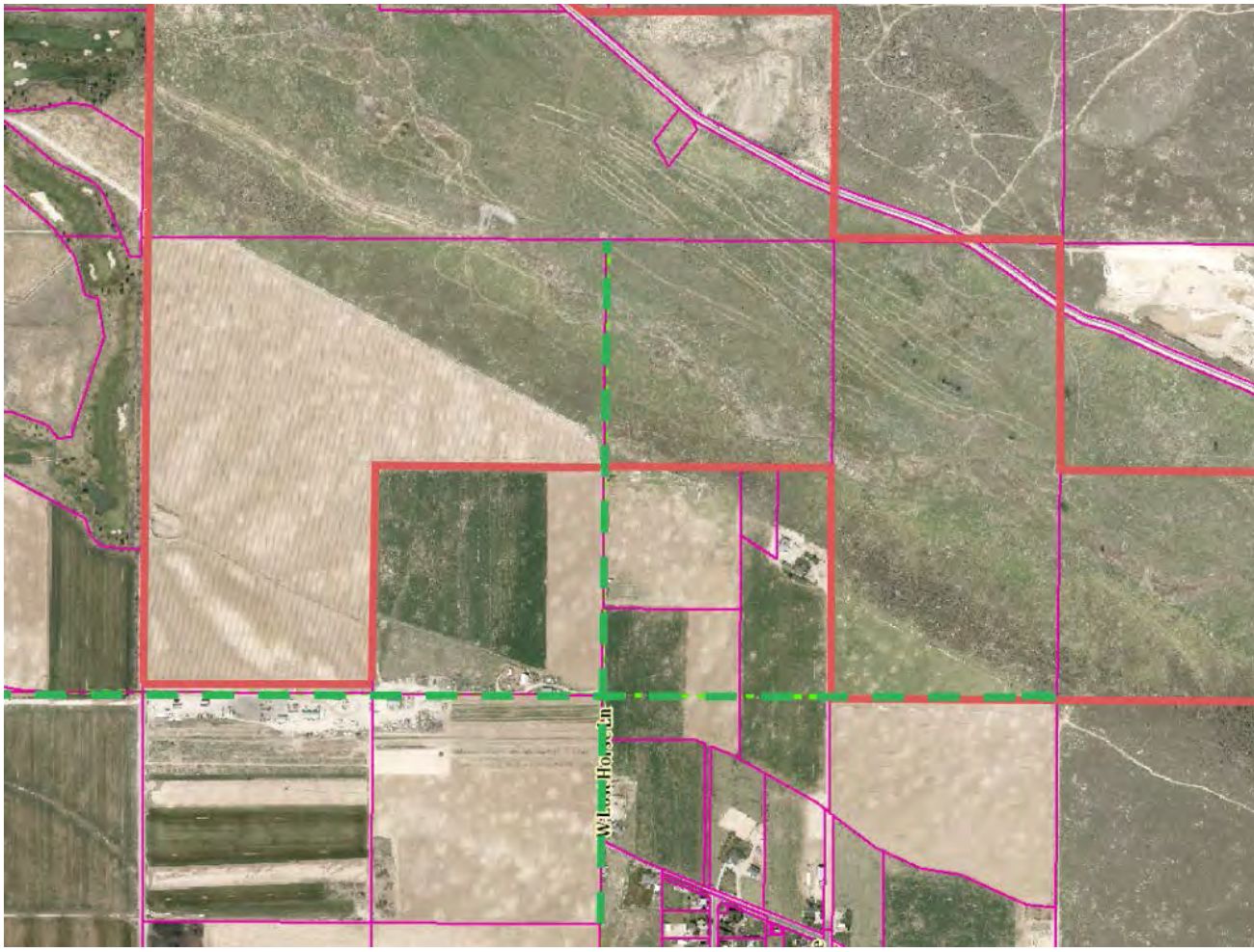
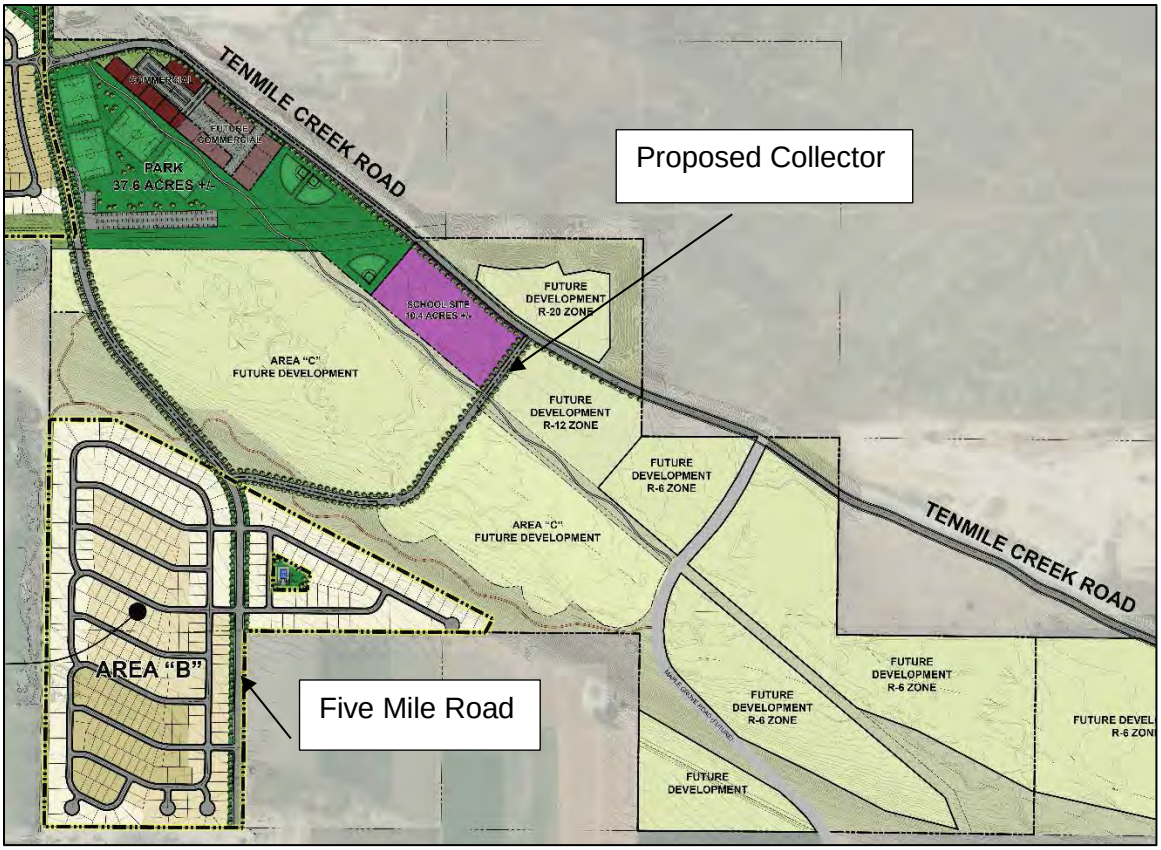
Exhibit B 2

9. Collector Roadways

a. Staff Comments: ACHD's MSM identifies 2 collector roadways within the Spring Rock Master Plan planning area. The east-west collector is proposed to be located at the half-mile between Kuna Road and Deer Flat Road at the south boundary of the site, and the north/south collector is proposed to extend a mile north of Kuna Road. Both collectors are designated as rural collector roadways.



b. Applicant's Proposal: The applicant is proposing to construct one collector roadway, Gem Valley Road, with the first phase of the development. The collector is proposed to run north/south between Ten Mile Creek Road and Five Mile Road and be constructed as 3-lane collector roadway a 46-foot wide street section within 74-feet of right-of-way. No other collector roadways are shown on the master plan for the Spring Rock Master Planned planning area.



c. Staff Recommendations: The applicant's proposal to construct a new collector roadway to extend north/south between Ten Mile Creek Road and Five Mile Road should be approved, as proposed. This collector roadway will provide alternative access between the southern proportion of the site and Five Mile Road.

Consistent with the MSM, the applicant will be required to construct the new east/west collector roadways abutting the site's south property line, as a collector roadway in this alignment is planned to be stubbed to this site as part of the Falcon Crest Master Planned Community. The MSM designates this collector as a rural collector. Staff recommends a modification to the MSM to change the designation of the roadway to a residential collector from the site's west property line to Maple Grove Road due to the urban residential densities of R-6 and R-4 planned in the vicinity of collector roadway extension area.

Staff recommends a modification to the MSM to remove the north/south rural collector proposed to extend a mile north of Kuna Road, as the applicant has proposed to construct a north/south collector to serve the site between Ten Mile Creek Road and Five Mile Road.

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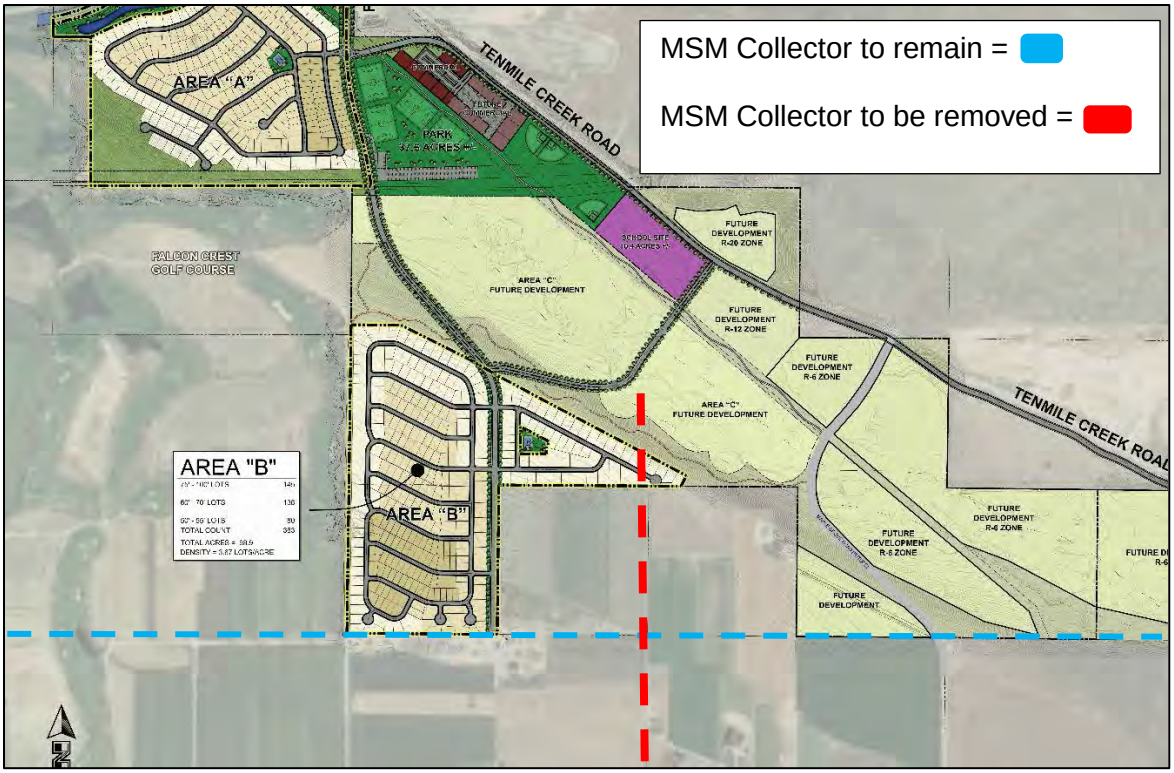

As other areas of the Spring Rock Master Planned planning area are preliminary platted, additional collector roadways maybe need to serve the site. This will be determined through the design of future preliminary plats and traffic impact studies.

10. Internal Local Street Sections

The applicant has not proposed any internal street sections as a part of the master plan application.

11. School Site

A 10-acre school site is proposed at the southwest corner of the Ten Mile Creek Road and Gem Valley Drive intersection. This parcel has approximately 960-feet of frontage on Ten Mile Creek Road, a minor arterial roadway and 450-feet of frontage on Gem Valley Drive, a collector roadway. Staff has concerns regarding the location and configuration of the proposed school parcel, as ACHD policy prohibits direct lot access to arterial roadways (Ten Mile Creek Road) when a site has frontage on a less classified street (Gem Valley Drive). This is the case with the proposed school parcel.

Typically, elementary schools have multiple driveways to separate the parent drop-off/pick-up loop from the bus loop. This creates better on-site circulation and improves the flow of traffic in and out of the school site during the peak drop-off and pick-up time periods. As the proposed school site is currently configured, There would not be enough frontage on Gem Valley Drive to provide enough driveway access to serve the school, as the location of driveways will be limited within the influence area of the Gem Valley Drive/Ten Mile Creek intersection and it is unknown if additional control (roundabout, signalization) of the intersection will be needed in the future. Additionally, staff has concerns with pedestrians possibly needing to walk along Ten Mile Creek Road to access the site, as this roadway will still carry heavy industrial truck traffic due to the near-by gravel pit operations.

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Exhibit B 2

Staff recommends that the school site be relocated to someplace within Lot 28, Block 13 adjacent to Gem Valley Drive. This will allow for the construction of the driveways needed to serve the school site, increases safety by moving the school away for Ten Mile Creek Road, an arterial roadway, and would move the school closer to the single family residential portion of the development which would allow for better pedestrian access to the school.

12. Summary/Disclaimer

I. Below is a summary of the primary issues that will be required to be addressed with future preliminary plats:

a. Traffic Impact Studies – Staff recommends updated traffic impact studies be required with each phase of the development to verify assumptions.

b. Disclaimer: No waiver or modification of policy is approved or recommended unless specifically called out by policy section and specifically approved in this report. Additional requirements may be required at each preliminary plat phase.

Attachments:

A. Vicinity Map

B. Master Plan

C. Traffic Impact Study Summary

CLINTON C. PLINE
CHAIRMAN OF THE BOARD

RON PLATT
VICE CHAIRMAN OF THE BOARD

ROBERT D. CARTER
PROJECT MANAGER

THOMAS RITTHALER
ASSISTANT PROJECT MANAGER

APRYL GARDNER
SECRETARY-TREASURER

MARY SUE CHASE
ASSISTANT SECRETARY-TREASURER

BOISE PROJECT BOARD OF CONTROL

(FORMERLY BOISE U.S. RECLAMATION PROJECT)

2465 OVERLAND ROAD
BOISE, IDAHO 83705-3155

OPERATING AGENCY FOR 167,000 ACRES FOR THE FOLLOWING IRRIGATION DISTRICTS

NAMPA-MERIDIAN DISTRICT
BOISE-KUNA DISTRICT
WILDER DISTRICT
NEW YORK DISTRICT
BIG BEND DISTRICT

TEL: (208) 344-1141
FAX: (208) 344-1437

5 August 2019

City of Kuna
P.O. Box 13
Kuna, Idaho 83634

RE: Spring Rock Subdivision **19-10-AN, 19-01-PUD**
Hubbard Rd. & New York Canal
Main Canal 1042+10
Sec.15, T2N, R1E, BM.

Troy Behunin:

The above-mentioned property is located outside of an irrigation district and does not possess a valid surface irrigation water right for the entire property; however, it does lie adjacent to the United States' New York Canal.

The United States' New York Canal borders this development on the west. The rights of way for this canal are held in the name of the United States through the Bureau of Reclamation under the authority of the Act of August 30, 1890. (26 Stat. 391; 43 U.S.C. 945)

The Boise Project Board of Control is contracted to operate and maintain the New York Canal. The normal limits of this easement are asserted 25' out and parallel to the lower toe of the canal embankment; however, any basement style houses, storm retention and/or detention ponds, catch basins and/or seepage beds planned on being constructed within this development **must be a minimum of 125'** from the lower toe to protect the integrity of the canal due to the underground reach from the storm facilities leaching and/or connecting to the underground reach of the New York Canal.

It appears that there is a pond being planned within this 100 feet set back that is required by Boise Project. Boise project will not approve this project until this is addressed. All utilities planning on crossing the New York canal must be overhead or attached to a bridge crossing. No crossing will be allowed under the New York canal.

The rest of the plans for this development are acceptable to Boise Project.

No excavation within the New York Canal's easement will be allowed, as this will affect the integrity of the canal's embankment.

Whereas these easements are for the operation and maintenance of our facility, no activity should hinder our ability to do so. The Boise Project does not approve landscaping (other than grass or gravel) within its easements, as this will certainly increase our cost of maintenance. Easements must remain a flat drivable surface.

Fencing/pathways (as may be required) must be constructed just off the canal easement, to insure public safety and prevent encroachments.

Storm Drainage and/or Street Runoff must be retained on site. NO DISCHARGE into the New York Canal system is permitted.

Wording on the preliminary and final recorded plat needs to be noted that this development must adhere to Idaho Statutes, Title 42-1209.

Future preliminary and final plats must call out the Boise Project easements.

Whereas this development is in its preliminary stages, Boise Project Board of Control reserves the right to review plans and require changes when our easements and/or facilities are affected by unknown factors.

Boise Project Board of Control requests a full set of plans for our review and approval before approval by the City of Kuna.

If you have any further questions or comments regarding this matter, please do not hesitate to contact me at (208) 344-1141.

Sincerely,

Thomas Ritthaler
Assistant Project Manager-BPBC

tbr/tr
cc Clint McCormick Watermaster, Div; 2 BPBC
File

CENTRAL DISTRICT HEALTH DEPARTMENT

Environmental Health Division

CENTRAL DISTRICT HEALTH DEPARTMENT

Return to:
- ☐ ACZ
- ☐ Boise
- ☐ Eagle
- ☐ Garden City
- ☒ Kuna
- ☐ Meridian
- ☐ Star

Rezone # 19-06-S

Conditional Use # _____

Preliminary / Final / Short Plat _____

Spring Rock

RECEIVED
AUG 14 2019
CITY OF KUNA

☐ 1. We have No Objections to this Proposal.

☐ 2. We recommend Denial of this Proposal.

☐ 3. Specific knowledge as to the exact type of use must be provided before we can comment on this Proposal.

☐ 4. We will require more data concerning soil conditions on this Proposal before we can comment.

☐ 5. Before we can comment concerning individual sewage disposal, we will require more data concerning the depth of:
- ☐ high seasonal ground water
- ☐ bedrock from original grade
- ☐ waste flow characteristics
- ☐ other _____

☐ 6. This office may require a study to assess the impact of nutrients and pathogens to receiving ground waters and surface waters.

☐ 7. This project shall be reviewed by the Idaho Department of Water Resources concerning well construction and water availability.

☒ 8. After written approval from appropriate entities are submitted, we can approve this proposal for:
- ☒ central sewage
- ☐ interim sewage
- ☐ individual sewage
- ☐ community sewage system
- ☒ central water
- ☐ individual water
- ☐ community water well

☒ 9. The following plan(s) must be submitted to and approved by the Idaho Department of Environmental Quality:
- ☒ central sewage
- ☐ sewage dry lines
- ☐ community sewage system
- ☒ central water
- ☐ community water

☐ 10. This Department would recommend deferral until high seasonal ground water can be determined if other considerations indicate approval.

☐ 11. If restroom facilities are to be installed, then a sewage system MUST be installed to meet Idaho State Sewage Regulations.

☐ 12. We will require plans be submitted for a plan review for any:
- ☐ food establishment
- ☐ beverage establishment
- ☐ swimming pools or spas
- ☐ grocery store
- ☐ child care center

☒ 13. Infiltration beds for storm water disposal are considered shallow injection wells. An application and fee must be submitted to CDHD.

☐ 14. _____

Reviewed By: _____

Date: 8/9/19

Review Sheet

Exhibit B 6

Communities in Motion 2040 2.0 Development Review

The Community Planning Association of Southwest Idaho (COMPASS) is the metropolitan planning organization (MPO) for Ada and Canyon Counties. COMPASS has developed this review as a tool for local governments to evaluate whether land developments are consistent with the goals of *Communities in Motion 2040 2.0* (CIM 2040), the regional long-range transportation plan for Ada and Canyon Counties. This checklist is not intended to be prescriptive, but rather a guidance document based on CIM 2040 2.0 goals.

Development Name: Spring Rock **Agency: Kuna**

CIM Vision Category: Rural

New households: 2,274 **New jobs: 700** **Exceeds CIM forecast: Yes**

CIM Corridor: **None** Pedestrian level of stress: **R: Kuna Rd** Bicycle level of stress: **R: Kuna Rd**	Level of Stress considers facility type, number of vehicle lanes, and speed. Roads with **G or PG** ratings better support bicyclists and pedestrians of all ages and comfort levels.
Housing within 1 mile: **230** Jobs within 1 mile: **140** Jobs/Housing Ratio: **0.6**	A good jobs/housing balance – a ratio between **1 and 1.5** – reduces traffic congestion. Higher numbers indicate the need for more housing and lower numbers indicate an employment need.
Nearest police station: **>4 miles** Nearest fire station: **>4 miles**	Developments within **1.5 miles** of police and fire stations ensure that emergency services are more efficient and reduce the cost of these important public services.
Farmland consumed: **Yes** Farmland within 1 mile: **1,238 acres**	Farmland contributes to the local economy, creates additional jobs, and provides food security to the region. Development in farm areas decreases the productivity and sustainability of farmland.
Nearest bus stop: **>4 miles** Nearest public school: **>4 miles** Nearest public park: **>4 miles** Nearest grocery store: **3.7 miles**	Residents who live or work less than **½ mile** from critical services have more transportation choices. Walking and biking reduces congestion by taking cars off the road, while supporting a healthy and active lifestyle.

Recommendations

This proposal exceeds growth forecasted for this area. Coupled with the Falcon Crest proposal to the southwest, transportation infrastructure may not be able to support the new transportation demands. This location is still in a largely farmland area. The proposal identifies future commercial, public school, and open space sites. However, until those are built, services will likely accessed only by vehicle. Although some housing mix and higher density is proposed, there are no public transportation planned for this area. Consider park and ride lots and other transportation demand management approaches to mitigate travel impact. The New York Canal has been identified as a key regional pathway in the *Communities in Motion* 2040 2.0 plan. This pathway will connect downtown Kuna to other parts of the region, including the Boise Airport and Micron.

More information about COMPASS and *Communities in Motion 2040 2.0*:
Web: www.compassidaho.org
Email info@compassidaho.org
More information about the development review process:
http://www.compassidaho.org/dashboard/devreview.htm

COMPASS
COMMUNITY PLANNING ASSOCIATION
of Southwest Idaho

Exhibit B 7

STATE OF IDAHO
DEPARTMENT OF ENVIRONMENTAL QUALITY
BOISE REGIONAL OFFICE
1445 North Orchard Street•Boise, ID 83706-2239•(208) 373-0550

DEQ Response to Request for Environmental Comment

Date:	*August 8, 2019*
Agency Requesting Comments:	*City of Kuna*
Date Request Received:	*August 2, 2019*
Applicant/Description:	*Spring Rock Subdivision 19-10-AN, 19-01-PUD, 19-06-S, and Development Agreement*

Thank you for the opportunity to respond to your request for comment. While DEQ does not review projects on a project-specific basis, we attempt to provide the best review of the information provided. DEQ encourages agencies to review and utilize the Idaho Environmental Guide to assist in addressing project-specific conditions that may apply. This guide can be found at http://www.deq.idaho.gov/ieg/.

The following information does not cover every aspect of this project; however, we have the following general comments to use as appropriate:

1. Air Quality

- *Please review IDAPA 58.01.01 for all rules on Air Quality, especially those regarding fugitive dust (58.01.01.651), trade waste burning (58.01.01.600-617), and odor control plans (58.01.01.776).*

  All property owners, developers, and their contractor(s) must ensure that reasonable controls to prevent fugitive dust from becoming airborne are utilized during all phases of construction activities per IDAPA 58.01.01.651.

  DEQ recommends the city/county require the development and submittal of a dust prevention and control plan prior to approval. Dust prevention and control plans incorporate appropriate best management practices to control fugitive dust that may be generated at sites.

  Information on fugitive dust control plans can be found at: http://www.deq.idaho.gov/media/61833-dust_control_plan.pdf

- *Per IDAPA 58.01.01.600-617, the open burning of any construction waste is prohibited. The property owner, developer, and their contractor(s) are responsible for ensuring no prohibited open burning occurs during construction.*

  For questions, contact David Luft, Air Quality Manager, at 373-0550.

2. Wastewater and Recycled Water

- *DEQ recommends verifying that there is adequate sewer to serve this project prior to approval. Please contact the sewer provider for a capacity statement, declining balance report, and willingness to serve this project.*

- *IDAPA 58.01.16 and IDAPA 58.01.17 are the sections of Idaho rules regarding wastewater and recycled water. Please review these rules to determine whether this or future projects will require DEQ approval. IDAPA 58.01.03 is the section of Idaho rules regarding subsurface disposal of wastewater. Please review this rule to determine whether this or future projects will require permitting by the district health department.*

  All projects for construction or modification of wastewater systems require preconstruction approval. Recycled water projects and subsurface disposal projects require separate permits as well.

- *DEQ recommends that projects be served by existing approved wastewater collection systems or a centralized community wastewater system whenever possible. Please contact DEQ to discuss potential for development of a community treatment system along with best management practices for communities to protect ground water.*

- *DEQ recommends that cities and counties develop and use a comprehensive land use management plan, which includes the impacts of present and future wastewater management in this area. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation.*

  For questions, contact Todd Crutcher, Engineering Manager, at 373-0550.

3. Drinking Water

- *DEQ recommends verifying that there is adequate water to serve this project prior to approval. Please contact the water provider for a capacity statement, declining balance report, and willingness to serve this project.*

- *IDAPA 58.01.08 is the section of Idaho rules regarding public drinking water systems. Please review these rules to determine whether this or future projects will require DEQ approval.*

  All projects for construction or modification of public drinking water systems require preconstruction approval.

- *DEQ recommends verifying if the current and/or proposed drinking water system is a regulated public drinking water system (refer to the DEQ website at http://www.deq.idaho.gov/water-quality/drinking-water.aspx). For non-regulated systems, DEQ recommends annual testing for total coliform bacteria, nitrate, and nitrite.*

- *If any private wells will be included in this project, we recommend that they be tested for total coliform bacteria, nitrate, and nitrite prior to use and retested annually thereafter.*

- *DEQ recommends using an existing drinking water system whenever possible or construction of a new community drinking water system. Please contact DEQ to discuss this project and to explore options to both best serve the future residents of this development and provide for protection of ground water resources.*

- *DEQ recommends cities and counties develop and use a comprehensive land use management plan which addresses the present and future needs of this area for adequate, safe, and sustainable drinking water. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation.*

  For questions, contact Todd Crutcher, Engineering Manager at 373-0550.

4. Surface Water

- *A DEQ short-term activity exemption (STAE) from this office is required if the project will involve de-watering of ground water during excavation and discharge back into surface water, including a description of the water treatment from this process to prevent excessive sediment and turbidity from entering surface water.*
- *Please contact DEQ to determine whether this project will require a National Pollution Discharge Elimination System (NPDES) Permit. If this project disturbs more than one acre, a stormwater permit from EPA may be required.*
- *If this project is near a source of surface water, DEQ requests that projects incorporate construction best management practices (BMPs) to assist in the protection of Idaho's water resources. Additionally, please contact DEQ to identify BMP alternatives and to determine whether this project is in an area with Total Maximum Daily Load stormwater permit conditions.*
- *The Idaho Stream Channel Protection Act requires a permit for most stream channel alterations. Please contact the Idaho Department of Water Resources (IDWR), Western Regional Office, at 2735 Airport Way, Boise, or call 208-334-2190 for more information. Information is also available on the IDWR website at:* http://www.idwr.idaho.gov/WaterManagement/StreamsDams/Streams/AlterationPermit/AlterationPermit.htm
- *The Federal Clean Water Act requires a permit for filling or dredging in waters of the United States. Please contact the US Army Corps of Engineers, Boise Field Office, at 10095 Emerald Street, Boise, or call 208-345-2155 for more information regarding permits.*

  For questions, contact Lance Holloway, Surface Water Manager, at 373-0550.

5. Hazardous Waste And Ground Water Contamination

- ***Hazardous Waste.*** *The types and number of requirements that must be complied with under the federal Resource Conservations and Recovery Act (RCRA) and the Idaho Rules and Standards for Hazardous Waste (IDAPA 58.01.05) are based on the quantity and type of waste generated. Every business in Idaho is required to track the volume of waste generated, determine whether each type of waste is hazardous, and ensure that all wastes are properly disposed of according to federal, state, and local requirements.*
- *No trash or other solid waste shall be buried, burned, or otherwise disposed of at the project site. These disposal methods are regulated by various state regulations including Idaho's Solid Waste Management Regulations and Standards, Rules and Regulations for Hazardous Waste, and Rules and Regulations for the Prevention of Air Pollution.*
- ***Water Quality Standards.*** *Site activities must comply with the Idaho Water Quality Standards (IDAPA 58.01.02) regarding hazardous and deleterious-materials storage, disposal, or accumulation adjacent to or in the immediate vicinity of state waters (IDAPA 58.01.02.800); and the cleanup and reporting of oil-filled electrical equipment (IDAPA 58.01.02.849); hazardous materials (IDAPA 58.01.02.850); and used-oil and petroleum releases (IDAPA 58.01.02.851 and 852).*

  Petroleum releases must be reported to DEQ in accordance with IDAPA 58.01.02.851.01 and 04. Hazardous material releases to state waters, or to land such

that there is likelihood that it will enter state waters, must be reported to DEQ in accordance with IDAPA 58.01.02.850.

- ***Ground Water Contamination.*** *DEQ requests that this project comply with Idaho's Ground Water Quality Rules (IDAPA 58.01.11), which states that "No person shall cause or allow the release, spilling, leaking, emission, discharge, escape, leaching, or disposal of a contaminant into the environment in a manner that causes a ground water quality standard to be exceeded, injures a beneficial use of ground water, or is not in accordance with a permit, consent order or applicable best management practice, best available method or best practical method."*

  For questions, contact Albert Crawshaw, Waste & Remediation Manager, at 373-0550.

6. Additional Notes

- *If an underground storage tank (UST) or an aboveground storage tank (AST) is identified at the site, the site should be evaluated to determine whether the UST is regulated by DEQ. EPA regulates ASTs. UST and AST sites should be assessed to determine whether there is potential soil and ground water contamination. Please call DEQ at 373-0550, or visit the DEQ website (http://www.deq.idaho.gov/waste-mgmt-remediation/storage-tanks.aspx) for assistance.*

- *If applicable to this project, DEQ recommends that BMPs be implemented for any of the following conditions: wash water from cleaning vehicles, fertilizers and pesticides, animal facilities, composted waste, and ponds. Please contact DEQ for more information on any of these conditions.*

We look forward to working with you in a proactive manner to address potential environmental impacts that may be within our regulatory authority. If you have any questions, please contact me, or any our technical staff at 208-373-0550.

Sincerely,

Aaron Scheff
aaron.scheff@deq.idaho.gov
Regional Administrator
Boise Regional Office
Idaho Department of Environmental Quality

ec: CM#2019AEK150

Exhibit B 8

IDAHO TRANSPORTATION DEPARTMENT
P.O. Box 8028
Boise, ID 83707-2028

(208) 334-8300
itd.idaho.gov

June 25, 2019

Chhang Ream
CR Engineering
181 East 50th St.
Garden City, ID 83714

RE: Springrock Subdivision – Traffic Impact Study Acceptance Letter

Via Email

Dear Mr. Ream,

The Idaho Transportation Department (ITD) has reviewed the Traffic Impact Study (TIS) for the Springrock Subdivision dated June 6, 2019. The development is located approximately four miles east of SH-69 on Hubbard Road. It is not taking direct access off of SH-69.

The TIS only provided intersection analysis for Phase 1 of the subdivision (buildout 2025). This letter acknowledges ITD's acceptance of the Springrock Subdivision TIS for Phase 1. Phase 1 is estimated to generate 1,054 AM and 962 PM trips. The TIS stated additional TIS's will be created for future phases up to and including full build out in 2040.

ITD has determined that no improvements to SH-69 are required for Phase 1 of the Springrock Subdvision as long as the development does not alter from what was proposed in the TIS.

Maintaining safety and mobility for Idaho's motorists is of the utmost importance to ITD. Please let me know if you have any questions. I can be reached by phone at (208) 265-4312 extension 7 or email at erika.bowen@itd.idaho.gov.

Sincerely,

Erika R Bowen
District 3 Traffic Technical Engineer

cc.
Mindy Wallace, ACHD

Exhibit B 8

Your Safety • Your Mobility
Your Economic Opportunity

IDAHO TRANSPORTATION DEPARTMENT
P.O. Box 8028 • Boise, ID 83707-2028
(208) 334-8300 • itd.idaho.gov

August 26, 2019

Troy Behunin
City of Kuna, Planning and Zoning Department
P.O. Box 13
Kuna, ID 83634

VIA EMAIL

Development Application	**19-10-AN, 19-01-PUD, 19-06-S**
Project Name	**SPRINGROCK SUBDIVISION**
Project Location	Northeast corner of Cloverdale and Kuna Roads, east of SH-69 milepost 3.00
Project Description	Annexation of 761 acres into Kuna City limits with C-1 and C-2 (Commercial), R-6 (Medium Density Residential), R-12 and R-20 (High Density Residential) zones. This is a multi-phased, Master-Planned project. Applicant requests pre-plat approval in order to subdivide approximately 476.76 acres into 825 total lots (791 single family, 23 common, 7 commercial, 1 school, 1 future multi-family and 2 public utility) The remaining lands (~284.24 acres) will be developed in the future
Applicant	David Powell, RiveRidge Engineers

The Idaho Transportation Department (ITD) reviewed the referenced annexation, planned unit development, and preliminary plat applications and has the following comments:

1. This project does not abut the State Highway system.

2. ITD has received, reviewed, and accepted a Traffic Impact Study for Phase I of Springrock Subdivision. No mitigation for the State Highway system will be required for the construction of Phase I.

3. All subsequent phases will be required to submit a Traffic Impact Study for review to determine if mitigation is required.

4. The Idaho Administrative Procedures Act (IDAPA) 39.03.60 governs advertising along the State highway system. The applicant may contact Justin Pond, Right-of-Way Section Program Manager, at (208) 334-8832 for more information.

5. Idaho Code 40-1910 does not allow advertising within the right-of-way of any State highway.

Exhibit B 8

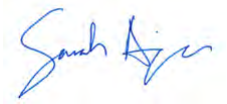
Your Safety • Your Mobility
Your Economic Opportunity

IDAHO TRANSPORTATION DEPARTMENT
P.O. Box 8028 • Boise, ID 83707-2028
(208) 334-8300 • itd.idaho.gov

6. Provided each subsequent phase provide a Traffic Impact Study for review, ITD does not object to the construction of Springrock Subdivision Phase I.

If you have any questions, you may contact Ken Couch at (208) 332-7190 or me at (208) 334-8338.

Sincerely,



Sarah Arjona
Development Services Coordinator
Sarah.Arjona@itd.idaho.gov

Exhibit B 9

Troy Behunin

Subject: Spring Rock Application - Request for Comments

KRFD

From: Phil Roberts [mailto:proberts@kunafire.com]
Sent: Wednesday, January 08, 2020 4:09 PM
To: Troy Behunin <tbehunin@kunaid.gov>
Subject: RE: Spring Rock Application - Request for Comments

No I haven't I have looked through all of my mails from you and did not see it. This attachment is the first I have seen. I may have missed a planning meeting that the development was discussed but these are the first documents that I have seen on the project.

Phase 7, Hammerhead is not one I like to see.

Each phase if over 30 units single residential or 100 Multi-family will need to be addressed for 2nd access. As we have spoken, We can make one temp until connections are made.

It would be nice to have 2 acres no less than 1 ½ set aside for a future Fire station.

Final Site Utilities will provide more of the information that I need.

Very Large.

Phil Roberts
Fire Chief
Kuna Rural Fire District
208-922-1144 Ext 101
208-922-1982 Fax
208-870-3057 Cell

From: Troy Behunin
Sent: Friday, August 02, 2019 5:00 PM
To: 'ACHD' <planningreview@achdidaho.org>; 'Becky Rone - Kuna USPS Addressing ' <rebecca.i.rone@usps.gov>; Bob Bachman <bbachman@kunaid.gov>; 'Boise Project Brd Cntrl' <TRitthaler@boiseproject.org>; 'Boise-Kuna Irrigation Distr.' <laurenboehlke@yahoo.com>; 'Cable One Business' <Adam.ingram@cableone.biz>; 'Cable One t.v.' <cheryl.goettsche@cableone.biz>; 'Central District Health Dept. CDHD' <lbadigia@cdhd.idaho.gov>; 'Chief Phil' <proberts@kunafire.com>; 'COMPASS' <cmiller@compassidaho.org>; 'D. Reinhart' <Dreinhart@kunschools.org>; 'DEQ' <Alicia.martin@deq.idaho.gov>; 'Idaho Power' <bwatson2@idahopower.com>; 'Idaho Power' <ahawkins@idahopower.com>; 'Idaho Power - Jacky Chris' <easements@idahopower.com>; 'Intermountain Gas' <robert.miller@mdu.com>; 'Intermountain Gas' <bryce.ostler@intgas.com>; 'ITD' <D3Development.Services@itd.idaho.gov>; 'J&M Sanitation - Chad Gordon' <Chad.Gordon@jmsanitation.com>; 'Jim O. - KSD' <Jim@kunaschools.org>; 'Julie Stanley - Regional Address Mgmt.' <Julie.R.Stanley@usps.gov>; 'Kuna Police Chief'

Exhibit B 9

<so4217@adaweb.net>; 'Kuna Postmaster - Marc C. Boyer' <marc.c.boyer@usps.gov>; 'Kuna School District' <kbekkedahl@kunaschools.org>; 'Kuna School District' <wjohnson@kunaschools.org>; 'Kuna School District' <bsaxton@kunaschools.org>; Lisa Holland <lholland@kunaid.gov>; Mike Borzick <mborzick@kunaid.gov>; 'New York Irrigation District' <terri@nyid.org>; 'P. Stevens' <Pstevens@kunaid.gov>; 'Planning Mgr: Ada County Development Services' <jboal@adaweb.net>
Subject: Spring Rock Application - Request for Comments

Good Evening Everyone,
Please review the packet included with this email and return relevant comments about the services your agency provides to Kuna's Planning and Zoning office, to be used in the public hearings scheduled for this project. Please submit comments to our office on or before ***August 20, 2019*****.** This project is very comprehensive and our office would appreciate your comments.

This project will be scheduled for public hearing with our Commission on ***October 8, 2019***. If you need additional information or additional time to provide comments, please let our office know ASAP.

Thank you in advance.
Troy

Troy Behunin
Planner III
City of Kuna
751 W. 4th Street
Kuna, ID 83634
TBehunin@KunaId.Gov

CONFIDENTIALITY NOTICE
This e-mail and any attachments may contain confidential or privileged information. If you are not the intended recipient, you are not authorized to use or distribute any information included in this e-mail or its attachments. If you receive this e-mail in error, please delete it from your system and contact the sender.

Exhibit B 10

Kuna School District

Inspiring each student to become a lifelong learner and a contributing, responsible citizen.

October 3, 2019

Dear Honorable Members of the Planning and Zoning Commission,

We appreciate our ability to give input to the Spring Rock proposal and others similar to it. We became aware of Spring Rock at a pre-application meeting.

Our primary concern with this particular development is the placement of the school site. West Ada has had land donated for a new school and yet Kuna School District, which will hold approximately half of the first phase has received no accommodation for a school. This development would have a significant impact in crowding our existing schools of Silver Trail, Fremont Middle School and Kuna High School.

For the sake of our children and for the sake of equality, we request a 10 acre site be donated in the plat west of Five Mile Road. Per ACHD, we ask that it is placed within the development. The placement should be coordinated with our Transportation Dept and ACHD.

The safety of our students is our first and foremost priority. With this in mind, we ask that you encourage the developer to also provide safe walkways, bike paths and pedestrian access for our students. School capacity and transportation is addressed in Idaho Code 67-6508.

Thank you for considering the needs of students in this request.

Regards,

Jim Obert
District Planner
Project Manager

David Reinhart
District Planner
Assistant Superintendent

Brenda Saxton
Transportation Supervisor

711 E. Porter Rd., Kuna, Idaho 83634
Phone: (208) 922-1000 FAX: (208) 922-5646

Wendy Johnson, Superintendent
Kim Bekkedahl, Assistant Superintendent
Dr. Catherine Beals, Administrator of CIA
Eileen O'Shea, Administrator of Student Services
David Reinhart, Administrator of HR

Exhibit B 11

Troy Behunin

From: Jon McDaniel <jmcdaniel@adacounty.id.gov>
Sent: Thursday, December 19, 2019 1:35 PM
To: Troy Behunin
Subject: Spring Rock Subdivision

Hi Troy, Unfortunately, I missed the pre-app meeting for Spring Rock. As I look into the logistics of responding to this N.E. side of KPD's limits, I have a concern.

If KPD was responding from the northern half of our current city limits, Hubbard Road would be a regularly traveled eastern route to toward this development. The fact that Hubbard Reservoir and the surround recreation area currently prevents Hubbard road from continuing directly to Cloverdale, it would add time to our responses to these citizens as we drive around. Is there any option to extend Hubbard from Locust Grove all the way through to Cloverdale?

Thanks, Jon

Jon McDaniel
Kuna Police Chief

1450 W. Boise St. Kuna, Idaho 83634 (208) 577-3850 jmcdaniel@adacounty.id.gov www.adasheriff.org

"We make safer places for you to live, work, and play."

ADA COUNTY SHERIFF'S OFFICE

Nate Crofts
8248 W. Victory Road
Boise, ID 83709
Phone (208) 362-7329
Fax (208) 362-3858
Nate.Crofts@suez.com

July 2, 2019

Dave Yorgason
1211 Happy Drive
Boise, ID 83706

Dear Mr. Yorgason:

The purpose of this letter is to advise you that **Spring Rock Subdivision** is serviceable with SUEZ under its present tariffs, rules and regulations as filed with the Idaho Public Utilities Commission.

SUEZ Rules and Regulations require that any main extension, booster station, reservoir or source of supply necessary to serve this project will be funded by the owner/developer of the project. Should this be the case, a specific agreement for those facilities is required.

The item(s) necessary to serve this project are indicated below.

1. New water mains, services, meter setters and fire hydrants.
2. New booster station/pressure regulating station.
3. New water storage reservoir.
4. Source of Supply (we do not antipicate needing to add a new source at this time).

Due to the dynamic and changing nature of the SUEZ water system, this letter of serviceability expires and cannot be relied upon twelve months from the date of this letter. Should you require confirmation of serviceability past the twelve months, please let us know at that time.

As noted above, specific written agreements may be required. SUEZ's obligation to proceed with the project is contingent on satisfactory execution of those agreements.

I trust that this letter will aid you in the speedy process of this project.

Best regards,

Nate Crofts
Construction Supervisor

Exhibit
B1

Exhibit B 13

ADA COUNTY

COMMISSIONERS' OFFICE
200 W. Front Street
Boise, Idaho 83702
(208) 287-7000
Fax: (208) 287-7009
bocc1@adaweb.net
www.adacounty.id.gov

October 7, 2019

Via Email: mayorstear@kunaid.gov

Mayor Joe Stear
Kuna City Council Members
City of Kuna
PO Box 13
Kuna, ID 83634

RE: Spring Rock Application

Dear Mayor Stear and City Council:

On Friday, August 2nd, the City of Kuna solicited feedback regarding an annexation, planned unit development, preliminary plat, and development agreement for the proposed Spring Rock subdivision comprising of 761 acres within unincorporated Ada County. The County and City of Boise thank you for this opportunity and are in full support of jurisdictions throughout the Treasure Valley working together to create a better quality of life for all residents.

As noted during the *Envision Kuna* comprehensive plan comment period, we believe that there is a disconnect between the future land use designations of this plan and COMPASS' growth projections for the City. The City's current population is almost 20,000 and the most recent COMPASS projections estimate a 2040 population of about 50,000. The *Envision Kuna* future land use map offers potential capacity for up to 344,705 residents within 46,000 acres of incorporated and impact areas. This type of capacity is not considered within the service portfolio of Ada County because when Ada County and its service providers plan for the future public facilities, services, and utilities, they rely on COMPASS' growth projections.

We fully support you, and other city leaders, in your desire to invest in and build a strong downtown core for Kuna as outlined in the *Envision Kuna* comprehensive plan. The Spring Rock subdivision proposes 825 lots on 476 acres and 284 acres of BLM land as far as 7.1 miles from downtown Kuna. This application will pre-maturely expand urban and suburban types of land uses in rural areas of Ada County, extending demands for public facilities, services and utilities in this remote area of Ten Mile Creek. This subdivision will create an increased demand on many of our County services such as the Sheriff, Paramedics, Coroner, Mosquito Abatement, and others. Additionally, this development will result in increased car dependency, increased strain on utility services, loss of open space, and several other negative effects that go directly against the goals of *Envision Kuna*. Ada County also has concerns about the ability of Kuna to preserve existing water resources in the proposed subdivision location.

Exhibit B 13

By supporting such a large application, the City of Kuna will incentivize sprawl and premature development of one of Ada County's beautiful open spaces. Therefore, Ada County and Boise City encourage Kuna to follow best planning practices, resist the lure of short-sighted property tax increases, and deny the Spring Rock Subdivision application for now. As you are aware, COMPASS is currently working with its member cities to conduct a fiscal impact analysis and a tool which would allow us to better understand the costs of allowing such application in rural areas.

Thank you for this opportunity to provide feedback.

Sincerely,

ADA COUNTY BOARD OF COMMISSIONERS

Kendra Kenyon, Commissioner

Diana Lachiondo, Commissioner

Rick Visser, Commissioner

Exhibit B 14

West Ada
SCHOOL DISTRICT

September 19, 2019

City of Kuna
PO Box 13
Kuna, ID 83634

Dear Planners:

Joint School District No. 2 (dba West Ada School District) has experienced significant and sustained growth in student enrollment during the last ten years. Many of our schools throughout the district are operating at or above capacity. Based on U.S. census data, we can predict that these homes, when completed, will house **633 (= # homes x 0.8 per census data) school aged children.** Approval of the **Spring Rock Subdivision** will affect enrollments at the following schools in West Ada District:

	Enrollment	Capacity
Lake Hazel Elementary	**483**	**539**
Silver Sage Elementary	**296**	**405**
Lake Hazel Middle School	**1067**	**1000**
Mountain View High School	**2304**	**1800**

West Ada School District supports economic growth; however, growth fosters the need for additional school capacity. In order to meet the need for additional school capacity, West Ada School District will accept the donation of land appropriate for a school site. Passage of a bond issue will be required prior to the commencement of new school construction.

New residents cannot be assured of attending the neighborhood school as it may be necessary to bus students to available classrooms across the district. The safety of our students is our first and foremost priority. With this in mind, we ask that you encourage the developer to provide safe walkways, bike baths and pedestrian access for our students. School capacity and transportation is addressed in Idaho Code 67-6508 - future development will continue to have an impact on the district's capacity.

Sincerely,

Joe Yochum
Assistant Superintendent – Operations
West Ada School District

Exhibit B 15

Troy Behunin

From: Rick Visser <rvisser@adacounty.id.gov>
Sent: Thursday, November 21, 2019 3:31 PM
To: Mayor Stear
Cc: Wendy Howell; Troy Behunin; Chris Engels
Subject: Re: [EXTERNAL] RE: My support for Envision Kuna

Categories: Agency Comments

Mayor Stear,
And *your* residents are what really matters. Keep up the good work of serving Kuna residents !
Rick

On Nov 21, 2019, at 2:19 PM, Mayor Stear <mayorstear@kunaid.gov> wrote:

CAUTION: This email originated from outside Ada County email servers. Do not click on links or open attachments unless you recognize the sender and know the content is safe. Verify the sender by mouse-hovering over their display name in order to see the sender's full email address and confirm it is not suspicious. If you are unsure an email is safe, please report the email by using the 'Phish Alert' button in Outlook.

Thank You Commissioner Visser;

I am sending this to our planning and zoning staff as well as City Clerk for the record.

I appreciate your support and that you recognize that Envision Kuna is about what our residents have asked for and is a well thought out plan.

Best always

Joe Stear
Mayor of Kuna Idaho

751 W. 4th St.
PO Box 13
Kuna Idaho 83634
www.KunaCity.id.gov [kunacity.id.gov]
(208) 922.5546
<image001.jpg>

From: Rick Visser [mailto:rvisser@adacounty.id.gov]
Sent: Thursday, November 21, 2019 1:56 PM
To: Mayor Stear <mayorstear@kunaid.gov>
Subject: Fwd: My support for Envision Kuna

Exhibit B 15

RE: Letter from Ada County in Regard to the Spring Rock Application

Dear Mayor Stear, City Council Members and Planning & Zoning Commissioners:

I did not sign the October 7, 2019 letter from Ada County to Mayor Stear and the City Council for a few reasons:

1. My main reason for not signing the letter is that I do not believe that Ada County Commissioners, Development Services staff or the City of Boise has the authority to judge your *Envision Kuna* comprehensive plan. The Kuna City Council and Mayor have used a thorough, well-researched analysis with several skilled participants to draft the plan. They know the Kuna community better than others. I respect your work!

2. A coordinated growth plan should not mean that Boise and Meridian have the best comprehensive plans and Ada County's other cities should follow them. Personally, I believe that Boise and Meridian have gone too far with their high density infill development. High density growth has led to increased traffic, longer response time for first responders, poorer air quality, over capacity schools, more vehicle accidents and many disappointed longtime residents.

3. Since Boise and Meridian's comprehensive plans have caused so many problems, a true coordinated growth would depart from high density infill and entertain less apartments but more planned communities and subdivisions.

4. I also am troubled by a "one shoe fits all" coordinated growth plan philosophy of Ada County and COMPASS. Based on the numbers provided by Mayor Stear, Kuna is a commuter city. Boise and Meridian are not, and one should not expect its shoes to fit Kuna. The future SpringRock development is similar to the successful planned communities that were developed at Hillcrest Golf Course, Plantation Golf Course, Eagle Hills Golf Course, Banbury Golf Course, Spurwing Golf Course, Avimor, Harris Ranch, Dry Creek Ranch and Hidden Springs. I believe that a mixed use SpringRock Development would be a great benefit to Kuna residents as it would allow more residents to work in Kuna.

5. The pros outweigh the cons for planned communities. Both Avimor and Dry Creek Ranch have high tech waste water treatment facilities that produce

drinkable water. This water is not used for public consumption, but it is safely used for fishing ponds and irrigation. Avimor and Dry Creek Ranch require water saving plumbing fixtures in every home. Avimor treats 110 gallons of waste water per day per household while Boise treats over 225 gallons of waste water per household per day. Avimor requires hot water circulating systems in all its homes. These systems save an average of 14,000 gallon of water per residence per year. An ITD study revealed that the population in Avimor has 50% less daily vehicle trips than a Boise or Meridian subdivision with the same population. One of my fellow commissioners believes that planned community residents expect the same response time as city dwellers. However, she has no evidence or data to back up that claim. I believe it is likely that people who choose to live away from a city realize it will take longer for first responders to arrive.

I know that there are two sides to every coin, and I believe in the Kuna side. As an Ada County Commissioner, I support *Envision Kuna.*

Respectfully,

BOISE POLICE DEPARTMENT
MAYOR: David H. Bieter | CHIEF: William Bones

RECEIVED
AUG 26 2019
CITY OF KUNA

August 19, 2019

Mayor Joe Stear & Kuna City Council
Kuna City Hall
751 W. 4th Street
Kuna, ID 83634

RE: Spring Rock Subdivision Application

Dear Mayor and City Council Members:

I am writing to express my concern about the recent application for annexation and a planned unit development by River Ridge Engineers. The developers have requested annexation of 761 acres for development of a residential subdivision with a commercial component less than two miles from our shooting range.

In 2016, the Boise Police Department constructed a law enforcement shooting range for the purpose of training our officers and partnering with other local law enforcement agencies. The facility at 5958 Kuna Mora Road includes pistol ranges, a rifle range and a large covered training house consisting of a maze of cinder block walls used for SWAT and special operations training. This facility is a phased project. The City of Boise has not fully developed the 120 acres of property we own City but certainly has plans to do so. At some point in the future, with the growth of the valley's population and the corresponding growth of local law enforcement agencies, this facility will increase in size and scope, with additional pistol and rifle ranges, including a 1000-yard precision rifle range.

The City purchased the shooting range property in this area in order to minimize the impact of such a facility on residential uses. This area of Ada County is sparsely populated, which makes the siting of the range on Kuna Mora Road about the best solution possible given the growth throughout the valley. The idea of constructing 2,274 homes along with parks and other amenities less than two miles away is troublesome, as it is highly unlikely/impossible the City would ever find another alternative to the current Range site.

Officers from several local law enforcement agencies use the shooting range at various times from 8 a.m. until 10 p.m. in accordance with the terms of BPD's Conditional Use Permit. We have learned, in our three years of operating the facility, that noise travels over the flat desert topography increasing the impact of the sound on the existing residential neighbors. Dense residential development in proximity to our range does not seem appropriate under these circumstances. Approval of this development will

exponentially increase the number of upset residents as a result of the regular use of the shooting range.

We respectfully request you deny the application for annexation and development of this property for residential uses.

Sincerely,

William L. Bones
Chief of Police
Boise Police Department

Troy Behunin

From: Janet Kell <jkellrealestate@gmail.com>
Sent: Sunday, January 05, 2020 7:58 AM
To: Troy Behunin; Wendy Howell
Subject: Spring Rock Application

To Kuna City Council and Planning &
Zoning Commission:

As a long term landowners in Kuna, our family would like to further express our support for the Spring Rock development and its application with Kuna. We are excited to see Kuna participate in Idaho's strong economic growth with the addition of a thoughtful, long-term planned community. I'm also sharing views and observations of the Spring Rock project as a local residential real estate professional since the late 1980s. Since I started representing buyers, and sellers, I have worked with numerous developments across the Treasure Valley including Lakewood, Wood Duck Island, Harris Ranch, Hidden Springs and many others. Similar to other successful developments, Spring Rock is offering quality parks, open space, and a variety of housing options that will appeal to several types of buyers, including apartments, starter homes, for young families and upscale retirement options.

While the state's continued growth has generally been positive, many of us have also observed the costs. Planned communities such as Spring Rock allow for more coordination and better long-term outcomes for the local community. We would also like to acknowledge the city's thorough process "Envision Kuna" report released in July 2019. We were delighted to see how much Spring Rock developers have conformed with this long-term plan.

In summary, our family is very supportive for the development's application to move forward.

Best Regards,
Janet Kell & the Gilmore
Family

January 8th, 2020

James L. Whitmore

850 E Riverpark Ln. Boise ID 83706

Mayor Stear

Kuna City Council

Kuna Planning and Zoning Commission & Staff

RE: Spring Rock Development

We are the landowners for a portion of this development proposal.

For over 100 years our family has been ranching in and around Kuna. In 1908 our grandfather, Jay Whitmore, started his cattle ranch in the Ten Mile Creek Valley and also near Swan Falls. In the 70's our father George Whitmore worked closely with Morley Nelson to establish the Birds of Prey Conservation Area, as well as, initiating the beginning of the World Center for Birds of Prey.

Throughout all that time we have seen Kuna progress and grow. We have been in support of Envision Kuna and the processes for long term planning.

We support the Spring Rock applications and are looking forward to being formally a part of Kuna. This is an opportunity for Kuna to set a cornerstone with a project that provides quality parks, amenities and well thought out design. This proposal avoids patchwork development and is a better long term strategy for planning.

We ask that you approve the Spring Rock applications.

Thank you for your consideration.

Sincerely,

James L. Whitmore

208-867-6416

January 10, 2020,

To the Commissioners and staff of ACHD:

I am writing to the Commissioners and staff of ACHD to express our families support for the Spring Rock Development. I have known Dave Yorgason for over 20 years, and I am privileged to have Dave be spearheading this project. He is a guy that always takes all parties involved into consideration. I'm a neighbor and property owner who plans to live in Kuna for many years to come. I believe the benefits of this development will be prosperous to our community. The developers have shown that the project meets the standards and needs of ACHD and the City of Kuna.

Sincerely,

Ryan and Brenda Colson
11157 West Silver Hawk Lane
Kuna, ID 83634

January10, 2020,

To the Commissioners and staff of ACHD:

I am writing to express our support for the Spring Rock Development applications. I feel that the developers have shown the project will enhance the City of Kuna and that it meets the requirements for ACHD. I have lived in the surrounding area where the Spring Rock Development will be since the 40's and believe this development will bring Kuna families a sense of pride living in such a beautiful area for many years to come.

Sincerely,

The Colson Family Trust

City of Kuna
Design Review Application

P.O. Box 13
Kuna, Idaho 83634
(208) 922.5274
Fax: (208) 922.5989
Website: www.kunacity.id.gov

FILE NO.: 19-06-S

CROSS REF.: 19-10-AN, 19-05-2C, 19-01-PUD, 19-23-DR

FILES:

The City of Kuna has adopted a Design Review process whose purpose is to make Kuna a pleasant and comfortable place to live and work. This Design Review process is based on standards and guidelines found in the Design Review Ordinance No. 2007-02 and the Architecture and Site Design Booklet. Both of these documents can be found online (www.cityofkuna.com) or are picked up in the City's Planning and zoning department is located at 763 W Avalon, Kuna ID. Staff is glad to assist you with your application form.

The Design Review application applies to the following land use actions:

- Multi- family dwellings (3 or more)
- Commercial
- Industrial
- Institutional
- Office
- Common Area
- Subdivision Signage
- Proposed Conversions
- Proposed changes in land use and/or building use or exterior remodeling
- Exterior restoration, and enlargement or expansion of existing buildings, signs or sites.

Application Submittal Requirements

Applicant Use		Staff Use
X	Date of pre- application meeting : 6/13/2019 *Note: Pre-Applications are valid for a period of three (3) months.*	☐
X	A complete Design Review Application form *Note: It is the applicant's responsibility to use a current application.*	☐
X	Detailed letter of explanation or justification for the application, describing the project and design elements, and how the project complies with Design Review standards.	☐
X	One (1) Vicinity Map (8 ½" x 11") at 1" = 300' scale (or similar), label the location of the property and adjacent streets. W/Preliminary Plat	☐
X	One 8 ½" x 11" colored aerial photo depicting proposed site, street names, and surrounding area within five-hundred feet (500').	☐
X	Copy of Deed; and, if the applicant is not the owner, an **original** notarized statement (affidavit of legal interest) from the owner (and all interested parties) stating the applicant is authorized to submit this application. W/Preliminary Plat	☐

Exhibit A8

[X] Detailed site, landscape, drainage plan, elevation and to scale. *(No smaller than 1"=30', unless otherwise approved.)* [ ]

One of each plan (site, landscape, drainage plan and elevations) is required to be submitted in the following plan sizes:

(1) 24" X 36" TO SCALE COPIES
(1) 11" X 17" REDUCTIONS
(1) 8 ½" x 11" REDUCTIONS

[ ] Provide a color rendering and material sample board specifically noting where each color and material is to be located on the structure. [ ]
Note: Provide photo of the colored rendering and material samples board to City Staff electronically in a JPG or PDF format.

The Applicant is obligated to provide a site plan that graphically portrays the site and includes the following features:

Site Plan

Applicant Use		Staff Use
[X]	North Arrow	[ ]
[X]	To scale drawings	[ ]
[X]	Property lines	[ ]
[X]	Name of "Plan Preparer" with contact information	[ ]
[X]	Name of project and date	[ ]
[X]	Existing structures, identify those which are to be relocated or removed	[ ]
[X]	On-site and adjoining streets, alleys, private drives and rights-of-way	[ ]
[X]	Drainage location and method of on-site retention / detention	[ ]
[ ]	Location of public restrooms	[ ]
[X]	Existing / proposed utility service and any above-ground utility structures and their location	[ ]
[ ]	Location and width of easements, canals and drainage ditches	[ ]
[ ]	Location and dimension of off-street parking	[ ]
[ ]	Locations and sizes of any loading area, docks, ramps and vehicle storage or service areas	[ ]
[ ]	Trash storage areas and exterior mechanical equipment, with proposed method of screening	[ ]
[ ]	Sign locations *(a separate sign application must be submitted with this application)*	[ ]
[X]	On-site transportation circulation plan for motor vehicles, pedestrians and bicycles	[ ]
[X]	Locations and uses of ALL open spaces	[ ]
[X]	Locations, types and sizes of sound and visual buffers *(Note: all buffers must be located outside the public right-of-way)*	[ ]
[X]	Parking layout including spaces, driveways, curb cuts, circulation patterns, pedestrian walks and vision triangle	[ ]
[X]	Locations of subdivision lines *(if applicable)*	[ ]
[ ]	Illustration that demonstrates adequate sight distance is provided for motor vehicles, pedestrians and bicycles	[ ]
[X]	Location of walls and fences and indication of their height and material of construction	[ ]
[ ]	Roofline and foundation plan of building, location on the site	[ ]
[X]	Location and designations of all sidewalks	[ ]
[X]	Location and designation of all rights-of-way and property lines	[ ]

Landscape and Streetscape Plan

The landscape and streetscape plans need to be drawn by the project architect, professional landscape architect, landscape designer, or qualified nurseryman for development's possessing more than twelve thousand (12,000) square feet of private land. The landscaped and streetscape plans must be colored. The Planning Director or City Forester may require the preparation of a landscape plan for smaller developments by one of the noted individuals if the lot(s) have unique attributes.

Applicant Use		Staff Use
[X]	North Arrow	☐
[X]	To scale drawings	☐
[X]	Boundaries, property lines and dimensions	☐
[X]	Name of "Plan Preparer" with contact information	☐
[X]	Name of project and date	☐
[X]	Type and location of all plant materials and other ground covers. *Please review the City's plant list and rely upon it to identify the site's planting strategy. Include botanical and common name, quantity, spacing and sizes of all proposed landscape materials at the time of planting, and at maturity. A list of acceptable trees is available upon request from City Planning Staff. If there are any questions, please contact the City Forester, Natalie Reeder, at 208.880.0953*	☐
[NA]	Existing vegetation identified by specific size. Identify those which are proposed to be relocated or removed.	☐
[X]	Method of irrigation. *Note: All plant materials, except existing native plants not damaged during construction or xeriscape species shown not to require regular watering, shall be irrigated by underground sprinkler systems set on a timer in order to obtain proper watering duration and ease of maintenance.*	☐
[X]	Location, description, materials, and cross-sections of special features, including berming, retaining walls, hedges, fencings, fountains street/pathway furniture *(benches, etc.), etc.*	☐
☐	Sign locations *Note: A separate sign application must be submitted with this application*	☐
[X]	Locations and uses for open spaces	☐
[X]	Parking layout including spaces, driveways, curb cuts, circulation patterns, pedestrian walks and vision triangle	☐
☐	Illustration that demonstrates adequate sight distance is provided for motor vehicles, pedestrians and bicycles	☐
[X]	Location and designations of all sidewalks	☐
[X]	Engineered grading and drainage plans: A generalized drainage plan showing direction drainage with proposed on-site retention. Upon submission of building/construction plans for an approved design review application, a detailed site grading and drainage plan, prepared by a registered professional engineer (PE) shall be submitted to the City for review and approval by the City Engineer.	☐

Building Elevations

Applicant Use		Staff Use
☐	Detailed elevation plans of each side of any proposed building(s) or additions(s) *Note: Four (4) elevations to include all sides of development and must be in color*	☐
☐	Identify the elevations as to north, south, east, and west orientation	☐
☐	Colored copies of all proposed building materials and indication where each material and color application is to be located *Note: Submit as 11"x17" reductions*	☐
☐	Screening/treatment of mechanical equipment	☐
☐	Provide a cross-section of the building showing any roof top mechanical units and their roof placement	☐
☐	Detailed elevation plans showing the materials to be used in construction of trash enclosures	☐

Lighting Plan

Applicant Use		Staff Use
☐	Exterior lighting including detained cut sheets and photometric plan (pedestrian, vehicle, security, decoration)	☐
☐	Types and wattage of all light fixtures *Note: The City encourages use of "dark sky" lighting fixtures*	☐
☐	Placement of all light fixtures shown on elevations and landscaping plans	☐

Roof Plans

Applicant Use		Staff Use
☐	Size and location of all roof top mechanical units	☐

Design Review Application

Applicant: Dave Yorgason, Ten Mile Creek LLC Phone: 208-850-1070

☐ Owner X Representative Fax/Email: dyorgason6@gmail.com

Applicant's Address: 1211 N Happy Dr.

Boise ID Zip: 83706

Owner: See Pg #8 list of owners Phone:

Owner's Address: Email:

Zip:

Represented By: *(if different from above)* Same as above applicant Phone:

Address: Email:

Zip:

Address of Property: Ten Mile Creek Rd. from Five Mile Rd east to Cole Rd.

Kuna ID Zip: 83634

Distance from Major Cross Street: Northwest Corner Street Name(s): Hubbard Rd. and Five Mile Rd.

Please check the box that reflects the intent of the application

BUILDING DESIGN REVIEW
XSUBDIVISION / COMMON AREA LANDSCAPE

☐ DESIGN REVIEW MODIFICATION
☐ STAFF LEVEL APPLICATION

This Design Review application is a request to construct, add or change the following: *(Briefly explain the nature of the request.)*

Construct a new subdivision with required landscape buffers and common areas.

1. Dimension of Property:
2. Current Land Use(s): Agriculture
3. What are the land uses of the adjoining properties?
   - North: Rural Preservation, BLM
   - South: R-6, Rural Residential, BLM
   - East: Agriculture
   - West: Golf Course, R-6, Rural Residential
4. Is the project intended to be phased, if so what is the phasing time period? Yes
   Please explain: Preliminary Plat includes 12 residential and 1 common phases to be completed in 5-6 years. Overall Master Plan over a 20 year period.
5. The number and use(s) of all structures: The overall Master Plan includes residential, multi-family, neighborhood commercial, City parks and pond and elementary school site.
6. Building heights: NA Number of stories: NA

The height and width relationship of new structures shall be compatible and consistent with the architectural character of the area and proposed use.

Note: The maximum building height for each zoning district is as follows:

L-O: 35'	C-2: 60'	CBD: 80'	M-2: 60'	P: 60'
C-1: 35'	C-3: 60'	M-1: 60'	M-3: 60'	

7. What is the percentage of building space on the lot when compared to the total lot area?
8. Exterior building materials & colors: *(Note: This section must be completed in compliance with the City of Kuna Ordinance No. 2007-21A (as amended); found online at (www.cityofkuna.com) under the City Code.*

	MATERIAL	/	COLOR
Roof:	NA	/	NA

Walls: (State percentage of wall coverage fro each type of building material below for each frontage wall) If there is not adequate space to identify the various building materials and applications, please list them on the attached sheet of this application. Please attach photos to support application types.

NA

% of Wood application:	NA	/	
% EIFS: (Exterior Insulation Finish System)	NA	/	
% Masonry:	NA	/	
% Face Block:	NA	/	
% Stucco:	NA	/	
& other material(s):	NA	/	
List all other materials:	NA		
Windows/Doors: (Type of window frames & styles / doors & styles, material)	NA	/	
Soffits and fascia material:	NA	/	
Trim, etc.:	NA	/	

Other: NA /

9. Please identify Mechanical Units: NA

   Type/Height: NA

   Proposed Screening Method: NA

10. Please identify trash enclosure: *(size, location, screening & construction materials)* NA

11. Are there any irrigation ditches/canals on or adjacent to the property? Yes

    If yes, what is the name of the irrigation or drainage provider? New York Canal

12. Fencing: *(Please provide information about new fencing material as well as any exiting fencing material)*

    Type: Vinyl, wood, wrought iron

    Size: 4ft and 6ft

    Location: Residential lots and boundaries, pathways

    (Please note that the City has height limitations of fencing material and requires a fence permit to be obtained prior to installation)

13. Proposed method of On-site Drainage Retention/Detention:

    On-site Stormwater Retention

14. Percentage of Site Devoted to Building Coverage: NA

    % of Site Devoted to Landscaping: *(including landscaped rights-of-way)* Square Footage:

    % of Site that is Hard Surface: *(Paving, driveways, walkways, etc.)* NA Square Footage:

    % of Site Devoted to other uses: NA

    Describe:

    % of landscaping within the parking lot (landscaped islands, etc.): NA

15. For details, please provide dimensions of landscaped areas within public rights-of-way:

    NA

16. Are there any existing trees of 4" or greater in caliper on the property? *(Please provide the information on the site plans.)*

    If yes, what type, size and the general location? *(The City's goal is to preserve existing tree with greater than a four inch (4") caliper whenever possible)*:

    Landscaping will be placed per plans.

17. Dock Loading Facilities:

    Number of docking facilities and their location: NA

    Method of screening: NA

18. Pedestrian Amenities: *(bike racks, receptacles, drinking fountains, benches, etc.)* Pathways, fishing pond, benches

19. Setbacks of the proposed building from property lines: Setbacks per Building Code.

Front _____ -feet Rear _____ -feet Side _____ -feet Side _____ -feet

20. Parking requirements: NA

Total Number of Parking Spaces: NA Width and Length of Spaces: _____

Total Number of Compact Spaces 8'x17'): NA

21. Is any portion of the property subject to flooding conditions? Yes X No _____

IF THE PLANNING DIRECTOR OR DESIGNEE, THE DESIGN REVIEW BOARD AND/OR THE CITY COUNCIL DETERMINE THAT ADDITIONAL AND/OR REVISED INFORMATION IS NEEDED, AND/OR IF OTHER UNFORESEEN CIRCUMSTANCES ARISE, ANY DATES OUTLINED FOR PROCESSING MAY BE RECHEDULED BY THE CITY. APPLICANT/REPRESENTATIVE MUST ATTED THE DESIGN REVIEW BOARD MEETING/PLANNING AND ZONING MEETINGS.

The Ada County Highway District may also conduct public meetings regarding this application. If you have questions about the meeting date or the traffic that this development may generate or the impact of that traffic on streets in the area, please contact the Ada County Highway District at 208.387.6170. In order to expedite you request, please have ready the file number indicated in this notice.

Signature of Applicant _____ Date _____

City staff comments:

_____

_____

Signature of receipt by City Staff _____ Date _____

FOR ADDITIONAL INFORMATION:

(Please list page number and item in reference)

Pg #5

Owners List

#1. Anne, George and James Whitmore

3431 W Meadow Dr. Boise ID 83706

#2. Gilmore Keith H & Ruth E Living Trust

3154 E Rivernest Dr. Boise ID 83706

#3. Davis Jay C & Roberta A Family Revocable Trust

P.O. Box 16232 Boise Id 83715

Neighborhood Meeting Certification

CITY OF KUNA PLANNING & ZONING * 763 W. Avalon, Kuna, Idaho, 83634 * www.kunacity.id.gov * (208) 922-5274 * Fax: (208) 922-5989

GENERAL INFORMATION:

You must conduct a neighborhood meeting prior to application for variance, conditional use, zoning ordinance map amendment, expansion or extension of a nonconforming use, and/or a subdivision. Please see Section 8-7A-3 of the Kuna City Code or ask one of our planners for more information on neighborhood meetings.

The meeting must be held either on a weekend between 10 a.m. and 7 p.m., or a weekday between 6 p.m. and 8 p.m. Meetings cannot be conducted on holidays, holiday weekends, or the day before or after a holiday or holiday weekend. The meeting must be held at one of the following locations:

- The Subject Property;
- The nearest available public meeting place (Examples include fire stations, libraries and community centers);
- An office space within a 1-mile radius of the subject property.

The meeting cannot take place more than 2 months prior to acceptance of the application and the application will not be accepted before the neighborhood meeting is conducted. You are required to send written notification of your meeting, allowing a reasonable amount of time before your meeting for property owners to plan to attend. Contacting and/or meeting individually with residents will not fulfill Neighborhood Meeting requirements.

You may request a list of the people you need to invite to the neighborhood meeting from our department. This list includes property owners within 300 feet of the subject property. Once you have held your neighborhood meeting, please complete this certification form and include it with your application.

Please Note: The neighborhood meeting must be conducted in one location for attendance by all neighboring residents. Contacting and/or meeting individually with residents does not comply with the neighborhood meeting requirements.

Please include a copy of the sign-in sheet for your neighborhood meeting, so we have written record of who attended your meeting and the letter of intent sent to each recipient. In addition, provide any concerns that may have been addressed by individuals that attended the meeting.

Description of proposed project: Spring Rock Subdivision

Date and time of neighborhood meeting: June 24th, 2019

Location of neighborhood meeting: Onsite, at the corner of Five Mile and Hubbard Rd'

SITE INFORMATION:

Location: Quarter: ____ Section: ____ Township: 2N Range: 1E Total Acres: 761

Subdivision Name: _____ Lot: _____ Block: _____

Site Address: Ten Mile Creek Rd between Five Mile and Cole Rd's Tax Parcel Number(s): (list attached)

Please make sure to include **all** parcels & addresses included in your proposed use.

CURRENT PROPERTY OWNER:

Name: Whitmore Family, Gilmore Living Trust, Davis Family

Address: _____ City: _____ State: _____ Zip: _____

CONTACT PERSON (Mail recipient and person to call with questions):

Name: Dave Yorgason Business (if applicable): Ten Mile Creek LLC

Address: 1211 N Happy Dr City: Boise State: ID Zip: 83706

PROPOSED USE:

I request a neighborhood meeting list for the following proposed use of my property (check all that apply):

	Application Type	*Brief Description*
x	Annexation	761 Acres
x	Re-zone	Ag to single family, multi family & Commercia
x	Subdivision (Sketch Plat and/or Prelim. Plat)	Preliminary Plat 476 Acres
	Special Use	
	Variance	
	Expansion of Extension of a Nonconforming Use	
	Zoning Ordinance Map Amendment	

APPLICANT:

Name: Ten Mile Creek LLC

Address: 1211 N Happy Dr

City: Boise State: ID Zip: 83706

Telephone: 208-850-1070 Fax:

I certify that a neighborhood meeting was conducted at the time and location noted on this form and in accord with Section 5-1A-2 of the Kuna City Code

Signature: (Applicant) Date 7-9-19

SIGN IN SHEET

PROJECT NAME: Springrock

Date: 6-24-2019

	Name	Address	Zip	Phone
1	Dave Yorgason	14254 W. Battenberg, Boise	83713	208-850-1070
2	BRYAN WOODELL	11575 S. HAWK HAVEN	83634	208 869 0658
3 LYNDA	BOB LEARSCH	8955 S. BROKEN WING	83634	208 362 4640
4	Jerry Green	10850 Hubbard Rd	83634	208-401-6501
5	Martha Green	"	"	208-407-2176
6	Nyle Olsen	836 LA CASCATA BOISE	83705	208 602-4912
7	Bobbie Davis	8400 Ten Mile Creek	83634	208 562 0035
8	Kelly Falser	2350 W Merrill	83642	208-870-5891
9	Ryan Carlson	11257 Silver Hawk	83634	208-941-2078
10	Bob Hall	10801 Hubbard	83634	208-866-3461
11				
12	Gregg Bunker	11263 Hubbard		
13	Darren Cranney	3606 E Columbia Meridian	83642	208-861-9814
14	Kelly Eck	11710 Hubbard	83634	208 870 8833
15	PAT/DWYN SLAGER	2896 North Mountain RD	BOISE 83702	208-890-2185
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June 12, 2019

Re: Neighborhood meeting for the proposed Springrock development located in Kuna, Idaho.

Dear neighbor,

We invite you to attend a neighborhood meeting to discuss an application for future development. The site is approximately 761 acres and is adjacent to the Falcon Crest golf course in Kuna, Idaho. It is generally located on the south side of Tenmile Creek Road. Beginning at the west side of the property at Hubbard and Five Mile Roads, it borders the New York canal and Falcon Crest golf course and extends east to Cole Road (see map on back of this notice).

The first phase preliminary plat is approximately 476 acres and will include:

- Single family dwelling units (R-6 Zoning)
- 4 plex units (R-12 Zoning)
- Small office and other commercial uses (as allowed within C-1 Zoning)
- Two large community park sites
- One elementary school site

The application will include annexation, zoning, preliminary plat, planned unit development and development agreement.

The neighborhood meeting will be held onsite at the southwest corner of Hubbard and Five Mile Roads on Monday, June 24, 2019 at 7:00 pm.

The purpose of this meeting is to review the proposed project and give the surrounding neighbors an opportunity to ask questions and express their concerns or support.

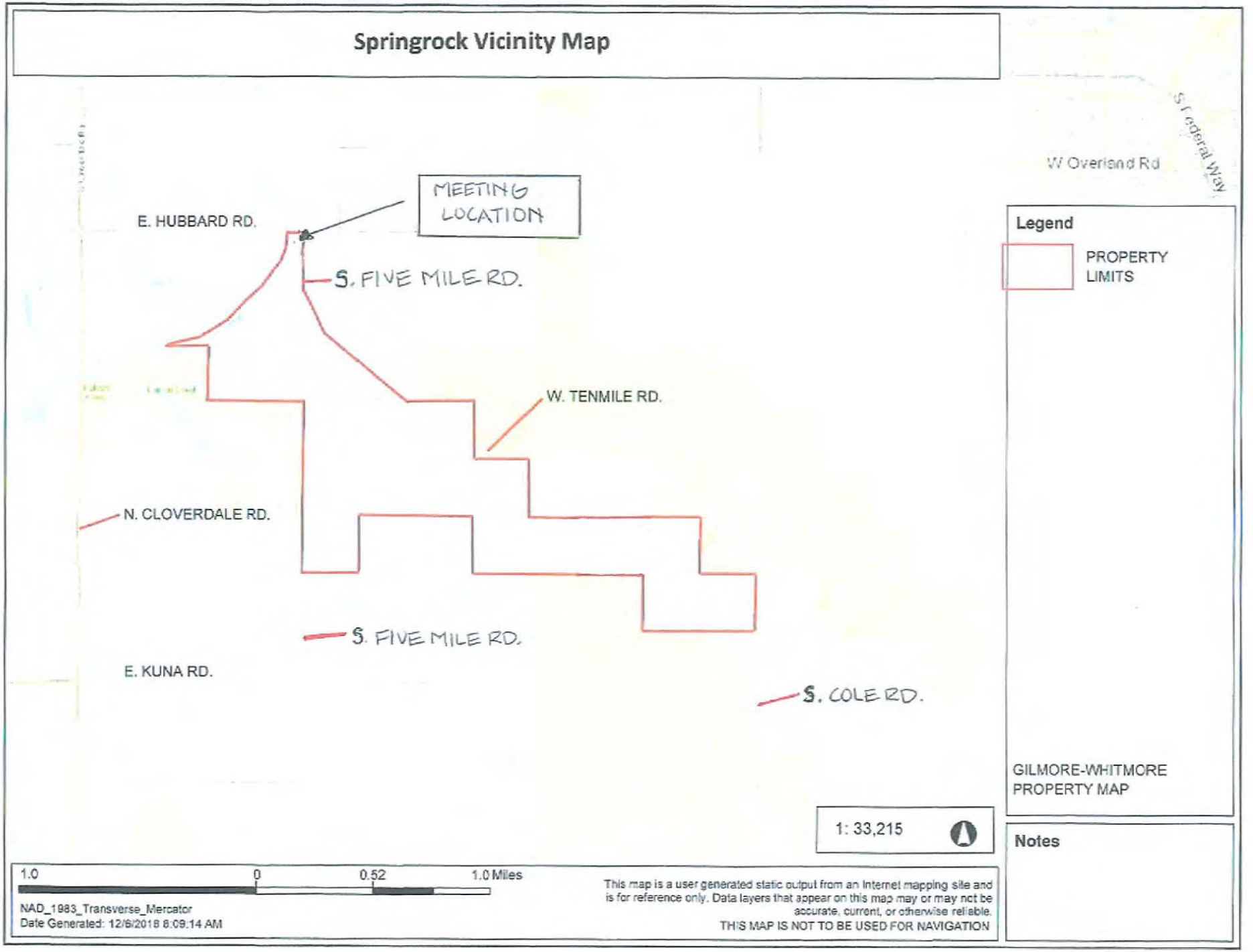
If you are unable to attend and would like additional information, or if you have any additional questions, I can be reached at: dyorgason6@gmail.com or 208-850-1070.

We hope you are able to attend.

Sincerely,

Dave Yorgason
Springrock, LLC

Springrock Vicinity Map



NEIGHBORHOOD MEETING MINUTES

Meeting Date: June 6th, 2019 Number of Attendees: 13

Meeting Location: At the corner of Five Mile Rd and Hubbard Rd

Description of Project Presented:

Proposed future development for Springrock Subdivision, including annexation of 761 acres and a preliminary plat of 476 acres. Project includes single family, 4 plex, small commercial, park and schools sites.

Attendee's comments:

-- When will the project start?
-- How will the traffic and roads work?
-- Who will be building the homes?
-- How will the 4 plexes be managed?
-- What is the timing for the school site?
-- What will be the effect on proerty taxes?
-- What will be the impact on Hubbard Rd?

I hereby certify that the above information is complete and correct to the best of by knowledge.

Christopher G. Findlay

Printed Name

Signature

7/18/2019

Date

DECLARATION OF

COVENANTS, CONDITIONS AND RESTRICTIONS

FOR

SPRING ROCK SUBDIVISION NO. 1

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IN WITNESS WHEREOF, the Grantor has executed this Declaration effective as of the date first set forth above.

_____
David Yorgason

_____
Chris Findlay

_____
Patt Duynslager

State of Idaho }
}ss
County of Ada}

On this ___ day of _____, 2019, before me the undersigned, a notary public in and for the State, personally appeared David Yorgason, known or identified to me to be a member of Ten Mile Creek LLC, an Idaho limited liability company, the person who executed this declaration and acknowledged to me that said limited liability company executed the same.

In witness whereof, I have hereunder set my hand and affixed my official seal the day and year in this certificate first above written.

My Commission Expires _____
Residing At _____

_____
Notary Public for the State of Idaho

State of Idaho }
}ss
County of Ada}

On this ___ day of _____, 2019, before me the undersigned, a notary public in and for the State, personally appeared Chris Findlay, known or identified to me to be a member of Ten Mile Creek LLC, an Idaho limited liability company, the person who executed this declaration and acknowledged to me that said limited liability company executed the same.

In witness whereof, I have hereunder set my hand and affixed my official seal the day and year in this certificate first above written.

My Commission Expires _____
Residing At _____

_____
Notary Public for the State of Idaho

State of Idaho }
}ss
County of Ada}

On this ___ day of _____, 2019, before me the undersigned, a notary public in and for the State, personally appeared Patt Duynslager, known or identified to me to be a member of Ten Mile Creek LLC, an Idaho limited liability company, the person who executed this declaration and acknowledged to me that said limited liability company executed the same.

In witness whereof, I have hereunder set my hand and affixed my official seal the day and year in this certificate first above written.

My Commission Expires _____
Residing At _____

_____
Notary Public for the State of Idaho

EXHIBIT A

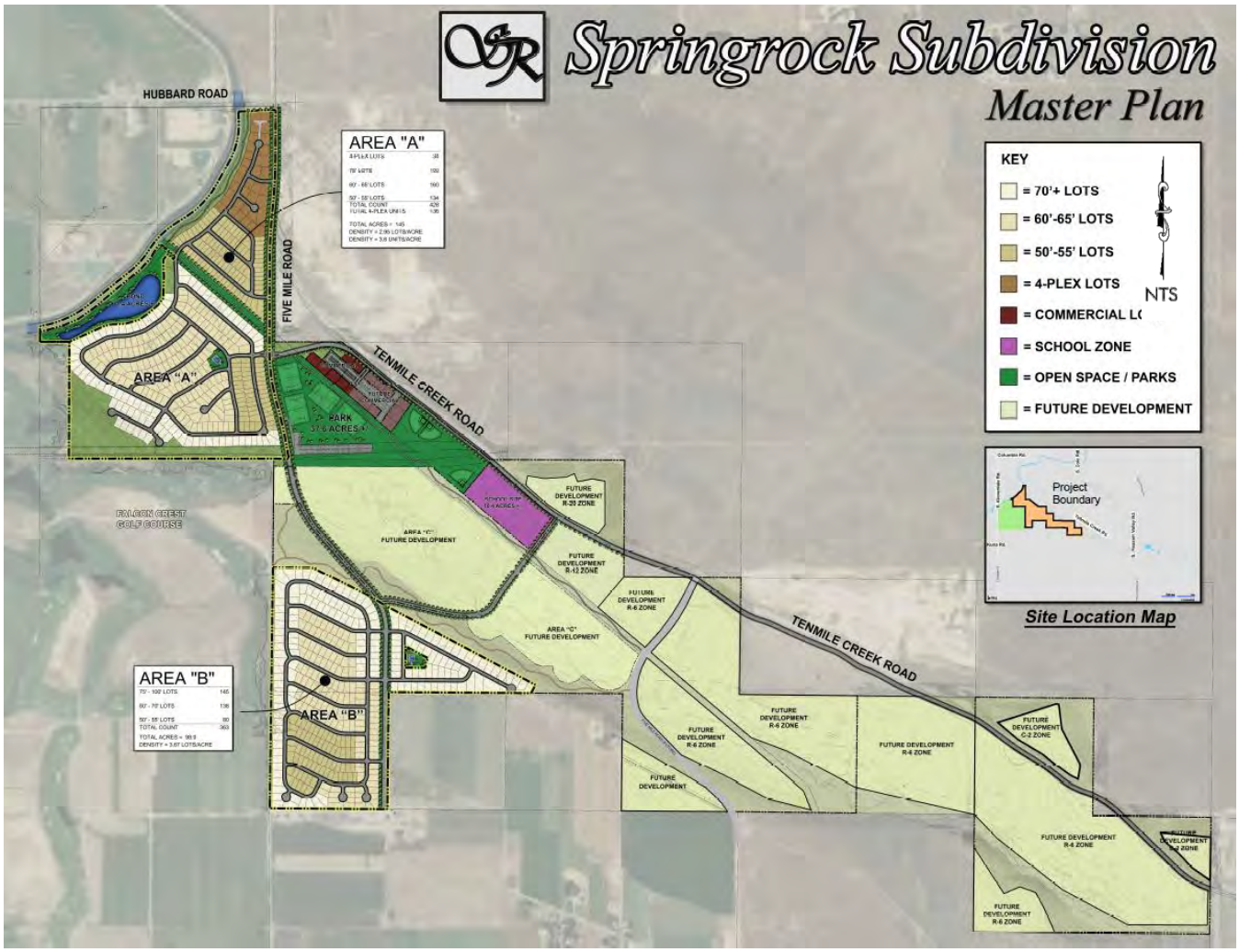
Legal Description of the Property

TRAFFIC IMPACT STUDY

SPRINGROCK SUBDIVISION

Kuna, Idaho

June 6, 2019



Prepared For:

DAVE YORGASON

Prepared By:

GR ENGINEERING, INC.

181 East 50th Street
Garden City, ID 83714
(208) 841-4996

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EXECUTIVE SUMMARY

CR Engineering, Inc. has been retained to prepare a traffic impact study (TIS) for the proposed Springrock Subdivision located along Tenmile Creek Road between Five Mile Road and Pleasant Valley Road in Kuna, Idaho, as shown in **Figure 1.1**. The scope of this report was determined through coordination with the Ada County Highway District (ACHD) and the Idaho Transportation Department (ITD) with inputs from the Community Planning Association of Southwest Idaho (COMPASS).

Springrock Subdivision is a proposed 761-acre mixed-use development planned to be developed in multiple phases. The initial developments in Phase 1 are planned to be completed by 2025, but may change depending on the market conditions. The remaining developments are planned to be completed in future phases with an expected 2040 full build-out year.

The TIS evaluates the potential traffic impacts resulting from background traffic growth, off-site developments in the area, and the proposed initial Phase 1 developments of Springrock Subdivision, and identifies improvements to mitigate the impacts if needed. Traffic impacts were evaluated under weekday AM and PM peak hour traffic conditions. **Table 1** and **Table 2** summarize the roadway and intersection improvements needed to mitigate the traffic impacts for the following traffic conditions:

- 2019 Existing traffic
- 2025 Phase 1 background traffic
- 2025 Phase 1 total traffic

In addition, a planning-level analysis of the study area roadway segments' level of service was also evaluated under 2040 full build-out year traffic conditions. The purpose of the planning-level analysis is to identify which study area roadway segments are expected to need additional lanes beyond the roadway lanes programmed in ACHD's 2016 Capital Improvement Plan (CIP). **Table 3** summarizes the roadway segment analysis results for the 2040 traffic conditions:

- 2040 Full build-out year background traffic
- 2040 Full build-out year total traffic

It is anticipated that additional TISs will be required for each future phase of the development at the time of submission of a preliminary plat application. Traffic impacts and mitigations for future phases will be identified in future TISs.

1.0 Proposed Development

1.1 At full build-out, Springrock Subdivision is estimated to include the following land uses:

- Single-family residential : 1,925 dwelling units
- 4-Plex residential : 252 dwelling units
- Multi-family residential : 120 dwelling units
- Office : 60,000 square feet (sf)
- Day care center : 5,000 sf
- Coffee shop with drive-thru : 2,000 sf
- Quality restaurant : 6,000 sf
- High-turnover restaurant : 6,000 sf
- Convenience market : 4,000 sf
- Mini-storage facility : 101,000 sf
- Elementary school : 1 with 600 students

1.2 The initial Phase 1 development includes the following land uses with an estimated 2025 build-out year:

- Single-family residential : 757 dwelling units
- 4-Plex residential : 136 dwelling units
- Office : 10,000 sf
- Day care center : 5,000 sf
- Quality restaurant : 6,000 sf
- Elementary school : 1 with 600 students

Table 1 – Intersection Improvements Summary (Phase 1)

Intersection		2019 Existing	2025 Phase 1	
			Background	Total
1	Columbia Road and Meridian Road	None	None[2]	**Signal timing**
2	Kuna Road and Meridian Road	None	None	None
3	Columbia Road and Locust Grove Road	None	None	None
4	Kuna Road and Locust Grove Road	None	None	None
5	Columbia Road and Eagle Road	None	None	None
6	Kuna Road and Eagle Road	None	None	None
7	Amity Road and Cloverdale Road	None	**2 thru lanes on Cloverdale Rd or Multi-lane roundabout**	None beyond prior improvements
8	Lake Hazel Road and Cloverdale Road	None	**Signal timing**[2]	**Widen intersection to 5x5**
9	Columbia Road and Cloverdale Road	None	**Single-lane roundabout or Signal with LT lanes**	None beyond prior improvements
10	Hubbard Road and Cloverdale Road	**SB right-turn lane**[1]	**Single-lane roundabout or Signal with LT lanes**	None beyond prior [2] improvements
11	Kuna Road and Cloverdale Road	None	None	None
12	Hubbard Road and Tenmile Creek Road	None	None	None
13	Gowen Road and Pleasant Valley Road	None	None[2]	None
14	Tenmile Creek Road and Pleasant Valley Road	**SB right-turn lane**[1]	None beyond prior improvements	**EB left-turn lane NB left-turn lane**

[1] Turn lane needs are based on ACHD's turn-lane guidelines, intersection meets minimum operational thresholds without turn lane

[2] Overall intersection v/c ratio exceeds 0.90

Table 2 – Roadway Segment Lane Improvement Summary (Phase 1)

Study Area Roadway Segment	2019 Existing Lanes	2025 Phase 1	
		Background	Total
Cloverdale Rd Amity Rd to Lake Hazel Rd	2	**Widen to 5 lanes**	5
Cloverdale Rd Lake Hazel Rd to Columbia Rd	2/3	2/3	**Widen to 5 lanes**
Cloverdale Rd Columbia Rd to Hubbard Rd	2	2	2
Pleasant Valley Rd Gowen Rd to Hollilynn Dr	2	2	2
Pleasant Valley Rd Hollilynn Dr to Tenmile Creek Rd	2	2	2
Columbia Rd Meridian Rd to Locust Grove Rd	2	2	2
Columbia Rd Locust Grove Rd to Eagle Rd	2	2	2
Columbia Rd Eagle Rd to Cloverdale Rd	2	2	2
Hubbard Rd Cloverdale Rd to Five Mile Rd	2	2	2
Five Mile Rd Tenmile Creek Rd to Hubbard Rd	2	2	2
Tenmile Creek Rd Five Mile Rd to Pleasant Valley Rd	2	2	2
Kuna Rd Meridian Rd to Locust Grove Rd	2	2	2
Kuna Rd Locust Grove Rd to Eagle Rd	2	2	2
Kuna Rd Eagle Rd to Cloverdale Rd	2	2	2

Table 3 – Roadway Segment Level of Service Summary (2040 Full Build-Out)

Study Area Roadway Segment	2019 Existing Lanes	CIP Programmed Lanes	Meet LOS Planning Threshold?	
			2040 Background	2040 Total
Cloverdale Rd Amity Rd to Lake Hazel Rd	2	5	Yes	**No**
Cloverdale Rd Lake Hazel Rd to Columbia Rd	2	5	**No**	**No**
Cloverdale Rd Columbia Rd to Hubbard Rd	2	3	**No**	**No**
Pleasant Valley Rd Gowen Rd to Hollilynn Dr	2	2	Yes	**No**
Pleasant Valley Rd Hollilynn Dr to Tenmile Creek Rd	2	2	Yes	**No**
Columbia Rd Meridian Rd to Locust Grove Rd	2	2	**No**	**No**
Columbia Rd Locust Grove Rd to Eagle Rd	2	2	**No**	**No**
Columbia Rd Eagle Rd to Cloverdale Rd	2	2	**No**	**No**
Hubbard Rd Cloverdale Rd to Five Mile Rd	2	3	Yes	**No**
Five Mile Rd Tenmile Creek Rd to Hubbard Rd	2	3	Yes	Yes
Tenmile Creek Rd Five Mile Rd to Pleasant Valley Rd	2	3/2	Yes	Yes
Kuna Rd Meridian Rd to Locust Grove Rd	2	2	Yes	**No**
Kuna Rd Locust Grove Rd to Eagle Rd	2	2	**No**	**No**
Kuna Rd Eagle Rd to Cloverdale Rd	2	2	**No**	**No**

2.0 Improvements Needed to Mitigate 2019 Existing Traffic

2.1 All study area intersections currently meet minimum operational thresholds with 2019 existing traffic conditions analyzed with the existing intersection control and lane configurations. As a result, no intersection control or capacity improvements are needed to mitigate 2019 existing traffic.

2.2 Two study area intersections meet ACHD's turn-lane guidelines:

- Hubbard Road and Cloverdale Road intersection
  - Southbound right-turn lane
- Tenmile Creek Road and Pleasant Valley Road intersection
  - Southbound right-turn lane

2.3 None of the study area roadway segments need additional capacity improvements, except for the turn-lane improvements identified above.

- The Cloverdale Road segment between Amity Road and Lake Hazel Road exceeds ACHD's LOS planning thresholds with 2019 existing traffic. However, based on intersection capacity analysis, the Cloverdale Road approaches do not need additional through lanes at the Amity Road intersection or Lake Hazel Road intersection. As a result, no roadway capacity improvements are recommended to mitigate 2019 existing traffic.

3.0 Improvements Needed to Mitigate 2025 Phase 1 Background Traffic

3.1. Six study area intersections are expected to exceed minimum operational thresholds with 2025 background traffic conditions analyzed with the existing intersection control and lane configurations or with the preceding improvements needed to mitigate 2019 existing traffic. The intersections and improvements needed to mitigate the 2025 background traffic impacts are:

- Columbia Road and Meridian Road intersection
  - No improvements are proposed to mitigate 2025 background traffic impacts
    - The intersection is expected to only exceed 0.90 overall intersection v/c ratio during the AM peak hour
    - All lane groups are expected to operate with v/c ratios less than 1.00 during the peak hours
- Amity Road and Cloverdale Road intersection (two options)
  - Option 1 – Widen Cloverdale Road approaches to two through lanes in each direction and signal modifications
    - Cloverdale Road is programmed in the 2019-2023 IFYWP to be widened to five lanes from Victory Road to Lake Hazel Road
  - Option 2 – Multi-lane roundabout
    - The Amity Road and Cloverdale Road intersection is programmed in the 2019-2023 IFYWP to be reconstructed as a multi-lane roundabout
- Lake Hazel Road and Cloverdale Road intersection
  - Optimize signal timing for the expected traffic conditions
  - No capacity improvements area proposed to mitigate 2025 background traffic impacts
    - The intersection is expected to only exceed 0.90 overall intersection v/c ratio during the peak hours
    - All lane groups are expected to operate with v/c ratios less than 1.00 during the peak hours
- Columbia Road and Cloverdale Road intersection (two options)
  - Option 1 – Signal with left-turn lanes on all approaches
  - Option 2 – Single-lane roundabout
    - The Columbia Road and Cloverdale Road intersection is programmed in the 2016 CIP to be reconstructed as a single-lane roundabout between 2026 and 2030 timeframe

- Hubbard Road and Cloverdale Road intersection (two options
  - Option 1 – Signal with left-turn lanes on all approaches)
  - Option 2 – Single-lane roundabout

  There are no improvements programmed at the Hubbard Road and Cloverdale Road intersection according to ACHD's current transportation plans. The intersection is listed in ACHD's Master Street Map (MSM) as a single-lane roundabout.

- Gowen Road and Pleasant Valley Road intersection
  - No improvements area proposed to mitigate 2025 background traffic impacts
    - The intersection is expected to only exceed 0.90 overall intersection v/c ratio during the PM peak hour
    - All lane groups are expected to operate with v/c ratios less than 1.00 during the peak hours

3.2. Cloverdale Road is expected to need the following improvements to mitigate 2025 background traffic impacts:

- Widen to five lanes between Amity Road and Lake Hazel Road
  - Cloverdale Road is programmed in the 2019-2023 IFYWP to be widened to five lanes from Victory Road to Lake Hazel Road.

4.0 Improvements Needed to Mitigate 2025 Phase 1 Total Traffic

4.1 Six study area intersections are expected to exceed ACHD's minimum operational thresholds with 2025 total traffic conditions analyzed with the existing intersection control and lane configurations, or with the preceding improvements identified above for 2019 existing and 2025 background traffic. The intersections and improvements needed to mitigate the 2025 total traffic impacts are:

- Columbia Road and Meridian Road intersection
  - Optimize signal timing for the expected traffic conditions
  - No improvements area proposed to mitigate 2025 total traffic impacts
    - The intersection is expected to only exceed 0.90 overall intersection v/c ratio during the AM peak hour
    - All lane groups are expected to operate with v/c ratios less than 1.00 during the peak hours

  The estimated Phase 1 site traffic at the Columbia Road and Meridian Road intersection is approximately 3.0% of the total intersection traffic during the PM peak hour.

- Lake Hazel Road and Cloverdale Road intersection
  - Widen intersection to have on left-turn lane, one through lane, and one shared through/right-turn lane on all approaches
    - The Lake Hazel Road and Cloverdale Road intersection is programmed in the 2019-2023 IFYWP to be widened to five lanes on both Lake Hazel Road and Cloverdale Road. The construction years have not been identified and the project is listed as preliminary development.
    - The estimated Phase 1 site traffic is approximately 11.2% of the total intersection traffic during the PM peak hour.

  The estimated Phase 1 site traffic at the Lake Hazel Road and Cloverdale Road intersection is approximately 11.2% of the total intersection traffic during the PM peak hour.

- Columbia Road and Cloverdale Road intersection
  - No improvements are proposed to mitigate 2025 total traffic impacts
    - As a signalized intersection, the intersection is expected to meet minimum operational thresholds

- As a single-lane roundabout, one lane group is expected to slightly exceed 0.85 v/c ratio threshold during the AM peak hour

The estimated Phase 1 site traffic at the Columbia Road and Cloverdale Road intersection is approximately 30.8% of the total intersection traffic during the PM peak hour.

- Hubbard Road and Cloverdale Road intersection
  - No improvements are proposed to mitigate 2025 total traffic impacts
    - As a signalized intersection, the intersection is expected to meet minimum operational thresholds, with the exception of the overall intersection v/c ratio slightly exceeding 0.90 v/c ratio during the AM peak hour
    - As a single-lane roundabout, one lane group is expected to slightly exceed 0.85 v/c ratio threshold during the AM peak hour

The estimated Phase 1 site traffic at the Hubbard Road and Cloverdale Road intersection is approximately 34.7% of the total intersection traffic during the PM peak hour.

- Gowen Road and Pleasant Valley Road intersection
  - No improvements are proposed to mitigate 2025 total traffic impacts
    - The intersection is expected to meet minimum operational threshold, with the exception of the overall intersection v/c ratio exceeding 0.90 threshold during the peak hours.

The estimated Phase 1 site traffic at the Gowen Road and Pleasant Valley Road intersection is approximately 10.3% of the total intersection traffic during the PM peak hour.

4.2 One study area intersection is expected to require turn lanes:

- Tenmile Creek Road and Pleasant Valley Road intersection
  - Eastbound left-turn lane
  - Northbound left-turn lane

The estimated Phase 1 site traffic at the Tenmile Creek Road and Pleasant Valley Road intersection is approximately 30.7% of the total intersection traffic during the PM peak hour.

4.3 Cloverdale Road is expected to need the following improvements to mitigate 2025 total traffic impacts:

- Widen to five lanes from Lake Hazel Road to Columbia Road
  - Cloverdale Road is programmed in the 2016 CIP to be widened to five lanes from Lake Hazel Road to Columbia Road between 2026 and 2030

The estimated Phase 1 site traffic on this Cloverdale Road segment is approximately 20.7% of the total traffic during the PM peak hour.

5.0 2040 Full Build-Out Planning-Level Analysis

5.1 With 2040 background traffic, the following study area roadway segments are expected to exceed ACHD's LOS planning thresholds and need additional lanes beyond the lanes programmed in the 2016 CIP:

- Cloverdale Road between Lake Hazel Road and Columbia Road
  - Widen from five lanes to seven lanes
- Cloverdale Road between Columbia Road and Hubbard Road
  - Widen from three lanes to five lanes
- Columbia Road between Meridian Road and Cloverdale Road
  - Widen from two lanes to three lanes
- Kuna Road between Meridian Road and Cloverdale Road
  - Widen from two lanes to three lanes

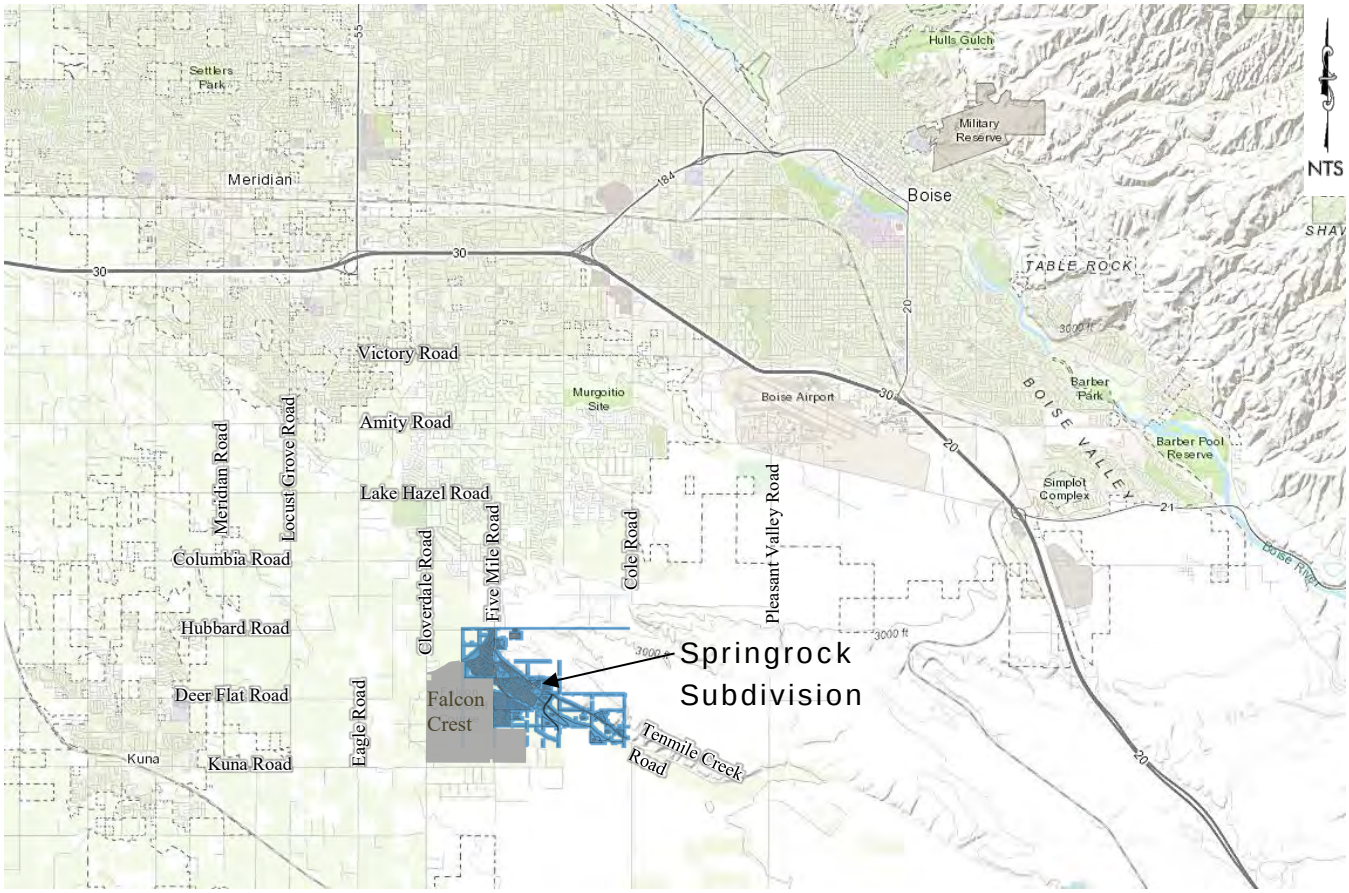
5.2 With 2040 total traffic, the following study area roadway segments are expected to exceed ACHD's LOS planning thresholds and need additional lanes beyond the number of lanes programmed in the 2016 CIP and lanes needed under 2040 background traffic:

- Cloverdale Road between Amity Road and Lake Hazel Road
  - Widen from five lanes to seven lanes
- Cloverdale Road between Columbia Road and Hubbard Road
  - Widen from five lanes to seven lanes
- Pleasant Valley Road between Gowen Road and Tenmile Creek Road
  - Widen from two lanes to three lanes
- Columbia Road between Meridian Road and Cloverdale Road
  - Widen from three lanes to five lanes
- Hubbard Road between Five Mile Road and Cloverdale Road
  - Widen from two lanes to five lanes
- Five Mile Road between Tenmile Creek Road and Hubbard Road
  - Widen from two lanes to five lanes
- Kuna Road between Meridian Road and Locust Grove Road
  - Widen from three lanes to five lanes

1.0 INTRODUCTION

CR Engineering, Inc. has been retained to prepare a traffic impact study for the proposed Springrock Subdivision located along Tenmile Creek Road between Five Mile Road and Pleasant Valley Road in Kuna, Idaho. **Figure 1.1** shows the site location and its vicinity. The TIS evaluates the potential traffic impacts resulting from background traffic growth, off-site developments, and the proposed Phase 1 development, and identifies improvements needed to mitigate the impacts. In additional, the TIS also conducted a planning-level analysis of the roadway segment level of service under the full build-out traffic conditions.

Figure 1.1 – Site Location and Vicinity



1.1 Proposed Development

Springrock Subdivision is a proposed 761-acre mixed-use development planned to be developed in multiple phases. **Figure 1.2** shows the preliminary master site plan. **Figure 1.3** shows the preliminary plan for Phase 1 developments. Detailed lots and internal roadway layouts are available for Phase 1 in areas A, B and C. However, a detailed layout of future phases beyond Phase 1 is not available at the time of this TIS. **Table 1.1** summarizes the proposed land uses for each land use area. The initial Phase 1 developments are planned to be completed by 2025. The full build-out of the Springrock Subdivision is expected in year 2040 but may change depending on the market conditions.

Springrock Subdivision is planning to construct a segment of Five Mile Road along the site frontages. A segment of Tenmile Creek Road will be realigned from Hubbard Road to intersect the proposed Five Mile Road segment. Multiple approaches are proposed on Tenmile Creek Road and the proposed Five Mile Road extension for Phase 1 site access.

Table 1.1 – Proposed Land Use Summary

Land Use Area	Development Area Acreage	Initial Phase 1	Full Build-Out Total
A	145	394 single-family dwelling units (DU) 136 4-plex DU	394 single-family DU 136 4-plex DU
B	99	363 single-family DU	363 single-family DU
C	105	1 Elementary school (600 students) 10,000 square feet (sf) office 5,000 sf day care center 6,000 sf quality restaurant	347 single-family DU 1 Elementary school (600 students) 60,000 sf office 5,000 sf day care center 6,000 sf quality restaurant 116 single-family DU 120 multi-family DU 2,000 sf coffee shop 6,000 sf high-turnover restaurant
Remainder	221	None	821 single-family DU 4,000 sf convenience market 101,000 sf mini-storage

Figure 1.2 – Preliminary Master Site Plan

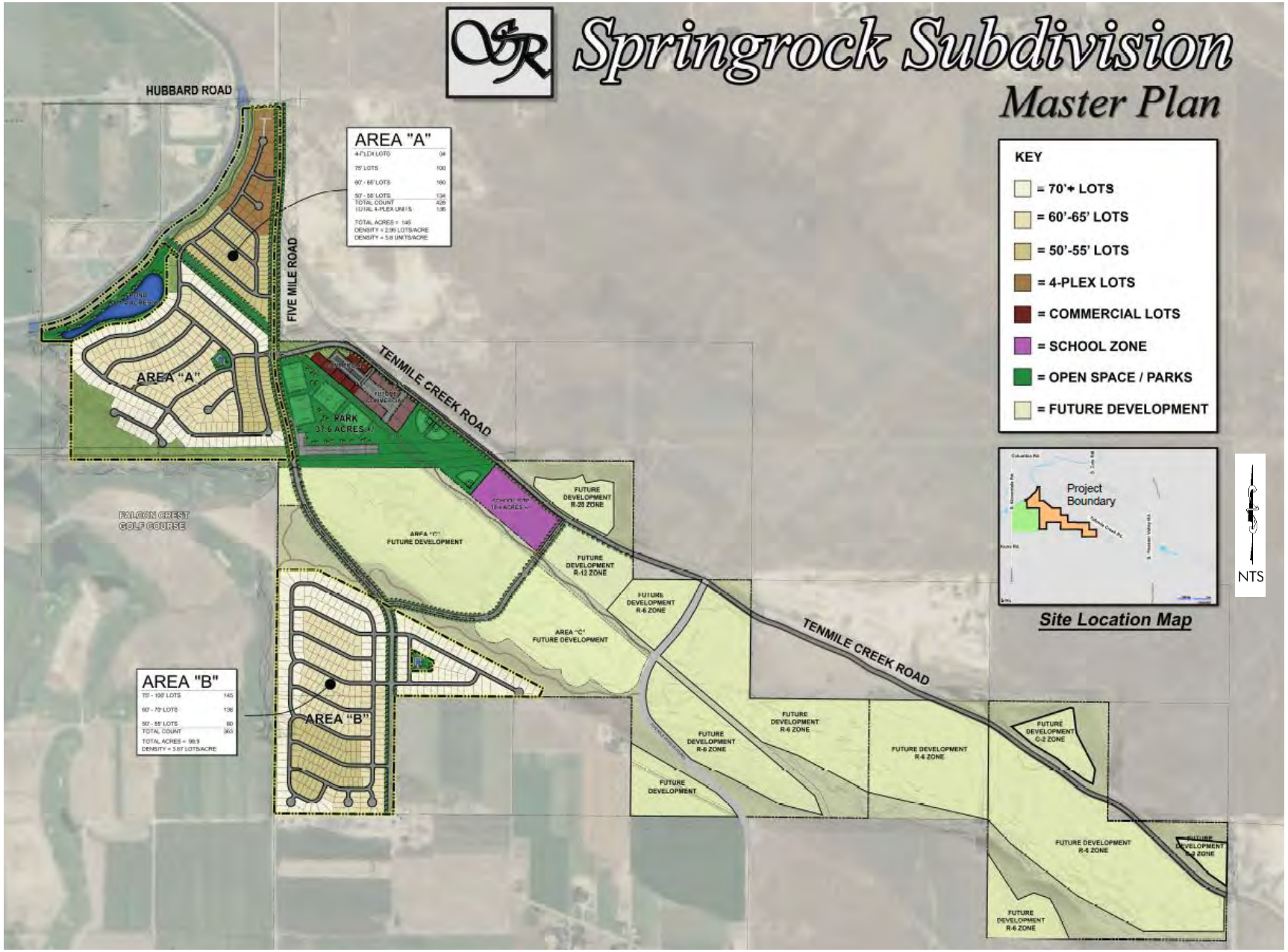
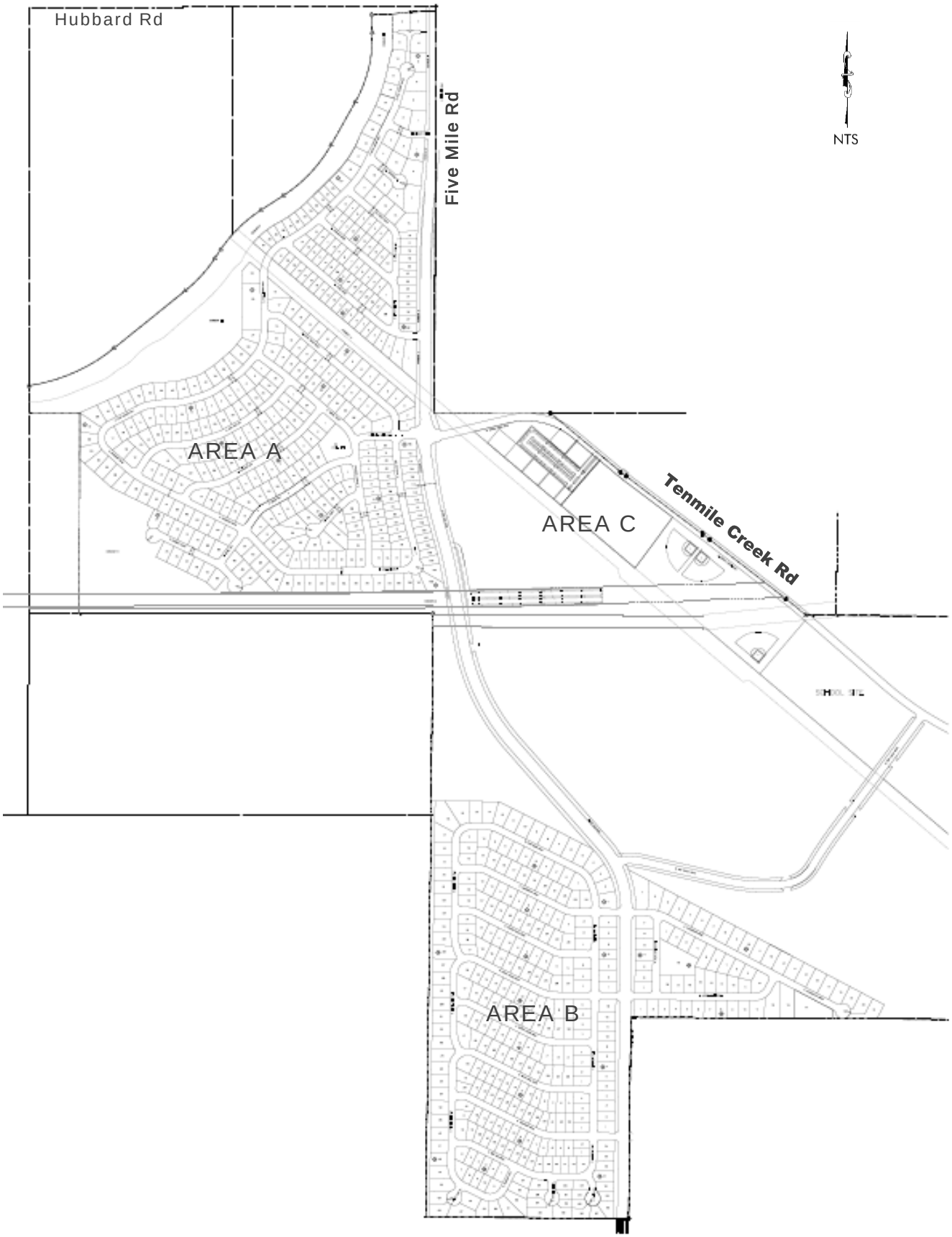


Figure 1.3 – Phase 1 Preliminary Site Plan



1.2 Study Approach

The TIS was prepared in accordance with ACHD Policy, *Section 7106 – Traffic Impact Studies* and ITD *IDAPA 39.03.42 – Rules Governing Highway Right-of-Way Encroachments on State Rights-of-Way*. The scope of this TIS, including the study area, specific parameters, and requirements were determined through coordination with ACHD and ITD with inputs from Community Planning Association of Southwest Idaho (COMPASS) modeling. A scope of work memorandum prepared for ACHD and ITD, including the results from the COMPASS area of influence model runs, is included in the appendix.

1.3 Study Area

Figure 1.3 shows the study area intersections and roadway segments. The following 14 existing intersections were identified by ACHD and ITD for collecting peak hour turning movement counts and conducting traffic impact analysis:

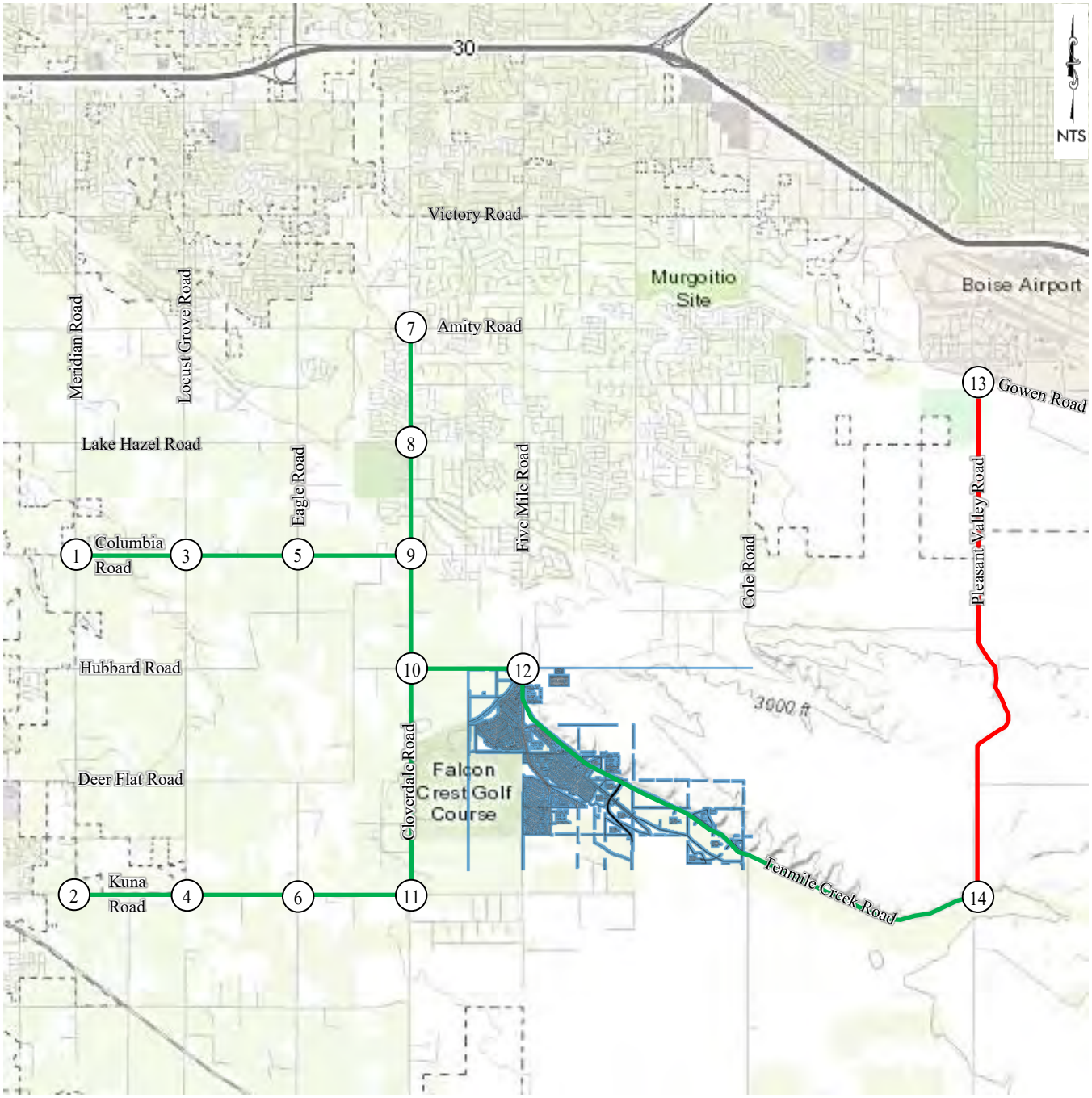
- Columbia Road and Meridian Road
- Kuna Road and Meridian Road
- Columbia Road and Locust Grove Road
- Kuna Road and Locust Grove Road
- Columbia Road and Eagle Road
- Kuna Road and Eagle Road
- Amity Road and Cloverdale Road
- Lake Hazel Road and Cloverdale Road
- Columbia Road and Cloverdale Road
- Hubbard Road and Cloverdale Road
- Kuna Road and Cloverdale Road
- Hubbard Road and Five Mile Road
- Gowen Road and Pleasant Valley Road
- Tenmile Creek Road and Pleasant Valley Road

In addition, major proposed site access intersections are also evaluated.

The following study area roadway segments were identified by ACHD for collecting daily traffic counts and traffic impact analysis:

- Pleasant Valley Road between Gowen Road and Hollilynn Drive
- Pleasant Valley Road between Hollilynn Drive and Ten Mile Creek Road
- Ten Mile Creek Road between Five Mile Road and Pleasant Valley Road
- Five Mile Road between Hubbard Road and Ten Mile Creek Road
- Hubbard Road between Cloverdale Road and Five Mile Road
- Cloverdale Road between Amity Road and Lake Hazel Road
- Cloverdale Road between Lake Hazel Road and Columbia Road
- Cloverdale Road between Columbia Road and Hubbard Road
- Columbia Road between Meridian Road and Locust Grove Road
- Columbia Road between Locust Grove Road and Eagle Road
- Columbia Road between Eagle Road and Cloverdale Road
- Kuna Road between Meridian Road and Locust Grove Road
- Kuna Road between Locust Grove Road and Eagle Road
- Kuna Road between Eagle Road and Cloverdale Road
- All proposed internal collector roadways

Figure 1.4 – Study Area Roadway and Intersection



1.4 Study Period

The analysis periods are weekday AM and PM peak hours of operation of the transportation system. The analysis years and traffic scenarios are:

- 2019 existing traffic
- 2025 Phase 1 background traffic
- 2025 Phase 1 total traffic
- 2040 Full build-out year background traffic
- 2040 Full build-out year total traffic

1.5 Analysis Methods and Performance Measure Thresholds

The study area roadways and intersections fall under ACHD's or ITD's jurisdictions. The operational thresholds of both ACHD and ITD were used to assess the study roadways and intersections.

Roadway segments under ACHD's jurisdiction were evaluated based on the level of service planning thresholds in accordance with Table 2 of ACHD Policy Manual, Section 7106. The roadway segment level of service is based on the maximum peak hour directional volume for different roadway functional classifications, number of through lanes, and left-turn type. The planning level of service is LOS E for principal and minor arterials and LOS D for collector streets.

Intersection capacity analysis was performed using the Synchro 10 (Version 10.3.122.0), which utilizes the HCM 2010 methodologies. All parameters used in the analysis were based on existing data when available or Synchro default values, when not available. Signal timing data for the signalized intersections was obtained from ACHD. The current signal timing data was used for the 2019 existing conditions analysis. For future conditions, the signal timing was optimized in Synchro and adjusted for the intersection lane configuration and traffic conditions. For this TIS, the minimum intersection operational thresholds are v/c ratio of 0.90 for the overall intersection and 1.00 for a lane group. For roundabouts, the v/c ratio threshold is 0.85 for the worst lane group. However, ACHD may allow the maximum v/c ratio to exceed 0.85 to avoid over-building on a case-by-case basis.

The HCM 2010 methodology does not define an overall intersection v/c ratio as a measure of effectiveness (MOE) for signalized intersection. For this study, the overall intersection v/c ratio for signalized intersection was estimated using Synchro based on HCM 2000 methodologies. Neither ACHD nor ITD allow the use of HCM 2000 in the analysis of level of service for traffic impact studies.

1.6 Study Assumptions and Limitations

Springrock Subdivision is expected to be developed in multiple phases. At this time, the developer is planning to submit a preliminary plat for Phase 1 only. Preliminary plats for other phases will be submitted in future dates. For this TIS, detailed traffic impacts and mitigation analyses were conducted for the initial Phase 1 developments. For future phases, a planning-level analysis of the study area roadway segments' level of service was evaluated for the full built out of the developments to identify the roadway needs beyond the roadway improvements programmed in the 2016 CIP. ACHD will require a separate TIS for each phase of the development at the time of submission of the preliminary plat.

Detailed site layout for the proposed elementary school was not available at the time of this study. School site checklist per Idaho Code 67-6519(3) will need to be addressed when site plans for the proposed school are available.

2.0 EXISTING CONDITIONS

2.1 Roadway Network, Intersection Control and Lane Configuration

Table 2.1 summarizes the study area roadway characteristics. The roadway functional classification is based on COMPASS 2040 Functional Classification Map. **Figure 2.1** summarizes the study area intersection control and lane configuration. The following intersections were adjusted in the analysis:

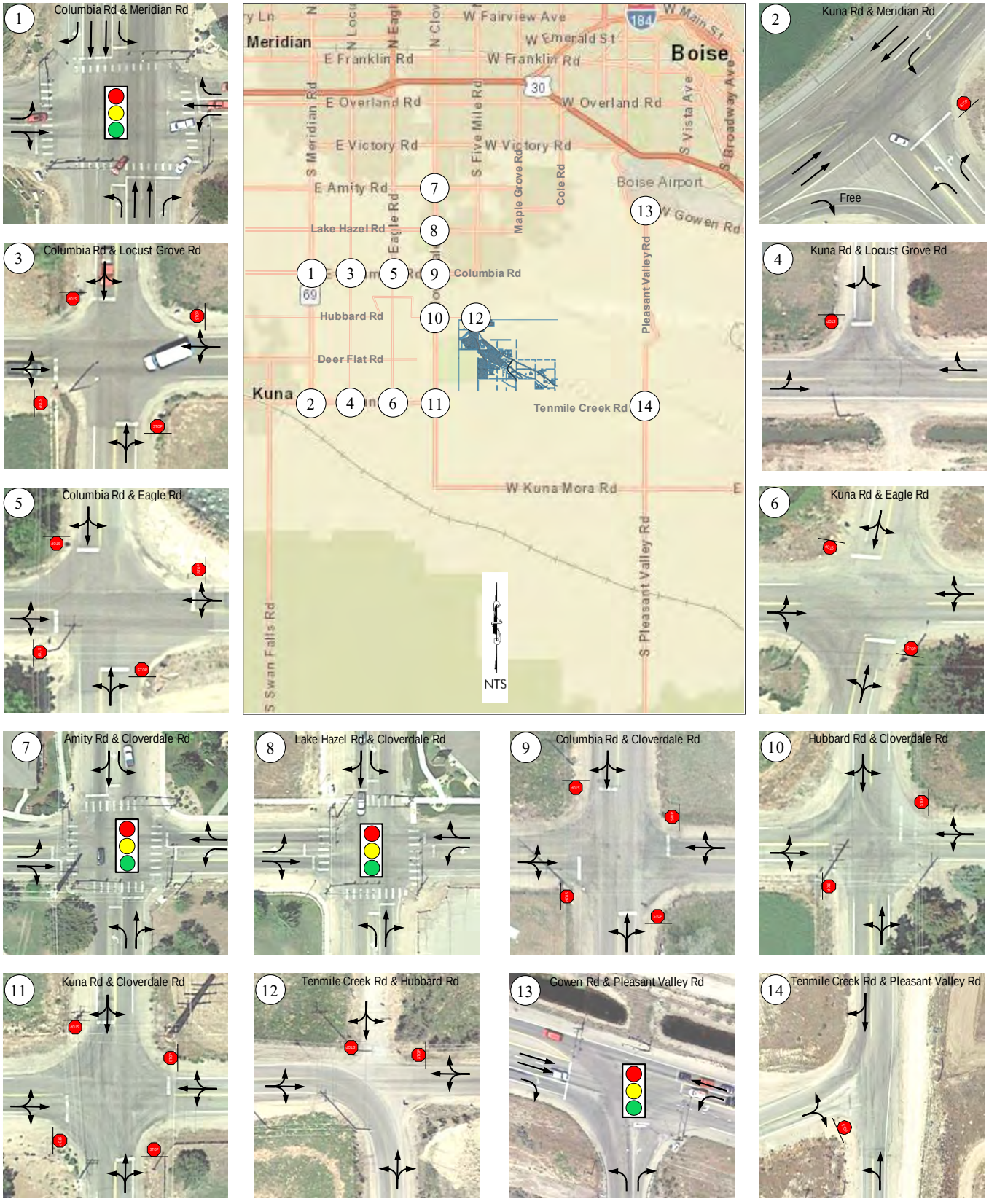
- Locust Grove Road and Kuna Road intersection – The south leg is a private approach providing access for one existing residential dwelling units and was excluded in the analysis.

- Tenmile Creek Road and Hubbard Road intersection – The north and east legs are private approaches. The north leg provides access for one existing residential dwelling units. The east leg provides access for nine existing residential dwelling units. Both of these approaches carry low traffic volumes and are stopped-control. The intersection control orientation is not compliant with the HCM methodology. For this TIS, the southbound and westbound approaches are combined in the analysis. The northbound and eastbound movements are uncontrolled.

Table 2.1 – Study Area Roadway Characteristics

Roadway	Functional Classification	Number of Lanes	Posted Speed Limit (mph)	Pedestrian Facilities
Cloverdale Road	Minor Arterial	2	45/50	Sidewalks along developed frontages
Pleasant Valley Road	Minor Arterial (S of Gowen) Principal Arterial	2/3	35/50	No sidewalks or bicycle lanes
Columbia Road	Minor Arterial	2	50	No sidewalks or bicycle lanes
Hubbard Road	Minor Arterial	2	45	No sidewalks or bicycles lanes
Five Mile Road	Minor Arterial	2	35	No sidewalks or bicycle lanes
Tenmile Creek Road	Minor Arterial	2	35	No sidewalks or bicycle lanes
Kuna Road	Minor Arterial (Expressway)	2	35/50	No sidewalks or bicycle lanes

Figure 2.1 – Existing Intersection Control and Lane Configuration



2.2 Existing Traffic Volumes

Weekday AM and PM peak hour traffic counts were obtained at the study intersections in March 2019. The peak hour intersection turning movement counts were collected on a weekday for a 2-hour period at 15-minute intervals between 7:00 and 9:00 during the AM peak travel period hour and between 4:00 and 6:00 during the PM peak travel period. Existing turning movement counts are included in the appendix. **Figure 2.2** and **Figure 2.3** summarize the existing weekday peak hour traffic volumes.

24-hour counts average daily traffic (ADT) were obtained for the study area roadway segments – summarized in **Table 2.2**.

Table 2.2 – 2019 Existing ADT Summary

Roadway	Segment	ADT	Count Date
Cloverdale Rd	Amity Rd to Lake Hazel Rd	8,678	03/05/2019
	Lake Hazel Rd to Columbia Rd	6,893	03/05/2019
	Columbia Rd to Hubbard Rd	4,743	11/28/2018 (ACHD)
Pleasant Valley Rd	Gowen Rd to Hollilynn Dr	8,831	03/13-14/2019
	Hollilynn Dr to Tenmile Creek Rd	5,377	03/05/2019
Columbia Rd	Meridian Rd to Locust Grove Rd	4,122	03/05/2019
	Locust Grove Rd to Eagle Rd	4,212	06/05/2018 (ACHD)
	Eagle Rd to Cloverdale Rd	3,905	06/05/2018 (ACHD)
Hubbard Rd	Five Mile Rd to Cloverdale Rd	1,934	11/28/2018 (ACHD)
Five Mile Rd	Tenmile Creek Rd to Hubbard Rd	1,937	03/13-14/2019
Tenmile Creek Rd	Five Mile Rd to Pleasant Valley Rd	1,937	03/13-14/2019
Kuna Rd	Meridian Rd to Locust Grove Rd	4,482	03/05/2019
	Locust Grove Rd to Eagle Rd	3,725	03/5-6/2019
	Eagle Rd to Cloverdale Rd	3,391	01/29/2019 (ACHD)

Figure 2.2 – 2019 Existing Weekday AM Peak Hour Traffic

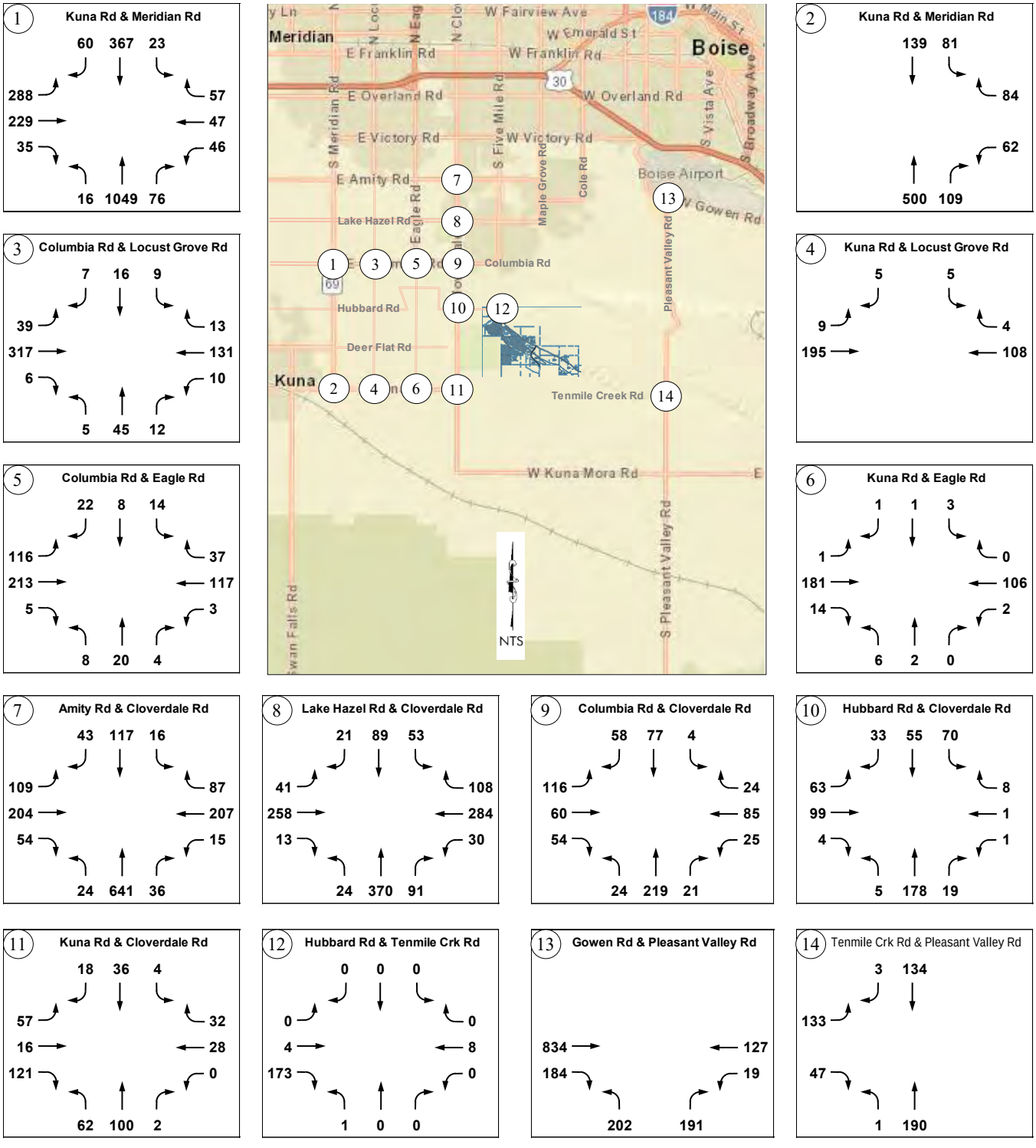
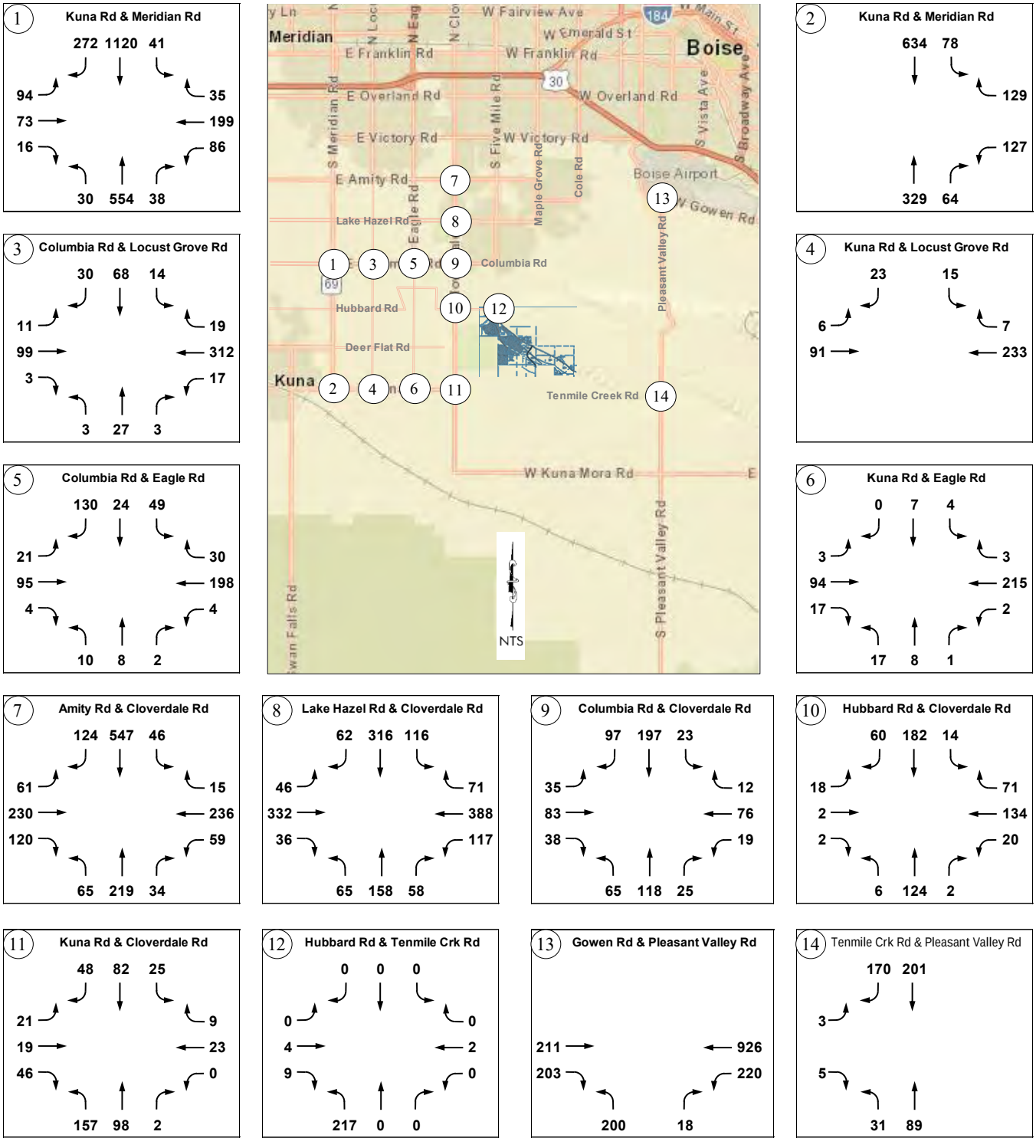


Figure 2.3 – 2019 Existing Weekday PM Peak Hour Traffic



2.3 Intersection Crash Data

The most current five-year crash data (2013-2017) was obtained from the Local Highway Technical Assistance Council (LHTAC) website (http://gis.lhtac.org/safety). **Table 2.3** summarizes the crash data for the study area intersections. One fatal crash occurred at the Columbia Road and Meridian intersection and Gowen Road and Pleasant Valley Road intersection. The Lake Hazel Road and Cloverdale Road intersection has the highest number of crashes with rear-end (10) and angle/turning (6) as the most common crash types.

Table 2.3 – Intersection Crash Data (2013-2017)

Intersection		Total Crashes	*Crash Severity*			Existing Crash Rate (ACC/MV)
			PDO	*Injury*	*Fatal*	
1	Columbia Road and Meridian Road	19	*11*	*7*	***1***	0.41
2	Kuna Road and Meridian Road	6	5	1	0	0.10
3	Columbia Road and Locust Grove Road	7	2	5	0	0.32
4	Kuna Road and Locust Grove Road	2	1	1	0	0.29
5	Columbia Road and Eagle Road	*No accidents reported at this intersection*				
6	Kuna Road and Eagle Road	4	1	2	***1***	0.59
7	Amity Road and Cloverdale Road	13	10	3	0	0.40
8	Lake Hazel Road and Cloverdale Road	20	12	8	0	0.63
9	Columbia Road and Cloverdale Road	8	6	2	0	0.56
10	Hubbard Road and Cloverdale Road	7	4	3	0	0.60
11	Kuna Road and Cloverdale Road	9	4	5	0	0.93
12	Hubbard Road and Five Mile Road/Tenmile Creek Road	1	1	0	0	0.24
13	Gowen Road and Pleasant Valley Road	5	3	1	***1***	0.15
14	Tenmile Creek Road and Pleasant Valley Road	3	3	0	0	0.33

2.4 Roadway Segment Level of Service

The study area roadway segments are under ACHD jurisdiction and were evaluated based on ACHD's LOS planning thresholds. **Table 2.4** summarizes the roadway segment level of service with the existing number of lanes and 2019 existing traffic. All study area roadway segments currently meet ACHD's LOS planning thresholds, with the exception of one roadway segment:

- Cloverdale Road between Amity Road and Lake Hazel Road

Table 2.4 – Roadway Segment Level of Service – 2019 Existing Traffic

Roadway	Segment	Functional Classification (No. of Lanes)	ACHD LOS Planning Threshold [vph]	Peak Hour Directional Volume [vph]		Meets LOS Planning Threshold?
				AM Peak	PM Peak	
Cloverdale Rd	Amity Rd to Lake Hazel Rd	Minor Arterial (2)	LOS E 575	**808**	**726**	**No**
	Lake Hazel Rd to Columbia Rd	Minor Arterial (2)	LOS E 575	489	469	Yes
	Columbia Rd to Hubbard Rd	Minor Arterial (2)	LOS E 575	264	256	Yes
Pleasant Valley Rd	Gowen Rd to Hollilynn Dr	Principal Arterial (2)	LOS E 690	393	423	Yes
	Hollilynn Dr to Tenmile Creek Rd	Principal Arterial (2)	LOS E 690	323	371	Yes
Columbia Rd	Meridian Rd to Locust Grove Rd	Minor Arterial (2)	LOS E 575	362	345	Yes
	Locust Grove Rd to Eagle Rd	Minor Arterial (2)	LOS E 575	338	348	Yes
	Eagle Rd to Cloverdale Rd	Minor Arterial (2)	LOS E 575	231	238	Yes
Hubbard Rd	Cloverdale Rd to Five Mile Rd	Minor Arterial (2)	LOS E 575	188	225	Yes
Five Mile Rd	Tenmile Creek Rd to Hubbard Rd	Minor Arterial (2)	LOS E 575	173	217	Yes
Tenmile Creek Rd	Five Mile Rd to Pleasant Valley Rd	Minor Arterial (2)	LOS E 575	180	201	Yes
Kuna Rd	Meridian Rd to Locust Grove Rd	Minor Arterial (2)	LOS E 575	204	256	Yes
	Locust Grove Rd to Eagle Rd	Minor Arterial (2)	LOS E 575	200	240	Yes
	Eagle Rd to Cloverdale Rd	Minor Arterial (2)	LOS E 575	194	228	Yes

2.5 Intersection Level of Service

To determine the existing traffic impacts, the study area intersections were analyzed with the existing intersection control and lane configuration and 2019 existing peak hour traffic. Copies of the analysis reports are included in the appendix. **Table 2.5** summarizes the intersection capacity analysis results. The MOEs shown are for the overall intersection and each lane group. All study area intersections currently meet ACHD's or ITD's minimum operational thresholds during the peak hours.

Table 2.5 – Intersection MOEs – 2019 Existing Traffic

Intersection		Control	Intersection or Lane Group	AM Peak			PM Peak		
				LOS	Delay [s/v]	v/c	LOS	Delay [s/v]	v/c
1	Columbia Road and Meridian Road	Signal	Intersection	C	34	0.75	C	29	0.65
			EBL	E	74	0.88	D	50	0.57
			EBTR	E	55	0.82	E	55	0.36
			WBL	D	51	0.32	D	48	0.34
			WBT	D	54	0.21	E	65	0.83
			WBR	D	55	0.30	D	54	0.17
			NBL	B	14	0.03	B	18	0.16
			NBT	C	24	0.64	B	19	0.34
			NBR	B	16	0.10	B	16	0.05
			SBL	B	18	0.11	B	14	0.10
			SBT	B	16	0.21	C	24	0.63
			SBR	B	15	0.02	B	19	0.34
2	Kuna Road and Meridian Road	Stop (Kuna Rd)	WBL	C	16	0.18	C	19	0.33
			WBR	B	11	0.14	B	10	0.16
			NBT	-	-	-	-	-	-
			NBR	-	-	-	-	-	-
			SBL	A	9	0.09	A	8	0.07
			SBT	-	-	-	-	-	-
3	Columbia Road and Locust Grove Road	4-Way Stop	Intersection	B	10	-	B	10	-
			EBLTR	B	12	0.49	A	9	0.16
			WBLTR	A	9	0.22	B	11	0.45
			NBLTR	A	9	0.10	A	9	0.05
			SBLTR	A	9	0.05	A	9	0.16
4	Kuna Road and Locust Grove Road	Stop	EBLT	A	8	0.01	A	8	0.01
			WBTR	-	-	-	-	-	-
			SBLR	B	10	0.02	B	10	0.06
5	Columbia Road and Eagle Road	4-Way Stop	Intersection	A	10	-	A	9	-
			EBLTR	A	8	0.05	A	9	0.17
			WBLTR	A	8	0.06	A	10	0.32
			NBLTR	B	11	0.42	A	8	0.03
			SBLTR	A	8	0.20	A	9	0.27
6	Kuna Road and Eagle Road	2-Way Stop	EBLTR	A	8	< 0.01	A	8	< 0.01
			WBLTR	A	8	< 0.01	A	8	< 0.01
			NBLTR	B	11	0.02	B	11	0.05
			SBLTR	B	11	0.01	B	11	0.02

Table 2.5 – Intersection MOEs – 2019 Existing Traffic (continued)

Intersection		Control	Intersection or Lane Group	AM Peak			PM Peak		
				LOS	Delay [s/v]	v/c	LOS	Delay [s/v]	v/c
7	Amity Road and Cloverdale Road	Signal	Intersection	D	36	0.82	C	34	0.77
			EBL	C	32	0.62	C	29	0.24
			EBTR	D	36	0.63	D	47	0.85
			WBL	C	32	0.08	C	31	0.36
			WBTR	D	53	0.89	D	36	0.59
			NBL	B	16	0.24	C	23	0.41
			NBTR	D	36	0.87	B	19	0.33
			SBL	C	24	0.13	B	15	0.09
			SBTR	C	22	0.29	C	34	0.85
8	Lake Hazel Road and Cloverdale Road	Signal	Intersection	C	29	0.73	C	26	0.72
			EBL	C	22	0.22	B	20	0.20
			EBTR	C	25	0.51	C	26	0.68
			WBL	B	20	0.11	B	19	0.37
			WBTR	C	32	0.82	C	26	0.78
			NBL	B	19	0.06	C	22	0.17
			NBTR	C	33	0.78	C	28	0.56
			SBL	C	22	0.26	C	21	0.34
			SBTR	C	22	0.21	C	29	0.74
9	Columbia Road and Cloverdale Road	4-Way Stop	Intersection	B	11	-	B	11	-
			EBLTR	B	12	0.38	B	11	0.26
			WBLTR	B	10	0.22	A	10	0.19
			NBLTR	B	12	0.42	B	11	0.33
			SBLTR	A	10	0.23	B	12	0.48
10	Hubbard Road and Cloverdale Road	2-Way Stop	EBLTR	C	17	0.37	C	17	0.08
			WBLTR	B	10	0.02	C	16	0.45
			NBLTR	A	7	< 0.01	A	8	0.01
			SBLTR	A	8	0.06	A	8	0.01
11	Kuna Road and Cloverdale Road	4-Way Stop	Intersection	A	9	-	A	9	-
			EBLTR	A	9	0.26	A	8	0.12
			WBLTR	A	8	0.08	A	8	0.05
			NBLTR	A	9	0.24	A	10	0.34
			SBLTR	A	8	0.08	A	9	0.20
12	Hubbard Road and Tenmile Creek Rd	2-Way Stop	EBLTR	Low volume on minor approach resulting in no reported MOEs in Synchro outputs. Meet minimum operation thresholds.					
			WBLTR						
			NBLTR						
			SBLTR						
13	Gowen Road and Pleasant Valley Road	Signal	Intersection	C	21	0.58	B	17	0.84
			EBT	B	11	0.52	A	9	0.15
			EBR	A	2	0.15	A	4	0.19
			WBL	A	8	0.06	A	6	0.33
			WBT	A	5	0.12	B	13	0.77
			NBL	D	53	0.83	E	67	0.89
			NBR	E	59	0.88	D	42	0.09
14	Tenmile Creek Road and Pleasant Valley Road	Stop (Tenmile)	EBLR	B	13	0.30	B	11	0.02
			NBLT	A	8	< 0.01	A	9	0.04
			SBTR	-	-	-	-	-	-

2.6 Roadway Segment Mitigation

Cloverdale Road Between Amity Road and Lake Hazel Road

The Cloverdale Road segment between Amity Road and Lake Hazel Road currently exceeds ACHD's LOS planning thresholds as a two-lane minor arterial. However, both the Amity Road and Lake Hazel Road intersections on Cloverdale Road currently meet ACHD's minimum operational thresholds with one through lane in each direction on Cloverdale Road. As a result, no capacity improvements are recommended on this Cloverdale Road segment to mitigate 2019 existing traffic.

2.7 Intersection Mitigation

All study area intersections currently meet minimum operational thresholds. As a result, no intersection control or capacity are proposed to mitigate 2019 existing traffic. Two study area intersections meet ACHD's turn-lane guidelines. The intersections and proposed turn lanes are discussed below:

Hubbard Road and Cloverdale Road Intersection

The Hubbard Road and Cloverdale Road intersection currently meets ACHD's minimum operational thresholds. However, based on ACHD's turn-lane guidelines, the following turn lane is warranted:

- Southbound right-turn lane

Tenmile Creek Road and Pleasant Valley Road

The Tenmile Creek Road and Pleasant Valley Road intersection currently meets ACHD's minimum operational thresholds. However, the following turn lane is warranted based on ACHD's turn-lane guidelines:

- Southbound right-turn lane

According to the current transportation plans, there are no improvements programmed at either of these intersections.

3.0 2025 PHASE 1 BACKGROUND TRAFFIC CONDITIONS

3.1 Roadway Network

The study area roadways and intersections are expected to remain the same as the existing conditions with the exception of the intersection improvements needed to mitigate 2019 existing traffic as discussed in the previous section. These preceding intersection improvements were included in the 2025 background traffic impact analysis.

There are roadway and intersection improvements planned within the study area based on ACHD's transportation plans. **Table 3.1** summarizes intersection improvements planned within the study area. **Table 3.2** summarizes roadway improvements planned within the study area. These planned roadway and intersection improvements are considered to mitigate 2025 background traffic impacts if necessary.

Additionally, ITD is currently conducting a corridor study on Meridian Road and the results and recommendations are expected to be published in 2020. ACHD is also conducting a signal timing study on the Meridian Road corridor.

Table 3.1 – Planned Roadway Improvements Summary

Transportation Plan	Project	Project Year	Funding
ACHD 2019-2023 IFYWP	**Cloverdale Road** Widen to 5 lanes with curb, gutter, multi-use paths from Victory Road to Lake Hazel Road	Unknown	Unfunded
	Lake Hazel Road Widen to 5 lanes with curb, gutter, multi-use paths from Eagle Road to Five Mile Road	Preliminary Development	Programmed
ACHD 2016 CIP	**Amity Road - Eagle Road to Cloverdale Road** Reconstruct/widen - two to three lanes	2026-2030	Unfunded
	Cloverdale Road - Victory Road to Lake Hazel Road Reconstruct/widen - two to five lanes	2021-2025	Unfunded
	Cloverdale Road - Lake Hazel Road to Columbia Road Reconstruct/widen - two to five lanes	2026-2030	Unfunded
	Cloverdale Road - Columbia Road to Kuna Road Reconstruct/widen - two to three lanes	2031-2035	Unfunded
	Lake Hazel Road - Eagle Road to Cloverdale Road Reconstruct/widen - two to three lanes	2021-2025	Unfunded
	Lake Hazel Road - Cloverdale Road to Five Mile Road Reconstruct/widen - two to five lanes	2021-2025	Unfunded
	Pleasant Valley Extension – Orchard Ext. to Pleasant Valley Road New Road. Construct new 5-lane roadway	2031-2035	Unfunded

Table 3.2 – Planned Intersection Improvement Summary

Transportation Plan	Project	Project Year	Funding
ACHD 2019-2023 FYWP	**Lake Hazel Road and Cloverdale Road intersection** Widen intersection to 5 lanes on all approaches	Unknown	Unfunded
	Amity Road and Cloverdale Road intersection Install a multi-lane roundabout	Preliminary Development	Programmed
ACHD 2016 CIP	**Amity Road and Cloverdale Road intersection** Construct a multi-lane roundabout with 2 lanes for Cloverdale Road approaches and 1 lane for Amity Road approaches	2021-2025	Unfunded
	Columbia Road and Cloverdale Road intersection Construct a single-lane roundabout with a westbound right-turn bypass lane	2026-2030	Unfunded
	Kuna Road and Cloverdale Road intersection Construct a single-lane roundabout	2031-2035	Unfunded
	Lake Hazel Road and Cloverdale Road intersection Reconstruct/widen approaches for dual left-turn lanes on Lake Hazel approaches, two through lanes on Cloverdale and eastbound Lake Hazel approaches, and an exclusive westbound right-turn lane	2031-2035	Unfunded
	Lake Hazel Road Extension and Pleasant Valley Road Intersection: Single-lane Roundabout	Unknown	Unfunded
ITD FY19-25 STIP	None		

3.2 Background Traffic

2025 background traffic was estimated by extrapolating the 2019 existing traffic counts with the following annual growth rates:

- Meridian Road – 3%
- Locust Grove Road – 10%
- Cloverdale Road – 8%
- Five Mile Road – 2%
- Pleasant Valley Road – 3%
- Amity Road – 4%
- Gowen Road – 2%
- Lake Hazel Road – 5%
- Columbia Road – 5%
- Hubbard Road – 10%
- Kuna Road – 8%
- Tenmile Creek Road – 6%

These growth rates are based on COMPASS forecasts assumed to account for all of the entitled off-site developments in area. Falcon Crest Subdivision developments beyond Phase 1 are not entitled and were included in the background traffic as off-site traffic. **Figure 3.1** and **Figure 3.2** summarizes 2025 weekday peak hour background traffic.

Figure 3.1 – 2025 Phase 1 AM Peak Hour Background Traffic

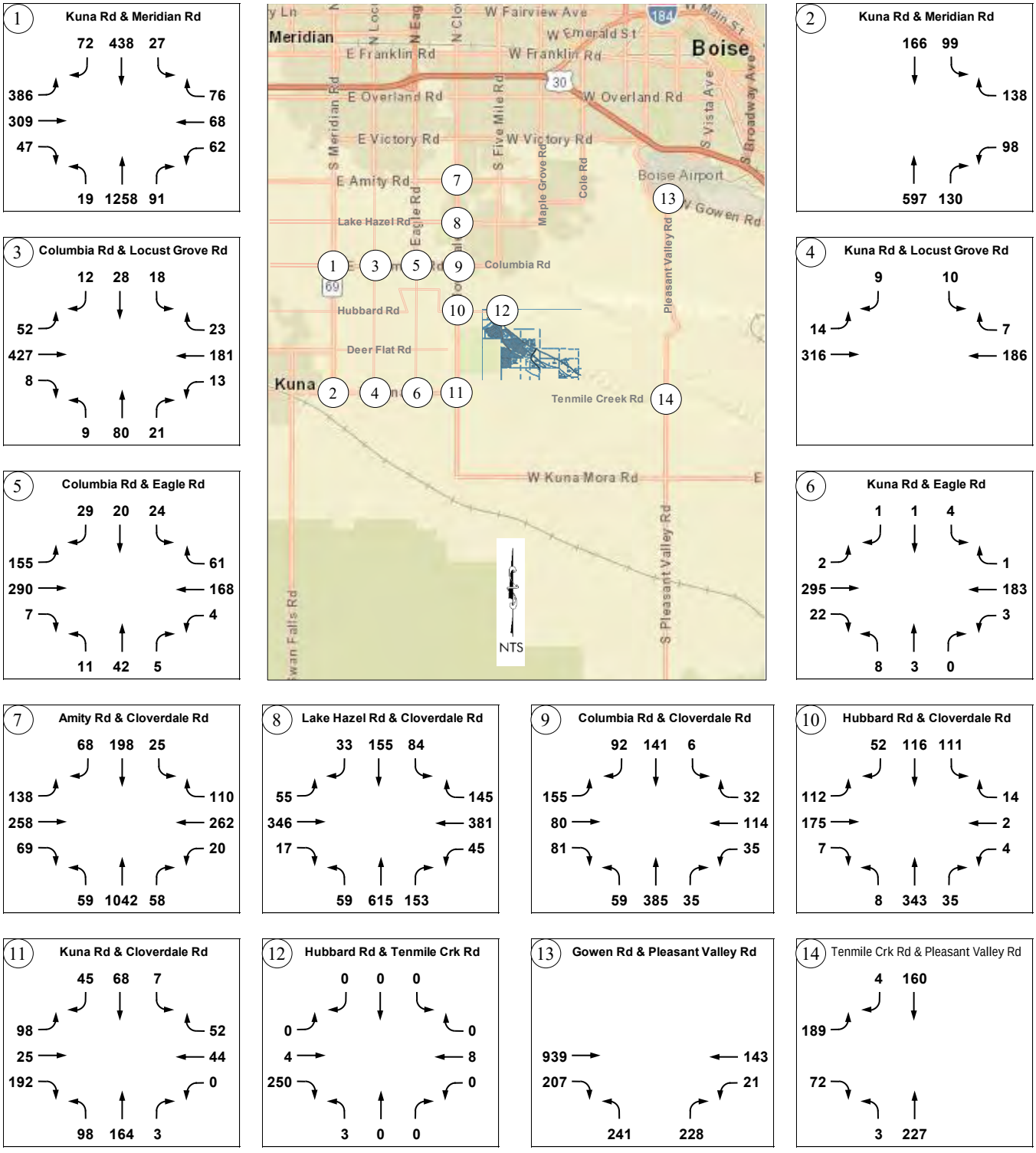
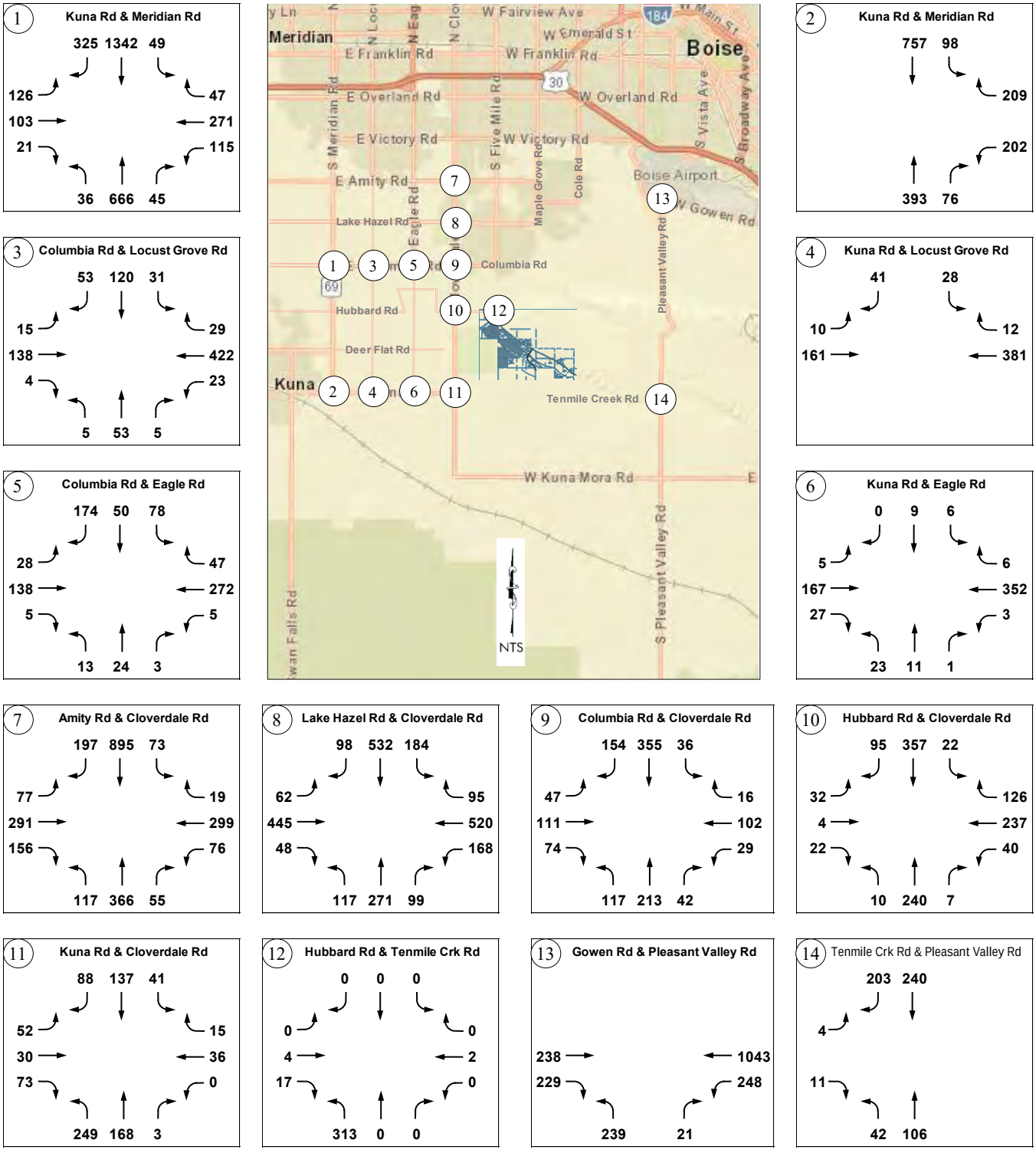


Figure 3.2 – 2025 Phase 1 PM Peak Hour Background Traffic



3.3 Roadway Segment Level of Service

The study area roadway segments were evaluated based on ACHD's LOS planning thresholds. **Table 3.3** summarizes the roadway segment level of service with the existing number of lanes and 2025 background traffic. All study area roadway segments are expected to meet ACHD's LOS planning thresholds, with the exception of two roadway segments:

- Cloverdale Road between Amity Road and Lake Hazel Road
- Cloverdale Road between Lake Hazel Road and Columbia Road

Table 3.3 – Roadway Segment Level of Service – 2025 Phase 1 Background Traffic

Roadway	Segment	Functional Classification (No. of Lanes)	ACHD LOS Planning Threshold [vph]	Peak Hour Directional Volume [vph]		Meets LOS Planning Threshold?
				AM Peak	PM Peak	
Cloverdale Rd	Amity Rd to Lake Hazel Rd	Minor Arterial (2)	LOS E 575	**1,310**	**1,127**	**No**
	Lake Hazel Rd to Columbia Rd	Minor Arterial (2)	LOS E 575	**812**	**748**	**No**
	Columbia Rd to Hubbard Rd	Minor Arterial (2)	LOS E 575	479	474	Yes
Pleasant Valley Rd	Gowen Rd to Hollilynn Dr	Principal Arterial (2)	LOS E 690	505	566	Yes
	Hollilynn Dr to Tenmile Creek Rd	Principal Arterial (2)	LOS E 690	275	490	Yes
Columbia Rd	Meridian Rd to Locust Grove Rd	Minor Arterial (2)	LOS E 575	487	480	Yes
	Locust Grove Rd to Eagle Rd	Minor Arterial (2)	LOS E 575	466	474	Yes
	Eagle Rd to Cloverdale Rd	Minor Arterial (2)	LOS E 575	319	373	Yes
Hubbard Rd	Cloverdale Rd to Five Mile Rd	Minor Arterial (2)	LOS E 575	321	403	Yes
Five Mile Rd	Tenmile Creek Rd to Hubbard Rd	Minor Arterial (2)	LOS E 575	250	313	Yes
Tenmile Creek Rd	Five Mile Rd to Pleasant Valley Rd	Minor Arterial (2)	LOS E 575	261	245	Yes
Kuna Rd	Meridian Rd to Locust Grove Rd	Minor Arterial (2)	LOS E 575	330	422	Yes
	Locust Grove Rd to Eagle Rd	Minor Arterial (2)	LOS E 575	326	393	Yes
	Eagle Rd to Cloverdale Rd	Minor Arterial (2)	LOS E 575	315	373	Yes

3.4 Intersection Level of Service

To determine the 2025 background traffic impacts, the study area intersections were analyzed with the existing intersection control and lane configuration or with the preceding improvements needed to mitigate 2019 existing traffic. Copies of the analysis reports are included in the appendix. **Table 3.4** summarizes the intersection capacity analysis results. All study area intersections are expected to meet ITD's or ACHD's minimum operational thresholds, with the exception of six intersections:

- Columbia Road and Meridian Road intersection
- Amity Road and Cloverdale Road intersection
- Lake Hazel Road and Cloverdale Road intersection
- Columbia Road and Cloverdale Road intersection
- Hubbard Road and Cloverdale Road intersection
- Gowen Road and Pleasant Valley Road intersection

Table 3.4 – Intersection MOEs – 2025 Phase 1 Background Traffic

Intersection		Control	Intersection or Lane Group	AM Peak			PM Peak		
				LOS	Delay [s/v]	v/c	LOS	Delay [s/v]	v/c
1	Columbia Road and Meridian Road	Signal	Intersection	D	46	**0.92**	C	35	0.78
			EBL	F	95	0.99	E	78	0.82
			EBTR	E	61	0.86	D	51	0.38
			WBL	D	52	0.43	D	50	0.43
			WBT	D	55	0.25	E	70	0.87
			WBR	E	56	0.34	D	50	0.18
			NBL	B	18	0.05	C	25	0.27
			NBT	D	38	0.84	C	22	0.41
			NBR	C	21	0.14	B	17	0.06
			SBL	C	28	0.21	B	16	0.14
			SBT	C	22	0.28	C	31	0.78
			SBR	B	20	0.10	C	23	0.42
2	Kuna Road and Meridian Road	Stop (Kuna Rd)	WBL	C	20	0.32	D	32	0.63
			WBR	B	12	0.23	B	11	0.28
			NBT	-	-	-	-	-	-
			NBR	-	-	-	-	-	-
			SBL	A	9	0.12	A	9	0.09
			SBT	-	-	-	-	-	-
3	Columbia Road and Locust Grove Road	4-Way Stop	Intersection	C	16	--	B	15	--
			EBLTR	C	20	0.71	B	10	0.25
			WBLTR	B	11	0.34	C	19	0.69
			NBLTR	B	10	0.20	A	10	0.11
			SBLTR	A	10	0.11	B	12	0.34
4	Kuna Road and Locust Grove Road	Stop	EBLT	A	8	0.01	A	8	0.01
			WBTR	-	-	-	-	-	-
			SBLR	B	11	0.04	B	12	0.13
5	Columbia Road and Eagle Road	4-Way Stop	Intersection	B	12	-	B	12	-
			EBLTR	B	14	0.60	B	11	0.28
			WBLTR	A	10	0.31	B	13	0.49
			NBLTR	A	9	0.10	A	9	0.07
			SBLTR	A	9	0.12	B	12	0.45
6	Kuna Road and Eagle Road	2-Way Stop	EBLTR	A	8	< 0.01	A	8	0.01
			WBLTR	A	8	< 0.01	A	8	< 0.01
			NBLTR	B	13	0.03	B	15	0.09
			SBLTR	B	13	0.01	B	14	0.04
7	Amity Road and Cloverdale Road	Signal	Intersection	**F**	**99**	**1.22**	**F**	**110**	**1.13**
			EBL	**F**	189	**1.19**	D	43	0.42
			EBTR	E	64	0.83	**F**	114	**1.07**
			WBL	D	45	0.16	E	79	0.81
			WBTR	**F**	122	**1.07**	D	53	0.72
			NBL	B	15	0.36	**F**	175	**1.16**
			NBTR	**F**	128	**1.19**	C	24	0.50
			SBL	D	38	0.32	B	19	0.18
			SBTR	C	21	0.33	**F**	164	**1.26**

Table 3.4 – Intersection MOEs – 2025 Phase 1 Background Traffic (continued)

Intersection		Control	Intersection or Lane Group	AM Peak			PM Peak		
				LOS	Delay [s/v]	v/c	LOS	Delay [s/v]	v/c
8	Lake Hazel Road and Cloverdale Road	Signal	Intersection	D	53	**0.95**	D	44	**0.95**
			EBL	E	77	0.57	E	57	0.43
			EBTR	D	37	0.59	D	53	0.88
			WBL	D	50	0.20	D	39	0.75
			WBTR	E	56	0.88	D	36	0.82
			NBL	C	22	0.08	E	65	0.49
			NBTR	E	68	0.99	D	47	0.75
			SBL	E	56	0.75	C	32	0.64
			SBTR	B	18	0.23	D	45	0.88
9	Columbia Road and Cloverdale Road	4-Way Stop	Intersection	E	36	-	E	47	-
			EBLTR	D	26	0.70	C	19	0.54
			WBLTR	C	17	0.43	C	16	0.37
			NBLTR	**F**	60	0.97	D	30	0.79
			SBLTR	C	18	0.53	**F**	80	**1.05**
10	Hubbard Road and Cloverdale Road	2-Way Stop	EBLTR	**F**	135	**1.14**	**F**	186	0.92
			WBLTR	C	18	0.07	**F**	167	**1.25**
			NBLTR	A	8	0.01	A	8	0.01
			SBLTR	A	9	0.11	A	8	0.02
11	Kuna Road and Cloverdale Road	4-Way Stop	Intersection	B	12	--	B	13	--
			EBLTR	B	13	0.48	B	11	0.26
			WBLTR	A	9	0.16	A	10	0.09
			NBLTR	B	13	0.44	C	16	0.62
			SBLTR	A	10	0.20	B	11	0.39
12	Hubbard Road and Tenmile Creek Rd	2-Way Stop	EBLTR	Low volume on minor approach resulting in no reported MOEs in Synchro outputs. Expected to meet minimum operation thresholds.					
			WBLTR						
			NBLTR						
			SBLTR						
13	Gowen Road and Pleasant Valley Road	Signal	Intersection	C	22	0.66	C	23	**0.95**
			EBT	B	15	0.61	B	11	0.18
			EBR	A	2	0.17	A	4	0.22
			WBL	B	10	0.08	A	7	0.40
			WBT	A	6	0.13	C	22	0.89
			NBL	D	48	0.84	E	75	0.91
			NBR	D	52	0.89	D	40	0.09
14	Tenmile Creek Road and Pleasant Valley Road	Stop (Tenmile)	EBLR	C	15	0.46	A	9	0.04
			NBLT	A	8	< 0.01	B	10	0.02
			SBTR	-	-	-	-	-	-

3.5 Roadway Segment Mitigation

Cloverdale Road between Amity Road and Lake Hazel Road

The Cloverdale Road segment between Amity Road and Lake Hazel Road is expected to exceed ACHD's LOS planning thresholds as a 2-lane minor arterial with 2025 background traffic. Based on the intersection improvements discussed below, the Cloverdale Road approaches are expected to need two through lanes in each direction. As a result, this Cloverdale Road segment is recommended to be widened to five lanes to mitigate 2025 background traffic impacts.

Cloverdale Road is programmed in the 2019-2023 IFYWP to be widened to five lanes from Victory Road to Lake Hazel Road.

Cloverdale Road between Lake Hazel Road and Columbia Road

The Cloverdale Road segment between Lake Hazel Road and Columbia Road is expected to exceed ACHD's LOS planning thresholds for a 2-lane minor arterial with 2025 background traffic. Based on the intersection improvements discussed below, Cloverdale Road is not expected to need two through lanes in each direction. As a result, no capacity improvements for this Cloverdale Road segment are recommended to mitigate 2025 background traffic impacts.

3.6 Intersection Mitigation

Six study area intersections are expected to exceed minimum operational thresholds with 2025 background traffic. The proposed intersection improvements discussed below are expected to mitigate 2025 background traffic impacts. **Table 3.5** summarizes the analysis results for the proposed mitigations.

Columbia Road and Meridian Road Intersection

The Columbia Road and Meridian Road intersection is expected to only exceed 0.90 overall intersection v/c ratio during the AM peak hour. All lane groups are expected to operate with v/c ratios less than 1.00 during the peak hours. As a result, no improvements are proposed to mitigate 2025 background traffic impacts.

Amity Road and Cloverdale Road Intersection

The Amity Road and Cloverdale Road intersection is expected to exceed ACHD's minimum operational thresholds with 2025 background traffic as a signalized intersection with the existing lane configuration. Two improvement options are proposed to mitigate 2025 background traffic impacts:

- Option 1 – widen Cloverdale Road approaches to have two thru lanes and signal modifications
  - Cloverdale Road is programmed in the 2019-2023 IFYWP to be widened to five lanes from Victory Road to Lake Hazel Road.
- Option 2 – reconstruction the intersection as a multi-lane roundabout
  - The Amity Road and Cloverdale Road intersection is programmed in the 2019-2023 IFYWP to be reconstructed as a multi-lane roundabout

Lake Hazel Road and Cloverdale Road Intersection

The Lake Hazel Road and Cloverdale Road intersection is expected to only exceed 0.90 overall intersection v/c ratio during the peak hours with optimized signal timing. All lane groups are expected to operate with v/c ratios less than 1.00 during the peak hours. As a result, no capacity improvements are proposed to mitigate 2025 background traffic impacts.

Columbia Road and Cloverdale Road Intersection

The Columbia Road and Cloverdale Road intersection is expected to exceed ACHD's minimum operational thresholds with 2025 background traffic as an unsignalized intersection. Based on the projected 2025 background traffic, the intersection is expected to meet warrants for a signal. Two improvement options are proposed to mitigate 2025 background traffic impacts:

- Option 1 – Signal with left-turn lanes on all approaches
  - The intersection is expected to meet MUTCD preliminary signal Warrants 1 and 2 (8 and 4-hour vehicular volume)
- Option 2 – reconstruction the intersection as a single-lane roundabout
  - The Columbia Road and Cloverdale Road intersection is programmed in the 2016 CIP to be reconstructed as a single-lane roundabout between 2026 and 2030 timeframe

Hubbard Road and Cloverdale Road Intersection

The Hubbard Road and Cloverdale Road intersection is expected to exceed ACHD's minimum operational thresholds as an unsignalized intersection. Based on the projected 2025 background traffic, the intersection is expected to meet warrants for a signal. Two improvement options are proposed to mitigate 2025 background traffic impacts:

- Option 1 – Signal with left-turn lanes on all approaches
  - The intersection is expected to meet MUTCD preliminary signal Warrants 1 and 2 (8 and 4-hour vehicular volume)
- Option 2 – Single-lane roundabout

There are no improvements programmed at the intersection according to ACHD's transportation plans. The intersection is listed as a single-lane roundabout in MSM.

Gowen Road and Pleasant Valley Road Intersection

The Gowen Road and Pleasant Valley Road intersection is expected to only exceed 0.90 overall intersection v/c ratio during the PM peak hour. All lane groups are expected to operate with v/c ratios less than 1.00 during the peak hours. As a result, no improvements are proposed to mitigate 2025 background traffic impacts.

Table 3.5 – Intersection MOEs – 2025 Phase 1 Background Traffic Mitigation

Intersection		Mitigation	Intersection or Lane Group	AM Peak			PM Peak		
				LOS	Delay [s/v]	v/c	LOS	Delay [s/v]	v/c
7	Amity Road and Cloverdale Road	Signal with 2 thru lanes on Cloverdale Rd	Intersection	C	33	0.79	D	38	0.81
			EBL	C	34	0.66	C	28	0.28
			EBTR	C	35	0.64	D	47	0.86
			WBL	C	32	0.09	C	33	0.46
			WBTR	D	49	0.88	D	36	0.60
			NBL	B	19	0.39	C	30	0.68
			NBTR	C	31	0.76	C	25	0.31
			SBL	C	31	0.76	C	25	0.32
			SBTR	C	25	0.15	C	22	0.18
		Multi-lane roundabout	Intersection	C	18	-	B	14	-
			EBTL	A	6	0.23	C	18	0.53
			EBTR	A	6	0.24	C	16	0.52
			WBTL	D	0.31	0.62	A	8	0.25
			WBTR	D	26	0.60	A	7	0.26
			NBTL	C	21	0.78	A	8	0.31
			NBTR	C	22	0.81	A	7	0.33
			SBTL	A	6	0.19	C	18	0.70
			SBTR	A	6	0.19	C	18	0.72
9	Columbia Road and Cloverdale Road	Single-lane roundabout	Intersection	A	7	-	A	8	-
			EBLTR	A	6	0.31	A	7	0.29
			WBLTR	A	8	0.27	A	6	0.17
			NBLTR	A	9	0.49	A	7	0.37
			SBLTR	A	6	0.24	B	11	0.57
		Signal	Intersection	A	6	0.32	A	8	0.31
			EBL	A	9	0.29	A	6	0.18
			EBTR	A	10	0.51	A	7	0.38
			WBL	A	6	0.25	B	11	0.59
			WBTR	B	11	0.54	B	11	0.59
			NBL	B	12	0.35	B	16	0.15
			NBTR	A	10	0.36	B	17	0.60
			SBL	B	11	0.08	B	18	0.11
			SBTR	A	10	0.32	B	15	0.37
10	Hubbard Road and Cloverdale Road	Single-lane roundabout	Intersection	A	7	-	A	8	-
			EBLTR	A	6	0.30	A	5	0.07
			WBLTR	A	4	0.02	A	8	0.43
			NBLTR	A	10	0.46	A	5	0.22
			SBLTR	A	6	0.23	A	10	0.52
		Signal	Intersection	A	8	-	A	9	-
			EBL	A	7	0.31	A	5	0.08
			EBTR	A	5	0.03	A	9	0.46
			WBL	B	11	0.49	A	5	0.23
			WBTR	A	5	0.23	B	11	0.54
			NBL	A	9	0.50	B	13	0.65
			NBTR	B	11	0.24	B	17	0.13
			SBL	B	12	0.55	A	10	0.06
			SBTR	B	13	0.01	B	10	0.07

4.0 2025 PHASE 1 TOTAL TRAFFIC CONDITIONS

4.1 Roadway Network

The study area roadways and intersections are expected to remain the same as the existing conditions with the exception of the roadway and intersection improvements needed to mitigate 2019 existing traffic and 2025 background traffic as discussed in the previous sections. These preceding roadway and intersection improvements were included in the 2025 total traffic impact analysis.

Springrock Subdivision is planning to construct a segment of Five Mile Road along the site frontages as a three-lane minor arterial roadway. A segment of Tenmile Creek Road will be realigned from Hubbard Road to intersect the proposed Five Mile Road segment as a three-lane minor arterial roadway.

4.2 Proposed Development

For the 2025 Phase 1 analysis, the proposed developments in Springrock Subdivision include the followings:

- 757 single-family residential dwelling units
- 136 multi-family residential dwelling units
- One Elementary School with 600 students
- One 5,000-square foot day care center
- 10,000 square feet of office
- One 6,000-square foot quality restaurant

4.3 Site Traffic

4.3.1 Trip Generation

Site trip generation is estimated using the procedures recommended in the latest edition of the Trip Generation Manual (10th edition), published by the Institute of Transportation Engineer (ITE). **Table 4.1** summarizes the site trip generation. The proposed Phase 1 development is estimated to generate approximately 9,718 trips per weekday, 1,086 trips during the AM peak hour, and 1,017 trips during the PM peak hour.

4.3.2 Trip Capture

Internal capture trip was estimated based on ITE methodologies as required by ACHD. Copies of the internal capture worksheets are included in the appendix. Based on the proposed land uses, the development is expected to retain trips approximately 3% during the PM peak hour. Daily capture rates were not available and was assumed 3%, the same as the PM peak hour trip capture rate. The Phase 1 developments are not expected to retain a significant number of trips during the AM peak hour.

4.3.3 Pass-by Trips

Based on ITE pass-by rates, the proposed commercial development is expected to attract approximately 20 pass-by trips during the PM peak hour. ITE does not have pass-by rates for the daily or AM peak hour. No pass-by trips were assumed in the AM peak hour analysis.

4.3.4 Modal Split

For the traffic analysis purposes, all trips generated by the development were assumed to be made by personal and commercial vehicles.

4.3.5 Trip Distribution and Assignment

Site traffic was distributed and assigned to the external roadway system based on the current travel patterns, site layout and the general location of the site within the area. Traffic forecasts from the COMPASS models were also used. **Figure 4.1** summarizes the expected site traffic distribution patterns. **Figure 4.2** and **Figure 4.3** summarize the estimated 2025 Phase 1 peak hour site traffic.

Table 4.1 – 2025 Phase 1 Site Trip Generation Summary

Land Use	ITE Code	Size	Unit	Total Trips	Capture Rate	Internal Capture	Pass-by Rate	Pass-by Trips	Primary Trips Total	Entering		Exiting	
Weekday Daily (vpd)													
Single-Family Detached Housing	210	757	DU	6,694	3%	201	--	--	6,493	50%	3,246	50%	3,247
Multifamily Housing (Low-Rise)	220	136	DU	987	3%	30	--	--	957	50%	478	50%	479
Elementary School	520	600	Students	1,134	8%	91	--	--	1,043	50%	522	50%	521
Day Care Center	565	5	TSF	238	3%	7	--	--	231	50%	116	50%	115
Small Office Building	712	10	TSF	162	3%	5	--	--	157	50%	78	50%	79
Quality Restaurant	931	6	TSF	503	3%	15	--	--	488	50%	244	50%	244
Weekday Daily Total Trips				**9,718**		**349**		**0**	**9,369**		**4,684**		**4,685**
Weekday AM Peak Hour (vph)													
Single-Family Detached Housing	210	757	DU	542	0%	0	--	--	542	25%	135	75%	407
Multifamily Housing (Low-Rise)	220	136	DU	64	0%	0	--	--	64	23%	15	77%	49
Elementary School	520	600	Students	402	8%	32	--	--	370	54%	200	46%	170
Day Care Center	565	5	TSF	55	0%	0	--	--	55	53%	29	47%	26
Small Office Building	712	10	TSF	19	0%	0	--	--	19	83%	16	17%	3
Quality Restaurant	931	6	TSF	4	0%	0	--	--	4	67%	3	33%	1
Weekday AM Peak Total Trips				**1,086**		**32**		**0**	**1,054**		**398**		**656**
Weekday PM Peak Hour (vph)													
Single-Family Detached Housing	210	757	DU	709	3%	21	--	--	688	63%	433	37%	255
Multifamily Housing (Low-Rise)	220	136	DU	78	3%	2	--	--	76	63%	48	37%	28
Elementary School	520	600	Students	102	8%	8	--	--	94	48%	45	52%	49
Day Care Center	565	5	TSF	56	3%	2	--	--	54	47%	25	53%	29
Small Office Building	712	10	TSF	25	3%	1	--	--	24	32%	8	68%	16
Quality Restaurant	931	6	TSF	47	3%	1	44%	20	26	67%	17	33%	9
Weekday PM Peak Hour Total Trips				**1,017**		**35**		**20**	**962**		**576**		**386**

4.4 Total Traffic

The 2025 site traffic is then added to the 2025 background traffic as determined above to obtain the 2025 total traffic. **Figure 4.4** and **Figure 4.5** summarize the estimated 2025 weekday peak hour total traffic at each intersection.

Figure 4.1 – Site Traffic Distribution Patterns

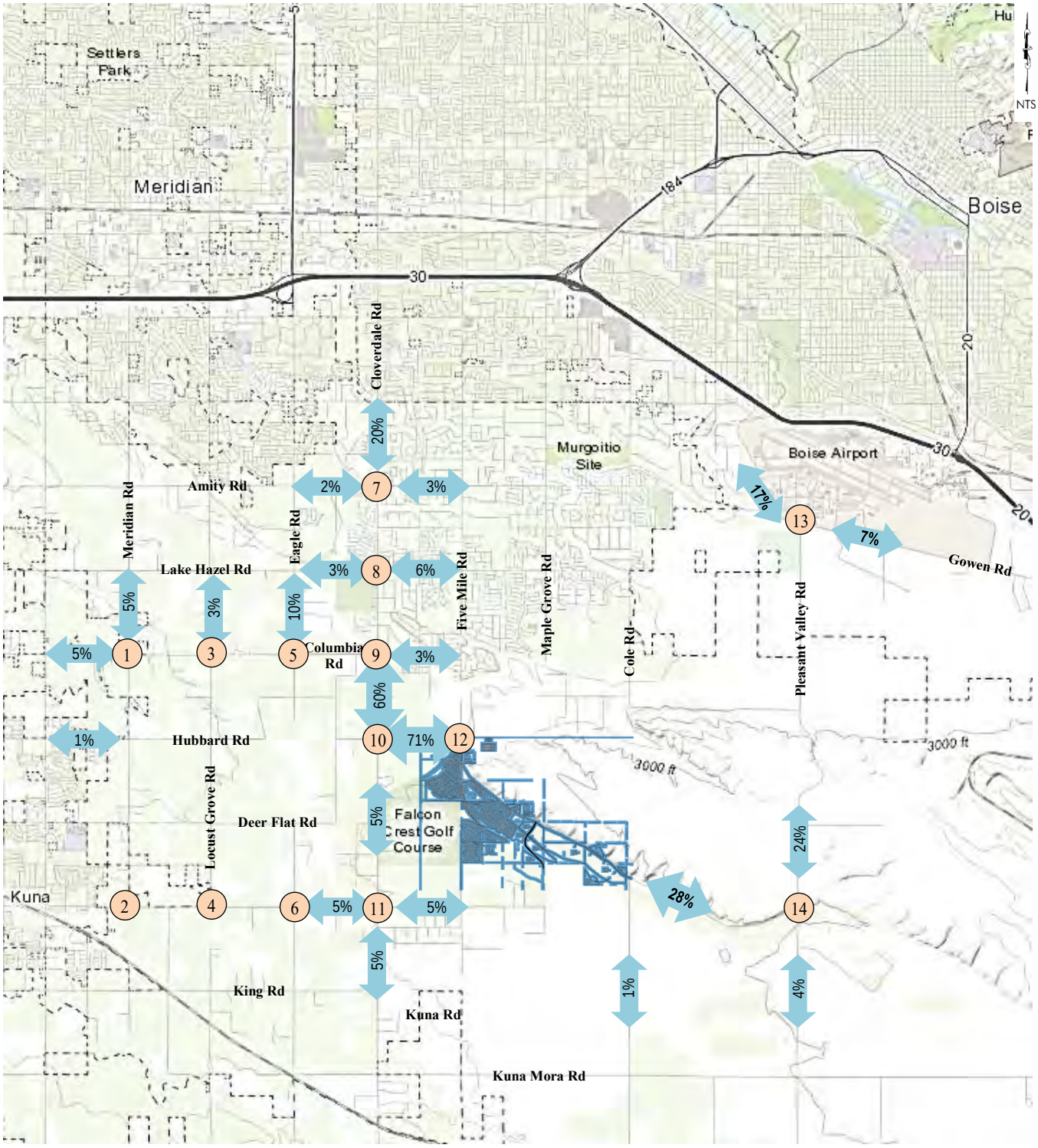


Figure 4.2 – 2025 Phase 1 AM Peak Hour Site Traffic

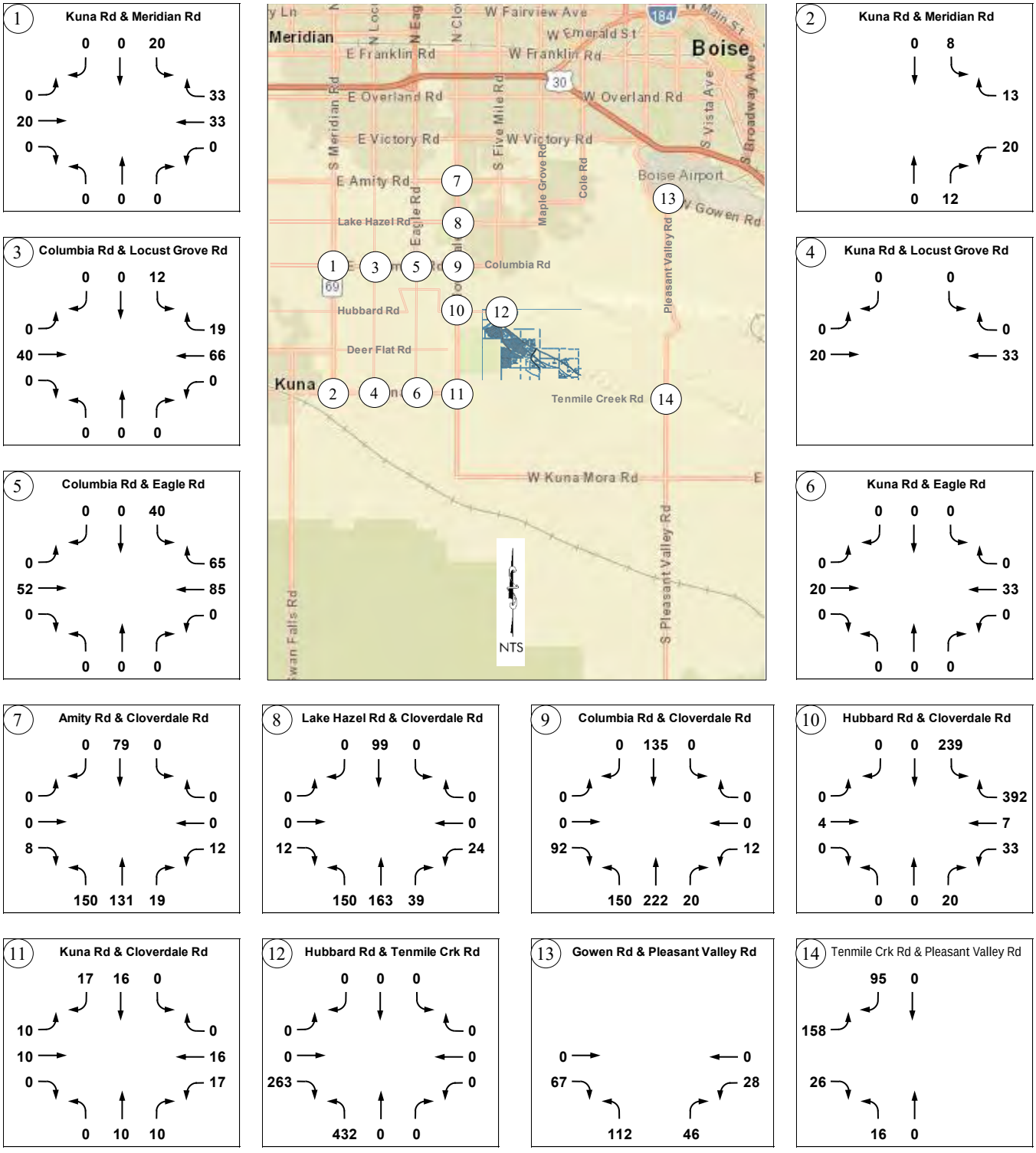


Figure 4.3 –2025 Phase 1 PM Peak Hour Site Traffic

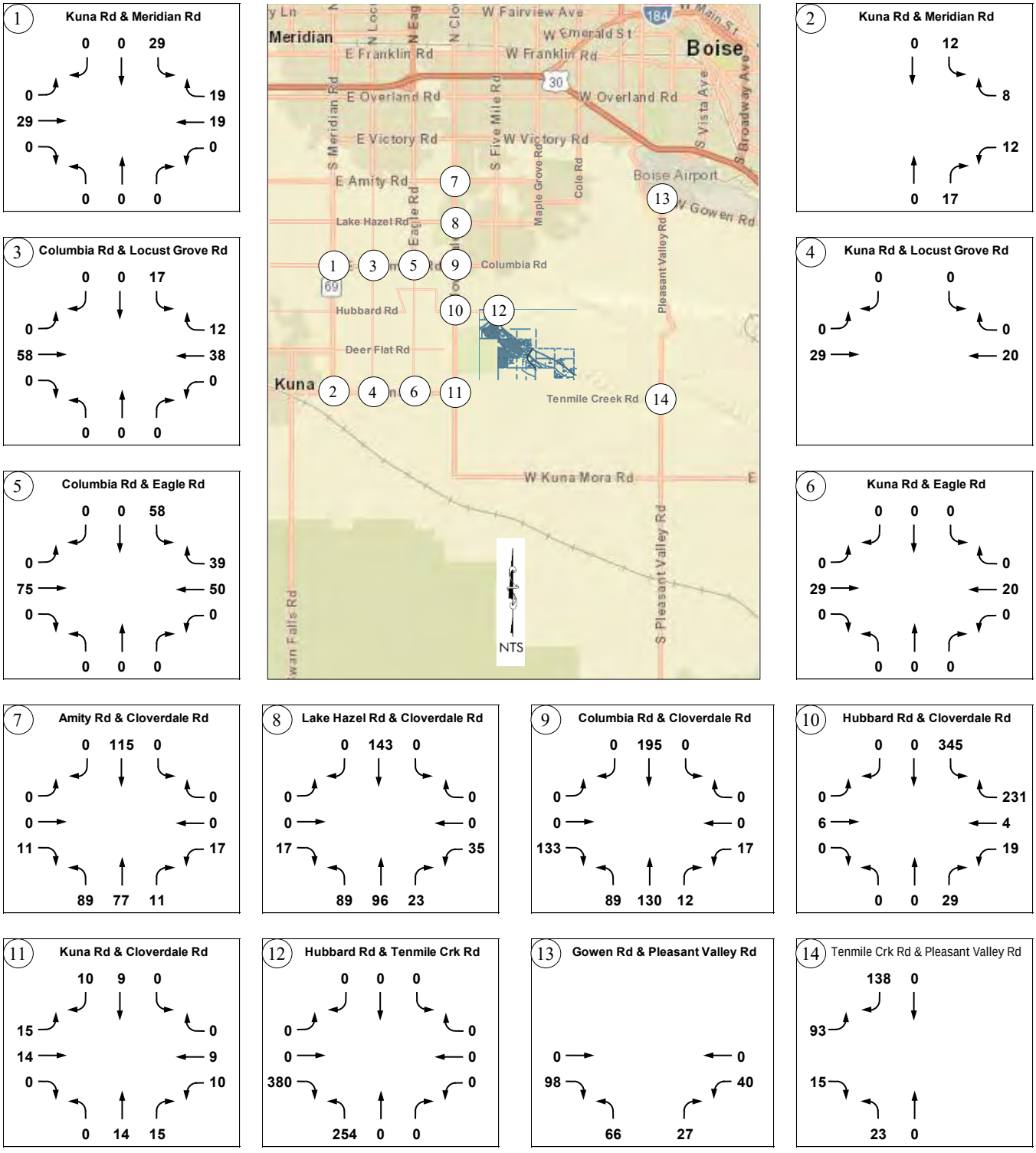


Figure 4.4 – 2025 Phase 1 AM Peak Hour Total Traffic

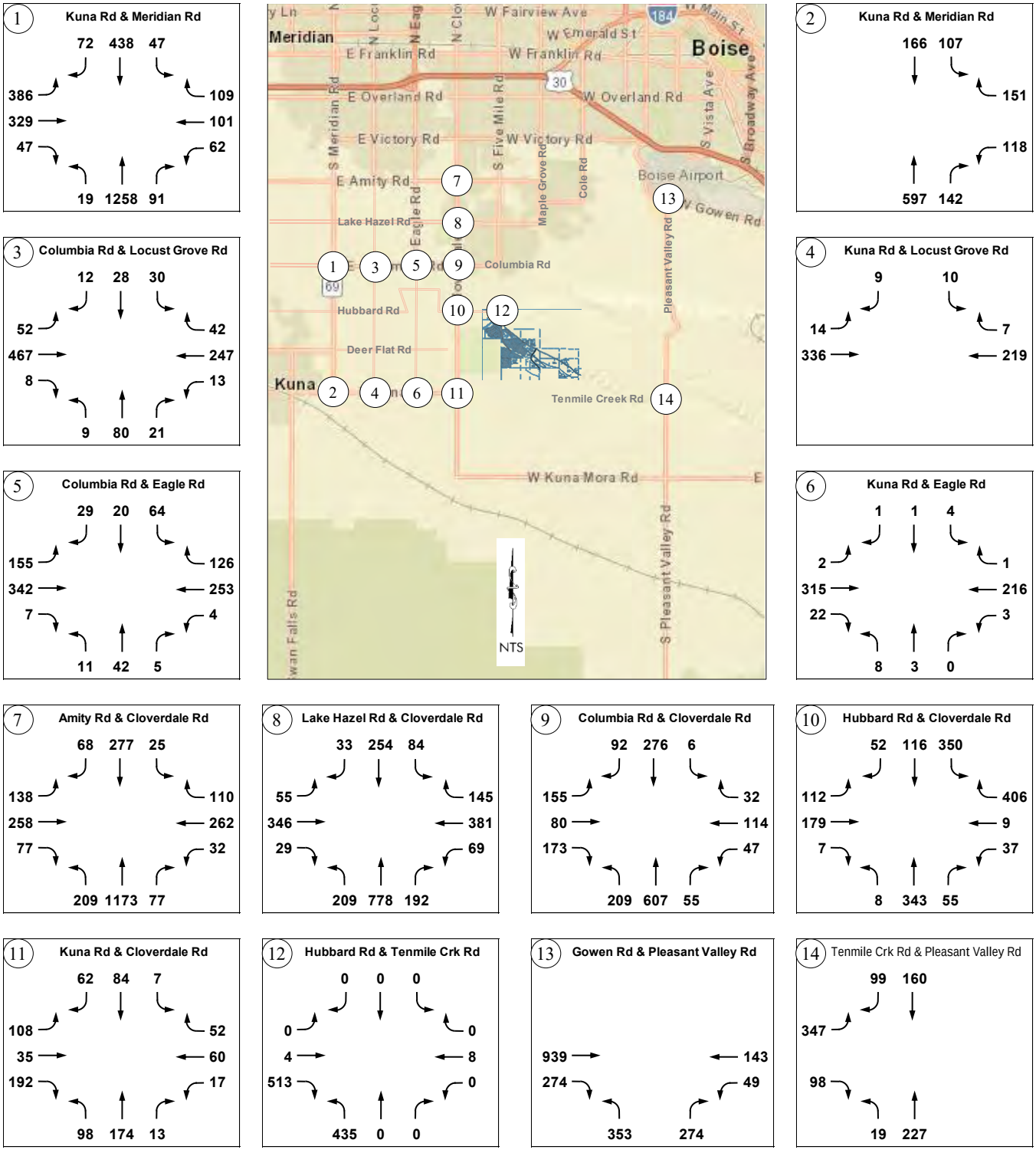
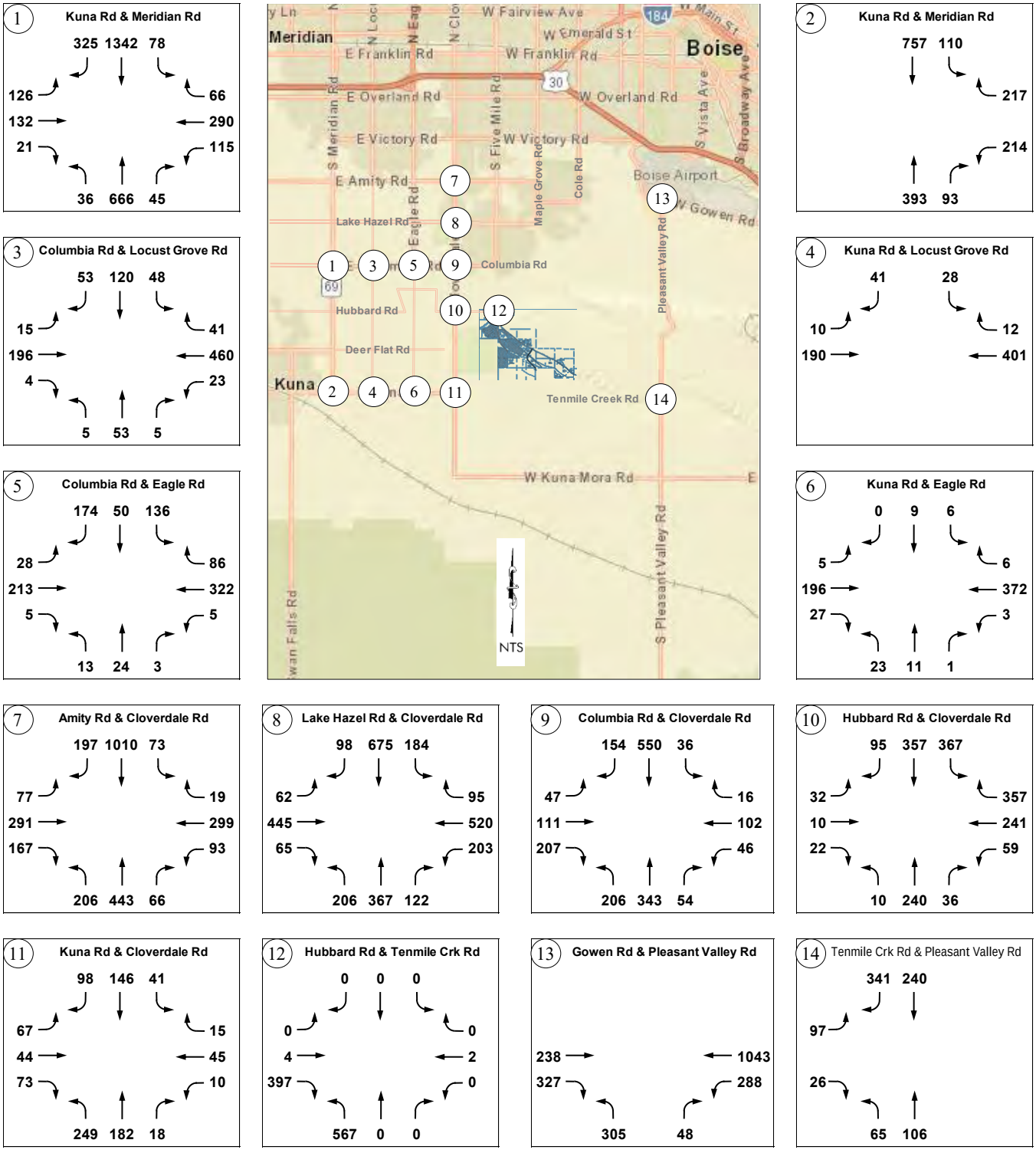


Figure 4.5 – 2025 Phase 1 PM Peak Hour Total Traffic



4.5 Roadway Segment Level of Service

The study area roadway segments were evaluated based on ACHD's LOS planning thresholds. **Table 4.2** summarizes the roadway segment level of service with the existing number of lanes and 2025 total traffic. All study area roadway segments are expected to meet ACHD's LOS planning thresholds, with the exception of three roadway segments:

- Cloverdale Road between Lake Hazel Road and Columbia Road
- Cloverdale Road between Columbia Road and Hubbard Road
- Hubbard Road between Cloverdale Road and Five Mile Road

Table 4.2 – Roadway Segment Level of Service – 2025 Phase 1 Total Traffic

Roadway	Segment	Functional Classification (No. of Lanes)	ACHD LOS Planning Threshold [vph]	Peak Hour Directional Volume [vph]		Meets LOS Planning Threshold?
				AM Peak	PM Peak	
Cloverdale Rd	Amity Rd to Lake Hazel Rd	Minor Arterial (5)	LOS E 1,540	1,473	1,270	Yes
	Lake Hazel Rd to Columbia Rd	Minor Arterial (2)	LOS E 575	**1,034**	**943**	**No**
	Columbia Rd to Hubbard Rd	Minor Arterial (2)	LOS E 575	**871**	**819**	**No**
Pleasant Valley Rd	Gowen Rd to Hollilynn Dr	Principal Arterial (2)	LOS E 690	627	615	Yes
	Hollilynn Dr to Tenmile Creek Rd	Principal Arterial (2)	LOS E 690	574	581	Yes
Columbia Rd	Meridian Rd to Locust Grove Rd	Minor Arterial (2)	LOS E 575	527	518	Yes
	Locust Grove Rd to Eagle Rd	Minor Arterial (2)	LOS E 575	518	524	Yes
	Eagle Rd to Cloverdale Rd	Minor Arterial (2)	LOS E 575	415	462	Yes
Hubbard Rd	Cloverdale Rd to Five Mile Rd	Minor Arterial (2)	LOS E 575	**584**	**657**	**No**
Five Mile Rd	Tenmile Creek Rd to Hubbard Rd	Minor Arterial (3)[1]	LOS E 720	513	567	Yes
Tenmile Creek Rd	Five Mile Rd to Pleasant Valley Rd	Minor Arterial (3/2)[1]	LOS E 720/575	445	406	Yes
Kuna Rd	Meridian Rd to Locust Grove Rd	Minor Arterial (2)	LOS E 575	445	406	Yes
	Locust Grove Rd to Eagle Rd	Minor Arterial (2)	LOS E 575	346	413	Yes
	Eagle Rd to Cloverdale Rd	Minor Arterial (2)	LOS E 575	335	392	Yes

[1] Springrock Subdivision planned to be widened this roadway segment to 3 lanes along the site frontages

4.6 Intersection Level of Service

To determine the 2025 total traffic impacts, the study area intersections were analyzed with the existing intersection control and lane configuration or with the preceding improvements needed to mitigate 2019 existing traffic and 2025 background traffic. Copies of the analysis reports are included in the appendix. **Table 4.3** summarizes the intersection capacity analysis results. All study area intersections are expected to meet minimum operational thresholds, with the exception of five intersections:

- Columbia Road and Meridian Road intersection
- Lake Hazel Road and Cloverdale Road intersection
- Columbia Road and Cloverdale Road intersection
- Hubbard Road and Cloverdale Road intersection
- Gowen Road and Pleasant Valley Road intersection

Table 4.3 – Intersection MOEs – 2025 Phase 1 Total Traffic

Intersection		Control	Intersection or Lane Group	AM Peak			PM Peak		
				LOS	Delay [s/v]	v/c	LOS	Delay [s/v]	v/c
1	Columbia Road and Meridian Road	Signal	Intersection	D	50	**0.91**	D	37	0.81
			EBL	E	79	0.95	E	71	0.81
			EBTR	E	69	0.88	D	50	0.43
			WBL	E	61	0.45	D	51	0.45
			WBT	E	80	0.72	E	78	0.90
			WBR	**F**	**119**	0.91	D	50	0.24
			NBL	B	19	0.05	C	26	0.28
			NBT	D	41	0.86	C	23	0.43
			NBR	C	22	0.14	B	18	0.06
			SBL	C	31	0.37	B	18	0.22
			SBT	C	23	0.28	C	33	0.80
			SBR	C	21	0.10	C	24	0.43
2	Kuna Road and Meridian Road	Stop (Kuna Rd)	WBL	C	22	0.39	E	38	0.69
			WBR	B	12	0.25	B	11	0.29
			NBT	-	-	-	-	-	-
			NBR	-	-	-	-	-	-
			SBL	A	10	0.13	A	9	0.10
			SBT	-	-	-	-	-	-
3	Columbia Road and Locust Grove Road	4-Way Stop	Intersection	C	20	-	C	19	-
			EBLTR	D	27	0.81	B	12	0.36
			WBLTR	B	13	0.49	26	D	0.79
			NBLTR	B	11	0.21	B	11	0.12
			SBLTR	B	11	0.14	B	13	0.39
4	Kuna Road and Locust Grove Road	Stop (Locust)	EBLT	A	8	0.01	A	8	0.01
			WBTR	-	-	-	-	-	-
			SBLR	B	12	0.04	B	13	0.14
5	Columbia Road and Eagle Road	4-Way Stop	Intersection	C	17		C	17	
			EBLTR	C	21	0.73	B	14	0.44
			WBLTR	B	14	0.55	C	20	0.68
			NBLTR	B	10	0.11	B	11	0.08
			SBLTR	B	11	0.20	C	18	0.61
6	Kuna Road and Eagle Road	2-Way Stop	EBLTR	A	8	< 0.01	A	8	0.01
			WBLTR	A	8	< 0.01	A	8	< 0.01
			NBLTR	B	14	0.03	C	15	0.10
			SBLTR	B	13	0.02	B	15	0.04
7	Amity Road and Cloverdale Road	Signal[1]	Intersection	D	38	0.84	D	46	0.87
			EBL	D	41	0.69	C	30	0.28
			EBTR	D	40	0.68	E	58	0.90
			WBL	C	35	0.1	D	37	0.57
			WBTR	E	59	0.90	D	38	0.58
			NBL	B	19	0.44	D	44	0.81
			NBT	D	37	0.82	C	28	0.38
			NBTR	D	37	0.83	C	28	0.38
			SBL	C	28	0.19	C	24	0.20
			SBT	C	27	0.27	E	55	0.91
			SBTR	C	27	0.28	E	56	0.91

Table 4.3 – Intersection MOEs – 2025 Phase 1 Total Traffic (continued)

Intersection		Control	Intersection or Lane Group	AM Peak			PM Peak		
				LOS	Delay [s/v]	v/c	LOS	Delay [s/v]	v/c
8	Lake Hazel Road and Cloverdale Road	Signal	Intersection	E	80	**1.11**	E	73	**1.26**
			EBL	**F**	**225**	**1.09**	**F**	**85**	0.66
			EBTR	D	44	0.68	**F**	**100**	**1.04**
			WBL	E	60	0.40	**F**	**153**	**1.14**
			WBTR	**F**	80	0.98	D	53	0.90
			NBL	C	21	0.12	**F**	**225**	**1.12**
			NBTR	**F**	**110**	**1.13**	D	41	0.75
			SBL	**F**	**92**	0.89	E	61	0.81
			SBTR	B	17	0.32	E	61	0.97
9	Columbia Road and Cloverdale Road	Roundabout[2]	Intersection	C	19	-	C	17	-
			EBLTR	A	9	0.46	B	14	0.56
			WBLTR	B	14	0.41	A	8	0.24
			NBLTR	D	28	**0.90**	B	11	0.59
			SBLTR	A	9	0.44	D	25	0.85
10	Hubbard Road and Cloverdale Road	Roundabout[3]	Intersection	B	11	-	C	22	-
			EBLTR	A	9	0.39	A	7	0.12
			WBLTR	B	13	0.57	C	15	0.72
			NBLTR	C	16	0.61	A	8	0.35
			SBLTR	A	7	0.44	D	32	**0.92**
11	Kuna Road and Cloverdale Road	4-Way Stop	Intersection	B	13	-	C	15	-
			EBLTR	B	15	0.55	B	12	0.32
			WBLTR	B	11	0.23	B	10	0.13
			NBLTR	B	14	0.50	C	20	0.70
			SBLTR	B	11	0.27	B	13	0.44
12	Hubbard Road and Tenmile Creek Rd	2-Way Stop	EBLTR	Low volume on minor approach resulting in no reported MOEs in Synchro outputs. Expected to meet minimum operation thresholds.					
			WBLTR						
			NBLTR						
			SBLTR						
13	Gowen Road and Pleasant Valley Road	Signal	Intersection	C	28	0.75	C	30	**1.00**
			EBT	C	22	0.70	B	15	0.20
			EBR	A	3	0.23	A	6	0.32
			WBL	B	15	0.22	A	10	0.51
			WBT	A	8	0.14	C	32	0.95
			NBL	E	59	0.92	E	75	0.93
			NBR	D	46	0.80	D	37	0.16
14	Tenmile Creek Road and Pleasant Valley Road	Stop (Tenmile)	EBLR	D	35	0.84	B	15	0.27
			NBLT	A	8	0.02	A	9	0.08
			SBTR	-	-	-	-	-	-

[1] Multi-lane roundabout = LOS D with maximum lane group v/c ratio of 0.91

[2] Signal = Overall intersection LOS D with 0.86 v/c ratio and a maximum lane group v/c ratio of 0.94

[3] Signal = Overall intersection LOS D with 0.92 v/c ratio and a maximum lane group v/c ratio of 0.94

4.7 Roadway Segment Mitigation

Cloverdale Road between Lake Hazel Road and Columbia Road

The Cloverdale Road segment between Lake Hazel Road and Columbia Road is expected to exceed ACHD's LOS service planning thresholds as a 2-lane minor arterial with 2025 total traffic. Based on the intersection improvements discussed below, the Cloverdale Road approaches are expected to need two through lanes in each direction. As a result, this Cloverdale Road segment is recommended to be widened to five lanes to mitigate 2025 total traffic impacts. Cloverdale Road is programmed in the 2016 CIP to be widened to five lanes from Lake Hazel Road to Columbia Road.

The estimated Phase 1 site traffic on this Cloverdale Road segment is approximately 20.7% of the total traffic during the PM peak hour.

Cloverdale Road between Columbia Road and Hubbard Road

The Cloverdale Road segment between Columbia Road and Hubbard Road is expected to exceed ACHD's LOS planning thresholds for a 2-lane minor arterial with 2025 total traffic. Based on the intersection capacity analysis results, this Cloverdale Road segment is not expected to need two through lanes in each direction. As a result, no roadway capacity improvements for this Cloverdale Road segment are recommended to mitigate 2025 total traffic impacts.

The estimated Phase 1 site traffic on this Cloverdale Road segment is approximately 11.3% of the total traffic during the PM peak hour.

Hubbard Road between Cloverdale Road and Five Mile Road

The Hubbard Road segment between Cloverdale Road and Five Road is expected to exceed ACHD's LOS planning thresholds for a 2-lane minor arterial with 2025 total traffic. Based on the intersection capacity analysis, Hubbard Road is not expected to need two through lanes in each direction. As a result, no roadway capacity improvements for this Hubbard Road segment are recommended to mitigate 2025 total traffic impacts. There are no capacity improvements programmed on Hubbard Road in the current ACHD transportation plans.

The estimated Phase 1 site traffic on this Hubbard Road segment is approximately 79.1% of the total traffic during the PM peak hour.

4.8 Intersection Mitigation

Two study area intersections are expected to exceed ITD's or ACHD's minimum operational thresholds with 2025 total traffic. One study area intersection is expected to meet ACHD's turn-lane guidelines. The proposed intersection improvements discussed below are expected to mitigate 2025 total traffic impacts. **Table 4.4** summarizes the analysis results for the proposed mitigations.

Columbia Road and Meridian Road Intersection

The Columbia Road and Meridian Road intersection is expected to slightly exceed 0.90 overall intersection v/c ratio during the AM peak hour with optimized signal timing. The westbound right-turn lane group is expected to operate at LOS F, but under capacity with a 0.91 v/c ratio during the AM peak hour. All other lane groups are also expected to operate under capacity with a v/c ratio of 0.95 or less during the peak hour. As a result, no improvements are proposed to mitigate 2025 total traffic impacts.

The estimated Phase 1 site traffic at the Columbia Road and Meridian Road intersection is approximately 3.0% of the total intersection traffic during the PM peak hour.

Lake Hazel Road and Cloverdale Road Intersection

The Lake Hazel Road and Cloverdale Road intersection is expected to exceed ACHD's minimum operational thresholds as a signalized intersection with one left-turn lane and one shared through/right-turn lane on all approaches. The following improvements are proposed to mitigate 2025 background traffic impacts:

- Widen intersection to have on left-turn lane, one through lane, and one shared through/right-turn lane on all approaches (5x5)
  - The Lake Hazel Road and Cloverdale Road intersection is programmed in the 2019-2023 IFYWP to be widened to five lanes on both Lake Hazel Road and Cloverdale Road. The construction years have not been identified and the project is listed as preliminary development.

The estimated Phase 1 site traffic at the Lake Hazel Road and Cloverdale Road intersection is approximately 11.2% of the total intersection traffic during the PM peak hour.

Columbia Road and Cloverdale Road Intersection

The Columbia Road and Cloverdale Road intersection is expected to meet minimum operational thresholds as a signalized intersection. As a single-lane roundabout, one lane group is expected to slightly exceed 0.85 v/c ratio threshold during the AM peak hour. To avoid over-building the roundabout, no additional improvements are proposed to mitigate 2025 total traffic impacts.

The estimated Phase 1 site traffic at the Columbia Road and Cloverdale Road intersection is approximately 30.8% of the total intersection traffic during the PM peak hour.

Hubbard Road and Cloverdale Road Intersection

The Hubbard Road and Cloverdale Road intersection is expected to meet minimum operational thresholds as a signalized intersection, with the exception of the overall intersection v/c ratio slightly exceeding 0.90 threshold during the AM peak hour. No additional improvements are proposed to reduce the overall intersection v/c ratio.

As a single-lane roundabout, one lane group is expected to slightly exceed 0.85 v/c ratio threshold during the AM peak hour. To avoid over-building the roundabout, no additional improvements are proposed to mitigate 2025 total traffic impacts.

The estimated Phase 1 site traffic at the Hubbard Road and Cloverdale Road intersection is approximately 34.7% of the total intersection traffic during the PM peak hour.

Gowen Road and Pleasant Valley Road Intersection

The Gowen Road and Pleasant Valley Road intersection is expected to only exceed 0.90 overall intersection v/c ratio during the PM peak hour. All lane groups are expected to operate with v/c ratios less than 1.00 during the peak hours. As a result, no improvements are proposed to mitigate 2025 total traffic impacts.

The estimated Phase 1 site traffic at the Gowen Road and Pleasant Valley Road intersection is approximately 10.3% of the total intersection traffic during the PM peak hour.

Tenmile Creek Road and Pleasant Valley Road Intersection

The Tenmile Creek Road and Pleasant Valley Road intersection is expected to meet ACHD's minimum operational thresholds. However, the following turn lanes are warranted based on ACHD's turn-lane guidelines:

- Eastbound left-turn lane
- Northbound left-turn lane

The estimated Phase 1 site traffic at the Tenmile Greek Road and Pleasant Valley Road intersection is approximately 30.7% of the total intersection traffic during the PM peak hour.

Table 4.4 – Intersection MOEs – 2025 Phase 1 Total Traffic Mitigation

Intersection		Mitigation	Intersection or Lane Group	AM Peak			PM Peak		
				LOS	Delay [s/v]	v/c	LOS	Delay [s/v]	v/c
8	Lake Hazel Road and Cloverdale Road	Widen intersection to 5x5	Intersection	C	28	0.65	C	29	0.70
			EBL	C	31	0.29	C	29	0.28
			EBT	D	36	0.49	D	38	0.70
			EBTR	D	36	0.50	D	38	0.71
			WBL	C	30	0.27	C	26	0.65
			WBT	D	39	0.69	C	33	0.66
			WBTR	D	39	0.70	C	33	0.66
			NBL	B	14	0.12	C	21	0.27
			NBT	C	23	0.63	C	26	0.46
			NBTR	C	23	0.63	C	26	0.47
			SBL	B	17	0.33	B	18	0.47
			SBT	B	17	0.20	C	26	0.63
			SBTR	B	18	0.20	C	26	0.63
14	Tenmile Creek Road and Pleasant Valley Road	EBL lane and NBL turn lanes	EBL	C	17	0.58	B	12	0.17
			EBR	A	10	0.13	A	10	0.04
			NBL	A	8	0.02	A	9	0.08
			NBT	-	-	-	-	-	-
			SBT	-	-	-	-	-	-
			SBR	-	-	-	-	-	-

4.9 Site Access and Circulation

Springrock Subdivision is planning to construct a segment of Five Mile Road along the site frontages. A segment of Tenmile Creek Road will be realigned from Hubbard Road to intersect the proposed Five Mile Road segment. These roadways segments are planned as three-lane minor arterial roadways in the Master Street Map, and are planned to be constructed to three lanes along the site frontages. Based on Phase 1 total traffic projections, these roadway segments are expected to meet ACHD's LOS planning thresholds as 3-lane minor arterials.

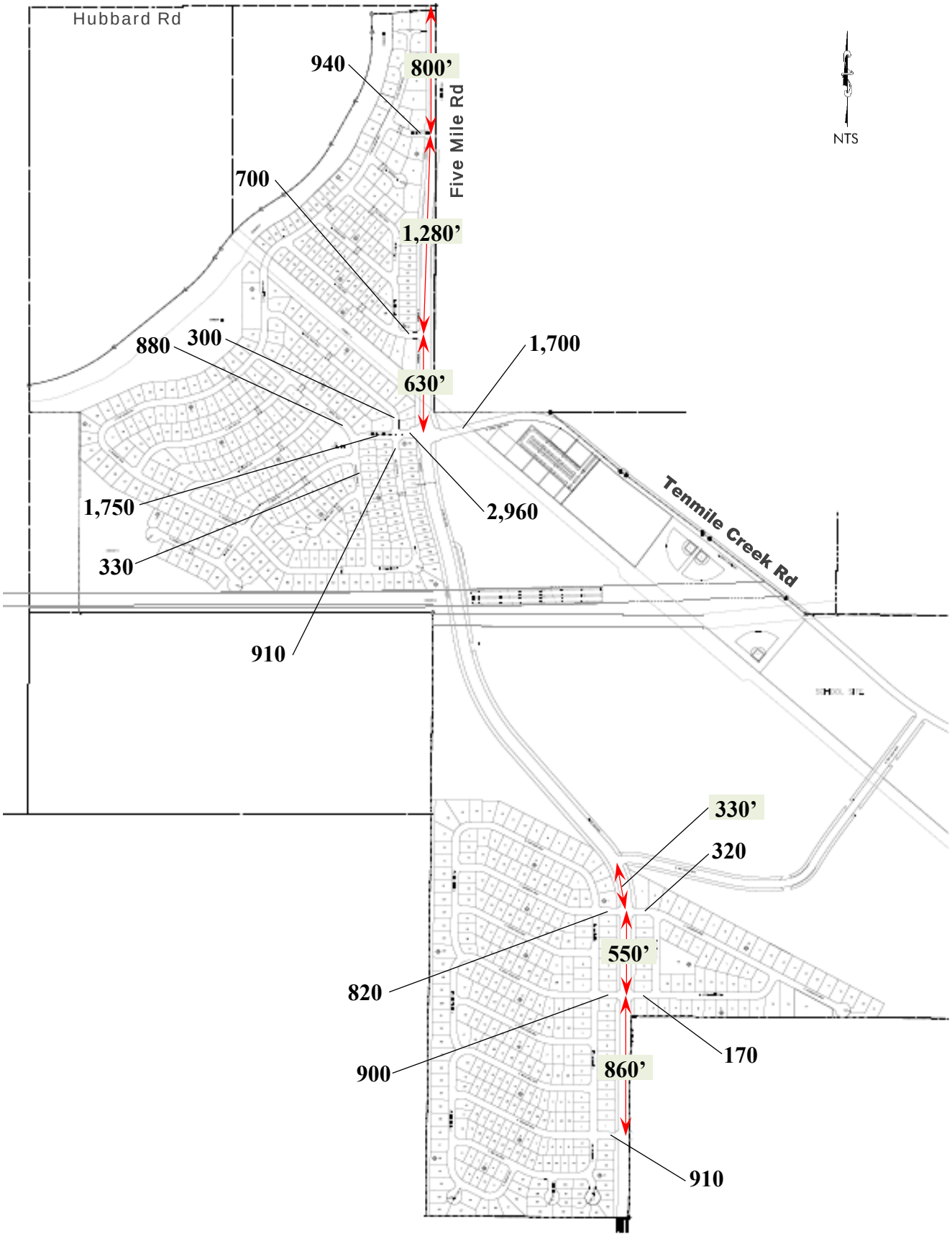
Multiple approaches are proposed on Tenmile Creek Road and the proposed Five Mile Road extension for Phase 1 site access as shown in **Figure 4.6**. We understand the design team has been working with ACHD to ensure the proposed access locations meet ACHD's spacing and requirements. Based on the Phase 1 preliminary site plan, all proposed driveways generally meet ACHD's minimum driveway separation of 330 feet on Five Mile Road and Tenmile Creek Road, a 35-mph minor arterial.

Sight distances at the proposed access intersections should be verified during construction. Building setback and landscaping should be located and designed to ensure adequate intersection sight distance.

Based on the project peak hour volumes, all proposed site access intersections are not expected to warrant right-turn lanes. The Five Mile Road and Tenmile Creek Road segments within the site boundary are expected to be constructed to three lanes with a center turn lane to accommodate left-turning traffic. All proposed site access intersections are expected to meet minimum operational thresholds with 2025 Phase 1 total traffic. Synchro outputs are included in the appendix.

The estimated ADTs on the internal roadways are shown in **Figure 4.6**.

Figure 4.6 – Phase 1 Site Access and Circulation and Internal Roadway ADTs



5.0 2040 BUILD-OUT YEAR PLANNING-LEVEL ANALYSIS

Planning-level analysis of the study area roadways was completed for the full build-out year traffic conditions. The study area roadways were determined based on COMPASS forecasts and are the same as Phase 1. The scope of the planning-level analysis does not include detailed intersection capacity or mitigation analyses. Separate TIS will be required for future phases.

5.1 Roadway Network, Demographics, and Background Traffic

COMPASS models were used to estimate 2040 background traffic. The COMPASS models are developed and calibrated for the Treasure Valley based on the adopted roadway network and demographics. The roadway network included funded and programmed projects. COMPASS 2040 forecasts are included in the appendix. The COMPASS forecasts were not post-processed for use in the planning-level analysis.

Falcon Crest Subdivision developments beyond Phase 1 are not entitled, and therefore were not included in the COMPASS model. Future phases of the proposed Falcon Crest Subdivision were included in the 2040 background traffic as off-site traffic.

5.2 Site Traffic

2040 analysis included the full build-out of Springrock Subdivision developments as summarized in **Table 1.1**. Site trip generation is estimated based on ITE trips rates and procedures. **Table 5.1** summarizes the site trip generation. At full build-out, Springrock Subdivision is expected to generated approximately 26,351 trips per weekday, 2,570 trips during the AM peak hour, and 2,563 trips during the PM peak hour. Based on ITE methodologies, approximately 9% of the trips are expected to be retained within the site during the AM peak hour and approximately 12% during the PM peak hour. A trip generation study for Springrock Subdivision should be conducted to verify trip generation and capture rates as developments are completed.

Site traffic was distributed and assigned to the external roadway system based on the estimated distribution patterns shown in **Figure 4.1**. **Table 5.2** summarizes the PM peak hour site traffic as a percentage of the 2040 total traffic for the study area roadway segments.

Table 5.1 – 2040 Build-Out Site Trip Generation Summary

Land Use	ITE Code	Size	Unit	Total Trips	Capture Rate	Internal Capture	Pass-by Rate	Pass-by Trips	Primary Trips				
									Total	Entering		Exiting	
Weekday Daily (vpd)													
Mini-Warehouse	151	101	TSF	153	12%	18	--	--	135	50%	67	50%	68
Single-Family Detached Housing	210	1925	DU	15,798	12%	1896	--	--	13,902	50%	6,951	50%	6,951
Multifamily Housing (Low-Rise)	220	252	DU	1,864	12%	224	--	--	1,640	50%	820	50%	820
Multifamily Housing (Mid-Rise)	221	120	DU	652	12%	78	--	--	574	50%	287	50%	287
Elementary School	520	600	Students	1,134	8%	91	--	--	1,043	50%	522	50%	521
Day Care Center	565	5	TSF	238	12%	29	--	--	209	50%	104	50%	105
Small Office Building	710	60	TSF	646	12%	78	--	--	568	50%	284	50%	284
Convenience Market	851	4	TSF	3,049	12%	366	--	--	2,683	50%	1,341	50%	1,342
Quality Restaurant	931	6	TSF	503	12%	60	--	--	443	50%	222	50%	221
High-Turnover (Sit-Down) Restaurant	932	6	TSF	673	12%	81	--	--	592	50%	296	50%	296
Coffee/Donut Shop with Drive Thru	937	2	TSF	1,641	12%	197	60%	866	578	50%	289	50%	289
Weekday Daily Total Trips				**26,351**		**3,118**		**866**	**22,367**		**11,183**		**11,184**
Weekday AM Peak Hour (vph)													
Mini-Warehouse	151	101	TSF	10	9%	1		--	9	60%	5	40%	4
Single-Family Detached Housing	210	1925	DU	1,372	9%	123		--	1,249	25%	312	75%	937
Multifamily Housing (Low-Rise)	220	252	DU	115	9%	10		--	105	23%	24	77%	81
Multifamily Housing (Mid-Rise)	221	120	DU	41	9%	4		--	37	23%	9	77%	28
Elementary School	520	600	Students	402	8%	32		--	370	54%	200	46%	170
Day Care Center	565	5	TSF	55	9%	5		--	50	53%	27	47%	23
Small Office Building	710	60	TSF	83	9%	7		--	76	62%	47	38%	29
Convenience Market	851	4	TSF	250	9%	23		--	227	50%	114	50%	113
Quality Restaurant	931	6	TSF	4	9%	0		--	4	67%	3	33%	1
High-Turnover (Sit-Down) Restaurant	932	6	TSF	60	9%	5		--	55	55%	30	45%	25
Coffee/Donut Shop with Drive Thru	937	2	TSF	178	9%	16	60%	98	64	51%	33	49%	31
Weekday AM Peak Total Trips				**2,570**		**226**		**98**	**2,246**		**804**		**1,442**
Weekday PM Peak Hour (vph)													
Mini-Warehouse	151	101	TSF	17	12%	2		--	15	47%	7	53%	8
Single-Family Detached Housing	210	1925	DU	1,737	12%	208		--	1,529	63%	963	37%	566
Multifamily Housing (Low-Rise)	220	252	DU	134	12%	16		--	118	63%	74	37%	44
Multifamily Housing (Mid-Rise)	221	120	DU	58	12%	7		--	51	63%	32	37%	19
Elementary School	520	600	Students	102	8%	8		--	94	48%	45	52%	49
Day Care Center	565	5	TSF	56	12%	7		--	49	16%	8	84%	41
Small Office Building	710	60	TSF	70	12%	8		--	62	16%	10	84%	52
Convenience Market	851	4	TSF	196	12%	24	51%	88	84	51%	43	49%	41
Quality Restaurant	931	6	TSF	47	12%	6	44%	18	23	67%	15	33%	8
High-Turnover (Sit-Down) Restaurant	932	6	TSF	59	12%	7	43%	22	30	62%	19	38%	11
Coffee/Donut Shop with Drive Thru	937	2	TSF	87	12%	10	60%	46	31	50%	16	50%	15
Weekday PM Peak Hour Total Trips				**2,563**		**303**		**174**	**2,086**		**1,232**		**854**

Table 5.2 – 2040 Percent Site Traffic Estimate

Roadway	Segment	% Site Traffic of 2040 PM Peak Total Traffic
Cloverdale Rd	Amity Rd to Lake Hazel Rd	17%
	Lake Hazel Rd to Columbia Rd	20%
	Columbia Rd to Hubbard Rd	42%
Pleasant Valley Rd	Gowen Rd to Hollilynn Dr	34%
	Hollilynn Dr to Tenmile Creek Rd	38%
Columbia Rd	Meridian Rd to Locust Grove Rd	17%
	Locust Grove Rd to Eagle Rd	21%
	Eagle Rd to Cloverdale Rd	31%
Hubbard Rd	Cloverdale Rd to Five Mile Rd	79%
Five Mile Rd	Tenmile Creek Rd to Hubbard Rd	79%
Tenmile Creek Rd	Five Mile Rd to Pleasant Valley Rd	48%
Kuna Rd	Meridian Rd to Locust Grove Rd	8%
	Locust Grove Rd to Eagle Rd	8%
	Eagle Rd to Cloverdale Rd	9%

5.3 Roadway Segment Level of Service

The study area roadway segments were evaluated based on ACHD's LOS planning thresholds. **Table 5.3** summarizes the roadway segment level of service analysis with 2040 background traffic. The following roadway segments are expected to need additional lanes beyond the lanes programmed in the 2016 CIP:

- Cloverdale Road between Amity Road and Lake Hazel Road – Widen from five to seven lanes
- Cloverdale Road between Columbia Road and Hubbard Road – Widen from three lanes to five lanes
- Columbia Road between Meridian Road and Cloverdale Road – Widen from two lanes to three lanes
- Kuna Road between Meridian Road and Cloverdale Road – Widen from two lanes to three lanes

Table 5.4 summarizes the roadway segment level of service analysis with 2040 background plus site traffic. The following roadway segments are expected to need additional lanes beyond the lanes programmed in the 2016 CIP and lanes needed under 2040 background traffic:

- Cloverdale Road between Lake Hazel Road and Columbia Road – Widen from five to seven lanes
- Cloverdale Road between Columbia Road and Hubbard Road – Widen from five lanes to seven lanes
- Pleasant Valley Road between Gowen Road and Tenmile Creek Road – Widen from two lanes to three lanes
- Columbia Road between Meridian Road and Cloverdale Road – Widen from three lanes to five lanes
- Hubbard Road between Five Mile Road and Cloverdale Road – Widen from two lanes to five lanes
- Five Mile Road between Tenmile Creek Road and Hubbard Road – Widen from two lanes to five lanes
- Kuna Road between Meridian Road and Locust Grove Road – Widen from three lanes to five lanes

Table 5.3 – Roadway Segment Level of Service Analysis – 2040 Build-Out Year Background Traffic

Roadway	Segment	Functional Classification (CIP Lanes)	ACHD LOS Planning Threshold [vph]	Peak Hour Directional Volume [vph]		Meets LOS Planning Threshold? (Lane Needs)
				AM Peak	PM Peak	
Cloverdale Rd	Amity Rd to Lake Hazel Rd	Minor Arterial (5)	LOS E 1,540	1,340	1,507	Yes
	Lake Hazel Rd to Columbia Rd	Minor Arterial (5)	LOS E 1,540	1,355	**1,648**	**No (7)**
	Columbia Rd to Hubbard Rd	Minor Arterial (3)	LOS E 720	**893**	**1,003**	**No (5)**
Pleasant Valley Rd	Gowen Rd to Hollilynn Dr	Principal Arterial (2)	LOS E 690	505	566	Yes
	Hollilynn Dr to Tenmile Creek Rd	Principal Arterial (2)	LOS E 690	275	490	Yes
Columbia Rd	Meridian Rd to Locust Grove Rd	Minor Arterial (2)	LOS E 575	514	**650**	**No (3)**
	Locust Grove Rd to Eagle Rd	Minor Arterial (2)	LOS E 575	**604**	**674**	**No (3)**
	Eagle Rd to Cloverdale Rd	Minor Arterial (2)	LOS E 575	533	**718**	**No (3)**
Hubbard Rd	Five Mile Rd to Cloverdale Rd	Minor Arterial (2)	LOS E 575	180	466	Yes
Five Mile Rd	Tenmile Creek Rd to Hubbard Rd	Minor Arterial (3)	LOS E 720	180	464	Yes
Tenmile Creek Rd	Five Mile Rd to Pleasant Valley Rd	Minor Arterial (3/2)	LOS E 720/575	125	377	Yes
Kuna Rd	Meridian Rd to Locust Grove Rd	Minor Arterial (2)	LOS E 575	549	**746**	**No (3)**
	Locust Grove Rd to Eagle Rd	Minor Arterial (2)	LOS E 575	465	**688**	**No (3)**
	Eagle Rd to Cloverdale Rd	Minor Arterial (2)	LOS E 575	489	**652**	**No (3)**

Table 5.4 – Roadway Segment Level of Service Analysis – 2040 Build-Out Year Total Traffic

Roadway	Segment	Functional Classification (No. of Lanes) (CIP Lanes)	ACHD LOS Planning Threshold [vph]	Peak Hour Directional Volume [vph]		Meets LOS Planning Threshold? (Need Lanes)
				AM Peak	PM Peak	
Cloverdale Rd	Amity Rd to Lake Hazel Rd	Minor Arterial (5)	LOS E 1,540	**1,700**	**1,815**	**No (7)**
	Lake Hazel Rd to Columbia Rd	Minor Arterial (5)	LOS E 1,540	**1,845**	**2,067**	**No (7)**
	Columbia Rd to Hubbard Rd	Minor Arterial (3)	LOS E 720	**1,757**	**1,743**	**No (7)**
Pleasant Valley Rd	Gowen Rd to Hollilynn Dr	Principal Arterial (2)	LOS E 690	**851**	**861**	**No (3)**
	Hollilynn Dr to Tenmile Creek Rd	Principal Arterial (2)	LOS E 690	621	**785**	**No (3)**
Columbia Rd	Meridian Rd to Locust Grove Rd	Minor Arterial (2)	LOS E 575	**594**	**735**	**No (5)**
	Locust Grove Rd to Eagle Rd	Minor Arterial (2)	LOS E 575	**708**	**785**	**No (5)**
	Eagle Rd to Cloverdale Rd	Minor Arterial (2)	LOS E 575	**718**	**914**	**No (5)**
Hubbard Rd	Five Mile Rd to Cloverdale Rd	Minor Arterial (2)	LOS E 575	**995**	**1,029**	**No (5)**
Five Mile Rd	Tenmile Creek Rd to Hubbard Rd	Minor Arterial (3)	LOS E 720	**991**	**1,027**	**No (5)**
Tenmile Creek Rd	Five Mile Rd to Pleasant Valley Rd	Minor Arterial (3/2)	LOS E 720/575	529	721	Yes
Kuna Rd	Meridian Rd to Locust Grove Rd	Minor Arterial (2)	LOS E 575	**589**	**789**	**No (5)**
	Locust Grove Rd to Eagle Rd	Minor Arterial (2)	LOS E 575	505	**731**	**No (3)**
	Eagle Rd to Cloverdale Rd	Minor Arterial (2)	LOS E 575	530	**695**	**No (3)**

APPENDIX A: SCOPE AND COMPASS AREA OF INFLUENCE RESULTS

CR ENGINEERING, INC.
181 East 50th Street
Garden City, ID 83714
(208) 841-4996
chhream@gmail.com

MEMORANDUM – TIS SCOPE

DATE: April 10, 2019

TO: Mindy Wallace, AICP, Ada County Highway District
Erika Bowen, P.E., Idaho Transportation Department

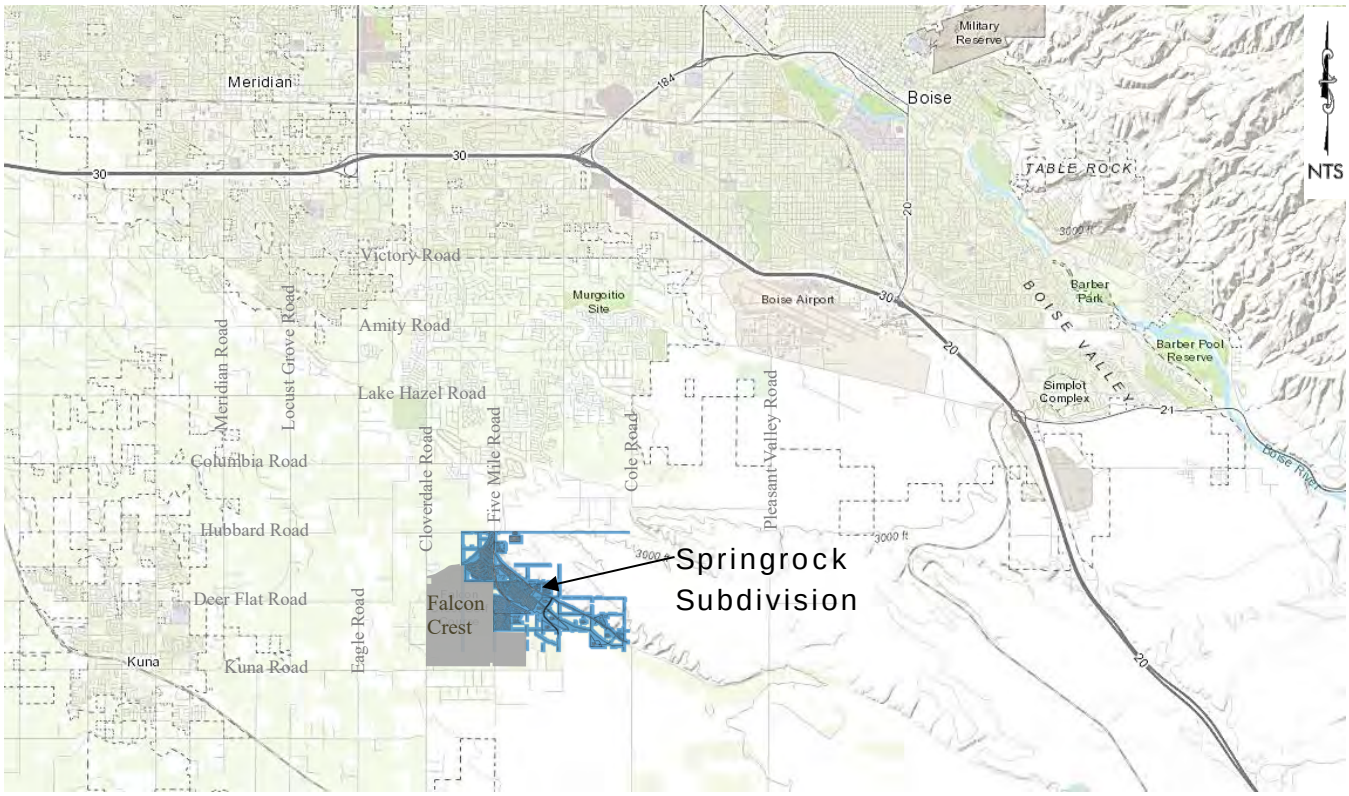
FROM: Chhang Ream
CR Engineering, Inc.

PROJECT: Springrock Subdivision
Ada County, Idaho

SUBJECT: Proposed Scope of Work for Traffic Impact Study

This memorandum summarizes the scope of work for conducting the traffic impact study (TIS) for the proposed development located on Ten Mile Creek Road between Cloverdale Road and Pleasant Valley Road, in Ada County, Idaho, as shown in **Figure 1**. The scope of work is based on the results from COMPASS influence area modeling with the study area intersections and roadway segments as determined by ACHD.

Figure 1 – Project Location and Vicinity



The TIS scope of work incudes and address items presented in the following sections:

1. **PROPOSED DEVELOPMENT** (preliminary plat as shown in **Figure 2**)
   - Mixed-use development with proposed land uses as summarized in **Table 1**

Figure 2 – Springrock Subdivision Preliminary Plat

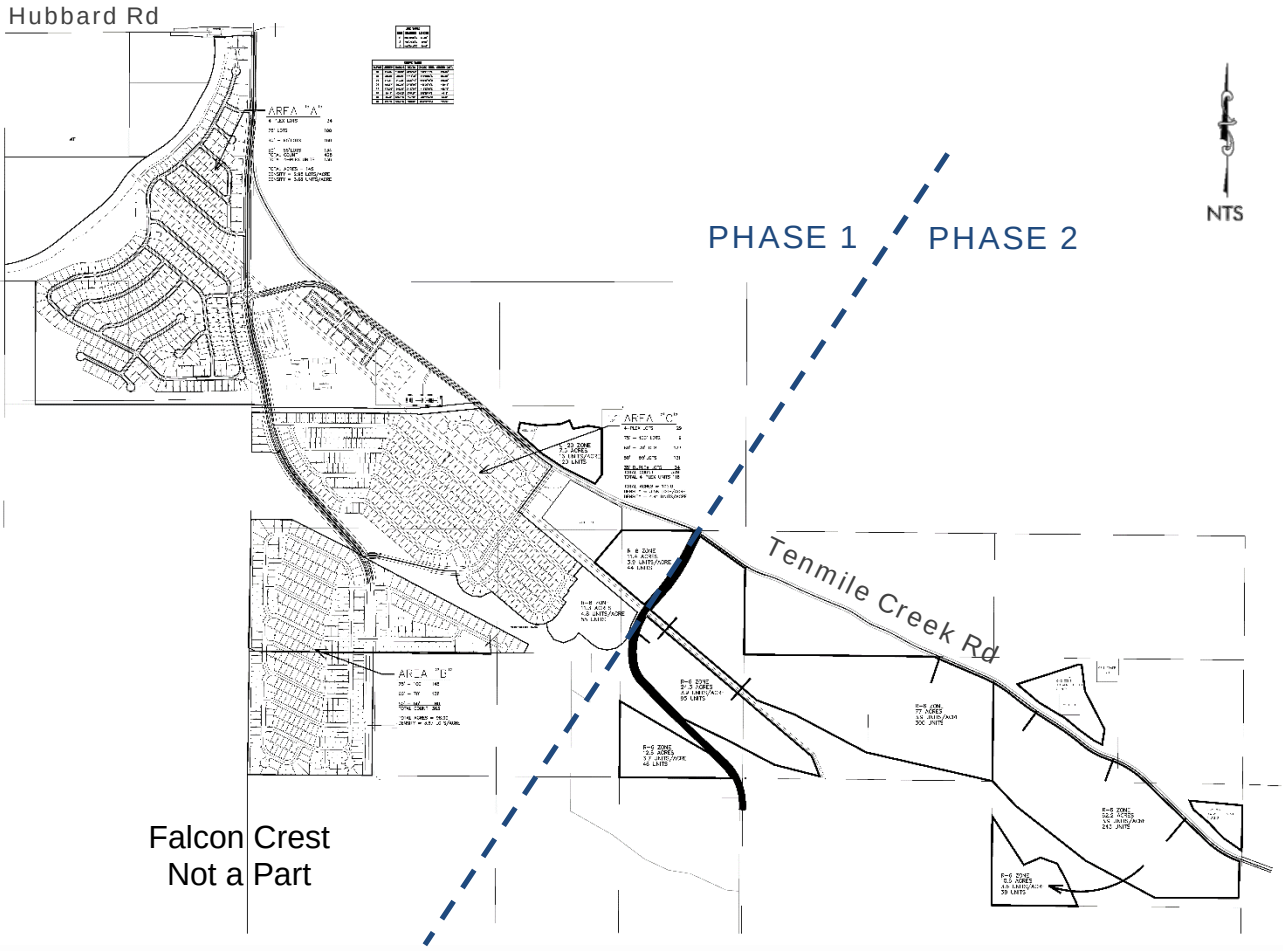


Table 1 – Proposed Land Use Summary

Land Use	Phase 1 (2030 build-out year)	Phase 2 (2040 build-out year)	Total
Single-family residential (DU)	1,104	821	1,925
4-Plex residential (DU)	252	-	252
Multi-family residential (DU)	120		120
Office (SF)	60,000	-	60,000
Daycare (SF)	5,000	-	5,000
Coffee shop with drive-thru (SF)	2,000	-	2,000
Quality restaurant (SF)	6,000	-	6,000
High-turnover restaurant (SF)	6,000	-	6,000
Convenience market (SF)	-	4,000	4,000
Mini-storage (SF)	-	101,000	101,000
Elementary school (EA)	1	-	1
Community parks (EA)	2	-	2

2. SITE TRIP GENERATION, MODE SPLIT, TRIP DISTRIBUTION AND ASSIGNMENT

- Estimate site trip generation using ITE Trip Generation Manual (10th Edition)
- Estimate internal capture trips using ITE methodologies
  - Phase 1 – 7% AM peak and 5% PM peak
  - Build-out – 9% AM peak and 12% PM peak
- Pass-by rates are based on ITE data and applied to the following land uses after internal trip capture
  - Coffee shop with drive-thru – assumed 60% AM and PM peak hours pass-by rate
    - ITE Code 938 (Coffee shop with drive-thru and no indoor seating) has a daily pass-by rate of 89%. This is reduced to a more conservative 60%, which has been used in other developments' TIS that included coffee shops with drive-thru windows within Ada County
  - Quality restaurant - 44% average PM peak hour rate as listed in Trip Generation Handbook
  - High-turnover restaurant – 43% average PM peak hour rate as listed in Trip Generation Handbook
  - Convenience Market – 51% average PM peak hour rate as listed in Trip Generation Handbook
- **Table 2** summarizes 2030 Phase 1 trip generation
- **Table 3** summarizes 2040 full build-out trip generation
- Site traffic distribution and assignment is based on COMPASS travel demand model results and adjusted as needed to reflect the proposed land uses and travel patterns in the area. **Figure 3** summarizes site traffic distribution patterns

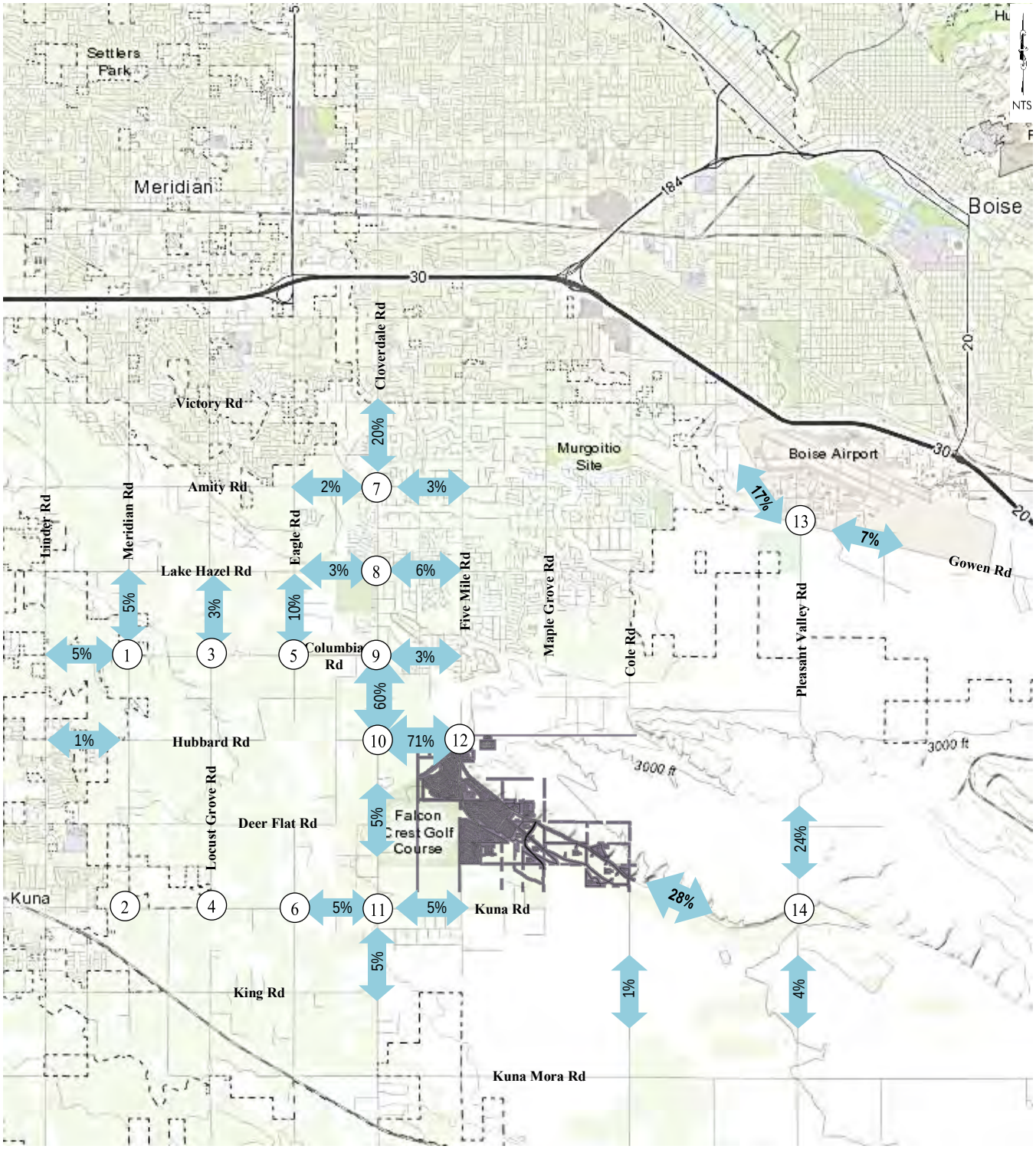
Table 2 – Phase 1 2030 Build-Out Trip Generation Summary

Land Use	ITE Code	Size	Unit	Trips per Unit	Total Trips	Internal Capture	Pass-by Trips	Primary Trips Total	Entering		Exiting	
Weekday Daily (vpd)												
Single-Family Residential Housing	210	1104	DU	EXP[0.92(Ln(X)) + 2.71]	9,473	568	--	8,905	50%	4,453	50%	4,452
Multifamily Housing (Low-Rise)	220	252	DU	7.56(X) - 40.86	1,865	112	--	1,753	50%	877	50%	876
Multifamily Housing (Low-Rise)	221	120	DU	5.45(X) - 1.75	653	39	--	614	50%	307	50%	307
Flex Office	710	60	TSF	EXP[0.97(Ln(X))+2.50]	646	39	--	607	50%	303	50%	304
Daycare	535	5	TSF	47.62	58	3	--	55	50%	27	50%	28
Coffee Shop with Drive Thru	937	2	TSF	820.38	1,641	98	--	1,543	50%	772	50%	771
Quality Restaurant	931	6	TSF	83.84	503	30	--	473	50%	237	50%	236
High Turnover Restaurant	932	6	TSF	112.18	673	40	--	633	50%	316	50%	317
Elementary School	520	600	Students	1.89	1,134	68	--	1,066	50%	533	50%	533
Community Park	411	2	Parks	--	0	0	--	0	50%	0	50%	0
Weekday Daily Total Trips					**16,646**	**997**		**15,649**		**7,825**		**7,824**
Weekday AM Peak Hour (vph)												
Single-Family Residential Housing	210	1104	DU	0.71(X) + 4.80	789	55	--	734	25%	184	75%	550
Multifamily Housing (Low-Rise)	220	252	DU	EXP[0.95(Ln(X)) - 0.51]	115	8	--	107	23%	25	77%	82
Multifamily Housing (Low-Rise)	221	120	DU	EXP[0.98(Ln(X)) - 0.98]	41	3	--	38	23%	9	77%	29
Flex Office	710	60	TSF	0.94(X) + 26.49	83	6	--	77	62%	48	38%	29
Daycare	535	5	TSF	11.00	58	4	--	54	53%	29	47%	25
Coffee Shop with Drive Thru	937	2	TSF	88.99	178	12	100	66	51%	34	49%	32
Quality Restaurant	931	6	TSF	0.73	4	0	--	4	67%	3	33%	1
High Turnover Restaurant	932	6	TSF	9.94	60	4	--	56	55%	31	45%	25
Elementary School	520	600	Students	0.67	402	28	--	374	54%	202	46%	172
Community Park	411	2	Parks	--	0	0	--	0	59%	0		0
Weekday AM Peak Total Trips					**1,730**	**120**	**100**	**1,510**		**565**		**945**
Weekday PM Peak Hour (vph)												
Single-Family Residential Housing	210	1104	DU	EXP[0.96(Ln(X)) + 0.20]	1,019	51	--	968	63%	610	37%	358
Multifamily Housing (Low-Rise)	220	252	DU	EXP[0.89(Ln(X)) - 0.02]	135	7	--	128	63%	81	37%	47
Multifamily Housing (Low-Rise)	221	120	DU	EXP[0.96(Ln(X)) - 0.63]	59	3	--	56	63%	35	37%	21
Flex Office	710	60	TSF	EXP[0.95(Ln(X))+0.36]	70	4	--	66	16%	11	84%	55
Daycare	535	5	TSF	11.12	56	3	--	53	16%	8	84%	45
Coffee Shop with Drive Thru	937	2	TSF	43.38	87	4	50	33	50%	17	50%	16
Quality Restaurant	931	6	TSF	7.80	47	2	20	25	67%	17	33%	8
High Turnover Restaurant	932	6	TSF	9.77	59	3	24	32	62%	20	38%	12
Elementary School	520	600	Students	0.17	102	5	--	97	48%	47	52%	50
Community Park	411	2	Parks	--	0	0	--	0		0		0
Weekday PM Peak Hour Total Trips					**1,634**	**82**	**94**	**1,458**		**846**		**612**

Table 3 – 2040 Full Build-Out Trip Generation Summary

Land Use	ITE Code	Size	Unit	Trips per Unit	Total Trips	Internal Capture	Pass-by Trips	Primary Trips				
								Total	Entering		Exiting	
Weekday Daily (vpd)												
Single-Family Residential Housing	210	1925	DU	EXP[0.92(Ln(X)) + 2.71]	15,799	1896	--	13,903	50%	6,952	50%	6,951
Multifamily Housing (Low-Rise)	220	252	DU	7.56(X) - 40.86	1,865	224	--	1,641	50%	821	50%	820
Multifamily Housing (Low-Rise)	221	120	DU	5.45(X) - 1.75	653	78	--	575	50%	288	50%	287
Flex Office	710	60	TSF	EXP[0.97(Ln(X))+2.50]	646	78	--	568	50%	284	50%	284
Daycare	535	5	TSF	47.62	58	7	--	51	50%	25	50%	26
Coffee Shop with Drive Thru	937	2	TSF	820.38	1,641	197	--	1,444	50%	722	50%	722
Quality Restaurant	931	6	TSF	83.84	503	60	--	443	50%	222	50%	221
High Turnover Restaurant	932	6	TSF	112.18	673	81	--	592	50%	296	50%	296
Convenience Market	851	4	TSF	762.28	3,049	366	--	2,683	50%	1,341	50%	1,342
Storage	151	101	TSF	1.51	153	18	--	135	50%	67	50%	68
Elementary School	520	600	Students	1.89	1,134	136	--	998	50%	499	50%	499
Community Park	411	2	Parks	--	0	0	--	0	50%	0	50%	0
Weekday Daily Total Trips					**26,174**	**3,141**		**23,033**		**11,517**		**11,516**
Weekday AM Peak Hour (vph)												
Single-Family Residential Housing	210	1925	DU	0.71(X) + 4.80	1,372	123	--	1,249	25%	312	75%	937
Multifamily Housing (Low-Rise)	220	252	DU	EXP[0.95(Ln(X)) - 0.51]	115	10	--	105	23%	24	77%	81
Multifamily Housing (Low-Rise)	221	120	DU	EXP[0.98(Ln(X)) - 0.98]	41	4	--	37	23%	9	77%	28
Flex Office	710	60	TSF	0.94(X) + 26.49	83	7	--	76	62%	47	38%	29
Daycare	535	5	TSF	11.00	58	5	--	53	53%	28	47%	25
Coffee Shop with Drive Thru	937	2	TSF	88.99	178	16	97	65	51%	33	49%	32
Quality Restaurant	931	6	TSF	0.73	4	0	--	4	67%	3	33%	1
High Turnover Restaurant	932	6	TSF	9.94	60	5	--	55	55%	30	45%	25
Convenience Market	851	4	TSF	62.54	250	23	--	227	50%	114	50%	113
Storage	151	101	TSF	0.10	10	1	--	9	60%	5	40%	4
Elementary School	520	600	Students	0.67	402	36	--	366	54%	198	46%	168
Community Park	411	2	Parks	--	0	0		0		0		0
Weekday AM Peak Total Trips					**2,573**	**230**	**97**	**2,246**		**803**		**1,443**
Weekday PM Peak Hour (vph)												
Single-Family Residential Housing	210	1925	DU	EXP[0.96(Ln(X)) + 0.20]	1,738.0	209	--	1,529	63%	963	37%	566
Multifamily Housing (Low-Rise)	220	252	DU	EXP[0.89(Ln(X)) - 0.02]	135.0	16	--	119	63%	75	37%	44
Multifamily Housing (Low-Rise)	221	120	DU	EXP[0.96(Ln(X)) - 0.63]	59	7	--	52	63%	33	37%	19
Flex Office	710	60	TSF	EXP[0.95(Ln(X))+0.36]	70.1	8	--	62	16%	10	84%	52
Daycare	535	5	TSF	11.12	56.0	7	--	49	16%	8	84%	41
Coffee Shop with Drive Thru	937	2	TSF	43.38	86.8	10	46	31	50%	16	50%	15
Quality Restaurant	931	6	TSF	7.80	46.8	6	18	23	67%	15	33%	8
High Turnover Restaurant	932	6	TSF	9.77	58.6	7	22	30	62%	19	38%	11
Convenience Market	851	4	TSF	49.11	196.4	24	88	84	51%	43	49%	41
Storage	151	101	TSF	0.17	17.2	2	--	15	47%	7	53%	8
Elementary School	520	600	Students	0.17	102.0	12	--	90	48%	43	52%	47
Community Park	411	2	Parks	--	0	0	--	0		0		0
Weekday PM Peak Hour Total Trips					**2,566**	**308**	**174**	**2,084**		**1,232**		**852**

Figure 3 – Site Traffic Distribution Patterns



3. STUDY AREA INTERSECTIONS

- Pleasant Valley Road & Gowen Road
- Pleasant Valley Road & Ten Mile Creek Road
- Five Mile Road & Ten Mile Creek Road (future intersection)
- Five Mile Road & Hubbard Road
- Cloverdale Road & Amity Road
- Cloverdale Road & Lake Hazel Road
- Cloverdale Road & Columbia Road
- Cloverdale Road & Hubbard Road
- Cloverdale Road & Kuna Road
- Columbia Road & Eagle Road
- Kuna Road & Eagle Road
- Columbia Road & Locust Grove Road
- Kuna Road & Locust Grove Road
- Columbia Road & SH 69
- Kuna Road & SH 69
- All proposed site access points

4. STUDY AREA ROADWAY SEGMENTS

- Pleasant Valley Road between Gowen Road and Hollilynn Drive
- Pleasant Valley Road between Hollilynn Drive and Ten Mile Creek Road
- Ten Mile Creek Road between Pleasant Valley Road and Five Mile Road
- Five Mile Road between Ten Mile Creek Road and Hubbard Road
- Hubbard Road between Five Mile Road and Cloverdale Road
- Cloverdale Road between Hubbard Road and Columbia Road
- Cloverdale Road between Columbia Road and Lake Hazel Road
- Cloverdale Road between Lake Hazel Road and Amity Road
- Columbia Road between Cloverdale Road and Eagle Road
- Columbia Road between Eagle Road and Locust Grove Road
- Columbia Road between Locust Grove Road and SH 69
- Kuna Road between Cloverdale Road and Eagle Road
- Kuna Road between Eagle Road and Locust Grove Road
- Kuna Road between Locust Grove Road and SH 69
- All proposed internal collector roadways

5. TRAFFIC DATA COLLECTION

- Intersection peak hour turning movement counts will be collected on a typical weekday (Tuesday-Thursday) for the AM peak period (7:00-9:00 AM) and PM peak period (4:00-6:00 PM)
- 24-hour directional volumes will be collected for the study area roadway segments on a typical weekday

6. ANALYSIS YEARS

- 2019 existing traffic
- 2030 Phase 1 build-out year background traffic
- 2030 Phase 1 build-out year background plus site traffic
  - Includes proposed development in Phase 1 only
- 2040 full build-out year background traffic
  - Planning-level analysis of roadway segment level of service
- 2040 full build-out year background plus site traffic
  - Planning-level analysis of roadway segment level of service
  - Includes full build-out of the development

7. ANALYSIS PEAK HOUR PERIODS
   - Weekday AM peak hour of the adjacent transportation system (7:00-9:00 AM)
   - Weekday PM peak hour of the adjacent transportation system (4:00-6:00 PM)
   - 2040 planning-level analysis will be conducted with PM peak hour traffic only

8. BACKGROUND TRAFFIC ESTIMATE
   - 2030 traffic growth will be estimated by expanding the existing traffic counts with the percent annual growth rates estimated from COMPASS forecast as summarized in **Table 4**:

Table 4 – Background Traffic Growth

Roadway	Phase 1 (2019-2030)	2040 Full Build-Out
SH 69	3%	2040 PM peak hour background traffic for roadway segments will be based on COMPASS forecasts
Locust Grove Road	10%	
Eagle Road	5%	
Cloverdale Road	8%	
Five Mile Road	2%	
Pleasant Valley Road	3%	
Amity Road	4%	
Gowen Road	2%	
Lake Hazel Road	5%	
Columbia Road	5%	
Hubbard Road	10%	
Kuna Road	8%	
Tenmile Creek Road	6%	

   - 2040 PM peak hour background traffic for roadways segments will be obtained from COMPASS model forecasts

9. OFF-SITE DEVELOPMENT
   - One proposed off-site development located adjacent to the site will be included in the background traffic in additional to the traffic growth – Falcon Crest Subdivision.
     - Phase 1 (400 DU) of Falcon Crest Subdivision is included in the COMPASS model growth rate. The proposed developments beyond Phase 1 are not included in the COMPASS model demographics and will be included in the background traffic as off-site traffic.

10. ANALYSIS TOOLS AND METHODOLOGIES
    - Signalized and unsignalized intersection capacity analysis will be performed using Synchro 10 (version 10.3.55.0) with 2010 Highway Capacity Manual methodologies
    - Roundabout capacity analysis will be based on the HCM 2016 methodologies, which reflect the latest research on roundabout capacity

11. MINIMUM OPERATIONAL THRESHOLDS
    - ACHD intersections
      - Signalized intersection – overall intersection v/c ratio of 0.90 and 1.00 for a lane group
      - Unsignalized intersection – v/c ratio of 1.00 for the critical lane group
        - We will conduct preliminary signal warrant analysis for ACHD intersections operating at LOS D or worse
    - ACHD roadway segment LOS planning level thresholds
      - Principal and minor arterial – LOS E or better

- Collector street – LOS D or better
- ITD intersections
  - LOS D with an overall intersection v/c ratio of 0.90 and 1.00 for a lane group

12. PLANNED ROADWAY AND INTERSECTION IMPROVEMENTS
    - Review ACHD transportation plans and identify planned roadway and intersection improvements within the study area to be considered for mitigating the traffic impacts if necessary (summarized in **Table 5**). All ACHD IFYWP improvements are in accordance with the 2016 ACHD CIP unless otherwise stated. If the lane configuration is built to the planned reservation as described in the ACHD Master Street Map, no additional improvements will be recommended as described in the ACHD Policy Manual.

Table 5 – Roadway Network Improvements

Transportation Plan	Project	Project Year	Funding
ACHD 2019-2023 IFYWP	**Cloverdale Road** • Widen to 5 lanes with curb, gutter, multi-use paths from Victory Road to Lake Hazel Road	Unknown	Unfunded
	Lake Hazel Road • Widen to 5 lanes with curb, gutter, multi-use paths from Eagle Road to Five Mile Road	Preliminary Development	Programmed
	Lake Hazel Road and Cloverdale Road intersection • Widen intersection to 5 lanes on all approaches	Unknown	Unfunded
	Amity Road and Cloverdale Road intersection • Install a multi-lane roundabout	Preliminary Development	Programmed
ACHD 2016 CIP	**Amity Road - Eagle Road to Cloverdale Road** • Reconstruct/widen - two to three lanes	2026-2030	Unfunded
	Cloverdale Road - Victory Road to Lake Hazel Road • Reconstruct/widen - two to five lanes	2021-2025	Unfunded
	Cloverdale Road - Lake Hazel Road to Columbia Road • Reconstruct/widen - two to five lanes	2026-2030	Unfunded
	Cloverdale Road - Columbia Road to Kuna Road • Reconstruct/widen - two to three lanes	2031-2035	Unfunded
	Lake Hazel Road - Eagle Road to Cloverdale Road • Reconstruct/widen - two to three lanes	2021-2025	Unfunded
	Lake Hazel Road - Cloverdale Road to Five Mile Road • Reconstruct/widen - two to five lanes	2021-2025	Unfunded
	Amity Road and Cloverdale Road intersection • Construct a multi-lane roundabout with 2 lanes for Cloverdale Road approaches and 1 lane for Amity Road approaches	2021-2025	Unfunded
	Columbia Road and Cloverdale Road intersection • Construct a single-lane roundabout with a westbound right-turn bypass lane	2026-2030	Unfunded
	Kuna Road and Cloverdale Road intersection • Construct a single-lane roundabout	2031-2035	Unfunded
	Lake Hazel Road and Cloverdale Road intersection • Reconstruct/widen approaches for dual left-turn lanes on Lake Hazel Road approaches, two through lanes on Cloverdale Road and eastbound Lake Hazel Road approaches, and an exclusive westbound right-turn lane	2031-2035	Unfunded

ACHD 2018 MSM	**Amity Road - Eagle Road to Five Mile Road** • Reservation for three lanes	Unknown	Unfunded
	Lake Hazel Road - Eagle Road to Five Mile Road • Reservation for five lanes	Unknown	Unfunded
	Columbia Road - Eagle Road to Five Mile Road • Reservation for three lanes	Unknown	Unfunded
	Hubbard Road - Linder Road to Locust Grove Road • Reservation for three lanes 3 2 5 3(Extend) 5	Unknown	Unfunded
	Hubbard Road - Locust Grove Road to Eagle Road • Reservation for two lanes	Unknown	Unfunded
	Hubbard Road - Eagle Road to Five Mile Road • Reservation for five lanes	Unknown	Unfunded
	Hubbard Road Extension • Reservation for three lanes	Unknown	Unfunded
	Kuna Road - Meridian Road to Eagle Road • Reservation for two lanes	Unknown	Unfunded
	Kuna Road - Eagle Road to Pleasant Valley Road • Reservation for three lanes	Unknown	Unfunded
	Ten Mile Creek Road - Five Mile Road to Pleasant Valley Road • Reservation for three lanes	Unknown	Unfunded
	Locust Grove Road - Lake Hazel Road to Kuna Road • Reservation for three lanes	Unknown	Unfunded
	Eagle Road - Lake Hazel Road to Hubbard Road • Reservation for three lanes	Unknown	Unfunded
	Cloverdale Road - Victory Road to Lake Hazel Road • Reservation for three lanes	Unknown	Unfunded
	Cloverdale Road - Victory Road to Lake Hazel Road • Reservation for five lanes	Unknown	Unfunded
	Five Mile Road - Columbia Road to 10 Mile Creek Road • Reservation for three lanes	Unknown	Unfunded
	Pleasant Valley Road south of Gowen Road • Reservation for five lanes	Unknown	Unfunded
	Pleasant Valley Road at 10 Mile Creek Road • Reservation for five lanes	Unknown	Unfunded
	Gowen Road at Pleasant Valley Road • Reservation for five lanes	Unknown	Unfunded

- Review ITD transportation plans
  - 2019-2025 Idaho Transportation Investment Program
  - SH 69 Corridor Plan (This study is underway)

13. 2030 PHASE 1 TRAFFIC IMPACT ANALYSIS
    - Conduct intersection capacity analysis
    - Conduct roadway segment LOS planning level analysis
    - Conduct turn lane warrant analysis using ACHD guidelines
    - Identify intersection and roadway improvements needed to mitigate the impacts if necessary

14. 2040 FULL BUILD-OUT PLANNING-LEVEL ANALYSIS
    - Conduct planning-level analysis of roadway segment level of service analysis (PM peak hour only)
      - 2040 background traffic
      - 2040 total traffic
    - Identify roadway improvement needed to mitigate the impacts if necessary
    - Detailed intersection capacity analysis will not be conducted with 2040 full build-out traffic conditions
      - An update TIS will be required for future phase preliminary plats

15. PREPARE A REPORT SUMMARIZING THE FINDINGS AND RECOMMENDATIONS

Ten Mile Creek Road Mixed Use Site Proposed Development

The following summarizes the results of an area of influence model run for a proposed development located along Ten Mile Creek from Hubbard Road to Cole Road. The proposed development will consist of 2,233 single family units, 120 multi-family units, school, park, church and 20 acres of commercial use with an anticipated build out by 2040. See figure 1.

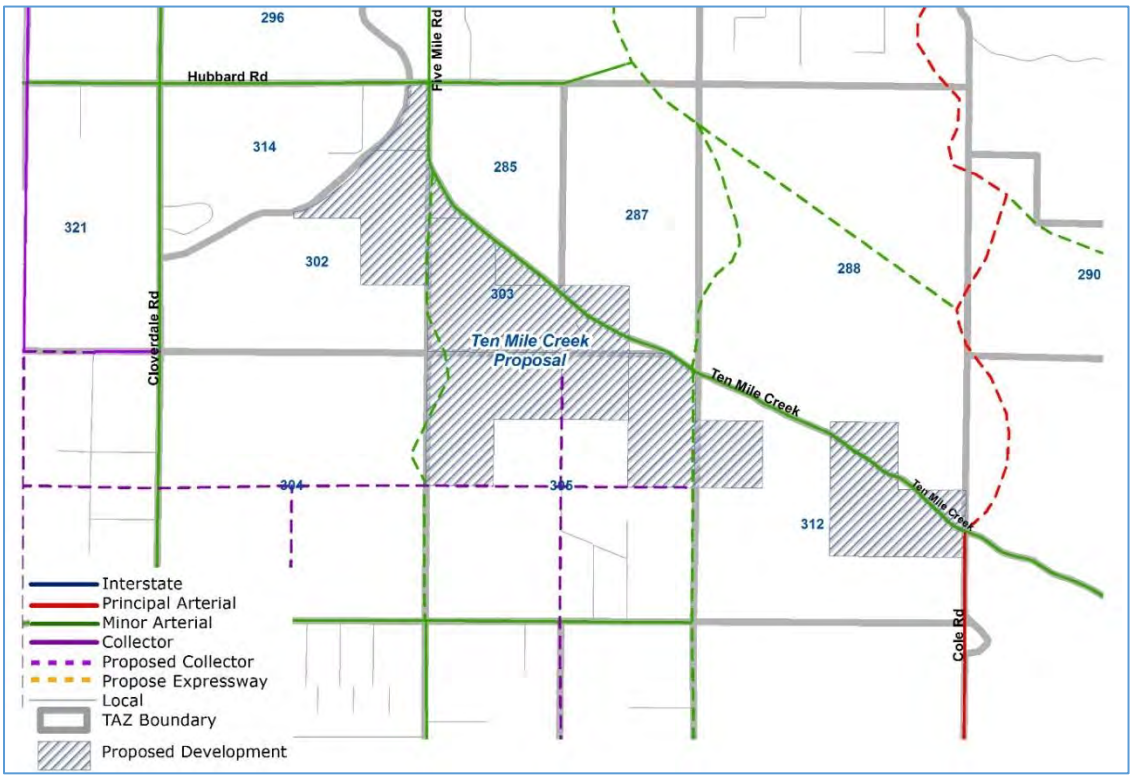


Figure 1: TAZs 302, 303,306, and 312

Table 1 provides the existing demographics for TAZ 302, 303, 306, and 312 and the proposed development's demographics used for the area of influence model run. Temporary TAZs and TAZ splits were used to isolate the proposed development's impact.

Table 1

TAZ	2018		2040 with proposal		2040	
	HH	Jobs	HH	Jobs	HH	Jobs
302, 303, 305, and 312	31		2,384	250	41	51
Falcon Crest, located in TAZ 304 northwest of Cloverdale and Kuna Roads, is entitled for 400 single family units. These were included in the special model run and the only TAZ with growth assumed. Limited information was provided to COMPASS regarding jobs by type for the proposed Ten Mile Creek development therefore, 50 retail, 150 office and 50 education jobs were assumed for the model run.						

Figure 2: area of influence results for the proposed development
Figures 3 and 4: peak hour results
Figure 5: surrounding TAZs and demographics
Figures 6, 7 and 8: compounded annual growth rates

Figure 2: Area of Influence, Peak hour demand contribution to the total peak hour demand

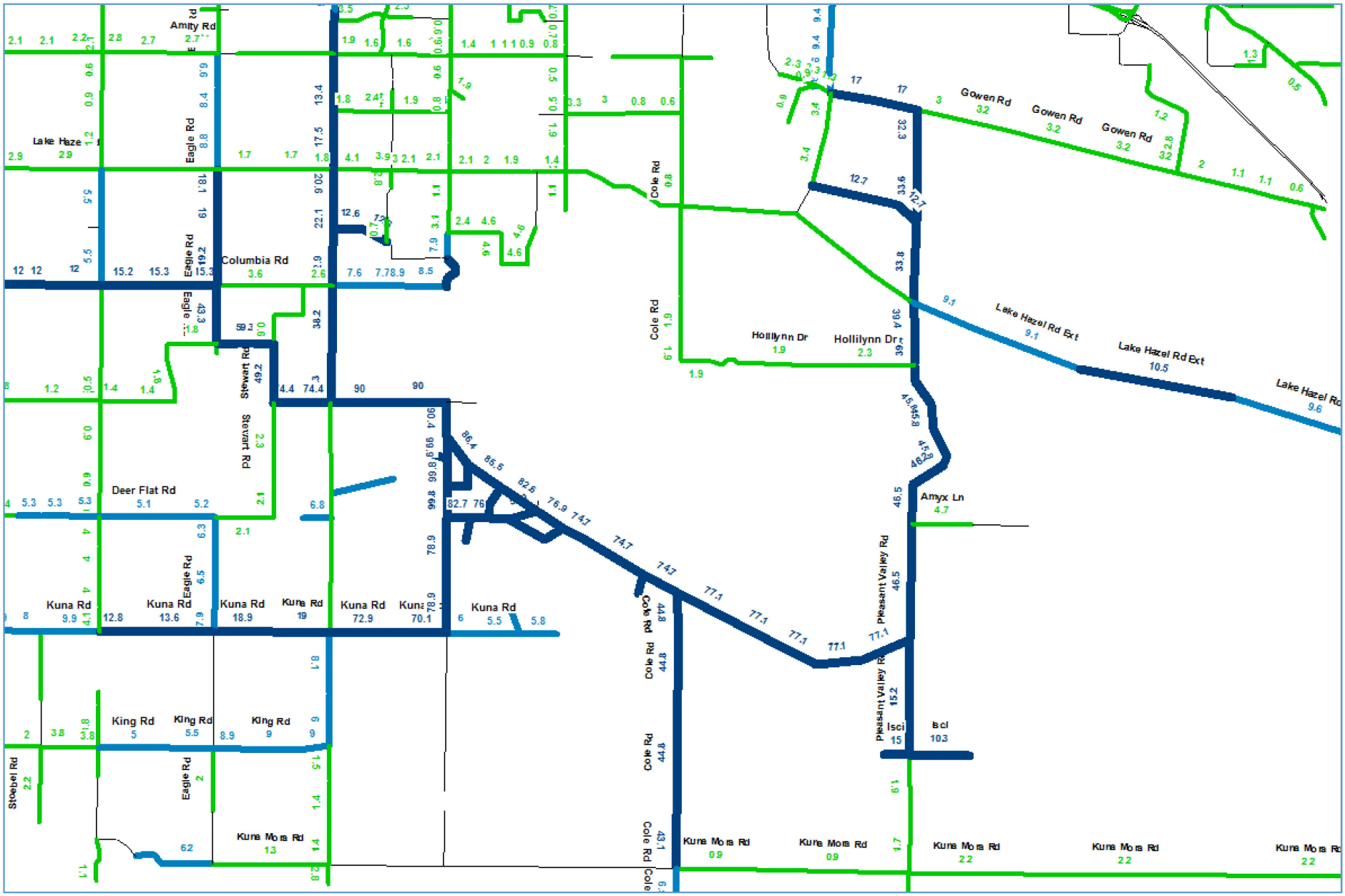


Figure 3: Peak Hour Demand with Proposed Development

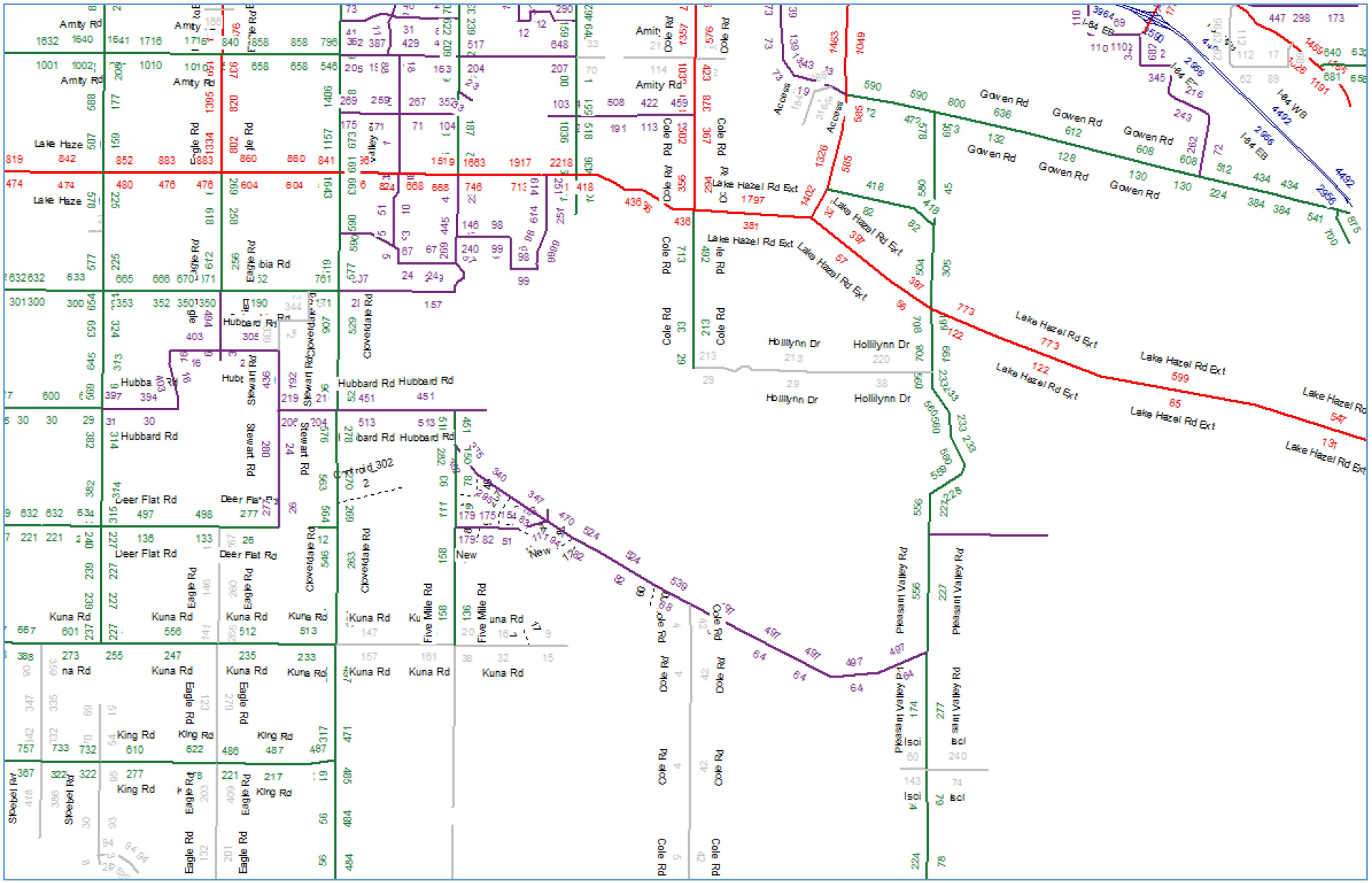


Figure 4a: Peak Hour Demand with Proposed Development – Detailed Area

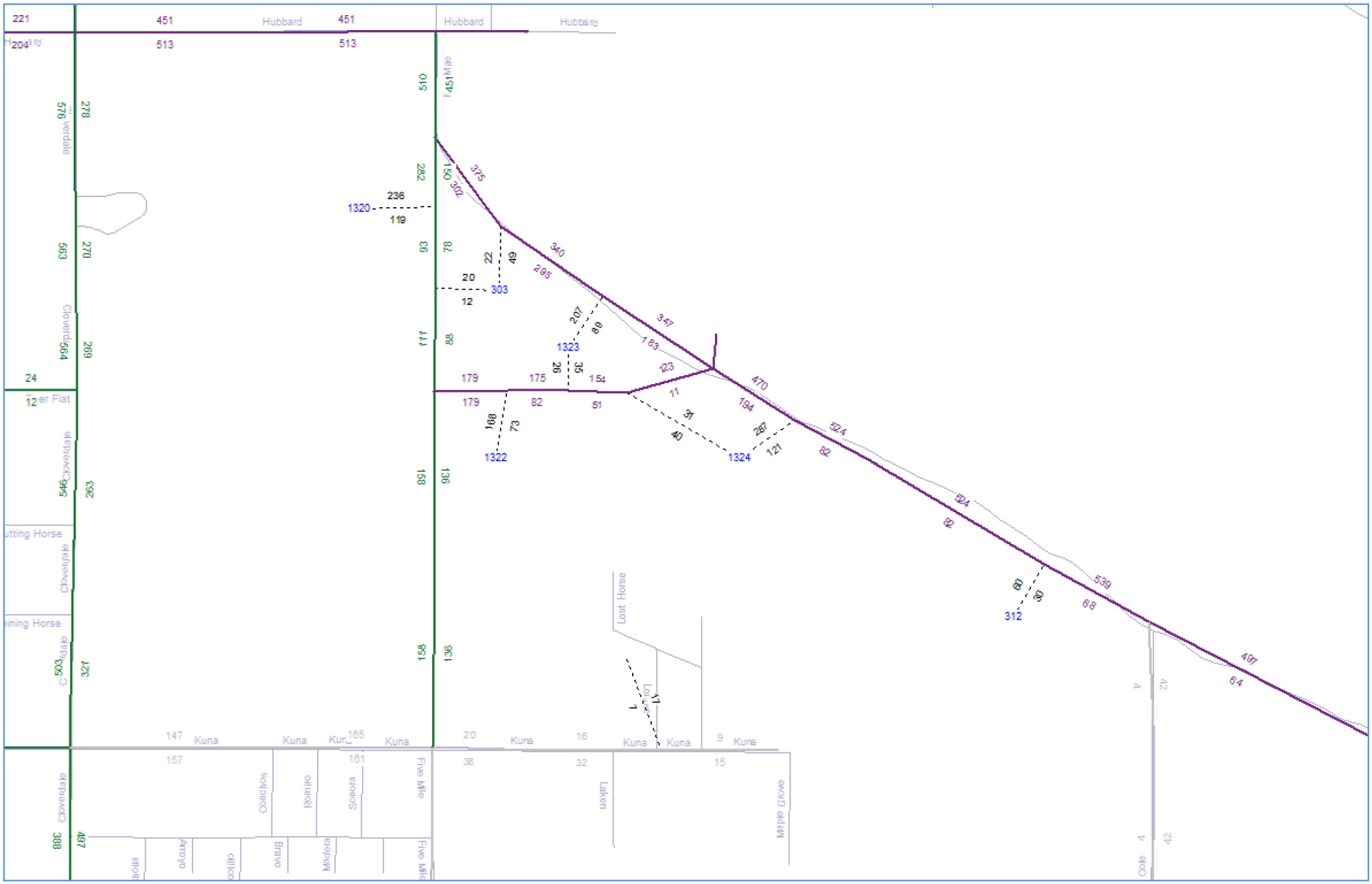


Figure 5: Peak Hour Demand without Proposed Development

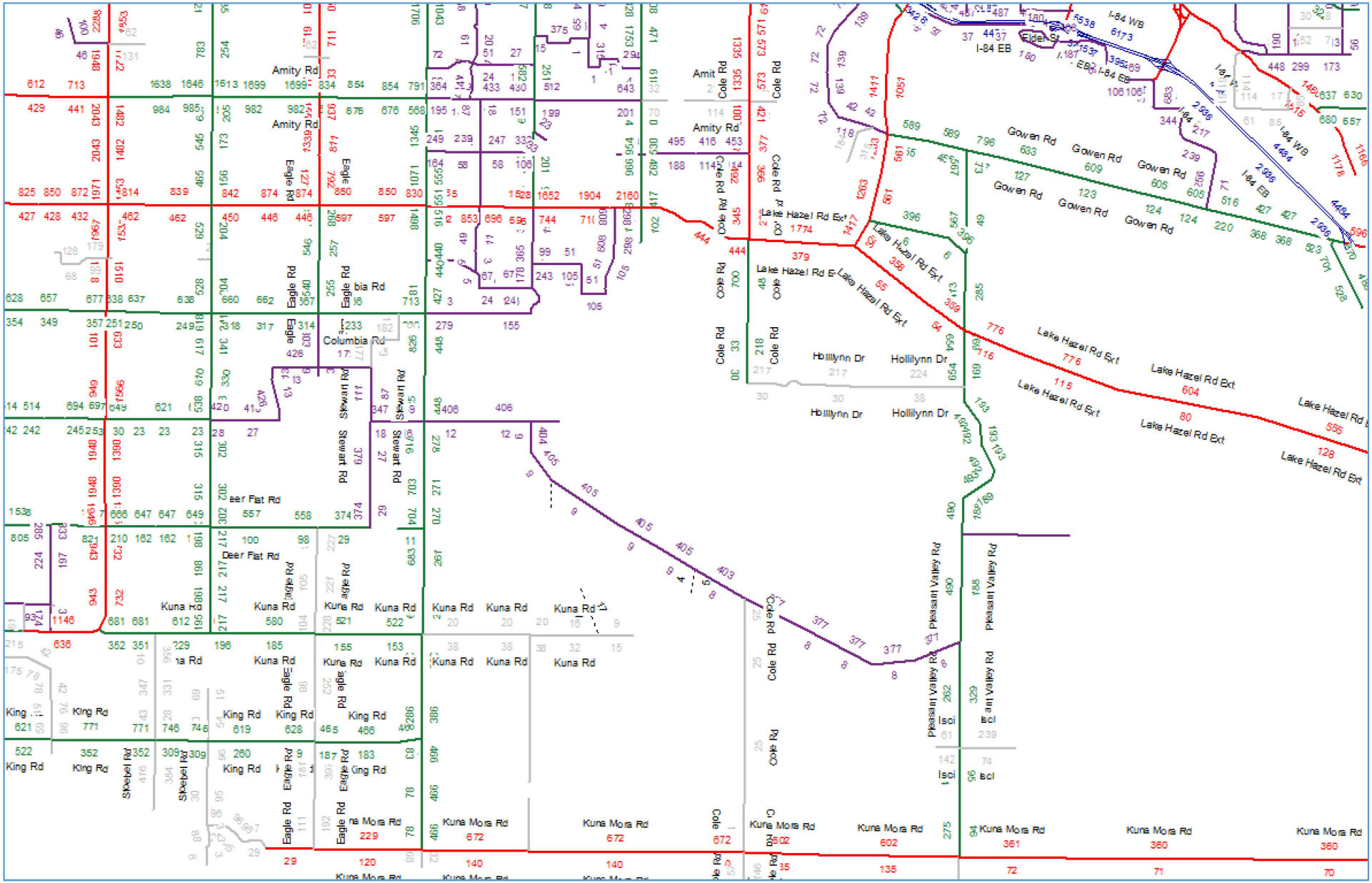
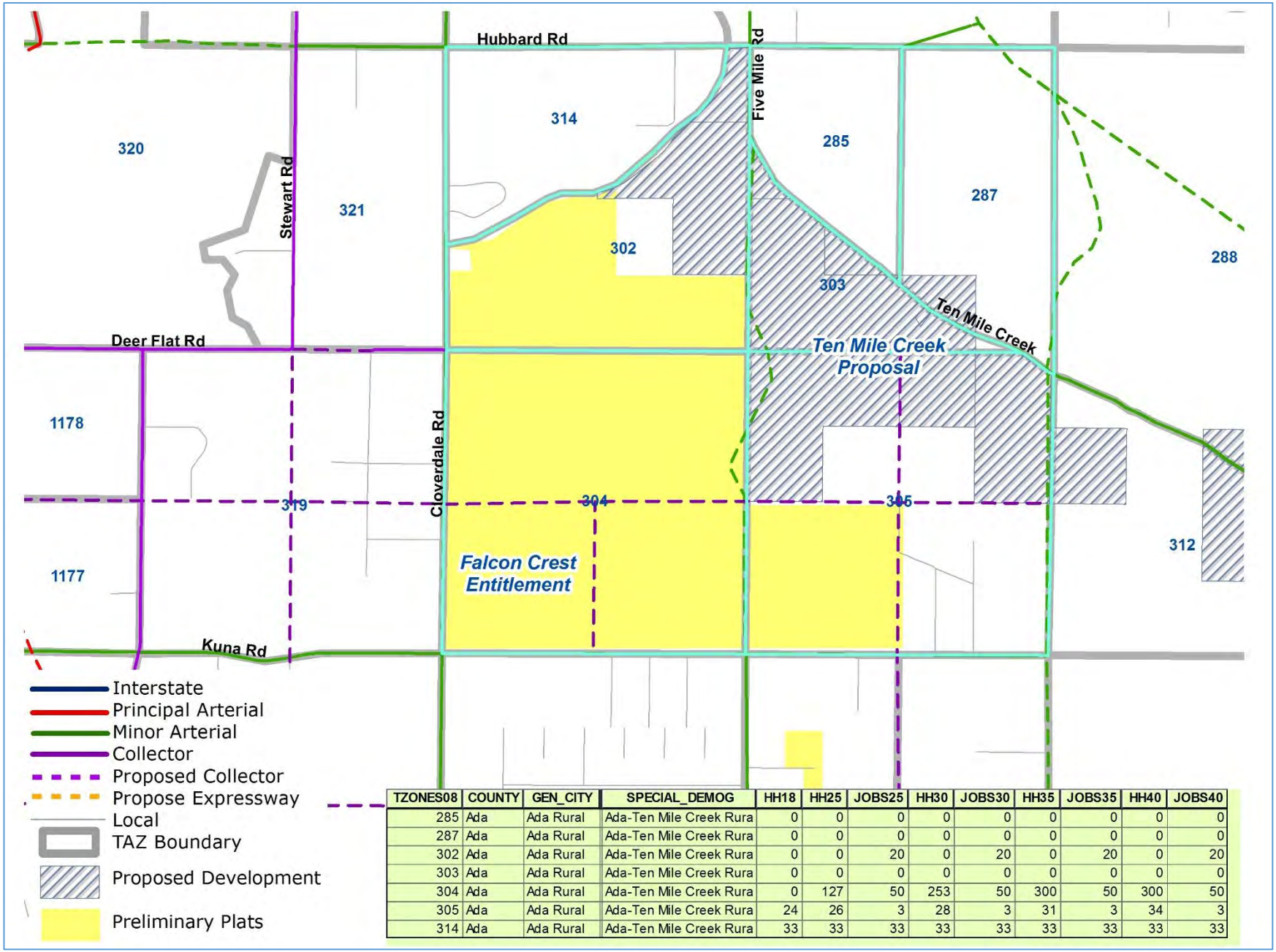
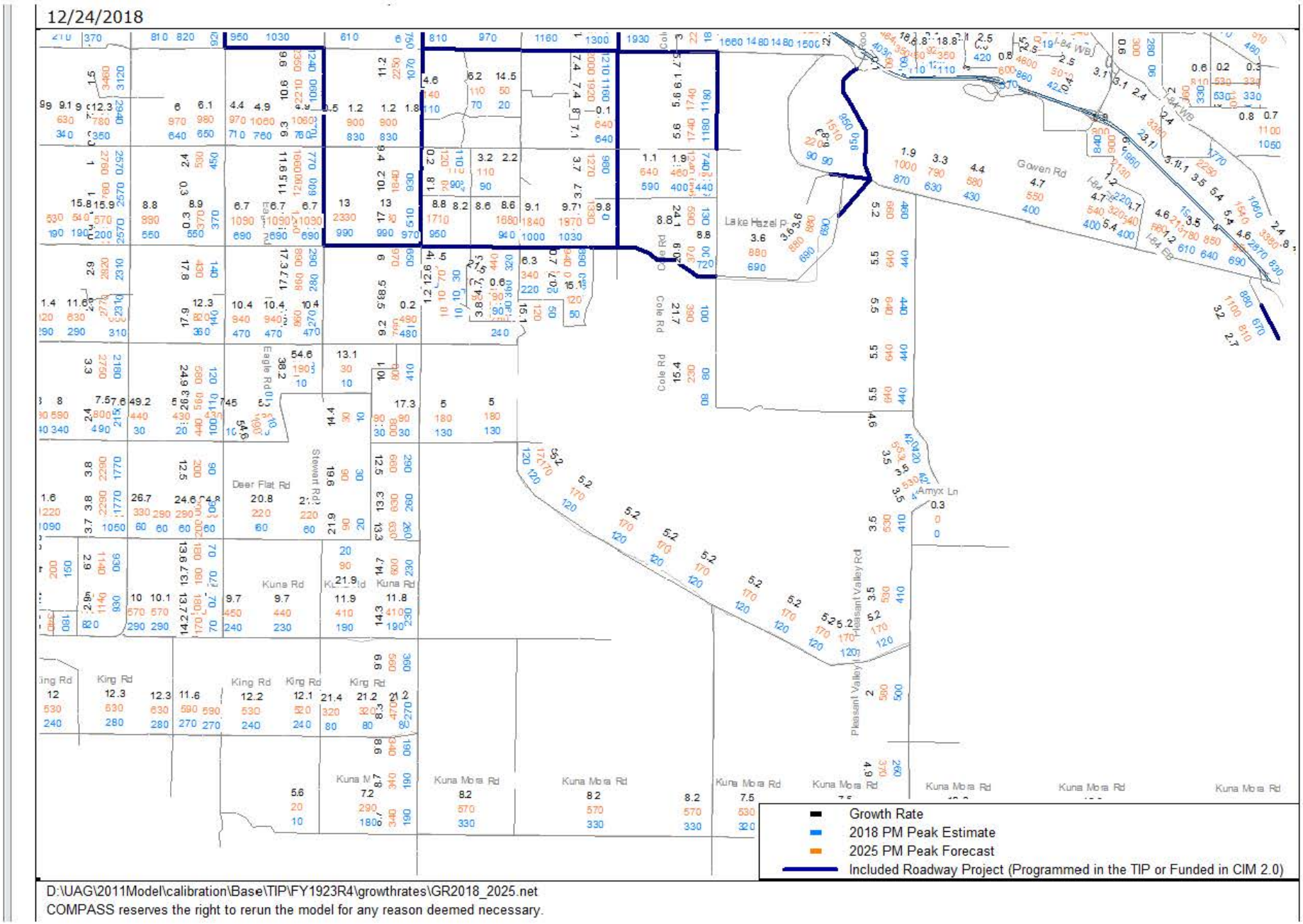


Figure 6: Surrounding Area TAZs



TZONES08	COUNTY	GEN_CITY	SPECIAL_DEMOG	HH18	HH25	JOBS25	HH30	JOBS30	HH35	JOBS35	HH40	JOBS40
285	Ada	Ada Rural	Ada-Ten Mile Creek Rura	0	0	0	0	0	0	0	0	0
287	Ada	Ada Rural	Ada-Ten Mile Creek Rura	0	0	0	0	0	0	0	0	0
302	Ada	Ada Rural	Ada-Ten Mile Creek Rura	0	0	20	0	20	0	20	0	20
303	Ada	Ada Rural	Ada-Ten Mile Creek Rura	0	0	0	0	0	0	0	0	0
304	Ada	Ada Rural	Ada-Ten Mile Creek Rura	0	127	50	253	50	300	50	300	50
305	Ada	Ada Rural	Ada-Ten Mile Creek Rura	24	26	3	28	3	31	3	34	3
314	Ada	Ada Rural	Ada-Ten Mile Creek Rura	33	33	33	33	33	33	33	33	33

Figure 7: 2018 to 2025 Compounded Annual Growth Rate



D:\UAG\2011Model\calibration\Base\TIP\FY1923R4\growthrates\GR2018_2025.net
COMPASS reserves the right to rerun the model for any reason deemed necessary.

Figure 8: 2025 to 2030 Compounded Annual Growth Rate

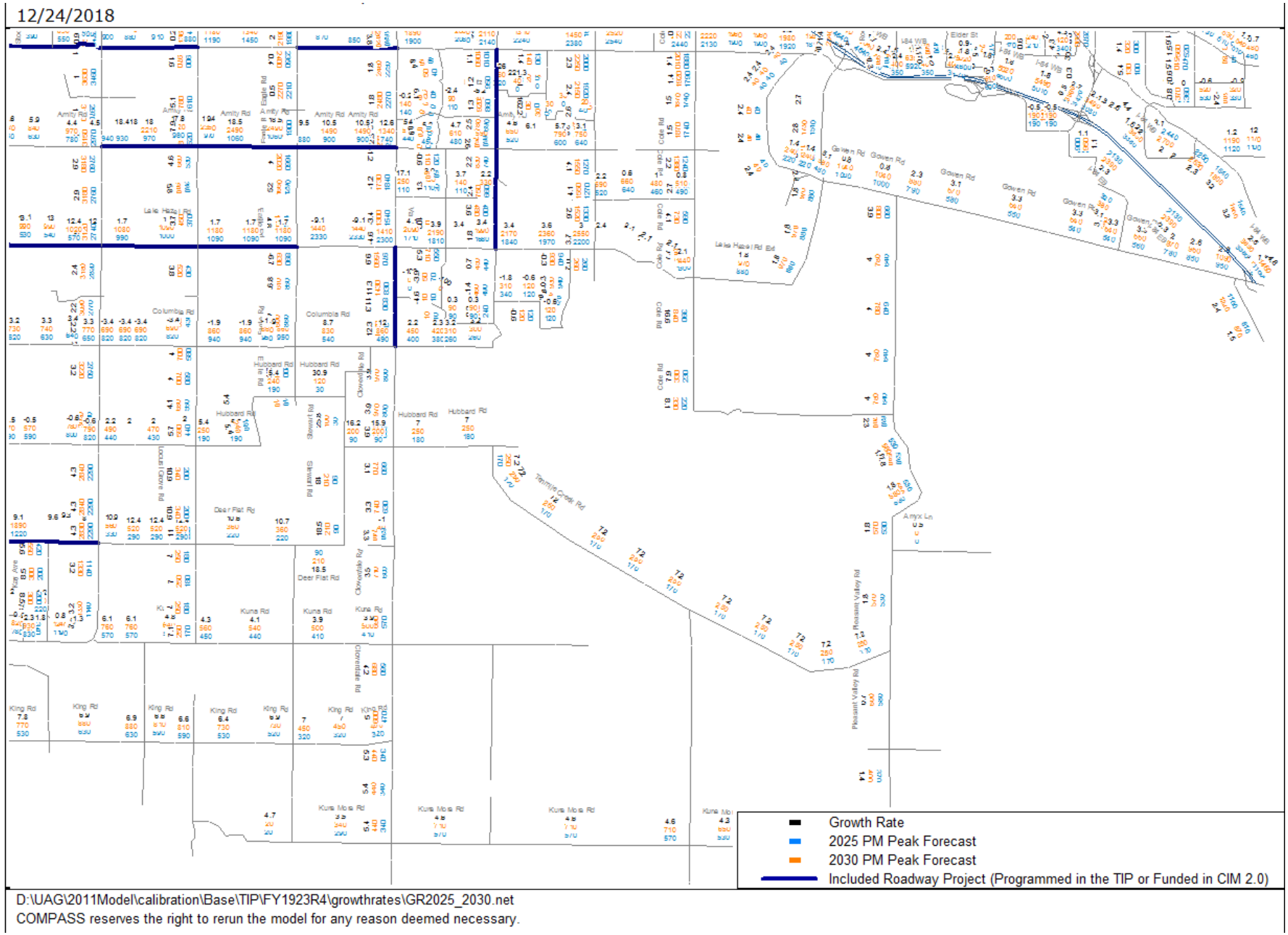
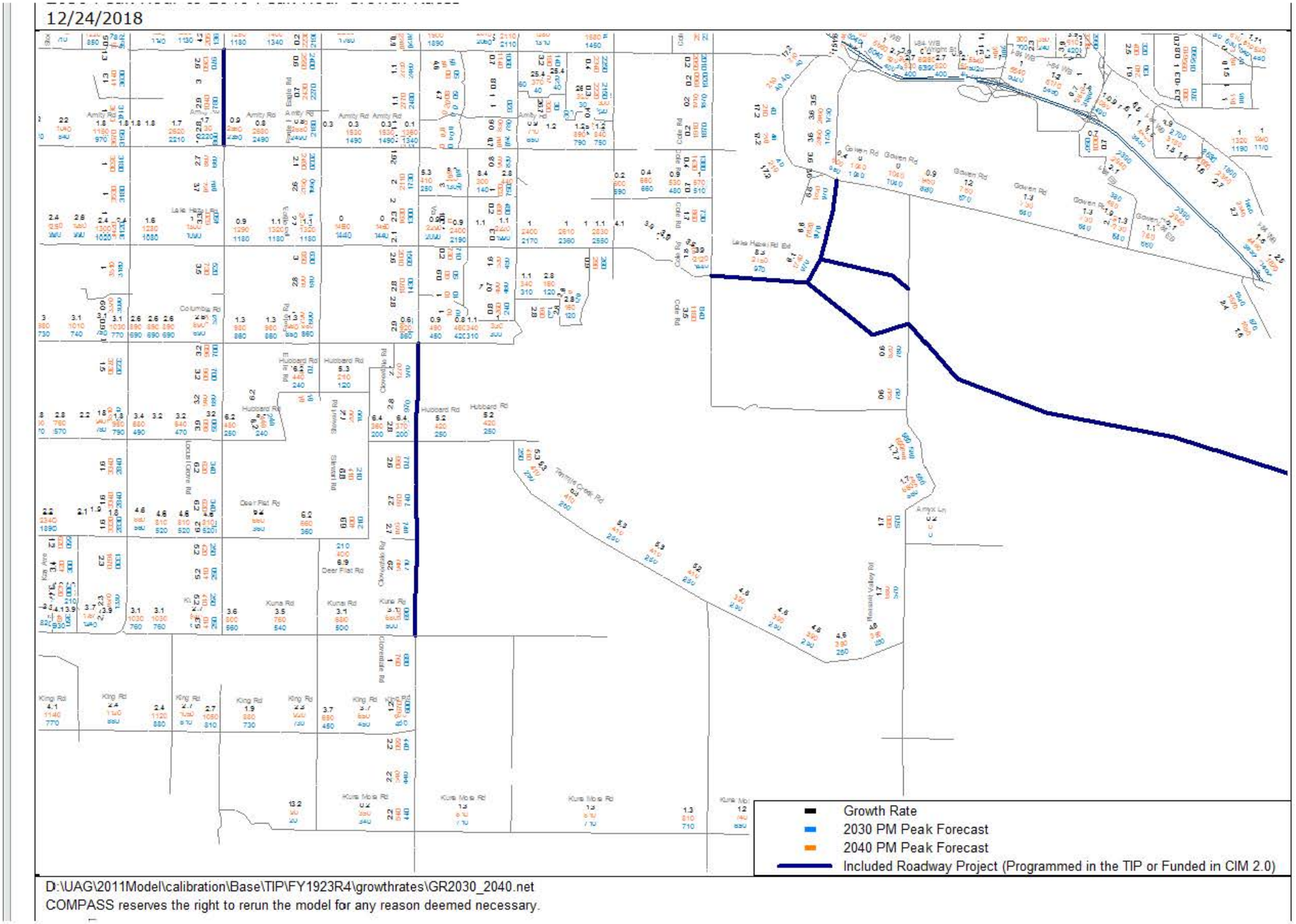


Figure 8: 2030 to 2040 Compounded Annual Growth Rate



APPENDIX B: TRAFFIC COUNTS

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: SH-69 / Columbia Rd
City, State: Ada County, Idaho
Control: Signalized

File Name : SH-69 (Meridian Rd) & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 1

Groups Printed- General Traffic - 3+ Axle Heavy Trucks

	Meridian Road (SH-69) From North					Columbia Road From East					Meridian Road (SH-69) From South					Columbia Road 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	11	84	2	0	97	16	11	10	0	37	15	291	2	0	308	4	45	91	0	140	582
07:15 AM	13	100	6	0	119	15	9	16	0	40	20	297	3	0	320	9	66	69	0	144	623
07:30 AM	18	89	6	0	113	9	17	15	0	41	17	246	5	0	268	14	66	68	0	148	570
07:45 AM	18	94	9	0	121	17	10	5	0	32	24	215	6	0	245	8	52	60	0	120	518
Total	60	367	23	0	450	57	47	46	0	150	76	1049	16	0	1141	35	229	288	0	552	2293
08:00 AM	15	79	3	0	97	7	10	4	0	21	11	172	4	0	187	10	47	60	0	117	422
08:15 AM	10	90	6	0	106	3	16	4	0	23	12	201	6	0	219	5	45	77	0	127	475
08:30 AM	9	81	5	0	95	9	7	2	0	18	15	210	4	0	229	5	38	51	0	94	436
08:45 AM	17	89	11	0	117	10	5	5	0	20	11	154	0	0	165	4	21	43	0	68	370
Total	51	339	25	0	415	29	38	15	0	82	49	737	14	0	800	24	151	231	0	406	1703

04:00 PM	50	211	6	0	267	11	32	13	0	56	6	133	6	0	145	6	18	24	0	48	516
04:15 PM	60	301	8	0	369	7	47	17	0	71	6	118	7	0	131	5	20	26	0	51	622
04:30 PM	48	260	4	0	312	6	39	15	0	60	4	164	3	0	171	4	16	25	0	45	588
04:45 PM	49	253	12	0	314	8	44	22	0	74	9	128	4	0	141	3	16	18	0	37	566
Total	207	1025	30	0	1262	32	162	67	0	261	25	543	20	0	588	18	70	93	0	181	2292
05:00 PM	58	275	9	0	342	10	47	20	0	77	11	139	8	0	158	2	13	27	0	42	619
05:15 PM	78	285	9	0	372	8	58	31	0	97	10	160	9	0	179	9	23	22	1	55	703
05:30 PM	64	291	14	0	369	8	43	18	0	69	5	116	5	0	126	2	18	21	0	41	605
05:45 PM	72	269	9	0	350	9	51	17	0	77	12	139	8	0	159	3	19	24	0	46	632
Total	272	1120	41	0	1433	35	199	86	0	320	38	554	30	0	622	16	73	94	1	184	2559
Grand Total	590	2851	119	0	3560	153	446	214	0	813	188	2883	80	0	3151	93	523	706	1	1323	8847
Apprch %	16.6	80.1	3.3	0		18.8	54.9	26.3	0		6	91.5	2.5	0		7	39.5	53.4	0.1		
Total %	6.7	32.2	1.3	0	40.2	1.7	5	2.4	0	9.2	2.1	32.6	0.9	0	35.6	1.1	5.9	8	0	15	
General Traffic		2825										2854									
% General Traffic	99.7	99.1	94.1	0	99	96.7	98.9	99.5	0	98.6	99.5	99	96.2	0	99	100	97.5	99.3	100	98.6	98.9
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	0.3	0.9	5.9	0	1	3.3	1.1	0.5	0	1.4	0.5	1	3.8	0	1	0	2.5	0.7	0	1.4	1.1

L2 Data Collection

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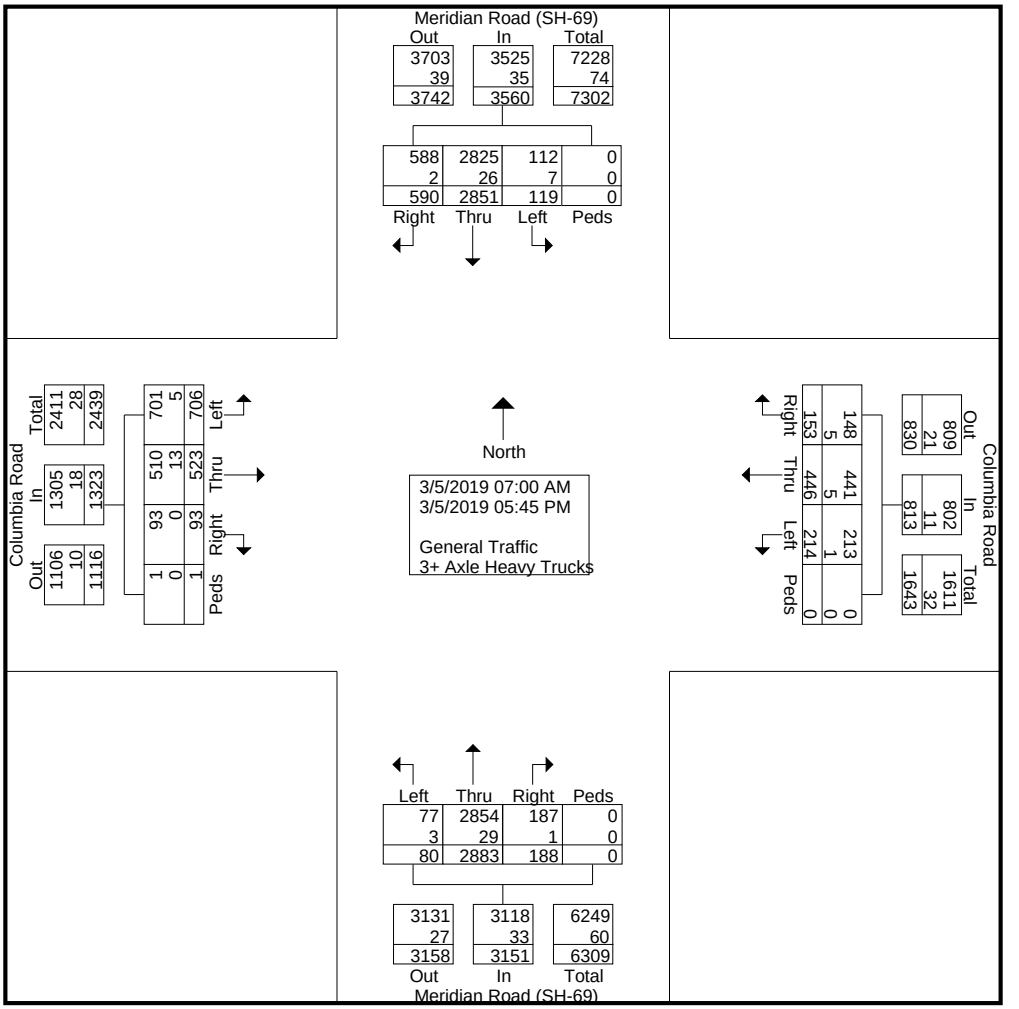
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: SH-69 / Columbia Rd
City, State: Ada County, Idaho
Control: Signalized

File Name : SH-69 (Meridian Rd) & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 2



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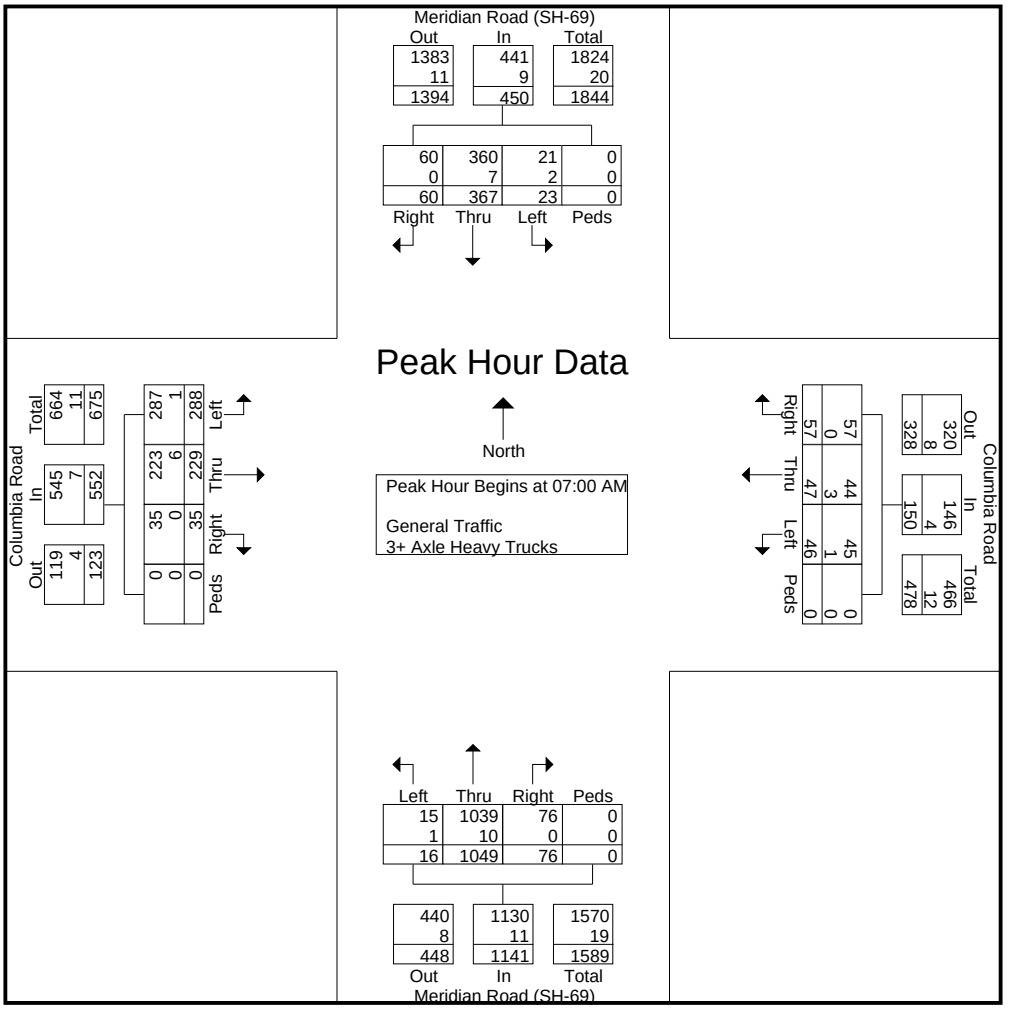
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	11	84	2	0	97	16	11	10	0	37	15	291	2	0	308	4	45	**91**	0	140	582
07:15 AM	13	**100**	6	0	119	15	9	**16**	0	40	20	**297**	3	0	**320**	9	**66**	69	0	144	**623**
07:30 AM	**18**	89	6	0	113	9	**17**	15	0	**41**	17	246	5	0	268	**14**	66	68	0	**148**	570
07:45 AM	18	94	**9**	0	**121**	**17**	10	5	0	32	**24**	215	**6**	0	245	8	52	60	0	120	518
Total Volume	60	367	23	0	450	57	47	46	0	150	76	1049	16	0	1141	35	229	288	0	552	2293
% App. Total	13.3	81.6	5.1	0		38	31.3	30.7	0		6.7	91.9	1.4	0		6.3	41.5	52.2	0		
PHF	.833	.918	.639	.000	.930	.838	.691	.719	.000	.915	.792	.883	.667	.000	.891	.625	.867	.791	.000	.932	.920
General Traffic												1039									
% General Traffic	100	98.1	91.3	0	98.0	100	93.6	97.8	0	97.3	100	99.0	93.8	0	99.0	100	97.4	99.7	0	98.7	98.6
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	0	1.9	8.7	0	2.0	0	6.4	2.2	0	2.7	0	1.0	6.3	0	1.0	0	2.6	0.3	0	1.3	1.4



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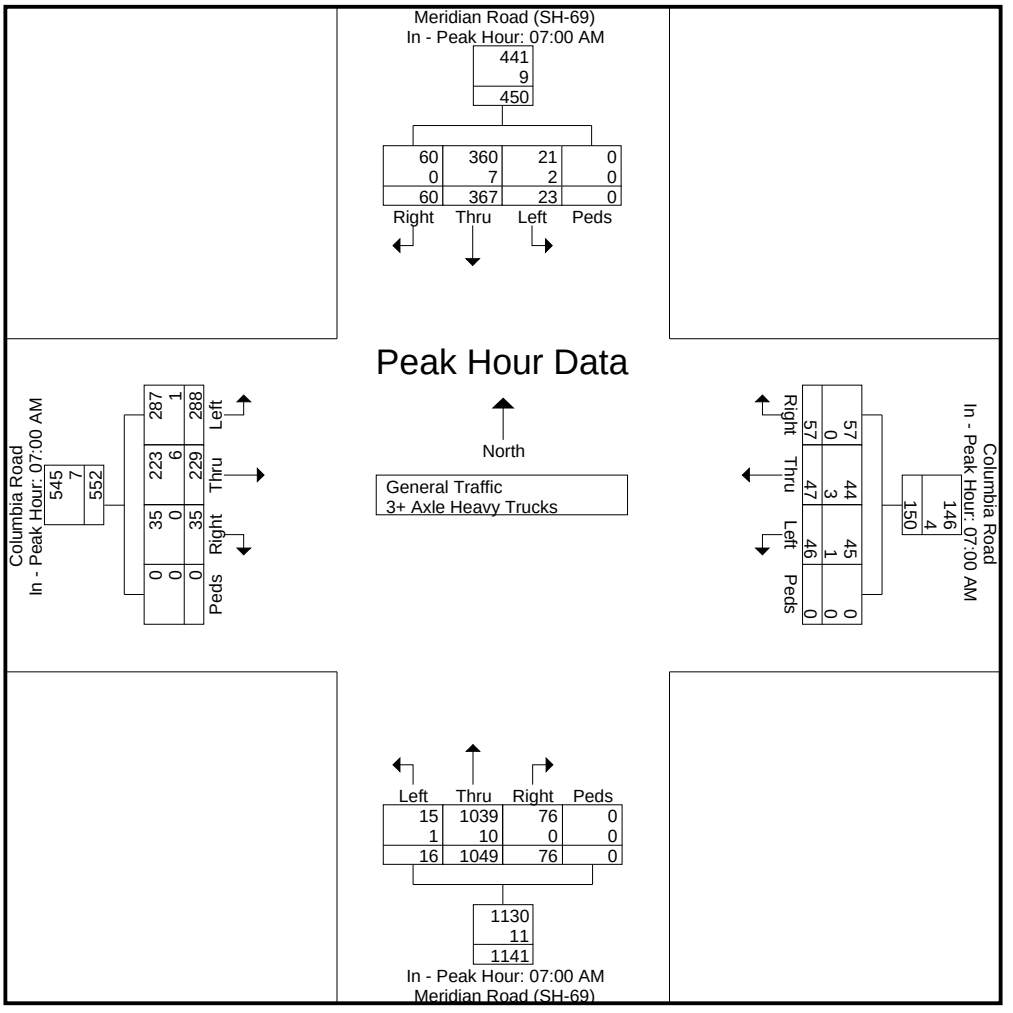
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:00 AM					07:00 AM					07:00 AM					07:00 AM					
+0 mins.	11	84	2	0	97	16	11	10	0	37	15	291	2	0	308	4	45	**91**	0	140	
+15 mins.	13	**100**	6	0	119	15	9	**16**	0	40	20	**297**	3	0	**320**	9	**66**	69	0	144	
+30 mins.	**18**	89	6	0	113	9	**17**	15	0	**41**	17	246	5	0	268	**14**	66	68	0	**148**	
+45 mins.	18	94	**9**	0	**121**	**17**	10	5	0	32	**24**	215	**6**	0	245	8	52	60	0	120	
Total Volume	60	367	23	0	450	57	47	46	0	150	76	1049	16	0	1141	35	229	288	0	552	
% App. Total	13.3	81.6	5.1	0		38	31.3	30.7	0		6.7	91.9	1.4	0		6.3	41.5	52.2	0		
PHF	.833	.918	.639	.000	.930	.838	.691	.719	.000	.915	.792	.883	.667	.000	.891	.625	.867	.791	.000	.932	
General Traffic	60	360	21	0	441	57	44	45	0	146	76	1039	15	0	1130	35	223	287	0	545	
% General Traffic	100	98.1	91.3	0	98	100	93.6	97.8	0	97.3	100	99	93.8	0	99	100	97.4	99.7	0	98.7	
3+ Axle Heavy Trucks	0	7	2	0	9	0	3	1	0	4	0	10	1	0	11	0	6	1	0	7	
% 3+ Axle Heavy Trucks	0	1.9	8.7	0	2	0	6.4	2.2	0	2.7	0	1	6.2	0	1	0	2.6	0.3	0	1.3	



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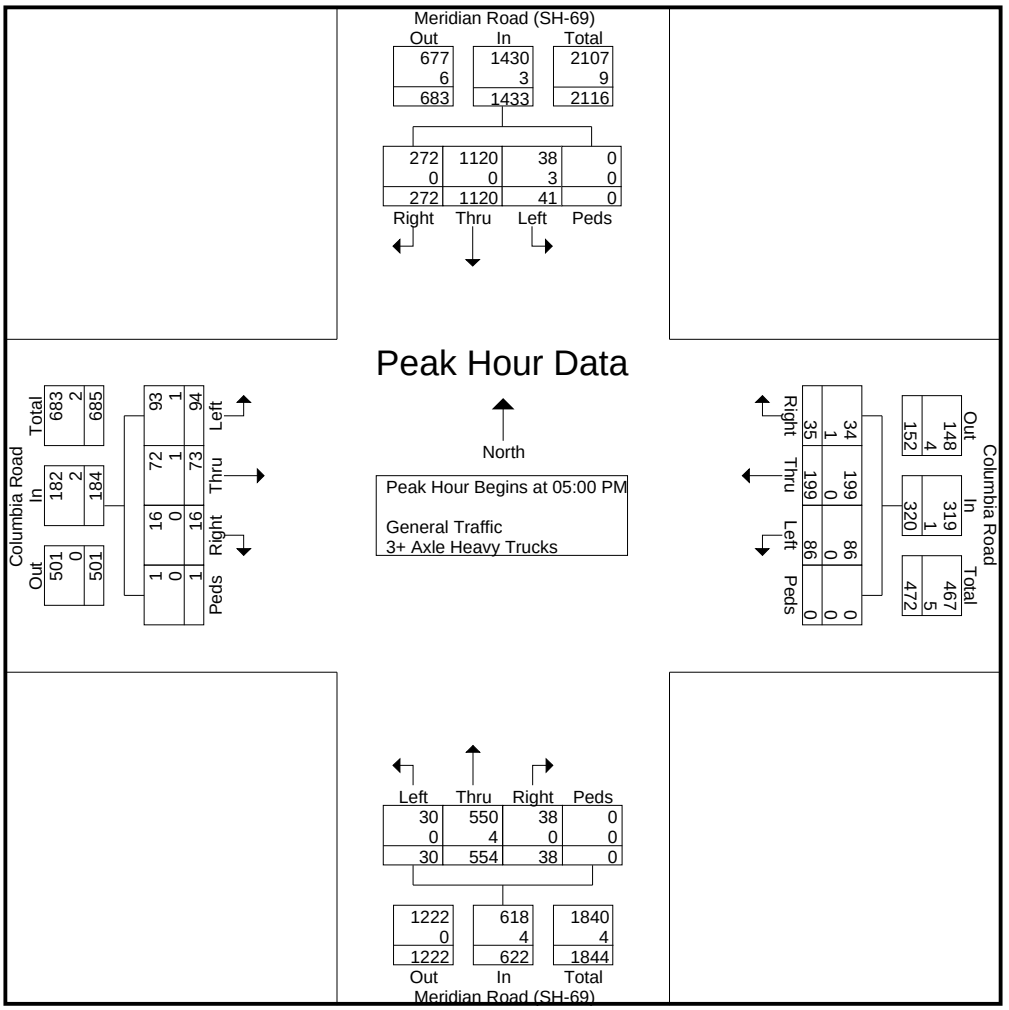
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	58	275	9	0	342	**10**	47	20	0	77	11	139	8	0	158	2	13	**27**	0	42	619
05:15 PM	**78**	285	9	0	**372**	8	**58**	**31**	0	**97**	10	**160**	**9**	0	**179**	**9**	**23**	22	**1**	**55**	**703**
05:30 PM	64	**291**	**14**	0	369	8	43	18	0	69	5	116	5	0	126	2	18	21	0	41	605
05:45 PM	72	269	9	0	350	9	51	17	0	77	**12**	139	8	0	159	3	19	24	0	46	632
Total Volume	272	1120	41	0	1433	35	199	86	0	320	38	554	30	0	622	16	73	94	1	184	2559
% App. Total	19	78.2	2.9	0		10.9	62.2	26.9	0		6.1	89.1	4.8	0		8.7	39.7	51.1	0.5		
PHF	.872	.962	.732	.000	.963	.875	.858	.694	.000	.825	.792	.866	.833	.000	.869	.444	.793	.870	.250	.836	.910
General Traffic		1120																			
% General Traffic	100	100	92.7	0	99.8	97.1	100	100	0	99.7	100	99.3	100	0	99.4	100	98.6	98.9	100	98.9	99.6
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	0	0	7.3	0	0.2	2.9	0	0	0	0.3	0	0.7	0	0	0.6	0	1.4	1.1	0	1.1	0.4



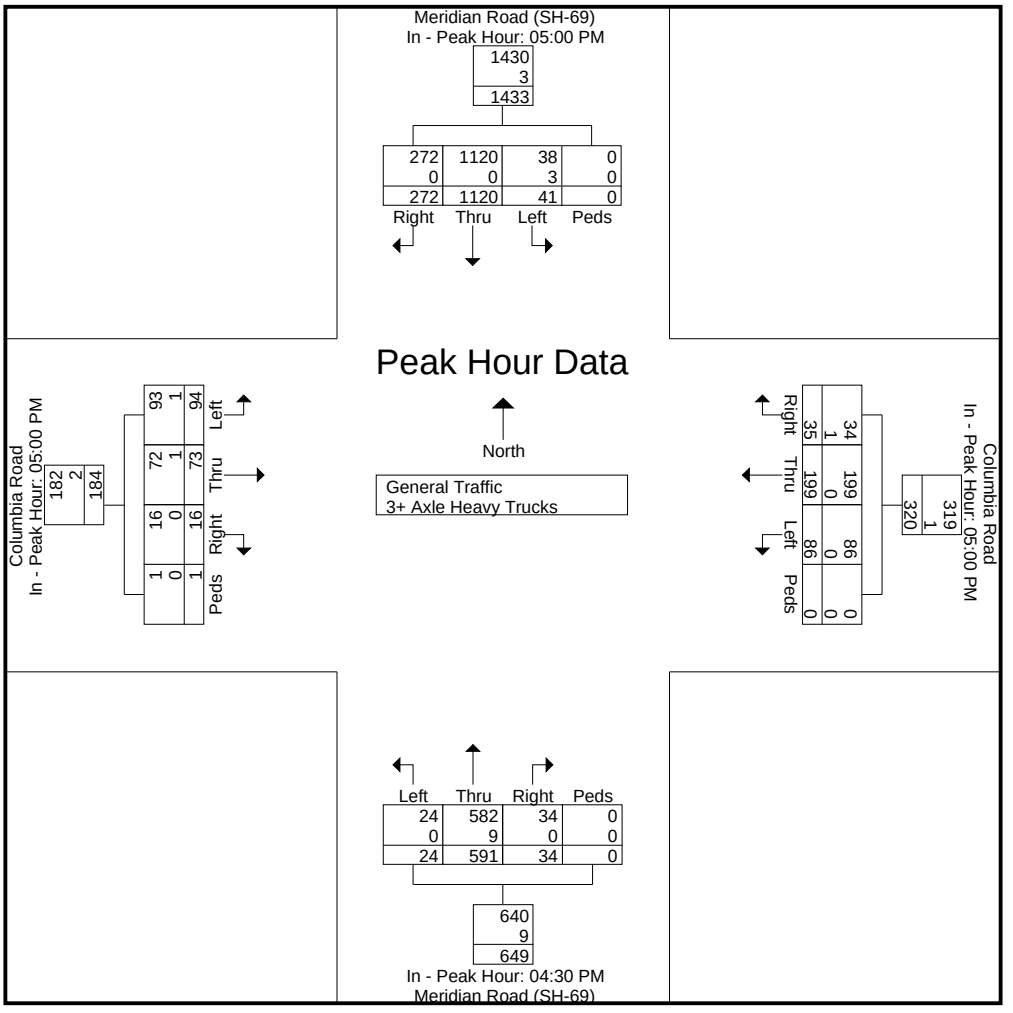
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: SH-69 / Columbia Rd
City, State: Ada County, Idaho
Control: Signalized

File Name : SH-69 (Meridian Rd) & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 6

	Meridian Road (SH-69) From North					Columbia Road From East					Meridian Road (SH-69) From South					Columbia Road 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:																					
	05:00 PM					05:00 PM					04:30 PM					05:00 PM					
+0 mins.	58	275	9	0	342	**10**	47	20	0	77	4	**164**	3	0	171	2	13	**27**	0	42	
+15 mins.	**78**	285	9	0	**372**	8	**58**	**31**	0	**97**	9	128	4	0	141	**9**	**23**	22	**1**	**55**	
+30 mins.	64	**291**	**14**	0	369	8	43	18	0	69	**11**	139	8	0	158	2	18	21	0	41	
+45 mins.	72	269	9	0	350	9	51	17	0	77	10	160	**9**	0	**179**	3	19	24	0	46	
Total Volume	272	1120	41	0	1433	35	199	86	0	320	34	591	24	0	649	16	73	94	1	184	
% App. Total	19	78.2	2.9	0		10.9	62.2	26.9	0		5.2	91.1	3.7	0		8.7	39.7	51.1	0.5		
PHF	.872	.962	.732	.000	.963	.875	.858	.694	.000	.825	.773	.901	.667	.000	.906	.444	.793	.870	.250	.836	
General Traffic	272	1120	38	0	1430	34	199	86	0	319	34	582	24	0	640	16	72	93	1	182	
% General Traffic	100	100	92.7	0	99.8	97.1	100	100	0	99.7	100	98.5	100	0	98.6	100	98.6	98.9	100	98.9	
3+ Axle Heavy Trucks	0	0	3	0	3	1	0	0	0	1	0	9	0	0	9	0	1	1	0	2	
% 3+ Axle Heavy Trucks	0	0	7.3	0	0.2	2.9	0	0	0	0.3	0	1.5	0	0	1.4	0	1.4	1.1	0	1.1	



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: SH-69 / Columbia Rd
City, State: Ada County, Idaho
Control: Signalized

File Name : SH-69 (Meridian Rd) & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 7

Image 1

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: SH-69 / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : SH-69 (Meridian Rd) & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 1

Groups Printed- General Traffic - 3+ Axle Heavy Trucks

	SH-69 (Meridian Road) From Northeast				Kuna Road From Southeast				SH-69 (Meridian Road) From Southwest				
Start Time	**Thru**	**Left**	**Peds**	**App. Total**	**Right**	**Left**	**Peds**	**App. Total**	**Right**	**Thru**	**Peds**	**App. Total**	**Int. Total**
07:00 AM	14	19	0	33	17	9	0	26	21	144	0	165	224
07:15 AM	42	26	0	68	26	16	0	42	31	138	0	169	279
07:30 AM	32	23	0	55	27	21	0	48	38	135	0	173	276
07:45 AM	51	13	0	64	14	16	0	30	19	83	0	102	196
Total	139	81	0	220	84	62	0	146	109	500	0	609	975
08:00 AM	41	10	0	51	12	9	0	21	19	92	0	111	183
08:15 AM	45	22	0	67	12	11	0	23	18	83	0	101	191
08:30 AM	36	11	0	47	15	5	0	20	19	91	0	110	177
08:45 AM	46	9	0	55	22	9	0	31	14	75	0	89	175
Total	168	52	0	220	61	34	0	95	70	341	0	411	726

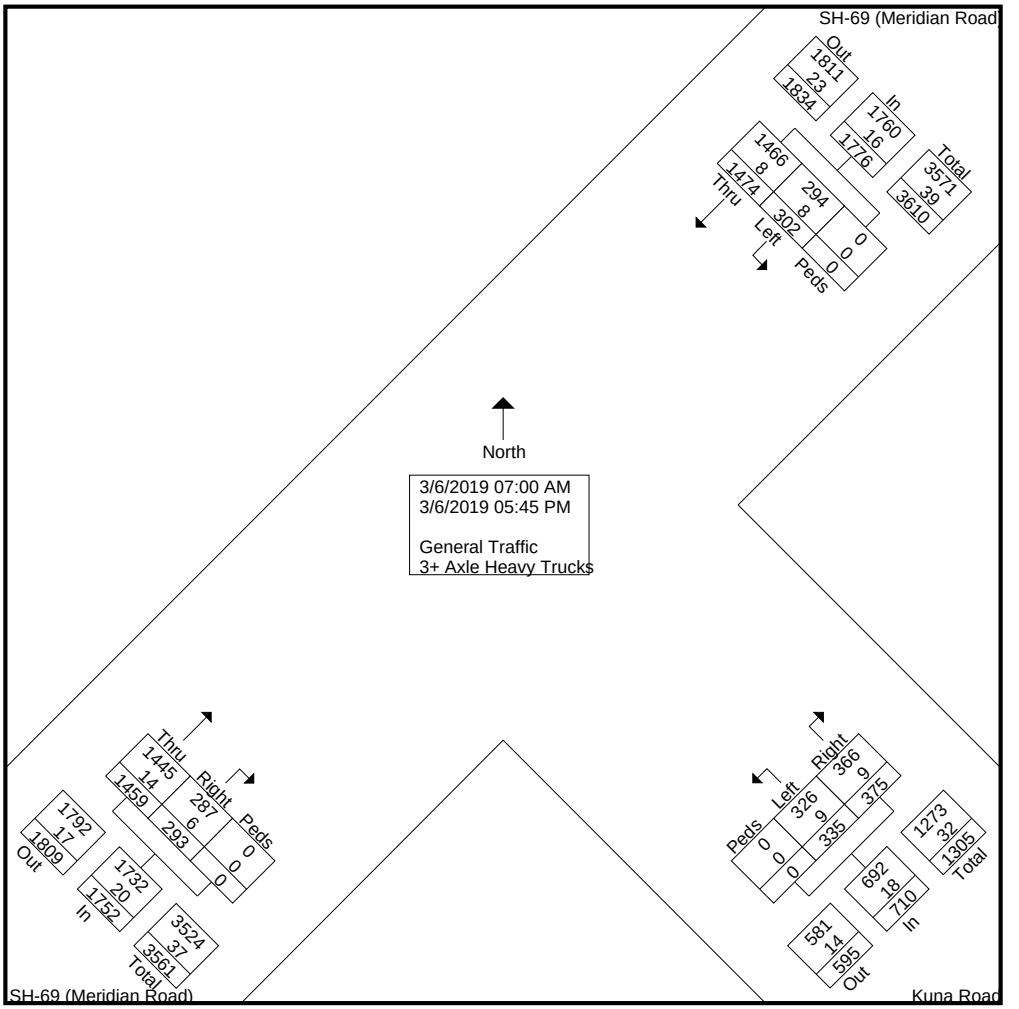
04:00 PM	117	20	0	137	20	24	0	44	15	81	0	96	277
04:15 PM	132	33	0	165	19	33	0	52	12	53	0	65	282
04:30 PM	135	19	0	154	25	26	0	51	15	79	0	94	299
04:45 PM	150	28	0	178	29	35	0	64	19	78	0	97	339
Total	534	100	0	634	93	118	0	211	61	291	0	352	1197
05:00 PM	156	14	0	170	32	30	0	62	24	103	0	127	359
05:15 PM	160	14	0	174	33	25	0	58	10	76	0	86	318
05:30 PM	168	22	0	190	35	37	0	72	11	72	0	83	345
05:45 PM	149	19	0	168	37	29	0	66	8	76	0	84	318
Total	633	69	0	702	137	121	0	258	53	327	0	380	1340
Grand Total	1474	302	0	1776	375	335	0	710	293	1459	0	1752	4238
Apprch %	83	17	0		52.8	47.2	0		16.7	83.3	0		
Total %	34.8	7.1	0	41.9	8.8	7.9	0	16.8	6.9	34.4	0	41.3	
General Traffic	1466	294	0	1760	366	326	0	692	287	1445	0	1732	4184
% General Traffic	99.5	97.4	0	99.1	97.6	97.3	0	97.5	98	99	0	98.9	98.7
3+ Axle Heavy Trucks	8	8	0	16	9	9	0	18	6	14	0	20	54
% 3+ Axle Heavy Trucks	0.5	2.6	0	0.9	2.4	2.7	0	2.5	2	1	0	1.1	1.3

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: SH-69 / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : SH-69 (Meridian Rd) & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 2



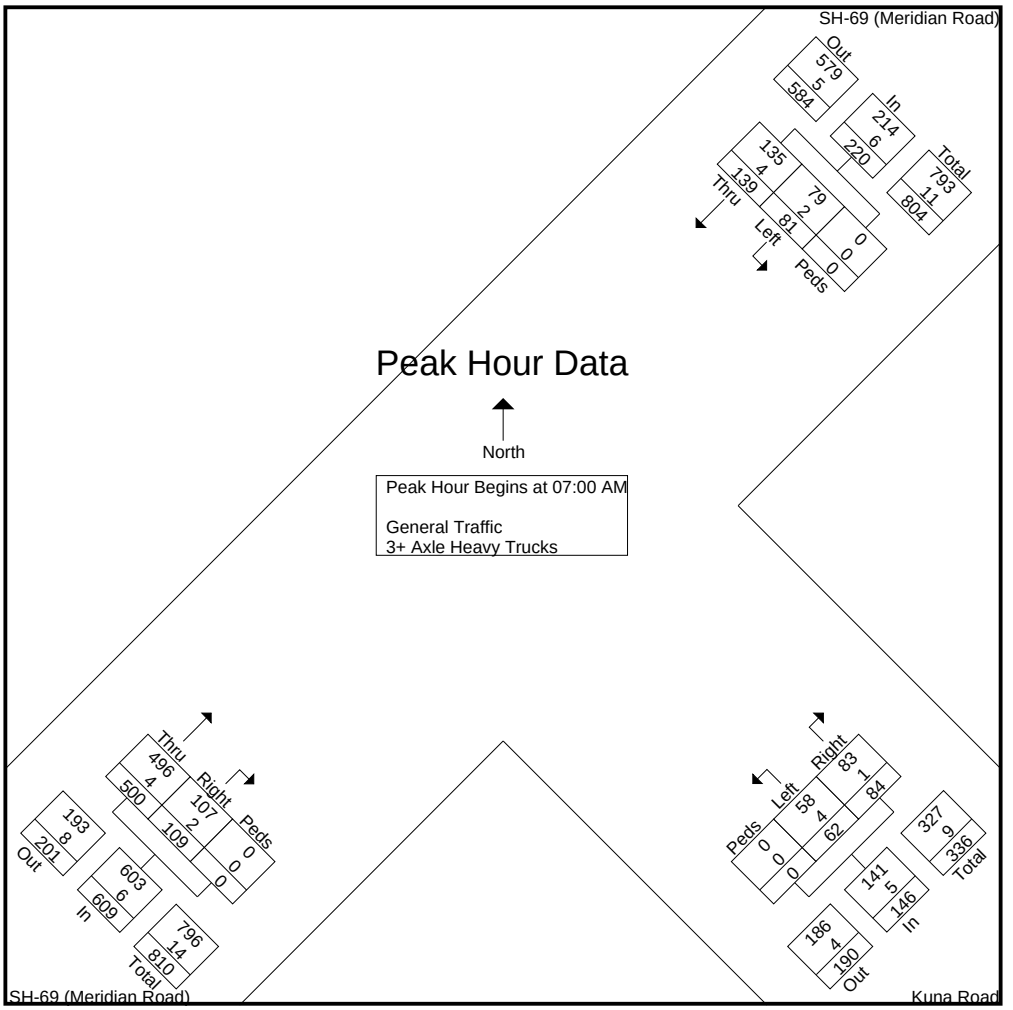
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: SH-69 / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : SH-69 (Meridian Rd) & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 3

	SH-69 (Meridian Road) From Northeast				Kuna Road From Southeast				SH-69 (Meridian Road) From Southwest				
Start Time	**Thru**	**Left**	**Peds**	**App. Total**	**Right**	**Left**	**Peds**	**App. Total**	**Right**	**Thru**	**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	14	19	0	33	17	9	0	26	21	**144**	0	165	224
07:15 AM	42	**26**	0	**68**	26	16	0	42	31	138	0	169	**279**
07:30 AM	32	23	0	55	**27**	**21**	0	**48**	**38**	135	0	**173**	276
07:45 AM	**51**	13	0	64	14	16	0	30	19	83	0	102	196
Total Volume	139	81	0	220	84	62	0	146	109	500	0	609	975
% App. Total	63.2	36.8	0		57.5	42.5	0		17.9	82.1	0		
PHF	.681	.779	.000	.809	.778	.738	.000	.760	.717	.868	.000	.880	.874
General Traffic	135	79	0	214	83	58	0	141	107	496	0	603	958
% General Traffic	97.1	97.5	0	97.3	98.8	93.5	0	96.6	98.2	99.2	0	99.0	98.3
3+ Axle Heavy Trucks	4	2	0	6	1	4	0	5	2	4	0	6	17
% 3+ Axle Heavy Trucks	2.9	2.5	0	2.7	1.2	6.5	0	3.4	1.8	0.8	0	1.0	1.7



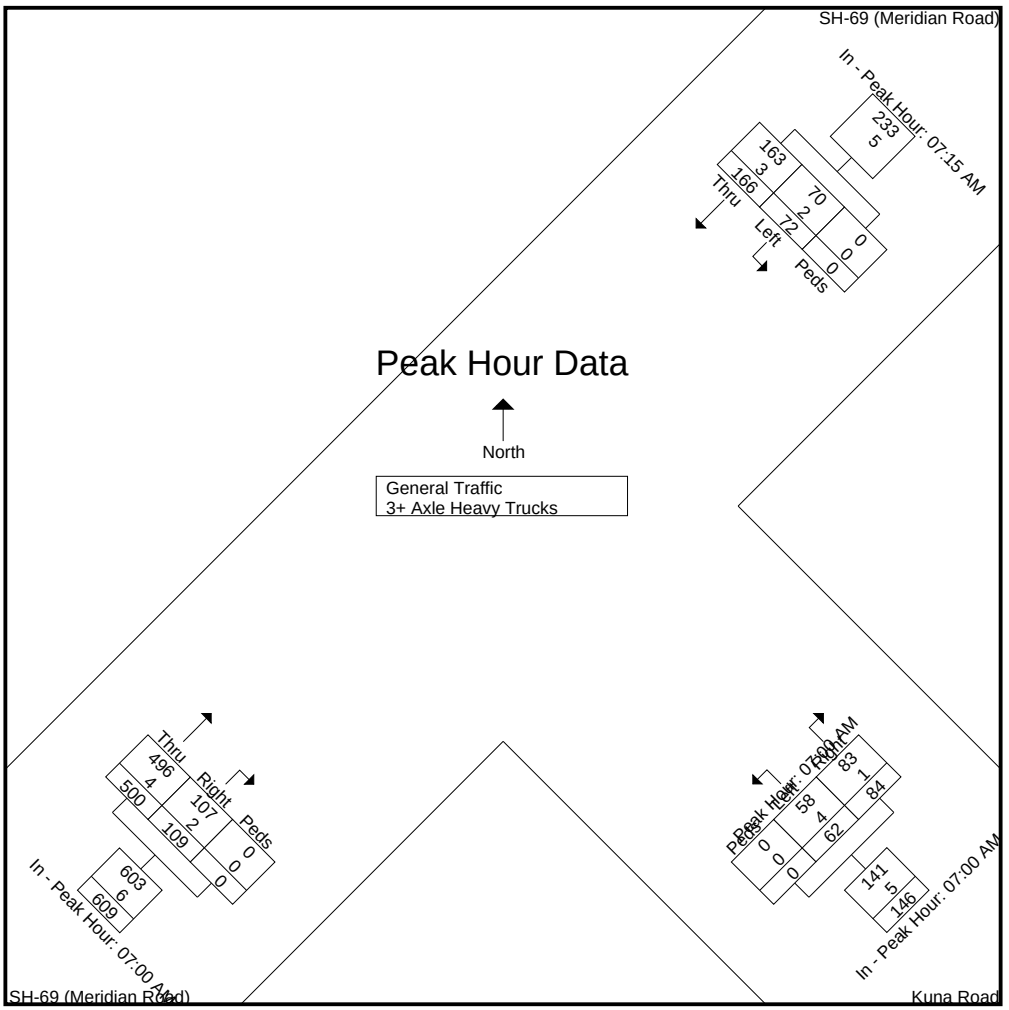
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: SH-69 / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : SH-69 (Meridian Rd) & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 4

	SH-69 (Meridian Road) From Northeast				Kuna Road From Southeast				SH-69 (Meridian Road) From Southwest				
Start Time	**Thru**	**Left**	**Peds**	**App. Total**	**Right**	**Left**	**Peds**	**App. Total**	**Right**	**Thru**	**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				
+0 mins.	42	**26**	0	**68**	17	9	0	26	21	**144**	0	165	
+15 mins.	32	23	0	55	26	16	0	42	31	138	0	169	
+30 mins.	**51**	13	0	64	**27**	**21**	0	**48**	**38**	135	0	**173**	
+45 mins.	41	10	0	51	14	16	0	30	19	83	0	102	
Total Volume	166	72	0	238	84	62	0	146	109	500	0	609	
% App. Total	69.7	30.3	0		57.5	42.5	0		17.9	82.1	0		
PHF	.814	.692	.000	.875	.778	.738	.000	.760	.717	.868	.000	.880	
General Traffic	163	70	0	233	83	58	0	141	107	496	0	603	
% General Traffic	98.2	97.2	0	97.9	98.8	93.5	0	96.6	98.2	99.2	0	99	
3+ Axle Heavy Trucks	3	2	0	5	1	4	0	5	2	4	0	6	
% 3+ Axle Heavy Trucks	1.8	2.8	0	2.1	1.2	6.5	0	3.4	1.8	0.8	0	1	



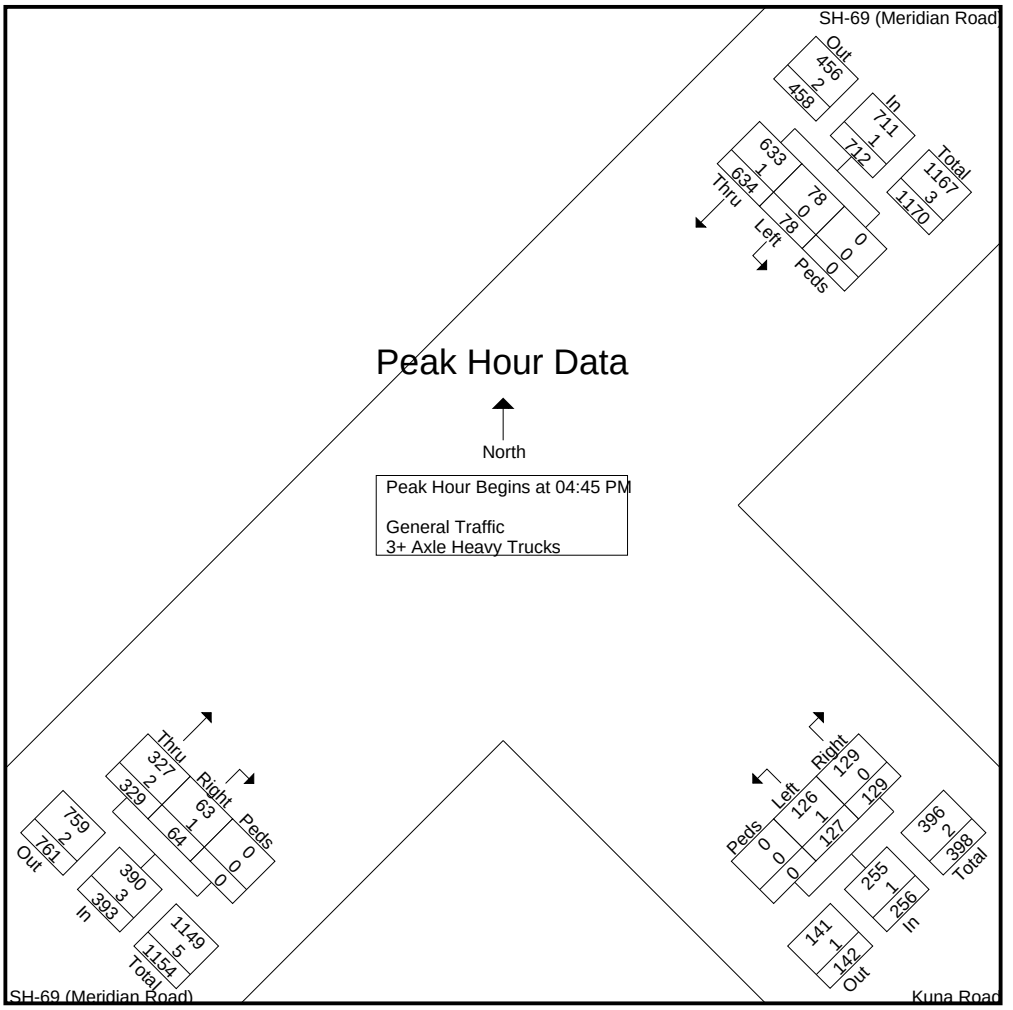
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: SH-69 / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : SH-69 (Meridian Rd) & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 5

	SH-69 (Meridian Road) From Northeast				Kuna Road From Southeast				SH-69 (Meridian Road) From Southwest				
Start Time	**Thru**	**Left**	**Peds**	**App. Total**	**Right**	**Left**	**Peds**	**App. Total**	**Right**	**Thru**	**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	150	**28**	0	178	29	35	0	64	19	78	0	97	339
05:00 PM	156	14	0	170	32	30	0	62	**24**	**103**	0	**127**	**359**
05:15 PM	160	14	0	174	33	25	0	58	10	76	0	86	318
05:30 PM	**168**	22	0	**190**	**35**	**37**	0	**72**	11	72	0	83	345
Total Volume	634	78	0	712	129	127	0	256	64	329	0	393	1361
% App. Total	89	11	0		50.4	49.6	0		16.3	83.7	0		
PHF	.943	.696	.000	.937	.921	.858	.000	.889	.667	.799	.000	.774	.948
General Traffic	633	78	0	711	129	126	0	255	63	327	0	390	1356
% General Traffic	99.8	100	0	99.9	100	99.2	0	99.6	98.4	99.4	0	99.2	99.6
3+ Axle Heavy Trucks	1	0	0	1	0	1	0	1	1	2	0	3	5
% 3+ Axle Heavy Trucks	0.2	0	0	0.1	0	0.8	0	0.4	1.6	0.6	0	0.8	0.4



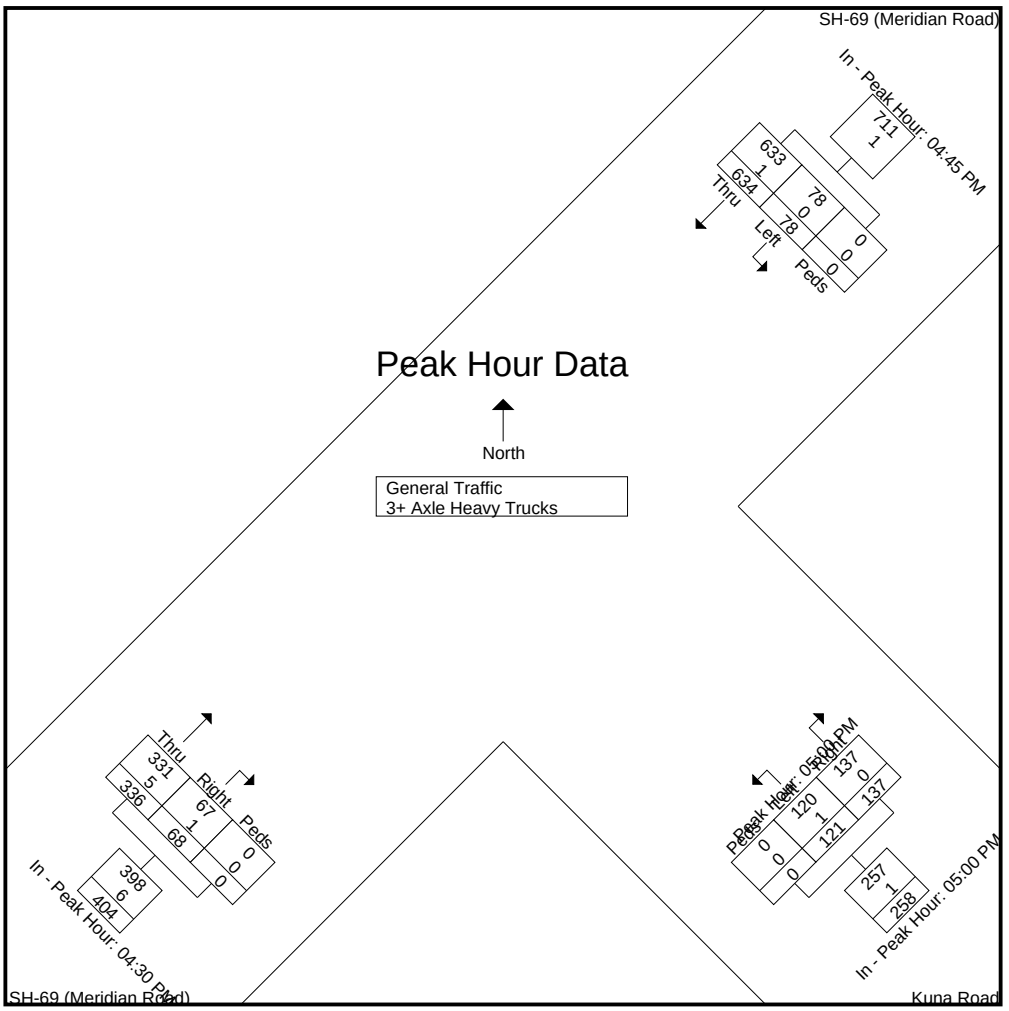
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: SH-69 / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : SH-69 (Meridian Rd) & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 6

	SH-69 (Meridian Road) From Northeast				Kuna Road From Southeast				SH-69 (Meridian Road) From Southwest				
Start Time	**Thru**	**Left**	**Peds**	**App. Total**	**Right**	**Left**	**Peds**	**App. Total**	**Right**	**Thru**	**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:													
	04:45 PM				05:00 PM				04:30 PM				
+0 mins.	150	**28**	0	178	32	30	0	62	15	79	0	94	
+15 mins.	156	14	0	170	33	25	0	58	19	78	0	97	
+30 mins.	160	14	0	174	35	**37**	0	**72**	**24**	**103**	0	**127**	
+45 mins.	**168**	22	0	**190**	**37**	29	0	66	10	76	0	86	
Total Volume	634	78	0	712	137	121	0	258	68	336	0	404	
% App. Total	89	11	0		53.1	46.9	0		16.8	83.2	0		
PHF	.943	.696	.000	.937	.926	.818	.000	.896	.708	.816	.000	.795	
General Traffic	633	78	0	711	137	120	0	257	67	331	0	398	
% General Traffic	99.8	100	0	99.9	100	99.2	0	99.6	98.5	98.5	0	98.5	
3+ Axle Heavy Trucks	1	0	0	1	0	1	0	1	1	5	0	6	
% 3+ Axle Heavy Trucks	0.2	0	0	0.1	0	0.8	0	0.4	1.5	1.5	0	1.5	



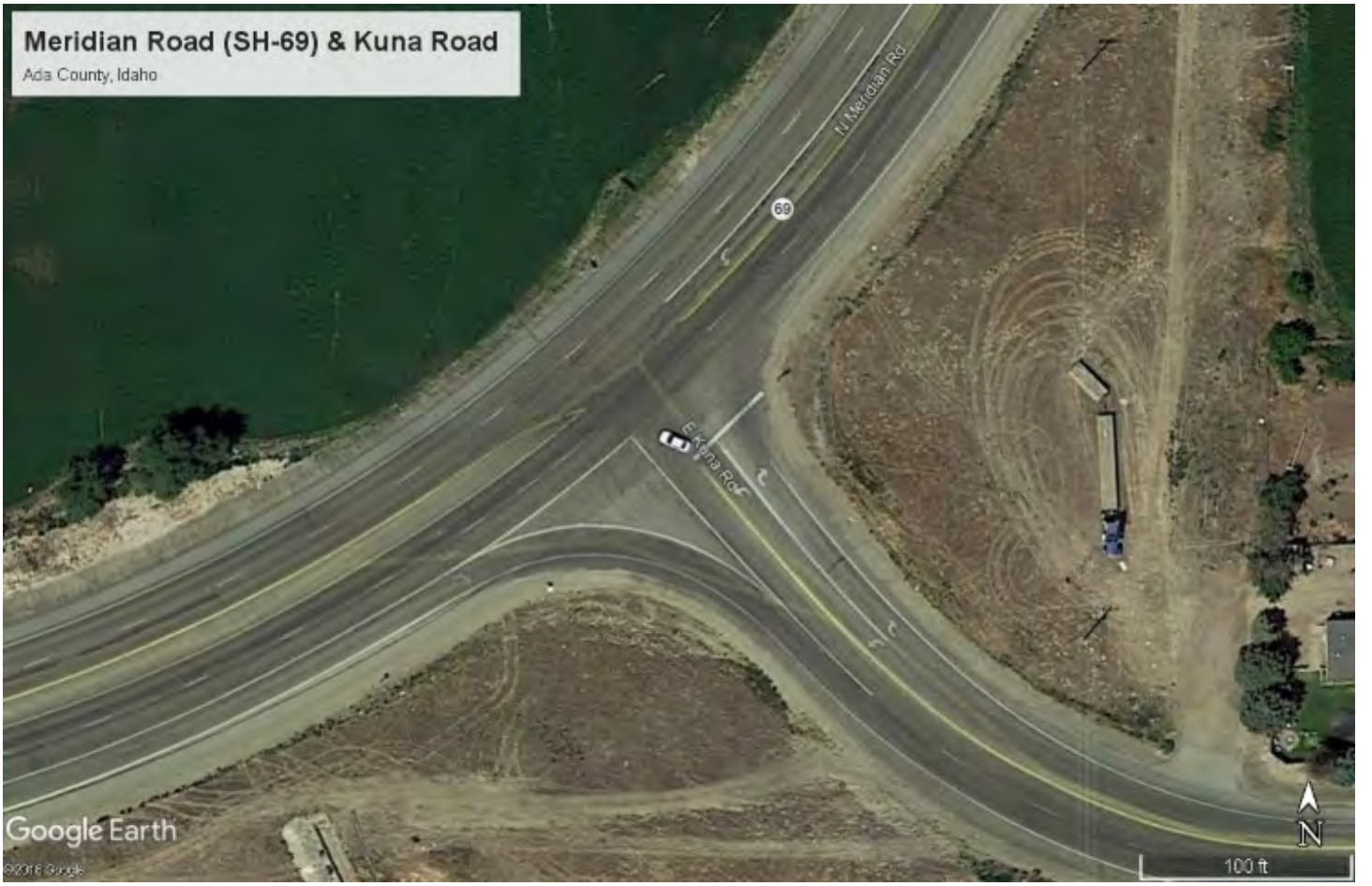
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: SH-69 / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : SH-69 (Meridian Rd) & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019

Image 1



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Locust Grove / Columbia Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Locust Grove Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 1

Groups Printed- General Traffic - 3+ Axle Heavy Trucks

	Locust Grove Road From North					Columbia Road From East					Locust Grove Road From South					Columbia Road 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	0	4	3	0	7	4	37	1	0	42	1	15	3	0	19	1	53	6	0	60	128
07:15 AM	2	7	4	0	13	3	46	2	0	51	3	13	1	0	17	0	74	10	0	84	165
07:30 AM	2	4	4	0	10	0	29	0	0	29	1	14	0	0	15	2	97	14	0	113	167
07:45 AM	1	3	0	0	4	3	29	5	0	37	3	13	0	0	16	3	75	9	0	87	144
Total	5	18	11	0	34	10	141	8	0	159	8	55	4	0	67	6	299	39	0	344	604
08:00 AM	2	2	1	0	5	7	27	3	0	37	5	5	4	0	14	1	71	6	0	78	134
08:15 AM	1	2	1	0	4	1	16	2	0	19	5	12	2	0	19	0	51	2	0	53	95
08:30 AM	2	0	7	0	9	5	16	1	0	22	4	7	1	0	12	0	53	5	0	58	101
08:45 AM	1	4	2	0	7	5	24	0	0	29	3	8	0	0	11	1	38	5	0	44	91
Total	6	8	11	0	25	18	83	6	0	107	17	32	7	0	56	2	213	18	0	233	421

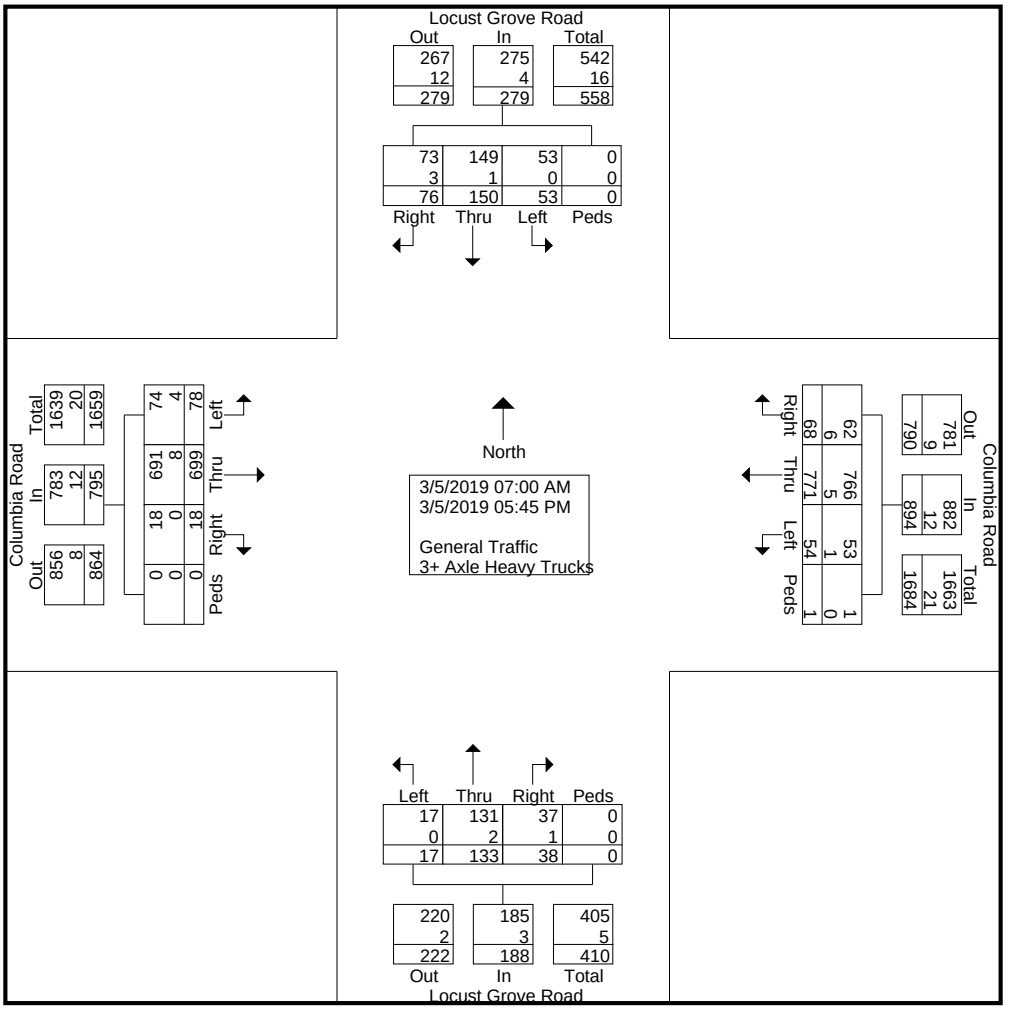
04:00 PM	6	9	5	0	20	8	51	2	1	62	1	4	1	0	6	4	25	2	0	31	119
04:15 PM	6	19	2	0	27	5	59	6	0	70	6	9	1	0	16	0	26	4	0	30	143
04:30 PM	11	15	6	0	32	5	63	8	0	76	1	4	1	0	6	2	26	2	0	30	144
04:45 PM	4	22	7	0	33	1	71	5	0	77	1	5	1	0	7	1	24	3	0	28	145
Total	27	65	20	0	112	19	244	21	1	285	9	22	4	0	35	7	101	11	0	119	551
05:00 PM	9	22	2	0	33	9	75	4	0	88	2	7	0	0	9	1	25	2	0	28	158
05:15 PM	8	12	4	0	24	3	84	4	0	91	0	4	0	0	4	1	22	2	0	25	144
05:30 PM	9	12	1	0	22	6	82	4	0	92	0	11	2	0	13	0	28	4	0	32	159
05:45 PM	12	13	4	0	29	3	62	7	0	72	2	2	0	0	4	1	11	2	0	14	119
Total	38	59	11	0	108	21	303	19	0	343	4	24	2	0	30	3	86	10	0	99	580
Grand Total	76	150	53	0	279	68	771	54	1	894	38	133	17	0	188	18	699	78	0	795	2156
Apprch %	27.2	53.8	19	0		7.6	86.2	6	0.1		20.2	70.7	9	0		2.3	87.9	9.8	0		
Total %	3.5	7	2.5	0	12.9	3.2	35.8	2.5	0	41.5	1.8	6.2	0.8	0	8.7	0.8	32.4	3.6	0	36.9	
General Traffic																					
% General Traffic	96.1	99.3	100	0	98.6	91.2	99.4	98.1	100	98.7	97.4	98.5	100	0	98.4	100	98.9	94.9	0	98.5	98.6
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	3.9	0.7	0	0	1.4	8.8	0.6	1.9	0	1.3	2.6	1.5	0	0	1.6	0	1.1	5.1	0	1.5	1.4

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Locust Grove / Columbia Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Locust Grove Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 2



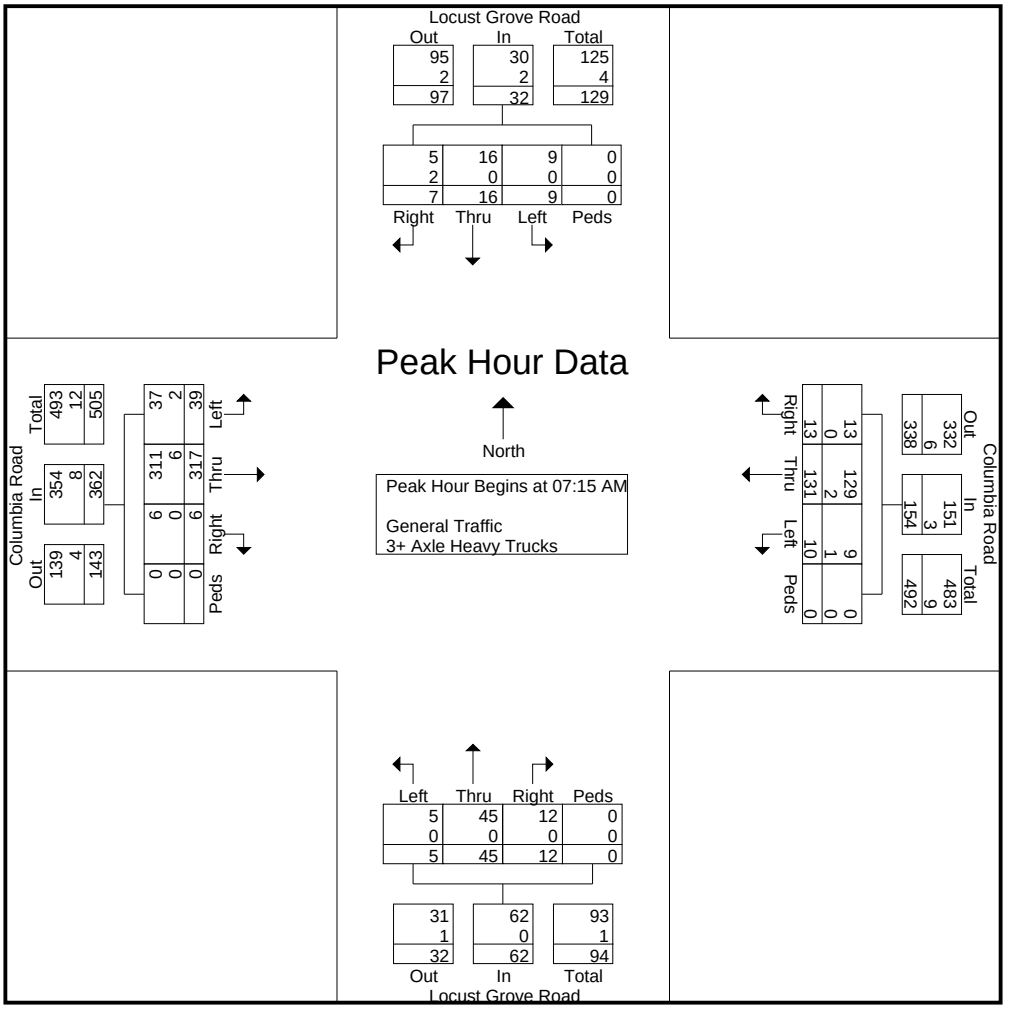
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Locust Grove / Columbia Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Locust Grove Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 3

	Locust Grove Road From North					Columbia Road From East					Locust Grove Road From South					Columbia Road 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 07:15 AM																					
07:15 AM	**2**	**7**	**4**	0	**13**	3	**46**	2	0	**51**	3	13	1	0	**17**	0	74	10	0	84	165
07:30 AM	2	4	4	0	10	0	29	0	0	29	1	**14**	0	0	15	2	**97**	**14**	0	**113**	**167**
07:45 AM	1	3	0	0	4	3	29	**5**	0	37	3	13	0	0	16	**3**	75	9	0	87	144
08:00 AM	2	2	1	0	5	**7**	27	3	0	37	**5**	5	**4**	0	14	1	71	6	0	78	134
Total Volume	7	16	9	0	32	13	131	10	0	154	12	45	5	0	62	6	317	39	0	362	610
% App. Total	21.9	50	28.1	0		8.4	85.1	6.5	0		19.4	72.6	8.1	0		1.7	87.6	10.8	0		
PHF	.875	.571	.563	.000	.615	.464	.712	.500	.000	.755	.600	.804	.313	.000	.912	.500	.817	.696	.000	.801	.913
General Traffic																					
% General Traffic	71.4	100	100	0	93.8	100	98.5	90.0	0	98.1	100	100	100	0	100	100	98.1	94.9	0	97.8	97.9
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	28.6	0	0	0	6.3	0	1.5	10.0	0	1.9	0	0	0	0	0	0	1.9	5.1	0	2.2	2.1



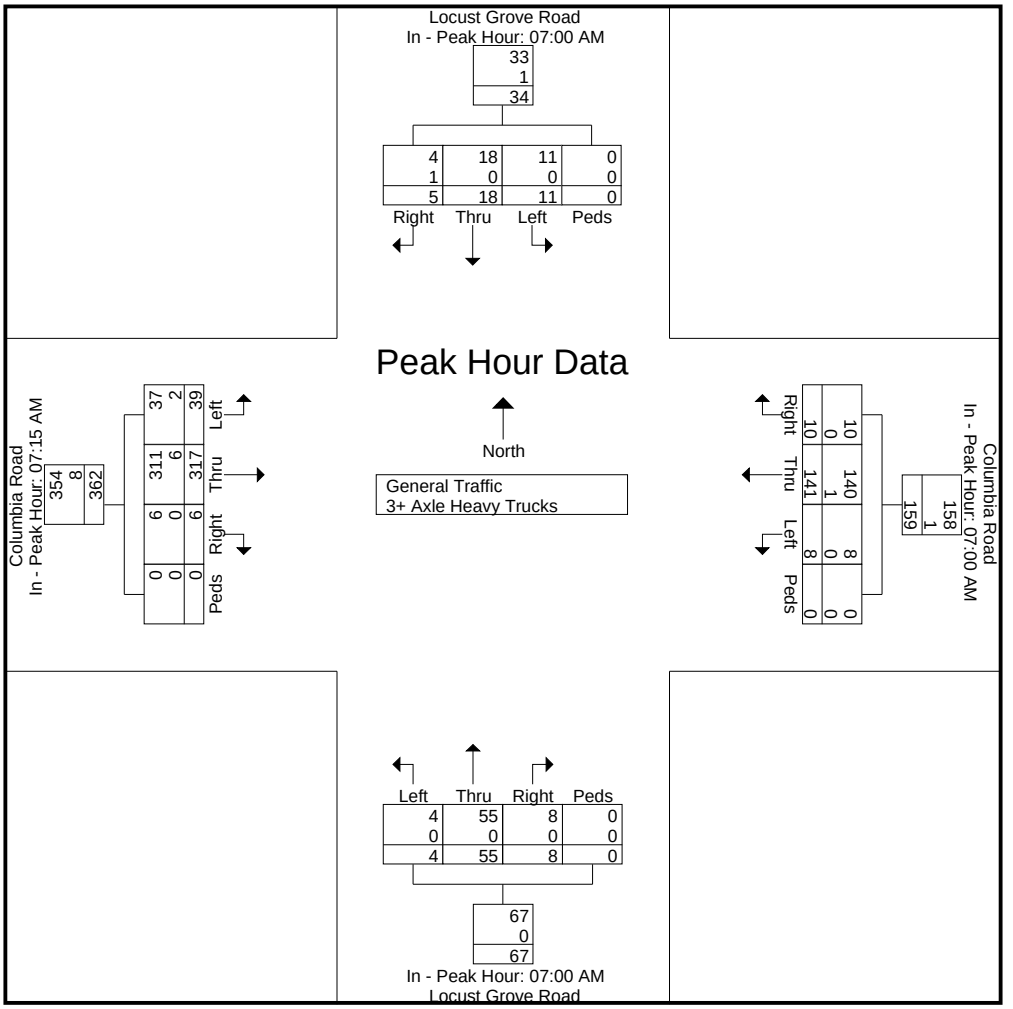
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Locust Grove / Columbia Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Locust Grove Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 4

	Locust Grove Road From North					Columbia Road From East					Locust Grove Road From South					Columbia Road 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:																					
	07:00 AM					07:00 AM					07:00 AM					07:15 AM					
+0 mins.	0	4	3	0	7	**4**	37	1	0	42	1	**15**	**3**	0	**19**	0	74	10	0	84	
+15 mins.	**2**	**7**	**4**	0	**13**	3	**46**	2	0	**51**	**3**	13	1	0	17	2	**97**	**14**	0	**113**	
+30 mins.	2	4	4	0	10	0	29	0	0	29	1	14	0	0	15	**3**	75	9	0	87	
+45 mins.	1	3	0	0	4	3	29	**5**	0	37	3	13	0	0	16	1	71	6	0	78	
Total Volume	5	18	11	0	34	10	141	8	0	159	8	55	4	0	67	6	317	39	0	362	
% App. Total	14.7	52.9	32.4	0		6.3	88.7	5	0		11.9	82.1	6	0		1.7	87.6	10.8	0		
PHF	.625	.643	.688	.000	.654	.625	.766	.400	.000	.779	.667	.917	.333	.000	.882	.500	.817	.696	.000	.801	
General Traffic																					
% General Traffic	80	100	100	0	97.1	100	99.3	100	0	99.4	100	100	100	0	100	100	98.1	94.9	0	97.8	
3+ Axle Heavy Trucks	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	6	2	0	8	
% 3+ Axle Heavy Trucks	20	0	0	0	2.9	0	0.7	0	0	0.6	0	0	0	0	0	0	1.9	5.1	0	2.2	



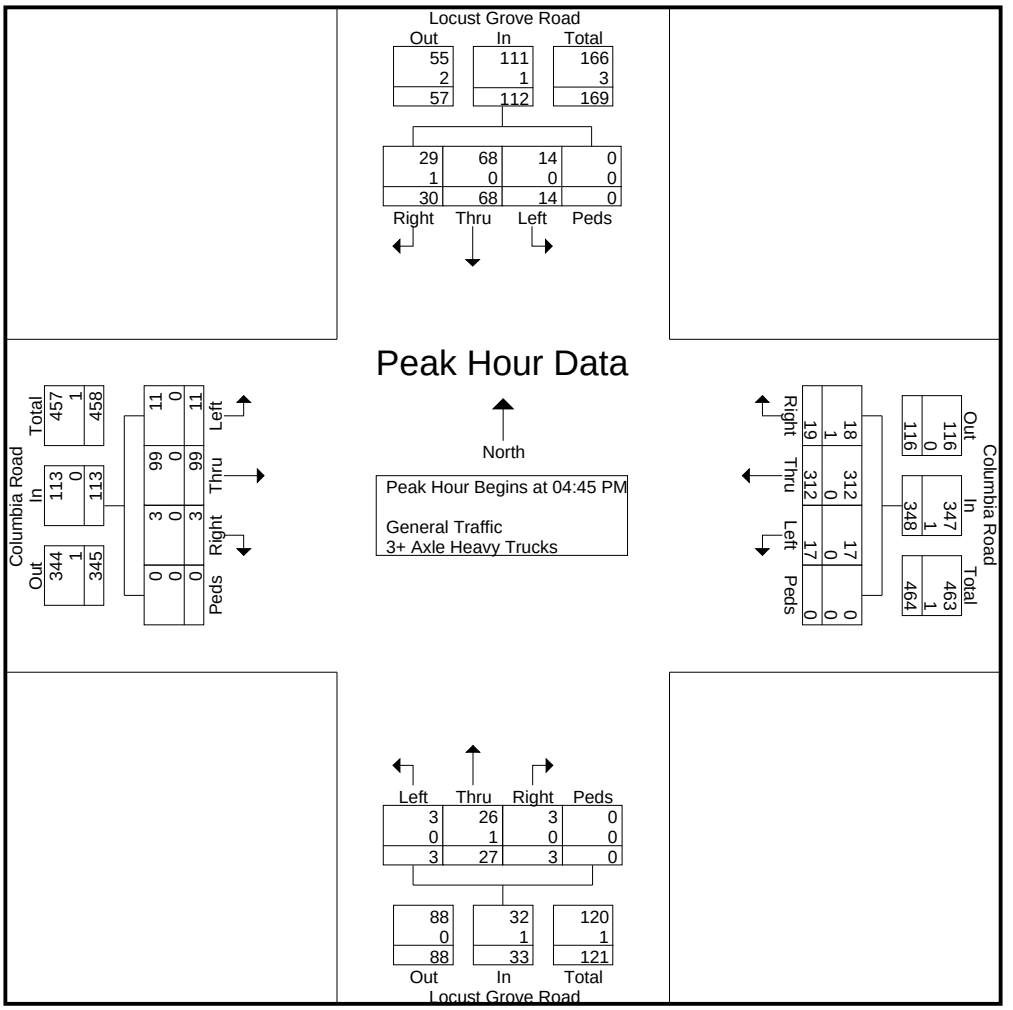
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Locust Grove / Columbia Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Locust Grove Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 5

	Locust Grove Road From North					Columbia Road From East					Locust Grove Road From South					Columbia Road 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	4	**22**	**7**	0	**33**	1	71	**5**	0	77	1	5	1	0	7	**1**	24	3	0	28	145
05:00 PM	**9**	22	2	0	33	**9**	75	4	0	88	**2**	7	0	0	9	1	25	2	0	28	158
05:15 PM	8	12	4	0	24	3	**84**	4	0	91	0	4	0	0	4	1	22	2	0	25	144
05:30 PM	9	12	1	0	22	6	82	4	0	**92**	0	**11**	**2**	0	**13**	0	**28**	**4**	0	**32**	**159**
Total Volume	30	68	14	0	112	19	312	17	0	348	3	27	3	0	33	3	99	11	0	113	606
% App. Total	26.8	60.7	12.5	0		5.5	89.7	4.9	0		9.1	81.8	9.1	0		2.7	87.6	9.7	0		
PHF	.833	.773	.500	.000	.848	.528	.929	.850	.000	.946	.375	.614	.375	.000	.635	.750	.884	.688	.000	.883	.953
General Traffic																					
% General Traffic	96.7	100	100	0	99.1	94.7	100	100	0	99.7	100	96.3	100	0	97.0	100	100	100	0	100	99.5
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	3.3	0	0	0	0.9	5.3	0	0	0	0.3	0	3.7	0	0	3.0	0	0	0	0	0	0.5



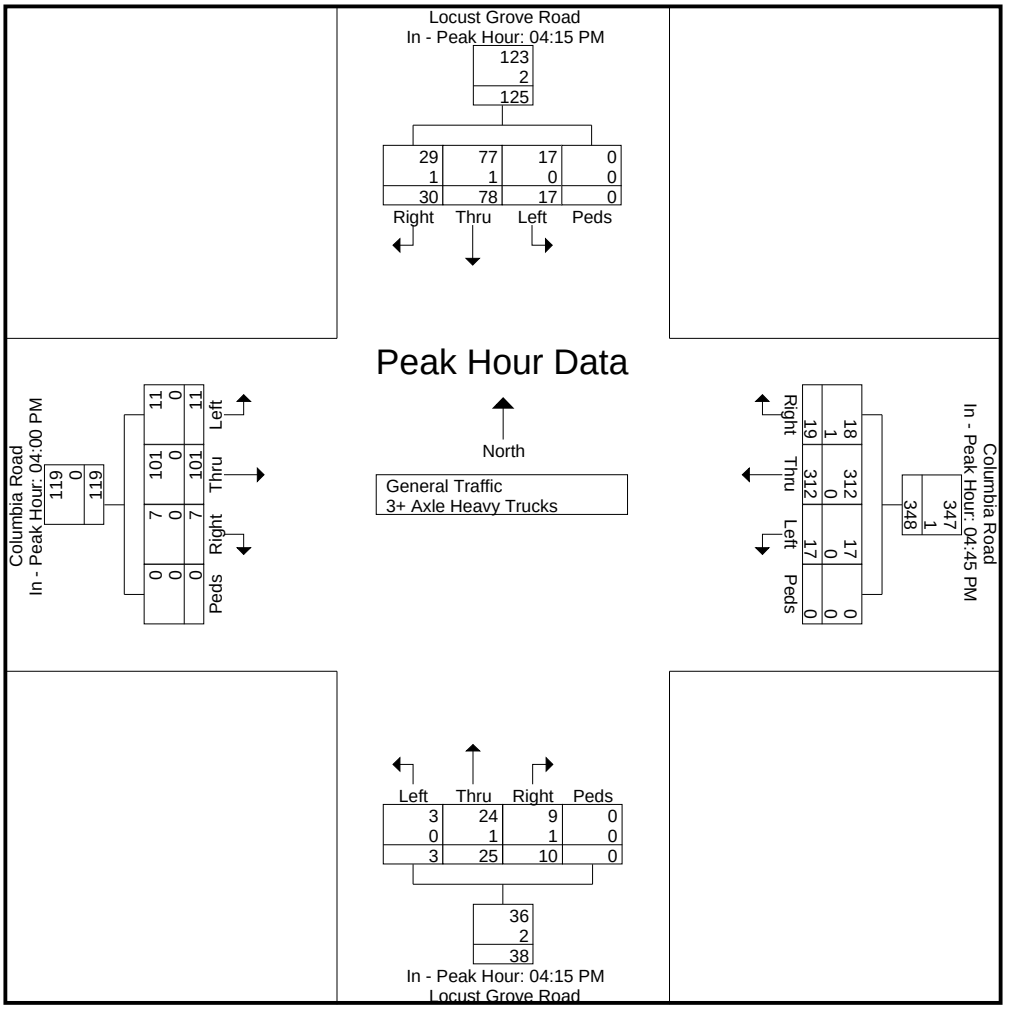
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Locust Grove / Columbia Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Locust Grove Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 6

	Locust Grove Road From North					Columbia Road From East					Locust Grove Road From South					Columbia Road 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:																					
	04:15 PM					04:45 PM					04:15 PM					04:00 PM					
+0 mins.	6	19	2	0	27	1	71	**5**	0	77	**6**	**9**	**1**	0	**16**	**4**	25	2	0	**31**	
+15 mins.	**11**	15	6	0	32	**9**	75	4	0	88	1	4	1	0	6	0	**26**	**4**	0	30	
+30 mins.	4	**22**	**7**	0	**33**	3	**84**	4	0	91	1	5	1	0	7	2	26	2	0	30	
+45 mins.	9	22	2	0	33	6	82	4	0	**92**	2	7	0	0	9	1	24	3	0	28	
Total Volume	30	78	17	0	125	19	312	17	0	348	10	25	3	0	38	7	101	11	0	119	
% App. Total	24	62.4	13.6	0		5.5	89.7	4.9	0		26.3	65.8	7.9	0		5.9	84.9	9.2	0		
PHF	.682	.886	.607	.000	.947	.528	.929	.850	.000	.946	.417	.694	.750	.000	.594	.438	.971	.688	.000	.960	
General Traffic																					
% General Traffic	96.7	98.7	100	0	98.4	94.7	100	100	0	99.7	90	96	100	0	94.7	100	100	100	0	100	
3+ Axle Heavy Trucks	1	1	0	0	2	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0	
% 3+ Axle Heavy Trucks	3.3	1.3	0	0	1.6	5.3	0	0	0	0.3	10	4	0	0	5.3	0	0	0	0	0	



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Locust Grove / Columbia Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Locust Grove Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019

Image 1

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Locust Grove / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Locust Grove Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 1

Groups Printed- General Traffic - 3+ Axle Heavy Trucks

	Locust Grove Road From North					Kuna Road From East					Gravel Road From South					Kuna Road 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	0	2	0	3	0	19	0	0	19	0	0	0	0	0	0	40	3	0	43	65
07:15 AM	1	0	1	0	2	0	36	0	0	36	0	0	0	0	0	0	58	3	0	61	99
07:30 AM	0	0	0	0	0	2	31	0	0	33	0	0	0	0	0	0	60	1	0	61	94
07:45 AM	3	0	2	0	5	2	22	0	0	24	0	0	1	0	1	0	37	2	0	39	69
Total	5	0	5	0	10	4	108	0	0	112	0	0	1	0	1	0	195	9	0	204	327
08:00 AM	0	0	1	0	1	1	14	0	0	15	0	0	0	0	0	0	34	1	0	35	51
08:15 AM	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	0	38	3	0	41	57
08:30 AM	0	0	1	0	1	0	18	0	0	18	0	0	0	0	0	0	31	0	0	31	50
08:45 AM	2	0	1	0	3	0	22	0	0	22	0	0	0	0	0	0	17	0	0	17	42
Total	2	0	3	0	5	1	70	0	0	71	0	0	0	0	0	0	120	4	0	124	200

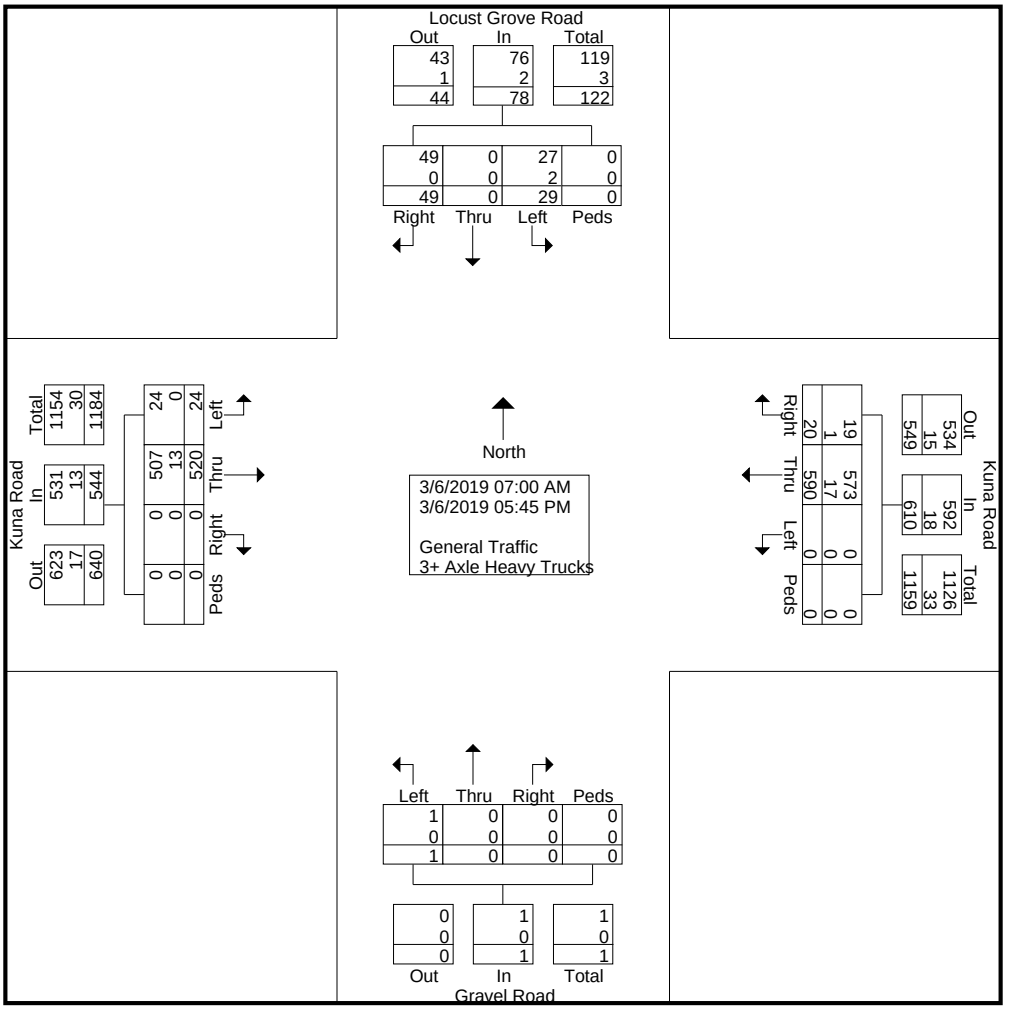
04:00 PM	3	0	3	0	6	4	40	0	0	44	0	0	0	0	0	0	24	2	0	26	76
04:15 PM	7	0	2	0	9	3	45	0	0	48	0	0	0	0	0	0	31	2	0	33	90
04:30 PM	6	0	1	0	7	0	39	0	0	39	0	0	0	0	0	0	30	0	0	30	76
04:45 PM	3	0	0	0	3	1	55	0	0	56	0	0	0	0	0	0	29	1	0	30	89
Total	19	0	6	0	25	8	179	0	0	187	0	0	0	0	0	0	114	5	0	119	331
05:00 PM	7	0	3	0	10	2	51	0	0	53	0	0	0	0	0	0	30	3	0	33	96
05:15 PM	8	0	2	0	10	2	58	0	0	60	0	0	0	0	0	0	21	0	0	21	91
05:30 PM	5	0	7	0	12	1	62	0	0	63	0	0	0	0	0	0	20	3	0	23	98
05:45 PM	3	0	3	0	6	2	62	0	0	64	0	0	0	0	0	0	20	0	0	20	90
Total	23	0	15	0	38	7	233	0	0	240	0	0	0	0	0	0	91	6	0	97	375
Grand Total	49	0	29	0	78	20	590	0	0	610	0	0	1	0	1	0	520	24	0	544	1233
Apprch %	62.8	0	37.2	0		3.3	96.7	0	0		0	0	100	0		0	95.6	4.4	0		
Total %	4	0	2.4	0	6.3	1.6	47.9	0	0	49.5	0	0	0.1	0	0.1	0	42.2	1.9	0	44.1	
General Traffic																					
% General Traffic	100	0	93.1	0	97.4	95	97.1	0	0	97	0	0	100	0	100	0	97.5	100	0	97.6	97.3
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	0	0	6.9	0	2.6	5	2.9	0	0	3	0	0	0	0	0	0	2.5	0	0	2.4	2.7

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Locust Grove / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Locust Grove Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 2



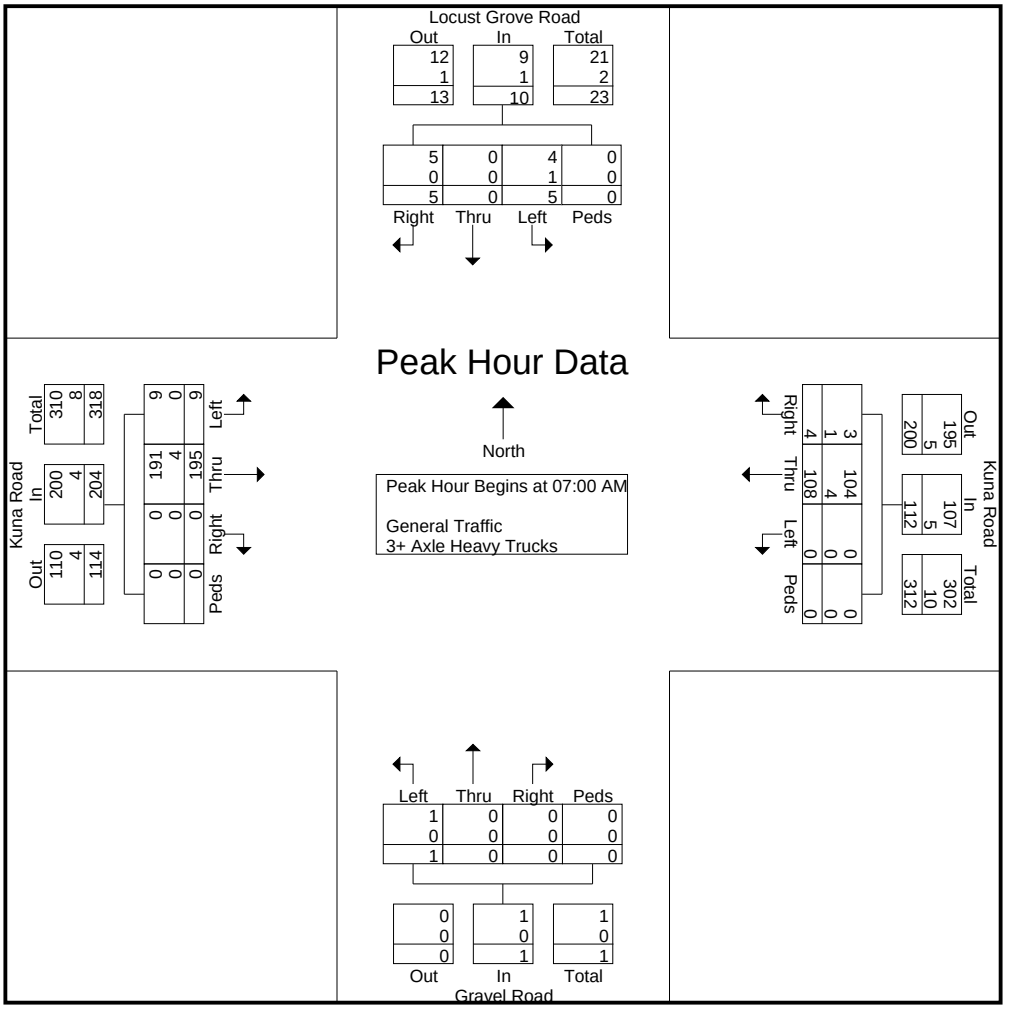
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Locust Grove / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Locust Grove Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 3

	Locust Grove Road From North					Kuna Road From East					Gravel Road From South					Kuna Road 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	0	**2**	0	3	0	19	0	0	19	0	0	0	0	0	0	40	**3**	0	43	65
07:15 AM	1	0	1	0	2	0	**36**	0	0	**36**	0	0	0	0	0	0	58	3	0	**61**	**99**
07:30 AM	0	0	0	0	0	**2**	31	0	0	33	0	0	0	0	0	0	**60**	1	0	61	94
07:45 AM	**3**	0	2	0	**5**	2	22	0	0	24	0	0	**1**	0	**1**	0	37	2	0	39	69
Total Volume	5	0	5	0	10	4	108	0	0	112	0	0	1	0	1	0	195	9	0	204	327
% App. Total	50	0	50	0		3.6	96.4	0	0		0	0	100	0		0	95.6	4.4	0		
PHF	.417	.000	.625	.000	.500	.500	.750	.000	.000	.778	.000	.000	.250	.000	.250	.000	.813	.750	.000	.836	.826
General Traffic																					
% General Traffic	100	0	80.0	0	90.0	75.0	96.3	0	0	95.5	0	0	100	0	100	0	97.9	100	0	98.0	96.9
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	0	0	20.0	0	10.0	25.0	3.7	0	0	4.5	0	0	0	0	0	0	2.1	0	0	2.0	3.1



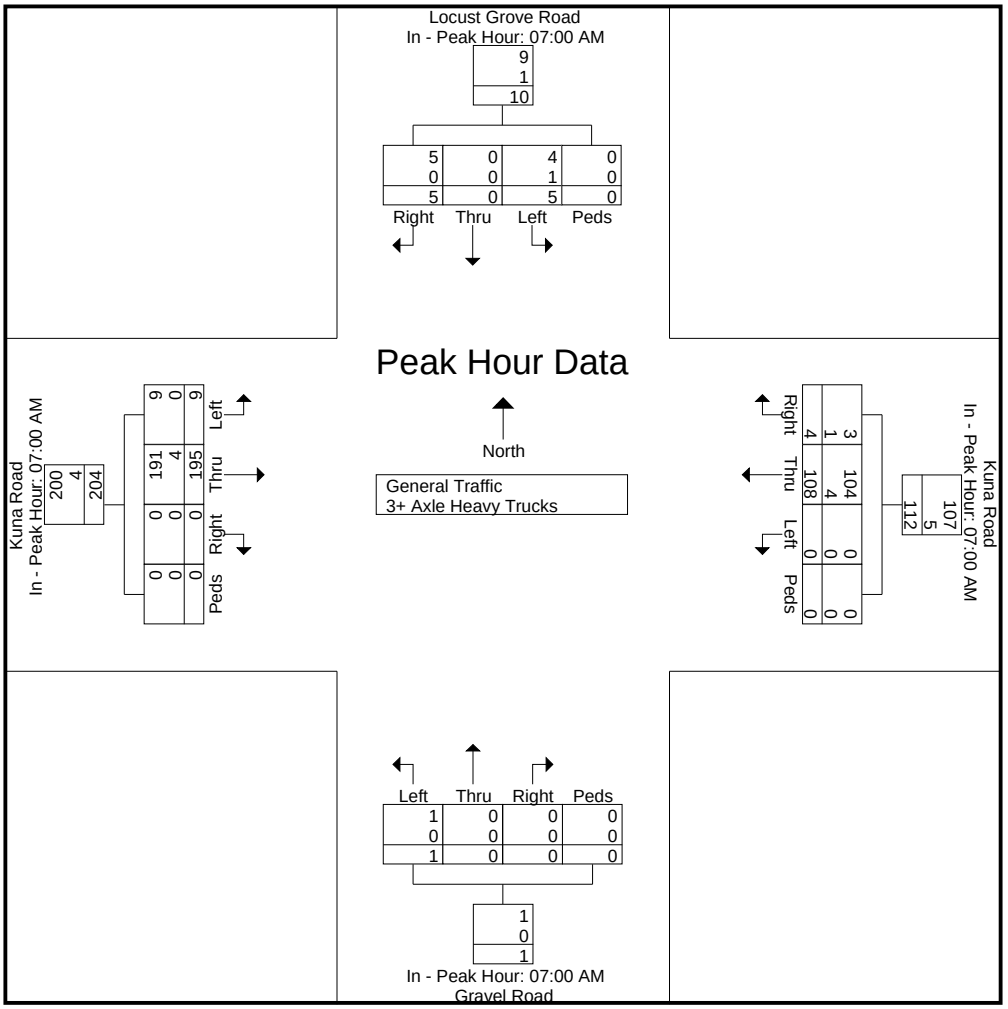
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Locust Grove / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Locust Grove Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 4

	Locust Grove Road From North					Kuna Road From East					Gravel Road From South					Kuna Road 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:																					
	07:00 AM					07:00 AM					07:00 AM					07:00 AM					
+0 mins.	1	0	**2**	0	3	0	19	0	0	19	0	0	0	0	0	0	40	**3**	0	43	
+15 mins.	1	0	1	0	2	0	**36**	0	0	**36**	0	0	0	0	0	0	58	3	0	**61**	
+30 mins.	0	0	0	0	0	**2**	31	0	0	33	0	0	0	0	0	0	**60**	1	0	61	
+45 mins.	**3**	0	2	0	**5**	2	22	0	0	24	0	0	**1**	0	**1**	0	37	2	0	39	
Total Volume	5	0	5	0	10	4	108	0	0	112	0	0	1	0	1	0	195	9	0	204	
% App. Total	50	0	50	0		3.6	96.4	0	0		0	0	100	0		0	95.6	4.4	0		
PHF	.417	.000	.625	.000	.500	.500	.750	.000	.000	.778	.000	.000	.250	.000	.250	.000	.813	.750	.000	.836	
General Traffic																					
% General Traffic	100	0	80	0	90	75	96.3	0	0	95.5	0	0	100	0	100	0	97.9	100	0	98	
3+ Axle Heavy Trucks	0	0	1	0	1	1	4	0	0	5	0	0	0	0	0	0	4	0	0	4	
% 3+ Axle Heavy Trucks	0	0	20	0	10	25	3.7	0	0	4.5	0	0	0	0	0	0	2.1	0	0	2	



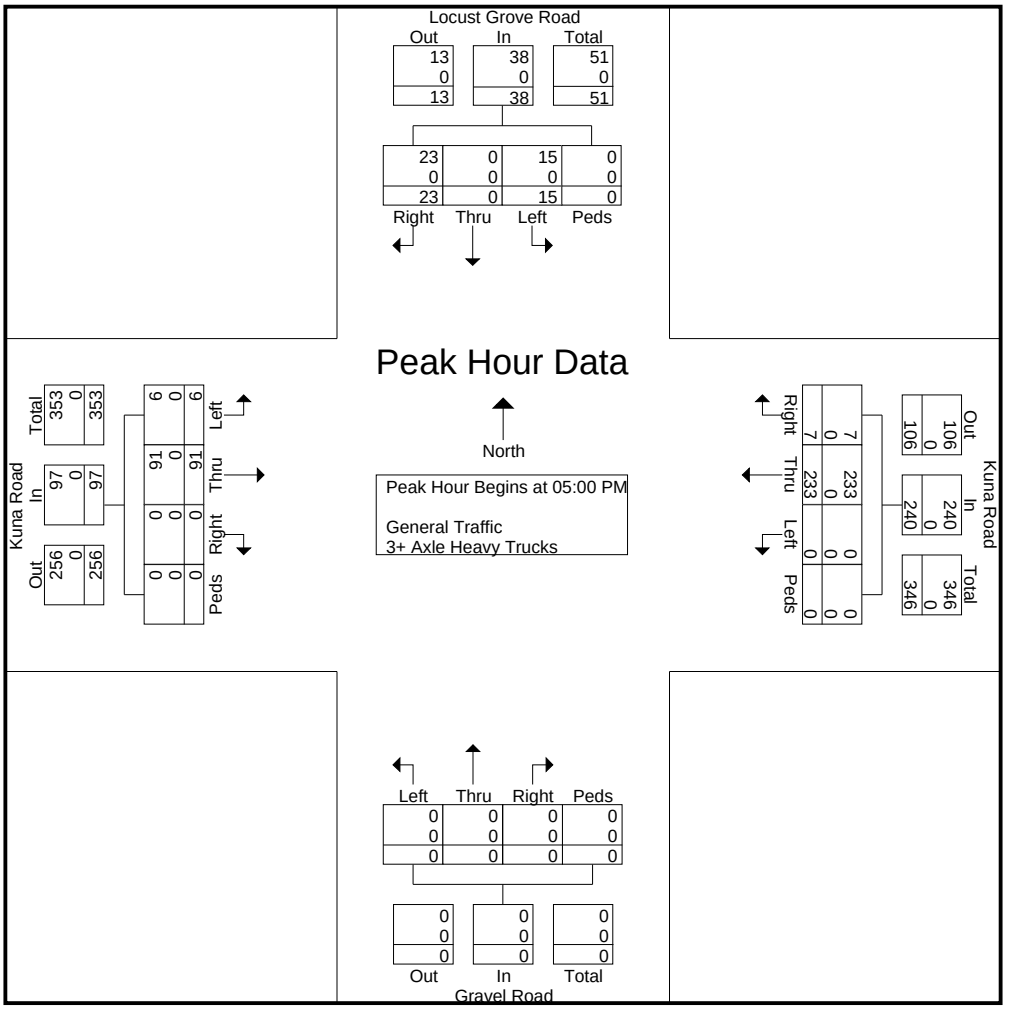
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Locust Grove / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Locust Grove Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 5

	Locust Grove Road From North					Kuna Road From East					Gravel Road From South					Kuna Road 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 05:00 PM																					
05:00 PM	7	0	3	0	10	**2**	51	0	0	53	0	0	0	0	0	0	**30**	**3**	0	**33**	96
05:15 PM	**8**	0	2	0	10	2	58	0	0	60	0	0	0	0	0	0	21	0	0	21	91
05:30 PM	5	0	**7**	0	**12**	1	**62**	0	0	63	0	0	0	0	0	0	20	3	0	23	**98**
05:45 PM	3	0	3	0	6	2	62	0	0	**64**	0	0	0	0	0	0	20	0	0	20	90
Total Volume	23	0	15	0	38	7	233	0	0	240	0	0	0	0	0	0	91	6	0	97	375
% App. Total	60.5	0	39.5	0		2.9	97.1	0	0		0	0	0	0		0	93.8	6.2	0		
PHF	.719	.000	.536	.000	.792	.875	.940	.000	.000	.938	.000	.000	.000	.000	.000	.000	.758	.500	.000	.735	.957
General Traffic																					
% General Traffic	100	0	100	0	100	100	100	0	0	100	0	0	0	0	0	0	100	100	0	100	100
3+ Axle Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 3+ Axle Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



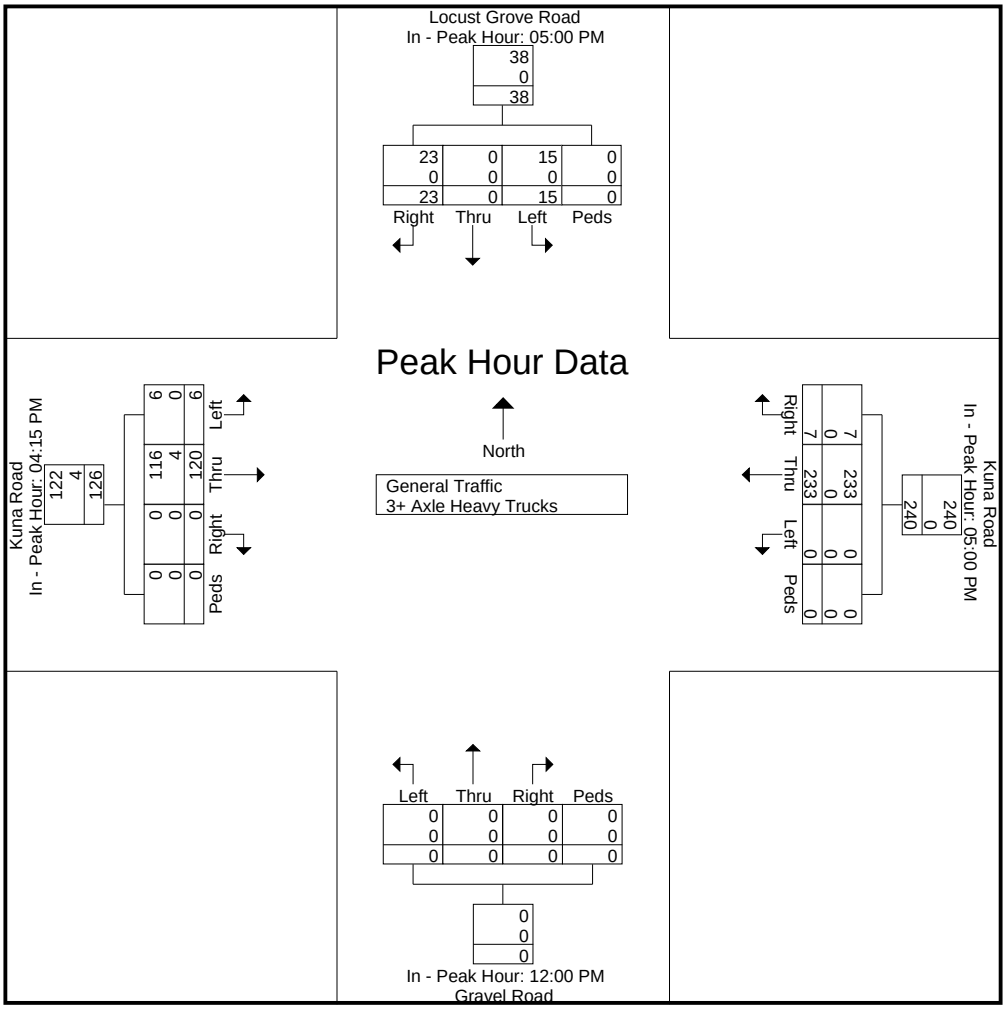
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Locust Grove / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Locust Grove Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 6

	Locust Grove Road From North					Kuna Road From East					Gravel Road From South					Kuna Road 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:																					
	05:00 PM					05:00 PM					12:00 PM					04:15 PM					
+0 mins.	7	0	3	0	10	**2**	51	0	0	53	0	0	0	0	0	0	**31**	2	0	**33**	
+15 mins.	**8**	0	2	0	10	2	58	0	0	60	0	0	0	0	0	0	30	0	0	30	
+30 mins.	5	0	**7**	0	**12**	1	**62**	0	0	63	0	0	0	0	0	0	29	1	0	30	
+45 mins.	3	0	3	0	6	2	62	0	0	**64**	0	0	0	0	0	0	30	**3**	0	33	
Total Volume	23	0	15	0	38	7	233	0	0	240	0	0	0	0	0	0	120	6	0	126	
% App. Total	60.5	0	39.5	0		2.9	97.1	0	0		0	0	0	0		0	95.2	4.8	0		
PHF	.719	.000	.536	.000	.792	.875	.940	.000	.000	.938	.000	.000	.000	.000	.000	.000	.968	.500	.000	.955	
General Traffic																					
% General Traffic	100	0	100	0	100	100	100	0	0	100	0	0	0	0	0	0	96.7	100	0	96.8	
3+ Axle Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	
% 3+ Axle Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.3	0	0	3.2	



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Locust Grove / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Locust Grove Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 7

Image 1

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Eagle Rd / Columbia Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Eagle Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 1

Groups Printed- General Traffic - 3+ Axle Heavy Trucks

	Eagle Road From North					Columbia Road From East					Eagle Road From South					Columbia Road 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	2	0	1	0	3	7	40	0	0	47	1	5	0	0	6	0	31	27	0	58	114
07:15 AM	4	3	2	0	9	7	39	0	0	46	1	3	4	0	8	1	46	31	0	78	141
07:30 AM	4	3	5	0	12	9	24	1	0	34	1	4	0	0	5	2	64	29	0	95	146
07:45 AM	8	1	6	0	15	13	27	1	0	41	1	5	3	0	9	2	53	25	0	80	145
Total	18	7	14	0	39	36	130	2	0	168	4	17	7	0	28	5	194	112	0	311	546
08:00 AM	6	1	1	0	8	8	27	1	0	36	1	8	1	0	10	0	50	31	0	81	135
08:15 AM	5	0	4	0	9	2	12	0	0	14	0	4	1	0	5	0	34	28	0	62	90
08:30 AM	4	0	1	0	5	7	17	0	0	24	2	1	1	0	4	1	39	22	0	62	95
08:45 AM	5	0	3	0	8	9	23	0	0	32	1	7	0	0	8	0	26	22	0	48	96
Total	20	1	9	0	30	26	79	1	0	106	4	20	3	0	27	1	149	103	0	253	416

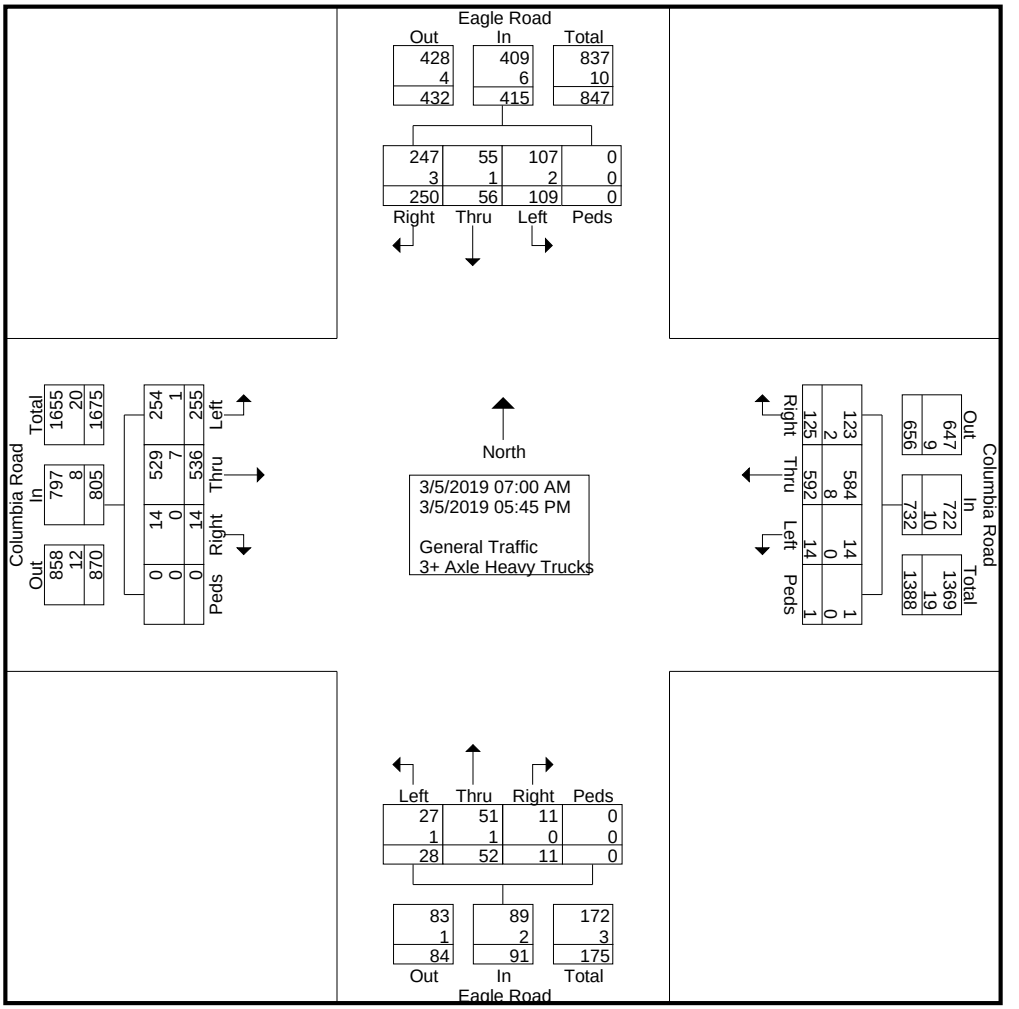
04:00 PM	20	7	9	0	36	9	45	1	0	55	0	2	1	0	3	0	29	4	0	33	127
04:15 PM	21	6	7	0	34	10	41	2	0	53	0	3	1	0	4	1	28	5	0	34	125
04:30 PM	25	3	13	0	41	6	45	3	0	54	0	1	5	0	6	3	25	8	0	36	137
04:45 PM	23	4	15	0	42	8	49	1	1	59	1	1	2	0	4	0	23	8	0	31	136
Total	89	20	44	0	153	33	180	7	1	221	1	7	9	0	17	4	105	25	0	134	525
05:00 PM	35	9	12	0	56	8	45	0	0	53	1	1	4	0	6	2	24	5	0	31	146
05:15 PM	37	7	8	0	52	5	50	1	0	56	0	2	3	0	5	2	23	2	0	27	140
05:30 PM	35	4	14	0	53	9	54	2	0	65	0	4	1	0	5	0	25	6	0	31	154
05:45 PM	16	8	8	0	32	8	54	1	0	63	1	1	1	0	3	0	16	2	0	18	116
Total	123	28	42	0	193	30	203	4	0	237	2	8	9	0	19	4	88	15	0	107	556
Grand Total	250	56	109	0	415	125	592	14	1	732	11	52	28	0	91	14	536	255	0	805	2043
Apprch %	60.2	13.5	26.3	0		17.1	80.9	1.9	0.1		12.1	57.1	30.8	0		1.7	66.6	31.7	0		
Total %	12.2	2.7	5.3	0	20.3	6.1	29	0.7	0	35.8	0.5	2.5	1.4	0	4.5	0.7	26.2	12.5	0	39.4	
General Traffic																					
% General Traffic	98.8	98.2	98.2	0	98.6	98.4	98.6	100	100	98.6	100	98.1	96.4	0	97.8	100	98.7	99.6	0	99	98.7
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	1.2	1.8	1.8	0	1.4	1.6	1.4	0	0	1.4	0	1.9	3.6	0	2.2	0	1.3	0.4	0	1	1.3

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Eagle Rd / Columbia Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Eagle Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 2



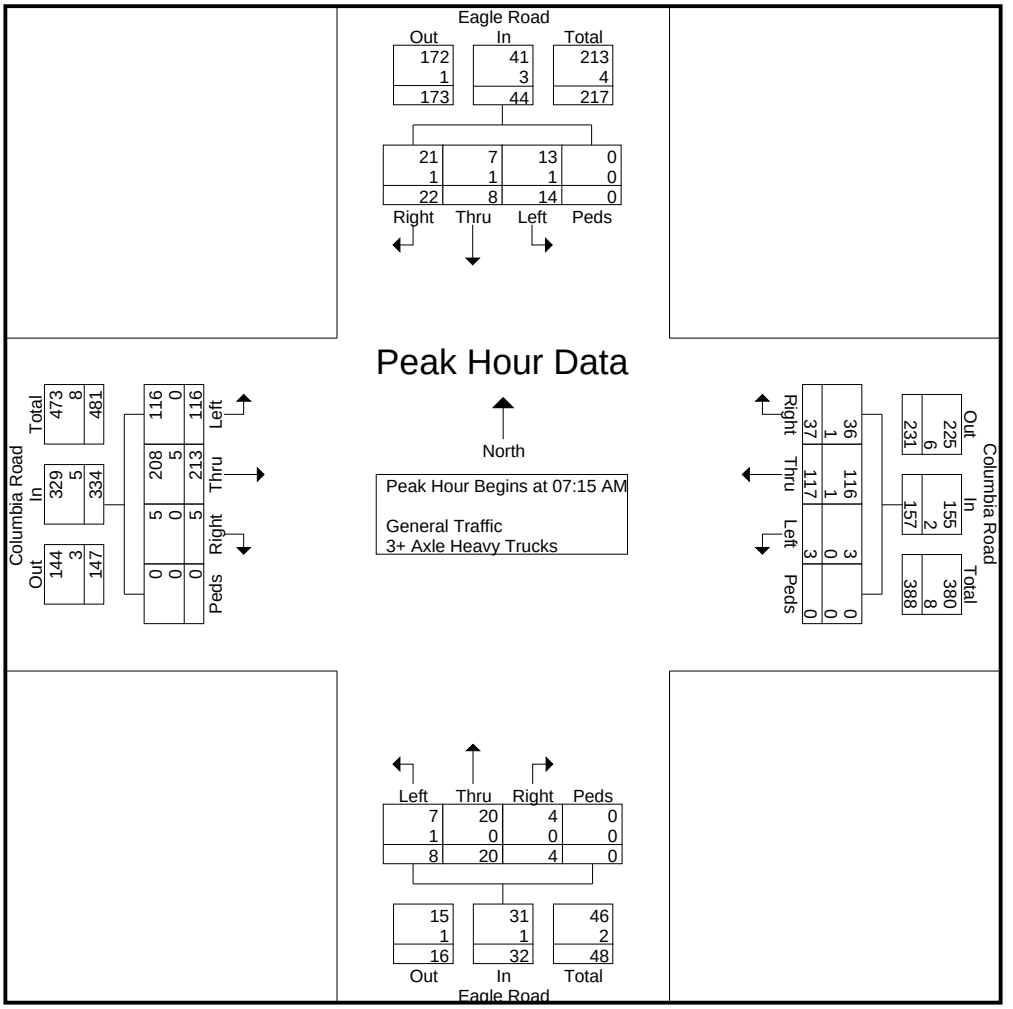
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Eagle Rd / Columbia Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Eagle Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 3

	Eagle Road From North					Columbia Road From East					Eagle Road From South					Columbia Road 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 07:15 AM																					
07:15 AM	4	**3**	2	0	9	7	**39**	0	0	**46**	**1**	3	**4**	0	8	1	46	**31**	0	78	141
07:30 AM	4	3	5	0	12	9	24	**1**	0	34	1	4	0	0	5	**2**	**64**	29	0	**95**	**146**
07:45 AM	**8**	1	**6**	0	**15**	**13**	27	1	0	41	1	5	3	0	9	2	53	25	0	80	145
08:00 AM	6	1	1	0	8	8	27	1	0	36	1	**8**	1	0	**10**	0	50	31	0	81	135
Total Volume	22	8	14	0	44	37	117	3	0	157	4	20	8	0	32	5	213	116	0	334	567
% App. Total	50	18.2	31.8	0		23.6	74.5	1.9	0		12.5	62.5	25	0		1.5	63.8	34.7	0		
PHF	.688	.667	.583	.000	.733	.712	.750	.750	.000	.853	1.00	.625	.500	.000	.800	.625	.832	.935	.000	.879	.971
General Traffic % General Traffic	95.5	87.5	92.9	0	93.2	97.3	99.1	100	0	98.7	100	100	87.5	0	96.9	100	97.7	100	0	98.5	98.1
3+ Axle Heavy Trucks % 3+ Axle Heavy Trucks	4.5	12.5	7.1	0	6.8	2.7	0.9	0	0	1.3	0	0	12.5	0	3.1	0	2.3	0	0	1.5	1.9



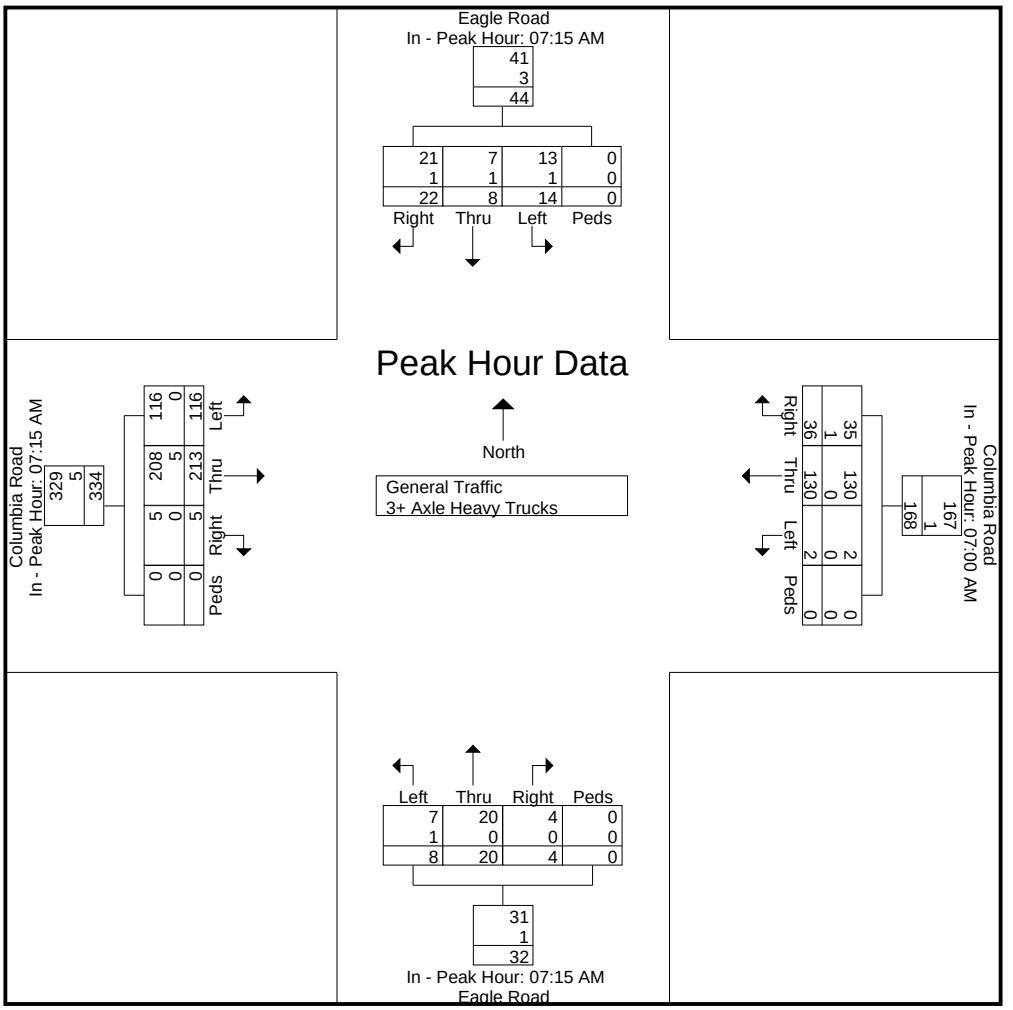
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Eagle Rd / Columbia Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Eagle Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 4

	Eagle Road From North					Columbia Road From East					Eagle Road From South					Columbia Road 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					07:15 AM					07:15 AM					
+0 mins.	4	**3**	2	0	9	7	**40**	0	0	**47**	**1**	3	**4**	0	8	1	46	**31**	0	78	
+15 mins.	4	3	5	0	12	7	39	0	0	46	1	4	0	0	5	**2**	**64**	29	0	**95**	
+30 mins.	**8**	1	**6**	0	**15**	9	24	**1**	0	34	1	5	3	0	9	2	53	25	0	80	
+45 mins.	6	1	1	0	8	**13**	27	1	0	41	1	**8**	1	0	**10**	0	50	31	0	81	
Total Volume	22	8	14	0	44	36	130	2	0	168	4	20	8	0	32	5	213	116	0	334	
% App. Total	50	18.2	31.8	0		21.4	77.4	1.2	0		12.5	62.5	25	0		1.5	63.8	34.7	0		
PHF	.688	.667	.583	.000	.733	.692	.813	.500	.000	.894	1.000	.625	.500	.000	.800	.625	.832	.935	.000	.879	
General Traffic																					
% General Traffic	95.5	87.5	92.9	0	93.2	97.2	100	100	0	99.4	100	100	87.5	0	96.9	100	97.7	100	0	98.5	
3+ Axle Heavy Trucks	1	1	1	0	3	1	0	0	0	1	0	0	1	0	1	0	5	0	0	5	
% 3+ Axle Heavy Trucks	4.5	12.5	7.1	0	6.8	2.8	0	0	0	0.6	0	0	12.5	0	3.1	0	2.3	0	0	1.5	



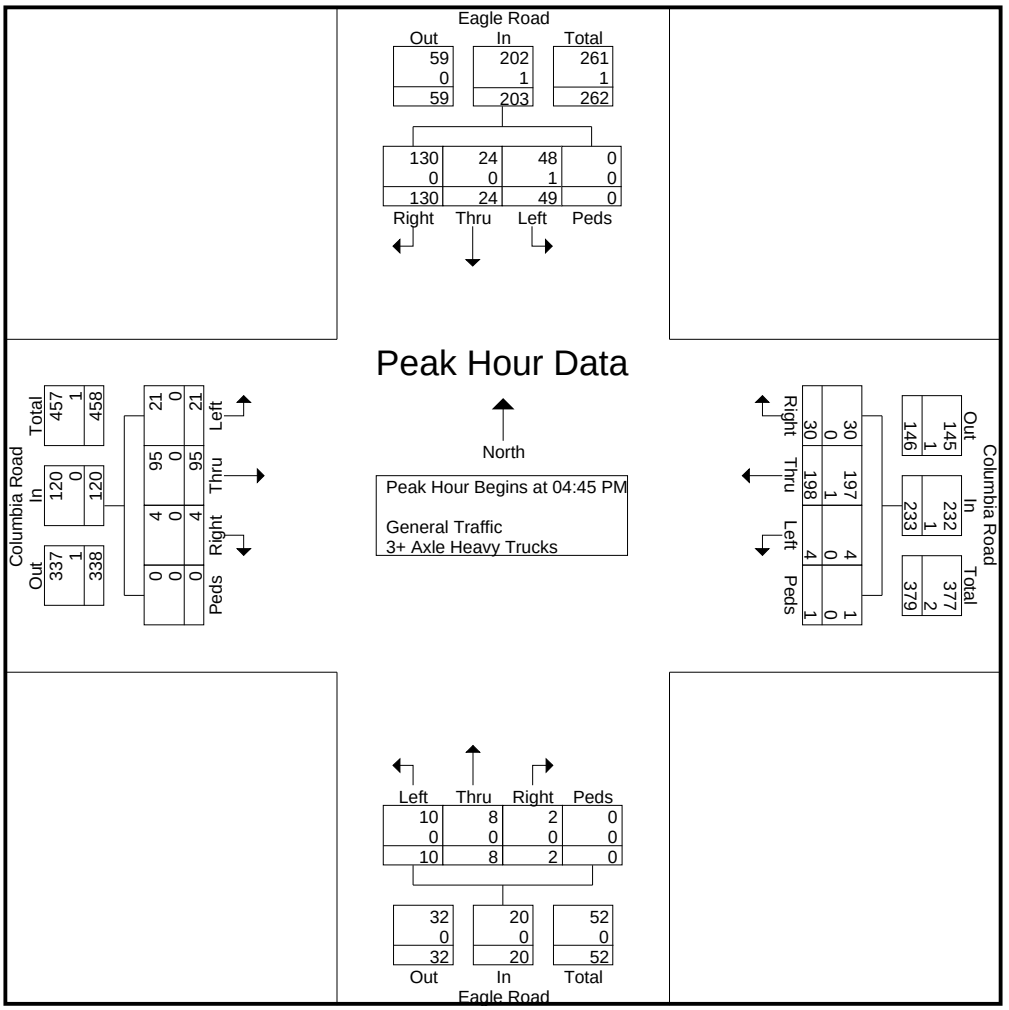
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Eagle Rd / Columbia Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Eagle Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 5

	Eagle Road From North					Columbia Road From East					Eagle Road From South					Columbia Road 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	23	4	**15**	0	42	8	49	1	**1**	59	**1**	1	2	0	4	0	23	**8**	0	**31**	136
05:00 PM	35	**9**	12	0	**56**	8	45	0	0	53	1	1	**4**	0	**6**	**2**	24	5	0	31	146
05:15 PM	**37**	7	8	0	52	5	50	1	0	56	0	2	3	0	5	2	23	2	0	27	140
05:30 PM	35	4	14	0	53	**9**	**54**	**2**	0	**65**	0	**4**	1	0	5	0	**25**	6	0	31	**154**
Total Volume	130	24	49	0	203	30	198	4	1	233	2	8	10	0	20	4	95	21	0	120	576
% App. Total	64	11.8	24.1	0		12.9	85	1.7	0.4		10	40	50	0		3.3	79.2	17.5	0		
PHF	.878	.667	.817	.000	.906	.833	.917	.500	.250	.896	.500	.500	.625	.000	.833	.500	.950	.656	.000	.968	.935
General Traffic																					
% General Traffic	100	100	98.0	0	99.5	100	99.5	100	100	99.6	100	100	100	0	100	100	100	100	0	100	99.7
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	0	0	2.0	0	0.5	0	0.5	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0.3



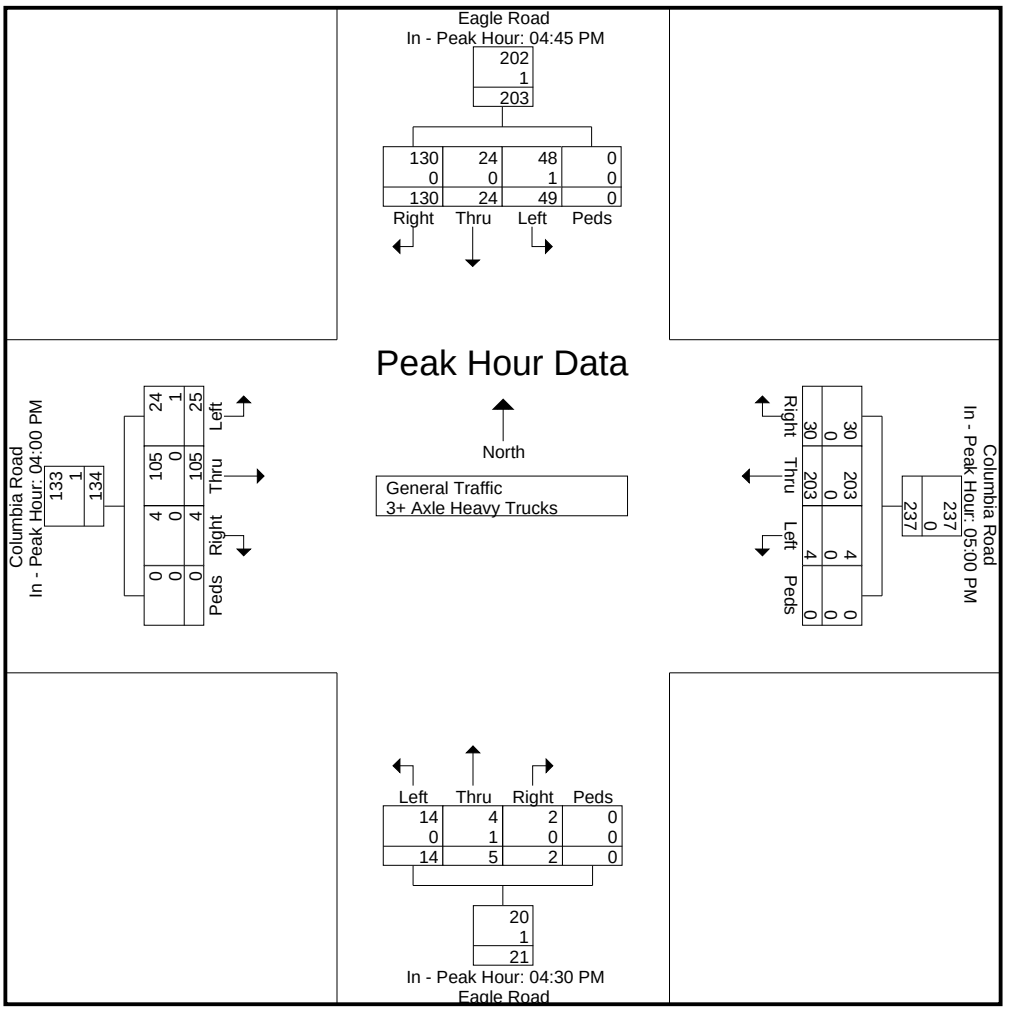
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Eagle Rd / Columbia Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Eagle Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 6

	Eagle Road From North					Columbia Road From East					Eagle Road From South					Columbia Road 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:																					
	04:45 PM					05:00 PM					04:30 PM					04:00 PM					
+0 mins.	23	4	**15**	0	42	8	45	0	0	53	0	1	**5**	0	**6**	0	**29**	4	0	33	
+15 mins.	35	**9**	12	0	**56**	5	50	1	0	56	**1**	1	2	0	4	1	28	5	0	34	
+30 mins.	**37**	7	8	0	52	**9**	**54**	**2**	0	**65**	1	1	4	0	6	**3**	25	**8**	0	**36**	
+45 mins.	35	4	14	0	53	8	54	1	0	63	0	**2**	3	0	5	0	23	8	0	31	
Total Volume	130	24	49	0	203	30	203	4	0	237	2	5	14	0	21	4	105	25	0	134	
% App. Total	64	11.8	24.1	0		12.7	85.7	1.7	0		9.5	23.8	66.7	0		3	78.4	18.7	0		
PHF	.878	.667	.817	.000	.906	.833	.940	.500	.000	.912	.500	.625	.700	.000	.875	.333	.905	.781	.000	.931	
General Traffic																					
% General Traffic	100	100	98	0	99.5	100	100	100	0	100	100	80	100	0	95.2	100	100	96	0	99.3	
3+ Axle Heavy Trucks	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	
% 3+ Axle Heavy Trucks	0	0	2	0	0.5	0	0	0	0	0	0	20	0	0	4.8	0	0	4	0	0.7	



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Eagle Rd / Columbia Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Eagle Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 7

Image 1

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Eagle Rd / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Eagle Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 1

Groups Printed- General Traffic - 3+ Axle Heavy Trucks

	Eagle Road From North					Kuna Road From East					Eagle Road From South					Kuna Road 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	0	0	1	0	1	0	18	0	0	18	0	1	2	0	3	3	37	0	0	40	62
07:15 AM	0	0	1	0	1	0	35	1	0	36	0	0	2	0	2	5	55	0	0	60	99
07:30 AM	1	0	1	0	2	0	32	1	0	33	0	1	2	0	3	5	51	0	0	56	94
07:45 AM	0	1	0	0	1	0	21	0	0	21	0	0	0	0	0	1	38	1	0	40	62
Total	1	1	3	0	5	0	106	2	0	108	0	2	6	0	8	14	181	1	0	196	317
08:00 AM	0	0	0	0	0	0	13	0	0	13	1	2	1	0	4	5	27	0	0	32	49
08:15 AM	0	0	0	0	0	1	14	1	0	16	1	0	2	0	3	3	32	0	0	35	54
08:30 AM	0	0	0	0	0	0	15	0	0	15	0	2	0	0	2	5	34	1	0	40	57
08:45 AM	0	0	0	0	0	0	21	1	0	22	0	2	0	0	2	3	14	0	0	17	41
Total	0	0	0	0	0	1	63	2	0	66	2	6	3	0	11	16	107	1	0	124	201

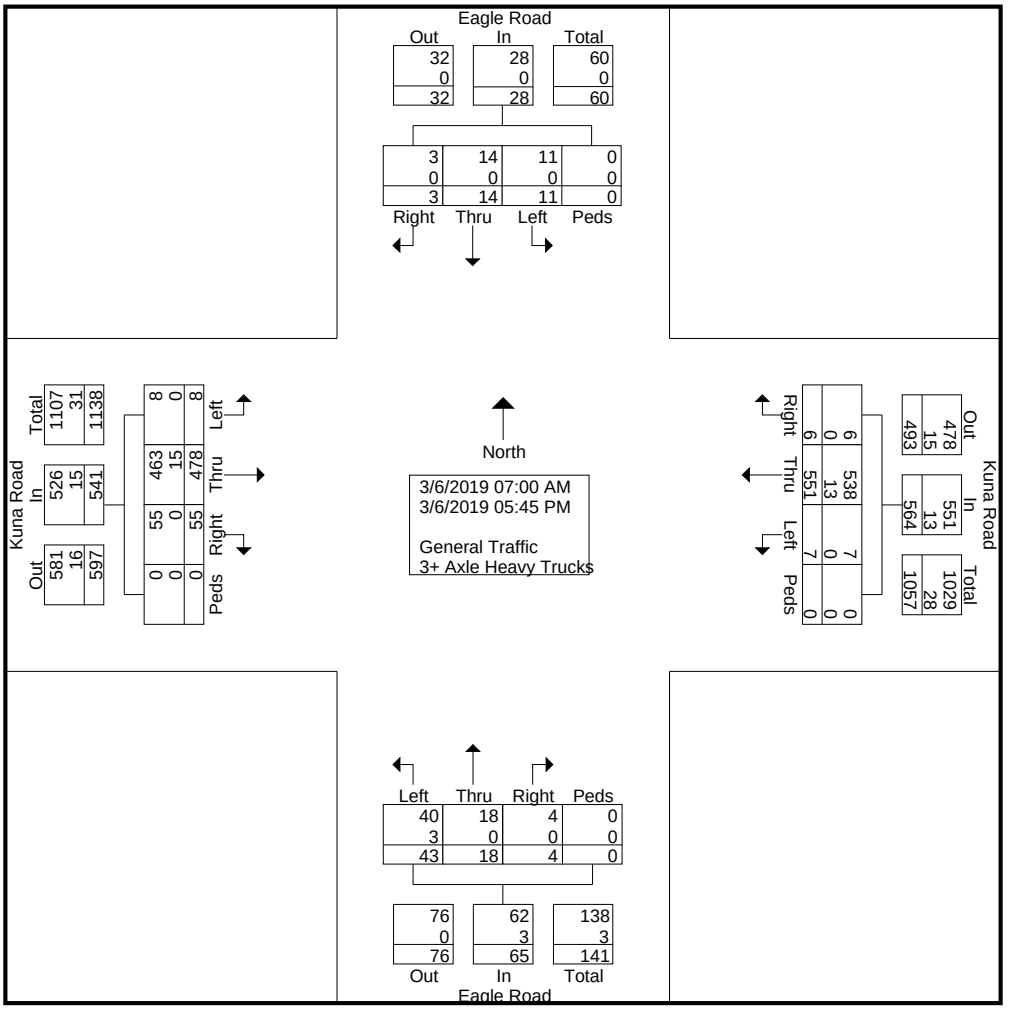
04:00 PM	1	1	0	0	2	0	33	1	0	34	0	0	3	0	3	1	24	1	0	26	65
04:15 PM	1	2	3	0	6	2	39	0	0	41	1	1	7	0	9	4	27	2	0	33	89
04:30 PM	0	0	0	0	0	0	37	0	0	37	0	1	3	0	4	2	25	0	0	27	68
04:45 PM	0	3	1	0	4	1	50	0	0	51	0	1	6	0	7	4	27	0	0	31	93
Total	2	6	4	0	12	3	159	1	0	163	1	3	19	0	23	11	103	3	0	117	315
05:00 PM	0	2	1	0	3	0	54	2	0	56	0	3	4	0	7	2	30	1	0	33	99
05:15 PM	0	1	2	0	3	1	51	0	0	52	0	3	4	0	7	5	17	1	0	23	85
05:30 PM	0	1	0	0	1	1	60	0	0	61	1	1	3	0	5	6	20	1	0	27	94
05:45 PM	0	3	1	0	4	0	58	0	0	58	0	0	4	0	4	1	20	0	0	21	87
Total	0	7	4	0	11	2	223	2	0	227	1	7	15	0	23	14	87	3	0	104	365
Grand Total	3	14	11	0	28	6	551	7	0	564	4	18	43	0	65	55	478	8	0	541	1198
Apprch %	10.7	50	39.3	0		1.1	97.7	1.2	0		6.2	27.7	66.2	0		10.2	88.4	1.5	0		
Total %	0.3	1.2	0.9	0	2.3	0.5	46	0.6	0	47.1	0.3	1.5	3.6	0	5.4	4.6	39.9	0.7	0	45.2	
General Traffic																					
% General Traffic	100	100	100	0	100	100	97.6	100	0	97.7	100	100	93	0	95.4	100	96.9	100	0	97.2	97.4
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	0	0	0	0	0	0	2.4	0	0	2.3	0	0	7	0	4.6	0	3.1	0	0	2.8	2.6

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Eagle Rd / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Eagle Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 2



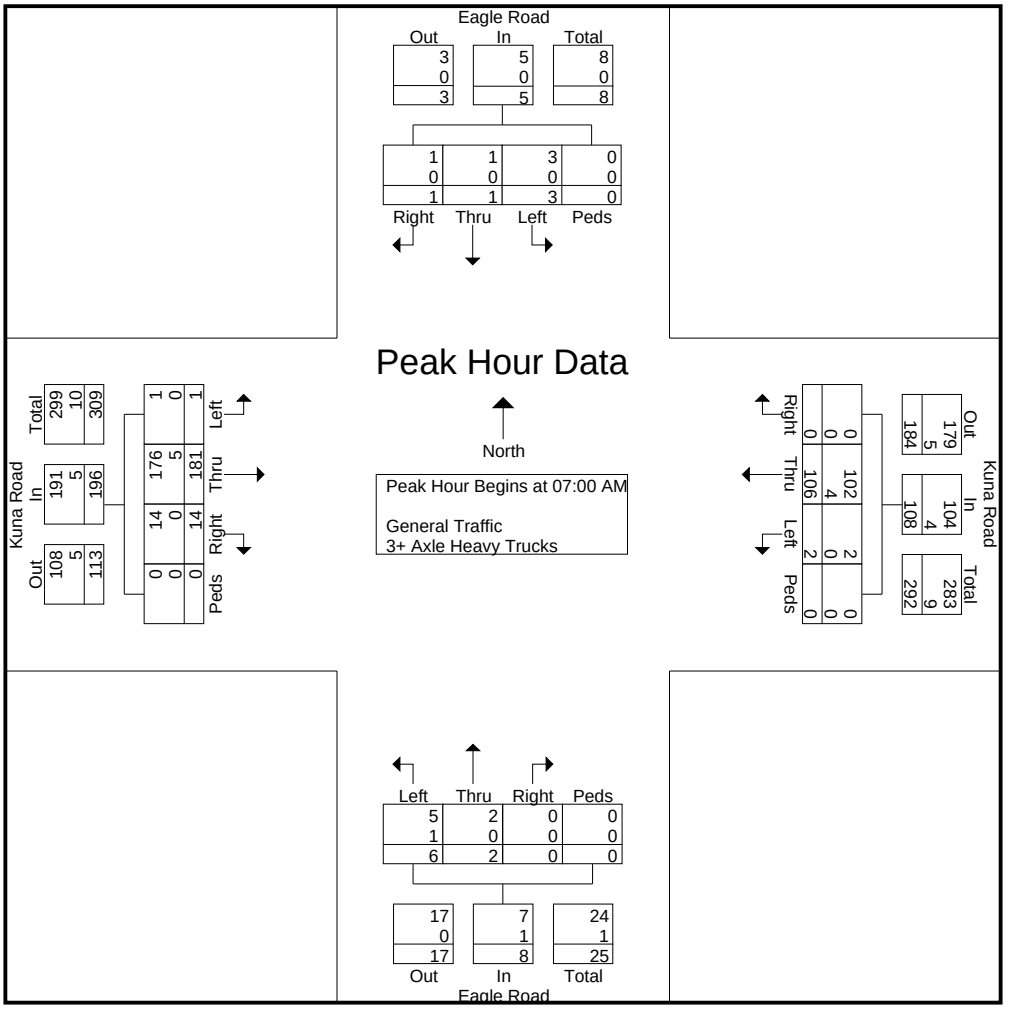
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Eagle Rd / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Eagle Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 3

	Eagle Road From North					Kuna Road From East					Eagle Road From South					Kuna Road 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	0	0	**1**	0	1	0	18	0	0	18	0	**1**	**2**	0	**3**	3	37	0	0	40	62
07:15 AM	0	0	1	0	1	0	**35**	**1**	0	**36**	0	0	2	0	2	**5**	**55**	0	0	**60**	**99**
07:30 AM	**1**	0	1	0	**2**	0	32	1	0	33	0	1	2	0	3	5	51	0	0	56	94
07:45 AM	0	**1**	0	0	1	0	21	0	0	21	0	0	0	0	0	1	38	**1**	0	40	62
Total Volume	1	1	3	0	5	0	106	2	0	108	0	2	6	0	8	14	181	1	0	196	317
% App. Total	20	20	60	0		0	98.1	1.9	0		0	25	75	0		7.1	92.3	0.5	0		
PHF	.250	.250	.750	.000	.625	.000	.757	.500	.000	.750	.000	.500	.750	.000	.667	.700	.823	.250	.000	.817	.801
General Traffic																					
% General Traffic	100	100	100	0	100	0	96.2	100	0	96.3	0	100	83.3	0	87.5	100	97.2	100	0	97.4	96.8
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	0	0	0	0	0	0	3.8	0	0	3.7	0	0	16.7	0	12.5	0	2.8	0	0	2.6	3.2



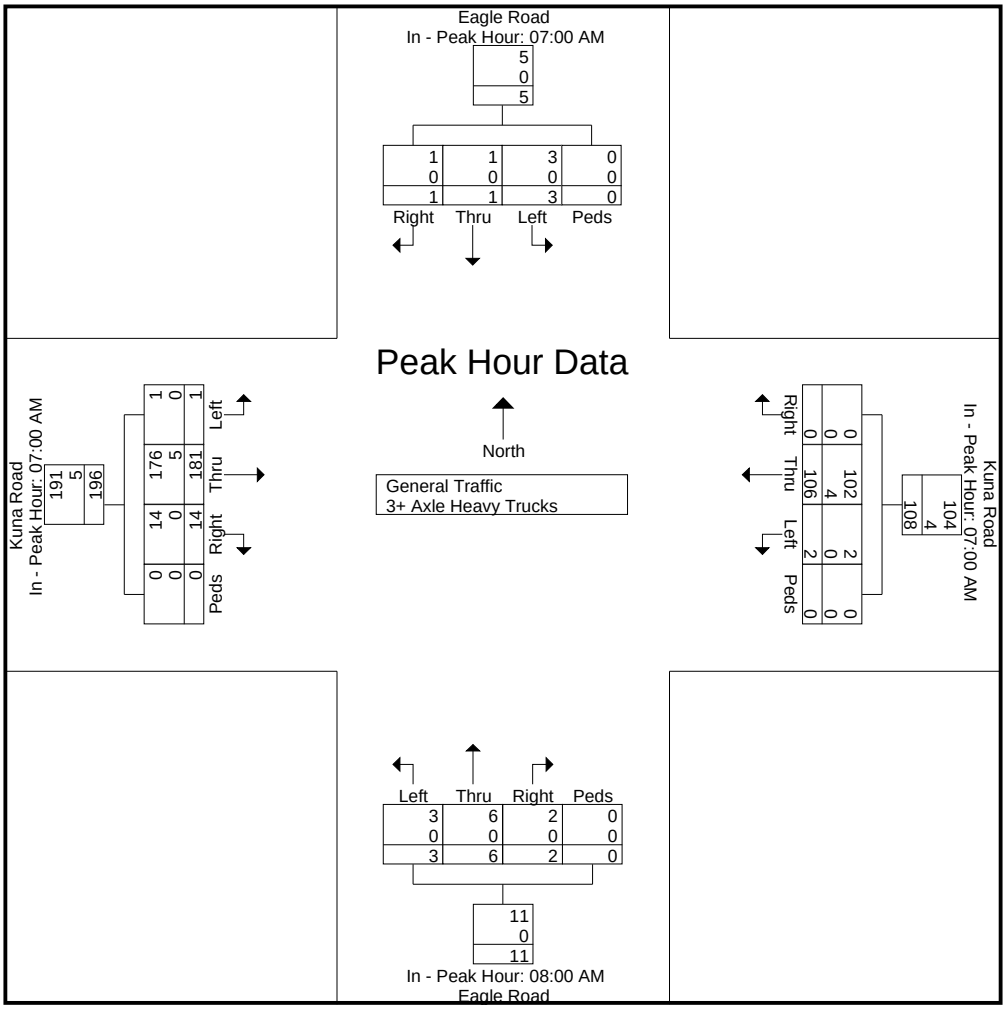
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Eagle Rd / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Eagle Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 4

	Eagle Road From North					Kuna Road From East					Eagle Road From South					Kuna Road 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:																					
	07:00 AM					07:00 AM					08:00 AM					07:00 AM					
+0 mins.	0	0	**1**	0	1	0	18	0	0	18	**1**	**2**	1	0	**4**	3	37	0	0	40	
+15 mins.	0	0	1	0	1	0	**35**	**1**	0	**36**	1	0	**2**	0	3	**5**	**55**	0	0	**60**	
+30 mins.	**1**	0	1	0	**2**	0	32	1	0	33	0	2	0	0	2	5	51	0	0	56	
+45 mins.	0	**1**	0	0	1	0	21	0	0	21	0	2	0	0	2	1	38	**1**	0	40	
Total Volume	1	1	3	0	5	0	106	2	0	108	2	6	3	0	11	14	181	1	0	196	
% App. Total	20	20	60	0		0	98.1	1.9	0		18.2	54.5	27.3	0		7.1	92.3	0.5	0		
PHF	.250	.250	.750	.000	.625	.000	.757	.500	.000	.750	.500	.750	.375	.000	.688	.700	.823	.250	.000	.817	
General Traffic																					
% General Traffic	100	100	100	0	100	0	96.2	100	0	96.3	100	100	100	0	100	100	97.2	100	0	97.4	
3+ Axle Heavy Trucks	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	
% 3+ Axle Heavy Trucks	0	0	0	0	0	0	3.8	0	0	3.7	0	0	0	0	0	0	2.8	0	0	2.6	



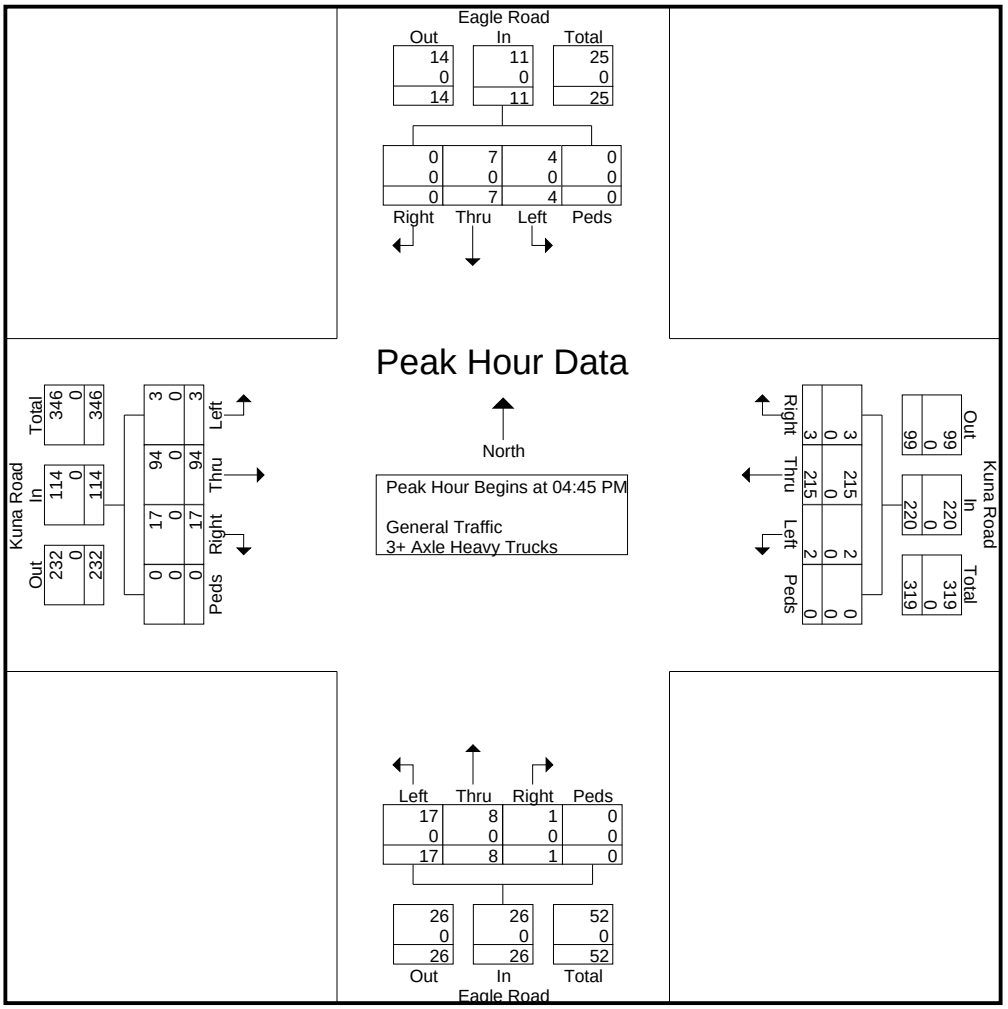
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Eagle Rd / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Eagle Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 5

	Eagle Road From North					Kuna Road From East					Eagle Road From South					Kuna Road 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	0	**3**	1	0	**4**	**1**	50	0	0	51	0	1	**6**	0	**7**	4	27	0	0	31	93
05:00 PM	0	2	1	0	3	0	54	**2**	0	56	0	**3**	4	0	7	2	**30**	**1**	0	**33**	**99**
05:15 PM	0	1	**2**	0	3	1	51	0	0	52	0	3	4	0	7	5	17	1	0	23	85
05:30 PM	0	1	0	0	1	1	**60**	0	0	**61**	**1**	1	3	0	5	**6**	20	1	0	27	94
Total Volume	0	7	4	0	11	3	215	2	0	220	1	8	17	0	26	17	94	3	0	114	371
% App. Total	0	63.6	36.4	0		1.4	97.7	0.9	0		3.8	30.8	65.4	0		14.9	82.5	2.6	0		
PHF	.000	.583	.500	.000	.688	.750	.896	.250	.000	.902	.250	.667	.708	.000	.929	.708	.783	.750	.000	.864	.937
General Traffic																					
% General Traffic	0	100	100	0	100	100	100	100	0	100	100	100	100	0	100	100	100	100	0	100	100
3+ Axle Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 3+ Axle Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



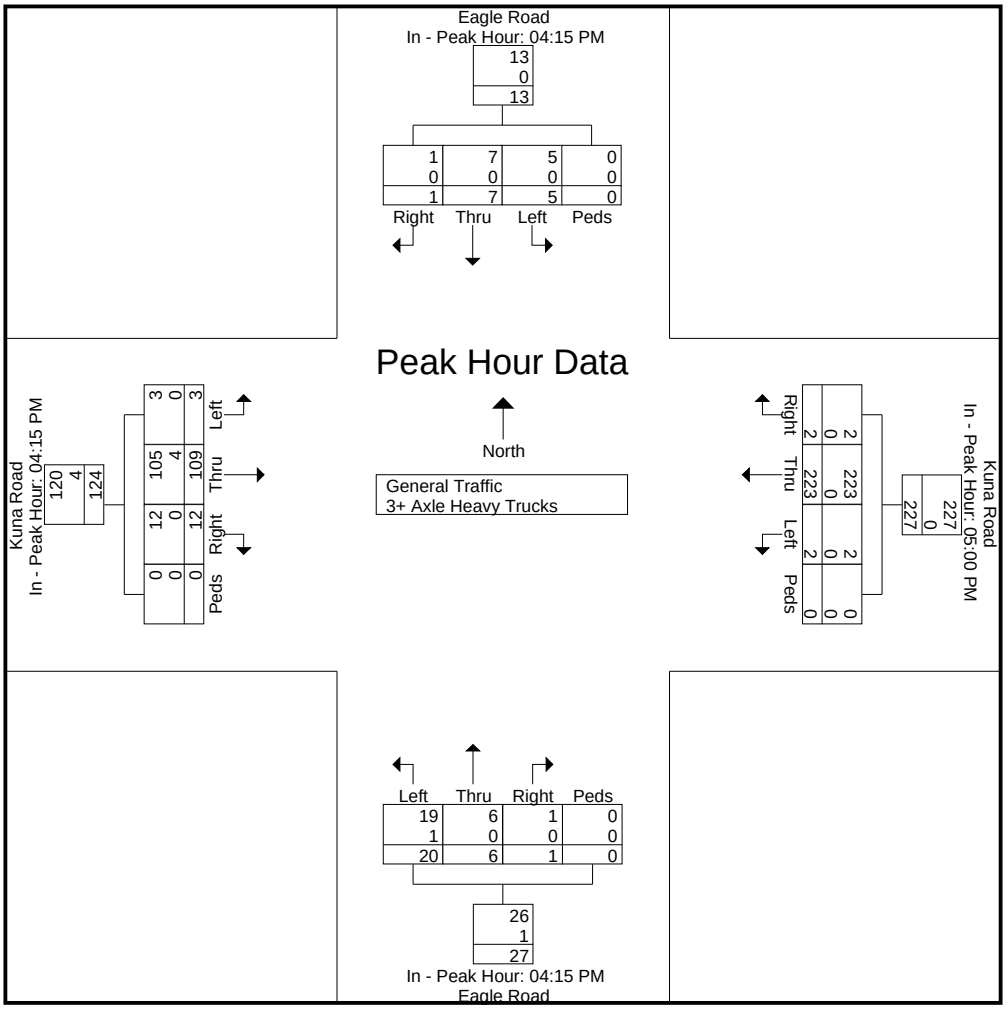
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Eagle Rd / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Eagle Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 6

	Eagle Road From North					Kuna Road From East					Eagle Road From South					Kuna Road 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:																					
	04:15 PM					05:00 PM					04:15 PM					04:15 PM					
+0 mins.	**1**	2	**3**	0	**6**	0	54	**2**	0	56	**1**	1	**7**	0	**9**	**4**	27	**2**	0	**33**	
+15 mins.	0	0	0	0	0	**1**	51	0	0	52	0	1	3	0	4	2	25	0	0	27	
+30 mins.	0	**3**	1	0	4	1	**60**	0	0	**61**	0	1	6	0	7	4	27	0	0	31	
+45 mins.	0	2	1	0	3	0	58	0	0	58	0	**3**	4	0	7	2	**30**	1	0	33	
Total Volume	1	7	5	0	13	2	223	2	0	227	1	6	20	0	27	12	109	3	0	124	
% App. Total	7.7	53.8	38.5	0		0.9	98.2	0.9	0		3.7	22.2	74.1	0		9.7	87.9	2.4	0		
PHF	.250	.583	.417	.000	.542	.500	.929	.250	.000	.930	.250	.500	.714	.000	.750	.750	.908	.375	.000	.939	
General Traffic																					
% General Traffic	100	100	100	0	100	100	100	100	0	100	100	100	95	0	96.3	100	96.3	100	0	96.8	
3+ Axle Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	4	0	0	4	
% 3+ Axle Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	5	0	3.7	0	3.7	0	0	3.2	



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Eagle Rd / Kuna Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Eagle Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 7

Image 1

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Amity Rd
City, State: Ada County, Idaho
Control: Signalized

File Name : Cloverdale Rd & Amity Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 1

Groups Printed- General Traffic - 3+ Axle Heavy Trucks

	Cloverdale Road From North					Amity Road From East					Cloverdale Road From South					Amity Road 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	11	15	3	0	29	21	50	2	0	73	8	169	39	0	216	6	42	20	0	68	386
07:15 AM	11	29	5	1	46	35	60	5	0	100	7	166	40	0	213	17	42	34	0	93	452
07:30 AM	8	30	3	0	41	20	50	5	0	75	15	149	22	0	186	17	78	26	0	121	423
07:45 AM	13	43	5	0	61	11	47	3	0	61	6	157	30	0	193	14	42	29	0	85	400
Total	43	117	16	1	177	87	207	15	0	309	36	641	131	0	808	54	204	109	0	367	1661
08:00 AM	12	31	0	0	43	13	48	3	0	64	9	109	31	0	149	28	52	34	0	114	370
08:15 AM	11	21	2	0	34	4	32	2	0	38	3	115	35	0	153	4	41	19	0	64	289
08:30 AM	11	27	1	0	39	4	47	4	0	55	6	94	22	0	122	8	38	14	0	60	276
08:45 AM	22	41	5	0	68	8	29	5	0	42	15	90	25	0	130	15	33	21	0	69	309
Total	56	120	8	0	184	29	156	14	0	199	33	408	113	0	554	55	164	88	0	307	1244

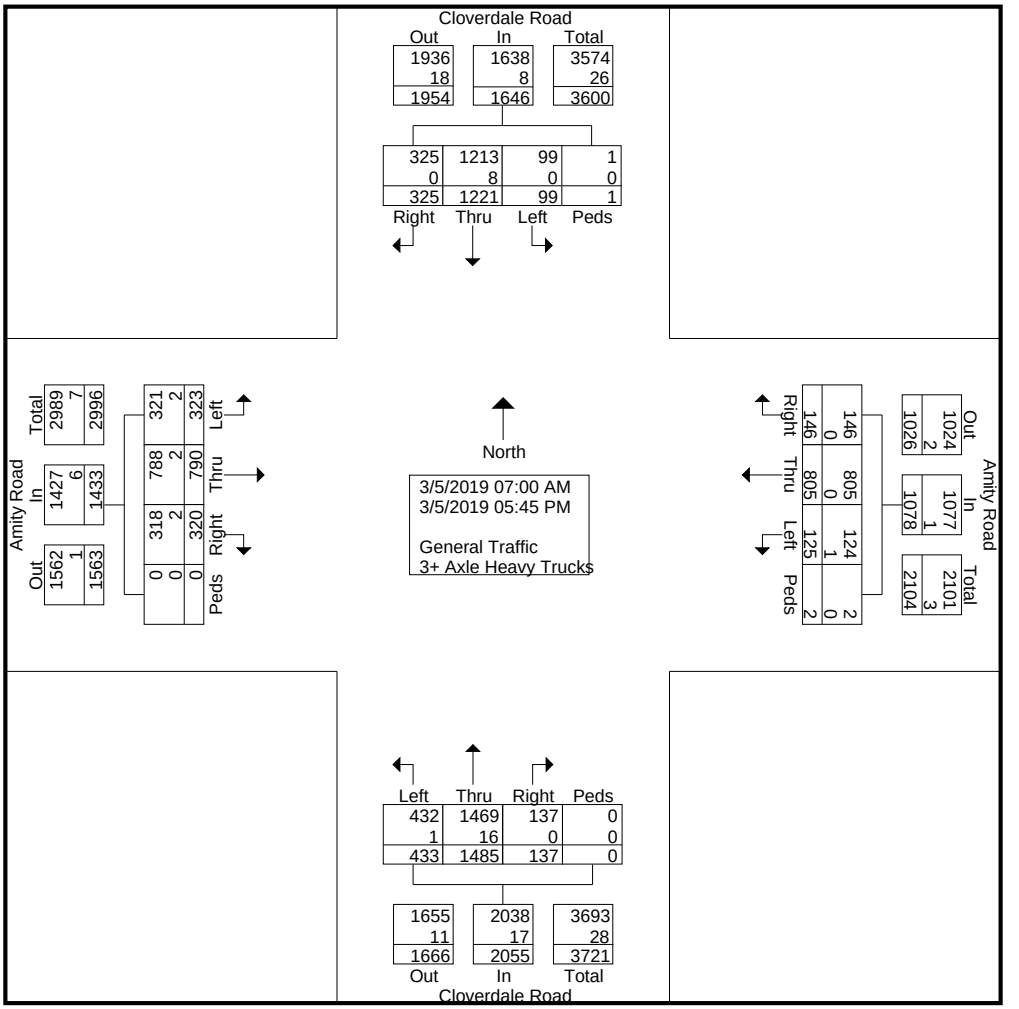
04:00 PM	13	88	8	0	109	5	52	9	0	66	7	68	27	0	102	17	55	28	0	100	377
04:15 PM	33	99	6	0	138	3	56	4	2	65	12	42	20	0	74	25	54	16	0	95	372
04:30 PM	19	119	8	0	146	2	51	12	0	65	6	55	33	0	94	25	37	11	0	73	378
04:45 PM	32	138	11	0	181	6	58	13	0	77	5	62	23	0	90	27	56	12	0	95	443
Total	97	444	33	0	574	16	217	38	2	273	30	227	103	0	360	94	202	67	0	363	1570
05:00 PM	31	132	11	0	174	5	66	16	0	87	11	54	19	0	84	39	58	15	0	112	457
05:15 PM	32	138	17	0	187	2	49	12	0	63	9	52	21	0	82	28	69	19	0	116	448
05:30 PM	29	139	7	0	175	2	63	18	0	83	9	51	23	0	83	26	47	15	0	88	429
05:45 PM	37	131	7	0	175	5	47	12	0	64	9	52	23	0	84	24	46	10	0	80	403
Total	129	540	42	0	711	14	225	58	0	297	38	209	86	0	333	117	220	59	0	396	1737
Grand Total	325	1221	99	1	1646	146	805	125	2	1078	137	1485	433	0	2055	320	790	323	0	1433	6212
Apprch %	19.7	74.2	6	0.1		13.5	74.7	11.6	0.2		6.7	72.3	21.1	0		22.3	55.1	22.5	0		
Total %	5.2	19.7	1.6	0	26.5	2.4	13	2	0	17.4	2.2	23.9	7	0	33.1	5.2	12.7	5.2	0	23.1	
General Traffic		1213										1469									
% General Traffic	100	99.3	100	100	99.5	100	100	99.2	100	99.9	100	98.9	99.8	0	99.2	99.4	99.7	99.4	0	99.6	99.5
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	0	0.7	0	0	0.5	0	0	0.8	0	0.1	0	1.1	0.2	0	0.8	0.6	0.3	0.6	0	0.4	0.5

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Amity Rd
City, State: Ada County, Idaho
Control: Signalized

File Name : Cloverdale Rd & Amity Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 2



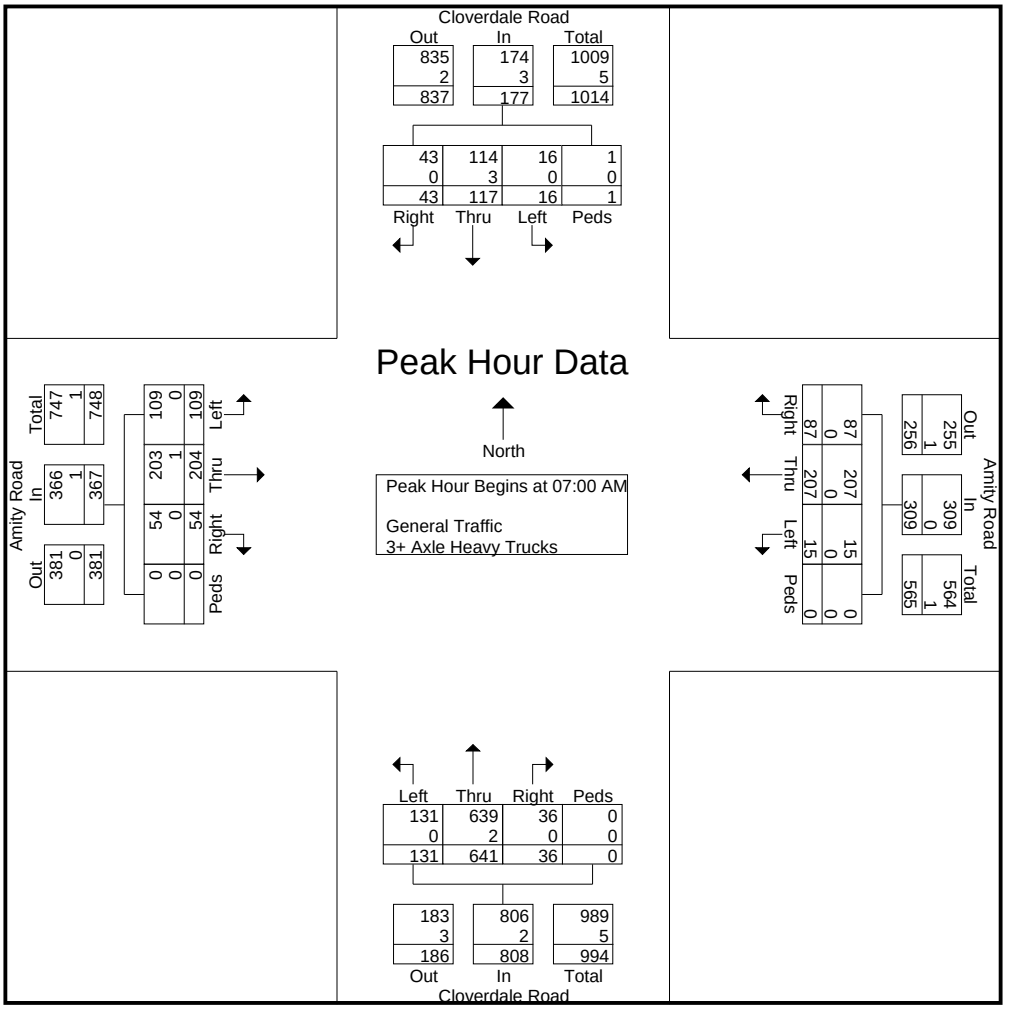
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Amity Rd
City, State: Ada County, Idaho
Control: Signalized

File Name : Cloverdale Rd & Amity Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 3

	Cloverdale Road From North					Amity Road From East					Cloverdale Road From South					Amity Road 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	11	15	3	0	29	21	50	2	0	73	8	**169**	39	0	**216**	6	42	20	0	68	386
07:15 AM	11	29	**5**	**1**	46	**35**	**60**	**5**	0	**100**	7	166	**40**	0	213	**17**	42	**34**	0	93	**452**
07:30 AM	8	30	3	0	41	20	50	5	0	75	**15**	149	22	0	186	17	**78**	26	0	**121**	423
07:45 AM	**13**	**43**	5	0	**61**	11	47	3	0	61	6	157	30	0	193	14	42	29	0	85	400
Total Volume	43	117	16	1	177	87	207	15	0	309	36	641	131	0	808	54	204	109	0	367	1661
% App. Total	24.3	66.1	9	0.6		28.2	67	4.9	0		4.5	79.3	16.2	0		14.7	55.6	29.7	0		
PHF	.827	.680	.800	.250	.725	.621	.863	.750	.000	.773	.600	.948	.819	.000	.935	.794	.654	.801	.000	.758	.919
General Traffic																					
% General Traffic	100	97.4	100	100	98.3	100	100	100	0	100	100	99.7	100	0	99.8	100	99.5	100	0	99.7	99.6
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	0	2.6	0	0	1.7	0	0	0	0	0	0	0.3	0	0	0.2	0	0.5	0	0	0.3	0.4



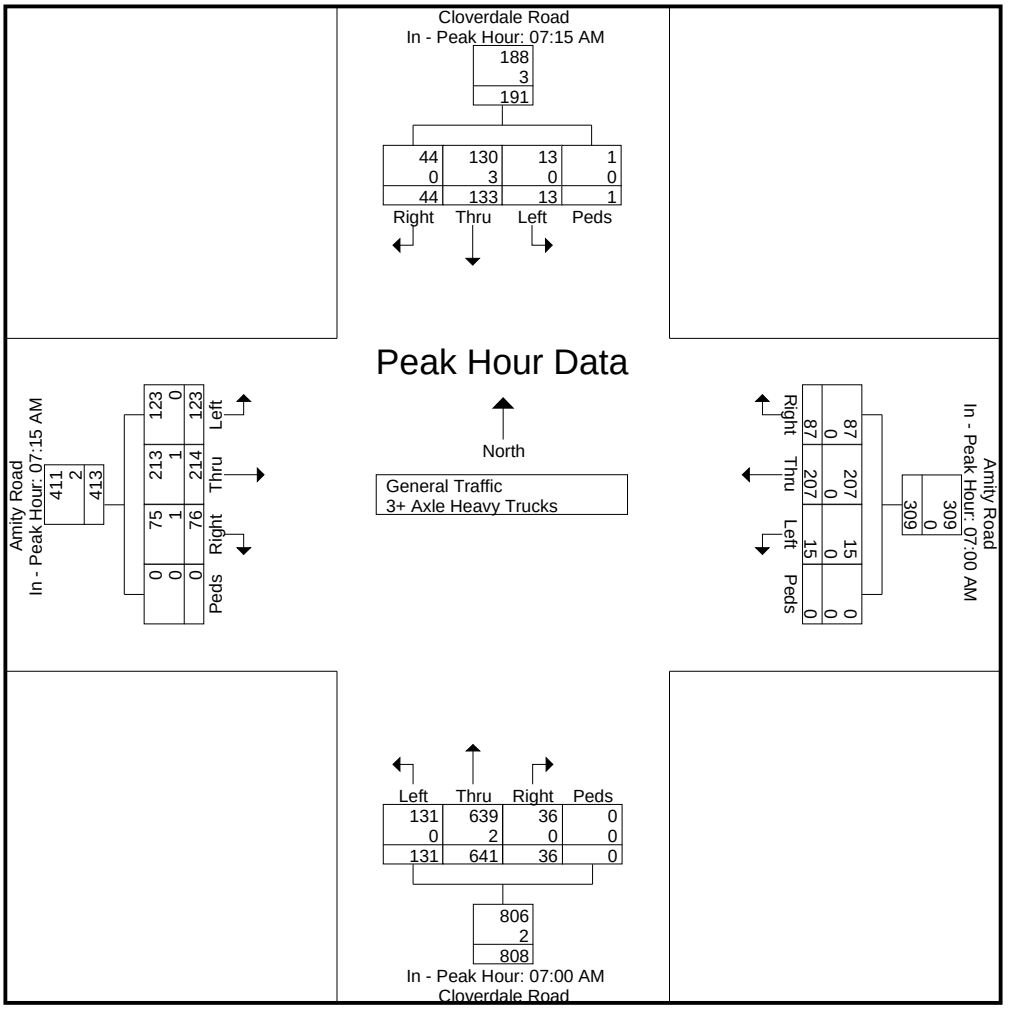
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Amity Rd
City, State: Ada County, Idaho
Control: Signalized

File Name : Cloverdale Rd & Amity Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 4

	Cloverdale Road From North					Amity Road From East					Cloverdale Road From South					Amity Road 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					07:15 AM					
+0 mins.	11	29	**5**	**1**	46	21	50	2	0	73	8	**169**	39	0	**216**	17	42	**34**	0	93	
+15 mins.	8	30	3	0	41	**35**	**60**	**5**	0	**100**	7	166	**40**	0	213	17	**78**	26	0	**121**	
+30 mins.	**13**	**43**	5	0	**61**	20	50	5	0	75	**15**	149	22	0	186	14	42	29	0	85	
+45 mins.	12	31	0	0	43	11	47	3	0	61	6	157	30	0	193	**28**	52	34	0	114	
Total Volume	44	133	13	1	191	87	207	15	0	309	36	641	131	0	808	76	214	123	0	413	
% App. Total	23	69.6	6.8	0.5		28.2	67	4.9	0		4.5	79.3	16.2	0		18.4	51.8	29.8	0		
PHF	.846	.773	.650	.250	.783	.621	.863	.750	.000	.773	.600	.948	.819	.000	.935	.679	.686	.904	.000	.853	
General Traffic																					
% General Traffic	100	97.7	100	100	98.4	100	100	100	0	100	100	99.7	100	0	99.8	98.7	99.5	100	0	99.5	
3+ Axle Heavy Trucks	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	1	1	0	0	2	
% 3+ Axle Heavy Trucks	0	2.3	0	0	1.6	0	0	0	0	0	0	0.3	0	0	0.2	1.3	0.5	0	0	0.5	



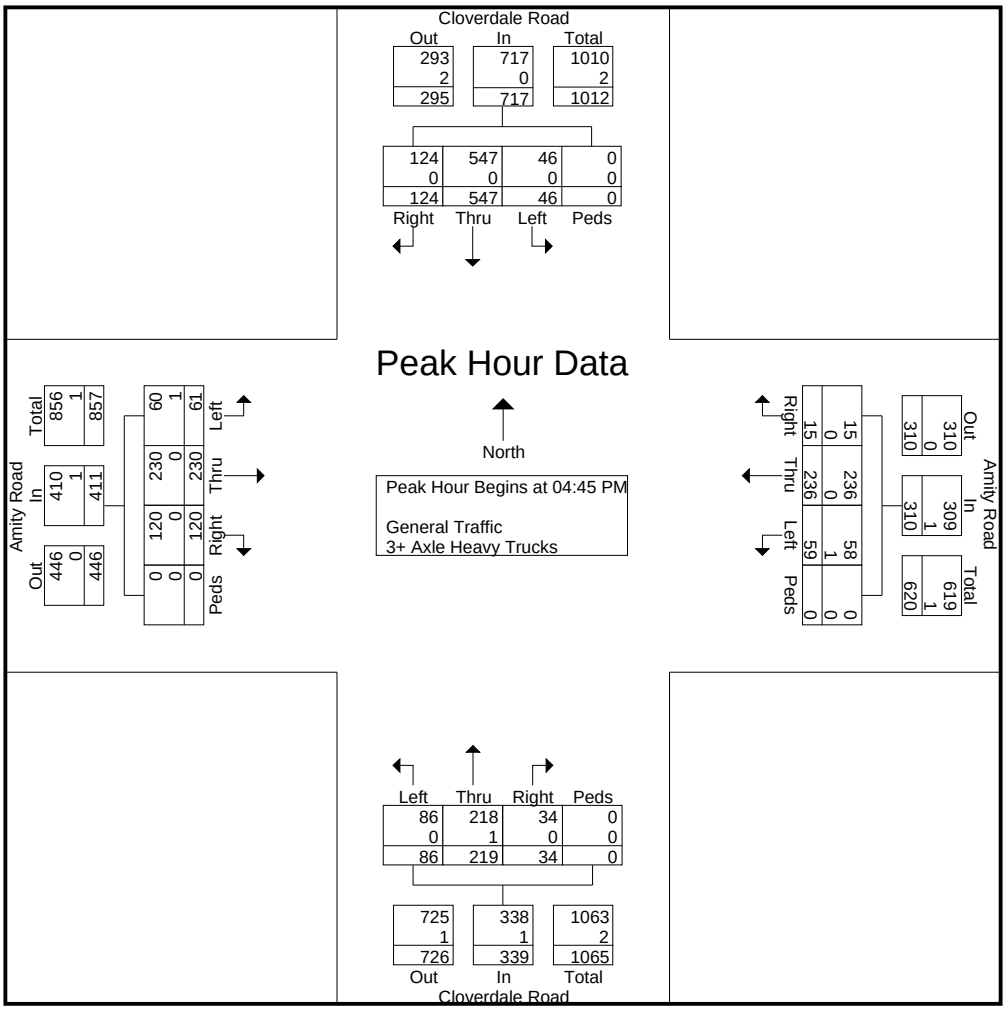
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Amity Rd
City, State: Ada County, Idaho
Control: Signalized

File Name : Cloverdale Rd & Amity Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 5

	Cloverdale Road From North					Amity Road From East					Cloverdale Road From South					Amity Road 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	**32**	138	11	0	181	**6**	58	13	0	77	5	**62**	**23**	0	**90**	27	56	12	0	95	443
05:00 PM	31	132	11	0	174	5	**66**	16	0	**87**	**11**	54	19	0	84	**39**	58	15	0	112	**457**
05:15 PM	32	138	**17**	0	**187**	2	49	12	0	63	9	52	21	0	82	28	**69**	**19**	0	**116**	448
05:30 PM	29	**139**	7	0	175	2	63	**18**	0	83	9	51	23	0	83	26	47	15	0	88	429
Total Volume	124	547	46	0	717	15	236	59	0	310	34	219	86	0	339	120	230	61	0	411	1777
% App. Total	17.3	76.3	6.4	0		4.8	76.1	19	0		10	64.6	25.4	0		29.2	56	14.8	0		
PHF	.969	.984	.676	.000	.959	.625	.894	.819	.000	.891	.773	.883	.935	.000	.942	.769	.833	.803	.000	.886	.972
General Traffic																					
% General Traffic	100	100	100	0	100	100	100	98.3	0	99.7	100	99.5	100	0	99.7	100	100	98.4	0	99.8	99.8
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	0	0	0	0	0	0	0	1.7	0	0.3	0	0.5	0	0	0.3	0	0	1.6	0	0.2	0.2



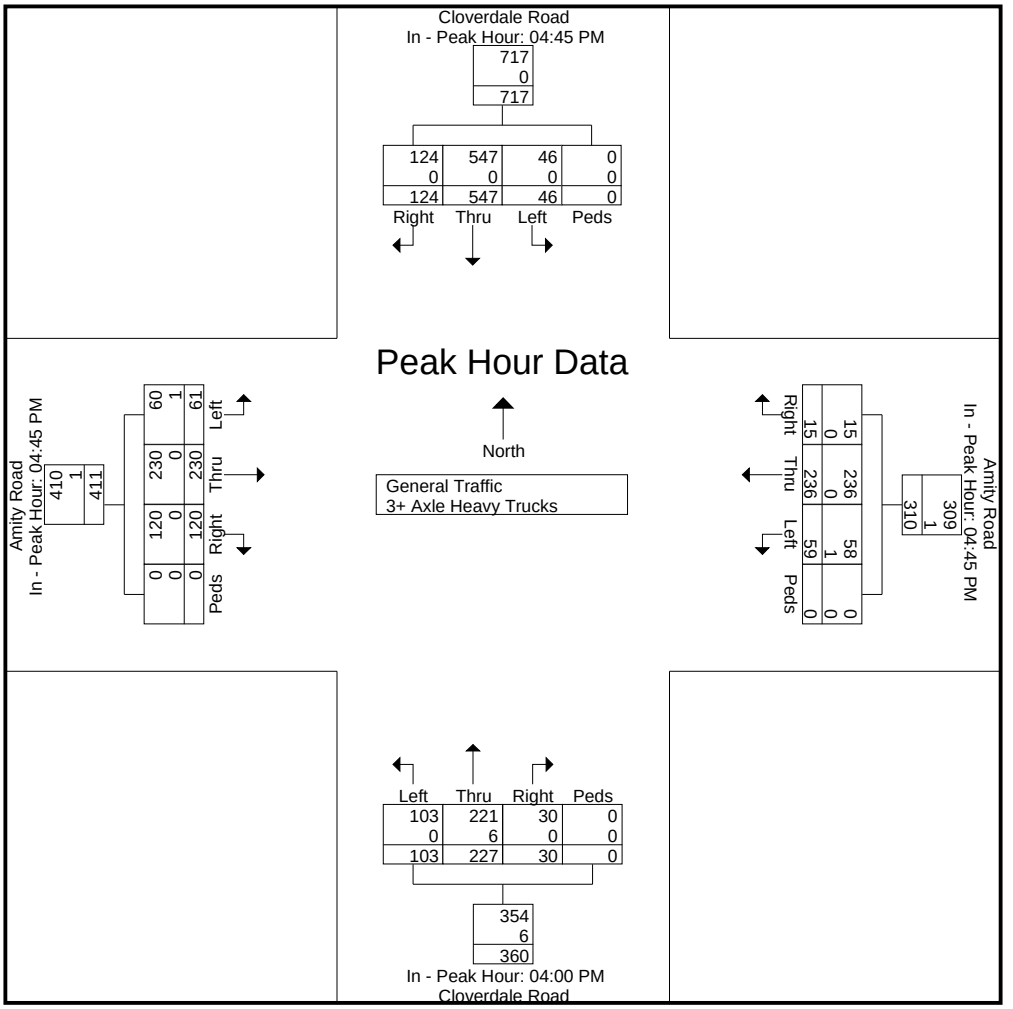
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Amity Rd
City, State: Ada County, Idaho
Control: Signalized

File Name : Cloverdale Rd & Amity Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 6

	Cloverdale Road From North					Amity Road From East					Cloverdale Road From South					Amity Road 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:																					
	04:45 PM					04:45 PM					04:00 PM					04:45 PM					
+0 mins.	**32**	138	11	0	181	**6**	58	13	0	77	7	**68**	27	0	**102**	27	56	12	0	95	
+15 mins.	31	132	11	0	174	5	**66**	16	0	**87**	**12**	42	20	0	74	**39**	58	15	0	112	
+30 mins.	32	138	**17**	0	**187**	2	49	12	0	63	6	55	**33**	0	94	28	**69**	**19**	0	**116**	
+45 mins.	29	**139**	7	0	175	2	63	**18**	0	83	5	62	23	0	90	26	47	15	0	88	
Total Volume	124	547	46	0	717	15	236	59	0	310	30	227	103	0	360	120	230	61	0	411	
% App. Total	17.3	76.3	6.4	0		4.8	76.1	19	0		8.3	63.1	28.6	0		29.2	56	14.8	0		
PHF	.969	.984	.676	.000	.959	.625	.894	.819	.000	.891	.625	.835	.780	.000	.882	.769	.833	.803	.000	.886	
General Traffic																					
% General Traffic	100	100	100	0	100	100	100	98.3	0	99.7	100	97.4	100	0	98.3	100	100	98.4	0	99.8	
3+ Axle Heavy Trucks	0	0	0	0	0	0	0	1	0	1	0	6	0	0	6	0	0	1	0	1	
% 3+ Axle Heavy Trucks	0	0	0	0	0	0	0	1.7	0	0.3	0	2.6	0	0	1.7	0	0	1.6	0	0.2	



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Amity Rd
City, State: Ada County, Idaho
Control: Signalized

File Name : Cloverdale Rd & Amity Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 7

Image 1

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Lake Hazel
City, State: Ada County, Idaho
Control: Signalized

File Name : Cloverdale Rd & Lake Hazel Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 1

Groups Printed- General Traffic - 3+ Axle Heavy Trucks

	Cloverdale Road From North					Lake Hazel Road From East					Cloverdale Road From South					Lake Hazel Road 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	2	18	9	0	29	29	77	7	0	113	16	95	4	0	115	6	34	9	0	49	306
07:15 AM	4	20	11	0	35	36	92	5	0	133	21	91	10	0	122	4	48	13	0	65	355
07:30 AM	6	26	17	0	49	25	64	11	0	100	30	90	5	0	125	2	77	9	0	88	362
07:45 AM	5	29	11	0	45	29	63	6	0	98	21	94	7	0	122	1	54	10	0	65	330
Total	17	93	48	0	158	119	296	29	0	444	88	370	26	0	484	13	213	41	0	267	1353
08:00 AM	6	14	14	0	34	18	65	8	0	91	19	95	6	0	120	6	79	9	0	94	339
08:15 AM	3	15	23	0	41	17	49	8	0	74	16	68	6	0	90	3	47	5	0	55	260
08:30 AM	3	15	11	4	33	8	45	4	4	61	14	62	6	0	82	3	41	2	0	46	222
08:45 AM	3	24	28	3	58	25	63	14	4	106	7	59	8	0	74	5	40	5	0	50	288
Total	15	68	76	7	166	68	222	34	8	332	56	284	26	0	366	17	207	21	0	245	1109

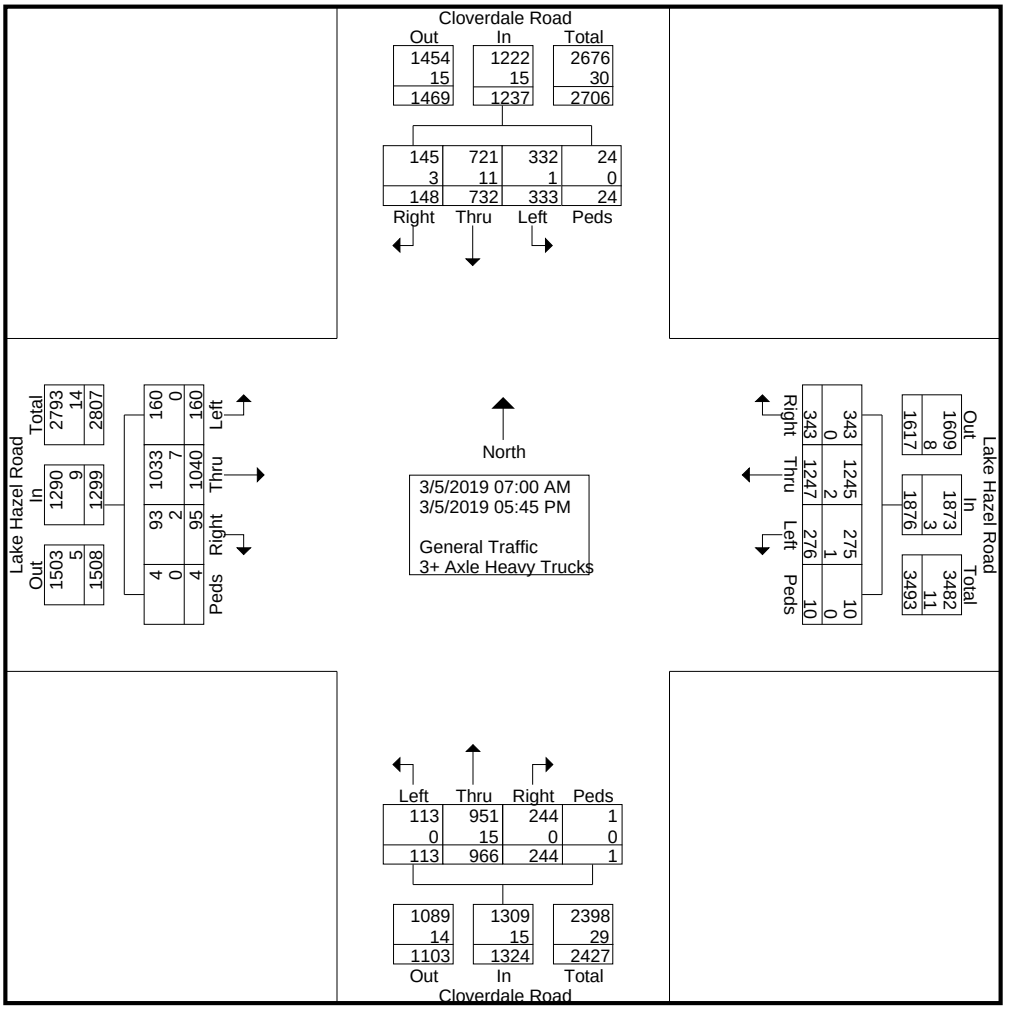
04:00 PM	7	52	23	8	90	30	76	31	2	139	11	43	8	0	62	6	61	10	0	77	368
04:15 PM	7	68	18	0	93	18	84	24	0	126	9	31	12	0	52	5	64	9	0	78	349
04:30 PM	19	60	35	3	117	14	91	26	0	131	14	41	3	0	58	12	76	7	0	95	401
04:45 PM	21	75	17	3	116	23	90	15	0	128	8	39	4	0	51	6	87	26	1	120	415
Total	54	255	93	14	416	85	341	96	2	524	42	154	27	0	223	29	288	52	1	370	1533
05:00 PM	20	79	35	1	135	14	109	23	0	146	12	33	4	0	49	10	80	16	1	107	437
05:15 PM	16	82	28	1	127	10	89	32	0	131	12	39	9	0	60	8	97	10	0	115	433
05:30 PM	11	73	35	1	120	23	99	35	0	157	13	41	10	0	64	8	82	9	2	101	442
05:45 PM	15	82	18	0	115	24	91	27	0	142	21	45	11	1	78	10	73	11	0	94	429
Total	62	316	116	3	497	71	388	117	0	576	58	158	34	1	251	36	332	46	3	417	1741
Grand Total	148	732	333	24	1237	343	1247	276	10	1876	244	966	113	1	1324	95	1040	160	4	1299	5736
Apprch %	12	59.2	26.9	1.9		18.3	66.5	14.7	0.5		18.4	73	8.5	0.1		7.3	80.1	12.3	0.3		
Total %	2.6	12.8	5.8	0.4	21.6	6	21.7	4.8	0.2	32.7	4.3	16.8	2	0	23.1	1.7	18.1	2.8	0.1	22.6	
General Traffic							1245										1033				
% General Traffic	98	98.5	99.7	100	98.8	100	99.8	99.6	100	99.8	100	98.4	100	100	98.9	97.9	99.3	100	100	99.3	99.3
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	2	1.5	0.3	0	1.2	0	0.2	0.4	0	0.2	0	1.6	0	0	1.1	2.1	0.7	0	0	0.7	0.7

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Lake Hazel
City, State: Ada County, Idaho
Control: Signalized

File Name : Cloverdale Rd & Lake Hazel Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 2



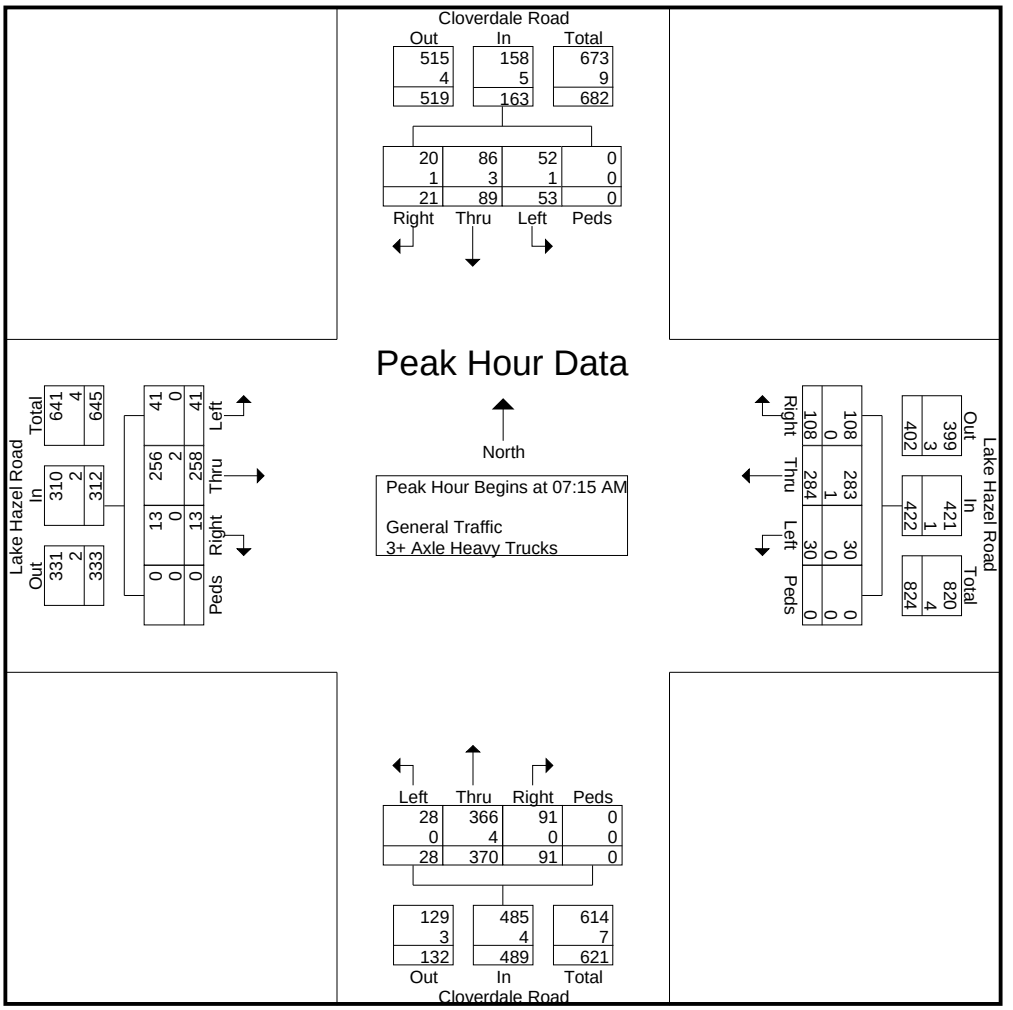
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Lake Hazel
City, State: Ada County, Idaho
Control: Signalized

File Name : Cloverdale Rd & Lake Hazel Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 3

	Cloverdale Road From North					Lake Hazel Road From East					Cloverdale Road From South					Lake Hazel Road 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 07:15 AM																					
07:15 AM	4	20	11	0	35	**36**	**92**	5	0	**133**	21	91	**10**	0	122	4	48	**13**	0	65	355
07:30 AM	**6**	26	**17**	0	**49**	25	64	**11**	0	100	**30**	90	5	0	**125**	2	77	9	0	88	**362**
07:45 AM	5	**29**	11	0	45	29	63	6	0	98	21	94	7	0	122	1	54	10	0	65	330
08:00 AM	6	14	14	0	34	18	65	8	0	91	19	**95**	6	0	120	**6**	**79**	9	0	**94**	339
Total Volume	21	89	53	0	163	108	284	30	0	422	91	370	28	0	489	13	258	41	0	312	1386
% App. Total	12.9	54.6	32.5	0		25.6	67.3	7.1	0		18.6	75.7	5.7	0		4.2	82.7	13.1	0		
PHF	.875	.767	.779	.000	.832	.750	.772	.682	.000	.793	.758	.974	.700	.000	.978	.542	.816	.788	.000	.830	.957
General Traffic % General Traffic	95.2	96.6	98.1	0	96.9	100	99.6	100	0	99.8	100	98.9	100	0	99.2	100	99.2	100	0	99.4	99.1
3+ Axle Heavy Trucks % 3+ Axle Heavy Trucks	4.8	3.4	1.9	0	3.1	0	0.4	0	0	0.2	0	1.1	0	0	0.8	0	0.8	0	0	0.6	0.9



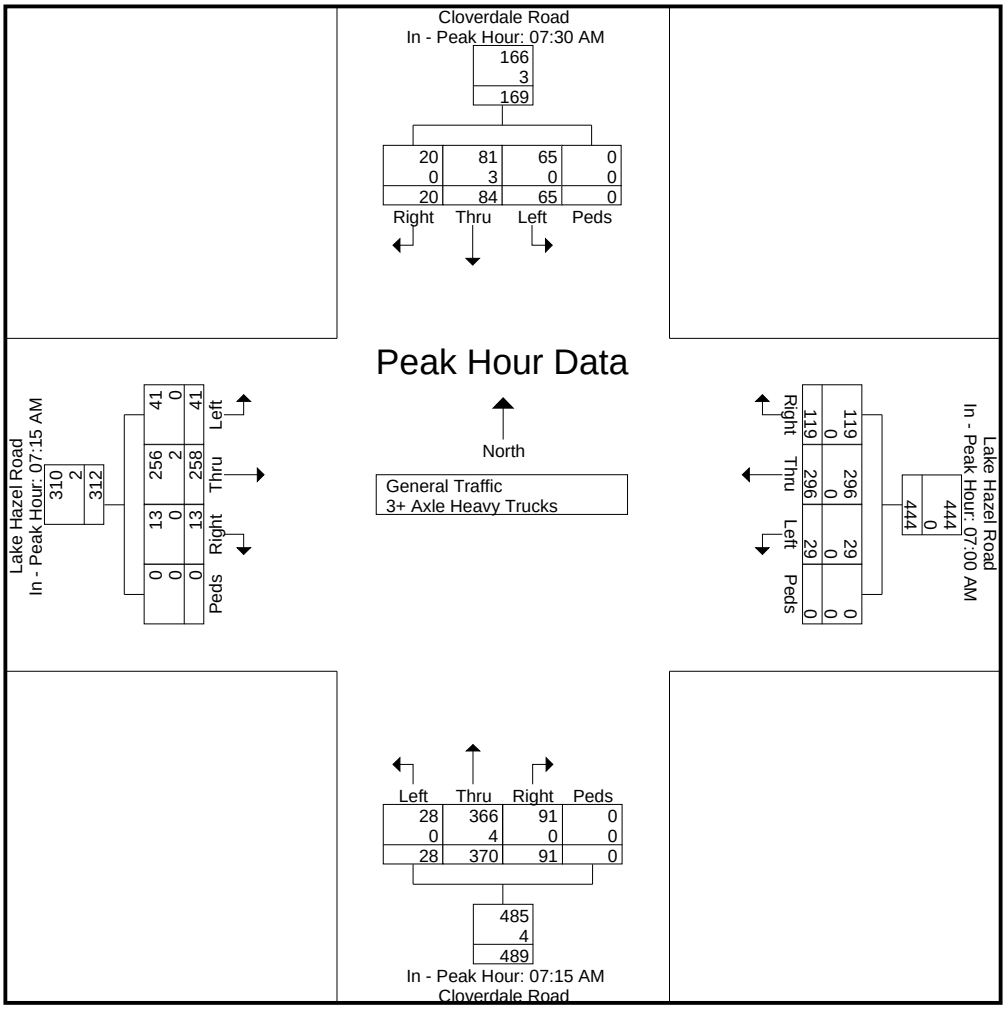
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Lake Hazel
City, State: Ada County, Idaho
Control: Signalized

File Name : Cloverdale Rd & Lake Hazel Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 4

	Cloverdale Road From North					Lake Hazel Road From East					Cloverdale Road From South					Lake Hazel Road 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:																					
	07:30 AM					07:00 AM					07:15 AM					07:15 AM					
+0 mins.	**6**	26	17	0	**49**	29	77	7	0	113	21	91	**10**	0	122	4	48	**13**	0	65	
+15 mins.	5	**29**	11	0	45	**36**	**92**	5	0	**133**	**30**	90	5	0	**125**	2	77	9	0	88	
+30 mins.	6	14	14	0	34	25	64	**11**	0	100	21	94	7	0	122	1	54	10	0	65	
+45 mins.	3	15	**23**	0	41	29	63	6	0	98	19	**95**	6	0	120	**6**	**79**	9	0	**94**	
Total Volume	20	84	65	0	169	119	296	29	0	444	91	370	28	0	489	13	258	41	0	312	
% App. Total	11.8	49.7	38.5	0		26.8	66.7	6.5	0		18.6	75.7	5.7	0		4.2	82.7	13.1	0		
PHF	.833	.724	.707	.000	.862	.826	.804	.659	.000	.835	.758	.974	.700	.000	.978	.542	.816	.788	.000	.830	
General Traffic																					
% General Traffic	100	96.4	100	0	98.2	100	100	100	0	100	100	98.9	100	0	99.2	100	99.2	100	0	99.4	
3+ Axle Heavy Trucks	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	0	2	0	0	2	
% 3+ Axle Heavy Trucks	0	3.6	0	0	1.8	0	0	0	0	0	0	1.1	0	0	0.8	0	0.8	0	0	0.6	



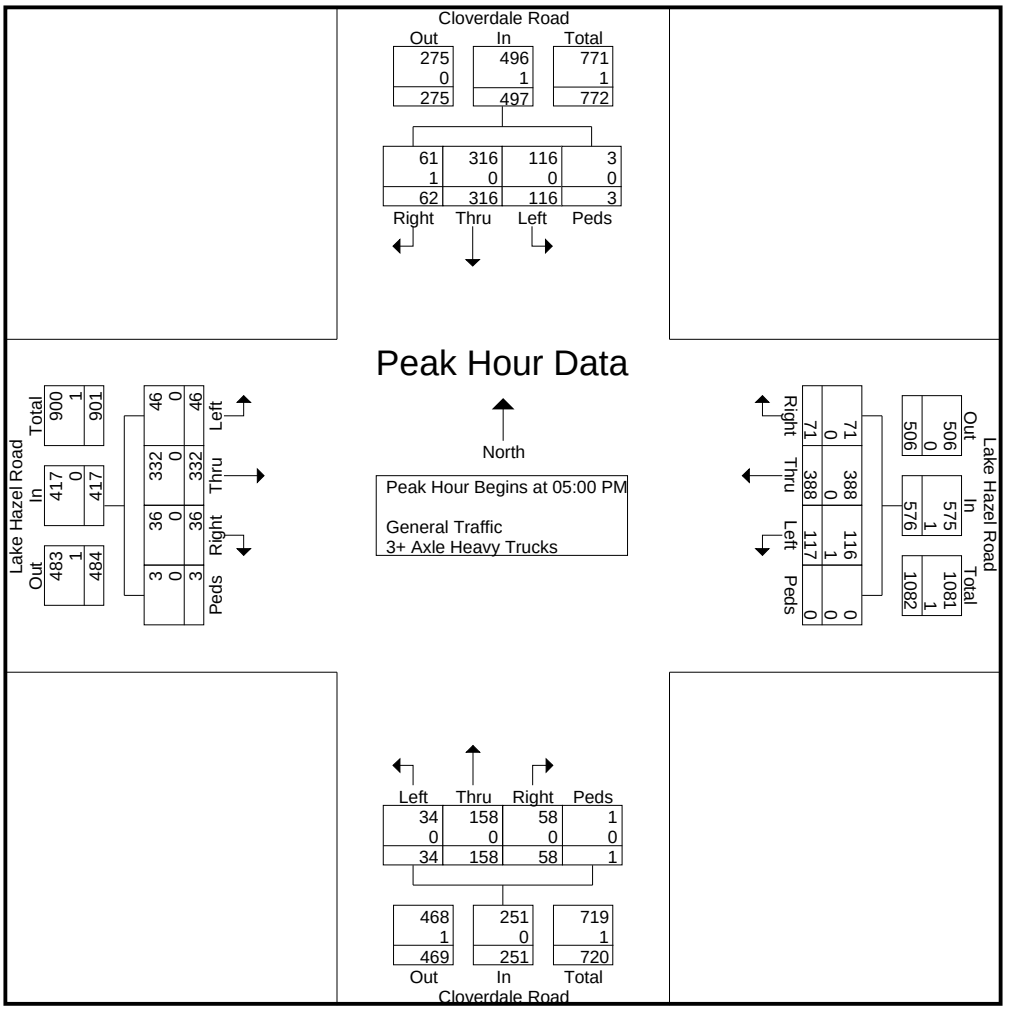
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Lake Hazel
City, State: Ada County, Idaho
Control: Signalized

File Name : Cloverdale Rd & Lake Hazel Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 5

	Cloverdale Road From North					Lake Hazel Road From East					Cloverdale Road From South					Lake Hazel Road 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 05:00 PM																					
05:00 PM	**20**	79	**35**	**1**	**135**	14	**109**	23	0	146	12	33	4	0	49	**10**	80	**16**	1	107	437
05:15 PM	16	**82**	28	1	127	10	89	32	0	131	12	39	9	0	60	8	**97**	10	0	**115**	433
05:30 PM	11	73	35	1	120	23	99	**35**	0	**157**	13	41	10	0	64	8	82	9	**2**	101	**442**
05:45 PM	15	82	18	0	115	**24**	91	27	0	142	**21**	**45**	**11**	**1**	**78**	10	73	11	0	94	429
Total Volume	62	316	116	3	497	71	388	117	0	576	58	158	34	1	251	36	332	46	3	417	1741
% App. Total	12.5	63.6	23.3	0.6		12.3	67.4	20.3	0		23.1	62.9	13.5	0.4		8.6	79.6	11	0.7		
PHF	.775	.963	.829	.750	.920	.740	.890	.836	.000	.917	.690	.878	.773	.250	.804	.900	.856	.719	.375	.907	.985
General Traffic																					
% General Traffic	98.4	100	100	100	99.8	100	100	99.1	0	99.8	100	100	100	100	100	100	100	100	100	100	99.9
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	1.6	0	0	0	0.2	0	0	0.9	0	0.2	0	0	0	0	0	0	0	0	0	0	0.1



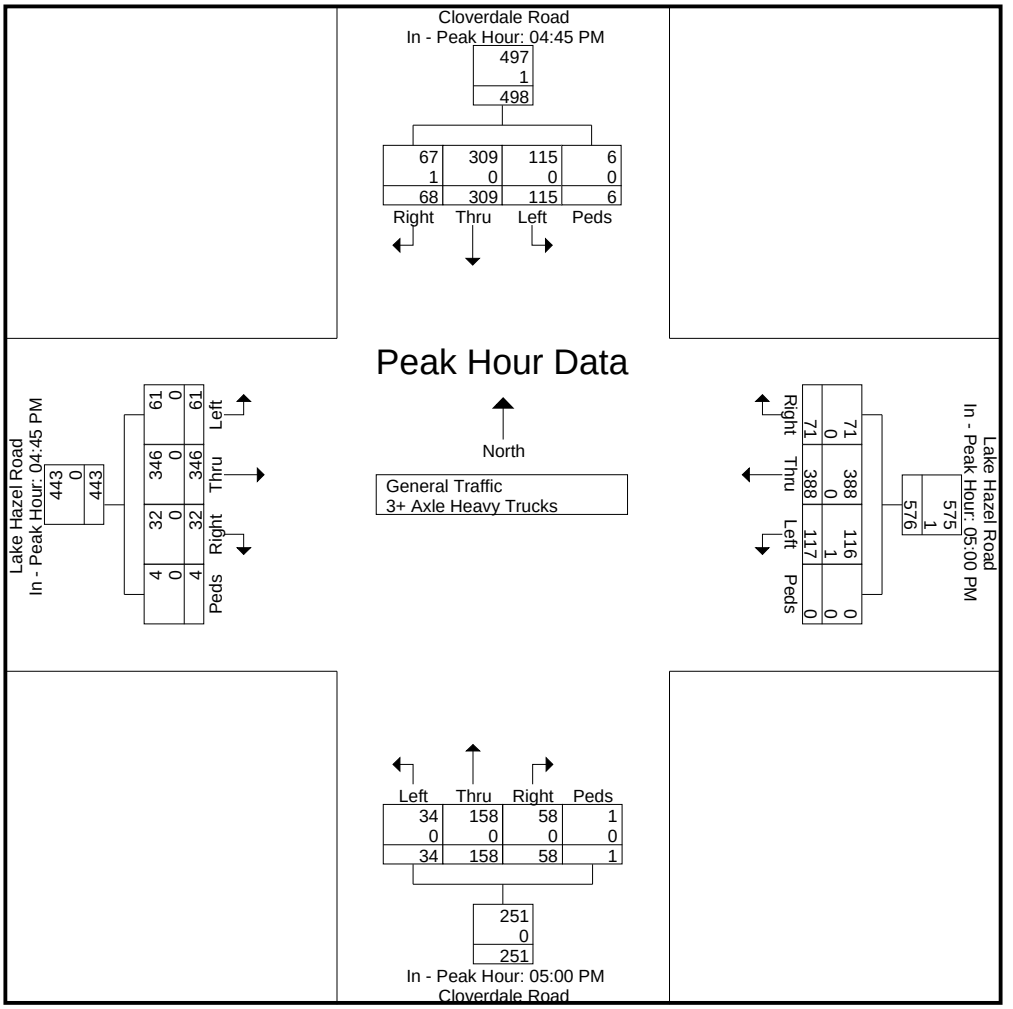
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Lake Hazel
City, State: Ada County, Idaho
Control: Signalized

File Name : Cloverdale Rd & Lake Hazel Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 6

	Cloverdale Road From North					Lake Hazel Road From East					Cloverdale Road From South					Lake Hazel Road 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:																					
	04:45 PM					05:00 PM					05:00 PM					04:45 PM					
+0 mins.	**21**	75	17	**3**	116	14	**109**	23	0	146	12	33	4	0	49	6	87	**26**	1	**120**	
+15 mins.	20	79	**35**	1	**135**	10	89	32	0	131	12	39	9	0	60	**10**	80	16	1	107	
+30 mins.	16	**82**	28	1	127	23	99	**35**	0	**157**	13	41	10	0	64	8	**97**	10	0	115	
+45 mins.	11	73	35	1	120	**24**	91	27	0	142	**21**	**45**	**11**	**1**	**78**	8	82	9	**2**	101	
Total Volume	68	309	115	6	498	71	388	117	0	576	58	158	34	1	251	32	346	61	4	443	
% App. Total	13.7	62	23.1	1.2		12.3	67.4	20.3	0		23.1	62.9	13.5	0.4		7.2	78.1	13.8	0.9		
PHF	.810	.942	.821	.500	.922	.740	.890	.836	.000	.917	.690	.878	.773	.250	.804	.800	.892	.587	.500	.923	
General Traffic																					
% General Traffic	98.5	100	100	100	99.8	100	100	99.1	0	99.8	100	100	100	100	100	100	100	100	100	100	
3+ Axle Heavy Trucks	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	
% 3+ Axle Heavy Trucks	1.5	0	0	0	0.2	0	0	0.9	0	0.2	0	0	0	0	0	0	0	0	0	0	



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Lake Hazel
City, State: Ada County, Idaho
Control: Signalized

File Name : Cloverdale Rd & Lake Hazel Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 7

Image 1

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Columbia R
City, State: Ada County, Idaho
Control: All Stop

File Name : Cloverdale Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 1

Groups Printed- General Traffic - 3+ Axle Heavy Trucks

	Cloverdale Road From North					Columbia Road From East					Cloverdale Road From South					Columbia Road 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	15	17	0	0	32	4	22	6	1	33	2	59	5	0	66	6	14	20	0	40	171
07:15 AM	19	16	1	0	36	4	22	9	0	35	7	53	6	0	66	14	13	27	0	54	191
07:30 AM	12	22	2	0	36	10	22	8	0	40	6	55	6	0	67	15	17	36	0	68	211
07:45 AM	12	22	1	1	36	6	19	2	0	27	6	52	7	0	65	19	16	33	0	68	196
Total	58	77	4	1	140	24	85	25	1	135	21	219	24	0	264	54	60	116	0	230	769
08:00 AM	8	11	1	0	20	8	20	3	0	31	2	42	3	0	47	5	17	26	0	48	146
08:15 AM	3	12	5	0	20	5	6	3	0	14	3	41	7	0	51	5	14	20	0	39	124
08:30 AM	2	8	2	0	12	2	14	2	0	18	4	28	7	0	39	8	15	22	0	45	114
08:45 AM	12	18	1	0	31	5	17	10	0	32	5	34	8	0	47	2	20	14	0	36	146
Total	25	49	9	0	83	20	57	18	0	95	14	145	25	0	184	20	66	82	0	168	530

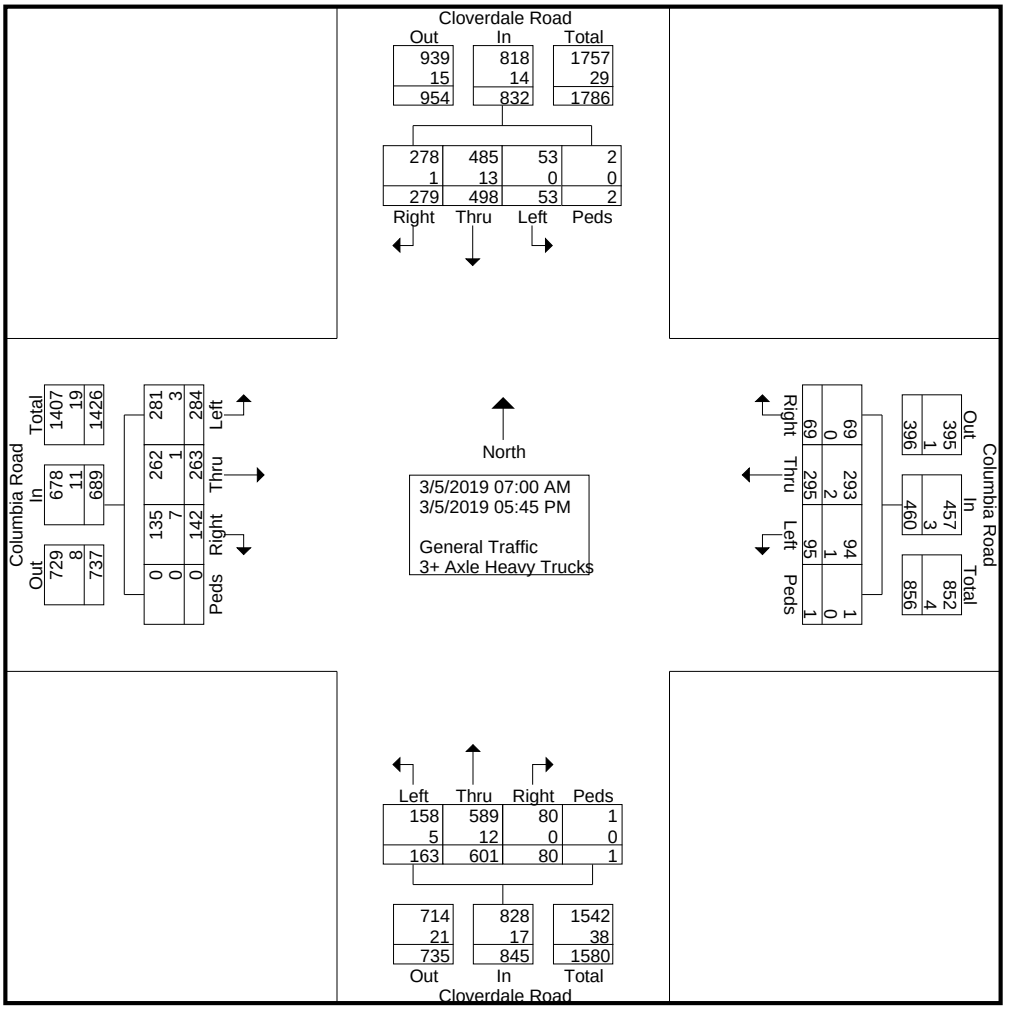
04:00 PM	19	37	4	0	60	2	22	12	0	36	7	32	14	0	53	11	14	9	0	34	183
04:15 PM	25	47	2	1	75	4	15	10	0	29	2	24	15	0	41	6	14	19	0	39	184
04:30 PM	23	51	3	0	77	4	22	8	0	34	5	32	13	1	51	7	15	13	0	35	197
04:45 PM	26	46	2	0	74	3	15	6	0	24	6	26	15	0	47	15	19	8	0	42	187
Total	93	181	11	1	286	13	74	36	0	123	20	114	57	1	192	39	62	49	0	150	751
05:00 PM	18	47	2	0	67	1	14	3	0	18	5	22	24	0	51	5	22	8	0	35	171
05:15 PM	25	54	12	0	91	3	20	7	0	30	8	37	15	0	60	11	15	10	0	36	217
05:30 PM	28	50	7	0	85	5	27	3	0	35	6	33	11	0	50	7	27	9	0	43	213
05:45 PM	32	40	8	0	80	3	18	3	0	24	6	31	7	0	44	6	11	10	0	27	175
Total	103	191	29	0	323	12	79	16	0	107	25	123	57	0	205	29	75	37	0	141	776
Grand Total	279	498	53	2	832	69	295	95	1	460	80	601	163	1	845	142	263	284	0	689	2826
Apprch %	33.5	59.9	6.4	0.2		15	64.1	20.7	0.2		9.5	71.1	19.3	0.1		20.6	38.2	41.2	0		
Total %	9.9	17.6	1.9	0.1	29.4	2.4	10.4	3.4	0	16.3	2.8	21.3	5.8	0	29.9	5	9.3	10	0	24.4	
General Traffic																					
% General Traffic	99.6	97.4	100	100	98.3	100	99.3	98.9	100	99.3	100	98	96.9	100	98	95.1	99.6	98.9	0	98.4	98.4
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	0.4	2.6	0	0	1.7	0	0.7	1.1	0	0.7	0	2	3.1	0	2	4.9	0.4	1.1	0	1.6	1.6

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Columbia R
City, State: Ada County, Idaho
Control: All Stop

File Name : Cloverdale Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 2



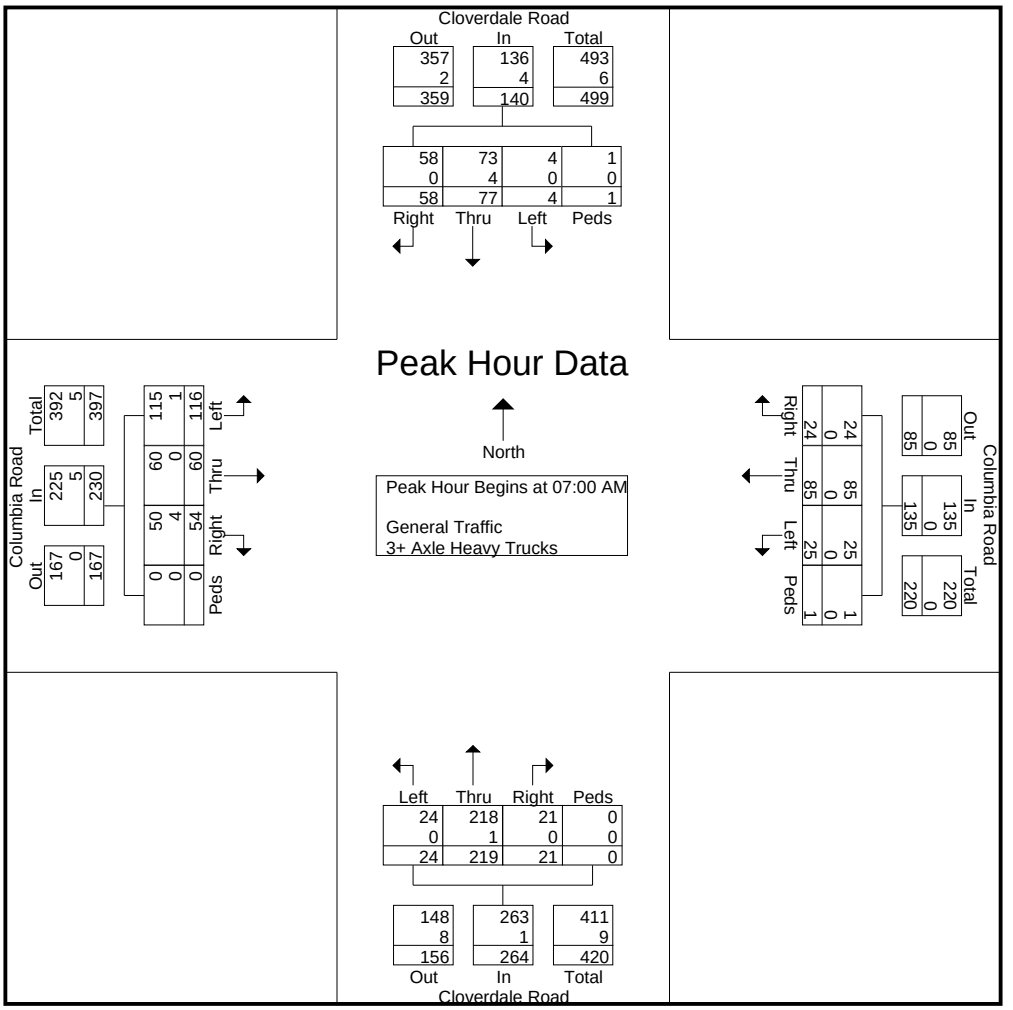
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Columbia R
City, State: Ada County, Idaho
Control: All Stop

File Name : Cloverdale Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 3

	Cloverdale Road From North					Columbia Road From East					Cloverdale Road From South					Columbia Road 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	15	17	0	0	32	4	**22**	6	**1**	33	2	**59**	5	0	66	6	14	20	0	40	171
07:15 AM	**19**	16	1	0	**36**	4	22	**9**	0	35	**7**	53	6	0	66	14	13	27	0	54	191
07:30 AM	12	**22**	**2**	0	36	**10**	22	8	0	**40**	6	55	6	0	**67**	15	**17**	**36**	0	**68**	**211**
07:45 AM	12	22	1	**1**	36	6	19	2	0	27	6	52	**7**	0	65	**19**	16	33	0	68	196
Total Volume	58	77	4	1	140	24	85	25	1	135	21	219	24	0	264	54	60	116	0	230	769
% App. Total	41.4	55	2.9	0.7		17.8	63	18.5	0.7		8	83	9.1	0		23.5	26.1	50.4	0		
PHF	.763	.875	.500	.250	.972	.600	.966	.694	.250	.844	.750	.928	.857	.000	.985	.711	.882	.806	.000	.846	.911
General Traffic																					
% General Traffic	100	94.8	100	100	97.1	100	100	100	100	100	100	99.5	100	0	99.6	92.6	100	99.1	0	97.8	98.7
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	0	5.2	0	0	2.9	0	0	0	0	0	0	0.5	0	0	0.4	7.4	0	0.9	0	2.2	1.3



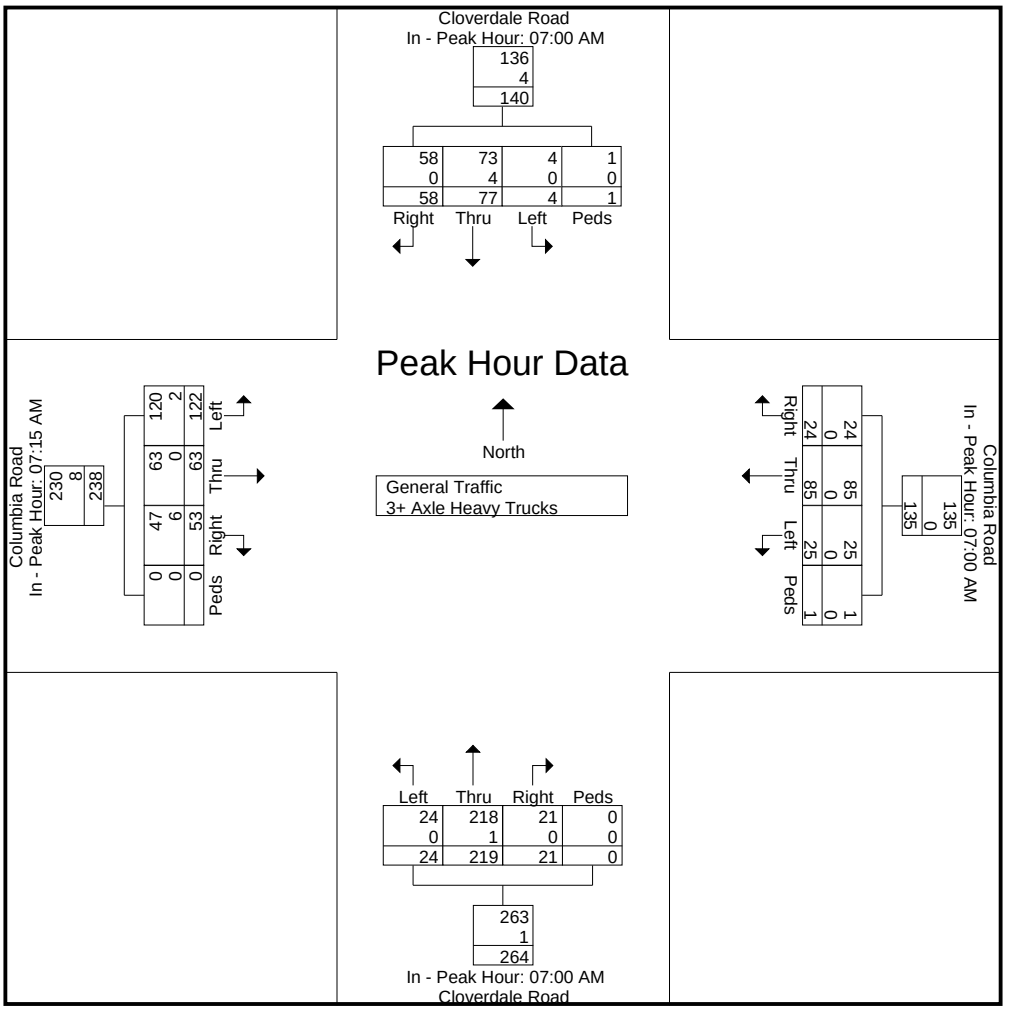
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Columbia R
City, State: Ada County, Idaho
Control: All Stop

File Name : Cloverdale Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 4

	Cloverdale Road From North					Columbia Road From East					Cloverdale Road From South					Columbia Road 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:																					
	07:00 AM					07:00 AM					07:00 AM					07:15 AM					
+0 mins.	15	17	0	0	32	4	**22**	6	**1**	33	2	**59**	5	0	66	14	13	27	0	54	
+15 mins.	**19**	16	1	0	**36**	4	22	**9**	0	35	**7**	53	6	0	66	15	**17**	**36**	0	**68**	
+30 mins.	12	**22**	**2**	0	36	**10**	22	8	0	**40**	6	55	6	0	**67**	**19**	16	33	0	68	
+45 mins.	12	22	1	**1**	36	6	19	2	0	27	6	52	**7**	0	65	5	17	26	0	48	
Total Volume	58	77	4	1	140	24	85	25	1	135	21	219	24	0	264	53	63	122	0	238	
% App. Total	41.4	55	2.9	0.7		17.8	63	18.5	0.7		8	83	9.1	0		22.3	26.5	51.3	0		
PHF	.763	.875	.500	.250	.972	.600	.966	.694	.250	.844	.750	.928	.857	.000	.985	.697	.926	.847	.000	.875	
General Traffic																					
% General Traffic	100	94.8	100	100	97.1	100	100	100	100	100	100	99.5	100	0	99.6	88.7	100	98.4	0	96.6	
3+ Axle Heavy Trucks	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	6	0	2	0	8	
% 3+ Axle Heavy Trucks	0	5.2	0	0	2.9	0	0	0	0	0	0	0.5	0	0	0.4	11.3	0	1.6	0	3.4	



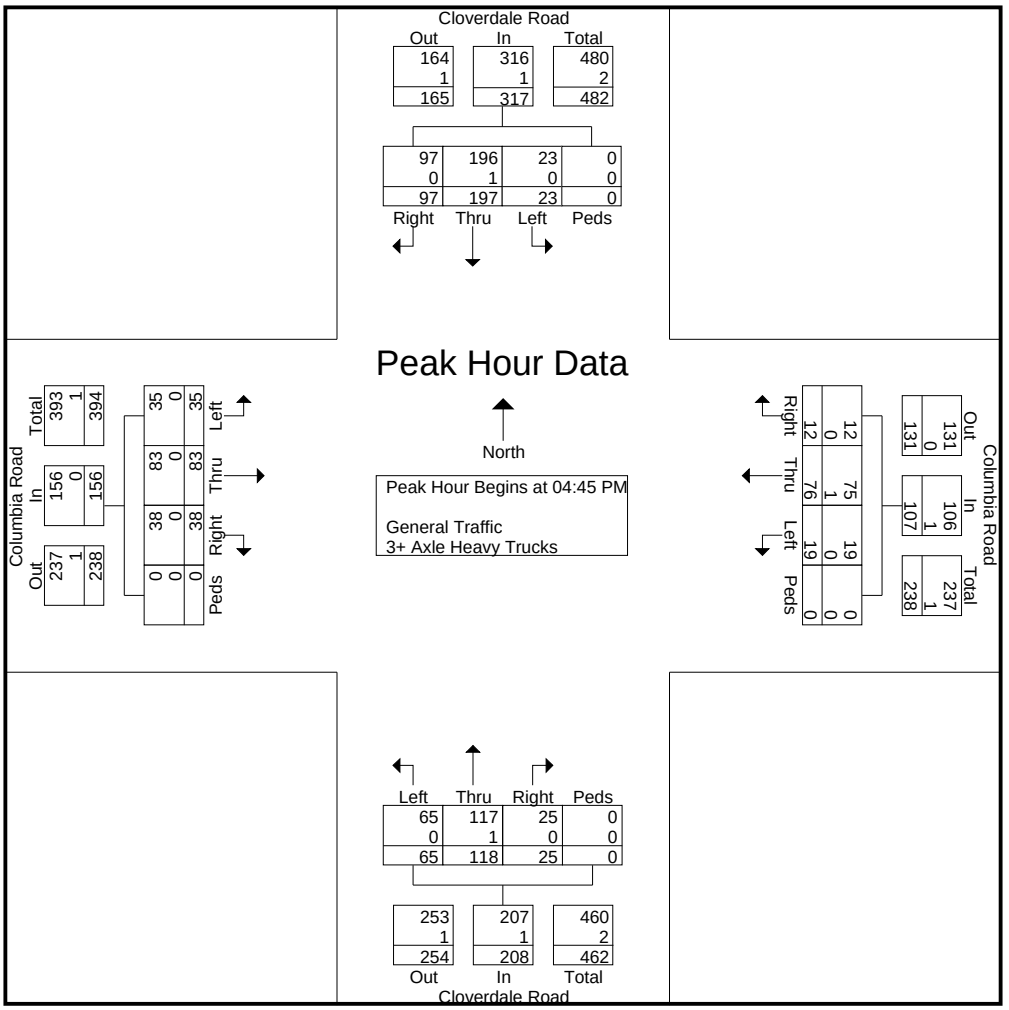
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Columbia R
City, State: Ada County, Idaho
Control: All Stop

File Name : Cloverdale Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 5

	Cloverdale Road From North					Columbia Road From East					Cloverdale Road From South					Columbia Road 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	26	46	2	0	74	3	15	6	0	24	6	26	15	0	47	**15**	19	8	0	42	187
05:00 PM	18	47	2	0	67	1	14	3	0	18	5	22	**24**	0	51	5	22	8	0	35	171
05:15 PM	25	**54**	**12**	0	**91**	3	20	**7**	0	30	**8**	**37**	15	0	**60**	11	15	**10**	0	36	**217**
05:30 PM	**28**	50	7	0	85	**5**	**27**	3	0	**35**	6	33	11	0	50	7	**27**	9	0	**43**	213
Total Volume	97	197	23	0	317	12	76	19	0	107	25	118	65	0	208	38	83	35	0	156	788
% App. Total	30.6	62.1	7.3	0		11.2	71	17.8	0		12	56.7	31.2	0		24.4	53.2	22.4	0		
PHF	.866	.912	.479	.000	.871	.600	.704	.679	.000	.764	.781	.797	.677	.000	.867	.633	.769	.875	.000	.907	.908
General Traffic																					
% General Traffic	100	99.5	100	0	99.7	100	98.7	100	0	99.1	100	99.2	100	0	99.5	100	100	100	0	100	99.6
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	0	0.5	0	0	0.3	0	1.3	0	0	0.9	0	0.8	0	0	0.5	0	0	0	0	0	0.4



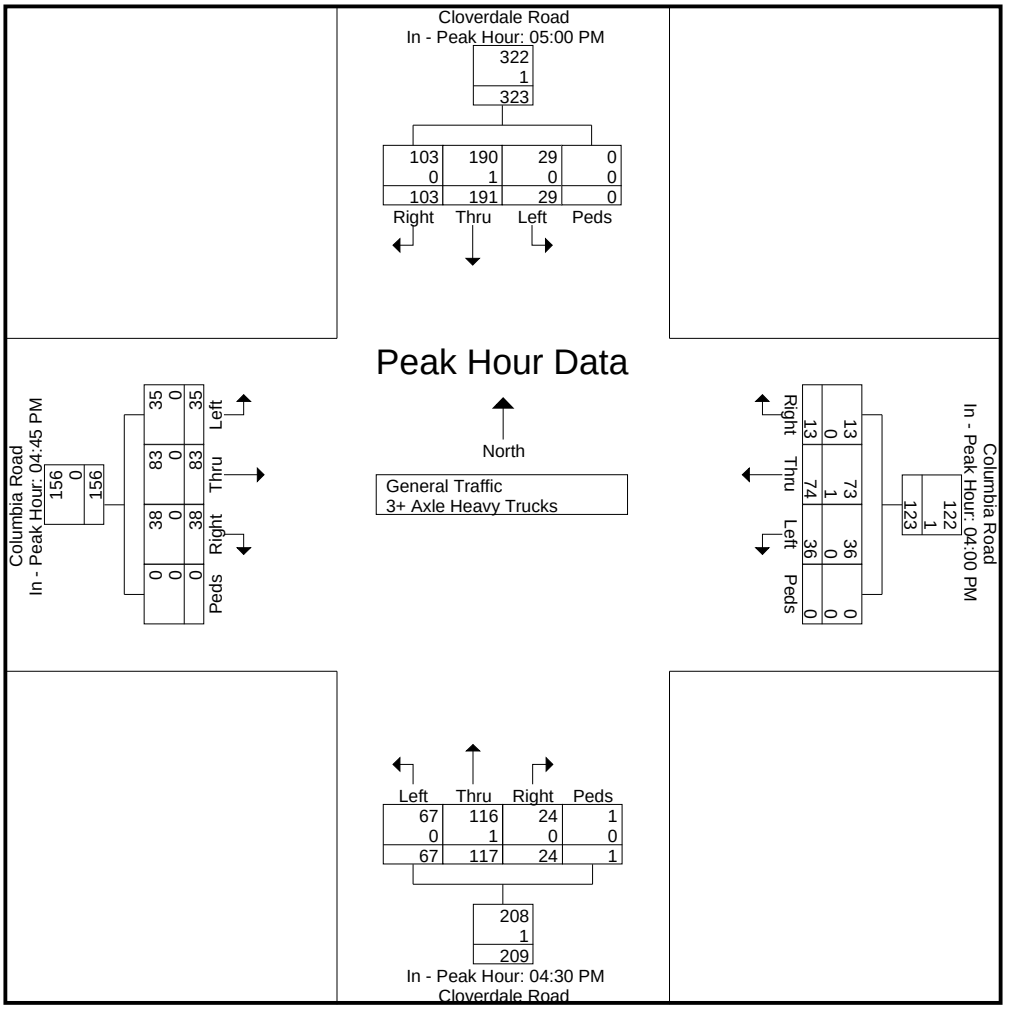
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Columbia R
City, State: Ada County, Idaho
Control: All Stop

File Name : Cloverdale Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 6

	Cloverdale Road From North					Columbia Road From East					Cloverdale Road From South					Columbia Road 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:																					
	05:00 PM					04:00 PM					04:30 PM					04:45 PM					
+0 mins.	18	47	2	0	67	2	**22**	**12**	0	**36**	5	32	13	**1**	51	**15**	19	8	0	42	
+15 mins.	25	**54**	**12**	0	**91**	**4**	15	10	0	29	6	26	15	0	47	5	22	8	0	35	
+30 mins.	28	50	7	0	85	4	22	8	0	34	5	22	**24**	0	51	11	15	**10**	0	36	
+45 mins.	**32**	40	8	0	80	3	15	6	0	24	**8**	**37**	15	0	**60**	7	**27**	9	0	**43**	
Total Volume	103	191	29	0	323	13	74	36	0	123	24	117	67	1	209	38	83	35	0	156	
% App. Total	31.9	59.1	9	0		10.6	60.2	29.3	0		11.5	56	32.1	0.5		24.4	53.2	22.4	0		
PHF	.805	.884	.604	.000	.887	.813	.841	.750	.000	.854	.750	.791	.698	.250	.871	.633	.769	.875	.000	.907	
General Traffic																					
% General Traffic	100	99.5	100	0	99.7	100	98.6	100	0	99.2	100	99.1	100	100	99.5	100	100	100	0	100	
3+ Axle Heavy Trucks	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	
% 3+ Axle Heavy Trucks	0	0.5	0	0	0.3	0	1.4	0	0	0.8	0	0.9	0	0	0.5	0	0	0	0	0	



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Columbia R
City, State: Ada County, Idaho
Control: All Stop

File Name : Cloverdale Rd & Columbia Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 7

Image 1

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Hubbard Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Cloverdale Rd & Hubbard Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 1

Groups Printed- General Traffic - 3+ Axle Heavy Trucks

	Cloverdale Road From North					Hubbard Road From East					Cloverdale Road From South					Hubbard Road 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	4	9	9	0	22	0	0	0	0	0	5	44	2	0	51	1	26	23	0	50	123
07:15 AM	14	14	19	0	47	2	1	0	0	3	6	46	1	0	53	1	33	9	0	43	146
07:30 AM	8	18	22	0	48	5	0	0	0	5	8	40	1	0	49	1	17	22	0	40	142
07:45 AM	7	14	20	0	41	1	0	1	0	2	0	48	1	0	49	1	23	9	0	33	125
Total	33	55	70	0	158	8	1	1	0	10	19	178	5	0	202	4	99	63	0	166	536
08:00 AM	4	13	7	0	24	2	1	0	0	3	6	36	3	0	45	0	9	9	0	18	90
08:15 AM	1	18	4	0	23	3	0	0	0	3	7	38	0	0	45	0	12	10	0	22	93
08:30 AM	3	7	6	0	16	4	3	0	0	7	1	28	0	0	29	1	9	8	0	18	70
08:45 AM	4	12	8	0	24	1	0	0	0	1	2	35	1	0	38	0	4	6	0	10	73
Total	12	50	25	0	87	10	4	0	0	14	16	137	4	0	157	1	34	33	0	68	326

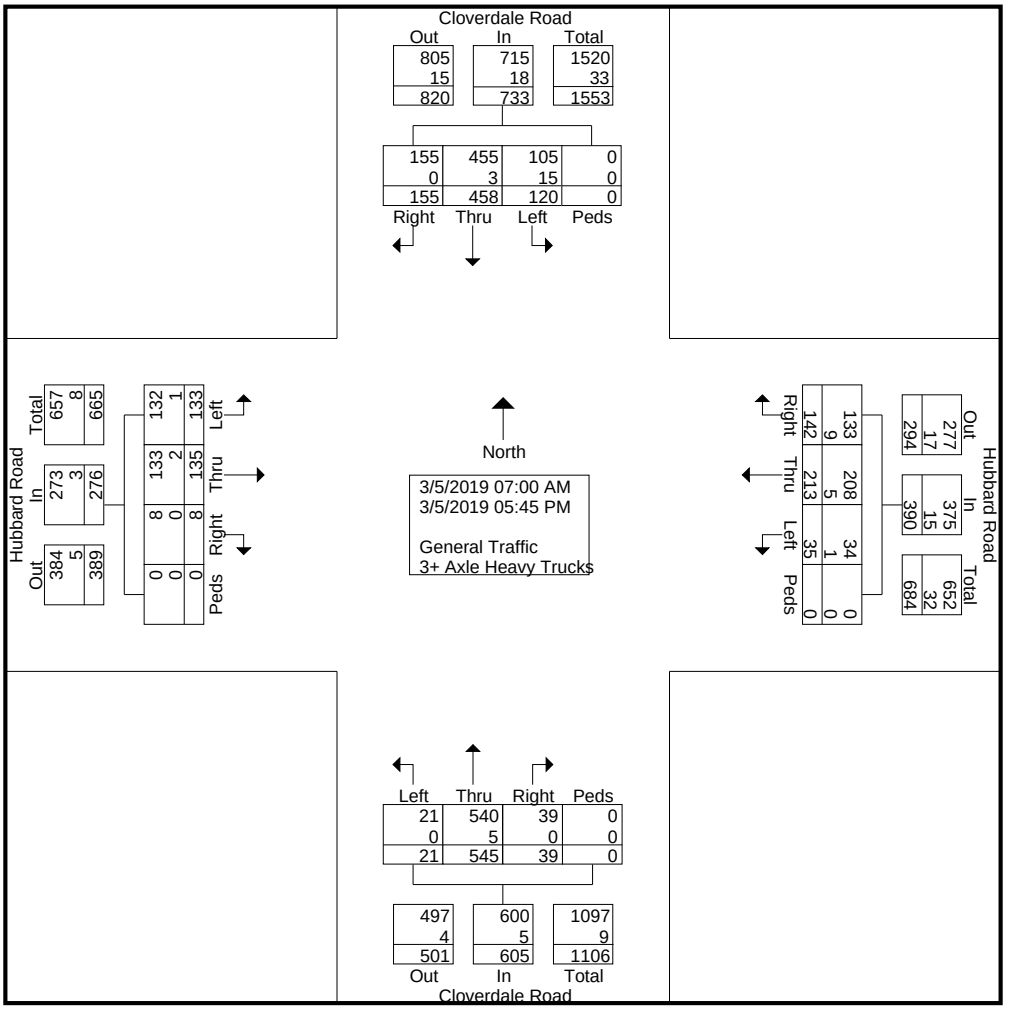
04:00 PM	13	44	2	0	59	17	20	4	0	41	0	35	2	0	37	1	0	2	0	3	140
04:15 PM	17	41	4	0	62	17	17	3	0	37	0	15	1	0	16	0	0	8	0	8	123
04:30 PM	14	45	3	0	62	10	21	4	0	35	1	30	2	0	33	0	0	7	0	7	137
04:45 PM	18	53	2	0	73	19	22	2	0	43	2	27	2	0	31	2	0	6	0	8	155
Total	62	183	11	0	256	63	80	13	0	156	3	107	7	0	117	3	0	23	0	26	555
05:00 PM	17	39	1	0	57	22	30	6	0	58	0	27	0	0	27	0	1	1	0	2	144
05:15 PM	15	49	6	0	70	14	46	6	0	66	0	37	2	0	39	0	1	7	0	8	183
05:30 PM	10	41	5	0	56	16	36	6	0	58	0	33	2	0	35	0	0	4	0	4	153
05:45 PM	6	41	2	0	49	9	16	3	0	28	1	26	1	0	28	0	0	2	0	2	107
Total	48	170	14	0	232	61	128	21	0	210	1	123	5	0	129	0	2	14	0	16	587
Grand Total	155	458	120	0	733	142	213	35	0	390	39	545	21	0	605	8	135	133	0	276	2004
Apprch %	21.1	62.5	16.4	0		36.4	54.6	9	0		6.4	90.1	3.5	0		2.9	48.9	48.2	0		
Total %	7.7	22.9	6	0	36.6	7.1	10.6	1.7	0	19.5	1.9	27.2	1	0	30.2	0.4	6.7	6.6	0	13.8	
General Traffic																					
% General Traffic	100	99.3	87.5	0	97.5	93.7	97.7	97.1	0	96.2	100	99.1	100	0	99.2	100	98.5	99.2	0	98.9	98
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	0	0.7	12.5	0	2.5	6.3	2.3	2.9	0	3.8	0	0.9	0	0	0.8	0	1.5	0.8	0	1.1	2

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Hubbard Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Cloverdale Rd & Hubbard Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 2



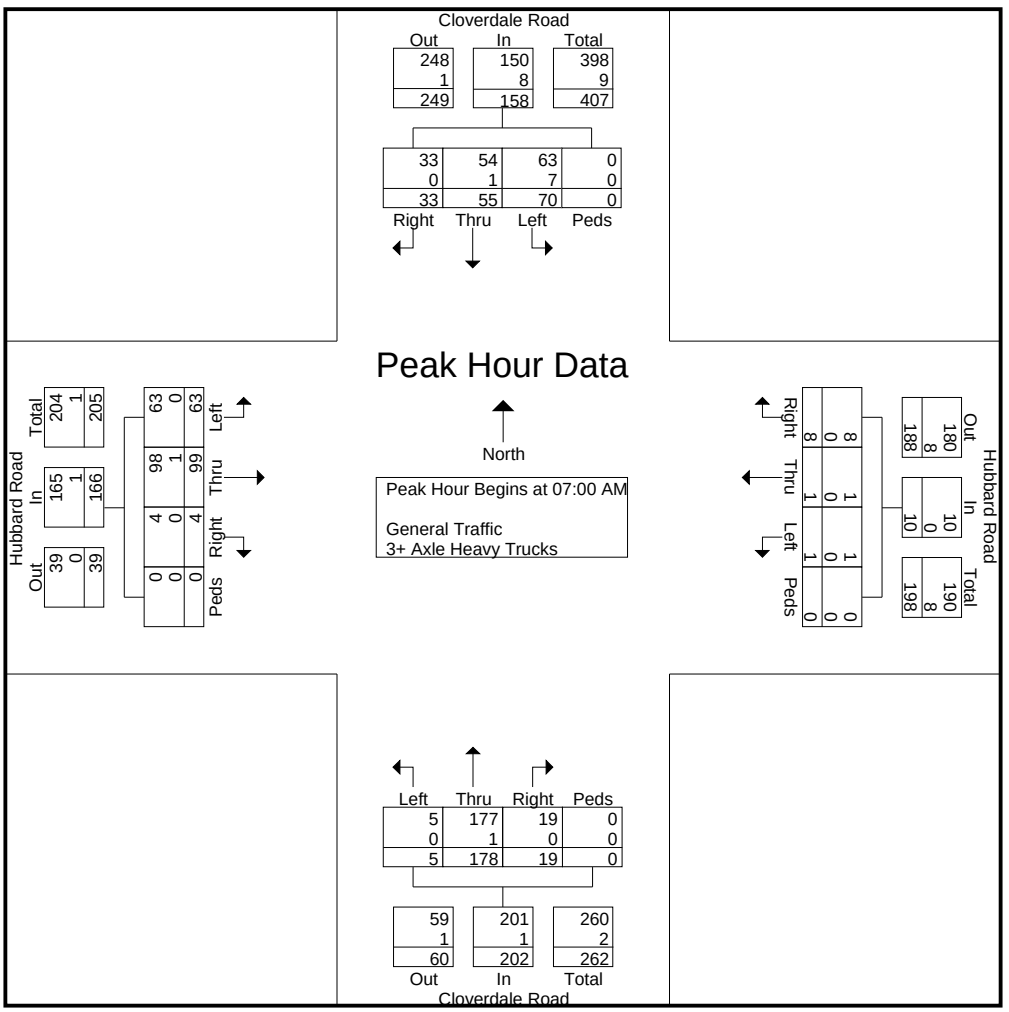
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Hubbard Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Cloverdale Rd & Hubbard Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 3

	Cloverdale Road From North					Hubbard Road From East					Cloverdale Road From South					Hubbard Road 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	4	9	9	0	22	0	0	0	0	0	5	44	**2**	0	51	**1**	26	**23**	0	**50**	123
07:15 AM	**14**	14	19	0	47	2	**1**	0	0	3	6	46	1	0	**53**	1	**33**	9	0	43	**146**
07:30 AM	8	**18**	**22**	0	**48**	**5**	0	0	0	**5**	**8**	40	1	0	49	1	17	22	0	40	142
07:45 AM	7	14	20	0	41	1	0	**1**	0	2	0	**48**	1	0	49	1	23	9	0	33	125
Total Volume	33	55	70	0	158	8	1	1	0	10	19	178	5	0	202	4	99	63	0	166	536
% App. Total	20.9	34.8	44.3	0		80	10	10	0		9.4	88.1	2.5	0		2.4	59.6	38	0		
PHF	.589	.764	.795	.000	.823	.400	.250	.250	.000	.500	.594	.927	.625	.000	.953	1.00	.750	.685	.000	.830	.918
General Traffic % General Traffic	100	98.2	90.0	0	94.9	100	100	100	0	100	100	99.4	100	0	99.5	100	99.0	100	0	99.4	98.1
3+ Axle Heavy Trucks % 3+ Axle Heavy Trucks	0	1.8	10.0	0	5.1	0	0	0	0	0	0	0.6	0	0	0.5	0	1.0	0	0	0.6	1.9



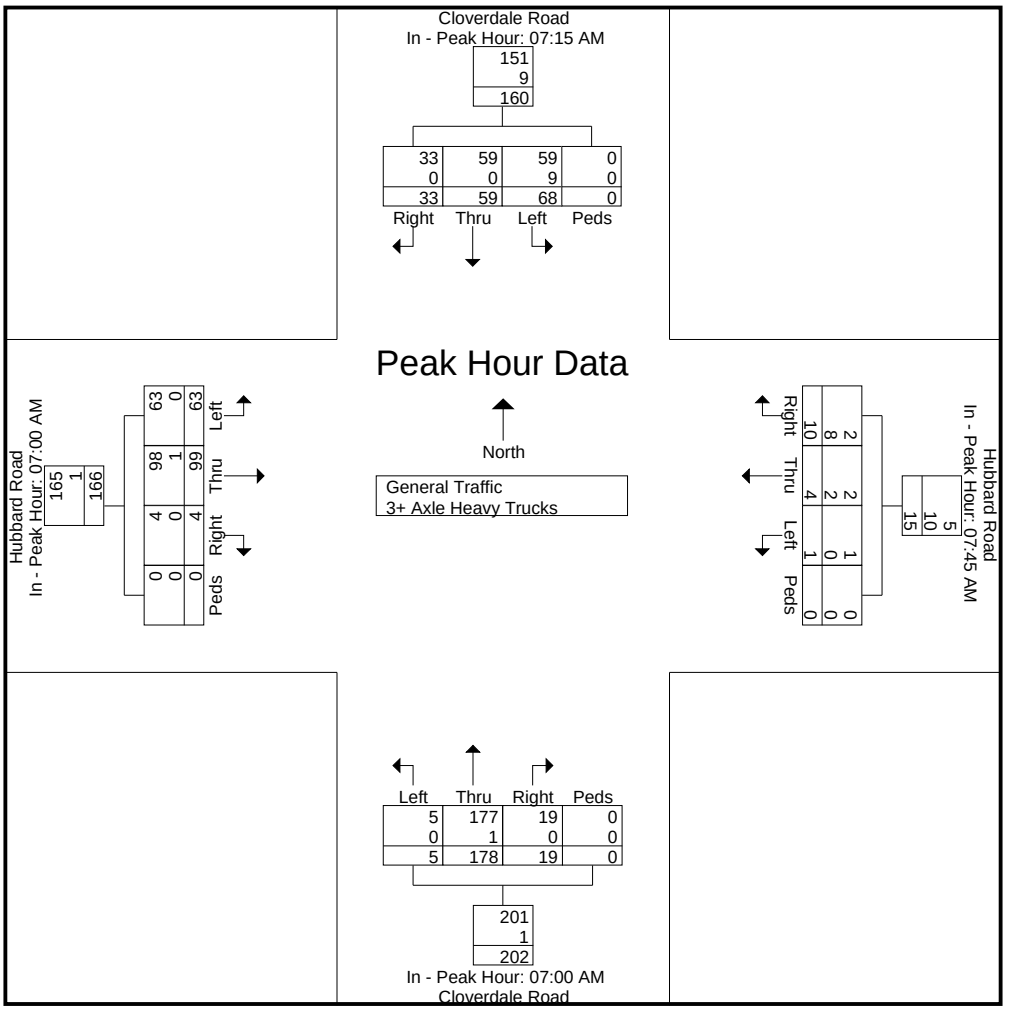
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Hubbard Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Cloverdale Rd & Hubbard Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 4

	Cloverdale Road From North					Hubbard Road From East					Cloverdale Road From South					Hubbard Road 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					07:45 AM					07:00 AM					07:00 AM					
+0 mins.	**14**	14	19	0	47	1	0	**1**	0	2	5	44	**2**	0	51	**1**	26	**23**	0	**50**	
+15 mins.	8	**18**	**22**	0	**48**	2	1	0	0	3	6	46	1	0	**53**	1	**33**	9	0	43	
+30 mins.	7	14	20	0	41	3	0	0	0	3	**8**	40	1	0	49	1	17	22	0	40	
+45 mins.	4	13	7	0	24	**4**	**3**	0	0	**7**	0	**48**	1	0	49	1	23	9	0	33	
Total Volume	33	59	68	0	160	10	4	1	0	15	19	178	5	0	202	4	99	63	0	166	
% App. Total	20.6	36.9	42.5	0		66.7	26.7	6.7	0		9.4	88.1	2.5	0		2.4	59.6	38	0		
PHF	.589	.819	.773	.000	.833	.625	.333	.250	.000	.536	.594	.927	.625	.000	.953	1.000	.750	.685	.000	.830	
General Traffic																					
% General Traffic	100	100	86.8	0	94.4	20	50	100	0	33.3	100	99.4	100	0	99.5	100	99	100	0	99.4	
3+ Axle Heavy Trucks	0	0	9	0	9	8	2	0	0	10	0	1	0	0	1	0	1	0	0	1	
% 3+ Axle Heavy Trucks	0	0	13.2	0	5.6	80	50	0	0	66.7	0	0.6	0	0	0.5	0	1	0	0	0.6	



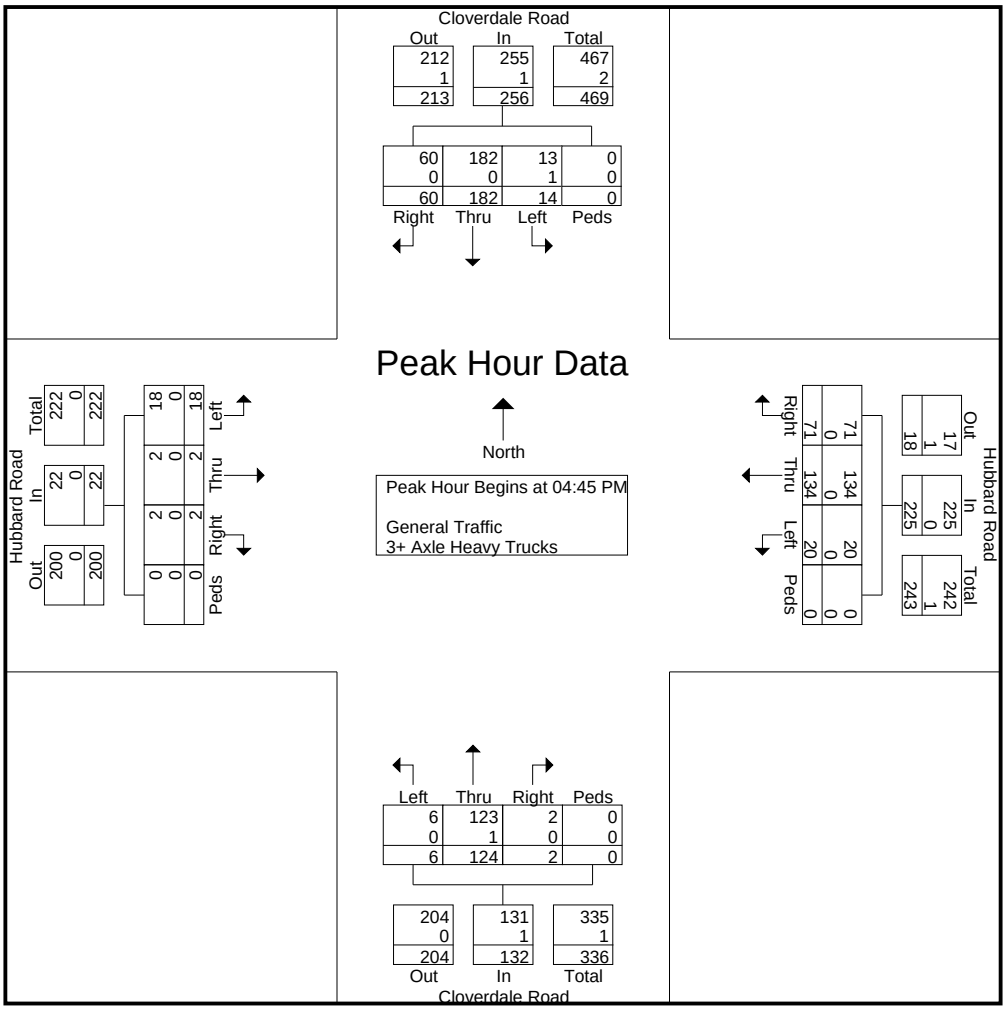
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Hubbard Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Cloverdale Rd & Hubbard Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 5

	Cloverdale Road From North					Hubbard Road From East					Cloverdale Road From South					Hubbard Road 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	**18**	**53**	2	0	**73**	19	22	2	0	43	**2**	27	**2**	0	31	**2**	0	6	0	**8**	155
05:00 PM	17	39	1	0	57	**22**	30	**6**	0	58	0	27	0	0	27	0	**1**	1	0	2	144
05:15 PM	15	49	**6**	0	70	14	**46**	6	0	**66**	0	**37**	2	0	**39**	0	1	**7**	0	8	**183**
05:30 PM	10	41	5	0	56	16	36	6	0	58	0	33	2	0	35	0	0	4	0	4	153
Total Volume	60	182	14	0	256	71	134	20	0	225	2	124	6	0	132	2	2	18	0	22	635
% App. Total	23.4	71.1	5.5	0		31.6	59.6	8.9	0		1.5	93.9	4.5	0		9.1	9.1	81.8	0		
PHF	.833	.858	.583	.000	.877	.807	.728	.833	.000	.852	.250	.838	.750	.000	.846	.250	.500	.643	.000	.688	.867
General Traffic																					
% General Traffic	100	100	92.9	0	99.6	100	100	100	0	100	100	99.2	100	0	99.2	100	100	100	0	100	99.7
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	0	0	7.1	0	0.4	0	0	0	0	0	0	0.8	0	0	0.8	0	0	0	0	0	0.3



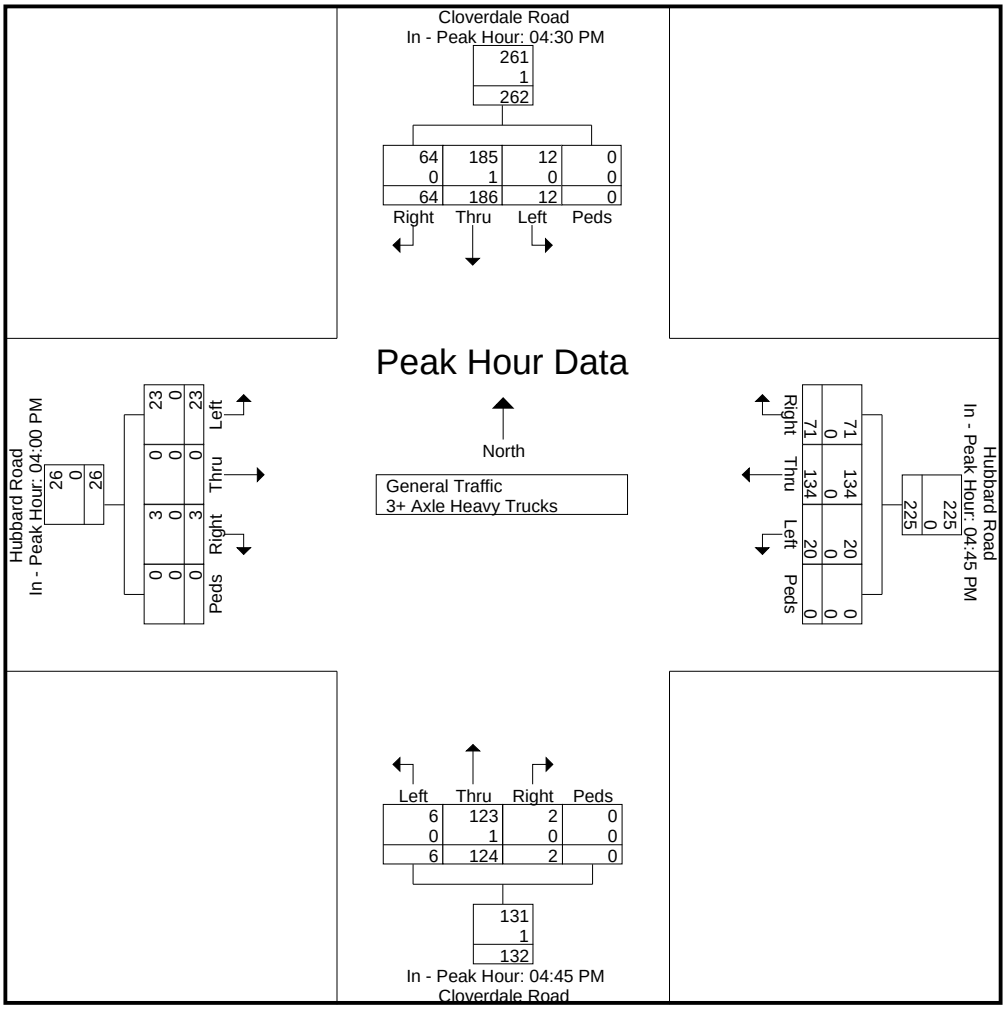
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Hubbard Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Cloverdale Rd & Hubbard Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 6

	Cloverdale Road From North					Hubbard Road From East					Cloverdale Road From South					Hubbard Road 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					04:45 PM					04:00 PM					
+0 mins.	14	45	3	0	62	19	22	2	0	43	**2**	27	**2**	0	31	1	0	2	0	3	
+15 mins.	**18**	**53**	2	0	**73**	**22**	30	**6**	0	58	0	27	0	0	27	0	0	**8**	0	**8**	
+30 mins.	17	39	1	0	57	14	**46**	6	0	**66**	0	**37**	2	0	**39**	0	0	7	0	7	
+45 mins.	15	49	**6**	0	70	16	36	6	0	58	0	33	2	0	35	**2**	0	6	0	8	
Total Volume	64	186	12	0	262	71	134	20	0	225	2	124	6	0	132	3	0	23	0	26	
% App. Total	24.4	71	4.6	0		31.6	59.6	8.9	0		1.5	93.9	4.5	0		11.5	0	88.5	0		
PHF	.889	.877	.500	.000	.897	.807	.728	.833	.000	.852	.250	.838	.750	.000	.846	.375	.000	.719	.000	.813	
General Traffic																					
% General Traffic	100	99.5	100	0	99.6	100	100	100	0	100	100	99.2	100	0	99.2	100	0	100	0	100	
3+ Axle Heavy Trucks	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	
% 3+ Axle Heavy Trucks	0	0.5	0	0	0.4	0	0	0	0	0	0	0.8	0	0	0.8	0	0	0	0	0	



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Hubbard Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Cloverdale Rd & Hubbard Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 7

Image 1

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Kuna Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Cloverdale Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 1

Groups Printed- General Traffic - 3+ Axle Heavy Trucks

	Cloverdale Road From North					Kuna Road From East					Cloverdale Road From South					Kuna Road 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	2	8	0	0	10	14	5	0	0	19	1	30	13	0	44	27	3	10	0	40	113
07:15 AM	9	8	0	0	17	4	10	0	0	14	0	26	20	0	46	30	6	20	0	56	133
07:30 AM	5	8	2	0	15	4	6	0	0	10	1	23	18	0	42	28	7	17	0	52	119
07:45 AM	2	12	2	0	16	10	7	0	0	17	0	21	11	0	32	36	0	10	0	46	111
Total	18	36	4	0	58	32	28	0	0	60	2	100	62	0	164	121	16	57	0	194	476
08:00 AM	2	8	1	0	11	8	2	0	0	10	0	21	9	0	30	13	4	13	0	30	81
08:15 AM	4	5	2	0	11	6	1	1	0	8	0	14	8	0	22	13	4	11	0	28	69
08:30 AM	4	6	2	0	12	6	2	0	0	8	0	18	11	0	29	21	5	8	0	34	83
08:45 AM	5	3	3	0	11	9	7	1	0	17	1	7	8	0	16	11	4	4	0	19	63
Total	15	22	8	0	45	29	12	2	0	43	1	60	36	0	97	58	17	36	0	111	296

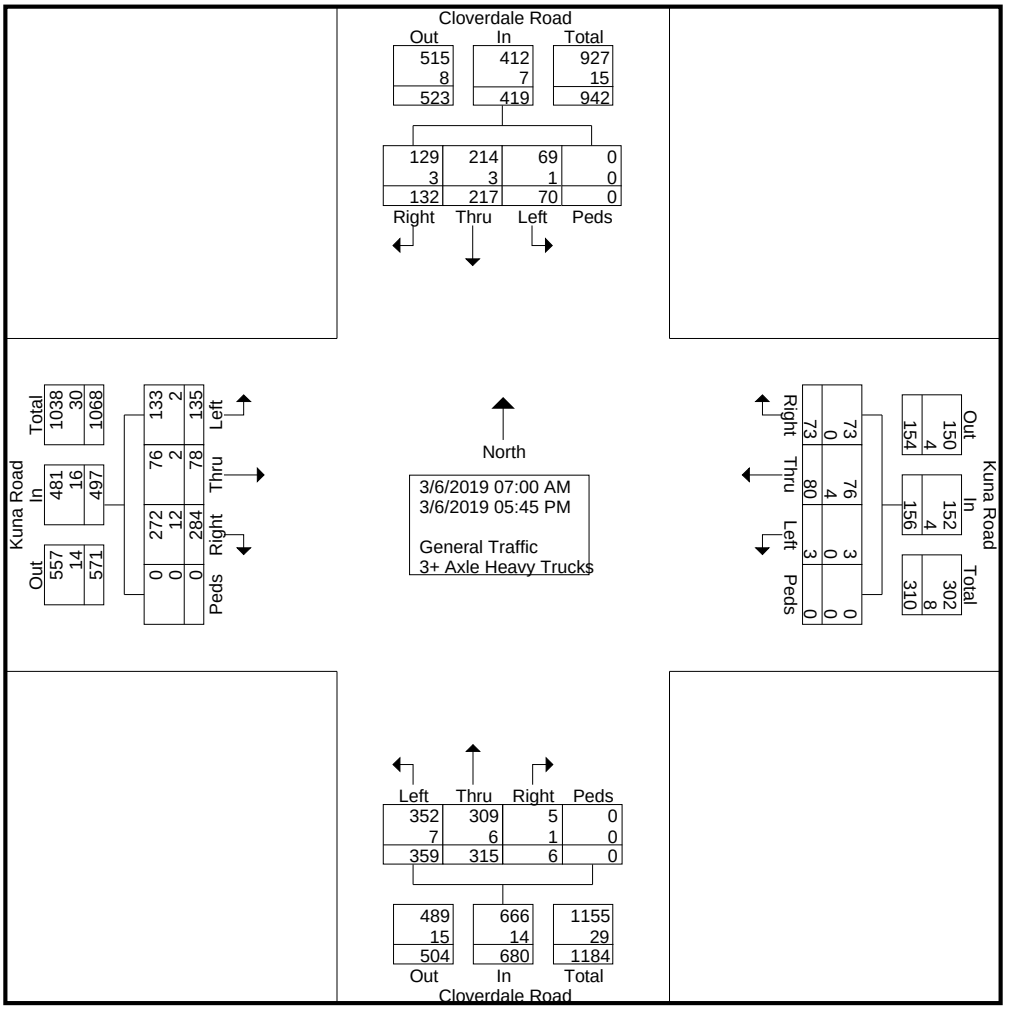
04:00 PM	17	19	10	0	46	0	4	0	0	4	1	14	17	0	32	12	5	4	0	21	103
04:15 PM	9	21	6	0	36	1	7	0	0	8	0	8	27	0	35	14	9	8	0	31	110
04:30 PM	8	20	9	0	37	0	3	0	0	3	0	19	26	0	45	20	9	3	0	32	117
04:45 PM	17	17	8	0	42	2	3	1	0	6	0	16	34	0	50	13	3	6	0	22	120
Total	51	77	33	0	161	3	17	1	0	21	1	57	104	0	162	59	26	21	0	106	450
05:00 PM	20	20	5	0	45	3	10	0	0	13	0	25	24	0	49	13	5	10	0	28	135
05:15 PM	11	24	12	0	47	4	6	0	0	10	0	29	34	0	63	9	7	3	0	19	139
05:30 PM	8	19	6	0	33	2	7	0	0	9	2	24	44	0	70	10	4	3	0	17	129
05:45 PM	9	19	2	0	30	0	0	0	0	0	0	20	55	0	75	14	3	5	0	22	127
Total	48	82	25	0	155	9	23	0	0	32	2	98	157	0	257	46	19	21	0	86	530
Grand Total	132	217	70	0	419	73	80	3	0	156	6	315	359	0	680	284	78	135	0	497	1752
Apprch %	31.5	51.8	16.7	0		46.8	51.3	1.9	0		0.9	46.3	52.8	0		57.1	15.7	27.2	0		
Total %	7.5	12.4	4	0	23.9	4.2	4.6	0.2	0	8.9	0.3	18	20.5	0	38.8	16.2	4.5	7.7	0	28.4	
General Traffic																					
% General Traffic	97.7	98.6	98.6	0	98.3	100	95	100	0	97.4	83.3	98.1	98.1	0	97.9	95.8	97.4	98.5	0	96.8	97.7
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	2.3	1.4	1.4	0	1.7	0	5	0	0	2.6	16.7	1.9	1.9	0	2.1	4.2	2.6	1.5	0	3.2	2.3

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Kuna Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Cloverdale Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 2



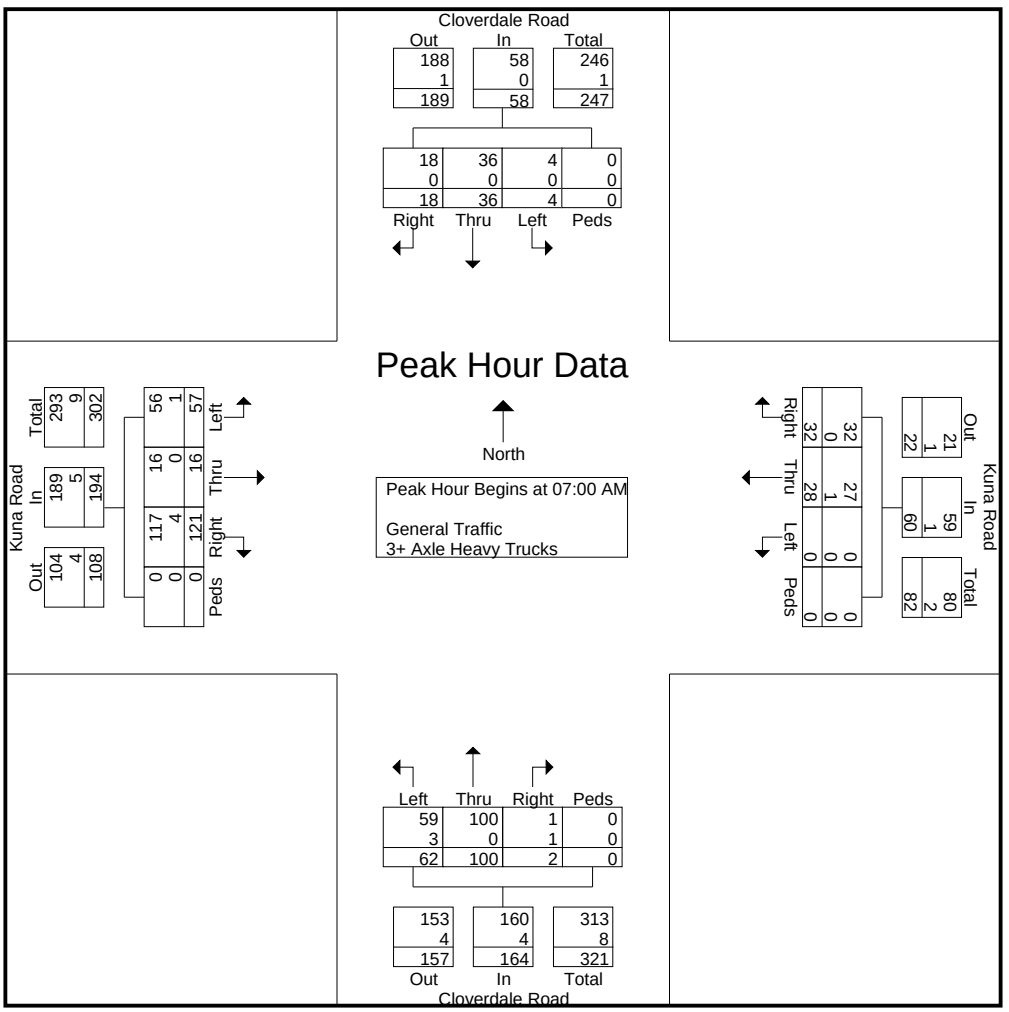
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Kuna Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Cloverdale Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 3

	Cloverdale Road From North					Kuna Road From East					Cloverdale Road From South					Kuna Road 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	2	8	0	0	10	**14**	5	0	0	**19**	**1**	**30**	13	0	44	27	3	10	0	40	113
07:15 AM	**9**	8	0	0	**17**	4	**10**	0	0	14	0	26	**20**	0	**46**	30	6	**20**	0	**56**	**133**
07:30 AM	5	8	**2**	0	15	4	6	0	0	10	1	23	18	0	42	28	**7**	17	0	52	119
07:45 AM	2	**12**	2	0	16	10	7	0	0	17	0	21	11	0	32	**36**	0	10	0	46	111
Total Volume	18	36	4	0	58	32	28	0	0	60	2	100	62	0	164	121	16	57	0	194	476
% App. Total	31	62.1	6.9	0		53.3	46.7	0	0		1.2	61	37.8	0		62.4	8.2	29.4	0		
PHF	.500	.750	.500	.000	.853	.571	.700	.000	.000	.789	.500	.833	.775	.000	.891	.840	.571	.713	.000	.866	.895
General Traffic % General Traffic	100	100	100	0	100	100	96.4	0	0	98.3	50.0	100	95.2	0	97.6	96.7	100	98.2	0	97.4	97.9
3+ Axle Heavy Trucks % 3+ Axle Heavy Trucks	0	0	0	0	0	0	3.6	0	0	1.7	50.0	0	4.8	0	2.4	3.3	0	1.8	0	2.6	2.1



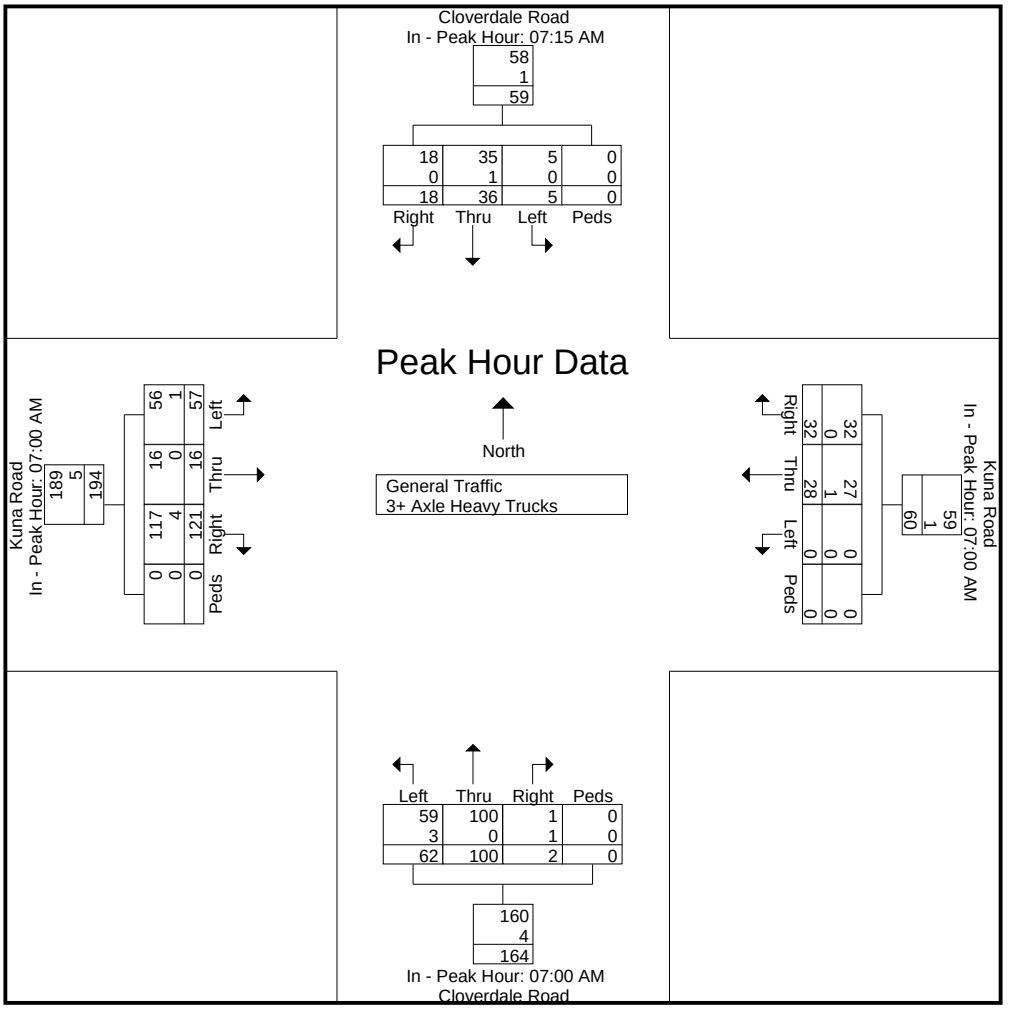
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Kuna Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Cloverdale Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 4

	Cloverdale Road From North					Kuna Road From East					Cloverdale Road From South					Kuna Road 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.	**9**	8	0	0	**17**	**14**	5	0	0	**19**	**1**	**30**	13	0	44	27	3	10	0	40	
+15 mins.	5	8	**2**	0	15	4	**10**	0	0	14	0	26	**20**	0	**46**	30	6	**20**	0	**56**	
+30 mins.	2	**12**	2	0	16	4	6	0	0	10	1	23	18	0	42	28	**7**	17	0	52	
+45 mins.	2	8	1	0	11	10	7	0	0	17	0	21	11	0	32	**36**	0	10	0	46	
Total Volume	18	36	5	0	59	32	28	0	0	60	2	100	62	0	164	121	16	57	0	194	
% App. Total	30.5	61	8.5	0		53.3	46.7	0	0		1.2	61	37.8	0		62.4	8.2	29.4	0		
PHF	.500	.750	.625	.000	.868	.571	.700	.000	.000	.789	.500	.833	.775	.000	.891	.840	.571	.713	.000	.866	
General Traffic																					
% General Traffic	100	97.2	100	0	98.3	100	96.4	0	0	98.3	50	100	95.2	0	97.6	96.7	100	98.2	0	97.4	
3+ Axle Heavy Trucks	0	1	0	0	1	0	1	0	0	1	1	0	3	0	4	4	0	1	0	5	
% 3+ Axle Heavy Trucks	0	2.8	0	0	1.7	0	3.6	0	0	1.7	50	0	4.8	0	2.4	3.3	0	1.8	0	2.6	



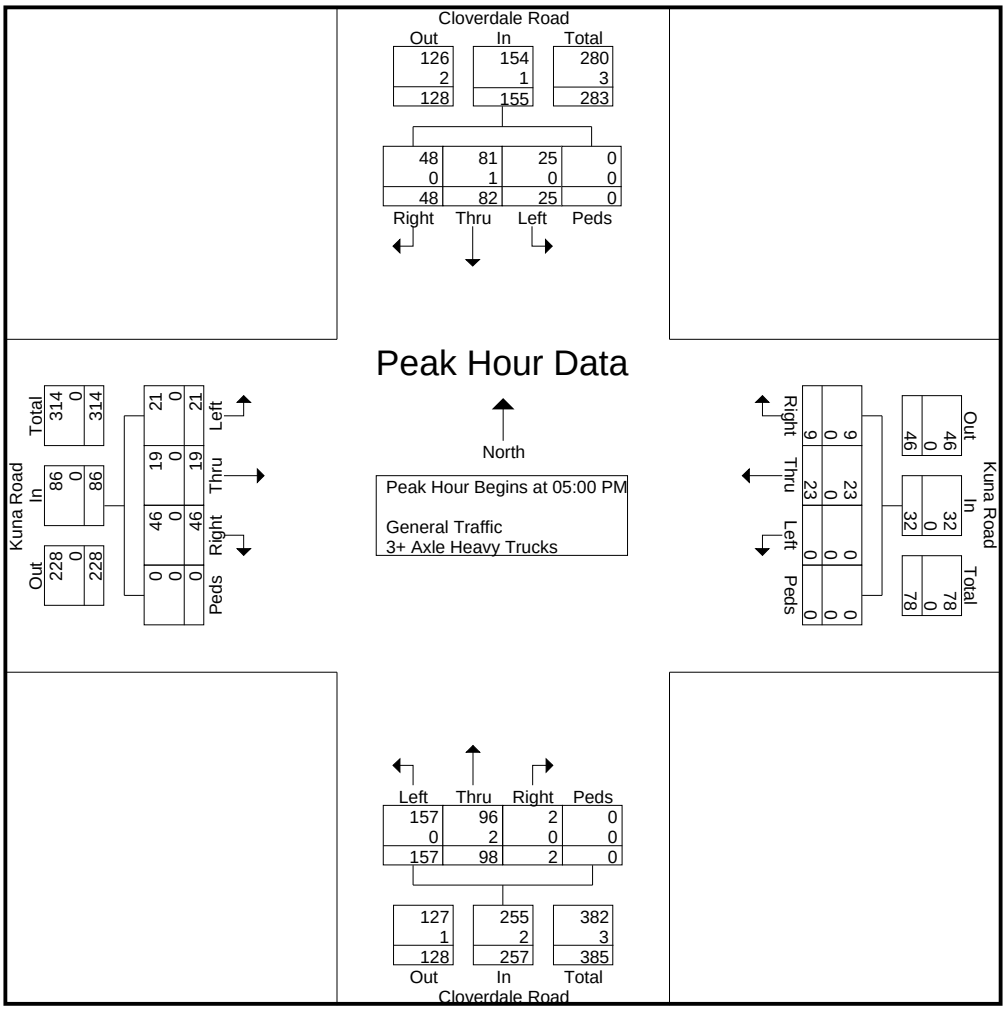
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Kuna Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Cloverdale Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 5

	Cloverdale Road From North					Kuna Road From East					Cloverdale Road From South					Kuna Road 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 05:00 PM																					
05:00 PM	**20**	20	5	0	45	3	**10**	0	0	**13**	0	25	24	0	49	13	5	**10**	0	**28**	135
05:15 PM	11	**24**	**12**	0	**47**	**4**	6	0	0	10	0	**29**	34	0	63	9	**7**	3	0	19	**139**
05:30 PM	8	19	6	0	33	2	7	0	0	9	**2**	24	44	0	70	10	4	3	0	17	129
05:45 PM	9	19	2	0	30	0	0	0	0	0	0	20	**55**	0	**75**	**14**	3	5	0	22	127
Total Volume	48	82	25	0	155	9	23	0	0	32	2	98	157	0	257	46	19	21	0	86	530
% App. Total	31	52.9	16.1	0		28.1	71.9	0	0		0.8	38.1	61.1	0		53.5	22.1	24.4	0		
PHF	.600	.854	.521	.000	.824	.563	.575	.000	.000	.615	.250	.845	.714	.000	.857	.821	.679	.525	.000	.768	.953
General Traffic % General Traffic	100	98.8	100	0	99.4	100	100	0	0	100	100	98.0	100	0	99.2	100	100	100	0	100	99.4
3+ Axle Heavy Trucks % 3+ Axle Heavy Trucks	0	1.2	0	0	0.6	0	0	0	0	0	0	2.0	0	0	0.8	0	0	0	0	0	0.6



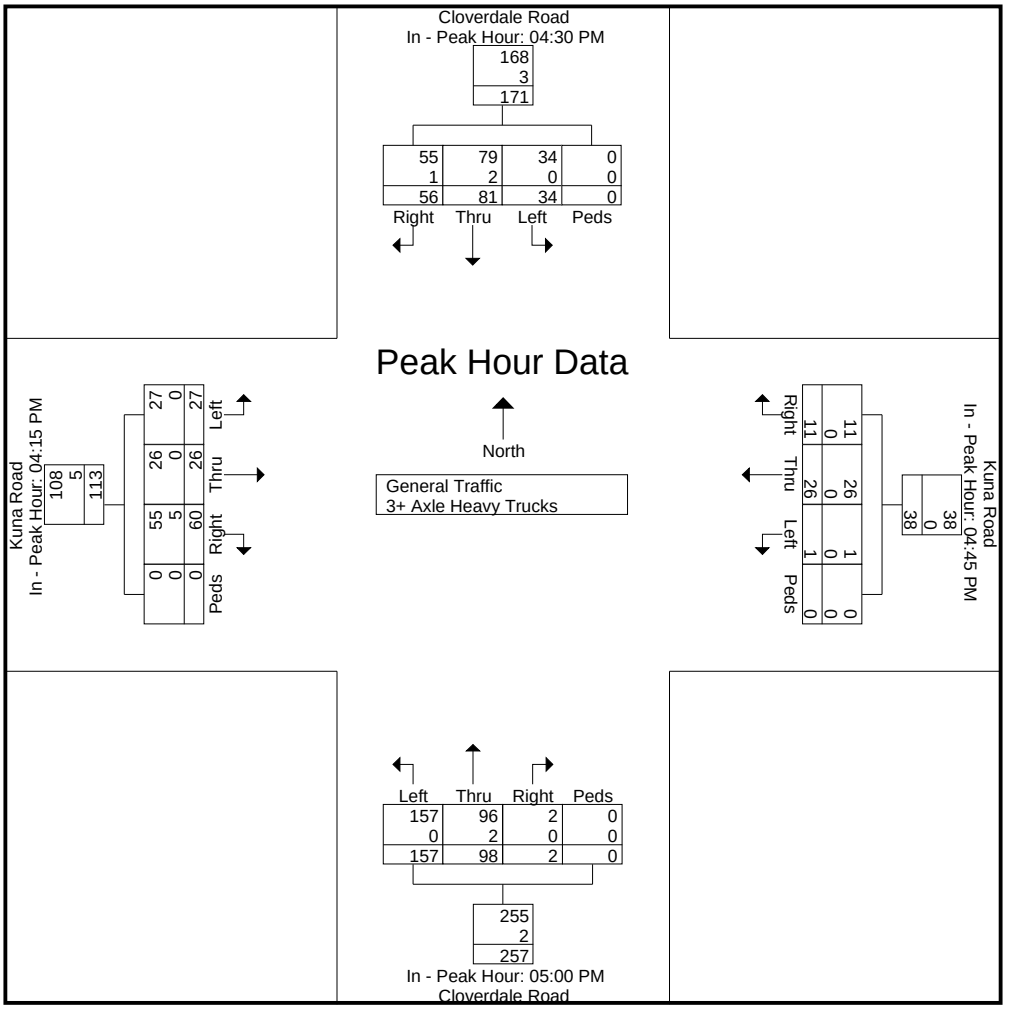
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Kuna Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Cloverdale Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 6

	Cloverdale Road From North					Kuna Road From East					Cloverdale Road From South					Kuna Road 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					05:00 PM					04:15 PM					
+0 mins.	8	20	9	0	37	2	3	**1**	0	6	0	25	24	0	49	14	**9**	8	0	31	
+15 mins.	17	17	8	0	42	3	**10**	0	0	**13**	0	**29**	34	0	63	**20**	9	3	0	**32**	
+30 mins.	**20**	20	5	0	45	**4**	6	0	0	10	**2**	24	44	0	70	13	3	6	0	22	
+45 mins.	11	**24**	**12**	0	**47**	2	7	0	0	9	0	20	**55**	0	**75**	13	5	**10**	0	28	
Total Volume	56	81	34	0	171	11	26	1	0	38	2	98	157	0	257	60	26	27	0	113	
% App. Total	32.7	47.4	19.9	0		28.9	68.4	2.6	0		0.8	38.1	61.1	0		53.1	23	23.9	0		
PHF	.700	.844	.708	.000	.910	.688	.650	.250	.000	.731	.250	.845	.714	.000	.857	.750	.722	.675	.000	.883	
General Traffic																					
% General Traffic	98.2	97.5	100	0	98.2	100	100	100	0	100	100	98	100	0	99.2	91.7	100	100	0	95.6	
3+ Axle Heavy Trucks	1	2	0	0	3	0	0	0	0	0	0	2	0	0	2	5	0	0	0	5	
% 3+ Axle Heavy Trucks	1.8	2.5	0	0	1.8	0	0	0	0	0	0	2	0	0	0.8	8.3	0	0	0	4.4	



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Cloverdale Rd / Kuna Rd
City, State: Ada County, Idaho
Control: All Stop

File Name : Cloverdale Rd & Kuna Rd
Site Code : 00000000
Start Date : 3/6/2019
Page No : 7

Image 1

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Five Mile Rd / Hubbard Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Five Mile Rd & Hubbard Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 1

Groups Printed- General Traffic - 3+ Axle Heavy Trucks

	Dead End From North					Hubbard Road From East					Five Mile Road From South					Hubbard Road 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	0	0	0	32	32
07:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	61	0	0	0	61	64
07:30 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	41	1	0	0	42	46
07:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	39	3	0	0	42	44
Total	0	0	0	0	0	0	8	0	0	8	0	0	1	0	1	173	4	0	0	177	186
08:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	3	0	3	20	2	0	0	22	26
08:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	3	0	3	20	0	0	0	20	24
08:30 AM	0	0	0	0	0	0	0	1	0	1	0	0	7	0	7	14	0	0	0	14	22
08:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	13	0	0	0	13	14
Total	0	0	0	0	0	0	2	2	0	4	0	0	13	0	13	67	2	0	0	69	86

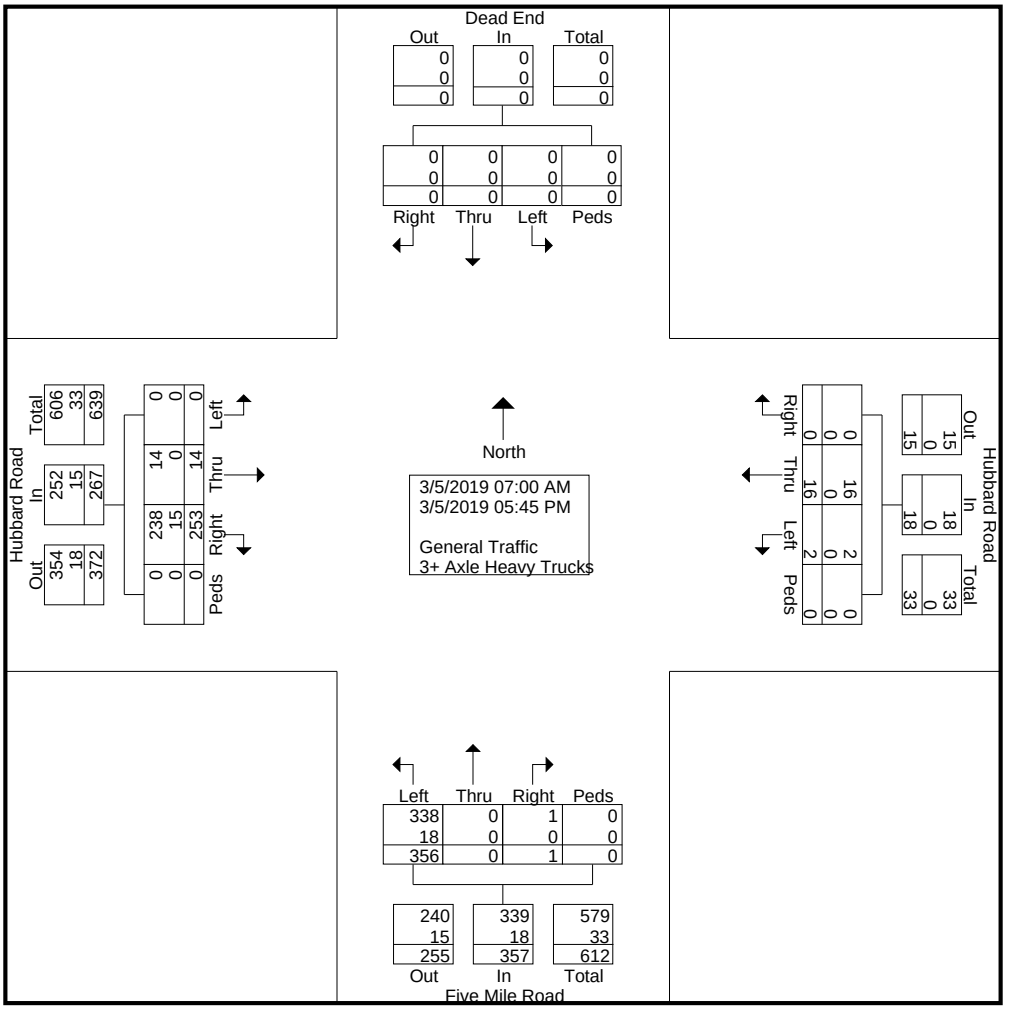
04:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	33	0	34	1	1	0	0	2	36
04:15 PM	0	0	0	0	0	0	3	0	0	3	0	0	39	0	39	1	2	0	0	3	45
04:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	34	0	34	1	1	0	0	2	37
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	43	0	43	4	2	0	0	6	49
Total	0	0	0	0	0	0	4	0	0	4	1	0	149	0	150	7	6	0	0	13	167
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	53	0	53	0	0	0	0	0	54
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	62	0	62	2	1	0	0	3	66
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	59	0	59	3	1	0	0	4	63
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	19	0	19	1	0	0	0	1	20
Total	0	0	0	0	0	0	2	0	0	2	0	0	193	0	193	6	2	0	0	8	203
Grand Total	0	0	0	0	0	0	16	2	0	18	1	0	356	0	357	253	14	0	0	267	642
Apprch %	0	0	0	0		0	88.9	11.1	0		0.3	0	99.7	0		94.8	5.2	0	0		
Total %	0	0	0	0	0	0	2.5	0.3	0	2.8	0.2	0	55.5	0	55.6	39.4	2.2	0	0	41.6	
General Traffic																					
% General Traffic	0	0	0	0	0	0	100	100	0	100	100	0	94.9	0	95	94.1	100	0	0	94.4	94.9
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	5.1	0	5	5.9	0	0	0	5.6	5.1

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Five Mile Rd / Hubbard Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Five Mile Rd & Hubbard Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 2



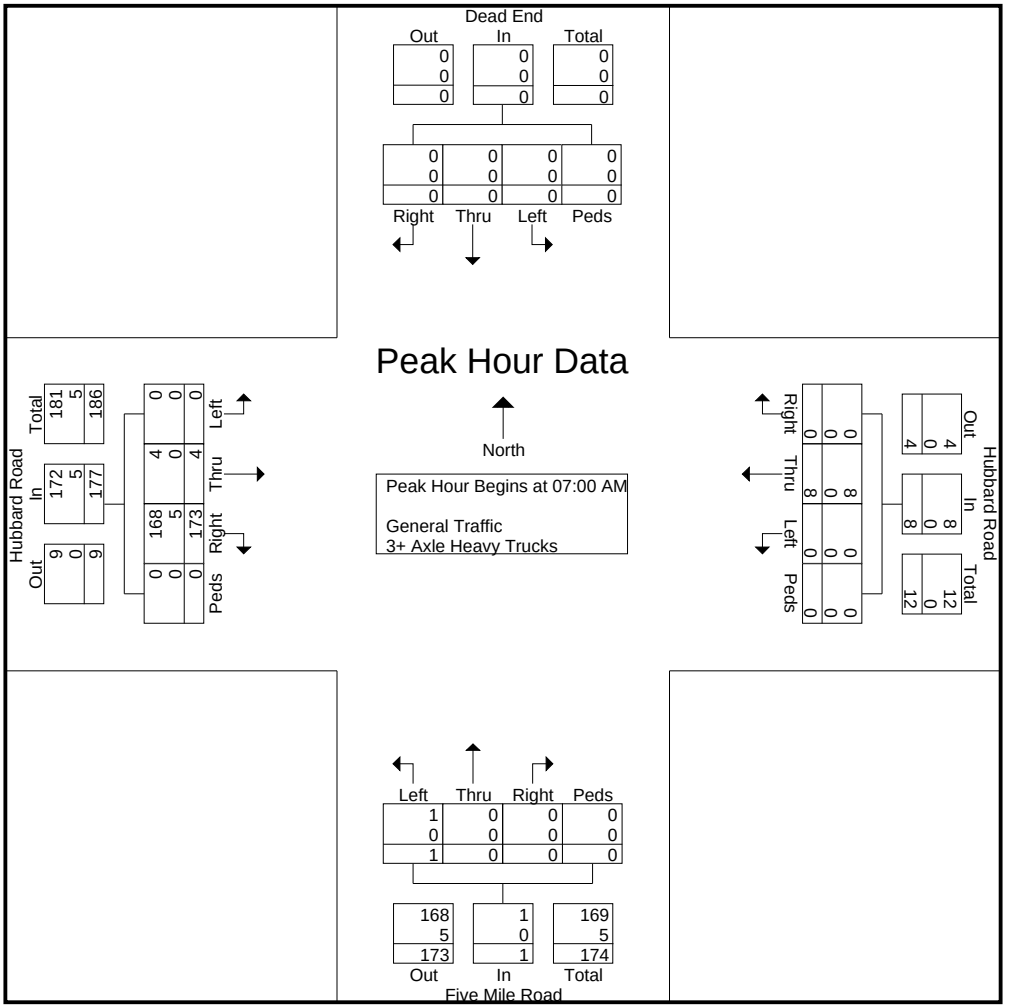
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Five Mile Rd / Hubbard Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Five Mile Rd & Hubbard Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 3

	Dead End From North					Hubbard Road From East					Five Mile Road From South					Hubbard Road 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	0	0	0	32	32
07:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	**1**	0	**1**	**61**	0	0	0	**61**	**64**
07:30 AM	0	0	0	0	0	0	**4**	0	0	**4**	0	0	0	0	0	41	1	0	0	42	46
07:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	39	**3**	0	0	42	44
Total Volume	0	0	0	0	0	0	8	0	0	8	0	0	1	0	1	173	4	0	0	177	186
% App. Total	0	0	0	0		0	100	0	0		0	0	100	0		97.7	2.3	0	0		
PHF	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.250	.000	.250	.709	.333	.000	.000	.725	.727
General Traffic																					
% General Traffic	0	0	0	0	0	0	100	0	0	100	0	0	100	0	100	97.1	100	0	0	97.2	97.3
3+ Axle Heavy Trucks																					
% 3+ Axle Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.9	0	0	0	2.8	2.7



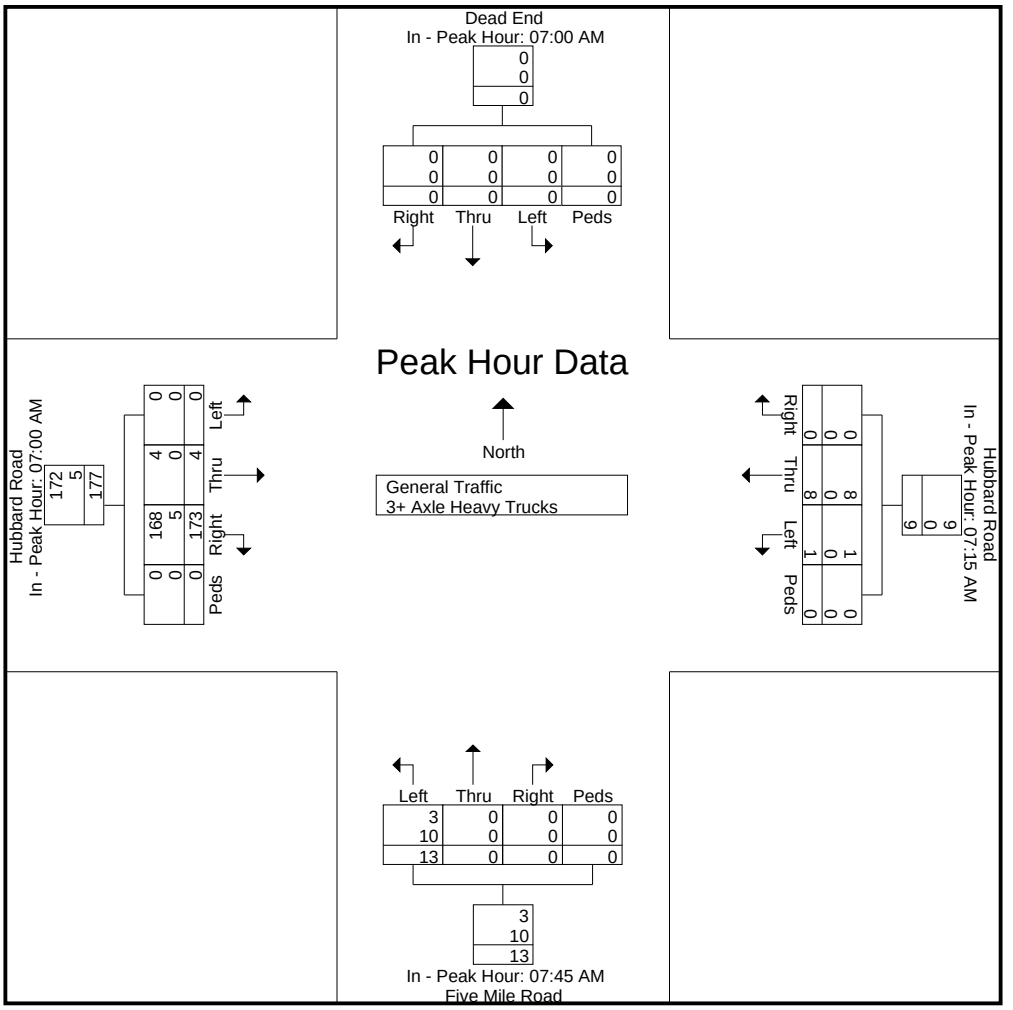
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Five Mile Rd / Hubbard Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Five Mile Rd & Hubbard Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 4

	Dead End From North					Hubbard Road From East					Five Mile Road From South					Hubbard Road 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:																					
	07:00 AM					07:15 AM					07:45 AM					07:00 AM					
+0 mins.	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	32	0	0	0	32	
+15 mins.	0	0	0	0	0	0	**4**	0	0	**4**	0	0	3	0	3	**61**	0	0	0	**61**	
+30 mins.	0	0	0	0	0	0	2	0	0	2	0	0	3	0	3	41	1	0	0	42	
+45 mins.	0	0	0	0	0	0	0	**1**	0	1	0	0	**7**	0	**7**	39	**3**	0	0	42	
Total Volume	0	0	0	0	0	0	8	1	0	9	0	0	13	0	13	173	4	0	0	177	
% App. Total	0	0	0	0		0	88.9	11.1	0		0	0	100	0		97.7	2.3	0	0		
PHF	.000	.000	.000	.000	.000	.000	.500	.250	.000	.563	.000	.000	.464	.000	.464	.709	.333	.000	.000	.725	
General Traffic																					
% General Traffic	0	0	0	0	0	0	100	100	0	100	0	0	23.1	0	23.1	97.1	100	0	0	97.2	
3+ Axle Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	10	0	10	5	0	0	0	5	
% 3+ Axle Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	76.9	0	76.9	2.9	0	0	0	2.8	



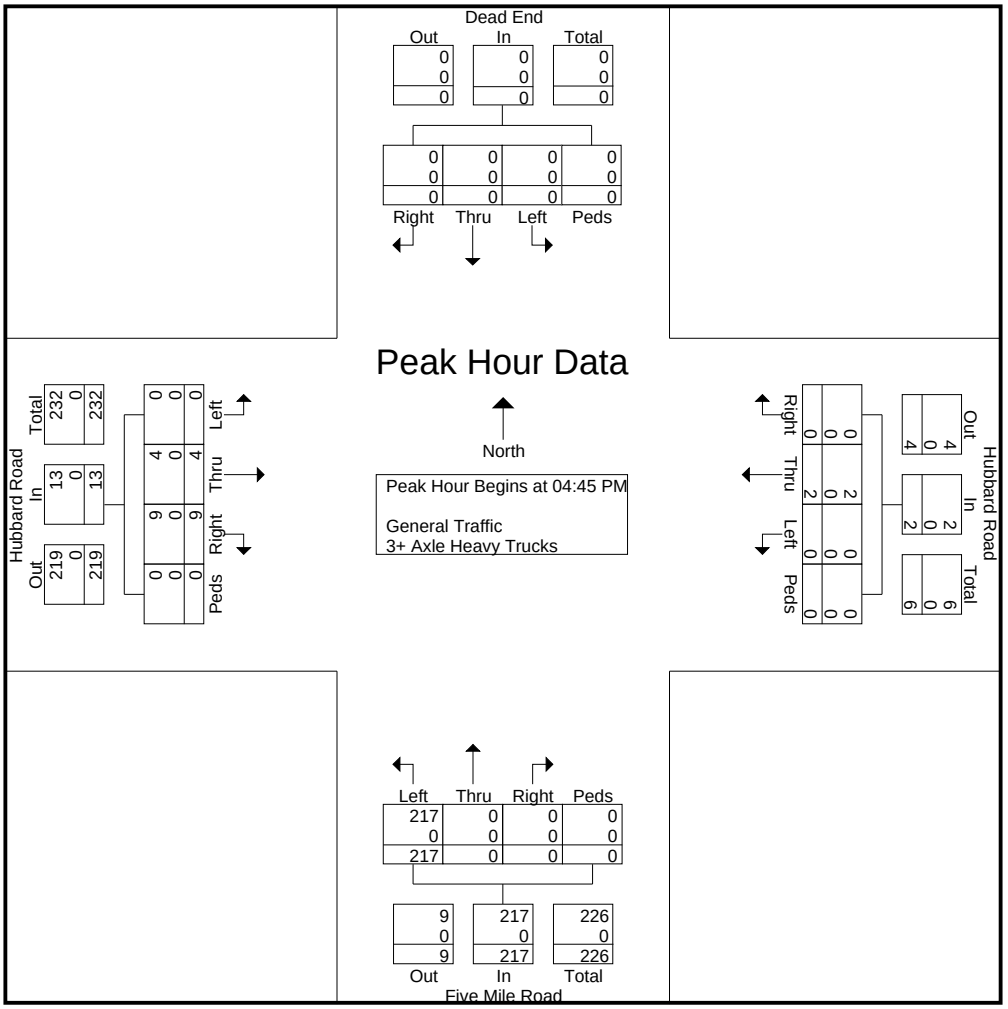
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Five Mile Rd / Hubbard Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Five Mile Rd & Hubbard Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 5

	Dead End From North					Hubbard Road From East					Five Mile Road From South					Hubbard Road 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	0	0	0	0	0	0	0	0	0	0	0	0	43	0	43	**4**	**2**	0	0	**6**	49
05:00 PM	0	0	0	0	0	0	**1**	0	0	**1**	0	0	53	0	53	0	0	0	0	0	54
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	**62**	0	**62**	2	1	0	0	3	**66**
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	59	0	59	3	1	0	0	4	63
Total Volume	0	0	0	0	0	0	2	0	0	2	0	0	217	0	217	9	4	0	0	13	232
% App. Total	0	0	0	0		0	100	0	0		0	0	100	0		69.2	30.8	0	0		
PHF	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.875	.000	.875	.563	.500	.000	.000	.542	.879
General Traffic																					
% General Traffic	0	0	0	0	0	0	100	0	0	100	0	0	100	0	100	100	100	0	0	100	100
3+ Axle Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 3+ Axle Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



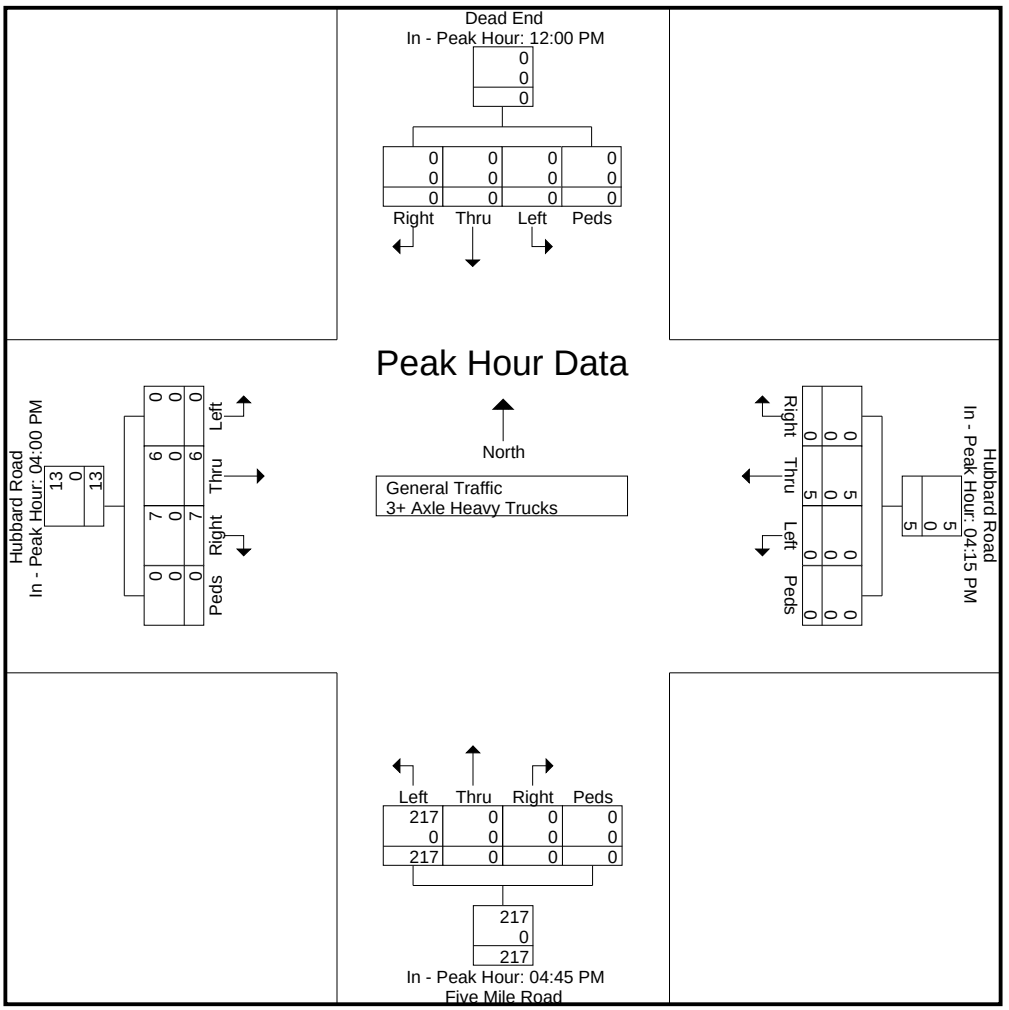
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Five Mile Rd / Hubbard Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Five Mile Rd & Hubbard Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 6

	Dead End From North					Hubbard Road From East					Five Mile Road From South					Hubbard Road 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:																					
	12:00 PM					04:15 PM					04:45 PM					04:00 PM					
+0 mins.	0	0	0	0	0	0	**3**	0	0	**3**	0	0	43	0	43	1	1	0	0	2	
+15 mins.	0	0	0	0	0	0	1	0	0	1	0	0	53	0	53	1	**2**	0	0	3	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**62**	0	**62**	1	1	0	0	2	
+45 mins.	0	0	0	0	0	0	1	0	0	1	0	0	59	0	59	**4**	2	0	0	**6**	
Total Volume	0	0	0	0	0	0	5	0	0	5	0	0	217	0	217	7	6	0	0	13	
% App. Total	0	0	0	0		0	100	0	0		0	0	100	0		53.8	46.2	0	0		
PHF	.000	.000	.000	.000	.000	.000	.417	.000	.000	.417	.000	.000	.875	.000	.875	.438	.750	.000	.000	.542	
General Traffic																					
% General Traffic	0	0	0	0	0	0	100	0	0	100	0	0	100	0	100	100	100	0	0	100	
3+ Axle Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% 3+ Axle Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Five Mile Rd / Hubbard Rd
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Five Mile Rd & Hubbard Rd
Site Code : 00000000
Start Date : 3/5/2019

Image 1

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Pleasant Valley / Gowen Rd
City, State: Ada County, Idaho
Control: Signalized

File Name : Pleasant Valley Rd & Gowen Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 1

Groups Printed- General Traffic - 3+ Axle Heavy Trucks

	Gowen Road From East				Pleasant Valley Road From South				Gowen Road From West				
Start Time	**Thru**	**Left**	**Peds**	**App. Total**	**Right**	**Left**	**Peds**	**App. Total**	**Right**	**Thru**	**Peds**	**App. Total**	**Int. Total**
07:00 AM	32	3	0	35	46	23	0	69	38	223	0	261	365
07:15 AM	38	6	0	44	49	59	1	109	57	203	0	260	413
07:30 AM	23	7	0	30	53	57	0	110	46	211	0	257	397
07:45 AM	34	3	0	37	43	63	0	106	43	197	0	240	383
Total	127	19	0	146	191	202	1	394	184	834	0	1018	1558
08:00 AM	43	4	0	47	20	56	0	76	42	128	0	170	293
08:15 AM	47	7	0	54	23	34	0	57	39	122	0	161	272
08:30 AM	37	8	0	45	16	41	0	57	51	99	0	150	252
08:45 AM	37	4	0	41	14	47	0	61	42	108	0	150	252
Total	164	23	0	187	73	178	0	251	174	457	0	631	1069

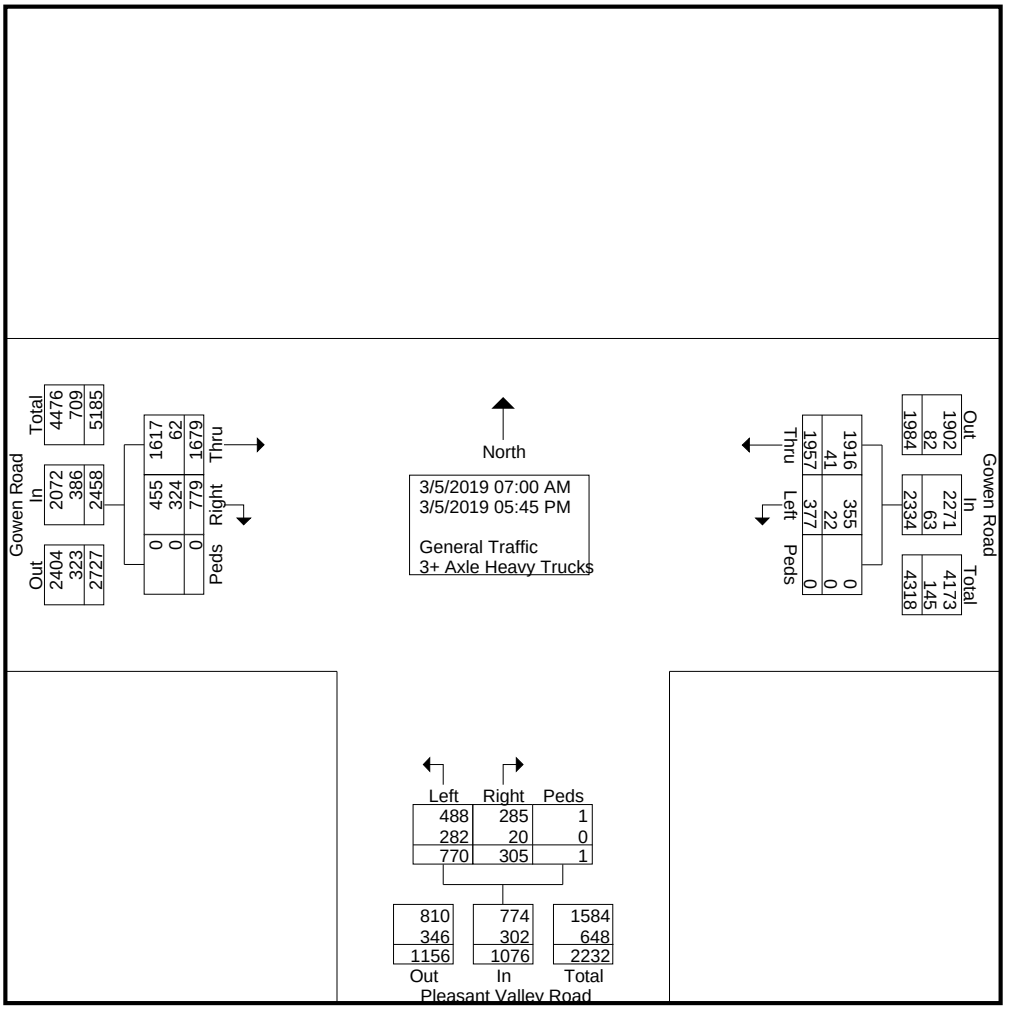
04:00 PM	190	26	0	216	12	35	0	47	24	33	0	57	320
04:15 PM	250	35	0	285	5	42	0	47	52	51	0	103	435
04:30 PM	245	43	0	288	3	59	0	62	35	55	0	90	440
04:45 PM	229	40	0	269	6	48	0	54	49	49	0	98	421
Total	914	144	0	1058	26	184	0	210	160	188	0	348	1616
05:00 PM	220	58	0	278	5	50	0	55	54	58	0	112	445
05:15 PM	232	79	0	311	4	43	0	47	65	49	0	114	472
05:30 PM	179	36	0	215	3	58	0	61	75	43	0	118	394
05:45 PM	121	18	0	139	3	55	0	58	67	50	0	117	314
Total	752	191	0	943	15	206	0	221	261	200	0	461	1625
Grand Total	1957	377	0	2334	305	770	1	1076	779	1679	0	2458	5868
Apprch %	83.8	16.2	0		28.3	71.6	0.1		31.7	68.3	0		
Total %	33.4	6.4	0	39.8	5.2	13.1	0	18.3	13.3	28.6	0	41.9	
General Traffic	1916	355	0	2271	285	488	1	774	455	1617	0	2072	5117
% General Traffic	97.9	94.2	0	97.3	93.4	63.4	100	71.9	58.4	96.3	0	84.3	87.2
3+ Axle Heavy Trucks	41	22	0	63	20	282	0	302	324	62	0	386	751
% 3+ Axle Heavy Trucks	2.1	5.8	0	2.7	6.6	36.6	0	28.1	41.6	3.7	0	15.7	12.8

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Pleasant Valley / Gowen Rd
City, State: Ada County, Idaho
Control: Signalized

File Name : Pleasant Valley Rd & Gowen Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 2



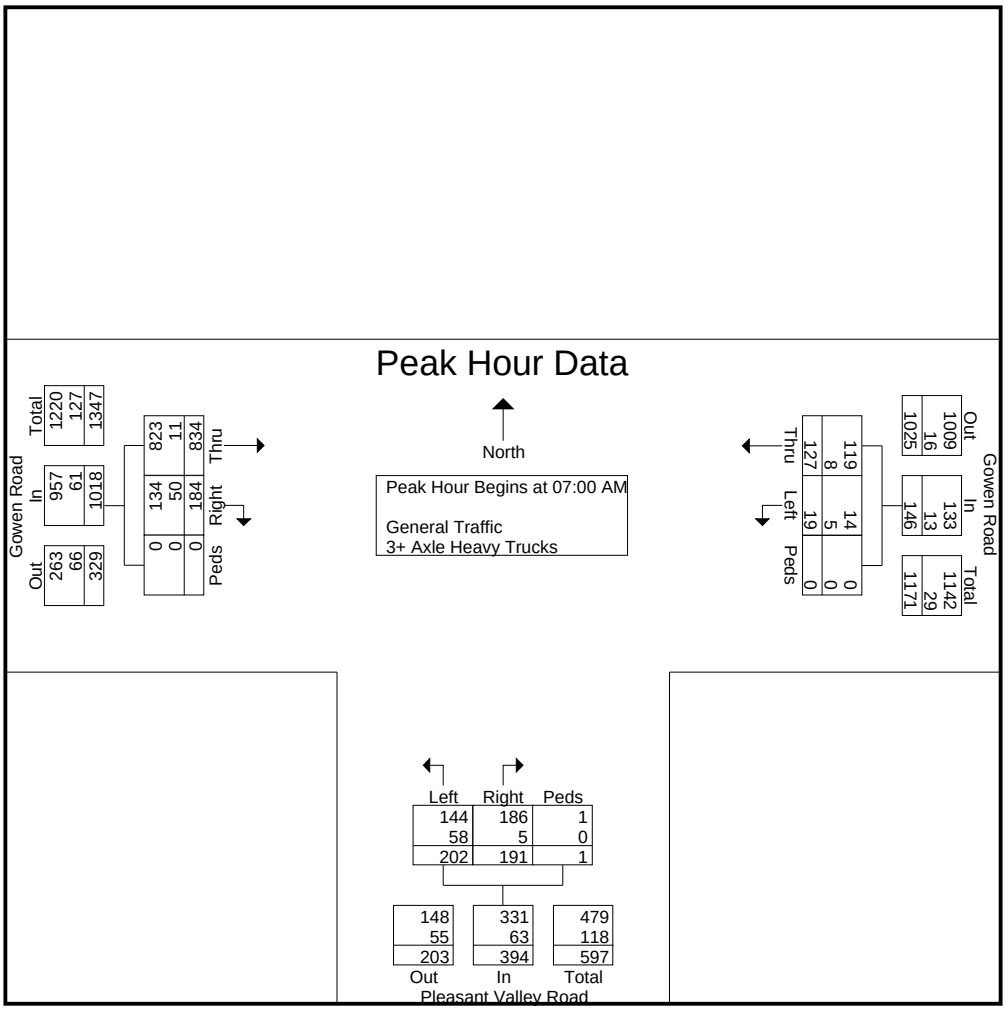
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Pleasant Valley / Gowen Rd
City, State: Ada County, Idaho
Control: Signalized

File Name : Pleasant Valley Rd & Gowen Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 3

	Gowen Road From East				Pleasant Valley Road From South				Gowen Road From West				
Start Time	**Thru**	**Left**	**Peds**	**App. Total**	**Right**	**Left**	**Peds**	**App. Total**	**Right**	**Thru**	**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	32	3	0	35	46	23	0	69	38	**223**	0	**261**	365
07:15 AM	**38**	6	0	**44**	49	59	**1**	109	**57**	203	0	260	**413**
07:30 AM	23	**7**	0	30	**53**	57	0	**110**	46	211	0	257	397
07:45 AM	34	3	0	37	43	**63**	0	106	43	197	0	240	383
Total Volume	127	19	0	146	191	202	1	394	184	834	0	1018	1558
% App. Total	87	13	0		48.5	51.3	0.3		18.1	81.9	0		
PHF	.836	.679	.000	.830	.901	.802	.250	.895	.807	.935	.000	.975	.943
General Traffic	119	14	0	133	186	144	1	331	134	823	0	957	1421
% General Traffic	93.7	73.7	0	91.1	97.4	71.3	100	84.0	72.8	98.7	0	94.0	91.2
3+ Axle Heavy Trucks	8	5	0	13	5	58	0	63	50	11	0	61	137
% 3+ Axle Heavy Trucks	6.3	26.3	0	8.9	2.6	28.7	0	16.0	27.2	1.3	0	6.0	8.8



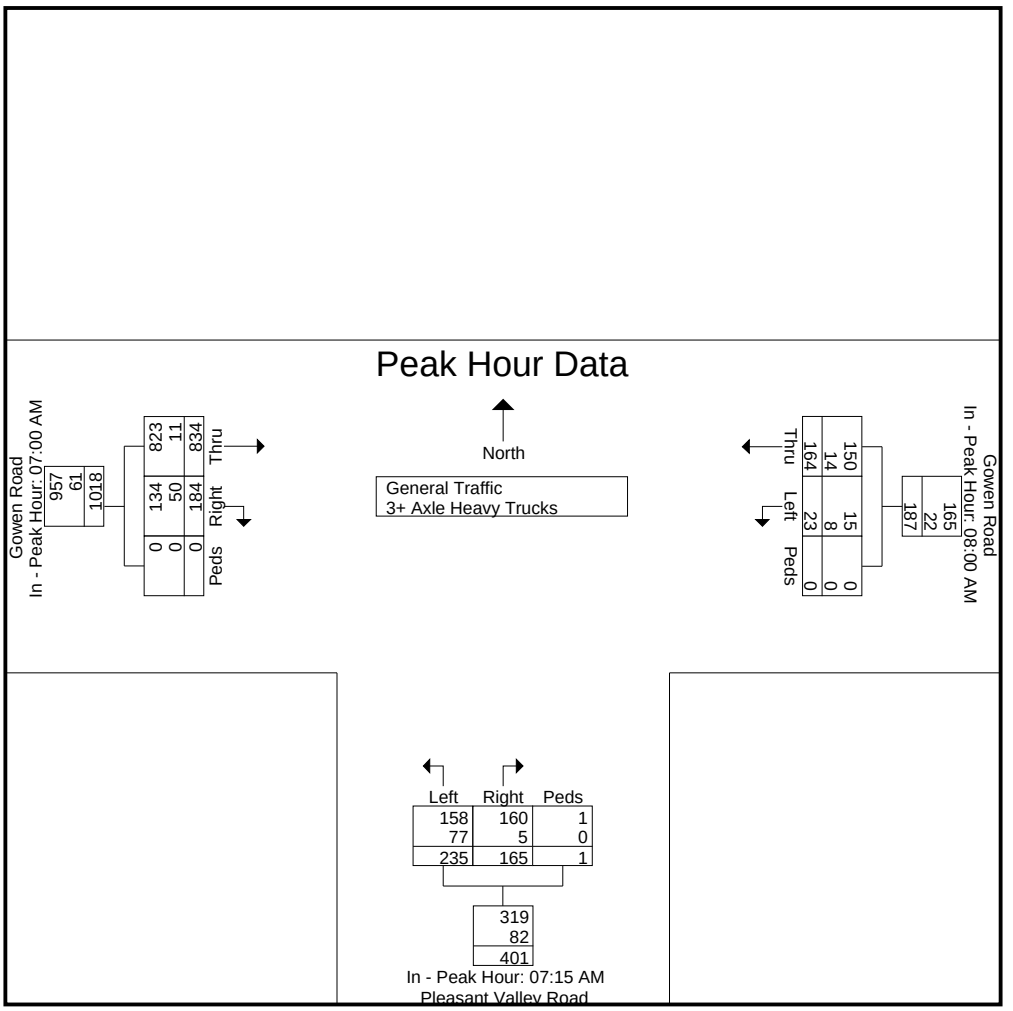
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Pleasant Valley / Gowen Rd
City, State: Ada County, Idaho
Control: Signalized

File Name : Pleasant Valley Rd & Gowen Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 4

	Gowen Road From East				Pleasant Valley Road From South				Gowen Road From West				
Start Time	**Thru**	**Left**	**Peds**	**App. Total**	**Right**	**Left**	**Peds**	**App. Total**	**Right**	**Thru**	**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:													
	08:00 AM				07:15 AM				07:00 AM				
+0 mins.	43	4	0	47	49	59	**1**	109	38	**223**	0	**261**	
+15 mins.	**47**	7	0	**54**	**53**	57	0	**110**	**57**	203	0	260	
+30 mins.	37	**8**	0	45	43	**63**	0	106	46	211	0	257	
+45 mins.	37	4	0	41	20	56	0	76	43	197	0	240	
Total Volume	164	23	0	187	165	235	1	401	184	834	0	1018	
% App. Total	87.7	12.3	0		41.1	58.6	0.2		18.1	81.9	0		
PHF	.872	.719	.000	.866	.778	.933	.250	.911	.807	.935	.000	.975	
General Traffic	150	15	0	165	160	158	1	319	134	823	0	957	
% General Traffic	91.5	65.2	0	88.2	97	67.2	100	79.6	72.8	98.7	0	94	
3+ Axle Heavy Trucks	14	8	0	22	5	77	0	82	50	11	0	61	
% 3+ Axle Heavy Trucks	8.5	34.8	0	11.8	3	32.8	0	20.4	27.2	1.3	0	6	



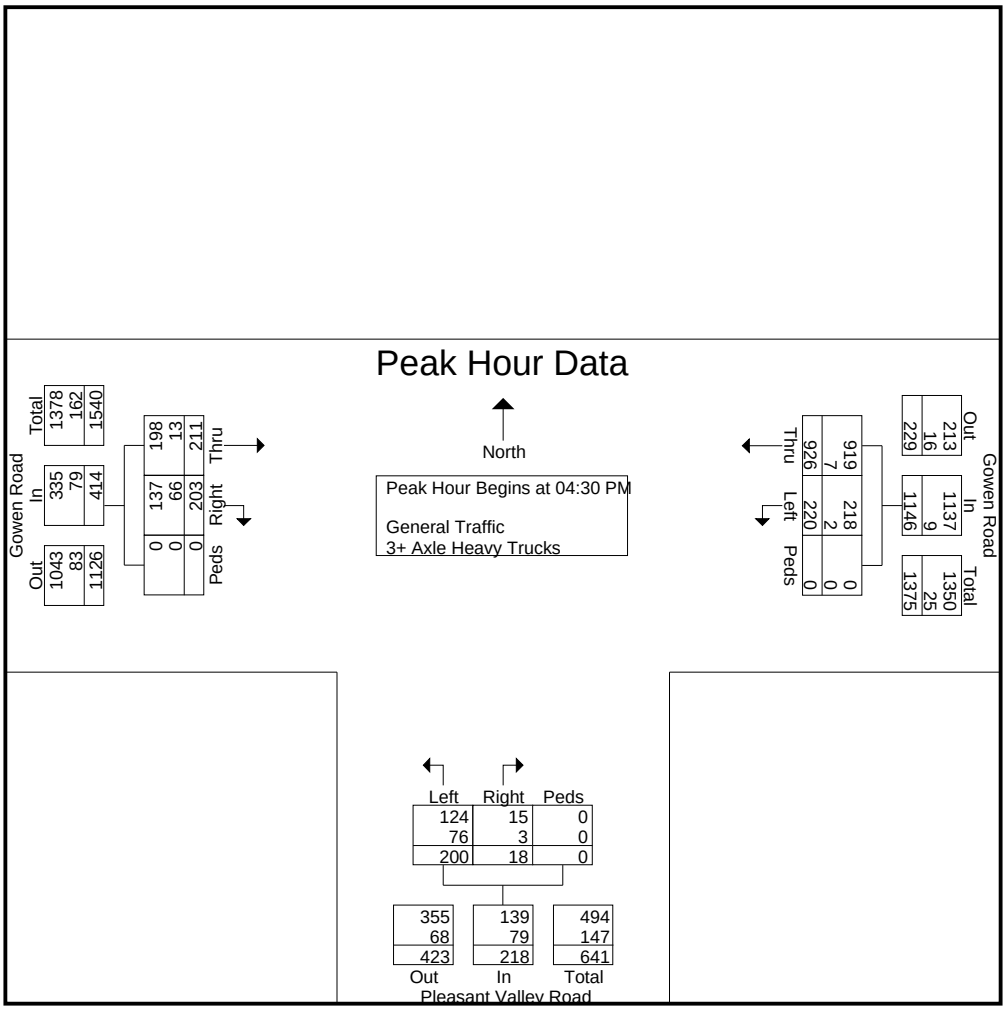
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Pleasant Valley / Gowen Rd
City, State: Ada County, Idaho
Control: Signalized

File Name : Pleasant Valley Rd & Gowen Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 5

	Gowen Road From East				Pleasant Valley Road From South				Gowen Road From West				
Start Time	**Thru**	**Left**	**Peds**	**App. Total**	**Right**	**Left**	**Peds**	**App. Total**	**Right**	**Thru**	**Peds**	**App. Total**	**Int. Total**
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	**245**	43	0	288	3	**59**	0	**62**	35	55	0	90	440
04:45 PM	229	40	0	269	**6**	48	0	54	49	49	0	98	421
05:00 PM	220	58	0	278	5	50	0	55	54	**58**	0	112	445
05:15 PM	232	**79**	0	**311**	4	43	0	47	**65**	49	0	**114**	**472**
Total Volume	926	220	0	1146	18	200	0	218	203	211	0	414	1778
% App. Total	80.8	19.2	0		8.3	91.7	0		49	51	0		
PHF	.945	.696	.000	.921	.750	.847	.000	.879	.781	.909	.000	.908	.942
General Traffic	919	218	0	1137	15	124	0	139	137	198	0	335	1611
% General Traffic	99.2	99.1	0	99.2	83.3	62.0	0	63.8	67.5	93.8	0	80.9	90.6
3+ Axle Heavy Trucks	7	2	0	9	3	76	0	79	66	13	0	79	167
% 3+ Axle Heavy Trucks	0.8	0.9	0	0.8	16.7	38.0	0	36.2	32.5	6.2	0	19.1	9.4



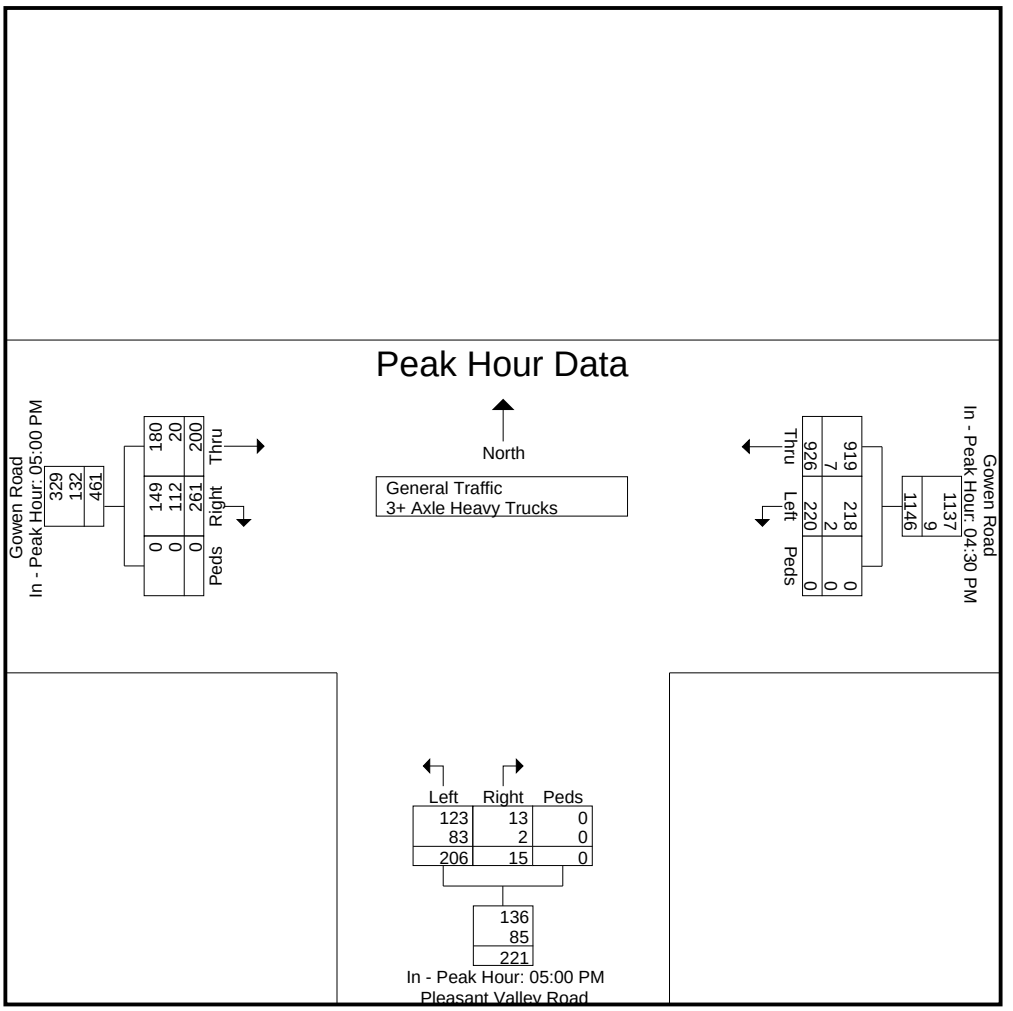
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Pleasant Valley / Gowen Rd
City, State: Ada County, Idaho
Control: Signalized

File Name : Pleasant Valley Rd & Gowen Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 6

	Gowen Road From East				Pleasant Valley Road From South				Gowen Road From West				
Start Time	**Thru**	**Left**	**Peds**	**App. Total**	**Right**	**Left**	**Peds**	**App. Total**	**Right**	**Thru**	**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				05:00 PM				05:00 PM				
+0 mins.	**245**	43	0	288	**5**	50	0	55	54	**58**	0	112	
+15 mins.	229	40	0	269	4	43	0	47	65	49	0	114	
+30 mins.	220	58	0	278	3	**58**	0	**61**	**75**	43	0	**118**	
+45 mins.	232	**79**	0	**311**	3	55	0	58	67	50	0	117	
Total Volume	926	220	0	1146	15	206	0	221	261	200	0	461	
% App. Total	80.8	19.2	0		6.8	93.2	0		56.6	43.4	0		
PHF	.945	.696	.000	.921	.750	.888	.000	.906	.870	.862	.000	.977	
General Traffic	919	218	0	1137	13	123	0	136	149	180	0	329	
% General Traffic	99.2	99.1	0	99.2	86.7	59.7	0	61.5	57.1	90	0	71.4	
3+ Axle Heavy Trucks	7	2	0	9	2	83	0	85	112	20	0	132	
% 3+ Axle Heavy Trucks	0.8	0.9	0	0.8	13.3	40.3	0	38.5	42.9	10	0	28.6	



L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Pleasant Valley / Gowen Rd
City, State: Ada County, Idaho
Control: Signalized

File Name : Pleasant Valley Rd & Gowen Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 7

Image 1

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Pleasant / Ten Mile Creek
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Pleasant Valley Rd & Ten Mile Creek Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 1

Groups Printed- General Traffic - 3+ Axle Heavy Trucks

	Pleasant Valley Road From North				Pleasant Valley Road From South				Ten Mile Creek Road From West				
Start Time	**Right**	**Thru**	**Peds**	**App. Total**	**Thru**	**Left**	**Peds**	**App. Total**	**Right**	**Left**	**Peds**	**App. Total**	**Int. Total**
07:00 AM	2	26	0	28	48	1	0	49	7	32	0	39	116
07:15 AM	0	28	0	28	49	0	0	49	10	42	0	52	129
07:30 AM	0	39	0	39	50	0	0	50	19	34	0	53	142
07:45 AM	1	41	0	42	43	0	0	43	11	25	0	36	121
Total	3	134	0	137	190	1	0	191	47	133	0	180	508
08:00 AM	0	22	0	22	33	0	0	33	8	25	0	33	88
08:15 AM	3	18	0	21	21	0	0	21	2	15	0	17	59
08:30 AM	3	16	0	19	15	1	0	16	4	10	0	14	49
08:45 AM	4	18	0	22	13	0	0	13	3	11	0	14	49
Total	10	74	0	84	82	1	0	83	17	61	0	78	245

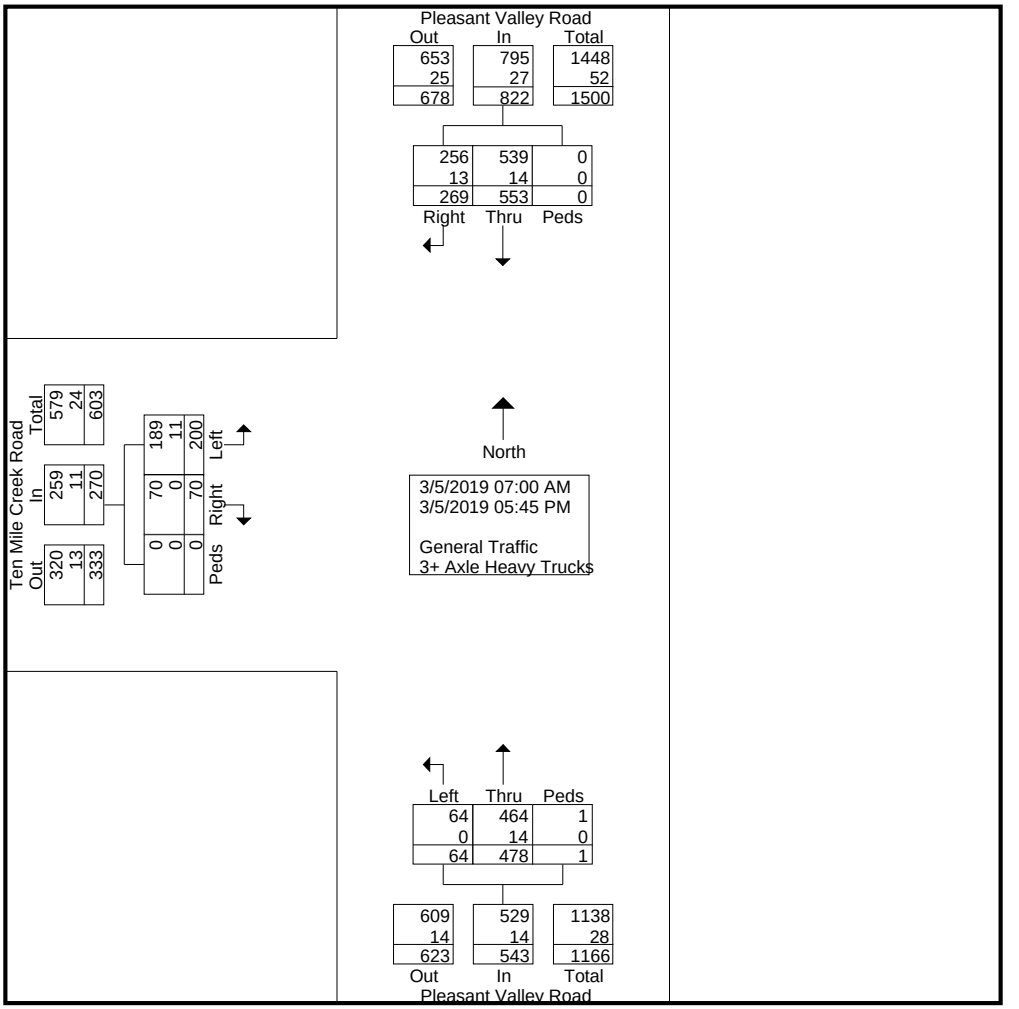
04:00 PM	15	27	0	42	30	14	0	44	0	2	0	2	88
04:15 PM	27	34	0	61	29	8	1	38	0	0	0	0	99
04:30 PM	24	33	0	57	33	8	0	41	0	1	0	1	99
04:45 PM	34	48	0	82	10	11	0	21	1	2	0	3	106
Total	100	142	0	242	102	41	1	144	1	5	0	6	392
05:00 PM	37	33	0	70	29	10	0	39	0	1	0	1	110
05:15 PM	64	68	0	132	23	7	0	30	1	0	0	1	163
05:30 PM	35	52	0	87	27	3	0	30	3	0	0	3	120
05:45 PM	20	50	0	70	25	1	0	26	1	0	0	1	97
Total	156	203	0	359	104	21	0	125	5	1	0	6	490
Grand Total	269	553	0	822	478	64	1	543	70	200	0	270	1635
Apprch %	32.7	67.3	0		88	11.8	0.2		25.9	74.1	0		
Total %	16.5	33.8	0	50.3	29.2	3.9	0.1	33.2	4.3	12.2	0	16.5	
General Traffic	256	539	0	795	464	64	1	529	70	189	0	259	1583
% General Traffic	95.2	97.5	0	96.7	97.1	100	100	97.4	100	94.5	0	95.9	96.8
3+ Axle Heavy Trucks	13	14	0	27	14	0	0	14	0	11	0	11	52
% 3+ Axle Heavy Trucks	4.8	2.5	0	3.3	2.9	0	0	2.6	0	5.5	0	4.1	3.2

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Pleasant / Ten Mile Creek
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Pleasant Valley Rd & Ten Mile Creek Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 2



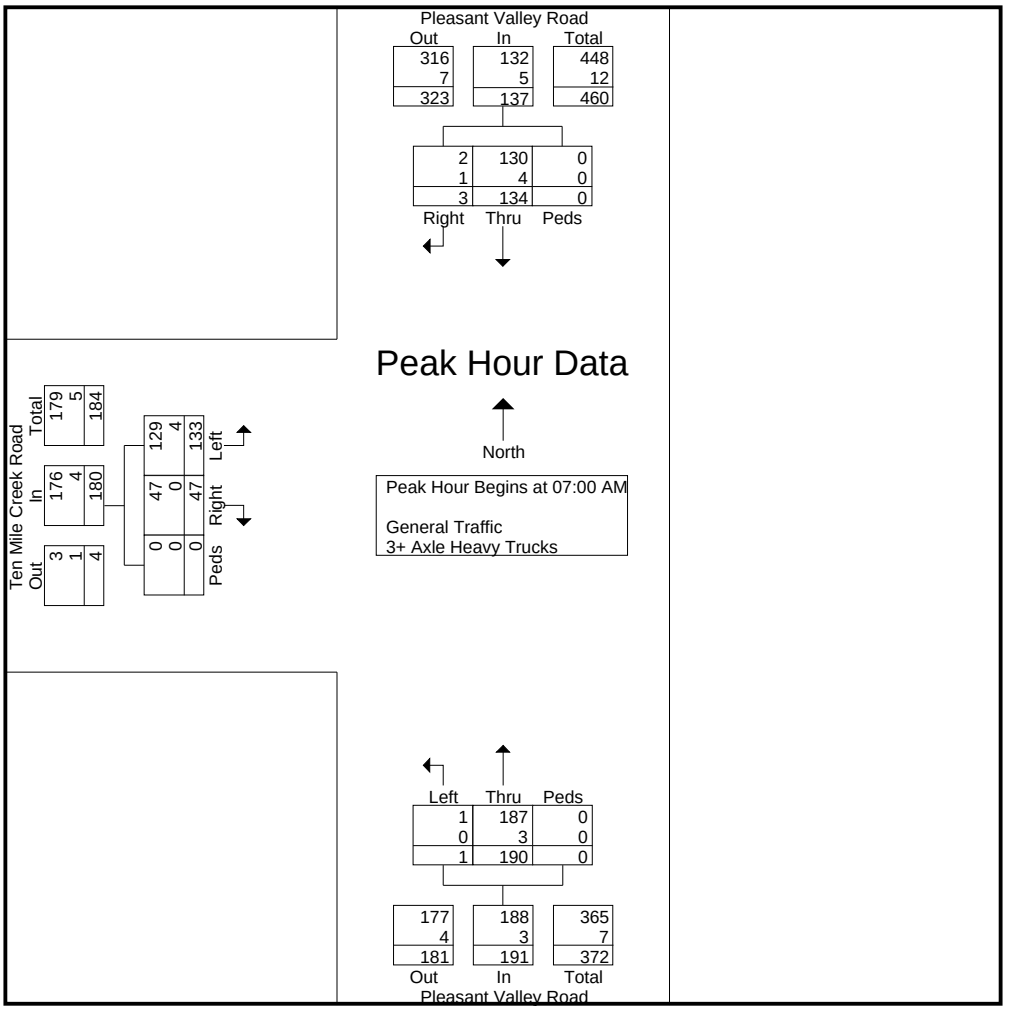
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Pleasant / Ten Mile Creek
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Pleasant Valley Rd & Ten Mile Creek Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 3

	Pleasant Valley Road From North				Pleasant Valley Road From South				Ten Mile Creek Road From West				
Start Time	**Right**	**Thru**	**Peds**	**App. Total**	**Thru**	**Left**	**Peds**	**App. Total**	**Right**	**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	**2**	26	0	28	48	**1**	0	49	7	32	0	39	116
07:15 AM	0	28	0	28	49	0	0	49	10	**42**	0	52	129
07:30 AM	0	39	0	39	**50**	0	0	**50**	**19**	34	0	**53**	**142**
07:45 AM	1	**41**	0	**42**	43	0	0	43	11	25	0	36	121
Total Volume	3	134	0	137	190	1	0	191	47	133	0	180	508
% App. Total	2.2	97.8	0		99.5	0.5	0		26.1	73.9	0		
PHF	.375	.817	.000	.815	.950	.250	.000	.955	.618	.792	.000	.849	.894
General Traffic	2	130	0	132	187	1	0	188	47	129	0	176	496
% General Traffic	66.7	97.0	0	96.4	98.4	100	0	98.4	100	97.0	0	97.8	97.6
3+ Axle Heavy Trucks	1	4	0	5	3	0	0	3	0	4	0	4	12
% 3+ Axle Heavy Trucks	33.3	3.0	0	3.6	1.6	0	0	1.6	0	3.0	0	2.2	2.4



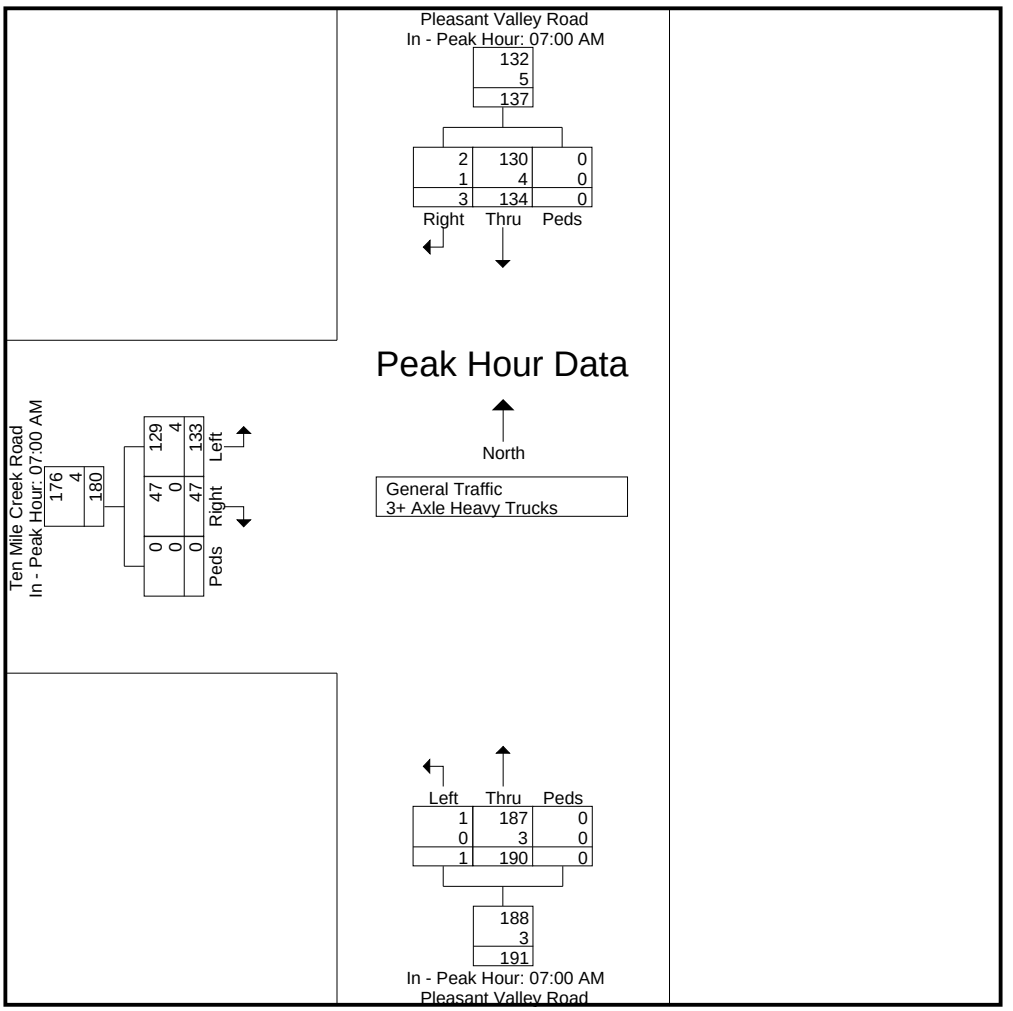
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Pleasant / Ten Mile Creek
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Pleasant Valley Rd & Ten Mile Creek Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 4

	Pleasant Valley Road From North				Pleasant Valley Road From South				Ten Mile Creek Road From West				
Start Time	**Right**	**Thru**	**Peds**	**App. Total**	**Thru**	**Left**	**Peds**	**App. Total**	**Right**	**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:													
	07:00 AM				07:00 AM				07:00 AM				
+0 mins.	**2**	26	0	28	48	**1**	0	49	7	32	0	39	
+15 mins.	0	28	0	28	49	0	0	49	10	**42**	0	52	
+30 mins.	0	39	0	39	**50**	0	0	**50**	**19**	34	0	**53**	
+45 mins.	1	**41**	0	**42**	43	0	0	43	11	25	0	36	
Total Volume	3	134	0	137	190	1	0	191	47	133	0	180	
% App. Total	2.2	97.8	0		99.5	0.5	0		26.1	73.9	0		
PHF	.375	.817	.000	.815	.950	.250	.000	.955	.618	.792	.000	.849	
General Traffic	2	130	0	132	187	1	0	188	47	129	0	176	
% General Traffic	66.7	97	0	96.4	98.4	100	0	98.4	100	97	0	97.8	
3+ Axle Heavy Trucks	1	4	0	5	3	0	0	3	0	4	0	4	
% 3+ Axle Heavy Trucks	33.3	3	0	3.6	1.6	0	0	1.6	0	3	0	2.2	



L2 Data Collection

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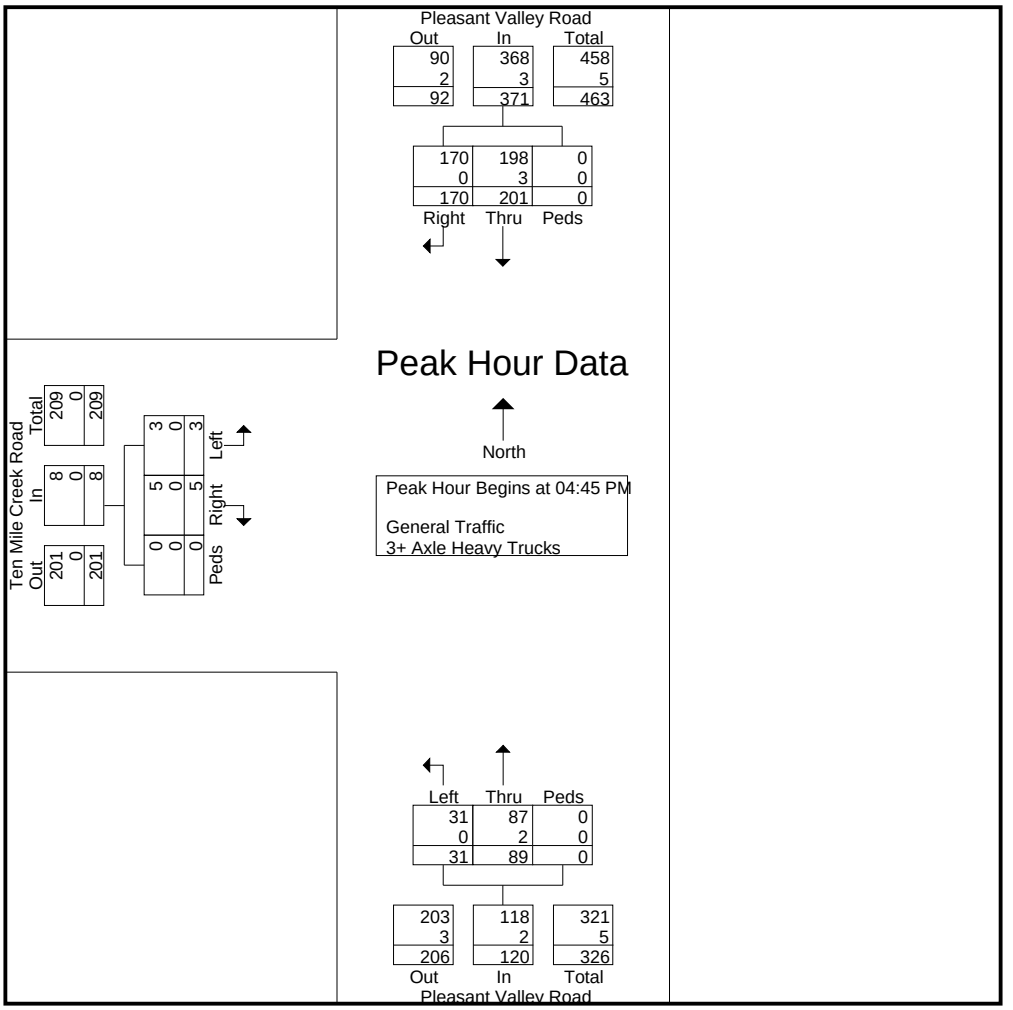
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Pleasant / Ten Mile Creek
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Pleasant Valley Rd & Ten Mile Creek Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 5

	Pleasant Valley Road From North				Pleasant Valley Road From South				Ten Mile Creek Road From West				
Start Time	**Right**	**Thru**	**Peds**	**App. Total**	**Thru**	**Left**	**Peds**	**App. Total**	**Right**	**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	34	48	0	82	10	**11**	0	21	1	**2**	0	**3**	106
05:00 PM	37	33	0	70	**29**	10	0	**39**	0	1	0	1	110
05:15 PM	**64**	**68**	0	**132**	23	7	0	30	1	0	0	1	**163**
05:30 PM	35	52	0	87	27	3	0	30	**3**	0	0	3	120
Total Volume	170	201	0	371	89	31	0	120	5	3	0	8	499
% App. Total	45.8	54.2	0		74.2	25.8	0		62.5	37.5	0		
PHF	.664	.739	.000	.703	.767	.705	.000	.769	.417	.375	.000	.667	.765
General Traffic	170	198	0	368	87	31	0	118	5	3	0	8	494
% General Traffic	100	98.5	0	99.2	97.8	100	0	98.3	100	100	0	100	99.0
3+ Axle Heavy Trucks	0	3	0	3	2	0	0	2	0	0	0	0	5
% 3+ Axle Heavy Trucks	0	1.5	0	0.8	2.2	0	0	1.7	0	0	0	0	1.0



L2 Data Collection

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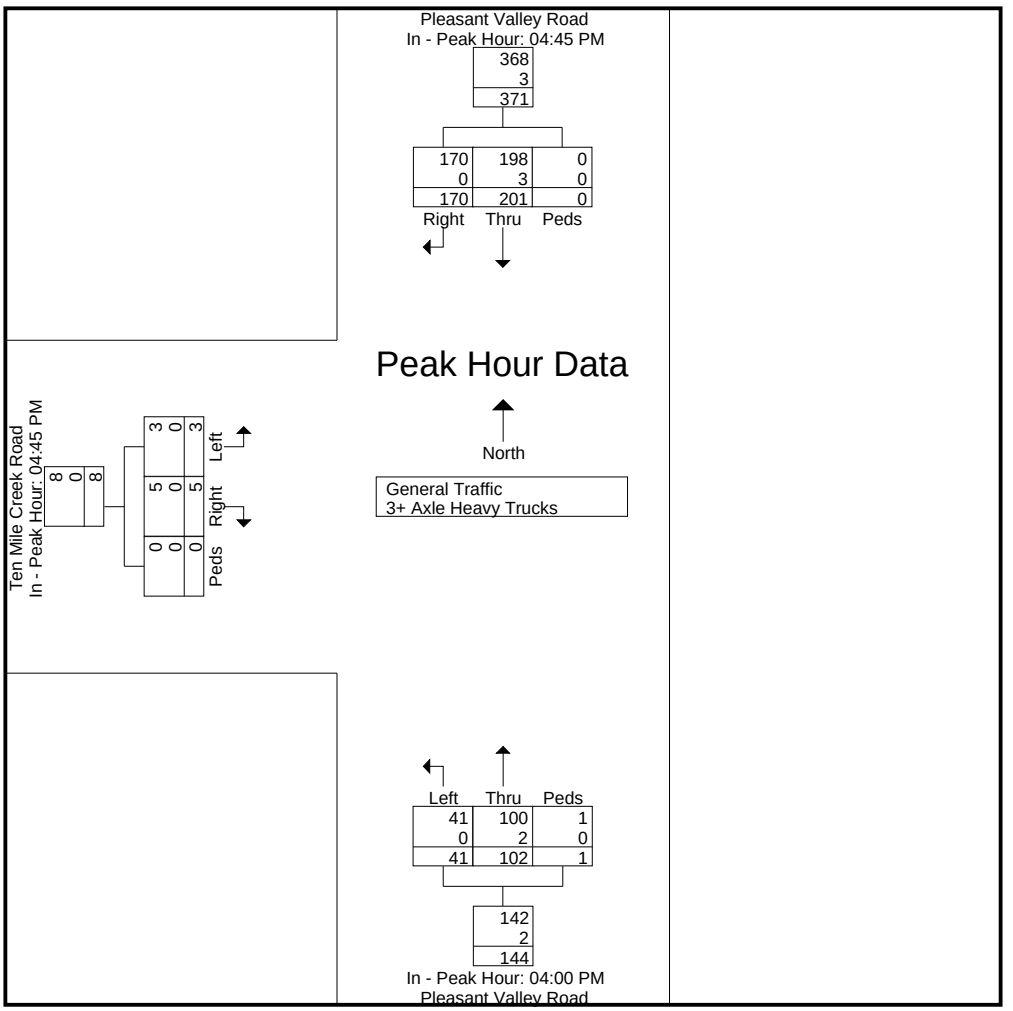
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Pleasant / Ten Mile Creek
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Pleasant Valley Rd & Ten Mile Creek Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 6

	Pleasant Valley Road From North				Pleasant Valley Road From South				Ten Mile Creek Road From West				
Start Time	**Right**	**Thru**	**Peds**	**App. Total**	**Thru**	**Left**	**Peds**	**App. Total**	**Right**	**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:													
	04:45 PM				04:00 PM				04:45 PM				
+0 mins.	34	48	0	82	30	**14**	0	**44**	1	**2**	0	**3**	
+15 mins.	37	33	0	70	29	8	**1**	38	0	1	0	1	
+30 mins.	**64**	**68**	0	**132**	**33**	8	0	41	1	0	0	1	
+45 mins.	35	52	0	87	10	11	0	21	**3**	0	0	3	
Total Volume	170	201	0	371	102	41	1	144	5	3	0	8	
% App. Total	45.8	54.2	0		70.8	28.5	0.7		62.5	37.5	0		
PHF	.664	.739	.000	.703	.773	.732	.250	.818	.417	.375	.000	.667	
General Traffic	170	198	0	368	100	41	1	142	5	3	0	8	
% General Traffic	100	98.5	0	99.2	98	100	100	98.6	100	100	0	100	
3+ Axle Heavy Trucks	0	3	0	3	2	0	0	2	0	0	0	0	
% 3+ Axle Heavy Trucks	0	1.5	0	0.8	2	0	0	1.4	0	0	0	0	



L2 Data Collection

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Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Intersection: Pleasant / Ten Mile Creek
City, State: Ada County, Idaho
Control: Stop Sign

File Name : Pleasant Valley Rd & Ten Mile Creek Rd
Site Code : 00000000
Start Date : 3/5/2019
Page No : 7

Image 1

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Type: Volume / Direction
Tech: Judd / Klaren
Count: Axle Hits / 2

Columbia Rd b SH-69 & Locust Grove VOL
Date Start: 05-Mar-19
Date End: 05-Mar-19
Columbia between SH-69 & Locust Grove Rd
Ada County, Idaho

Start Time	05-Mar-19 Tue	WB	EB	Total
12:00 AM		0	2	2
12:15		0	0	0
12:30		0	1	1
12:45		2	0	2
01:00		1	1	2
01:15		1	2	3
01:30		1	0	1
01:45		0	2	2
02:00		0	0	0
02:15		1	2	3
02:30		1	1	2
02:45		1	1	2
03:00		0	0	0
03:15		1	1	2
03:30		0	1	1
03:45		2	1	3
04:00		3	2	5
04:15		2	6	8
04:30		1	2	3
04:45		1	2	3
05:00		3	5	8
05:15		4	11	15
05:30		7	18	25
05:45		5	16	21
06:00		8	29	37
06:15		14	38	52
06:30		12	49	61
06:45		20	74	94
07:00		**39**	55	94
07:15		**49**	**94**	**143**
07:30		**36**	**108**	**144**
07:45		**34**	**92**	**126**
08:00		39	**88**	**127**
08:15		20	55	75
08:30		26	54	80
08:45		26	46	72
09:00		20	28	48
09:15		20	38	58
09:30		10	20	30
09:45		14	22	36
10:00		18	24	42
10:15		16	27	43
10:30		17	20	37
10:45		15	26	41
11:00		12	17	29
11:15		20	24	44
11:30		22	16	38
11:45		16	28	44
Total		560	1149	1709
Percent		32.8%	67.2%	
Peak	-	07:00	07:15	07:15
Vol.	-	158	382	540
P.H.F.		0.806	0.884	0.938

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Type: Volume / Direction
Tech: Judd / Klaren
Count: Axle Hits / 2

Columbia Rd b SH-69 & Locust Grove VOL
Date Start: 05-Mar-19
Date End: 05-Mar-19
Columbia between SH-69 & Locust Grove Rd
Ada County, Idaho

Start Time	05-Mar-19 Tue	WB	EB	Total
12:00 PM		28	22	50
12:15		22	22	44
12:30		24	23	47
12:45		21	13	34
01:00		18	12	30
01:15		20	34	54
01:30		24	26	50
01:45		27	27	54
02:00		22	22	44
02:15		24	22	46
02:30		24	24	48
02:45		34	24	58
03:00		38	32	70
03:15		44	**32**	76
03:30		41	**38**	79
03:45		33	**34**	67
04:00		61	**34**	95
04:15		67	32	99
04:30		80	32	112
04:45		**74**	28	**102**
05:00		**85**	28	**113**
05:15		**93**	26	**119**
05:30		**99**	32	**131**
05:45		72	22	94
06:00		75	24	99
06:15		36	28	64
06:30		44	16	60
06:45		32	25	57
07:00		26	23	49
07:15		15	14	29
07:30		24	19	43
07:45		15	6	21
08:00		18	10	28
08:15		13	12	25
08:30		10	25	35
08:45		12	12	24
09:00		10	12	22
09:15		18	11	29
09:30		8	11	19
09:45		6	9	15
10:00		4	5	9
10:15		8	11	19
10:30		8	4	12
10:45		3	5	8
11:00		10	8	18
11:15		2	1	3
11:30		3	1	4
11:45		2	3	5
Total		1477	936	2413
Percent		61.2%	38.8%	
Peak	-	16:45	15:15	16:45
Vol.	-	351	138	465
P.H.F.		0.886	0.908	0.887
Grand Total		2037	2085	4122
Percent		49.4%	50.6%	

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Type: Volume / Direction
Tech: Judd / Klaren
Count: Axle Hits / 2

Kuna Rd b Locust Grove Rd & Eagle Rd VOL
Date Start: 05-Mar-19
Date End: 06-Mar-19
Kuna Rd between Locust G & Eagle Rd
Ada County, Idaho

Start Time	05-Mar-19 Tue	WB	EB							Total
12:00 AM		1	4							5
12:15		0	1							1
12:30		1	2							3
12:45		6	0							6
01:00		3	0							3
01:15		0	1							1
01:30		0	1							1
01:45		0	0							0
02:00		1	10							11
02:15		3	1							4
02:30		7	2							9
02:45		6	0							6
03:00		2	1							3
03:15		1	3							4
03:30		0	5							5
03:45		0	3							3
04:00		2	2							4
04:15		4	5							9
04:30		3	16							19
04:45		2	10							12
05:00		9	22							31
05:15		7	35							42
05:30		8	60							68
05:45		8	51							59
06:00		6	40							46
06:15		16	44							60
06:30		13	48							61
06:45		22	33							55
07:00		**26**	34							60
07:15		**28**	**48**							**76**
07:30		**41**	**70**							**111**
07:45		**27**	**46**							**73**
08:00		18	**52**							**70**
08:15		20	26							46
08:30		18	34							52
08:45		25	26							51
09:00		17	10							27
09:15		20	22							42
09:30		10	20							30
09:45		20	24							44
10:00		17	20							37
10:15		23	17							40
10:30		22	23							45
10:45		26	16							42
11:00		24	17							41
11:15		22	23							45
11:30		19	10							29
11:45		32	20							52
Total		586	958							1544
Percent		38.0%	62.0%							
Peak	-	07:00	07:15	-	-	-	-	-	-	07:15
Vol.	-	122	216	-	-	-	-	-	-	330
P.H.F.		0.744	0.771							0.743

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Type: Volume / Direction
Tech: Judd / Klaren
Count: Axle Hits / 2

Kuna Rd b Locust Grove Rd & Eagle Rd VOL
Date Start: 05-Mar-19
Date End: 06-Mar-19
Kuna Rd between Locust G & Eagle Rd
Ada County, Idaho

Start Time	05-Mar-19 Tue	WB	EB							Total
12:00 PM		24	20							44
12:15		22	30							52
12:30		14	24							38
12:45		20	35							55
01:00		18	26							44
01:15		30	23							53
01:30		30	22							52
01:45		33	20							53
02:00		22	24							46
02:15		24	27							51
02:30		37	22							59
02:45		30	28							58
03:00		34	30							64
03:15		28	32							60
03:30		30	34							64
03:45		37	27							64
04:00		34	32							66
04:15		37	31							68
04:30		47	29							76
04:45		66	**31**							**97**
05:00		60	**38**							**98**
05:15		**69**	**31**							**100**
05:30		**65**	**30**							**95**
05:45		**64**	22							86
06:00		**68**	30							98
06:15		32	23							55
06:30		39	18							57
06:45		72	22							94
07:00		38	23							61
07:15		14	14							28
07:30		24	18							42
07:45		15	8							23
08:00		10	18							28
08:15		14	11							25
08:30		2	21							23
08:45		4	15							19
09:00		1	7							8
09:15		11	12							23
09:30		6	11							17
09:45		4	13							17
10:00		0	6							6
10:15		4	1							5
10:30		3	8							11
10:45		5	3							8
11:00		6	3							9
11:15		2	3							5
11:30		3	0							3
11:45		2	1							3
Total		1254	957							2211
Percent		56.7%	43.3%							
Peak	-	17:15	16:45	-	-	-	-	-	-	16:45
Vol.	-	266	130	-	-	-	-	-	-	390
P.H.F.		0.964	0.855							0.975

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Type: Volume / Direction
Tech: Judd / Klaren
Count: Axle Hits / 2

Kuna Rd b Locust Grove Rd & Eagle Rd VOL
Date Start: 05-Mar-19
Date End: 06-Mar-19
Kuna Rd between Locust G & Eagle Rd
Ada County, Idaho

Start Time	06-Mar-19 Wed	WB	EB	Total
12:00 AM		1	4	5
12:15		0	1	1
12:30		1	2	3
12:45		6	0	6
01:00		0	1	1
01:15		0	1	1
01:30		0	0	0
01:45		0	8	8
02:00		0	4	4
02:15		0	1	1
02:30		4	1	5
02:45		9	1	10
03:00		2	0	2
03:15		0	4	4
03:30		1	4	5
03:45		0	3	3
04:00		2	3	5
04:15		6	9	15
04:30		4	15	19
04:45		2	16	18
05:00		8	10	18
05:15		9	30	39
05:30		10	53	63
05:45		10	53	63
06:00		6	46	52
06:15		12	43	55
06:30		16	40	56
06:45		**30**	32	62
07:00		**23**	**42**	**65**
07:15		**39**	**61**	**100**
07:30		**35**	**60**	**95**
07:45		28	**42**	**70**
08:00		18	34	52
08:15		18	46	64
08:30		19	38	57
08:45		26	18	44
09:00		9	24	33
09:15		18	12	30
09:30		13	18	31
09:45		22	24	46
10:00		28	13	41
10:15		16	13	29
10:30		16	20	36
10:45		20	22	42
11:00		16	18	34
11:15		24	18	42
11:30		28	18	46
11:45		24	12	36
Total		579	938	1517
Percent		38.2%	61.8%	
Peak	-	06:45	07:00	07:00
Vol.	-	127	205	330
P.H.F.		0.814	0.840	0.825

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Type: Volume / Direction
Tech: Judd / Klaren
Count: Axle Hits / 2

Kuna Rd b Locust Grove Rd & Eagle Rd VOL
Date Start: 05-Mar-19
Date End: 06-Mar-19
Kuna Rd between Locust G & Eagle Rd
Ada County, Idaho

Start Time	06-Mar-19 Wed	WB	EB							Total
12:00 PM		16	21							37
12:15		17	27							44
12:30		24	26							50
12:45		14	31							45
01:00		22	28							50
01:15		34	18							52
01:30		30	22							52
01:45		25	23							48
02:00		31	24							55
02:15		31	29							60
02:30		22	26							48
02:45		26	22							48
03:00		24	28							52
03:15		20	28							48
03:30		28	28							56
03:45		37	26							63
04:00		41	27							68
04:15		50	**40**							90
04:30		46	**32**							78
04:45		58	**30**							**88**
05:00		**54**	**34**							**88**
05:15		**59**	24							**83**
05:30		**65**	28							**93**
05:45		**66**	22							88
06:00		45	30							75
06:15		52	23							75
06:30		39	26							65
06:45		39	20							59
07:00		32	15							47
07:15		34	18							52
07:30		30	14							44
07:45		10	12							22
08:00		11	14							25
08:15		13	12							25
08:30		10	18							28
08:45		12	19							31
09:00		8	12							20
09:15		7	20							27
09:30		5	5							10
09:45		10	6							16
10:00		1	4							5
10:15		4	6							10
10:30		7	4							11
10:45		5	6							11
11:00		3	10							13
11:15		3	5							8
11:30		1	0							1
11:45		4	5							9
Total		1225	948							2173
Percent		56.4%	43.6%							
Peak	-	17:00	16:15	-	-	-	-	-	-	16:45
Vol.	-	244	136	-	-	-	-	-	-	352
P.H.F.		0.924	0.850							0.946
Grand Total		3644	3801							7445
Percent		48.9%	51.1%							

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Type: Volume / Direction
Tech: Judd / Klaren
Count: Axle Hits / 2

Kuna Rd b SH-69 & Locust Grove Rd VOL
Date Start: 05-Mar-19
Date End: 05-Mar-19
Kuna Rd between SH-69 & Locust Grove Rd
Ada County, Idaho

Start Time	05-Mar-19 Tue	WB	EB	Total
12:00 AM		2	0	2
12:15		1	4	5
12:30		2	3	5
12:45		1	1	2
01:00		5	0	5
01:15		0	1	1
01:30		0	1	1
01:45		0	1	1
02:00		2	9	11
02:15		2	0	2
02:30		8	2	10
02:45		4	0	4
03:00		4	1	5
03:15		0	4	4
03:30		2	4	6
03:45		0	3	3
04:00		2	2	4
04:15		4	6	10
04:30		2	15	17
04:45		6	13	19
05:00		11	22	33
05:15		10	36	46
05:30		10	60	70
05:45		12	45	57
06:00		8	46	54
06:15		20	43	63
06:30		20	49	69
06:45		32	30	62
07:00		**32**	38	70
07:15		**40**	**50**	**90**
07:30		**54**	**74**	**128**
07:45		**34**	**44**	**78**
08:00		32	**48**	**80**
08:15		24	36	60
08:30		29	38	67
08:45		30	27	57
09:00		20	14	34
09:15		19	24	43
09:30		12	27	39
09:45		26	28	54
10:00		16	21	37
10:15		28	18	46
10:30		26	19	45
10:45		28	20	48
11:00		30	21	51
11:15		30	22	52
11:30		26	22	48
11:45		38	22	60
Total		744	1014	1758
Percent		42.3%	57.7%	
Peak	-	07:00	07:15	07:15
Vol.	-	160	216	376
P.H.F.		0.741	0.730	0.734

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Type: Volume / Direction
Tech: Judd / Klaren
Count: Axle Hits / 2

Kuna Rd b SH-69 & Locust Grove Rd VOL
Date Start: 05-Mar-19
Date End: 05-Mar-19
Kuna Rd between SH-69 & Locust Grove Rd
Ada County, Idaho

Start Time	05-Mar-19 Tue	WB	EB	Total
12:00 PM		31	27	58
12:15		30	30	60
12:30		19	26	45
12:45		29	40	69
01:00		24	31	55
01:15		36	32	68
01:30		30	28	58
01:45		40	26	66
02:00		28	28	56
02:15		30	32	62
02:30		44	33	77
02:45		40	32	72
03:00		39	**44**	83
03:15		37	**37**	74
03:30		38	**48**	86
03:45		44	**42**	86
04:00		42	40	82
04:15		40	38	78
04:30		56	37	93
04:45		68	38	106
05:00		68	41	**109**
05:15		**69**	39	**108**
05:30		**73**	50	**123**
05:45		**82**	28	**110**
06:00		**70**	35	105
06:15		40	30	70
06:30		36	28	64
06:45		86	34	120
07:00		44	30	74
07:15		18	25	43
07:30		26	16	42
07:45		20	12	32
08:00		14	19	33
08:15		13	16	29
08:30		12	32	44
08:45		4	22	26
09:00		2	17	19
09:15		12	16	28
09:30		8	14	22
09:45		5	14	19
10:00		0	16	16
10:15		5	2	7
10:30		2	8	10
10:45		6	4	10
11:00		7	4	11
11:15		3	4	7
11:30		4	0	4
11:45		3	2	5
Total		1477	1247	2724
Percent		54.2%	45.8%	
Peak	-	17:15	15:00	17:00
Vol.	-	294	171	450
P.H.F.		0.896	0.891	0.915
Grand Total		2221	2261	4482
Percent		49.6%	50.4%	

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Type: Volume / Direction
Tech: Judd / Klaren
Count: Axle Hits / 2

Cloverdale b Amity Rd & Lake Hazel Rd VOL
Date Start: 05-Mar-19
Date End: 05-Mar-19
Cloverdale Rd between Amity & Lake Hazel
Ada County, Idaho

Start Time	05-Mar-19 Tue	SB	NB							Total
12:00 AM		6	2							8
12:15		6	2							8
12:30		4	5							9
12:45		3	2							5
01:00		1	2							3
01:15		1	1							2
01:30		3	4							7
01:45		3	2							5
02:00		4	2							6
02:15		6	4							10
02:30		1	1							2
02:45		2	3							5
03:00		2	2							4
03:15		1	1							2
03:30		6	2							8
03:45		6	5							11
04:00		5	7							12
04:15		3	5							8
04:30		6	9							15
04:45		2	16							18
05:00		3	16							19
05:15		12	24							36
05:30		16	37							53
05:45		22	25							47
06:00		26	50							76
06:15		19	81							100
06:30		20	100							120
06:45		14	106							120
07:00		30	**150**							180
07:15		36	**160**							**196**
07:30		44	**150**							**194**
07:45		44	**155**							**199**
08:00		48	142							**190**
08:15		42	122							164
08:30		36	90							126
08:45		57	106							163
09:00		58	104							162
09:15		27	70							97
09:30		38	53							91
09:45		44	74							118
10:00		46	46							92
10:15		28	54							82
10:30		55	71							126
10:45		40	48							88
11:00		**43**	55							98
11:15		**42**	58							100
11:30		**58**	64							122
11:45		**52**	52							104
Total		1071	2340							3411
Percent		31.4%	68.6%							
Peak	-	11:00	07:00	-	-	-	-	-	-	07:15
Vol.	-	195	615	-	-	-	-	-	-	779
P.H.F.		0.841	0.961							0.979

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Type: Volume / Direction
Tech: Judd / Klaren
Count: Axle Hits / 2

Cloverdale b Amity Rd & Lake Hazel Rd VOL
Date Start: 05-Mar-19
Date End: 05-Mar-19
Cloverdale Rd between Amity & Lake Hazel
Ada County, Idaho

Start Time	05-Mar-19 Tue	SB	NB	Total
12:00 PM		55	69	124
12:15		44	51	95
12:30		44	63	107
12:45		51	62	113
01:00		64	52	116
01:15		56	51	107
01:30		48	56	104
01:45		44	62	106
02:00		58	54	112
02:15		58	50	108
02:30		60	64	124
02:45		83	70	153
03:00		87	70	157
03:15		98	63	161
03:30		116	77	193
03:45		103	58	161
04:00		94	100	194
04:15		103	64	167
04:30		117	68	185
04:45		**136**	94	**230**
05:00		**151**	74	**225**
05:15		**152**	72	**224**
05:30		**130**	**91**	**221**
05:45		128	**86**	214
06:00		103	**88**	191
06:15		108	**87**	195
06:30		61	82	143
06:45		60	50	110
07:00		46	40	86
07:15		52	36	88
07:30		54	27	81
07:45		44	24	68
08:00		38	27	65
08:15		58	22	80
08:30		32	30	62
08:45		44	24	68
09:00		39	21	60
09:15		32	18	50
09:30		26	14	40
09:45		28	7	35
10:00		12	10	22
10:15		15	8	23
10:30		11	4	15
10:45		17	8	25
11:00		7	9	16
11:15		16	3	19
11:30		5	4	9
11:45		10	5	15
Total		2998	2269	5267
Percent		56.9%	43.1%	
Peak	-	16:45	17:30	16:45
Vol.	-	569	352	900
P.H.F.		0.936	0.967	0.978
Grand Total		4069	4609	8678
Percent		46.9%	53.1%	

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Type: Volume / Direction
Tech: Judd / Klaren
Count: Axle Hits /2

Cloverdale b Lake Hazel Rd & Columbia Rd VOL
Date Start: 05-Mar-19
Date End: 05-Mar-19
Cloverdale between Lake Hazel & Columbia
Ada County, Idaho

Start Time	05-Mar-19 Tue	SB	NB							Total
12:00 AM		4	1							5
12:15		3	1							4
12:30		4	1							5
12:45		1	1							2
01:00		0	0							0
01:15		2	2							4
01:30		2	4							6
01:45		2	1							3
02:00		3	0							3
02:15		4	1							5
02:30		0	0							0
02:45		3	4							7
03:00		2	4							6
03:15		1	3							4
03:30		6	4							10
03:45		6	6							12
04:00		1	4							5
04:15		2	6							8
04:30		4	5							9
04:45		4	18							22
05:00		3	16							19
05:15		8	23							31
05:30		13	30							43
05:45		28	21							49
06:00		31	52							83
06:15		18	74							92
06:30		20	98							118
06:45		16	86							102
07:00		36	116							152
07:15		29	**120**							**149**
07:30		38	**128**							**166**
07:45		38	**134**							**172**
08:00		30	**125**							**155**
08:15		30	95							125
08:30		24	86							110
08:45		44	86							130
09:00		36	58							94
09:15		20	45							65
09:30		28	54							82
09:45		34	54							88
10:00		37	35							72
10:15		24	48							72
10:30		41	51							92
10:45		**46**	47							93
11:00		**32**	39							71
11:15		**32**	46							78
11:30		**54**	43							97
11:45		40	46							86
Total		884	1922							2806
Percent		31.5%	68.5%							
Peak	-	10:45	07:15	-	-	-	-	-	-	07:15
Vol.	-	164	507	-	-	-	-	-	-	642
P.H.F.		0.759	0.946							0.933

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Type: Volume / Direction
Tech: Judd / Klaren
Count: Axle Hits /2

Cloverdale b Lake Hazel Rd & Columbia Rd VOL
Date Start: 05-Mar-19
Date End: 05-Mar-19
Cloverdale between Lake Hazel & Columbia
Ada County, Idaho

Start Time	05-Mar-19 Tue	SB	NB	Total
12:00 PM		37	52	89
12:15		38	42	80
12:30		51	51	102
12:45		38	41	79
01:00		59	40	99
01:15		34	42	76
01:30		41	51	92
01:45		37	48	85
02:00		49	41	90
02:15		49	44	93
02:30		44	48	92
02:45		64	56	120
03:00		69	44	113
03:15		74	44	118
03:30		82	61	143
03:45		84	49	133
04:00		82	64	146
04:15		95	52	147
04:30		106	56	162
04:45		98	52	150
05:00		**108**	44	**152**
05:15		**118**	56	**174**
05:30		**108**	**62**	**170**
05:45		**115**	**64**	**179**
06:00		86	**54**	140
06:15		77	**59**	136
06:30		66	50	116
06:45		52	46	98
07:00		43	33	76
07:15		42	32	74
07:30		32	16	48
07:45		32	22	54
08:00		29	27	56
08:15		44	15	59
08:30		25	12	37
08:45		37	21	58
09:00		24	17	41
09:15		29	11	40
09:30		24	8	32
09:45		19	10	29
10:00		4	4	8
10:15		12	12	24
10:30		6	6	12
10:45		20	6	26
11:00		3	5	8
11:15		12	1	13
11:30		4	4	8
11:45		6	4	10
Total		2408	1679	4087
Percent		58.9%	41.1%	
Peak	-	17:00	17:30	17:00
Vol.	-	449	239	675
P.H.F.		0.951	0.934	0.943
Grand Total		3292	3601	6893
Percent		47.8%	52.2%	

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Type: Volume / Direction / Speed / Class
Tech: Judd / Klaren
Count: Axle Hits / 2

Pleasant Valley b Gowen Rd & Hollilynn Dr VOL D2
Date Start: 13-Mar-19
Date End: 14-Mar-19
Pleasant Vly Rd b Gowen Rd & Hollilynn D
Ada County, Idaho

Start Time	13-Mar-19 Wed	SB	NB	Total
12:00 AM		*	*	*
12:15		*	*	*
12:30		*	*	*
12:45		*	*	*
01:00		*	*	*
01:15		*	*	*
01:30		*	*	*
01:45		*	*	*
02:00		*	*	*
02:15		*	*	*
02:30		*	*	*
02:45		*	*	*
03:00		*	*	*
03:15		*	*	*
03:30		*	*	*
03:45		*	*	*
04:00		*	*	*
04:15		*	*	*
04:30		*	*	*
04:45		*	*	*
05:00		*	*	*
05:15		*	*	*
05:30		*	*	*
05:45		*	*	*
06:00		*	*	*
06:15		*	*	*
06:30		*	*	*
06:45		*	*	*
07:00		*	*	*
07:15		*	*	*
07:30		*	*	*
07:45		*	*	*
08:00		*	*	*
08:15		*	*	*
08:30		*	*	*
08:45		*	*	*
09:00		*	*	*
09:15		*	*	*
09:30		*	*	*
09:45		*	*	*
10:00		*	*	*
10:15		*	*	*
10:30		*	*	*
10:45		*	*	*
11:00		*	*	*
11:15		*	*	*
11:30		*	*	*
11:45		*	*	*
Total		0	0	0
Percent		0.0%	0.0%	
Peak	-	-	-	-
Vol.	-	-	-	-
P.H.F.				

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Type: Volume / Direction / Speed / Class
Tech: Judd / Klaren
Count: Axle Hits / 2

Pleasant Valley b Gowen Rd & Hollilynn Dr VOL D2
Date Start: 13-Mar-19
Date End: 14-Mar-19
Pleasant Vly Rd b Gowen Rd & Hollilynn D
Ada County, Idaho

Start Time	13-Mar-19 Wed	SB	NB							Total
12:00 PM		97	85							182
12:15		84	67							151
12:30		64	91							155
12:45		71	77							148
01:00		96	52							148
01:15		96	99							195
01:30		**96**	100							196
01:45		**98**	73							171
02:00		**102**	**94**							**196**
02:15		**115**	**109**							**224**
02:30		70	**132**							**202**
02:45		64	**140**							**204**
03:00		104	85							189
03:15		80	60							140
03:30		88	124							212
03:45		86	90							176
04:00		85	70							155
04:15		92	70							162
04:30		82	74							156
04:45		104	52							156
05:00		102	40							142
05:15		88	36							124
05:30		88	50							138
05:45		72	41							113
06:00		48	32							80
06:15		33	33							66
06:30		28	32							60
06:45		18	29							47
07:00		16	21							37
07:15		16	22							38
07:30		12	14							26
07:45		7	16							23
08:00		7	6							13
08:15		10	18							28
08:30		12	35							47
08:45		12	18							30
09:00		9	8							17
09:15		6	21							27
09:30		18	10							28
09:45		26	16							42
10:00		9	9							18
10:15		5	8							13
10:30		6	24							30
10:45		4	18							22
11:00		6	10							16
11:15		8	0							8
11:30		4	3							7
11:45		1	2							3
Total		2445	2316							4761
Percent		51.4%	48.6%							
Peak	-	13:30	14:00	-	-	-	-	-	-	14:00
Vol.	-	411	475	-	-	-	-	-	-	826
P.H.F.		0.893	0.848							0.922

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Type: Volume / Direction / Speed / Class
Tech: Judd / Klaren
Count: Axle Hits / 2

Pleasant Valley b Gowen Rd & Hollilynn Dr VOL D2
Date Start: 13-Mar-19
Date End: 14-Mar-19
Pleasant Vly Rd b Gowen Rd & Hollilynn D
Ada County, Idaho

Start Time	14-Mar-19 Thu	SB	NB							Total
12:00 AM		2	3							5
12:15		0	0							0
12:30		3	1							4
12:45		1	0							1
01:00		0	1							1
01:15		2	2							4
01:30		2	0							2
01:45		6	2							8
02:00		5	2							7
02:15		1	1							2
02:30		4	7							11
02:45		4	6							10
03:00		0	2							2
03:15		1	4							5
03:30		1	4							5
03:45		4	2							6
04:00		1	6							7
04:15		7	2							9
04:30		16	6							22
04:45		4	4							8
05:00		16	6							22
05:15		34	12							46
05:30		44	18							62
05:45		60	30							90
06:00		71	22							93
06:15		48	40							88
06:30		56	56							112
06:45		89	96							185
07:00		36	72							108
07:15		50	**112**							162
07:30		82	**115**							**197**
07:45		82	**124**							**206**
08:00		58	**112**							**170**
08:15		66	100							**166**
08:30		70	77							147
08:45		80	92							172
09:00		**107**	60							167
09:15		**102**	86							188
09:30		**84**	102							186
09:45		**85**	66							151
10:00		78	93							171
10:15		84	84							168
10:30		78	50							128
10:45		88	87							175
11:00		74	82							156
11:15		73	90							163
11:30		80	56							136
11:45		90	46							136
Total		2029	2041							4070
Percent		49.9%	50.1%							
Peak	-	09:00	07:15	-	-	-	-	-	-	07:30
Vol.	-	378	463	-	-	-	-	-	-	739
P.H.F.		0.883	0.933							0.897
Grand Total		4474	4357							8831
Percent		50.7%	49.3%							

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Type: Volume / Direction
Tech: Judd / Klaren
Count: Axle Hits / 2

Pleasant Valley b Hollilynn Dr & Tenmile Creek Rd VOL
Date Start: 05-Mar-18
Date End: 05-Mar-18
Pleasant Valley b Hollilynn & Tenmile Cr
Ada County, Idaho

Start Time	05-Mar-18 Mon	SB	NB							Total
12:00 AM		1	0							1
12:15		3	0							3
12:30		2	1							3
12:45		4	1							5
01:00		1	0							1
01:15		1	1							2
01:30		4	0							4
01:45		0	1							1
02:00		9	1							10
02:15		3	4							7
02:30		3	9							12
02:45		6	3							9
03:00		1	4							5
03:15		0	0							0
03:30		1	0							1
03:45		1	3							4
04:00		3	2							5
04:15		2	4							6
04:30		7	9							16
04:45		12	6							18
05:00		14	7							21
05:15		34	9							43
05:30		37	20							57
05:45		**62**	20							82
06:00		**90**	27							117
06:15		**43**	55							98
06:30		**43**	74							117
06:45		38	**78**							116
07:00		39	**89**							**128**
07:15		40	**100**							**140**
07:30		54	**104**							**158**
07:45		56	76							**132**
08:00		28	64							92
08:15		34	58							92
08:30		50	30							80
08:45		45	38							83
09:00		31	64							95
09:15		32	33							65
09:30		32	34							66
09:45		37	40							77
10:00		44	29							73
10:15		44	46							90
10:30		46	55							101
10:45		24	41							65
11:00		28	32							60
11:15		27	39							66
11:30		57	26							83
11:45		53	42							95
Total		1226	1379							2605
Percent		47.1%	52.9%							
Peak	-	05:45	06:45	-	-	-	-	-	-	07:00
Vol.	-	238	371	-	-	-	-	-	-	558
P.H.F.		0.661	0.892							0.883

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Type: Volume / Direction
Tech: Judd / Klaren
Count: Axle Hits / 2

Pleasant Valley b Hollilynn Dr & Tenmile Creek Rd VOL
Date Start: 05-Mar-18
Date End: 05-Mar-18
Pleasant Valley b Hollilynn & Tenmile Cr
Ada County, Idaho

Start Time	05-Mar-18 Mon	SB	NB							Total
12:00 PM		37	40							77
12:15		25	52							77
12:30		42	22							64
12:45		39	42							81
01:00		52	35							87
01:15		48	50							98
01:30		43	42							85
01:45		42	55							97
02:00		52	36							88
02:15		26	34							60
02:30		30	**72**							102
02:45		28	**42**							70
03:00		35	**56**							91
03:15		26	**46**							72
03:30		34	38							72
03:45		54	65							119
04:00		47	40							87
04:15		60	29							89
04:30		62	36							98
04:45		**87**	20							**107**
05:00		**72**	32							**104**
05:15		**138**	24							**162**
05:30		**80**	28							**108**
05:45		76	29							105
06:00		42	29							71
06:15		32	34							66
06:30		24	30							54
06:45		20	38							58
07:00		12	8							20
07:15		3	16							19
07:30		5	10							15
07:45		9	8							17
08:00		6	12							18
08:15		2	11							13
08:30		4	9							13
08:45		6	6							12
09:00		12	16							28
09:15		10	9							19
09:30		7	5							12
09:45		12	4							16
10:00		12	20							32
10:15		4	11							15
10:30		1	28							29
10:45		2	16							18
11:00		5	6							11
11:15		2	4							6
11:30		2	3							5
11:45		2	3							5
Total		1471	1301							2772
Percent		53.1%	46.9%							
Peak	-	16:45	14:30	-	-	-	-	-	-	16:45
Vol.	-	377	216	-	-	-	-	-	-	481
P.H.F.		0.683	0.750							0.742
Grand Total		2697	2680							5377
Percent		50.2%	49.8%							

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Type: Volume / Direction
Tech: Judd / Klaren
Count: Axle Hits / 2

Ten Mile Creek b Hubbard & Pleasant Vally Rd VOL
Date Start: 13-Mar-19
Date End: 14-Mar-19
Ten Mile Creek Rd b Hubbard & Pleasant V
Ada County, Idaho

Start Time	13-Mar-19 Wed	WB	EB							Total
12:00 AM		*	*							*
12:15		*	*							*
12:30		*	*							*
12:45		*	*							*
01:00		*	*							*
01:15		*	*							*
01:30		*	*							*
01:45		*	*							*
02:00		*	*							*
02:15		*	*							*
02:30		*	*							*
02:45		*	*							*
03:00		*	*							*
03:15		*	*							*
03:30		*	*							*
03:45		*	*							*
04:00		*	*							*
04:15		*	*							*
04:30		*	*							*
04:45		*	*							*
05:00		*	*							*
05:15		*	*							*
05:30		*	*							*
05:45		*	*							*
06:00		*	*							*
06:15		*	*							*
06:30		*	*							*
06:45		*	*							*
07:00		*	*							*
07:15		*	*							*
07:30		*	*							*
07:45		*	*							*
08:00		*	*							*
08:15		*	*							*
08:30		*	*							*
08:45		*	*							*
09:00		*	*							*
09:15		*	*							*
09:30		*	*							*
09:45		*	*							*
10:00		*	*							*
10:15		*	*							*
10:30		*	*							*
10:45		*	*							*
11:00		*	*							*
11:15		*	*							*
11:30		*	*							*
11:45		*	*							*
Total		0	0							0
Percent		0.0%	0.0%							
Peak	-	-	-	-	-	-	-	-	-	-
Vol.	-	-	-	-	-	-	-	-	-	-
P.H.F.										

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Type: Volume / Direction
Tech: Judd / Klaren
Count: Axle Hits / 2

Ten Mile Creek b Hubbard & Pleasant Vally Rd VOL
Date Start: 13-Mar-19
Date End: 14-Mar-19
Ten Mile Creek Rd b Hubbard & Pleasant V
Ada County, Idaho

Start Time	13-Mar-19 Wed	WB	EB							Total
12:00 PM		9	20							29
12:15		13	6							19
12:30		24	14							38
12:45		14	5							19
01:00		4	**24**							28
01:15		20	**17**							37
01:30		16	**17**							33
01:45		16	**16**							32
02:00		18	22							40
02:15		23	8							31
02:30		24	18							42
02:45		24	14							38
03:00		20	8							28
03:15		24	16							40
03:30		24	10							34
03:45		54	8							**62**
04:00		28	6							**34**
04:15		58	6							**64**
04:30		44	2							**46**
04:45		**47**	2							49
05:00		**38**	2							40
05:15		**58**	5							63
05:30		**46**	7							53
05:45		30	3							33
06:00		14	2							16
06:15		20	2							22
06:30		11	7							18
06:45		5	4							9
07:00		8	0							8
07:15		6	2							8
07:30		2	1							3
07:45		2	2							4
08:00		4	0							4
08:15		4	1							5
08:30		10	0							10
08:45		5	2							7
09:00		2	1							3
09:15		4	3							7
09:30		0	1							1
09:45		1	0							1
10:00		2	4							6
10:15		2	1							3
10:30		0	0							0
10:45		4	0							4
11:00		1	0							1
11:15		2	0							2
11:30		0	0							0
11:45		1	0							1
Total		786	289							1075
Percent		73.1%	26.9%							
Peak	-	16:45	13:00	-	-	-	-	-	-	15:45
Vol.	-	189	74	-	-	-	-	-	-	206
P.H.F.		0.815	0.771							0.805

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 431-2993

Study: CR0010
Type: Volume / Direction
Tech: Judd / Klaren
Count: Axle Hits / 2

Ten Mile Creek b Hubbard & Pleasant Vally Rd VOL
Date Start: 13-Mar-19
Date End: 14-Mar-19
Ten Mile Creek Rd b Hubbard & Pleasant V
Ada County, Idaho

Start Time	14-Mar-19 Thu	WB	EB							Total
12:00 AM		1	1							2
12:15		0	0							0
12:30		0	0							0
12:45		0	0							0
01:00		0	0							0
01:15		0	0							0
01:30		1	0							1
01:45		0	1							1
02:00		0	0							0
02:15		1	0							1
02:30		0	0							0
02:45		2	1							3
03:00		0	0							0
03:15		0	0							0
03:30		1	0							1
03:45		0	0							0
04:00		0	1							1
04:15		0	1							1
04:30		0	7							7
04:45		2	3							5
05:00		0	4							4
05:15		2	8							10
05:30		0	18							18
05:45		0	17							17
06:00		1	32							33
06:15		2	17							19
06:30		4	42							46
06:45		8	32							40
07:00		4	**40**							44
07:15		10	**64**							**74**
07:30		2	**42**							**44**
07:45		6	**47**							**53**
08:00		7	40							**47**
08:15		8	26							34
08:30		2	14							16
08:45		**14**	20							34
09:00		**11**	22							33
09:15		**16**	22							38
09:30		**19**	16							35
09:45		8	8							16
10:00		6	18							24
10:15		6	10							16
10:30		25	4							29
10:45		1	15							16
11:00		14	16							30
11:15		10	8							18
11:30		11	11							22
11:45		21	8							29
Total		226	636							862
Percent		26.2%	73.8%							
Peak	-	08:45	07:00	-	-	-	-	-	-	07:15
Vol.	-	60	193	-	-	-	-	-	-	218
P.H.F.		0.789	0.754							0.736
Grand Total		1012	925							1937
Percent		52.2%	47.8%							

APPENDIX C: 2019 CAPACITY ANALYSIS REPORTS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	288	229	35	46	47	57	16	1049	76	23	367	60
Future Volume (veh/h)	288	229	35	46	47	57	16	1049	76	23	367	60
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	310	246	38	50	51	62	18	1179	85	25	395	65
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.89	0.89	0.89	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	352	300	46	156	245	208	537	1832	819	220	1846	826
Arrive On Green	0.09	0.20	0.20	0.03	0.14	0.14	0.02	0.55	0.55	0.02	0.55	0.55
Sat Flow, veh/h	1681	1493	231	1681	1765	1500	1681	3353	1500	1681	3353	1500
Grp Volume(v), veh/h	310	0	284	50	51	62	18	1179	85	25	395	65
Grp Sat Flow(s),veh/h/ln	1681	0	1724	1681	1765	1500	1681	1676	1500	1681	1676	1500
Q Serve(g_s), s	13.0	0.0	22.1	3.6	3.6	5.2	0.7	34.5	3.8	0.9	8.4	2.9
Cycle Q Clear(g_c), s	13.0	0.0	22.1	3.6	3.6	5.2	0.7	34.5	3.8	0.9	8.4	2.9
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	352	0	347	156	245	208	537	1832	819	220	1846	826
V/C Ratio(X)	0.88	0.00	0.82	0.32	0.21	0.30	0.03	0.64	0.10	0.11	0.21	0.08
Avail Cap(c_a), veh/h	352	0	565	160	466	396	567	1832	819	243	1846	826
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	0.0	53.5	50.0	53.5	54.2	13.7	22.2	15.3	17.7	16.0	14.8
Incr Delay (d2), s/veh	21.3	0.0	1.9	0.4	0.2	0.3	0.0	1.8	0.3	0.1	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.7	0.0	16.0	3.0	3.2	3.9	0.6	23.0	2.9	0.8	7.1	2.2
LnGrp Delay(d),s/veh	73.6	0.0	55.4	50.5	53.6	54.5	13.7	24.0	15.5	17.8	16.3	15.0
LnGrp LOS	E		E	D	D	D	B	C	B	B	B	B
Approach Vol, veh/h		594			163			1282			485	
Approach Delay, s/veh		64.9			53.0			23.3			16.2	
Approach LOS		E			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	26.4	9.5	84.1	11.3	35.2	10.1	83.5
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	6.5	* 7	7.0	7.0
Max Green Setting (Gmax), s	13.0	37.0	5.0	57.0	5.1	* 46	5.0	57.0
Max Q Clear Time (g_c+I1), s	15.0	7.2	2.7	10.4	5.6	24.1	2.9	36.5
Green Ext Time (p_c), s	0.0	0.6	0.0	12.7	0.0	4.1	0.0	18.6

Intersection Summary	
HCM 2010 Ctrl Delay	33.6
HCM 2010 LOS	C

Notes

Intersection	
Int Delay, s/veh	3.1

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	62	84	500	109	81	139
Future Vol, veh/h	62	84	500	109	81	139
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	0	-	150	450	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	71	97	575	125	93	160

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	841	288	0	-	575	0
Stage 1	575	-	-	-	-	-
Stage 2	266	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	304	709	-	0	994	-
Stage 1	526	-	-	0	-	-
Stage 2	754	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	275	709	-	-	994	-
Mov Cap-2 Maneuver	393	-	-	-	-	-
Stage 1	526	-	-	-	-	-
Stage 2	683	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	13.2	0	3.3
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	393	709	994	-
HCM Lane V/C Ratio	-	0.181	0.136	0.094	-
HCM Control Delay (s)	-	16.2	10.9	9	-
HCM Lane LOS	-	C	B	A	-
HCM 95th %tile Q(veh)	-	0.7	0.5	0.3	-

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	317	6	10	131	13	5	45	12	9	16	7
Future Vol, veh/h	39	317	6	10	131	13	5	45	12	9	16	7
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	348	7	11	144	14	5	49	13	10	18	8
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	11.5	8.9	8.8	8.6
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	11%	6%	28%
Vol Thru, %	73%	88%	85%	50%
Vol Right, %	19%	2%	8%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	62	362	154	32
LT Vol	5	39	10	9
Through Vol	45	317	131	16
RT Vol	12	6	13	7
Lane Flow Rate	68	398	169	35
Geometry Grp	1	1	1	1
Degree of Util (X)	0.097	0.486	0.216	0.051
Departure Headway (Hd)	5.15	4.4	4.587	5.228
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	694	819	782	682
Service Time	3.2	2.427	2.621	3.282
HCM Lane V/C Ratio	0.098	0.486	0.216	0.051
HCM Control Delay	8.8	11.5	8.9	8.6
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.3	2.7	0.8	0.2

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	195	108	4	5	5
Future Vol, veh/h	9	195	108	4	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	235	130	5	6	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	135	0	-	0	390	133
Stage 1	-	-	-	-	133	-
Stage 2	-	-	-	-	257	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1449	-	-	-	614	916
Stage 1	-	-	-	-	893	-
Stage 2	-	-	-	-	786	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1449	-	-	-	608	916
Mov Cap-2 Maneuver	-	-	-	-	608	-
Stage 1	-	-	-	-	885	-
Stage 2	-	-	-	-	786	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1449	-	-	-	731
HCM Lane V/C Ratio	0.007	-	-	-	0.016
HCM Control Delay (s)	7.5	0	-	-	10
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	116	213	5	3	117	37	8	20	4	14	8	22
Future Vol, veh/h	116	213	5	3	117	37	8	20	4	14	8	22
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	120	220	5	3	121	38	8	21	4	14	8	23
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	10.5	8.4	8.4	8.2
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	35%	2%	32%
Vol Thru, %	62%	64%	75%	18%
Vol Right, %	12%	1%	24%	50%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	334	157	44
LT Vol	8	116	3	14
Through Vol	20	213	117	8
RT Vol	4	5	37	22
Lane Flow Rate	33	344	162	45
Geometry Grp	1	1	1	1
Degree of Util (X)	0.047	0.417	0.196	0.061
Departure Headway (Hd)	5.092	4.359	4.352	4.862
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	703	826	825	736
Service Time	3.126	2.377	2.373	2.896
HCM Lane V/C Ratio	0.047	0.416	0.196	0.061
HCM Control Delay	8.4	10.5	8.4	8.2
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.1	2.1	0.7	0.2

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	181	14	2	106	0	6	2	0	3	1	1
Future Vol, veh/h	1	181	14	2	106	0	6	2	0	3	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	226	18	3	133	0	8	3	0	4	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	133	0	0	244	0	0	377	376	235	378	385	133
Stage 1	-	-	-	-	-	-	237	237	-	139	139	-
Stage 2	-	-	-	-	-	-	140	139	-	239	246	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1452	-	-	1322	-	-	580	555	804	580	549	916
Stage 1	-	-	-	-	-	-	766	709	-	864	782	-
Stage 2	-	-	-	-	-	-	863	782	-	764	703	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1452	-	-	1322	-	-	577	553	804	577	547	916
Mov Cap-2 Maneuver	-	-	-	-	-	-	577	553	-	577	547	-
Stage 1	-	-	-	-	-	-	765	708	-	863	780	-
Stage 2	-	-	-	-	-	-	859	780	-	761	702	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	11.4	10.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	571	1452	-	-	1322	-	-	616
HCM Lane V/C Ratio	0.018	0.001	-	-	0.002	-	-	0.01
HCM Control Delay (s)	11.4	7.5	0	-	7.7	0	-	10.9
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	204	54	15	207	87	131	641	36	16	117	43
Future Volume (veh/h)	109	204	54	15	207	87	131	641	36	16	117	43
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1835	1800
Adj Flow Rate, veh/h	143	268	71	19	269	113	139	682	38	22	160	59
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.76	0.76	0.76	0.77	0.77	0.77	0.94	0.94	0.94	0.73	0.73	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	230	423	112	245	303	127	571	781	44	173	552	204
Arrive On Green	0.08	0.31	0.31	0.02	0.26	0.26	0.06	0.47	0.47	0.02	0.43	0.43
Sat Flow, veh/h	1681	1345	356	1681	1181	496	1681	1656	92	1681	1280	472
Grp Volume(v), veh/h	143	0	339	19	0	382	139	0	720	22	0	219
Grp Sat Flow(s),veh/h/ln	1681	0	1702	1681	0	1677	1681	0	1748	1681	0	1752
Q Serve(g_s), s	7.0	0.0	19.8	1.0	0.0	25.5	5.2	0.0	43.0	0.8	0.0	9.4
Cycle Q Clear(g_c), s	7.0	0.0	19.8	1.0	0.0	25.5	5.2	0.0	43.0	0.8	0.0	9.4
Prop In Lane	1.00		0.21	1.00		0.30	1.00		0.05	1.00		0.27
Lane Grp Cap(c), veh/h	230	0	536	245	0	430	571	0	824	173	0	755
V/C Ratio(X)	0.62	0.00	0.63	0.08	0.00	0.89	0.24	0.00	0.87	0.13	0.00	0.29
Avail Cap(c_a), veh/h	316	0	571	429	0	563	684	0	918	353	0	920
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.5	0.0	34.1	31.5	0.0	41.5	15.9	0.0	27.6	24.1	0.0	21.5
Incr Delay (d2), s/veh	1.0	0.0	1.4	0.0	0.0	11.0	0.1	0.0	8.7	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.0	0.0	14.6	0.8	0.0	19.0	4.3	0.0	30.4	0.7	0.0	8.1
LnGrp Delay(d),s/veh	31.5	0.0	35.5	31.5	0.0	52.6	16.0	0.0	36.2	24.2	0.0	21.7
LnGrp LOS	C		D	C		D	B		D	C		C
Approach Vol, veh/h		482			401			859			241	
Approach Delay, s/veh		34.3			51.6			33.0			21.9	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	34.8	12.2	55.1	7.3	41.6	7.5	59.8
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	15.0	39.0	15.0	61.0	15.0	39.0	15.0	61.0
Max Q Clear Time (g_c+I1), s	9.0	27.5	7.2	11.4	3.0	21.8	2.8	45.0
Green Ext Time (p_c), s	0.1	2.3	0.1	4.2	0.0	4.4	0.0	9.8

Intersection Summary	
HCM 2010 Ctrl Delay	35.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	258	13	30	284	108	28	370	91	53	89	21
Future Volume (veh/h)	41	258	13	30	284	108	28	370	91	53	89	21
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	49	311	16	38	359	137	29	378	93	64	107	25
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.83	0.83	0.83	0.79	0.79	0.79	0.98	0.98	0.98	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	221	609	31	360	440	168	516	486	120	244	512	120
Arrive On Green	0.04	0.37	0.35	0.03	0.36	0.34	0.03	0.36	0.33	0.04	0.37	0.35
Sat Flow, veh/h	1681	1664	86	1681	1218	465	1681	1369	337	1681	1384	323
Grp Volume(v), veh/h	49	0	327	38	0	496	29	0	471	64	0	132
Grp Sat Flow(s),veh/h/ln	1681	0	1750	1681	0	1683	1681	0	1705	1681	0	1708
Q Serve(g_s), s	1.8	0.0	14.3	1.4	0.0	26.3	1.1	0.0	24.2	2.3	0.0	5.2
Cycle Q Clear(g_c), s	1.8	0.0	14.3	1.4	0.0	26.3	1.1	0.0	24.2	2.3	0.0	5.2
Prop In Lane	1.00		0.05	1.00		0.28	1.00		0.20	1.00		0.19
Lane Grp Cap(c), veh/h	221	0	641	360	0	608	516	0	606	244	0	631
V/C Ratio(X)	0.22	0.00	0.51	0.11	0.00	0.82	0.06	0.00	0.78	0.26	0.00	0.21
Avail Cap(c_a), veh/h	414	0	944	561	0	908	726	0	816	430	0	817
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.0	0.0	24.3	19.4	0.0	28.7	19.1	0.0	28.4	21.7	0.0	21.3
Incr Delay (d2), s/veh	0.2	0.0	0.6	0.0	0.0	3.6	0.0	0.0	4.1	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	0.0	11.4	1.1	0.0	18.6	0.9	0.0	17.8	1.9	0.0	4.5
LnGrp Delay(d),s/veh	22.2	0.0	24.9	19.5	0.0	32.3	19.1	0.0	32.5	22.0	0.0	21.5
LnGrp LOS	C		C	B		C	B		C	C		C
Approach Vol, veh/h		376			534			500			196	
Approach Delay, s/veh		24.6			31.4			31.7			21.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	40.5	7.7	41.3	8.2	41.0	9.1	39.9
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	15.0	53.0	15.0	47.0	15.0	53.0	15.0	47.0
Max Q Clear Time (g_c+I1), s	3.8	28.3	3.1	7.2	3.4	16.3	4.3	26.2
Green Ext Time (p_c), s	0.0	7.2	0.0	2.7	0.0	4.1	0.1	8.7

Intersection Summary	
HCM 2010 Ctrl Delay	28.7
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	116	60	54	25	85	24	24	219	21	4	77	58
Future Vol, veh/h	116	60	54	25	85	24	24	219	21	4	77	58
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	127	66	59	27	93	26	26	241	23	4	85	64
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	11.5	10.1	12.1	9.8
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	50%	19%	3%
Vol Thru, %	83%	26%	63%	55%
Vol Right, %	8%	23%	18%	42%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	264	230	134	139
LT Vol	24	116	25	4
Through Vol	219	60	85	77
RT Vol	21	54	24	58
Lane Flow Rate	290	253	147	153
Geometry Grp	1	1	1	1
Degree of Util (X)	0.423	0.374	0.224	0.223
Departure Headway (Hd)	5.245	5.327	5.472	5.254
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	685	675	655	681
Service Time	3.281	3.365	3.515	3.297
HCM Lane V/C Ratio	0.423	0.375	0.224	0.225
HCM Control Delay	12.1	11.5	10.1	9.8
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	2.1	1.7	0.9	0.9

Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	63	99	4	1	1	8	5	178	19	70	55	33
Future Vol, veh/h	63	99	4	1	1	8	5	178	19	70	55	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	68	108	4	1	1	9	5	193	21	76	60	36

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	449	454	78	500	462	204	96	0	0	214	0	0
Stage 1	230	230	-	214	214	-	-	-	-	-	-	-
Stage 2	219	224	-	286	248	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	520	502	983	481	497	837	1498	-	-	1356	-	-
Stage 1	773	714	-	788	725	-	-	-	-	-	-	-
Stage 2	783	718	-	721	701	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	489	470	983	376	466	837	1498	-	-	1356	-	-
Mov Cap-2 Maneuver	489	470	-	376	466	-	-	-	-	-	-	-
Stage 1	770	672	-	785	722	-	-	-	-	-	-	-
Stage 2	771	715	-	567	660	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.8	10.3	0.2	3.5
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1498	-	-	483	696	1356	-	-
HCM Lane V/C Ratio	0.004	-	-	0.374	0.016	0.056	-	-
HCM Control Delay (s)	7.4	0	-	16.8	10.3	7.8	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.7	0	0.2	-	-

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	57	16	121	0	28	32	62	100	2	4	36	18
Future Vol, veh/h	57	16	121	0	28	32	62	100	2	4	36	18
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	63	18	134	0	31	36	69	111	2	4	40	20
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	8.8	7.9	9.2	8.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	38%	29%	0%	7%
Vol Thru, %	61%	8%	47%	62%
Vol Right, %	1%	62%	53%	31%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	164	194	60	58
LT Vol	62	57	0	4
Through Vol	100	16	28	36
RT Vol	2	121	32	18
Lane Flow Rate	182	216	67	64
Geometry Grp	1	1	1	1
Degree of Util (X)	0.238	0.257	0.082	0.082
Departure Headway (Hd)	4.701	4.287	4.446	4.608
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	764	839	805	775
Service Time	2.735	2.312	2.48	2.648
HCM Lane V/C Ratio	0.238	0.257	0.083	0.083
HCM Control Delay	9.2	8.8	7.9	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.9	1	0.3	0.3

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	173	0	8	1	0
Future Vol, veh/h	4	173	0	8	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	-	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	237	0	11	1	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	0	0	124	242
Stage 1	-	-	0	0
Stage 2	-	-	124	242
Critical Hdwy	-	-	6.42	6.52
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	5.52
Follow-up Hdwy	-	-	3.518	4.018
Pot Cap-1 Maneuver	-	-	871	660
Stage 1	-	-	-	-
Stage 2	-	-	902	705
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	871	0
Mov Cap-2 Maneuver	-	-	871	0
Stage 1	-	-	-	0
Stage 2	-	-	902	0

Approach	EB	WB
HCM Control Delay, s	0	
HCM LOS		-

Minor Lane/Major Mvmt	EBT	EBR	WBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	-
HCM Lane LOS	-	-	-
HCM 95th %tile Q(veh)	-	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	834	184	19	127	202	191
Future Volume (veh/h)	834	184	19	127	202	191
Number	6	16	5	2	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	851	188	23	153	224	212
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.98	0.98	0.83	0.83	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1631	1231	361	1297	270	241
Arrive On Green	0.66	0.66	0.02	0.73	0.16	0.16
Sat Flow, veh/h	3000	1500	1681	1765	1681	1500
Grp Volume(v), veh/h	851	188	23	153	224	212
Grp Sat Flow(s),veh/h/ln	1235	1500	1681	1765	1681	1500
Q Serve(g_s), s	20.5	3.0	0.5	2.9	14.8	15.9
Cycle Q Clear(g_c), s	20.5	3.0	0.5	2.9	14.8	15.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1631	1231	361	1297	270	241
V/C Ratio(X)	0.52	0.15	0.06	0.12	0.83	0.88
Avail Cap(c_a), veh/h	1631	1231	469	1297	395	352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.1	2.1	7.6	4.4	46.7	47.2
Incr Delay (d2), s/veh	1.2	0.3	0.0	0.2	6.1	11.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.7	4.3	0.4	2.6	11.8	11.8
LnGrp Delay(d),s/veh	11.3	2.4	7.6	4.6	52.8	59.0
LnGrp LOS	B	A	A	A	D	E
Approach Vol, veh/h	1039			176	436	
Approach Delay, s/veh	9.7			5.0	55.8	
Approach LOS	A			A	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		90.5			8.6	81.9		24.5
Change Period (Y+Rc), s		6.0			6.0	6.0		6.0
Max Green Setting (Gmax), s		76.0			10.0	60.0		27.0
Max Q Clear Time (g_c+I1), s		4.9			2.5	22.5		17.9
Green Ext Time (p_c), s		1.3			0.0	9.9		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	21.4
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	133	47	1	190	134	3
Future Vol, veh/h	133	47	1	190	134	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	53	1	213	151	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	368	153	154	0	-	0
Stage 1	153	-	-	-	-	-
Stage 2	215	-	-	-	-	-
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	632	893	1426	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	631	893	1426	-	-	-
Mov Cap-2 Maneuver	631	-	-	-	-	-
Stage 1	874	-	-	-	-	-
Stage 2	821	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1426	-	683	-	-
HCM Lane V/C Ratio	0.001	-	0.296	-	-
HCM Control Delay (s)	7.5	0	12.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	1.2	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	73	16	86	199	35	30	554	38	41	1120	272
Future Volume (veh/h)	94	73	16	86	199	35	30	554	38	41	1120	272
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	112	87	19	104	240	42	34	637	44	43	1167	283
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.84	0.84	0.84	0.83	0.83	0.83	0.87	0.87	0.87	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	241	53	305	289	246	207	1857	831	434	1865	834
Arrive On Green	0.07	0.17	0.17	0.06	0.16	0.16	0.03	0.55	0.55	0.03	0.56	0.56
Sat Flow, veh/h	1681	1404	307	1681	1765	1500	1681	3353	1500	1681	3353	1500
Grp Volume(v), veh/h	112	0	106	104	240	42	34	637	44	43	1167	283
Grp Sat Flow(s),veh/h/ln	1681	0	1711	1681	1765	1500	1681	1676	1500	1681	1676	1500
Q Serve(g_s), s	8.2	0.0	8.2	7.6	19.7	3.6	1.3	15.7	2.0	1.6	35.5	15.5
Cycle Q Clear(g_c), s	8.2	0.0	8.2	7.6	19.7	3.6	1.3	15.7	2.0	1.6	35.5	15.5
Prop In Lane	1.00		0.18	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	197	0	293	305	289	246	207	1857	831	434	1865	834
V/C Ratio(X)	0.57	0.00	0.36	0.34	0.83	0.17	0.16	0.34	0.05	0.10	0.63	0.34
Avail Cap(c_a), veh/h	229	0	439	349	447	380	310	1857	831	533	1865	834
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.9	0.0	54.9	47.9	60.7	53.9	18.1	18.4	15.4	14.3	22.6	18.2
Incr Delay (d2), s/veh	1.0	0.0	0.3	0.2	4.2	0.1	0.1	0.5	0.1	0.0	1.6	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.0	0.0	7.0	6.4	15.2	2.7	1.1	11.8	1.5	1.4	23.5	10.9
LnGrp Delay(d),s/veh	49.8	0.0	55.2	48.1	64.9	54.1	18.2	18.9	15.5	14.4	24.2	19.3
LnGrp LOS	D		E	D	E	D	B	B	B	B	C	B
Approach Vol, veh/h		218			386			715			1493	
Approach Delay, s/veh		52.4			59.2			18.7			23.0	
Approach LOS		D			E			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.2	31.6	10.8	90.4	16.1	32.7	11.2	90.1
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	6.5	* 7	7.0	7.0
Max Green Setting (Gmax), s	13.0	38.0	13.0	58.0	13.5	* 39	13.0	58.0
Max Q Clear Time (g_c+I1), s	10.2	21.7	3.3	37.5	9.6	10.2	3.6	17.7
Green Ext Time (p_c), s	0.0	2.8	0.0	18.8	0.1	1.4	0.0	20.2

Intersection Summary	
HCM 2010 Ctrl Delay	29.2
HCM 2010 LOS	C

Notes

Intersection	
Int Delay, s/veh	3.3

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	127	129	329	64	78	634
Future Vol, veh/h	127	129	329	64	78	634
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	0	-	150	450	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	134	136	346	67	82	667

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	844	173	0	-	346	0
Stage 1	346	-	-	-	-	-
Stage 2	498	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	302	840	-	0	1210	-
Stage 1	688	-	-	0	-	-
Stage 2	576	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	281	840	-	-	1210	-
Mov Cap-2 Maneuver	400	-	-	-	-	-
Stage 1	688	-	-	-	-	-
Stage 2	537	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	14.3	0	0.9
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	400	840	1210	-
HCM Lane V/C Ratio	-	0.334	0.162	0.068	-
HCM Control Delay (s)	-	18.5	10.1	8.2	-
HCM Lane LOS	-	C	B	A	-
HCM 95th %tile Q(veh)	-	1.4	0.6	0.2	-

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	99	3	17	312	19	3	27	3	14	68	30
Future Vol, veh/h	11	99	3	17	312	19	3	27	3	14	68	30
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	12	104	3	18	328	20	3	28	3	15	72	32
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	8.6	11.1	8.5	9
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	10%	5%	12%
Vol Thru, %	82%	88%	90%	61%
Vol Right, %	9%	3%	5%	27%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	33	113	348	112
LT Vol	3	11	17	14
Through Vol	27	99	312	68
RT Vol	3	3	19	30
Lane Flow Rate	35	119	366	118
Geometry Grp	1	1	1	1
Degree of Util (X)	0.05	0.156	0.451	0.162
Departure Headway (Hd)	5.169	4.725	4.433	4.948
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	689	757	813	723
Service Time	3.227	2.768	2.466	2.997
HCM Lane V/C Ratio	0.051	0.157	0.45	0.163
HCM Control Delay	8.5	8.6	11.1	9
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.2	0.6	2.4	0.6

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	91	233	7	15	23
Future Vol, veh/h	6	91	233	7	15	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	95	243	7	16	24

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	250	0	-	0	354	247
Stage 1	-	-	-	-	247	-
Stage 2	-	-	-	-	107	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1316	-	-	-	644	792
Stage 1	-	-	-	-	794	-
Stage 2	-	-	-	-	917	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1316	-	-	-	641	792
Mov Cap-2 Maneuver	-	-	-	-	641	-
Stage 1	-	-	-	-	790	-
Stage 2	-	-	-	-	917	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1316	-	-	-	725
HCM Lane V/C Ratio	0.005	-	-	-	0.055
HCM Control Delay (s)	7.7	0	-	-	10.3
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	95	4	4	198	30	10	8	2	49	24	130
Future Vol, veh/h	21	95	4	4	198	30	10	8	2	49	24	130
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	101	4	4	211	32	11	9	2	52	26	138
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	8.8	9.7	8.3	9.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	17%	2%	24%
Vol Thru, %	40%	79%	85%	12%
Vol Right, %	10%	3%	13%	64%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	120	232	203
LT Vol	10	21	4	49
Through Vol	8	95	198	24
RT Vol	2	4	30	130
Lane Flow Rate	21	128	247	216
Geometry Grp	1	1	1	1
Degree of Util (X)	0.03	0.17	0.313	0.27
Departure Headway (Hd)	5.122	4.788	4.565	4.498
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	695	747	785	797
Service Time	3.18	2.836	2.607	2.538
HCM Lane V/C Ratio	0.03	0.171	0.315	0.271
HCM Control Delay	8.3	8.8	9.7	9.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.6	1.3	1.1

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	3	94	17	2	215	3	17	8	1	4	7	0
Future Vol, veh/h	3	94	17	2	215	3	17	8	1	4	7	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	100	18	2	229	3	18	9	1	4	7	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	232	0	0	118	0	0	353	351	109	355	359	231
Stage 1	-	-	-	-	-	-	115	115	-	235	235	-
Stage 2	-	-	-	-	-	-	238	236	-	120	124	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1336	-	-	1470	-	-	602	573	945	600	568	808
Stage 1	-	-	-	-	-	-	890	800	-	768	710	-
Stage 2	-	-	-	-	-	-	765	710	-	884	793	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1336	-	-	1470	-	-	594	571	945	591	566	808
Mov Cap-2 Maneuver	-	-	-	-	-	-	594	571	-	591	566	-
Stage 1	-	-	-	-	-	-	888	798	-	766	709	-
Stage 2	-	-	-	-	-	-	755	709	-	872	791	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	11.3	11.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	595	1336	-	-	1470	-	-	575
HCM Lane V/C Ratio	0.046	0.002	-	-	0.001	-	-	0.02
HCM Control Delay (s)	11.3	7.7	0	-	7.5	0	-	11.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	230	120	59	236	15	86	219	34	46	547	124
Future Volume (veh/h)	61	230	120	59	236	15	86	219	34	46	547	124
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1835	1800
Adj Flow Rate, veh/h	69	258	135	66	265	17	91	233	36	48	570	129
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.94	0.94	0.94	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	282	303	158	184	452	29	222	705	109	535	671	152
Arrive On Green	0.04	0.28	0.28	0.04	0.28	0.28	0.04	0.47	0.47	0.03	0.46	0.46
Sat Flow, veh/h	1681	1092	572	1681	1641	105	1681	1493	231	1681	1449	328
Grp Volume(v), veh/h	69	0	393	66	0	282	91	0	269	48	0	699
Grp Sat Flow(s),veh/h/ln	1681	0	1664	1681	0	1746	1681	0	1724	1681	0	1777
Q Serve(g_s), s	3.3	0.0	25.4	3.2	0.0	15.9	3.2	0.0	11.1	1.7	0.0	39.6
Cycle Q Clear(g_c), s	3.3	0.0	25.4	3.2	0.0	15.9	3.2	0.0	11.1	1.7	0.0	39.6
Prop In Lane	1.00		0.34	1.00		0.06	1.00		0.13	1.00		0.18
Lane Grp Cap(c), veh/h	282	0	461	184	0	481	222	0	814	535	0	822
V/C Ratio(X)	0.24	0.00	0.85	0.36	0.00	0.59	0.41	0.00	0.33	0.09	0.00	0.85
Avail Cap(c_a), veh/h	434	0	571	338	0	599	370	0	925	700	0	954
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.8	0.0	38.9	30.7	0.0	35.6	22.5	0.0	18.7	15.3	0.0	27.0
Incr Delay (d2), s/veh	0.2	0.0	8.5	0.4	0.0	0.4	0.4	0.0	0.2	0.0	0.0	6.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	0.0	18.6	2.7	0.0	12.3	2.7	0.0	9.1	1.4	0.0	28.4
LnGrp Delay(d),s/veh	29.0	0.0	47.4	31.1	0.0	36.0	22.9	0.0	19.0	15.3	0.0	33.6
LnGrp LOS	C		D	C		D	C		B	B		C
Approach Vol, veh/h		462			348			360			747	
Approach Delay, s/veh		44.7			35.1			20.0			32.4	
Approach LOS		D			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	36.3	10.0	57.6	9.6	36.5	8.9	58.7
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	15.0	39.0	15.0	61.0	15.0	39.0	15.0	61.0
Max Q Clear Time (g_c+I1), s	5.3	17.9	5.2	41.6	5.2	27.4	3.7	13.1
Green Ext Time (p_c), s	0.1	2.1	0.1	11.0	0.1	4.1	0.0	5.2

Intersection Summary	
HCM 2010 Ctrl Delay	33.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	332	36	117	388	71	34	158	58	116	316	62
Future Volume (veh/h)	46	332	36	117	388	71	34	158	58	116	316	62
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	51	365	40	127	422	77	42	198	72	126	343	67
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.92	0.92	0.92	0.80	0.80	0.80	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	254	538	59	339	541	99	250	354	129	370	462	90
Arrive On Green	0.04	0.34	0.34	0.07	0.37	0.37	0.04	0.29	0.29	0.07	0.32	0.32
Sat Flow, veh/h	1681	1563	171	1681	1453	265	1681	1236	449	1681	1435	280
Grp Volume(v), veh/h	51	0	405	127	0	499	42	0	270	126	0	410
Grp Sat Flow(s),veh/h/ln	1681	0	1734	1681	0	1718	1681	0	1685	1681	0	1715
Q Serve(g_s), s	1.7	0.0	17.5	4.2	0.0	22.5	1.5	0.0	11.9	4.5	0.0	18.7
Cycle Q Clear(g_c), s	1.7	0.0	17.5	4.2	0.0	22.5	1.5	0.0	11.9	4.5	0.0	18.7
Prop In Lane	1.00		0.10	1.00		0.15	1.00		0.27	1.00		0.16
Lane Grp Cap(c), veh/h	254	0	597	339	0	640	250	0	482	370	0	553
V/C Ratio(X)	0.20	0.00	0.68	0.37	0.00	0.78	0.17	0.00	0.56	0.34	0.00	0.74
Avail Cap(c_a), veh/h	473	0	1148	510	0	1137	476	0	808	535	0	822
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.5	0.0	24.6	18.3	0.0	24.3	22.1	0.0	26.6	20.3	0.0	26.5
Incr Delay (d2), s/veh	0.1	0.0	1.4	0.3	0.0	2.1	0.1	0.0	1.5	0.2	0.0	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.0	13.3	3.5	0.0	16.5	1.3	0.0	9.7	3.8	0.0	14.2
LnGrp Delay(d),s/veh	19.7	0.0	26.0	18.6	0.0	26.4	22.2	0.0	28.1	20.5	0.0	29.3
LnGrp LOS	B		C	B		C	C		C	C		C
Approach Vol, veh/h		456			626			312			536	
Approach Delay, s/veh		25.3			24.8			27.3			27.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	37.7	8.2	33.2	11.1	35.1	11.4	30.1
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	15.0	58.0	15.0	42.0	15.0	58.0	15.0	42.0
Max Q Clear Time (g_c+I1), s	3.7	24.5	3.5	20.7	6.2	19.5	6.5	13.9
Green Ext Time (p_c), s	0.0	8.1	0.0	7.6	0.1	5.4	0.1	5.5

Intersection Summary	
HCM 2010 Ctrl Delay	26.0
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	83	38	19	76	12	65	118	25	23	197	97
Future Vol, veh/h	32	83	38	19	76	12	65	118	25	23	197	97
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	35	91	42	21	84	13	71	130	27	25	216	107
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	10.5	10	10.9	12.4
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	31%	21%	18%	7%
Vol Thru, %	57%	54%	71%	62%
Vol Right, %	12%	25%	11%	31%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	208	153	107	317
LT Vol	65	32	19	23
Through Vol	118	83	76	197
RT Vol	25	38	12	97
Lane Flow Rate	229	168	118	348
Geometry Grp	1	1	1	1
Degree of Util (X)	0.332	0.257	0.186	0.477
Departure Headway (Hd)	5.236	5.511	5.68	4.925
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	686	651	631	732
Service Time	3.271	3.551	3.722	2.955
HCM Lane V/C Ratio	0.334	0.258	0.187	0.475
HCM Control Delay	10.9	10.5	10	12.4
HCM Lane LOS	B	B	A	B
HCM 95th-tile Q	1.5	1	0.7	2.6

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	18	2	2	20	134	71	6	124	2	14	182	60
Future Vol, veh/h	18	2	2	20	134	71	6	124	2	14	182	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	2	2	23	154	82	7	143	2	16	209	69

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	552	435	244	436	468	144	278	0	0	145	0	0
Stage 1	276	276	-	158	158	-	-	-	-	-	-	-
Stage 2	276	159	-	278	310	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	444	514	795	531	493	903	1285	-	-	1437	-	-
Stage 1	730	682	-	844	767	-	-	-	-	-	-	-
Stage 2	730	766	-	728	659	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	300	504	795	520	484	903	1285	-	-	1437	-	-
Mov Cap-2 Maneuver	300	504	-	520	484	-	-	-	-	-	-	-
Stage 1	726	673	-	839	762	-	-	-	-	-	-	-
Stage 2	527	761	-	714	650	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.8	16.4	0.4	0.4
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1285	-	-	331	571	1437	-	-
HCM Lane V/C Ratio	0.005	-	-	0.076	0.453	0.011	-	-
HCM Control Delay (s)	7.8	0	-	16.8	16.4	7.5	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	2.3	0	-	-

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	19	46	0	23	9	157	98	2	25	82	48
Future Vol, veh/h	21	19	46	0	23	9	157	98	2	25	82	48
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	22	20	48	0	24	9	165	103	2	26	86	51
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	8.4	8.1	9.9	8.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	61%	24%	0%	16%
Vol Thru, %	38%	22%	72%	53%
Vol Right, %	1%	53%	28%	31%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	257	86	32	155
LT Vol	157	21	0	25
Through Vol	98	19	23	82
RT Vol	2	46	9	48
Lane Flow Rate	271	91	34	163
Geometry Grp	1	1	1	1
Degree of Util (X)	0.34	0.118	0.046	0.198
Departure Headway (Hd)	4.523	4.685	4.866	4.377
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	795	764	734	819
Service Time	2.55	2.72	2.905	2.407
HCM Lane V/C Ratio	0.341	0.119	0.046	0.199
HCM Control Delay	9.9	8.4	8.1	8.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.5	0.4	0.1	0.7

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	9	0	2	217	0
Future Vol, veh/h	4	9	0	2	217	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	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	5	10	0	2	247	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	0	0	10	15
Stage 1	-	-	0	0
Stage 2	-	-	10	15
Critical Hdwy	-	-	6.42	6.52
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	5.52
Follow-up Hdwy	-	-	3.518	4.018
Pot Cap-1 Maneuver	-	-	1010	879
Stage 1	-	-	-	-
Stage 2	-	-	1013	883
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	1010	0
Mov Cap-2 Maneuver	-	-	1010	0
Stage 1	-	-	-	0
Stage 2	-	-	1013	0

Approach	EB	WB
HCM Control Delay, s	0	
HCM LOS		-

Minor Lane/Major Mvmt	EBT	EBR	WBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	-
HCM Lane LOS	-	-	-
HCM 95th %tile Q(veh)	-	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	211	203	220	926	200	18
Future Volume (veh/h)	211	203	220	926	200	18
Number	6	16	5	2	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	232	223	239	1007	227	20
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.91	0.91	0.92	0.92	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1545	1166	721	1313	255	228
Arrive On Green	0.63	0.63	0.07	0.74	0.15	0.15
Sat Flow, veh/h	3000	1500	1681	1765	1681	1500
Grp Volume(v), veh/h	232	223	239	1007	227	20
Grp Sat Flow(s),veh/h/ln	1235	1500	1681	1765	1681	1500
Q Serve(g_s), s	4.5	4.5	5.5	39.1	15.2	1.3
Cycle Q Clear(g_c), s	4.5	4.5	5.5	39.1	15.2	1.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1545	1166	721	1313	255	228
V/C Ratio(X)	0.15	0.19	0.33	0.77	0.89	0.09
Avail Cap(c_a), veh/h	1545	1166	741	1313	322	287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.9	3.4	5.9	8.8	47.8	41.9
Incr Delay (d2), s/veh	0.2	0.4	0.1	4.3	19.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	5.8	4.5	27.7	13.2	1.0
LnGrp Delay(d),s/veh	9.1	3.7	6.0	13.1	66.8	42.0
LnGrp LOS	A	A	A	B	E	D
Approach Vol, veh/h	455			1246	247	
Approach Delay, s/veh	6.5			11.8	64.8	
Approach LOS	A			B	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		91.5			13.6	77.9		23.5
Change Period (Y+Rc), s		6.0			6.0	6.0		6.0
Max Green Setting (Gmax), s		81.0			9.0	66.0		22.0
Max Q Clear Time (g_c+I1), s		41.1			7.5	6.5		17.2
Green Ext Time (p_c), s		17.6			0.1	2.6		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	17.2
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	5	31	89	201	170
Future Vol, veh/h	3	5	31	89	201	170
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	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	6	40	116	261	221

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	568	372	482	0	-	0
Stage 1	372	-	-	-	-	-
Stage 2	196	-	-	-	-	-
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	484	674	1081	-	-	-
Stage 1	697	-	-	-	-	-
Stage 2	837	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	465	674	1081	-	-	-
Mov Cap-2 Maneuver	465	-	-	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	837	-	-	-	-	-

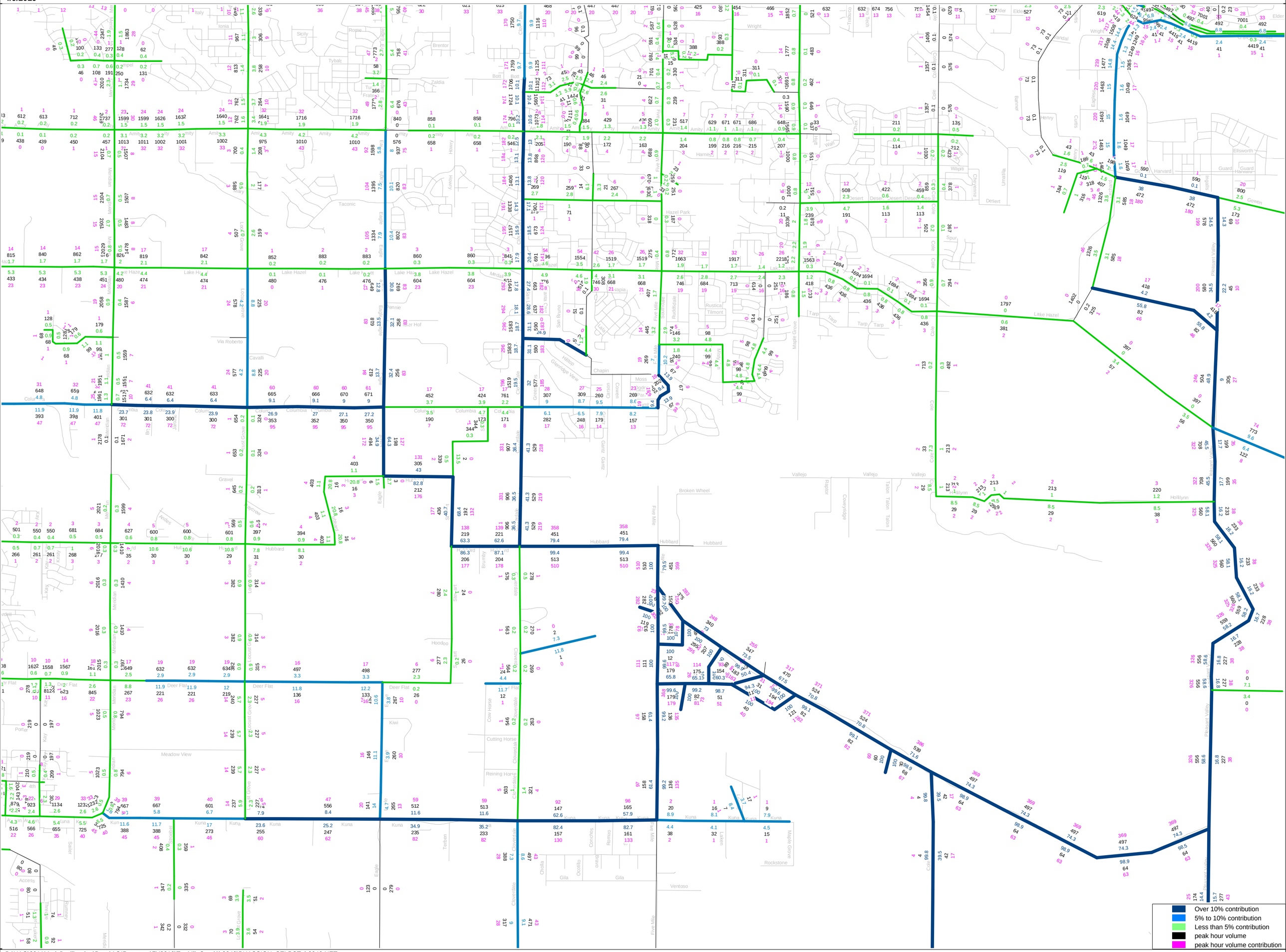
Approach	EB	NB	SB
HCM Control Delay, s	11.4	2.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1081	-	577	-	-
HCM Lane V/C Ratio	0.037	-	0.018	-	-
HCM Control Delay (s)	8.5	0	11.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

APPENDIX D: COMPASS FORECASTS

Site Specific Contribution to the Total PM Peak Hour Volume

4/9/2019



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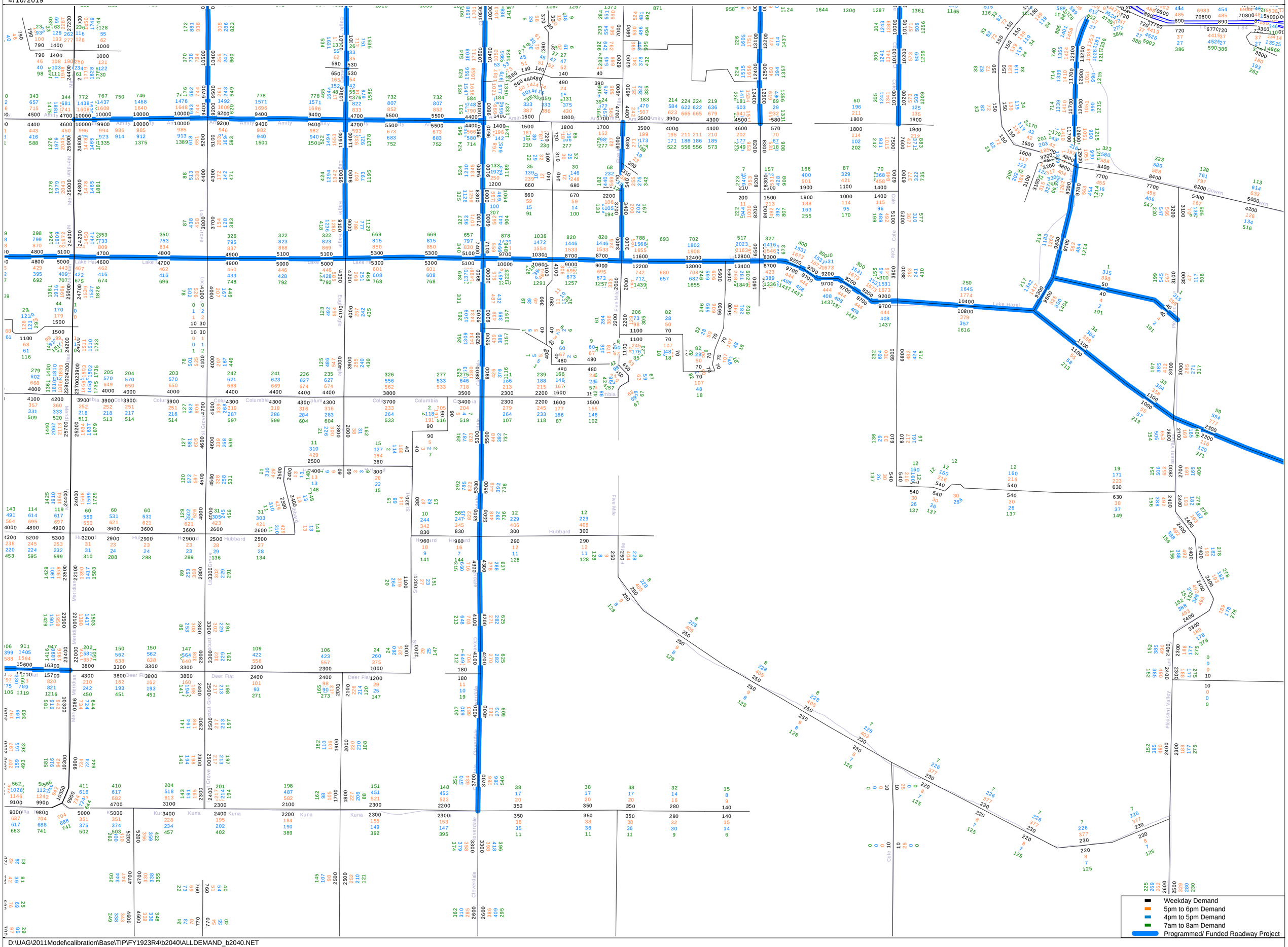
2040 Build: Daily, 5pm to 6pm Peak, 4pm to 5pm Peak and 7am to 8am Peak Demand
4/10/2019



D:\UAG\2011Model\calibration\Base\TIP\FY1923R4\b2040\ALLDEMAND_b2040.NET
New Regional Model calibrated to 2011/12 conditions - completed in January 2015

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APPENDIX E: 2025 CAPACITY ANALYSIS REPORTS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	386	309	47	62	68	76	19	1258	91	27	438	72
Future Volume (veh/h)	386	309	47	62	68	76	19	1258	91	27	438	72
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	415	332	51	67	74	83	21	1398	101	29	471	77
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.90	0.90	0.90	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	418	386	59	156	291	248	441	1670	747	136	1684	753
Arrive On Green	0.13	0.26	0.26	0.04	0.17	0.17	0.02	0.50	0.50	0.02	0.50	0.50
Sat Flow, veh/h	1681	1495	230	1681	1765	1500	1681	3353	1500	1681	3353	1500
Grp Volume(v), veh/h	415	0	383	67	74	83	21	1398	101	29	471	77
Grp Sat Flow(s),veh/h/ln	1681	0	1724	1681	1765	1500	1681	1676	1500	1681	1676	1500
Q Serve(g_s), s	19.0	0.0	31.8	5.0	5.5	7.3	0.9	53.8	5.4	1.3	12.2	4.0
Cycle Q Clear(g_c), s	19.0	0.0	31.8	5.0	5.5	7.3	0.9	53.8	5.4	1.3	12.2	4.0
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	418	0	446	156	291	248	441	1670	747	136	1684	753
V/C Ratio(X)	0.99	0.00	0.86	0.43	0.25	0.34	0.05	0.84	0.14	0.21	0.28	0.10
Avail Cap(c_a), veh/h	418	0	580	156	424	360	464	1670	747	153	1684	753
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	0.0	53.0	50.9	54.6	55.3	18.1	32.4	20.3	28.0	21.6	19.6
Incr Delay (d2), s/veh	41.7	0.0	8.2	0.7	0.2	0.3	0.0	5.2	0.4	0.3	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	19.1	0.0	22.7	4.2	4.8	5.5	0.8	34.4	4.2	1.1	9.6	3.1
LnGrp Delay(d),s/veh	94.5	0.0	61.2	51.6	54.7	55.6	18.2	37.6	20.6	28.3	22.0	19.9
LnGrp LOS	F		E	D	D	E	B	D	C	C	C	B
Approach Vol, veh/h		798			224			1520			577	
Approach Delay, s/veh		78.5			54.1			36.2			22.1	
Approach LOS		E			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	31.8	9.9	82.3	12.0	45.8	10.5	81.7
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	6.5	* 7	7.0	7.0
Max Green Setting (Gmax), s	19.0	36.0	5.0	62.0	5.5	* 51	5.0	62.0
Max Q Clear Time (g_c+I1), s	21.0	9.3	2.9	14.2	7.0	33.8	3.3	55.8
Green Ext Time (p_c), s	0.0	0.9	0.0	15.7	0.0	5.0	0.0	6.0

Intersection Summary	
HCM 2010 Ctrl Delay	45.7
HCM 2010 LOS	D

Notes

Intersection	
Int Delay, s/veh	4.2

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	98	138	597	130	99	166
Future Vol, veh/h	98	138	597	130	99	166
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	0	-	150	450	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	109	153	663	144	110	184

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	975	332	0	-	663	0
Stage 1	663	-	-	-	-	-
Stage 2	312	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	249	664	-	0	922	-
Stage 1	474	-	-	0	-	-
Stage 2	715	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	219	664	-	-	922	-
Mov Cap-2 Maneuver	344	-	-	-	-	-
Stage 1	474	-	-	-	-	-
Stage 2	630	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	15.4	0	3.5
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	344	664	922	-
HCM Lane V/C Ratio	-	0.317	0.231	0.119	-
HCM Control Delay (s)	-	20.2	12	9.4	-
HCM Lane LOS	-	C	B	A	-
HCM 95th %tile Q(veh)	-	1.3	0.9	0.4	-

Intersection	
Intersection Delay, s/veh	15.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	52	427	8	13	181	23	9	80	21	18	28	12
Future Vol, veh/h	52	427	8	13	181	23	9	80	21	18	28	12
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	469	9	14	199	25	10	88	23	20	31	13
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	19.5	10.8	10.4	9.8
HCM LOS	C	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	11%	6%	31%
Vol Thru, %	73%	88%	83%	48%
Vol Right, %	19%	2%	11%	21%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	487	217	58
LT Vol	9	52	13	18
Through Vol	80	427	181	28
RT Vol	21	8	23	12
Lane Flow Rate	121	535	238	64
Geometry Grp	1	1	1	1
Degree of Util (X)	0.197	0.723	0.341	0.107
Departure Headway (Hd)	5.869	4.863	5.142	6.039
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	610	749	699	592
Service Time	3.914	2.863	3.176	4.089
HCM Lane V/C Ratio	0.198	0.714	0.34	0.108
HCM Control Delay	10.4	19.5	10.8	9.8
HCM Lane LOS	B	C	B	A
HCM 95th-tile Q	0.7	6.3	1.5	0.4

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	316	186	7	10	9
Future Vol, veh/h	14	316	186	7	10	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	351	207	8	11	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	215	0	-	0	594	211
Stage 1	-	-	-	-	211	-
Stage 2	-	-	-	-	383	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1355	-	-	-	468	829
Stage 1	-	-	-	-	824	-
Stage 2	-	-	-	-	689	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1355	-	-	-	461	829
Mov Cap-2 Maneuver	-	-	-	-	461	-
Stage 1	-	-	-	-	812	-
Stage 2	-	-	-	-	689	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	11.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1355	-	-	-	584
HCM Lane V/C Ratio	0.011	-	-	-	0.036
HCM Control Delay (s)	7.7	0	-	-	11.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	155	290	7	4	168	61	11	42	5	24	20	29
Future Vol, veh/h	155	290	7	4	168	61	11	42	5	24	20	29
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	160	299	7	4	173	63	11	43	5	25	21	30
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	14.4	9.9	9.3	9.3
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	34%	2%	33%
Vol Thru, %	72%	64%	72%	27%
Vol Right, %	9%	2%	26%	40%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	58	452	233	73
LT Vol	11	155	4	24
Through Vol	42	290	168	20
RT Vol	5	7	61	29
Lane Flow Rate	60	466	240	75
Geometry Grp	1	1	1	1
Degree of Util (X)	0.094	0.599	0.312	0.114
Departure Headway (Hd)	5.641	4.63	4.674	5.455
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	628	774	764	650
Service Time	3.738	2.685	2.739	3.548
HCM Lane V/C Ratio	0.096	0.602	0.314	0.115
HCM Control Delay	9.3	14.4	9.9	9.3
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.3	4.1	1.3	0.4

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	295	22	3	183	1	8	3	0	4	1	1
Future Vol, veh/h	2	295	22	3	183	1	8	3	0	4	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	328	24	3	203	1	9	3	0	4	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	204	0	0	352	0	0	555	554	340	556	566	204
Stage 1	-	-	-	-	-	-	344	344	-	210	210	-
Stage 2	-	-	-	-	-	-	211	210	-	346	356	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1368	-	-	1207	-	-	442	440	702	442	434	837
Stage 1	-	-	-	-	-	-	671	637	-	792	728	-
Stage 2	-	-	-	-	-	-	791	728	-	670	629	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1368	-	-	1207	-	-	439	438	702	438	432	837
Mov Cap-2 Maneuver	-	-	-	-	-	-	439	438	-	438	432	-
Stage 1	-	-	-	-	-	-	670	636	-	790	726	-
Stage 2	-	-	-	-	-	-	786	726	-	665	628	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	13.4	12.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	439	1368	-	-	1207	-	-	475
HCM Lane V/C Ratio	0.028	0.002	-	-	0.003	-	-	0.014
HCM Control Delay (s)	13.4	7.6	0	-	8	0	-	12.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	258	69	20	262	110	210	1042	58	25	198	68
Future Volume (veh/h)	138	258	69	20	262	110	210	1042	58	25	198	68
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1835	1800
Adj Flow Rate, veh/h	153	287	77	22	291	122	223	1109	62	28	220	76
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.94	0.94	0.94	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	129	346	93	139	273	114	619	932	52	88	668	231
Arrive On Green	0.05	0.26	0.26	0.02	0.23	0.23	0.07	0.56	0.56	0.02	0.51	0.51
Sat Flow, veh/h	1681	1341	360	1681	1182	495	1681	1656	93	1681	1305	451
Grp Volume(v), veh/h	153	0	364	22	0	413	223	0	1171	28	0	296
Grp Sat Flow(s),veh/h/ln	1681	0	1701	1681	0	1677	1681	0	1748	1681	0	1756
Q Serve(g_s), s	7.0	0.0	29.8	1.5	0.0	34.0	9.0	0.0	83.0	1.2	0.0	14.6
Cycle Q Clear(g_c), s	7.0	0.0	29.8	1.5	0.0	34.0	9.0	0.0	83.0	1.2	0.0	14.6
Prop In Lane	1.00		0.21	1.00		0.30	1.00		0.05	1.00		0.26
Lane Grp Cap(c), veh/h	129	0	439	139	0	387	619	0	984	88	0	898
V/C Ratio(X)	1.19	0.00	0.83	0.16	0.00	1.07	0.36	0.00	1.19	0.32	0.00	0.33
Avail Cap(c_a), veh/h	129	0	439	174	0	387	619	0	984	117	0	929
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.8	0.0	51.6	44.2	0.0	56.7	14.8	0.0	32.2	35.5	0.0	21.1
Incr Delay (d2), s/veh	139.0	0.0	11.8	0.5	0.0	64.9	0.1	0.0	95.5	2.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.5	0.0	21.8	1.2	0.0	40.8	7.5	0.0	118.9	1.1	0.0	11.5
LnGrp Delay(d),s/veh	188.8	0.0	63.5	44.7	0.0	121.6	14.9	0.0	127.7	37.6	0.0	21.4
LnGrp LOS	F		E	D		F	B		F	D		C
Approach Vol, veh/h		517			435			1394			324	
Approach Delay, s/veh		100.6			117.7			109.7			22.8	
Approach LOS		F			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	39.0	16.0	80.4	8.0	43.0	8.4	88.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	7.0	34.0	11.0	78.0	6.0	35.0	6.0	83.0
Max Q Clear Time (g_c+I1), s	9.0	36.0	11.0	16.6	3.5	31.8	3.2	85.0
Green Ext Time (p_c), s	0.0	0.0	0.0	6.1	0.0	1.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	98.7
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	346	17	45	381	145	44	615	153	84	155	33
Future Volume (veh/h)	55	346	17	45	381	145	44	615	153	84	155	33
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	61	384	19	50	423	161	45	628	156	93	172	37
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.98	0.98	0.98	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	107	656	32	255	479	182	593	637	158	124	760	164
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.47	0.47	0.47	0.04	0.54	0.54
Sat Flow, veh/h	828	1668	83	978	1219	464	1168	1366	339	1681	1408	303
Grp Volume(v), veh/h	61	0	403	50	0	584	45	0	784	93	0	209
Grp Sat Flow(s),veh/h/ln	828	0	1750	978	0	1683	1168	0	1705	1681	0	1711
Q Serve(g_s), s	10.6	0.0	27.2	6.4	0.0	48.4	3.2	0.0	68.1	4.2	0.0	9.6
Cycle Q Clear(g_c), s	59.0	0.0	27.2	33.6	0.0	48.4	3.2	0.0	68.1	4.2	0.0	9.6
Prop In Lane	1.00		0.05	1.00		0.28	1.00		0.20	1.00		0.18
Lane Grp Cap(c), veh/h	107	0	688	255	0	662	593	0	796	124	0	924
V/C Ratio(X)	0.57	0.00	0.59	0.20	0.00	0.88	0.08	0.00	0.99	0.75	0.00	0.23
Avail Cap(c_a), veh/h	107	0	688	255	0	662	593	0	796	124	0	924
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	69.9	0.0	35.9	49.1	0.0	42.3	22.2	0.0	39.5	35.5	0.0	18.1
Incr Delay (d2), s/veh	7.1	0.0	1.3	0.4	0.0	13.3	0.1	0.0	28.2	20.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.9	0.0	19.3	3.1	0.0	33.0	1.9	0.0	48.4	4.7	0.0	8.1
LnGrp Delay(d),s/veh	77.0	0.0	37.1	49.5	0.0	55.6	22.3	0.0	67.7	55.6	0.0	18.3
LnGrp LOS	E		D	D		E	C		E	E		B
Approach Vol, veh/h		464			634			829			302	
Approach Delay, s/veh		42.4			55.1			65.3			29.7	
Approach LOS		D			E			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		64.0		86.0		64.0	11.0	75.0
Change Period (Y+Rc), s		5.0		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		59.0		81.0		59.0	6.0	70.0
Max Q Clear Time (g_c+I1), s		50.4		11.6		61.0	6.2	70.1
Green Ext Time (p_c), s		4.5		5.2		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	52.8
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	36.4
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	155	80	81	35	114	32	59	385	35	6	141	92
Future Vol, veh/h	155	80	81	35	114	32	59	385	35	6	141	92
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	170	88	89	38	125	35	65	423	38	7	155	101
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	25.6	16.6	60.1	18.1
HCM LOS	D	C	F	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	49%	19%	3%
Vol Thru, %	80%	25%	63%	59%
Vol Right, %	7%	26%	18%	38%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	479	316	181	239
LT Vol	59	155	35	6
Through Vol	385	80	114	141
RT Vol	35	81	32	92
Lane Flow Rate	526	347	199	263
Geometry Grp	1	1	1	1
Degree of Util (X)	0.98	0.699	0.428	0.525
Departure Headway (Hd)	6.7	7.246	7.755	7.199
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	542	497	461	499
Service Time	4.763	5.321	5.845	5.283
HCM Lane V/C Ratio	0.97	0.698	0.432	0.527
HCM Control Delay	60.1	25.6	16.6	18.1
HCM Lane LOS	F	D	C	C
HCM 95th-tile Q	13.3	5.4	2.1	3

Intersection	
Int Delay, s/veh	42.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↰	↱
Traffic Vol, veh/h	112	175	7	4	2	14	8	343	35	111	116	52
Future Vol, veh/h	112	175	7	4	2	14	8	343	35	111	116	52
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	122	190	8	4	2	15	9	373	38	121	126	57

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	787	797	126	906	835	392	183	0	0	411	0	0
Stage 1	368	368	-	410	410	-	-	-	-	-	-	-
Stage 2	419	429	-	496	425	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	309	319	924	257	304	657	1392	-	-	1148	-	-
Stage 1	652	621	-	619	595	-	-	-	-	-	-	-
Stage 2	612	584	-	556	586	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	271	279	924	105	266	657	1392	-	-	1148	-	-
Mov Cap-2 Maneuver	271	279	-	105	266	-	-	-	-	-	-	-
Stage 1	647	548	-	614	590	-	-	-	-	-	-	-
Stage 2	591	579	-	318	517	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	135.4	18	0.2	3.4
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1392	-	-	281	299	1148	-	-
HCM Lane V/C Ratio	0.006	-	-	1.137	0.073	0.105	-	-
HCM Control Delay (s)	7.6	0	-	135.4	18	8.5	0	-
HCM Lane LOS	A	A	-	F	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	13.6	0.2	0.4	-	-

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	98	25	192	0	44	52	98	164	3	7	68	45
Future Vol, veh/h	98	25	192	0	44	52	98	164	3	7	68	45
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	109	28	213	0	49	58	109	182	3	8	76	50
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	12.6	9.4	12.7	9.8
HCM LOS	B	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	37%	31%	0%	6%
Vol Thru, %	62%	8%	46%	57%
Vol Right, %	1%	61%	54%	38%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	265	315	96	120
LT Vol	98	98	0	7
Through Vol	164	25	44	68
RT Vol	3	192	52	45
Lane Flow Rate	294	350	107	133
Geometry Grp	1	1	1	1
Degree of Util (X)	0.442	0.484	0.158	0.2
Departure Headway (Hd)	5.41	4.981	5.336	5.405
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	665	725	671	663
Service Time	3.445	3.014	3.381	3.448
HCM Lane V/C Ratio	0.442	0.483	0.159	0.201
HCM Control Delay	12.7	12.6	9.4	9.8
HCM Lane LOS	B	B	A	A
HCM 95th-tile Q	2.3	2.7	0.6	0.7

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	250	0	8	3	0
Future Vol, veh/h	4	250	0	8	3	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	-	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	278	0	9	3	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	0	0	143	282
Stage 1	-	-	0	0
Stage 2	-	-	143	282
Critical Hdwy	-	-	6.42	6.52
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	5.52
Follow-up Hdwy	-	-	3.518	4.018
Pot Cap-1 Maneuver	-	-	850	627
Stage 1	-	-	-	-
Stage 2	-	-	884	678
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	850	0
Mov Cap-2 Maneuver	-	-	850	0
Stage 1	-	-	-	0
Stage 2	-	-	884	0

Approach	EB	WB
HCM Control Delay, s	0	
HCM LOS		-

Minor Lane/Major Mvmt	EBT	EBR	WBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	-
HCM Lane LOS	-	-	-
HCM 95th %tile Q(veh)	-	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	939	207	21	143	241	228
Future Volume (veh/h)	939	207	21	143	241	228
Number	6	16	5	2	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	958	211	23	159	268	253
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.98	0.98	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1559	1231	291	1246	319	285
Arrive On Green	0.63	0.63	0.02	0.71	0.19	0.19
Sat Flow, veh/h	3000	1500	1681	1765	1681	1500
Grp Volume(v), veh/h	958	211	23	159	268	253
Grp Sat Flow(s),veh/h/ln	1235	1500	1681	1765	1681	1500
Q Serve(g_s), s	26.9	3.4	0.5	3.3	17.7	18.9
Cycle Q Clear(g_c), s	26.9	3.4	0.5	3.3	17.7	18.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1559	1231	291	1246	319	285
V/C Ratio(X)	0.61	0.17	0.08	0.13	0.84	0.89
Avail Cap(c_a), veh/h	1559	1231	326	1246	526	470
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.8	2.1	10.1	5.5	44.9	45.4
Incr Delay (d2), s/veh	1.8	0.3	0.0	0.2	2.8	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.5	5.4	0.4	3.1	13.2	13.1
LnGrp Delay(d),s/veh	14.6	2.4	10.2	5.7	47.7	52.1
LnGrp LOS	B	A	B	A	D	D
Approach Vol, veh/h	1169			182	521	
Approach Delay, s/veh	12.4			6.2	49.8	
Approach LOS	B			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		87.2			8.6	78.6		27.8
Change Period (Y+Rc), s		6.0			6.0	6.0		6.0
Max Green Setting (Gmax), s		67.0			5.0	56.0		36.0
Max Q Clear Time (g_c+I1), s		5.3			2.5	28.9		20.9
Green Ext Time (p_c), s		1.6			0.0	11.6		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	22.2
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	189	72	3	227	160	4
Future Vol, veh/h	189	72	3	227	160	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	300
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	210	80	3	252	178	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	436	178	182	0	-	0
Stage 1	178	-	-	-	-	-
Stage 2	258	-	-	-	-	-
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	578	865	1393	-	-	-
Stage 1	853	-	-	-	-	-
Stage 2	785	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	576	865	1393	-	-	-
Mov Cap-2 Maneuver	576	-	-	-	-	-
Stage 1	850	-	-	-	-	-
Stage 2	785	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.4	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1393	-	634	-	-
HCM Lane V/C Ratio	0.002	-	0.457	-	-
HCM Control Delay (s)	7.6	0	15.4	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	2.4	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	103	21	115	271	47	36	666	45	49	1342	325
Future Volume (veh/h)	126	103	21	115	271	47	36	666	45	49	1342	325
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	140	114	23	128	301	52	40	740	50	51	1398	339
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	170	300	60	297	347	295	150	1790	801	372	1797	804
Arrive On Green	0.05	0.21	0.21	0.04	0.20	0.20	0.03	0.53	0.53	0.03	0.54	0.54
Sat Flow, veh/h	1681	1426	288	1681	1765	1500	1681	3353	1500	1681	3353	1500
Grp Volume(v), veh/h	140	0	137	128	301	52	40	740	50	51	1398	339
Grp Sat Flow(s),veh/h/ln	1681	0	1714	1681	1765	1500	1681	1676	1500	1681	1676	1500
Q Serve(g_s), s	8.0	0.0	10.3	6.5	24.8	4.3	1.6	19.8	2.4	2.1	49.8	20.3
Cycle Q Clear(g_c), s	8.0	0.0	10.3	6.5	24.8	4.3	1.6	19.8	2.4	2.1	49.8	20.3
Prop In Lane	1.00		0.17	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	170	0	360	297	347	295	150	1790	801	372	1797	804
V/C Ratio(X)	0.82	0.00	0.38	0.43	0.87	0.18	0.27	0.41	0.06	0.14	0.78	0.42
Avail Cap(c_a), veh/h	170	0	451	297	435	370	161	1790	801	379	1797	804
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	0.0	50.8	49.4	58.3	50.1	24.3	20.9	16.9	16.2	27.7	20.9
Incr Delay (d2), s/veh	25.2	0.0	0.2	0.4	12.1	0.1	0.3	0.7	0.1	0.1	3.4	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.8	0.0	8.5	3.1	19.3	3.3	1.3	14.3	1.9	1.7	31.8	13.7
LnGrp Delay(d),s/veh	78.2	0.0	51.1	49.8	70.4	50.2	24.7	21.6	17.0	16.2	31.1	22.5
LnGrp LOS	E		D	D	E	D	C	C	B	B	C	C
Approach Vol, veh/h		277			481			830			1788	
Approach Delay, s/veh		64.8			62.7			21.5			29.0	
Approach LOS		E			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	36.5	11.1	87.4	13.0	38.5	11.4	87.1
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	6.5	* 7	7.0	7.0
Max Green Setting (Gmax), s	8.0	37.0	5.0	72.0	6.5	* 40	5.0	72.0
Max Q Clear Time (g_c+I1), s	10.0	26.8	3.6	51.8	8.5	12.3	4.1	21.8
Green Ext Time (p_c), s	0.0	2.8	0.0	19.5	0.0	1.9	0.0	26.8

Intersection Summary	
HCM 2010 Ctrl Delay	34.9
HCM 2010 LOS	C

Notes

Intersection	
Int Delay, s/veh	5.9

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	202	209	393	76	98	757
Future Vol, veh/h	202	209	393	76	98	757
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	0	-	150	450	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	213	220	414	80	103	797

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1019	207	0	-	414	0
Stage 1	414	-	-	-	-	-
Stage 2	605	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	233	799	-	0	1141	-
Stage 1	635	-	-	0	-	-
Stage 2	508	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	~ 212	799	-	-	1141	-
Mov Cap-2 Maneuver	337	-	-	-	-	-
Stage 1	635	-	-	-	-	-
Stage 2	462	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	21.6	0	1
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	337	799	1141	-
HCM Lane V/C Ratio	-	0.631	0.275	0.09	-
HCM Control Delay (s)	-	32.3	11.2	8.5	-
HCM Lane LOS	-	D	B	A	-
HCM 95th %tile Q(veh)	-	4.1	1.1	0.3	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	14.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	138	4	23	422	29	5	53	5	31	120	53
Future Vol, veh/h	15	138	4	23	422	29	5	53	5	31	120	53
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	16	145	4	24	444	31	5	56	5	33	126	56
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	10.4	18.5	9.9	11.6
HCM LOS	B	C	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	10%	5%	15%
Vol Thru, %	84%	88%	89%	59%
Vol Right, %	8%	3%	6%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	157	474	204
LT Vol	5	15	23	31
Through Vol	53	138	422	120
RT Vol	5	4	29	53
Lane Flow Rate	66	165	499	215
Geometry Grp	1	1	1	1
Degree of Util (X)	0.112	0.252	0.692	0.337
Departure Headway (Hd)	6.054	5.485	4.996	5.652
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	590	653	723	636
Service Time	4.108	3.529	3.029	3.695
HCM Lane V/C Ratio	0.112	0.253	0.69	0.338
HCM Control Delay	9.9	10.4	18.5	11.6
HCM Lane LOS	A	B	C	B
HCM 95th-tile Q	0.4	1	5.6	1.5

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	161	381	12	28	41
Future Vol, veh/h	10	161	381	12	28	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	168	397	13	29	43

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	410	0	-	0	592	404
Stage 1	-	-	-	-	404	-
Stage 2	-	-	-	-	188	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1149	-	-	-	469	647
Stage 1	-	-	-	-	674	-
Stage 2	-	-	-	-	844	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1149	-	-	-	464	647
Mov Cap-2 Maneuver	-	-	-	-	464	-
Stage 1	-	-	-	-	667	-
Stage 2	-	-	-	-	844	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	12.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1149	-	-	-	558
HCM Lane V/C Ratio	0.009	-	-	-	0.129
HCM Control Delay (s)	8.2	0	-	-	12.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	138	5	5	272	47	13	24	3	78	50	174
Future Vol, veh/h	28	138	5	5	272	47	13	24	3	78	50	174
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	147	5	5	289	50	14	26	3	83	53	185
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	10.6	13	9.4	12.4
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	33%	16%	2%	26%
Vol Thru, %	60%	81%	84%	17%
Vol Right, %	7%	3%	15%	58%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	40	171	324	302
LT Vol	13	28	5	78
Through Vol	24	138	272	50
RT Vol	3	5	47	174
Lane Flow Rate	43	182	345	321
Geometry Grp	1	1	1	1
Degree of Util (X)	0.07	0.276	0.491	0.455
Departure Headway (Hd)	5.905	5.456	5.126	5.103
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	605	659	703	707
Service Time	3.955	3.493	3.158	3.137
HCM Lane V/C Ratio	0.071	0.276	0.491	0.454
HCM Control Delay	9.4	10.6	13	12.4
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.2	1.1	2.7	2.4

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	167	27	3	352	6	23	11	1	6	9	0
Future Vol, veh/h	5	167	27	3	352	6	23	11	1	6	9	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	178	29	3	374	6	24	12	1	6	10	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	380	0	0	207	0	0	591	589	193	592	600	377
Stage 1	-	-	-	-	-	-	203	203	-	383	383	-
Stage 2	-	-	-	-	-	-	388	386	-	209	217	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1178	-	-	1364	-	-	419	421	849	418	415	670
Stage 1	-	-	-	-	-	-	799	733	-	640	612	-
Stage 2	-	-	-	-	-	-	636	610	-	793	723	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1178	-	-	1364	-	-	409	418	849	406	412	670
Mov Cap-2 Maneuver	-	-	-	-	-	-	409	418	-	406	412	-
Stage 1	-	-	-	-	-	-	795	729	-	637	610	-
Stage 2	-	-	-	-	-	-	624	608	-	775	719	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	14.5	14.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	418	1178	-	-	1364	-	-	410
HCM Lane V/C Ratio	0.089	0.005	-	-	0.002	-	-	0.039
HCM Control Delay (s)	14.5	8.1	0	-	7.6	0	-	14.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	291	156	76	299	19	138	366	55	73	895	197
Future Volume (veh/h)	77	291	156	76	299	19	138	366	55	73	895	197
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1835	1800
Adj Flow Rate, veh/h	86	323	173	84	332	21	147	389	59	76	932	205
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.94	0.94	0.94	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	204	303	162	104	460	29	126	779	118	434	739	162
Arrive On Green	0.03	0.28	0.28	0.03	0.28	0.28	0.05	0.52	0.52	0.03	0.51	0.51
Sat Flow, veh/h	1681	1083	580	1681	1642	104	1681	1497	227	1681	1458	321
Grp Volume(v), veh/h	86	0	496	84	0	353	147	0	448	76	0	1137
Grp Sat Flow(s),veh/h/ln	1681	0	1662	1681	0	1746	1681	0	1725	1681	0	1779
Q Serve(g_s), s	5.0	0.0	42.0	5.0	0.0	27.4	7.0	0.0	25.3	3.3	0.0	76.0
Cycle Q Clear(g_c), s	5.0	0.0	42.0	5.0	0.0	27.4	7.0	0.0	25.3	3.3	0.0	76.0
Prop In Lane	1.00		0.35	1.00		0.06	1.00		0.13	1.00		0.18
Lane Grp Cap(c), veh/h	204	0	465	104	0	489	126	0	897	434	0	901
V/C Ratio(X)	0.42	0.00	1.07	0.81	0.00	0.72	1.16	0.00	0.50	0.18	0.00	1.26
Avail Cap(c_a), veh/h	204	0	465	104	0	489	126	0	897	434	0	901
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.1	0.0	54.0	45.3	0.0	48.7	44.7	0.0	23.3	18.6	0.0	37.0
Incr Delay (d2), s/veh	0.5	0.0	60.3	33.7	0.0	4.5	130.4	0.0	0.4	0.1	0.0	126.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	0.0	48.7	6.2	0.0	20.0	17.7	0.0	17.7	2.7	0.0	123.8
LnGrp Delay(d),s/veh	42.6	0.0	114.3	79.1	0.0	53.2	175.1	0.0	23.8	18.7	0.0	163.7
LnGrp LOS	D		F	E		D	F		C	B		F
Approach Vol, veh/h		582			437			595			1213	
Approach Delay, s/veh		103.7			58.2			61.2			154.6	
Approach LOS		F			E			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	47.0	12.0	81.0	10.0	47.0	10.0	83.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	5.0	42.0	7.0	76.0	5.0	42.0	5.0	78.0
Max Q Clear Time (g_c+I1), s	7.0	29.4	9.0	78.0	7.0	44.0	5.3	27.3
Green Ext Time (p_c), s	0.0	2.2	0.0	0.0	0.0	0.0	0.0	9.9

Intersection Summary	
HCM 2010 Ctrl Delay	109.6
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	445	48	168	520	95	54	271	99	184	532	98
Future Volume (veh/h)	62	445	48	168	520	95	54	271	99	184	532	98
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	68	489	53	183	565	103	60	301	110	200	578	107
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.92	0.92	0.92	0.90	0.90	0.90	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	158	553	60	243	687	125	121	400	146	311	657	122
Arrive On Green	0.35	0.35	0.35	0.08	0.47	0.47	0.32	0.32	0.32	0.09	0.45	0.45
Sat Flow, veh/h	766	1565	170	1681	1453	265	754	1234	451	1681	1449	268
Grp Volume(v), veh/h	68	0	542	183	0	668	60	0	411	200	0	685
Grp Sat Flow(s),veh/h/ln	766	0	1735	1681	0	1718	754	0	1685	1681	0	1717
Q Serve(g_s), s	11.4	0.0	39.9	9.1	0.0	45.5	10.7	0.0	29.6	10.4	0.0	49.2
Cycle Q Clear(g_c), s	40.7	0.0	39.9	9.1	0.0	45.5	42.4	0.0	29.6	10.4	0.0	49.2
Prop In Lane	1.00		0.10	1.00		0.15	1.00		0.27	1.00		0.16
Lane Grp Cap(c), veh/h	158	0	613	243	0	812	121	0	546	311	0	779
V/C Ratio(X)	0.43	0.00	0.88	0.75	0.00	0.82	0.49	0.00	0.75	0.64	0.00	0.88
Avail Cap(c_a), veh/h	203	0	716	278	0	949	121	0	546	354	0	822
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.4	0.0	41.3	31.0	0.0	30.9	61.0	0.0	41.0	29.6	0.0	33.7
Incr Delay (d2), s/veh	1.8	0.0	11.4	7.8	0.0	5.2	4.4	0.0	6.2	2.0	0.0	10.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.5	0.0	28.6	8.3	0.0	30.5	4.3	0.0	21.1	8.6	0.0	33.8
LnGrp Delay(d),s/veh	57.2	0.0	52.6	38.9	0.0	36.0	65.4	0.0	47.3	31.6	0.0	44.6
LnGrp LOS	E		D	D		D	E		D	C		D
Approach Vol, veh/h		610			851			471			885	
Approach Delay, s/veh		53.1			36.6			49.6			41.6	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		69.2		66.6	16.2	53.0	17.6	49.0
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s		75.0		65.0	14.0	56.0	16.0	44.0
Max Q Clear Time (g_c+I1), s		47.5		51.2	11.1	42.7	12.4	44.4
Green Ext Time (p_c), s		11.0		9.3	0.1	5.3	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	43.9
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	47.2
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	111	74	29	102	16	117	213	42	36	355	154
Future Vol, veh/h	47	111	74	29	102	16	117	213	42	36	355	154
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	122	81	32	112	18	129	234	46	40	390	169
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	18.7	15.6	29.5	79.9
HCM LOS	C	C	D	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	31%	20%	20%	7%
Vol Thru, %	57%	48%	69%	65%
Vol Right, %	11%	32%	11%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	372	232	147	545
LT Vol	117	47	29	36
Through Vol	213	111	102	355
RT Vol	42	74	16	154
Lane Flow Rate	409	255	162	599
Geometry Grp	1	1	1	1
Degree of Util (X)	0.768	0.522	0.353	1.06
Departure Headway (Hd)	6.992	7.651	8.187	6.373
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	519	474	443	569
Service Time	4.992	5.651	6.187	4.431
HCM Lane V/C Ratio	0.788	0.538	0.366	1.053
HCM Control Delay	29.5	18.7	15.6	79.9
HCM Lane LOS	D	C	C	F
HCM 95th-tile Q	6.8	3	1.6	17.2

Intersection	
Int Delay, s/veh	65.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↱
Traffic Vol, veh/h	32	4	22	40	237	126	10	240	7	22	357	95
Future Vol, veh/h	32	4	22	40	237	126	10	240	7	22	357	95
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	4	24	44	263	140	11	267	8	24	397	106

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	940	742	397	805	844	271	503	0	0	275	0	0
Stage 1	445	445	-	293	293	-	-	-	-	-	-	-
Stage 2	495	297	-	512	551	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	244	344	652	301	300	768	1061	-	-	1288	-	-
Stage 1	592	575	-	715	670	-	-	-	-	-	-	-
Stage 2	556	668	-	545	515	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	41	331	652	278	289	768	1061	-	-	1288	-	-
Mov Cap-2 Maneuver	41	331	-	278	289	-	-	-	-	-	-	-
Stage 1	585	560	-	706	662	-	-	-	-	-	-	-
Stage 2	271	660	-	507	502	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	185.6	167	0.3	0.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1061	-	-	70	357	1288	-	-
HCM Lane V/C Ratio	0.01	-	-	0.921	1.254	0.019	-	-
HCM Control Delay (s)	8.4	0	-	185.6	167	7.8	0	-
HCM Lane LOS	A	A	-	F	F	A	A	-
HCM 95th %tile Q(veh)	0	-	-	4.6	19.8	0.1	-	-

Intersection	
Intersection Delay, s/veh	13.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	52	30	73	0	36	15	249	168	3	41	137	88
Future Vol, veh/h	52	30	73	0	36	15	249	168	3	41	137	88
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	55	32	77	0	38	16	262	177	3	43	144	93
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	10.6	9.5	16.1	11.2
HCM LOS	B	A	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	59%	34%	0%	15%
Vol Thru, %	40%	19%	71%	52%
Vol Right, %	1%	47%	29%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	420	155	51	266
LT Vol	249	52	0	41
Through Vol	168	30	36	137
RT Vol	3	73	15	88
Lane Flow Rate	442	163	54	280
Geometry Grp	1	1	1	1
Degree of Util (X)	0.623	0.255	0.088	0.39
Departure Headway (Hd)	5.072	5.625	5.907	5.016
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	712	638	605	717
Service Time	3.098	3.666	3.957	3.047
HCM Lane V/C Ratio	0.621	0.255	0.089	0.391
HCM Control Delay	16.1	10.6	9.5	11.2
HCM Lane LOS	C	B	A	B
HCM 95th-tile Q	4.4	1	0.3	1.9

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	17	0	2	313	0
Future Vol, veh/h	4	17	0	2	313	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	-	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	19	0	2	348	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	0	0	14	23
Stage 1	-	-	0	0
Stage 2	-	-	14	23
Critical Hdwy	-	-	6.42	6.52
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	5.52
Follow-up Hdwy	-	-	3.518	4.018
Pot Cap-1 Maneuver	-	-	1005	870
Stage 1	-	-	-	-
Stage 2	-	-	1009	876
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	1005	0
Mov Cap-2 Maneuver	-	-	1005	0
Stage 1	-	-	-	0
Stage 2	-	-	1009	0

Approach	EB	WB
HCM Control Delay, s	0	
HCM LOS		-

Minor Lane/Major Mvmt	EBT	EBR	WBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	-
HCM Lane LOS	-	-	-
HCM 95th %tile Q(veh)	-	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	238	229	248	1043	239	21
Future Volume (veh/h)	238	229	248	1043	239	21
Number	6	16	5	2	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	262	252	270	1134	266	23
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.91	0.91	0.92	0.92	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1463	1148	674	1274	292	260
Arrive On Green	0.59	0.59	0.08	0.72	0.17	0.17
Sat Flow, veh/h	3000	1500	1681	1765	1681	1500
Grp Volume(v), veh/h	262	252	270	1134	266	23
Grp Sat Flow(s),veh/h/ln	1235	1500	1681	1765	1681	1500
Q Serve(g_s), s	5.6	5.4	6.9	57.5	17.9	1.5
Cycle Q Clear(g_c), s	5.6	5.4	6.9	57.5	17.9	1.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1463	1148	674	1274	292	260
V/C Ratio(X)	0.18	0.22	0.40	0.89	0.91	0.09
Avail Cap(c_a), veh/h	1463	1148	689	1274	307	274
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.7	3.8	7.1	12.4	46.7	39.9
Incr Delay (d2), s/veh	0.3	0.4	0.1	9.6	28.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	7.3	5.6	39.9	15.9	1.1
LnGrp Delay(d),s/veh	11.0	4.2	7.2	22.0	74.9	39.9
LnGrp LOS	B	A	A	C	E	D
Approach Vol, veh/h	514			1404	289	
Approach Delay, s/veh	7.7			19.1	72.1	
Approach LOS	A			B	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		89.0			15.0	74.1		26.0
Change Period (Y+Rc), s		6.0			6.0	6.0		6.0
Max Green Setting (Gmax), s		82.0			10.0	66.0		21.0
Max Q Clear Time (g_c+I1), s		59.5			8.9	7.6		19.9
Green Ext Time (p_c), s		15.0			0.1	2.9		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	23.4
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	11	42	106	240	203
Future Vol, veh/h	4	11	42	106	240	203
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	-	-	-	-	300
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	12	47	118	267	226

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	479	267	493	0	-	0
Stage 1	267	-	-	-	-	-
Stage 2	212	-	-	-	-	-
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	545	772	1071	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	823	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	519	772	1071	-	-	-
Mov Cap-2 Maneuver	519	-	-	-	-	-
Stage 1	741	-	-	-	-	-
Stage 2	823	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	2.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1071	-	683	-	-
HCM Lane V/C Ratio	0.044	-	0.024	-	-
HCM Control Delay (s)	8.5	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	258	69	20	262	110	210	1042	58	25	198	68
Future Volume (veh/h)	138	258	69	20	262	110	210	1042	58	25	198	68
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1835	1800
Adj Flow Rate, veh/h	153	287	77	22	291	122	223	1109	62	28	220	76
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.94	0.94	0.94	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	234	451	121	253	330	138	569	1467	82	181	985	331
Arrive On Green	0.08	0.34	0.34	0.02	0.28	0.28	0.10	0.45	0.45	0.03	0.38	0.38
Sat Flow, veh/h	1681	1341	360	1681	1182	495	1681	3229	180	1681	2565	862
Grp Volume(v), veh/h	153	0	364	22	0	413	223	576	595	28	148	148
Grp Sat Flow(s),veh/h/ln	1681	0	1701	1681	0	1677	1681	1676	1733	1681	1744	1683
Q Serve(g_s), s	7.7	0.0	22.2	1.1	0.0	28.9	9.5	35.1	35.1	1.2	7.0	7.3
Cycle Q Clear(g_c), s	7.7	0.0	22.2	1.1	0.0	28.9	9.5	35.1	35.1	1.2	7.0	7.3
Prop In Lane	1.00		0.21	1.00		0.30	1.00		0.10	1.00		0.51
Lane Grp Cap(c), veh/h	234	0	573	253	0	468	569	761	787	181	670	646
V/C Ratio(X)	0.66	0.00	0.64	0.09	0.00	0.88	0.39	0.76	0.76	0.15	0.22	0.23
Avail Cap(c_a), veh/h	265	0	775	299	0	682	641	846	874	221	724	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	0.0	34.4	31.4	0.0	42.4	18.5	27.9	27.9	24.9	25.5	25.6
Incr Delay (d2), s/veh	3.2	0.0	0.4	0.1	0.0	7.0	0.2	3.5	3.4	0.4	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.7	0.0	15.8	1.0	0.0	20.5	7.8	23.6	24.3	1.1	6.1	6.2
LnGrp Delay(d),s/veh	34.3	0.0	34.9	31.6	0.0	49.4	18.6	31.4	31.3	25.2	25.6	25.8
LnGrp LOS	C		C	C		D	B	C	C	C	C	C
Approach Vol, veh/h		517			435			1394			324	
Approach Delay, s/veh		34.7			48.5			29.3			25.7	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.7	39.3	16.7	52.2	7.6	46.4	8.1	60.8
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	12.0	50.0	17.0	51.0	6.0	56.0	6.0	62.0
Max Q Clear Time (g_c+I1), s	9.7	30.9	11.5	9.3	3.1	24.2	3.2	37.1
Green Ext Time (p_c), s	0.1	3.3	0.2	5.4	0.0	6.5	0.0	18.7

Intersection Summary	
HCM 2010 Ctrl Delay	33.0
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	347	198	526	263
Demand Flow Rate, veh/h	354	203	536	268
Vehicles Circulating, veh/h	204	670	270	232
Vehicles Exiting, veh/h	296	136	288	640
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.4	8.9	9.7	5.7
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	354	203	536	268
Cap Entry Lane, veh/h	1121	697	1048	1089
Entry HV Adj Factor	0.981	0.978	0.981	0.981
Flow Entry, veh/h	347	198	526	263
Cap Entry, veh/h	1099	681	1027	1068
V/C Ratio	0.316	0.291	0.512	0.246
Control Delay, s/veh	6.4	8.9	9.7	5.7
LOS	A	A	A	A
95th %tile Queue, veh	1	1	3	1

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	320	21	420	304
Demand Flow Rate, veh/h	326	21	428	310
Vehicles Circulating, veh/h	256	513	441	15
Vehicles Exiting, veh/h	69	356	141	519
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.5	4.7	10.5	4.6
Approach LOS	A	A	B	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	326	21	428	310
Cap Entry Lane, veh/h	1063	818	880	1359
Entry HV Adj Factor	0.982	0.998	0.980	0.982
Flow Entry, veh/h	320	21	420	304
Cap Entry, veh/h	1044	816	863	1335
V/C Ratio	0.307	0.026	0.486	0.228
Control Delay, s/veh	6.5	4.7	10.5	4.6
LOS	A	A	B	A
95th %tile Queue, veh	1	0	3	1

Intersection	
Intersection Delay, s/veh	17.7
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	505	427	1424	316
Demand Flow Rate, veh/h	515	435	1453	322
Vehicles Circulating, veh/h	269	1542	467	546
Vehicles Exiting, veh/h	599	378	317	1431
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.6	28.5	21.4	6.2
Approach LOS	A	D	C	A

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.470	0.530	0.469	0.531	0.470	0.530	0.469	0.531
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	242	273	204	231	683	770	151	171
Cap Entry Lane, veh/h	1054	1130	327	383	878	955	817	893
Entry HV Adj Factor	0.982	0.981	0.984	0.980	0.980	0.980	0.983	0.979
Flow Entry, veh/h	238	268	201	226	669	755	148	167
Cap Entry, veh/h	1034	1109	322	375	861	936	803	874
V/C Ratio	0.230	0.242	0.624	0.603	0.778	0.806	0.185	0.192
Control Delay, s/veh	5.7	5.5	31.2	26.2	21.0	21.7	6.4	6.1
LOS	A	A	D	D	C	C	A	A
95th %tile Queue, veh	1	1	4	4	8	9	1	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	80	81	35	114	32	59	385	35	6	141	92
Future Volume (veh/h)	155	80	81	35	114	32	59	385	35	6	141	92
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	172	89	90	39	127	36	60	389	35	6	145	95
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.99	0.99	0.99	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	488	245	248	469	402	114	479	557	50	342	348	228
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1218	806	815	1200	1323	375	1135	1596	144	959	997	653
Grp Volume(v), veh/h	172	0	179	39	0	163	60	0	424	6	0	240
Grp Sat Flow(s),veh/h/ln	1218	0	1621	1200	0	1699	1135	0	1739	959	0	1649
Q Serve(g_s), s	4.4	0.0	3.0	0.9	0.0	2.6	1.5	0.0	7.3	0.2	0.0	3.8
Cycle Q Clear(g_c), s	6.9	0.0	3.0	3.9	0.0	2.6	5.3	0.0	7.3	7.5	0.0	3.8
Prop In Lane	1.00		0.50	1.00		0.22	1.00		0.08	1.00		0.40
Lane Grp Cap(c), veh/h	488	0	493	469	0	517	479	0	608	342	0	576
V/C Ratio(X)	0.35	0.00	0.36	0.08	0.00	0.32	0.13	0.00	0.70	0.02	0.00	0.42
Avail Cap(c_a), veh/h	2228	0	2808	2184	0	2943	2640	0	3918	2168	0	3715
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.9	0.0	9.4	11.0	0.0	9.3	10.6	0.0	9.7	12.9	0.0	8.6
Incr Delay (d2), s/veh	0.4	0.0	0.4	0.1	0.0	0.3	0.1	0.0	1.5	0.0	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.7	0.0	2.4	0.5	0.0	2.2	0.8	0.0	6.6	0.1	0.0	3.3
LnGrp Delay(d),s/veh	12.4	0.0	9.9	11.0	0.0	9.6	10.7	0.0	11.2	12.9	0.0	9.1
LnGrp LOS	B		A	B		A	B		B	B		A
Approach Vol, veh/h		351			202			484			246	
Approach Delay, s/veh		11.1			9.9			11.1			9.2	
Approach LOS		B			A			B			A	

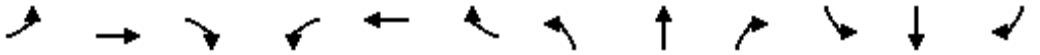
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		16.5		18.1		16.5		18.1
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		60.0		78.0		60.0		78.0
Max Q Clear Time (g_c+I1), s		5.9		9.5		8.9		9.3
Green Ext Time (p_c), s		1.0		1.5		1.6		2.8

Intersection Summary	
HCM 2010 Ctrl Delay	10.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	175	7	4	2	14	8	343	35	111	116	52
Future Volume (veh/h)	112	175	7	4	2	14	8	343	35	111	116	52
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	124	194	8	4	2	16	8	361	37	123	129	58
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.95	0.95	0.95	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	510	355	15	357	36	286	624	638	65	455	468	210
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	1389	1683	69	1175	169	1356	1192	1575	161	983	1154	519
Grp Volume(v), veh/h	124	0	202	4	0	18	8	0	398	123	0	187
Grp Sat Flow(s),veh/h/ln	1389	0	1752	1175	0	1525	1192	0	1736	983	0	1673
Q Serve(g_s), s	2.4	0.0	3.2	0.1	0.0	0.3	0.1	0.0	5.5	3.5	0.0	2.3
Cycle Q Clear(g_c), s	2.7	0.0	3.2	3.3	0.0	0.3	2.5	0.0	5.5	9.0	0.0	2.3
Prop In Lane	1.00		0.04	1.00		0.89	1.00		0.09	1.00		0.31
Lane Grp Cap(c), veh/h	510	0	369	357	0	322	624	0	703	455	0	678
V/C Ratio(X)	0.24	0.00	0.55	0.01	0.00	0.06	0.01	0.00	0.57	0.27	0.00	0.28
Avail Cap(c_a), veh/h	2574	0	2973	2104	0	2588	3384	0	4725	2730	0	4553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.9	0.0	11.0	12.5	0.0	9.8	7.1	0.0	7.2	10.6	0.0	6.2
Incr Delay (d2), s/veh	0.2	0.0	1.3	0.0	0.0	0.1	0.0	0.0	0.7	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	0.0	3.0	0.1	0.0	0.2	0.1	0.0	4.8	1.7	0.0	1.9
LnGrp Delay(d),s/veh	11.2	0.0	12.3	12.5	0.0	9.9	7.1	0.0	7.9	11.0	0.0	6.4
LnGrp LOS	B		B	B		A	A		A	B		A
Approach Vol, veh/h		326			22			406			310	
Approach Delay, s/veh		11.8			10.4			7.9			8.2	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		12.6		18.7		12.6		18.7
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		53.0		85.0		53.0		85.0
Max Q Clear Time (g_c+I1), s		5.3		11.0		5.2		7.5
Green Ext Time (p_c), s		0.1		1.7		1.4		2.4

Intersection Summary	
HCM 2010 Ctrl Delay	9.2
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	291	156	76	299	19	138	366	55	73	895	197
Future Volume (veh/h)	77	291	156	76	299	19	138	366	55	73	895	197
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1835	1800
Adj Flow Rate, veh/h	86	323	173	84	332	21	147	389	59	76	932	205
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.94	0.94	0.94	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	308	376	201	182	557	35	217	1234	186	434	1122	246
Arrive On Green	0.05	0.35	0.35	0.04	0.34	0.34	0.07	0.42	0.42	0.04	0.39	0.39
Sat Flow, veh/h	1681	1083	580	1681	1642	104	1681	2923	440	1681	2844	625
Grp Volume(v), veh/h	86	0	496	84	0	353	147	222	226	76	571	566
Grp Sat Flow(s),veh/h/ln	1681	0	1662	1681	0	1746	1681	1676	1687	1681	1744	1725
Q Serve(g_s), s	4.3	0.0	36.3	4.3	0.0	21.9	6.7	11.5	11.7	3.5	38.5	38.6
Cycle Q Clear(g_c), s	4.3	0.0	36.3	4.3	0.0	21.9	6.7	11.5	11.7	3.5	38.5	38.6
Prop In Lane	1.00		0.35	1.00		0.06	1.00		0.26	1.00		0.36
Lane Grp Cap(c), veh/h	308	0	577	182	0	592	217	708	712	434	688	680
V/C Ratio(X)	0.28	0.00	0.86	0.46	0.00	0.60	0.68	0.31	0.32	0.18	0.83	0.83
Avail Cap(c_a), veh/h	308	0	713	182	0	736	297	809	814	445	721	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	0.0	39.7	31.9	0.0	35.7	28.6	25.1	25.2	22.2	35.6	35.6
Incr Delay (d2), s/veh	0.2	0.0	7.5	0.7	0.0	0.4	1.4	0.3	0.3	0.1	7.8	8.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.6	0.0	24.8	3.6	0.0	15.9	5.7	9.1	9.4	2.9	27.4	27.2
LnGrp Delay(d),s/veh	28.2	0.0	47.2	32.6	0.0	36.1	30.0	25.4	25.4	22.3	43.4	43.6
LnGrp LOS	C		D	C		D	C	C	C	C	D	D
Approach Vol, veh/h		582			437			595			1213	
Approach Delay, s/veh		44.4			35.4			26.5			42.2	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	49.3	13.8	56.5	10.0	50.3	10.2	60.1
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	6.0	55.0	15.0	54.0	5.0	56.0	6.0	63.0
Max Q Clear Time (g_c+I1), s	6.3	23.9	8.7	40.6	6.3	38.3	5.5	13.7
Green Ext Time (p_c), s	0.0	3.1	0.1	10.9	0.0	7.0	0.0	9.0

Intersection Summary	
HCM 2010 Ctrl Delay	38.3
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	255	162	409	599
Demand Flow Rate, veh/h	260	165	418	611
Vehicles Circulating, veh/h	472	424	218	279
Vehicles Exiting, veh/h	418	212	514	310
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.7	5.9	7.2	11.4
Approach LOS	A	A	A	B

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	260	165	418	611
Cap Entry Lane, veh/h	853	895	1105	1038
Entry HV Adj Factor	0.979	0.980	0.979	0.981
Flow Entry, veh/h	255	162	409	599
Cap Entry, veh/h	835	878	1082	1018
V/C Ratio	0.305	0.184	0.378	0.589
Control Delay, s/veh	7.7	5.9	7.2	11.4
LOS	A	A	A	B
95th %tile Queue, veh	1	1	2	4

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	64	447	286	527
Demand Flow Rate, veh/h	65	456	291	537
Vehicles Circulating, veh/h	474	320	65	324
Vehicles Exiting, veh/h	387	36	474	452
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.0	9.1	4.8	10.7
Approach LOS	A	A	A	B

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	65	456	291	537
Cap Entry Lane, veh/h	851	996	1291	992
Entry HV Adj Factor	0.983	0.980	0.982	0.981
Flow Entry, veh/h	64	447	286	527
Cap Entry, veh/h	837	975	1268	973
V/C Ratio	0.076	0.458	0.225	0.542
Control Delay, s/veh	5.0	9.1	4.8	10.7
LOS	A	A	A	B
95th %tile Queue, veh	0	2	1	3

Intersection	
Intersection Delay, s/veh	13.8
Intersection LOS	B

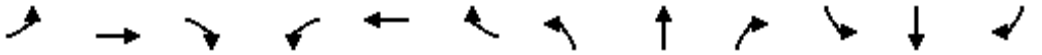
Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	540	406	576	1201
Demand Flow Rate, veh/h	551	414	588	1224
Vehicles Circulating, veh/h	1097	611	463	539
Vehicles Exiting, veh/h	666	440	1185	486
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	17.1	7.4	7.4	17.6
Approach LOS	C	A	A	C

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.470	0.530	0.471	0.529	0.469	0.531	0.470	0.530
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	259	292	195	219	276	312	575	649
Cap Entry Lane, veh/h	492	559	769	845	882	958	822	898
Entry HV Adj Factor	0.980	0.980	0.978	0.982	0.982	0.979	0.981	0.980
Flow Entry, veh/h	254	286	191	215	271	306	564	636
Cap Entry, veh/h	482	548	753	830	865	938	807	881
V/C Ratio	0.526	0.522	0.253	0.259	0.313	0.326	0.699	0.723
Control Delay, s/veh	18.1	16.2	7.7	7.1	7.6	7.3	17.6	17.6
LOS	C	C	A	A	A	A	C	C
95th %tile Queue, veh	3	3	1	1	1	1	6	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	111	74	29	102	16	117	213	42	36	355	154
Future Volume (veh/h)	47	111	74	29	102	16	117	213	42	36	355	154
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	52	122	81	32	113	18	130	237	47	40	394	171
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	350	203	134	285	304	48	385	718	142	616	586	255
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	1254	991	658	1174	1486	237	842	1431	284	1091	1168	507
Grp Volume(v), veh/h	52	0	203	32	0	131	130	0	284	40	0	565
Grp Sat Flow(s),veh/h/ln	1254	0	1649	1174	0	1723	842	0	1715	1091	0	1675
Q Serve(g_s), s	1.5	0.0	4.6	1.0	0.0	2.7	5.6	0.0	4.0	0.9	0.0	10.4
Cycle Q Clear(g_c), s	4.2	0.0	4.6	5.6	0.0	2.7	16.0	0.0	4.0	5.0	0.0	10.4
Prop In Lane	1.00		0.40	1.00		0.14	1.00		0.17	1.00		0.30
Lane Grp Cap(c), veh/h	350	0	337	285	0	352	385	0	861	616	0	841
V/C Ratio(X)	0.15	0.00	0.60	0.11	0.00	0.37	0.34	0.00	0.33	0.06	0.00	0.67
Avail Cap(c_a), veh/h	1444	0	1775	1309	0	1855	1900	0	3943	2577	0	3853
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.8	0.0	14.8	17.3	0.0	14.0	13.6	0.0	6.1	7.6	0.0	7.6
Incr Delay (d2), s/veh	0.2	0.0	1.7	0.2	0.0	0.7	0.5	0.0	0.2	0.0	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.0	4.0	0.6	0.0	2.4	2.4	0.0	3.5	0.5	0.0	8.6
LnGrp Delay(d),s/veh	16.0	0.0	16.5	17.5	0.0	14.7	14.2	0.0	6.3	7.6	0.0	8.6
LnGrp LOS	B		B	B		B	B		A	A		A
Approach Vol, veh/h		255			163			414			605	
Approach Delay, s/veh		16.4			15.2			8.8			8.5	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		14.4		26.5		14.4		26.5
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		44.0		94.0		44.0		94.0
Max Q Clear Time (g_c+I1), s		7.6		12.4		6.6		18.0
Green Ext Time (p_c), s		0.8		4.1		1.3		2.6

Intersection Summary	
HCM 2010 Ctrl Delay	10.7
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	4	22	40	237	126	10	240	7	22	357	95
Future Volume (veh/h)	32	4	22	40	237	126	10	240	7	22	357	95
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	36	4	24	44	263	140	11	267	8	24	397	106
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	280	71	427	603	353	188	288	660	20	473	520	139
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	978	219	1314	1377	1085	578	892	1705	51	1100	1343	359
Grp Volume(v), veh/h	36	0	28	44	0	403	11	0	275	24	0	503
Grp Sat Flow(s),veh/h/ln	978	0	1533	1377	0	1663	892	0	1756	1100	0	1701
Q Serve(g_s), s	1.4	0.0	0.5	0.9	0.0	9.0	0.5	0.0	4.7	0.7	0.0	10.7
Cycle Q Clear(g_c), s	10.4	0.0	0.5	1.5	0.0	9.0	11.2	0.0	4.7	5.4	0.0	10.7
Prop In Lane	1.00		0.86	1.00		0.35	1.00		0.03	1.00		0.21
Lane Grp Cap(c), veh/h	280	0	498	603	0	541	288	0	679	473	0	658
V/C Ratio(X)	0.13	0.00	0.06	0.07	0.00	0.75	0.04	0.00	0.40	0.05	0.00	0.76
Avail Cap(c_a), veh/h	1463	0	2354	2269	0	2553	1527	0	3117	2000	0	3021
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.2	0.0	9.7	10.2	0.0	12.5	16.0	0.0	9.3	11.3	0.0	11.1
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.0	2.1	0.1	0.0	0.4	0.0	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.0	0.4	0.7	0.0	7.8	0.2	0.0	4.3	0.4	0.0	9.0
LnGrp Delay(d),s/veh	17.4	0.0	9.7	10.2	0.0	14.6	16.0	0.0	9.7	11.3	0.0	13.0
LnGrp LOS	B		A	B		B	B		A	B		B
Approach Vol, veh/h		64			447			286			527	
Approach Delay, s/veh		14.0			14.2			9.9			12.9	
Approach LOS		B			B			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		19.5		22.1		19.5		22.1
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		64.0		74.0		64.0		74.0
Max Q Clear Time (g_c+I1), s		11.0		12.7		12.4		13.2
Green Ext Time (p_c), s		2.5		3.4		0.3		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	12.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	386	329	47	62	101	109	19	1258	91	47	438	72
Future Volume (veh/h)	386	329	47	62	101	109	19	1258	91	47	438	72
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	415	354	51	67	110	118	21	1398	101	51	471	77
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.90	0.90	0.90	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	436	402	58	151	153	130	432	1623	726	137	1656	741
Arrive On Green	0.21	0.27	0.27	0.04	0.09	0.09	0.02	0.48	0.48	0.03	0.49	0.49
Sat Flow, veh/h	1681	1509	217	1681	1765	1500	1681	3353	1500	1681	3353	1500
Grp Volume(v), veh/h	415	0	405	67	110	118	21	1398	101	51	471	77
Grp Sat Flow(s),veh/h/ln	1681	0	1726	1681	1765	1500	1681	1676	1500	1681	1676	1500
Q Serve(g_s), s	32.0	0.0	33.7	5.5	9.1	11.7	0.9	55.4	5.6	2.3	12.4	4.1
Cycle Q Clear(g_c), s	32.0	0.0	33.7	5.5	9.1	11.7	0.9	55.4	5.6	2.3	12.4	4.1
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	436	0	460	151	153	130	432	1623	726	137	1656	741
V/C Ratio(X)	0.95	0.00	0.88	0.45	0.72	0.91	0.05	0.86	0.14	0.37	0.28	0.10
Avail Cap(c_a), veh/h	436	0	466	151	153	130	456	1623	726	144	1656	741
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	0.0	52.7	60.2	66.7	67.9	19.1	34.3	21.4	30.3	22.4	20.3
Incr Delay (d2), s/veh	30.6	0.0	16.6	0.8	13.2	50.8	0.0	6.3	0.4	0.6	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.1	0.0	25.2	4.6	8.7	10.9	0.8	35.6	4.3	1.9	9.8	3.2
LnGrp Delay(d),s/veh	78.6	0.0	69.3	61.0	79.9	118.7	19.2	40.5	21.8	30.9	22.8	20.5
LnGrp LOS	E		E	E	E	F	B	D	C	C	C	C
Approach Vol, veh/h		820			295			1520			599	
Approach Delay, s/veh		74.0			91.1			39.0			23.2	
Approach LOS		E			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	39.0	20.0	9.9	81.1	12.0	47.0	11.4	79.6
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	6.5	* 7	7.0	7.0
Max Green Setting (Gmax), s	32.0	13.0	5.0	72.0	5.5	* 41	5.0	72.0
Max Q Clear Time (g_c+I1), s	34.0	13.7	2.9	14.4	7.5	35.7	4.3	57.4
Green Ext Time (p_c), s	0.0	0.0	0.0	16.7	0.0	2.0	0.0	14.1

Intersection Summary	
HCM 2010 Ctrl Delay	49.7
HCM 2010 LOS	D

Notes

Intersection	
Int Delay, s/veh	4.8

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	118	151	597	142	107	166
Future Vol, veh/h	118	151	597	142	107	166
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	0	-	150	450	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	131	168	663	158	119	184

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	993	332	0	-	663	0
Stage 1	663	-	-	-	-	-
Stage 2	330	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	242	664	-	0	922	-
Stage 1	474	-	-	0	-	-
Stage 2	701	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	211	664	-	-	922	-
Mov Cap-2 Maneuver	337	-	-	-	-	-
Stage 1	474	-	-	-	-	-
Stage 2	611	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	16.6	0	3.7
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	337	664	922	-
HCM Lane V/C Ratio	-	0.389	0.253	0.129	-
HCM Control Delay (s)	-	22.3	12.2	9.5	-
HCM Lane LOS	-	C	B	A	-
HCM 95th %tile Q(veh)	-	1.8	1	0.4	-

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	52	467	8	13	247	42	9	80	21	30	28	12
Future Vol, veh/h	52	467	8	13	247	42	9	80	21	30	28	12
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	513	9	14	271	46	10	88	23	33	31	13
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	26.5	13.4	11.1	10.6
HCM LOS	D	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	10%	4%	43%
Vol Thru, %	73%	89%	82%	40%
Vol Right, %	19%	2%	14%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	527	302	70
LT Vol	9	52	13	30
Through Vol	80	467	247	28
RT Vol	21	8	42	12
Lane Flow Rate	121	579	332	77
Geometry Grp	1	1	1	1
Degree of Util (X)	0.211	0.815	0.489	0.139
Departure Headway (Hd)	6.297	5.067	5.302	6.503
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	568	712	677	548
Service Time	4.363	3.106	3.35	4.574
HCM Lane V/C Ratio	0.213	0.813	0.49	0.141
HCM Control Delay	11.1	26.5	13.4	10.6
HCM Lane LOS	B	D	B	B
HCM 95th-tile Q	0.8	8.6	2.7	0.5

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	336	219	7	10	9
Future Vol, veh/h	14	336	219	7	10	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	373	243	8	11	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	251	0	-	0	652	247
Stage 1	-	-	-	-	247	-
Stage 2	-	-	-	-	405	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1314	-	-	-	433	792
Stage 1	-	-	-	-	794	-
Stage 2	-	-	-	-	673	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1314	-	-	-	427	792
Mov Cap-2 Maneuver	-	-	-	-	427	-
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	673	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1314	-	-	-	546
HCM Lane V/C Ratio	0.012	-	-	-	0.039
HCM Control Delay (s)	7.8	0	-	-	11.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Intersection Delay, s/veh	16.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	155	342	7	4	253	126	11	42	5	64	20	29
Future Vol, veh/h	155	342	7	4	253	126	11	42	5	64	20	29
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	160	353	7	4	261	130	11	43	5	66	21	30
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	21	14.1	10.3	10.9
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	31%	1%	57%
Vol Thru, %	72%	68%	66%	18%
Vol Right, %	9%	1%	33%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	58	504	383	113
LT Vol	11	155	4	64
Through Vol	42	342	253	20
RT Vol	5	7	126	29
Lane Flow Rate	60	520	395	116
Geometry Grp	1	1	1	1
Degree of Util (X)	0.107	0.735	0.55	0.203
Departure Headway (Hd)	6.459	5.092	5.019	6.269
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	553	712	719	571
Service Time	4.522	3.125	3.056	4.323
HCM Lane V/C Ratio	0.108	0.73	0.549	0.203
HCM Control Delay	10.3	21	14.1	10.9
HCM Lane LOS	B	C	B	B
HCM 95th-tile Q	0.4	6.5	3.4	0.8

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	315	22	3	216	1	8	3	0	4	1	1
Future Vol, veh/h	2	315	22	3	216	1	8	3	0	4	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	350	24	3	240	1	9	3	0	4	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	241	0	0	374	0	0	614	613	362	615	625	241
Stage 1	-	-	-	-	-	-	366	366	-	247	247	-
Stage 2	-	-	-	-	-	-	248	247	-	368	378	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1326	-	-	1184	-	-	404	408	683	403	401	798
Stage 1	-	-	-	-	-	-	653	623	-	757	702	-
Stage 2	-	-	-	-	-	-	756	702	-	652	615	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1326	-	-	1184	-	-	401	406	683	399	399	798
Mov Cap-2 Maneuver	-	-	-	-	-	-	401	406	-	399	399	-
Stage 1	-	-	-	-	-	-	652	622	-	755	700	-
Stage 2	-	-	-	-	-	-	751	700	-	647	614	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	14.2	13.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	402	1326	-	-	1184	-	-	435
HCM Lane V/C Ratio	0.03	0.002	-	-	0.003	-	-	0.015
HCM Control Delay (s)	14.2	7.7	0	-	8	0	-	13.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	258	77	32	262	110	223	1173	77	25	277	68
Future Volume (veh/h)	138	258	77	32	262	110	223	1173	77	25	277	68
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1835	1800
Adj Flow Rate, veh/h	153	287	86	36	291	122	237	1248	82	28	308	76
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.94	0.94	0.94	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	221	423	127	235	323	135	541	1515	99	151	1118	272
Arrive On Green	0.08	0.32	0.32	0.03	0.27	0.27	0.10	0.47	0.47	0.02	0.40	0.40
Sat Flow, veh/h	1681	1305	391	1681	1182	495	1681	3195	210	1681	2783	676
Grp Volume(v), veh/h	153	0	373	36	0	413	237	654	676	28	191	193
Grp Sat Flow(s),veh/h/ln	1681	0	1696	1681	0	1677	1681	1676	1728	1681	1744	1716
Q Serve(g_s), s	8.5	0.0	25.4	2.0	0.0	31.6	10.7	44.9	45.1	1.3	9.8	10.1
Cycle Q Clear(g_c), s	8.5	0.0	25.4	2.0	0.0	31.6	10.7	44.9	45.1	1.3	9.8	10.1
Prop In Lane	1.00		0.23	1.00		0.30	1.00		0.12	1.00		0.39
Lane Grp Cap(c), veh/h	221	0	550	235	0	459	541	795	819	151	700	689
V/C Ratio(X)	0.69	0.00	0.68	0.15	0.00	0.90	0.44	0.82	0.83	0.19	0.27	0.28
Avail Cap(c_a), veh/h	228	0	661	264	0	591	605	830	855	185	706	695
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	0.0	39.0	34.6	0.0	46.7	19.1	30.2	30.3	27.4	26.8	26.9
Incr Delay (d2), s/veh	7.0	0.0	1.4	0.3	0.0	12.4	0.2	6.5	6.4	0.6	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.8	0.0	17.8	1.7	0.0	22.9	8.5	29.9	30.7	1.1	8.3	8.4
LnGrp Delay(d),s/veh	41.4	0.0	40.4	34.9	0.0	59.1	19.3	36.7	36.7	28.0	27.0	27.1
LnGrp LOS	D		D	C		E	B	D	D	C	C	C
Approach Vol, veh/h		526			449			1567			412	
Approach Delay, s/veh		40.7			57.1			34.1			27.1	
Approach LOS		D			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.4	41.5	17.9	58.5	8.7	48.2	8.2	68.2
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	11.0	47.0	18.0	54.0	6.0	52.0	6.0	66.0
Max Q Clear Time (g_c+I1), s	10.5	33.6	12.7	12.1	4.0	27.4	3.3	47.1
Green Ext Time (p_c), s	0.0	2.8	0.2	7.3	0.0	6.0	0.0	16.1

Intersection Summary	
HCM 2010 Ctrl Delay	37.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	346	29	69	381	145	64	778	192	84	254	33
Future Volume (veh/h)	55	346	29	69	381	145	64	778	192	84	254	33
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	61	384	32	77	423	161	65	794	196	93	282	37
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.98	0.98	0.98	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	56	568	47	193	431	164	560	702	173	104	887	116
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.51	0.51	0.51	0.03	0.58	0.58
Sat Flow, veh/h	828	1607	134	966	1219	464	1056	1368	338	1681	1529	201
Grp Volume(v), veh/h	61	0	416	77	0	584	65	0	990	93	0	319
Grp Sat Flow(s),veh/h/ln	828	0	1741	966	0	1683	1056	0	1705	1681	0	1729
Q Serve(g_s), s	1.4	0.0	30.5	11.0	0.0	51.6	5.1	0.0	77.0	4.0	0.0	14.3
Cycle Q Clear(g_c), s	53.0	0.0	30.5	41.5	0.0	51.6	9.3	0.0	77.0	4.0	0.0	14.3
Prop In Lane	1.00		0.08	1.00		0.28	1.00		0.20	1.00		0.12
Lane Grp Cap(c), veh/h	56	0	615	193	0	595	560	0	875	104	0	1003
V/C Ratio(X)	1.09	0.00	0.68	0.40	0.00	0.98	0.12	0.00	1.13	0.89	0.00	0.32
Avail Cap(c_a), veh/h	56	0	615	193	0	595	560	0	875	104	0	1003
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	74.9	0.0	41.2	58.8	0.0	48.0	21.2	0.0	36.5	36.9	0.0	16.2
Incr Delay (d2), s/veh	147.3	0.0	2.9	1.3	0.0	32.3	0.1	0.0	73.3	54.7	0.0	0.3
Initial Q Delay(d3),s/veh	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.3	0.0	21.6	5.4	0.0	38.2	2.7	0.0	96.8	9.2	0.0	11.2
LnGrp Delay(d),s/veh	224.5	0.0	44.2	60.2	0.0	80.3	21.3	0.0	109.8	91.6	0.0	16.5
LnGrp LOS	F		D	E		F	C		F	F		B
Approach Vol, veh/h		477			661			1055			412	
Approach Delay, s/veh		67.2			78.0			104.3			33.4	
Approach LOS		E			E			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		58.0		92.0		58.0	10.0	82.0
Change Period (Y+Rc), s		5.0		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		53.0		87.0		53.0	5.0	77.0
Max Q Clear Time (g_c+I1), s		53.6		16.3		55.0	6.0	79.0
Green Ext Time (p_c), s		0.0		8.5		0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		79.6
HCM 2010 LOS		E

Intersection	
Intersection Delay, s/veh	22.1
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	448	212	957	411
Demand Flow Rate, veh/h	457	217	976	419
Vehicles Circulating, veh/h	369	1088	270	415
Vehicles Exiting, veh/h	465	158	556	889
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	9.8	17.6	34.1	9.8
Approach LOS	A	C	D	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	457	217	976	419
Cap Entry Lane, veh/h	947	455	1048	904
Entry HV Adj Factor	0.981	0.979	0.980	0.981
Flow Entry, veh/h	448	212	957	411
Cap Entry, veh/h	929	445	1027	886
V/C Ratio	0.483	0.477	0.932	0.464
Control Delay, s/veh	9.8	17.6	34.1	9.8
LOS	A	C	D	A
95th %tile Queue, veh	3	3	15	2

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	325	491	442	563
Demand Flow Rate, veh/h	331	501	450	575
Vehicles Circulating, veh/h	558	513	711	60
Vehicles Exiting, veh/h	77	648	178	954
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	10.2	14.4	19.4	7.3
Approach LOS	B	B	C	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	331	501	450	575
Cap Entry Lane, veh/h	781	818	668	1298
Entry HV Adj Factor	0.982	0.980	0.981	0.980
Flow Entry, veh/h	325	491	442	563
Cap Entry, veh/h	767	801	656	1272
V/C Ratio	0.424	0.613	0.673	0.443
Control Delay, s/veh	10.2	14.4	19.4	7.3
LOS	B	B	C	A
95th %tile Queue, veh	2	4	5	2

Intersection	
Intersection Delay, s/veh	13.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	108	35	192	17	60	52	98	174	13	7	84	62
Future Vol, veh/h	108	35	192	17	60	52	98	174	13	7	84	62
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	120	39	213	19	67	58	109	193	14	8	93	69
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	14.7	10.6	14.4	10.9
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	34%	32%	13%	5%
Vol Thru, %	61%	10%	47%	55%
Vol Right, %	5%	57%	40%	41%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	285	335	129	153
LT Vol	98	108	17	7
Through Vol	174	35	60	84
RT Vol	13	192	52	62
Lane Flow Rate	317	372	143	170
Geometry Grp	1	1	1	1
Degree of Util (X)	0.501	0.548	0.229	0.269
Departure Headway (Hd)	5.699	5.303	5.763	5.705
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	630	677	618	626
Service Time	3.761	3.364	3.842	3.78
HCM Lane V/C Ratio	0.503	0.549	0.231	0.272
HCM Control Delay	14.4	14.7	10.6	10.9
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.8	3.3	0.9	1.1

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	513	0	8	435	0
Future Vol, veh/h	4	513	0	8	435	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	-	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	570	0	9	483	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	0	0	289	574
Stage 1	-	-	0	0
Stage 2	-	-	289	574
Critical Hdwy	-	-	6.42	6.52
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	5.52
Follow-up Hdwy	-	-	3.518	4.018
Pot Cap-1 Maneuver	-	-	702	429
Stage 1	-	-	-	-
Stage 2	-	-	760	503
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	702	0
Mov Cap-2 Maneuver	-	-	702	0
Stage 1	-	-	-	0
Stage 2	-	-	760	0

Approach	EB	WB
HCM Control Delay, s	0	
HCM LOS		-

Minor Lane/Major Mvmt	EBT	EBR	WBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	-
HCM Lane LOS	-	-	-
HCM 95th %tile Q(veh)	-	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	939	274	49	143	353	274
Future Volume (veh/h)	939	274	49	143	353	274
Number	6	16	5	2	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	958	280	54	159	392	304
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.98	0.98	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1369	1212	244	1133	426	380
Arrive On Green	0.55	0.55	0.04	0.64	0.25	0.25
Sat Flow, veh/h	3000	1500	1681	1765	1681	1500
Grp Volume(v), veh/h	958	280	54	159	392	304
Grp Sat Flow(s),veh/h/ln	1235	1500	1681	1765	1681	1500
Q Serve(g_s), s	32.5	5.1	1.5	4.1	26.1	21.8
Cycle Q Clear(g_c), s	32.5	5.1	1.5	4.1	26.1	21.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1369	1212	244	1133	426	380
V/C Ratio(X)	0.70	0.23	0.22	0.14	0.92	0.80
Avail Cap(c_a), veh/h	1369	1212	257	1133	526	470
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.7	2.6	15.0	8.1	41.8	40.2
Incr Delay (d2), s/veh	3.0	0.4	0.2	0.3	17.3	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	17.2	8.6	1.3	3.7	20.3	14.8
LnGrp Delay(d),s/veh	21.7	3.1	15.2	8.4	59.1	46.4
LnGrp LOS	C	A	B	A	E	D
Approach Vol, veh/h	1238			213	696	
Approach Delay, s/veh	17.5			10.1	53.5	
Approach LOS	B			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		79.8			10.1	69.7		35.2
Change Period (Y+Rc), s		6.0			6.0	6.0		6.0
Max Green Setting (Gmax), s		67.0			5.0	56.0		36.0
Max Q Clear Time (g_c+I1), s		6.1			3.5	34.5		28.1
Green Ext Time (p_c), s		1.6			0.0	10.5		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	28.4
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	16.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	347	98	19	227	160	99
Future Vol, veh/h	347	98	19	227	160	99
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	-	-	-	-	300
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	386	109	21	252	178	110

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	472	178	288	0	-	0
Stage 1	178	-	-	-	-	-
Stage 2	294	-	-	-	-	-
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	551	865	1274	-	-	-
Stage 1	853	-	-	-	-	-
Stage 2	756	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	541	865	1274	-	-	-
Mov Cap-2 Maneuver	541	-	-	-	-	-
Stage 1	837	-	-	-	-	-
Stage 2	756	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	34.9	0.6	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1274	-	590	-	-
HCM Lane V/C Ratio	0.017	-	0.838	-	-
HCM Control Delay (s)	7.9	0	34.9	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	8.9	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	132	21	115	290	66	36	666	45	78	1342	325
Future Volume (veh/h)	126	132	21	115	290	66	36	666	45	78	1342	325
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	140	147	23	128	322	73	40	740	50	81	1398	339
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	174	343	54	286	359	305	144	1733	775	364	1754	785
Arrive On Green	0.06	0.23	0.23	0.04	0.20	0.20	0.03	0.52	0.52	0.03	0.52	0.52
Sat Flow, veh/h	1681	1490	233	1681	1765	1500	1681	3353	1500	1681	3353	1500
Grp Volume(v), veh/h	140	0	170	128	322	73	40	740	50	81	1398	339
Grp Sat Flow(s),veh/h/ln	1681	0	1724	1681	1765	1500	1681	1676	1500	1681	1676	1500
Q Serve(g_s), s	9.0	0.0	12.6	5.5	26.7	6.1	1.7	20.5	2.5	3.4	51.2	20.9
Cycle Q Clear(g_c), s	9.0	0.0	12.6	5.5	26.7	6.1	1.7	20.5	2.5	3.4	51.2	20.9
Prop In Lane	1.00		0.14	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	174	0	396	286	359	305	144	1733	775	364	1754	785
V/C Ratio(X)	0.81	0.00	0.43	0.45	0.90	0.24	0.28	0.43	0.06	0.22	0.80	0.43
Avail Cap(c_a), veh/h	174	0	442	286	400	340	154	1733	775	364	1754	785
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.5	0.0	49.3	50.5	58.2	50.1	25.8	22.5	18.1	17.5	29.3	22.0
Incr Delay (d2), s/veh	22.0	0.0	0.3	0.4	19.8	0.1	0.4	0.8	0.2	0.1	3.9	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.5	0.0	10.1	4.0	21.4	4.6	1.4	14.7	1.9	2.9	32.8	13.9
LnGrp Delay(d),s/veh	71.4	0.0	49.6	50.9	78.0	50.2	26.2	23.2	18.3	17.7	33.1	23.8
LnGrp LOS	E		D	D	E	D	C	C	B	B	C	C
Approach Vol, veh/h		310			523			830			1818	
Approach Delay, s/veh		59.5			67.5			23.1			30.7	
Approach LOS		E			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	37.5	11.1	85.5	12.0	41.5	12.0	84.5
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	6.5	* 7	7.0	7.0
Max Green Setting (Gmax), s	9.0	34.0	5.0	74.0	5.5	* 39	5.0	74.0
Max Q Clear Time (g_c+I1), s	11.0	28.7	3.7	53.2	7.5	14.6	5.4	22.5
Green Ext Time (p_c), s	0.0	1.8	0.0	20.0	0.0	2.3	0.0	27.2

Intersection Summary	
HCM 2010 Ctrl Delay	37.0
HCM 2010 LOS	D

Notes

Intersection	
Int Delay, s/veh	6.8

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	214	217	393	93	110	757
Future Vol, veh/h	214	217	393	93	110	757
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	0	-	150	450	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	225	228	414	98	116	797

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1045	207	0	-	414	0
Stage 1	414	-	-	-	-	-
Stage 2	631	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 224	799	-	0	1141	-
Stage 1	635	-	-	0	-	-
Stage 2	492	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	~ 201	799	-	-	1141	-
Mov Cap-2 Maneuver	325	-	-	-	-	-
Stage 1	635	-	-	-	-	-
Stage 2	442	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	24.4	0	1.1
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	325	799	1141	-
HCM Lane V/C Ratio	-	0.693	0.286	0.101	-
HCM Control Delay (s)	-	37.7	11.3	8.5	-
HCM Lane LOS	-	E	B	A	-
HCM 95th %tile Q(veh)	-	4.9	1.2	0.3	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	19.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	196	4	23	460	41	5	53	5	48	120	53
Future Vol, veh/h	15	196	4	23	460	41	5	53	5	48	120	53
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	16	206	4	24	484	43	5	56	5	51	126	56
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	25.7	10.5	12.9
HCM LOS	B	D	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	7%	4%	22%
Vol Thru, %	84%	91%	88%	54%
Vol Right, %	8%	2%	8%	24%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	215	524	221
LT Vol	5	15	23	48
Through Vol	53	196	460	120
RT Vol	5	4	41	53
Lane Flow Rate	66	226	552	233
Geometry Grp	1	1	1	1
Degree of Util (X)	0.12	0.359	0.798	0.389
Departure Headway (Hd)	6.508	5.712	5.206	6.026
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	546	627	695	593
Service Time	4.599	3.78	3.256	4.096
HCM Lane V/C Ratio	0.121	0.36	0.794	0.393
HCM Control Delay	10.5	12	25.7	12.9
HCM Lane LOS	B	B	D	B
HCM 95th-tile Q	0.4	1.6	8.1	1.8

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	190	401	12	28	41
Future Vol, veh/h	10	190	401	12	28	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	198	418	13	29	43

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	431	0	-	0	643	425
Stage 1	-	-	-	-	425	-
Stage 2	-	-	-	-	218	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1129	-	-	-	438	629
Stage 1	-	-	-	-	659	-
Stage 2	-	-	-	-	818	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1129	-	-	-	434	629
Mov Cap-2 Maneuver	-	-	-	-	434	-
Stage 1	-	-	-	-	652	-
Stage 2	-	-	-	-	818	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1129	-	-	-	532
HCM Lane V/C Ratio	0.009	-	-	-	0.135
HCM Control Delay (s)	8.2	0	-	-	12.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection	
Intersection Delay, s/veh	17.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	213	5	5	322	86	13	24	3	136	50	174
Future Vol, veh/h	28	213	5	5	322	86	13	24	3	136	50	174
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	227	5	5	343	91	14	26	3	145	53	185
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	13.7	19.7	10.5	17.5
HCM LOS	B	C	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	33%	11%	1%	38%
Vol Thru, %	60%	87%	78%	14%
Vol Right, %	7%	2%	21%	48%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	40	246	413	360
LT Vol	13	28	5	136
Through Vol	24	213	322	50
RT Vol	3	5	86	174
Lane Flow Rate	43	262	439	383
Geometry Grp	1	1	1	1
Degree of Util (X)	0.082	0.435	0.679	0.611
Departure Headway (Hd)	6.914	5.978	5.567	5.746
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	521	597	646	624
Service Time	4.914	4.073	3.648	3.827
HCM Lane V/C Ratio	0.083	0.439	0.68	0.614
HCM Control Delay	10.5	13.7	19.7	17.5
HCM Lane LOS	B	B	C	C
HCM 95th-tile Q	0.3	2.2	5.3	4.1

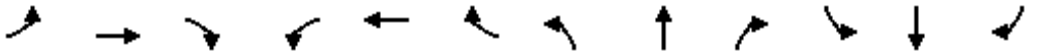
Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	5	196	27	3	372	6	23	11	1	6	9	0
Future Vol, veh/h	5	196	27	3	372	6	23	11	1	6	9	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	209	29	3	396	6	24	12	1	6	10	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	402	0	0	238	0	0	644	642	224	645	653	399
Stage 1	-	-	-	-	-	-	234	234	-	405	405	-
Stage 2	-	-	-	-	-	-	410	408	-	240	248	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1157	-	-	1329	-	-	386	392	815	385	387	651
Stage 1	-	-	-	-	-	-	769	711	-	622	598	-
Stage 2	-	-	-	-	-	-	619	597	-	763	701	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1157	-	-	1329	-	-	376	389	815	373	384	651
Mov Cap-2 Maneuver	-	-	-	-	-	-	376	389	-	373	384	-
Stage 1	-	-	-	-	-	-	765	707	-	619	596	-
Stage 2	-	-	-	-	-	-	607	595	-	746	697	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	15.3	14.9
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	386	1157	-	-	1329	-	-	380
HCM Lane V/C Ratio	0.096	0.005	-	-	0.002	-	-	0.042
HCM Control Delay (s)	15.3	8.1	0	-	7.7	0	-	14.9
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	291	167	93	299	19	146	443	66	73	1010	197
Future Volume (veh/h)	77	291	167	93	299	19	146	443	66	73	1010	197
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1835	1800
Adj Flow Rate, veh/h	86	323	186	103	332	21	155	471	70	76	1052	205
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.94	0.94	0.94	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	312	359	207	180	572	36	191	1250	185	389	1156	225
Arrive On Green	0.04	0.34	0.34	0.05	0.35	0.35	0.07	0.43	0.43	0.04	0.40	0.40
Sat Flow, veh/h	1681	1052	606	1681	1642	104	1681	2931	434	1681	2913	566
Grp Volume(v), veh/h	86	0	509	103	0	353	155	268	273	76	629	628
Grp Sat Flow(s),veh/h/ln	1681	0	1658	1681	0	1746	1681	1676	1688	1681	1744	1735
Q Serve(g_s), s	4.6	0.0	40.7	5.5	0.0	23.0	7.5	15.3	15.4	3.7	47.5	47.8
Cycle Q Clear(g_c), s	4.6	0.0	40.7	5.5	0.0	23.0	7.5	15.3	15.4	3.7	47.5	47.8
Prop In Lane	1.00		0.37	1.00		0.06	1.00		0.26	1.00		0.33
Lane Grp Cap(c), veh/h	312	0	566	180	0	609	191	715	720	389	692	689
V/C Ratio(X)	0.28	0.00	0.90	0.57	0.00	0.58	0.81	0.38	0.38	0.20	0.91	0.91
Avail Cap(c_a), veh/h	312	0	629	180	0	676	244	769	774	396	699	696
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	0.0	43.7	34.3	0.0	37.1	32.2	27.3	27.4	23.8	39.7	39.8
Incr Delay (d2), s/veh	0.2	0.0	14.1	2.8	0.0	0.5	11.9	0.3	0.3	0.1	15.7	16.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.9	0.0	28.4	4.9	0.0	16.6	7.3	11.5	11.7	3.1	34.2	34.4
LnGrp Delay(d),s/veh	30.0	0.0	57.8	37.1	0.0	37.6	44.1	27.7	27.7	23.9	55.4	56.2
LnGrp LOS	C		E	D		D	D	C	C	C	E	E
Approach Vol, veh/h		595			456			696			1333	
Approach Delay, s/veh		53.8			37.5			31.3			54.0	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	53.6	14.6	60.4	12.0	52.6	10.4	64.5
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	6.0	54.0	14.0	56.0	7.0	53.0	6.0	64.0
Max Q Clear Time (g_c+I1), s	6.6	25.0	9.5	49.8	7.5	42.7	5.7	17.4
Green Ext Time (p_c), s	0.0	3.1	0.1	5.6	0.0	4.9	0.0	11.2

Intersection Summary	
HCM 2010 Ctrl Delay	46.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	445	65	203	520	95	65	367	122	184	675	98
Future Volume (veh/h)	62	445	65	203	520	95	65	367	122	184	675	98
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	68	489	71	221	565	103	72	408	136	200	734	107
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.92	0.92	0.92	0.90	0.90	0.90	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	472	69	194	630	115	64	541	180	248	753	110
Arrive On Green	0.31	0.31	0.31	0.09	0.43	0.43	0.43	0.43	0.43	0.04	0.50	0.50
Sat Flow, veh/h	766	1507	219	1681	1453	265	651	1268	423	1681	1506	220
Grp Volume(v), veh/h	68	0	560	221	0	668	72	0	544	200	0	841
Grp Sat Flow(s),veh/h/ln	766	0	1726	1681	0	1718	651	0	1690	1681	0	1726
Q Serve(g_s), s	10.9	0.0	47.0	13.0	0.0	54.1	3.7	0.0	40.8	6.0	0.0	71.3
Cycle Q Clear(g_c), s	47.0	0.0	47.0	13.0	0.0	54.1	64.0	0.0	40.8	6.0	0.0	71.3
Prop In Lane	1.00		0.13	1.00		0.15	1.00		0.25	1.00		0.13
Lane Grp Cap(c), veh/h	104	0	541	194	0	744	64	0	721	248	0	863
V/C Ratio(X)	0.66	0.00	1.04	1.14	0.00	0.90	1.12	0.00	0.75	0.81	0.00	0.97
Avail Cap(c_a), veh/h	104	0	541	194	0	744	64	0	721	248	0	863
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.5	0.0	51.5	45.1	0.0	39.4	74.5	0.0	36.4	44.1	0.0	36.6
Incr Delay (d2), s/veh	13.9	0.0	48.1	107.8	0.0	13.7	149.5	0.0	4.8	16.4	0.0	24.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.8	0.0	53.3	24.9	0.0	37.2	9.6	0.0	27.3	10.8	0.0	50.1
LnGrp Delay(d),s/veh	84.5	0.0	99.6	152.9	0.0	53.1	224.5	0.0	41.2	60.5	0.0	61.1
LnGrp LOS	F		F	F		D	F		D	E		E
Approach Vol, veh/h		628			889			616			1041	
Approach Delay, s/veh		98.0			77.9			62.6			61.0	
Approach LOS		F			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		70.0		80.0	18.0	52.0	11.0	69.0
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s		65.0		75.0	13.0	47.0	6.0	64.0
Max Q Clear Time (g_c+I1), s		56.1		73.3	15.0	49.0	8.0	66.0
Green Ext Time (p_c), s		5.1		1.5	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	73.4
HCM 2010 LOS	E

Intersection	
Intersection Delay, s/veh	20.4
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	401	181	662	813
Demand Flow Rate, veh/h	409	184	676	829
Vehicles Circulating, veh/h	709	669	218	397
Vehicles Exiting, veh/h	517	225	900	456
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	16.8	8.4	11.5	32.1
Approach LOS	C	A	B	D

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	409	184	676	829
Cap Entry Lane, veh/h	670	697	1105	920
Entry HV Adj Factor	0.979	0.982	0.980	0.981
Flow Entry, veh/h	401	181	662	813
Cap Entry, veh/h	656	685	1083	903
V/C Ratio	0.611	0.264	0.612	0.901
Control Delay, s/veh	16.8	8.4	11.5	32.1
LOS	C	A	B	D
95th %tile Queue, veh	4	1	4	13

Intersection	
Intersection Delay, s/veh	26.7
Intersection LOS	D

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	71	731	318	911
Demand Flow Rate, veh/h	72	745	324	929
Vehicles Circulating, veh/h	888	320	464	351
Vehicles Exiting, veh/h	392	468	496	714
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.2	17.5	8.7	41.8
Approach LOS	A	C	A	E

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	72	745	324	929
Cap Entry Lane, veh/h	558	996	860	965
Entry HV Adj Factor	0.983	0.981	0.980	0.981
Flow Entry, veh/h	71	731	318	911
Cap Entry, veh/h	548	976	843	946
V/C Ratio	0.129	0.748	0.377	0.963
Control Delay, s/veh	8.2	17.5	8.7	41.8
LOS	A	C	A	E
95th %tile Queue, veh	0	7	2	16

Intersection	
Intersection Delay, s/veh	15.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	67	44	73	10	45	15	249	182	18	41	146	98
Future Vol, veh/h	67	44	73	10	45	15	249	182	18	41	146	98
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	71	46	77	11	47	16	262	192	19	43	154	103
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	11.8	10.3	19.6	12.5
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	55%	36%	14%	14%
Vol Thru, %	41%	24%	64%	51%
Vol Right, %	4%	40%	21%	34%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	449	184	70	285
LT Vol	249	67	10	41
Through Vol	182	44	45	146
RT Vol	18	73	15	98
Lane Flow Rate	473	194	74	300
Geometry Grp	1	1	1	1
Degree of Util (X)	0.695	0.319	0.129	0.441
Departure Headway (Hd)	5.296	5.926	6.287	5.292
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	681	604	567	678
Service Time	3.343	3.99	4.365	3.346
HCM Lane V/C Ratio	0.695	0.321	0.131	0.442
HCM Control Delay	19.6	11.8	10.3	12.5
HCM Lane LOS	C	B	B	B
HCM 95th-tile Q	5.6	1.4	0.4	2.3

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	397	0	2	567	0
Future Vol, veh/h	4	397	0	2	567	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	-	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	441	0	2	630	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	0	0	225	445
Stage 1	-	-	0	0
Stage 2	-	-	225	445
Critical Hdwy	-	-	6.42	6.52
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	5.52
Follow-up Hdwy	-	-	3.518	4.018
Pot Cap-1 Maneuver	-	-	763	508
Stage 1	-	-	-	-
Stage 2	-	-	812	575
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	763	0
Mov Cap-2 Maneuver	-	-	763	0
Stage 1	-	-	-	0
Stage 2	-	-	812	0

Approach	EB	WB
HCM Control Delay, s	0	
HCM LOS		-

Minor Lane/Major Mvmt	EBT	EBR	WBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	-
HCM Lane LOS	-	-	-
HCM 95th %tile Q(veh)	-	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	238	327	288	1043	305	48
Future Volume (veh/h)	238	327	288	1043	305	48
Number	6	16	5	2	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	262	359	313	1134	339	53
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.91	0.91	0.92	0.92	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1303	1115	608	1200	363	324
Arrive On Green	0.53	0.53	0.10	0.68	0.22	0.22
Sat Flow, veh/h	3000	1500	1681	1765	1681	1500
Grp Volume(v), veh/h	262	359	313	1134	339	53
Grp Sat Flow(s),veh/h/ln	1235	1500	1681	1765	1681	1500
Q Serve(g_s), s	6.4	9.3	9.3	66.2	22.8	3.3
Cycle Q Clear(g_c), s	6.4	9.3	9.3	66.2	22.8	3.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1303	1115	608	1200	363	324
V/C Ratio(X)	0.20	0.32	0.51	0.95	0.93	0.16
Avail Cap(c_a), veh/h	1303	1115	644	1200	365	326
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.4	5.0	9.4	16.5	44.3	36.7
Incr Delay (d2), s/veh	0.3	0.8	0.3	15.8	30.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.0	11.8	7.7	47.1	19.7	2.5
LnGrp Delay(d),s/veh	14.7	5.8	9.7	32.3	74.6	36.7
LnGrp LOS	B	A	A	C	E	D
Approach Vol, veh/h	621			1447	392	
Approach Delay, s/veh	9.5			27.4	69.5	
Approach LOS	A			C	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		84.2			17.6	66.6		30.8
Change Period (Y+Rc), s		6.0			6.0	6.0		6.0
Max Green Setting (Gmax), s		78.0			14.0	58.0		25.0
Max Q Clear Time (g_c+I1), s		68.2			11.3	11.3		24.8
Green Ext Time (p_c), s		7.6			0.2	3.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.6
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	97	26	65	106	240	341
Future Vol, veh/h	97	26	65	106	240	341
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	-	-	-	-	300
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	108	29	72	118	267	379

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	529	267	646	0	-	0
Stage 1	267	-	-	-	-	-
Stage 2	262	-	-	-	-	-
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	510	772	939	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	782	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	468	772	939	-	-	-
Mov Cap-2 Maneuver	468	-	-	-	-	-
Stage 1	714	-	-	-	-	-
Stage 2	782	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.6	3.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	939	-	510	-	-
HCM Lane V/C Ratio	0.077	-	0.268	-	-
HCM Control Delay (s)	9.2	0	14.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	1.1	-	-

Intersection	
Intersection Delay, s/veh	25.1
Intersection LOS	D

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	514	440	1601	402
Demand Flow Rate, veh/h	525	449	1633	410
Vehicles Circulating, veh/h	371	1700	467	574
Vehicles Exiting, veh/h	613	400	429	1575
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.3	41.9	31.0	7.1
Approach LOS	A	E	D	A

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.470	0.530	0.471	0.529
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	247	278	211	238	768	865	193	217
Cap Entry Lane, veh/h	960	1036	283	335	878	955	796	872
Entry HV Adj Factor	0.979	0.981	0.981	0.980	0.979	0.981	0.979	0.982
Flow Entry, veh/h	242	273	207	233	752	848	189	213
Cap Entry, veh/h	939	1016	277	328	860	936	779	856
V/C Ratio	0.257	0.268	0.747	0.711	0.874	0.906	0.242	0.249
Control Delay, s/veh	6.4	6.2	47.0	37.5	29.7	32.1	7.3	6.8
LOS	A	A	E	E	D	D	A	A
95th %tile Queue, veh	1	1	5	5	11	13	1	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	80	173	47	114	32	209	607	55	6	276	92
Future Volume (veh/h)	155	80	173	47	114	32	209	607	55	6	276	92
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	172	89	192	52	127	36	211	613	56	6	285	95
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.99	0.99	0.99	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	376	140	303	263	372	106	403	811	74	280	360	120
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.12	0.51	0.51	0.28	0.28	0.28
Sat Flow, veh/h	1218	499	1076	1094	1323	375	1681	1593	146	765	1268	423
Grp Volume(v), veh/h	172	0	281	52	0	163	211	0	669	6	0	380
Grp Sat Flow(s),veh/h/ln	1218	0	1575	1094	0	1699	1681	0	1739	765	0	1690
Q Serve(g_s), s	7.5	0.0	8.9	2.5	0.0	4.4	4.6	0.0	17.6	0.4	0.0	11.9
Cycle Q Clear(g_c), s	11.8	0.0	8.9	11.4	0.0	4.4	4.6	0.0	17.6	5.1	0.0	11.9
Prop In Lane	1.00		0.68	1.00		0.22	1.00		0.08	1.00		0.25
Lane Grp Cap(c), veh/h	376	0	443	263	0	478	403	0	885	280	0	480
V/C Ratio(X)	0.46	0.00	0.63	0.20	0.00	0.34	0.52	0.00	0.76	0.02	0.00	0.79
Avail Cap(c_a), veh/h	1077	0	1350	893	0	1456	849	0	2708	879	0	1804
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.0	0.0	18.0	23.0	0.0	16.3	12.4	0.0	11.2	18.4	0.0	18.9
Incr Delay (d2), s/veh	0.9	0.0	1.5	0.4	0.0	0.4	1.1	0.0	1.3	0.0	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.6	0.0	7.2	1.4	0.0	3.8	3.9	0.0	13.5	0.1	0.0	9.9
LnGrp Delay(d),s/veh	21.9	0.0	19.5	23.3	0.0	16.7	13.5	0.0	12.6	18.4	0.0	21.9
LnGrp LOS	C		B	C		B	B		B	B		C
Approach Vol, veh/h		453			215			880			386	
Approach Delay, s/veh		20.4			18.3			12.8			21.8	
Approach LOS		C			B			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		22.1	12.8	22.2		22.1		35.1
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0		6.0
Max Green Setting (Gmax), s		49.0	22.0	61.0		49.0		89.0
Max Q Clear Time (g_c+I1), s		13.4	6.6	13.9		13.8		19.6
Green Ext Time (p_c), s		1.0	0.5	2.4		2.2		4.8

Intersection Summary	
HCM 2010 Ctrl Delay	17.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	179	7	37	9	406	8	343	55	350	116	52
Future Volume (veh/h)	112	179	7	37	9	406	8	343	55	350	116	52
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	124	199	8	41	10	451	8	361	58	389	129	58
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.95	0.95	0.95	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	186	685	28	435	13	598	364	389	62	414	585	263
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.26	0.26	0.26	0.20	0.51	0.51
Sat Flow, veh/h	927	1685	68	1170	33	1472	1192	1484	238	1681	1154	519
Grp Volume(v), veh/h	124	0	207	41	0	461	8	0	419	389	0	187
Grp Sat Flow(s),veh/h/ln	927	0	1753	1170	0	1505	1192	0	1723	1681	0	1673
Q Serve(g_s), s	18.2	0.0	11.0	3.4	0.0	36.1	0.7	0.0	32.7	25.1	0.0	8.6
Cycle Q Clear(g_c), s	54.4	0.0	11.0	14.3	0.0	36.1	0.7	0.0	32.7	25.1	0.0	8.6
Prop In Lane	1.00		0.04	1.00		0.98	1.00		0.14	1.00		0.31
Lane Grp Cap(c), veh/h	186	0	712	435	0	611	364	0	451	414	0	848
V/C Ratio(X)	0.67	0.00	0.29	0.09	0.00	0.75	0.02	0.00	0.93	0.94	0.00	0.22
Avail Cap(c_a), veh/h	186	0	712	435	0	611	415	0	525	490	0	995
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.3	0.0	27.6	32.4	0.0	35.0	37.8	0.0	49.6	37.4	0.0	18.9
Incr Delay (d2), s/veh	8.8	0.0	0.2	0.1	0.0	5.3	0.0	0.0	21.4	24.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.9	0.0	9.1	2.0	0.0	22.4	0.4	0.0	25.3	24.1	0.0	7.2
LnGrp Delay(d),s/veh	67.1	0.0	27.8	32.5	0.0	40.3	37.8	0.0	71.1	61.4	0.0	19.0
LnGrp LOS	E		C	C		D	D		E	E		B
Approach Vol, veh/h		331			502			427			576	
Approach Delay, s/veh		42.5			39.7			70.4			47.7	
Approach LOS		D			D			E			D	

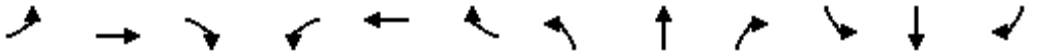
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		62.0		75.8		62.0	33.8	42.1
Change Period (Y+Rc), s		6.0		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		56.0		82.0		56.0	34.0	42.0
Max Q Clear Time (g_c+I1), s		38.1		10.6		56.4	27.1	34.7
Green Ext Time (p_c), s		2.8		1.1		0.0	0.7	1.4

Intersection Summary		
HCM 2010 Ctrl Delay		49.8
HCM 2010 LOS		D

Intersection	
Intersection Delay, s/veh	17.6
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	551	424	676	1319
Demand Flow Rate, veh/h	562	432	689	1345
Vehicles Circulating, veh/h	1236	701	463	566
Vehicles Exiting, veh/h	675	451	1335	567
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	22.3	8.4	8.2	23.4
Approach LOS	C	A	A	C

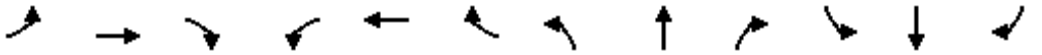
Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	264	298	203	229	324	365	632	713
Cap Entry Lane, veh/h	433	497	708	783	882	958	802	878
Entry HV Adj Factor	0.981	0.980	0.981	0.981	0.980	0.981	0.981	0.981
Flow Entry, veh/h	259	292	199	225	318	358	620	699
Cap Entry, veh/h	425	487	695	768	864	940	787	861
V/C Ratio	0.610	0.600	0.287	0.293	0.367	0.381	0.788	0.812
Control Delay, s/veh	23.9	20.9	8.7	8.1	8.4	8.1	23.3	23.6
LOS	C	C	A	A	A	A	C	C
95th %tile Queue, veh	4	4	1	1	2	2	8	9



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	111	207	46	102	16	206	343	54	36	550	154
Future Volume (veh/h)	47	111	207	46	102	16	206	343	54	36	550	154
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	52	122	227	51	113	18	229	381	60	40	611	171
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	323	151	280	125	405	64	256	943	148	520	652	182
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.10	0.63	0.63	0.49	0.49	0.49
Sat Flow, veh/h	1254	553	1030	1028	1486	237	1681	1489	234	944	1328	372
Grp Volume(v), veh/h	52	0	349	51	0	131	229	0	441	40	0	782
Grp Sat Flow(s),veh/h/ln	1254	0	1583	1028	0	1723	1681	0	1723	944	0	1699
Q Serve(g_s), s	4.3	0.0	26.2	6.2	0.0	7.6	9.8	0.0	16.0	2.9	0.0	55.2
Cycle Q Clear(g_c), s	11.9	0.0	26.2	32.3	0.0	7.6	9.8	0.0	16.0	2.9	0.0	55.2
Prop In Lane	1.00		0.65	1.00		0.14	1.00		0.14	1.00		0.22
Lane Grp Cap(c), veh/h	323	0	431	125	0	469	256	0	1091	520	0	834
V/C Ratio(X)	0.16	0.00	0.81	0.41	0.00	0.28	0.90	0.00	0.40	0.08	0.00	0.94
Avail Cap(c_a), veh/h	357	0	473	152	0	515	347	0	1356	614	0	1003
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.1	0.0	43.2	58.3	0.0	36.4	32.6	0.0	11.5	17.2	0.0	30.5
Incr Delay (d2), s/veh	0.2	0.0	9.4	2.1	0.0	0.3	19.7	0.0	0.2	0.1	0.0	14.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.7	0.0	18.4	3.3	0.0	6.6	14.3	0.0	12.2	1.4	0.0	38.0
LnGrp Delay(d),s/veh	41.4	0.0	52.6	60.4	0.0	36.7	52.4	0.0	11.7	17.3	0.0	44.6
LnGrp LOS	D		D	E		D	D		B	B		D
Approach Vol, veh/h		401			182			670			822	
Approach Delay, s/veh		51.1			43.4			25.6			43.3	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		40.6	18.1	68.4		40.6		86.5
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0		6.0
Max Green Setting (Gmax), s		38.0	19.0	75.0		38.0		100.0
Max Q Clear Time (g_c+I1), s		34.3	11.8	57.2		28.2		18.0
Green Ext Time (p_c), s		0.2	0.4	5.2		1.5		2.8

Intersection Summary	
HCM 2010 Ctrl Delay	39.1
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	10	22	59	241	357	10	240	36	367	357	95
Future Volume (veh/h)	32	10	22	59	241	357	10	240	36	367	357	95
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	36	11	24	66	268	397	11	267	40	408	397	106
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	103	224	489	658	291	432	230	294	44	436	611	163
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.20	0.20	0.20	0.21	0.45	0.45
Sat Flow, veh/h	768	495	1079	1368	643	953	892	1500	225	1681	1343	359
Grp Volume(v), veh/h	36	0	35	66	0	665	11	0	307	408	0	503
Grp Sat Flow(s),veh/h/ln	768	0	1574	1368	0	1597	892	0	1725	1681	0	1701
Q Serve(g_s), s	6.0	0.0	1.6	3.7	0.0	50.8	1.3	0.0	22.6	24.8	0.0	29.8
Cycle Q Clear(g_c), s	56.8	0.0	1.6	5.3	0.0	50.8	1.3	0.0	22.6	24.8	0.0	29.8
Prop In Lane	1.00		0.69	1.00		0.60	1.00		0.13	1.00		0.21
Lane Grp Cap(c), veh/h	103	0	713	658	0	723	230	0	338	436	0	774
V/C Ratio(X)	0.35	0.00	0.05	0.10	0.00	0.92	0.05	0.00	0.91	0.94	0.00	0.65
Avail Cap(c_a), veh/h	139	0	787	722	0	798	268	0	411	544	0	955
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.0	0.0	19.9	21.4	0.0	33.4	42.6	0.0	51.1	33.1	0.0	27.4
Incr Delay (d2), s/veh	2.0	0.0	0.0	0.1	0.0	14.9	0.1	0.0	21.0	21.1	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.4	0.0	1.3	2.5	0.0	33.6	0.6	0.0	18.7	23.7	0.0	20.4
LnGrp Delay(d),s/veh	62.0	0.0	19.9	21.5	0.0	48.3	42.6	0.0	72.1	54.2	0.0	28.6
LnGrp LOS	E		B	C		D	D		E	D		C
Approach Vol, veh/h		71			731			318			911	
Approach Delay, s/veh		41.3			45.8			71.1			40.0	
Approach LOS		D			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		64.9		65.2		64.9	33.7	31.5
Change Period (Y+Rc), s		6.0		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		65.0		73.0		65.0	36.0	31.0
Max Q Clear Time (g_c+I1), s		52.8		31.8		58.8	26.8	24.6
Green Ext Time (p_c), s		3.6		3.3		0.1	0.9	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	47.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	346	29	69	381	145	64	778	192	84	254	33
Future Volume (veh/h)	55	346	29	69	381	145	64	778	192	84	254	33
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	61	384	32	77	423	161	65	794	196	93	282	37
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.98	0.98	0.98	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	163	690	58	300	523	199	484	1076	266	221	1462	190
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.40	0.40	0.40	0.05	0.49	0.49
Sat Flow, veh/h	828	1607	134	966	1219	464	1056	2667	658	1681	2985	388
Grp Volume(v), veh/h	61	0	416	77	0	584	65	499	491	93	157	162
Grp Sat Flow(s),veh/h/ln	828	0	1741	966	0	1683	1056	1676	1649	1681	1676	1696
Q Serve(g_s), s	8.6	0.0	22.2	8.0	0.0	37.5	4.8	31.3	31.3	3.9	6.5	6.7
Cycle Q Clear(g_c), s	46.1	0.0	22.2	30.2	0.0	37.5	4.8	31.3	31.3	3.9	6.5	6.7
Prop In Lane	1.00		0.08	1.00		0.28	1.00		0.40	1.00		0.23
Lane Grp Cap(c), veh/h	163	0	748	300	0	723	484	676	665	221	821	831
V/C Ratio(X)	0.38	0.00	0.56	0.26	0.00	0.81	0.13	0.74	0.74	0.42	0.19	0.19
Avail Cap(c_a), veh/h	269	0	971	424	0	938	528	745	733	293	962	973
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.0	0.0	26.5	37.8	0.0	30.9	23.5	31.4	31.4	24.1	17.8	17.8
Incr Delay (d2), s/veh	1.4	0.0	0.7	0.4	0.0	4.1	0.2	3.9	4.0	0.5	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.7	0.0	16.1	3.9	0.0	25.2	2.6	21.5	21.3	3.2	5.5	5.7
LnGrp Delay(d),s/veh	52.4	0.0	27.1	38.2	0.0	34.9	23.6	35.3	35.4	24.5	17.9	18.0
LnGrp LOS	D		C	D		C	C	D	D	C	B	B
Approach Vol, veh/h		477			661			1055			412	
Approach Delay, s/veh		30.4			35.3			34.6			19.4	
Approach LOS		C			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		58.1		65.6		58.1	10.7	54.9
Change Period (Y+Rc), s		5.0		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		69.0		71.0		69.0	11.0	55.0
Max Q Clear Time (g_c+I1), s		39.5		8.7		48.1	5.9	33.3
Green Ext Time (p_c), s		10.2		7.9		5.0	0.1	16.6

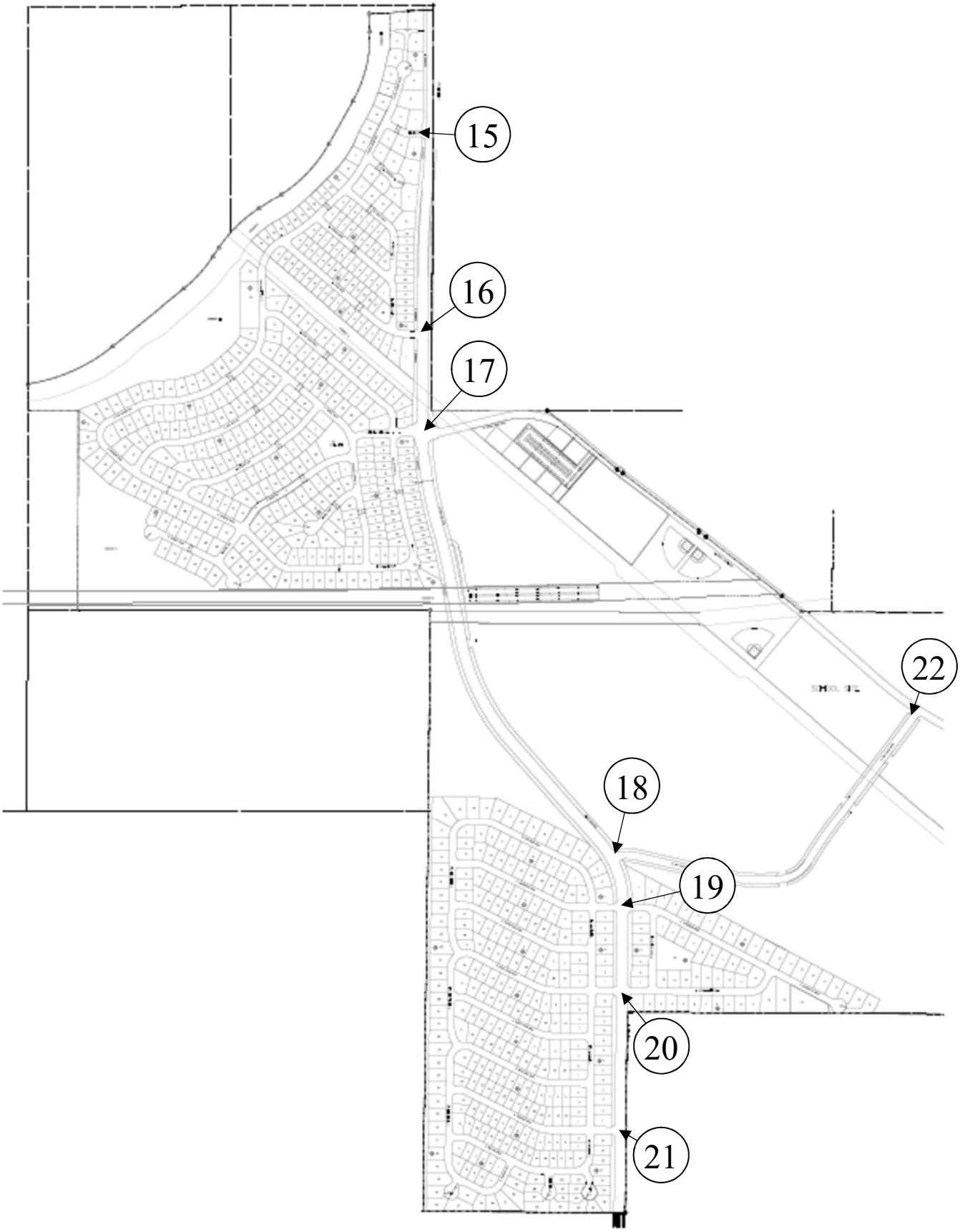
Intersection Summary	
HCM 2010 Ctrl Delay	31.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	445	65	203	520	95	65	367	122	184	675	98
Future Volume (veh/h)	62	445	65	203	520	95	65	367	122	184	675	98
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	68	489	71	221	565	103	72	408	136	200	734	107
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.92	0.92	0.92	0.90	0.90	0.90	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	226	576	84	294	756	138	187	617	203	319	1159	169
Arrive On Green	0.38	0.38	0.38	0.10	0.52	0.52	0.25	0.25	0.25	0.10	0.39	0.39
Sat Flow, veh/h	766	1507	219	1681	1453	265	651	2479	818	1681	2938	428
Grp Volume(v), veh/h	68	0	560	221	0	668	72	274	270	200	419	422
Grp Sat Flow(s),veh/h/ln	766	0	1726	1681	0	1718	651	1676	1620	1681	1676	1689
Q Serve(g_s), s	9.0	0.0	34.7	9.0	0.0	35.7	11.7	17.2	17.5	10.0	23.6	23.6
Cycle Q Clear(g_c), s	28.5	0.0	34.7	9.0	0.0	35.7	18.3	17.2	17.5	10.0	23.6	23.6
Prop In Lane	1.00		0.13	1.00		0.15	1.00		0.50	1.00		0.25
Lane Grp Cap(c), veh/h	226	0	660	294	0	894	187	417	403	319	661	666
V/C Ratio(X)	0.30	0.00	0.85	0.75	0.00	0.75	0.39	0.66	0.67	0.63	0.63	0.63
Avail Cap(c_a), veh/h	352	0	944	349	0	1233	231	530	512	347	802	808
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	0.0	33.0	24.9	0.0	22.0	42.9	39.5	39.6	28.6	28.6	28.6
Incr Delay (d2), s/veh	0.7	0.0	5.2	5.7	0.0	1.7	1.8	2.7	3.0	2.0	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	0.0	24.3	8.1	0.0	24.1	4.0	13.0	12.9	8.3	16.7	16.8
LnGrp Delay(d),s/veh	40.3	0.0	38.2	30.6	0.0	23.7	44.7	42.2	42.7	30.6	30.2	30.2
LnGrp LOS	D		D	C		C	D	D	D	C	C	C
Approach Vol, veh/h		628			889			616			1041	
Approach Delay, s/veh		38.4			25.4			42.7			30.3	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		65.9		51.2	16.1	49.7	17.0	34.1
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s		84.0		56.0	15.0	64.0	14.0	37.0
Max Q Clear Time (g_c+I1), s		37.7		25.6	11.0	36.7	12.0	20.3
Green Ext Time (p_c), s		13.5		18.3	0.2	8.0	0.1	8.8

Intersection Summary	
HCM 2010 Ctrl Delay	32.9
HCM 2010 LOS	C

Site Access Numbering for Synchro Outputs



Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	42	17	5	393	500	13
Future Vol, veh/h	42	17	5	393	500	13
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	-	50	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	19	6	437	556	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1012	563	570	0	-	0
Stage 1	563	-	-	-	-	-
Stage 2	449	-	-	-	-	-
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	265	526	1002	-	-	-
Stage 1	570	-	-	-	-	-
Stage 2	643	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	263	526	1002	-	-	-
Mov Cap-2 Maneuver	462	-	-	-	-	-
Stage 1	567	-	-	-	-	-
Stage 2	643	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.7	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1002	-	479	-	-
HCM Lane V/C Ratio	0.006	-	0.137	-	-
HCM Control Delay (s)	8.6	-	13.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	10	3	373	508	9
Future Vol, veh/h	25	10	3	373	508	9
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	-	50	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	11	3	414	564	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	989	569	574	0	-	0
Stage 1	569	-	-	-	-	-
Stage 2	420	-	-	-	-	-
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	274	522	999	-	-	-
Stage 1	566	-	-	-	-	-
Stage 2	663	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	273	522	999	-	-	-
Mov Cap-2 Maneuver	469	-	-	-	-	-
Stage 1	564	-	-	-	-	-
Stage 2	663	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.1	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	999	-	483	-	-
HCM Lane V/C Ratio	0.003	-	0.081	-	-
HCM Control Delay (s)	8.6	-	13.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Intersection Delay, s/veh	6.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	185	170	149	575
Demand Flow Rate, veh/h	189	173	152	587
Vehicles Circulating, veh/h	550	279	676	25
Vehicles Exiting, veh/h	62	549	63	427
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.3	5.1	7.9	7.0
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	189	173	152	587
Cap Entry Lane, veh/h	787	1038	692	1345
Entry HV Adj Factor	0.979	0.981	0.981	0.979
Flow Entry, veh/h	185	170	149	575
Cap Entry, veh/h	771	1018	680	1317
V/C Ratio	0.240	0.167	0.219	0.436
Control Delay, s/veh	7.3	5.1	7.9	7.0
LOS	A	A	A	A
95th %tile Queue, veh	1	1	1	2

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↱		↰	↱	
Traffic Vol, veh/h	0	0	0	0	0	0	0	134	0	0	56	0
Future Vol, veh/h	0	0	0	0	0	0	0	134	0	0	56	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	149	0	0	62	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	211	211	62	211	211	149	62	0	0	149	0	0
Stage 1	62	62	-	149	149	-	-	-	-	-	-	-
Stage 2	149	149	-	62	62	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	746	686	1003	746	686	898	1541	-	-	1432	-	-
Stage 1	949	843	-	854	774	-	-	-	-	-	-	-
Stage 2	854	774	-	949	843	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	746	686	1003	746	686	898	1541	-	-	1432	-	-
Mov Cap-2 Maneuver	745	678	-	745	678	-	-	-	-	-	-	-
Stage 1	949	843	-	854	774	-	-	-	-	-	-	-
Stage 2	854	774	-	949	843	-	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1541	-	-	-	-	1432	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	0	0	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	0	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	0	147	49	4	52
Future Vol, veh/h	18	0	147	49	4	52
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	-	-	-	50	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	0	163	54	4	58

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	256	190	0	0	217	0
Stage 1	190	-	-	-	-	-
Stage 2	66	-	-	-	-	-
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	733	852	-	-	1353	-
Stage 1	842	-	-	-	-	-
Stage 2	957	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	731	852	-	-	1353	-
Mov Cap-2 Maneuver	784	-	-	-	-	-
Stage 1	842	-	-	-	-	-
Stage 2	954	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	0.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	784	1353	-
HCM Lane V/C Ratio	-	-	0.026	0.003	-
HCM Control Delay (s)	-	-	9.7	7.7	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	50	0	1	0	0	20	0	126	0	7	46	17
Future Vol, veh/h	50	0	1	0	0	20	0	126	0	7	46	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	56	0	1	0	0	22	0	140	0	8	51	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	228	217	61	217	226	140	70	0	0	140	0	0
Stage 1	77	77	-	140	140	-	-	-	-	-	-	-
Stage 2	151	140	-	77	86	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	727	681	1004	739	673	908	1531	-	-	1443	-	-
Stage 1	932	831	-	863	781	-	-	-	-	-	-	-
Stage 2	851	781	-	932	824	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	706	677	1004	735	669	908	1531	-	-	1443	-	-
Mov Cap-2 Maneuver	714	671	-	741	669	-	-	-	-	-	-	-
Stage 1	932	826	-	863	781	-	-	-	-	-	-	-
Stage 2	830	781	-	926	819	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.4	9.1	0	0.8
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1531	-	-	718	908	1443	-	-
HCM Lane V/C Ratio	-	-	-	0.079	0.024	0.005	-	-
HCM Control Delay (s)	0	-	-	10.4	9.1	7.5	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0	-	-

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↱		↰	↱	
Traffic Vol, veh/h	55	0	1	0	0	11	0	60	0	4	24	19
Future Vol, veh/h	55	0	1	0	0	11	0	60	0	4	24	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	61	0	1	0	0	12	0	67	0	4	27	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	119	113	38	113	123	67	48	0	0	67	0	0
Stage 1	46	46	-	67	67	-	-	-	-	-	-	-
Stage 2	73	67	-	46	56	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	857	777	1034	864	767	997	1559	-	-	1535	-	-
Stage 1	968	857	-	943	839	-	-	-	-	-	-	-
Stage 2	937	839	-	968	848	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	845	775	1034	861	765	997	1559	-	-	1535	-	-
Mov Cap-2 Maneuver	815	739	-	828	733	-	-	-	-	-	-	-
Stage 1	968	854	-	943	839	-	-	-	-	-	-	-
Stage 2	926	839	-	964	845	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.8	8.7	0	0.6
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1559	-	-	818	997	1535	-	-
HCM Lane V/C Ratio	-	-	-	0.076	0.012	0.003	-	-
HCM Control Delay (s)	0	-	-	9.8	8.7	7.4	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0	-	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	110	372	2	16	8	90	0	0	19	56	0	114
Future Vol, veh/h	110	372	2	16	8	90	0	0	19	56	0	114
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	122	413	2	18	9	100	0	0	21	62	0	127

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	109	0	0	415	0	0	817	803	414	764	754	59
Stage 1	-	-	-	-	-	-	658	658	-	95	95	-
Stage 2	-	-	-	-	-	-	159	145	-	669	659	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1481	-	-	1144	-	-	295	317	638	321	338	1007
Stage 1	-	-	-	-	-	-	453	461	-	912	816	-
Stage 2	-	-	-	-	-	-	843	777	-	447	461	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1481	-	-	1144	-	-	239	286	638	287	305	1007
Mov Cap-2 Maneuver	-	-	-	-	-	-	327	351	-	334	354	-
Stage 1	-	-	-	-	-	-	416	423	-	837	803	-
Stage 2	-	-	-	-	-	-	725	765	-	397	423	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	1.2	10.8	13.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	638	1481	-	-	1144	-	-	605
HCM Lane V/C Ratio	0.033	0.083	-	-	0.016	-	-	0.312
HCM Control Delay (s)	10.8	7.6	-	-	8.2	-	-	13.6
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.3	-	-	0	-	-	1.3

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	24	10	17	543	356	41
Future Vol, veh/h	24	10	17	543	356	41
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	-	50	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	11	19	603	396	46

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1060	419	442	0	-	0
Stage 1	419	-	-	-	-	-
Stage 2	641	-	-	-	-	-
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	248	634	1118	-	-	-
Stage 1	664	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	244	634	1118	-	-	-
Mov Cap-2 Maneuver	440	-	-	-	-	-
Stage 1	653	-	-	-	-	-
Stage 2	525	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.1	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1118	-	484	-	-
HCM Lane V/C Ratio	0.017	-	0.078	-	-
HCM Control Delay (s)	8.3	-	13.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	6	11	544	340	26
Future Vol, veh/h	16	6	11	544	340	26
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	-	50	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	7	12	604	378	29

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1021	393	407	0	-	0
Stage 1	393	-	-	-	-	-
Stage 2	628	-	-	-	-	-
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	262	656	1152	-	-	-
Stage 1	682	-	-	-	-	-
Stage 2	532	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	259	656	1152	-	-	-
Mov Cap-2 Maneuver	451	-	-	-	-	-
Stage 1	675	-	-	-	-	-
Stage 2	532	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.7	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1152	-	493	-	-
HCM Lane V/C Ratio	0.011	-	0.05	-	-
HCM Control Delay (s)	8.2	-	12.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Intersection Delay, s/veh	6.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	116	525	104	384
Demand Flow Rate, veh/h	119	535	106	391
Vehicles Circulating, veh/h	352	175	282	80
Vehicles Exiting, veh/h	119	213	189	630
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.0	8.2	4.5	5.7
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	119	535	106	391
Cap Entry Lane, veh/h	964	1154	1035	1272
Entry HV Adj Factor	0.978	0.981	0.983	0.981
Flow Entry, veh/h	116	525	104	384
Cap Entry, veh/h	942	1132	1018	1248
V/C Ratio	0.123	0.463	0.102	0.307
Control Delay, s/veh	5.0	8.2	4.5	5.7
LOS	A	A	A	A
95th %tile Queue, veh	0	3	0	1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	0	0	93	0	0	168	0
Future Vol, veh/h	0	0	0	0	0	0	0	93	0	0	168	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	103	0	0	187	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	290	290	187	290	290	103	187	0	0	103	0	0
Stage 1	187	187	-	103	103	-	-	-	-	-	-	-
Stage 2	103	103	-	187	187	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	662	620	855	662	620	952	1387	-	-	1489	-	-
Stage 1	815	745	-	903	810	-	-	-	-	-	-	-
Stage 2	903	810	-	815	745	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	662	620	855	662	620	952	1387	-	-	1489	-	-
Mov Cap-2 Maneuver	690	635	-	690	635	-	-	-	-	-	-	-
Stage 1	815	745	-	903	810	-	-	-	-	-	-	-
Stage 2	903	810	-	815	745	-	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1387	-	-	-	-	1489	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	0	0	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	0	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	51	0	93	34	11	157
Future Vol, veh/h	51	0	93	34	11	157
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	-	-	-	50	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	0	103	38	12	174

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	320	122	0	0	141	0
Stage 1	122	-	-	-	-	-
Stage 2	198	-	-	-	-	-
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	673	929	-	-	1442	-
Stage 1	903	-	-	-	-	-
Stage 2	835	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	668	929	-	-	1442	-
Mov Cap-2 Maneuver	753	-	-	-	-	-
Stage 1	903	-	-	-	-	-
Stage 2	828	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	753	1442	-
HCM Lane V/C Ratio	-	-	0.075	0.008	-
HCM Control Delay (s)	-	-	10.2	7.5	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	0	0	0	0	12	1	83	0	21	134	53
Future Vol, veh/h	32	0	0	0	0	12	1	83	0	21	134	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	0	0	0	0	13	1	92	0	23	149	59

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	326	319	179	319	348	92	208	0	0	92	0	0
Stage 1	225	225	-	94	94	-	-	-	-	-	-	-
Stage 2	101	94	-	225	254	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	627	598	864	634	576	965	1363	-	-	1503	-	-
Stage 1	778	718	-	913	817	-	-	-	-	-	-	-
Stage 2	905	817	-	778	697	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	611	588	864	626	567	965	1363	-	-	1503	-	-
Mov Cap-2 Maneuver	650	605	-	657	591	-	-	-	-	-	-	-
Stage 1	777	707	-	912	816	-	-	-	-	-	-	-
Stage 2	892	816	-	766	687	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.9	8.8	0.1	0.8
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1363	-	-	650	965	1503	-	-
HCM Lane V/C Ratio	0.001	-	-	0.055	0.014	0.016	-	-
HCM Control Delay (s)	7.6	-	-	10.9	8.8	7.4	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↱		↰	↱	
Traffic Vol, veh/h	35	0	0	0	0	7	1	41	0	11	64	59
Future Vol, veh/h	35	0	0	0	0	7	1	41	0	11	64	59
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	0	0	0	0	8	1	46	0	12	71	66

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	180	176	104	176	209	46	137	0	0	46	0	0
Stage 1	128	128	-	48	48	-	-	-	-	-	-	-
Stage 2	52	48	-	128	161	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	782	717	951	786	688	1023	1447	-	-	1562	-	-
Stage 1	876	790	-	965	855	-	-	-	-	-	-	-
Stage 2	961	855	-	876	765	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	771	711	951	781	682	1023	1447	-	-	1562	-	-
Mov Cap-2 Maneuver	763	692	-	767	671	-	-	-	-	-	-	-
Stage 1	875	784	-	964	854	-	-	-	-	-	-	-
Stage 2	953	854	-	869	759	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	8.5	0.2	0.6
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1447	-	-	763	1023	1562	-	-
HCM Lane V/C Ratio	0.001	-	-	0.051	0.008	0.008	-	-
HCM Control Delay (s)	7.5	-	-	10	8.5	7.3	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0	-	-

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	163	0	51	403	20	0	0	37	34	0	69
Future Vol, veh/h	25	163	0	51	403	20	0	0	37	34	0	69
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	181	0	57	448	22	0	0	41	38	0	77

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	470	0	0	181	0	0	849	821	181	831	810	459
Stage 1	-	-	-	-	-	-	237	237	-	573	573	-
Stage 2	-	-	-	-	-	-	612	584	-	258	237	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1092	-	-	1394	-	-	281	309	862	289	314	602
Stage 1	-	-	-	-	-	-	766	709	-	505	504	-
Stage 2	-	-	-	-	-	-	480	498	-	747	709	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1092	-	-	1394	-	-	233	289	862	262	293	602
Mov Cap-2 Maneuver	-	-	-	-	-	-	314	369	-	369	379	-
Stage 1	-	-	-	-	-	-	746	691	-	492	483	-
Stage 2	-	-	-	-	-	-	402	478	-	693	691	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.8	9.4	14.4
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	862	1092	-	-	1394	-	-	498
HCM Lane V/C Ratio	0.048	0.025	-	-	0.041	-	-	0.23
HCM Control Delay (s)	9.4	8.4	-	-	7.7	-	-	14.4
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0.1	-	-	0.9

APPENDIX F: INTERNAL CAPTURE TRIPS WORKSHEETS

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Springrock Subdivision	**Organization:**	CR Engineering, Inc.
Project Location:	Ada County, Idaho	**Performed By:**	Brandon Atchley
Scenario Description:	Phase 1	**Date:**	09-May-19
Analysis Year:	2025	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	10	TSF	19	16	3
Retail			TSF	0		
Restaurant	931	6	TSF	4	3	1
Cinema/Entertainment				0		
Residential	210 (220)	757 (136)	DU	606	150	456
Hotel				0		
All Other Land Uses[2]	Other	--	--	457	246	211
				1,086	415	671

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00	0%	0%	1.00	0%	0%
Retail	1.00	0%	0%	1.00	0%	0%
Restaurant	1.00	0%	0%	1.00	0%	0%
Cinema/Entertainment	1.00	0%	0%	1.00	0%	0%
Residential	1.00	0%	0%	1.00	0%	0%
Hotel	1.00	0%	0%	1.00	0%	0%
All Other Land Uses[2]	1.00	0%	0%	1.00	0%	0%

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	1	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	1	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,086	415	671
Internal Capture Percentage	0%	0%	0%
External Vehicle-Trips[5]	1,082	413	669
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	0%	33%
Retail	N/A	N/A
Restaurant	67%	0%
Cinema/Entertainment	N/A	N/A
Residential	0%	0%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Springrock Subdivision	**Organization:**	CR Engineering, Inc.
Project Location:	Ada County, Idaho	**Performed By:**	Brandon Atchley
Scenario Description:	Phase 1	**Date:**	09-May-19
Analysis Year:	2025	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	10	TSF	25	8	17
Retail			TSF	0		
Restaurant	931	6	TSF	47	31	16
Cinema/Entertainment				0		
Residential	210 (220)	757 (136)	DU	787	496	291
Hotel				0		
All Other Land Uses[2]	Other	--	--	158	75	83
				1,017	610	407

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00	0%	0%	1.00	0%	0%
Retail	1.00	0%	0%	1.00	0%	0%
Restaurant	1.00	0%	0%	1.00	0%	0%
Cinema/Entertainment	1.00	0%	0%	1.00	0%	0%
Residential	1.00	0%	0%	1.00	0%	0%
Hotel	1.00	0%	0%	1.00	0%	0%
All Other Land Uses[2]	1.00	0%	0%	1.00	0%	0%

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	1	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	3	0
Cinema/Entertainment	0	0	0		0	0
Residential	5	0	4	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,017	610	407
Internal Capture Percentage	3%	2%	3%
External Vehicle-Trips[5]	991	597	394
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	63%	6%
Retail	N/A	N/A
Restaurant	16%	19%
Cinema/Entertainment	N/A	N/A
Residential	1%	3%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Springrock Subdivision	**Organization:**	CR Engineering, Inc.
Project Location:	Ada County, Idhao	**Performed By:**	Brandon Atchley
Scenario Description:	Phase 1	**Date:**	05-Apr-19
Analysis Year:	2030	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	60	TSF	83	51	32
Retail	851	4	TSF	250	125	125
Restaurant	Multi	6, 6, 2	TSF	242	127	115
Cinema/Entertainment				0		
Residential	210 (220)	1925 (252)	DU	1,487	369	1,118
Hotel				0		
All Other Land Uses[2]	Other	--	--	403	218	185
				2,465	890	1,575

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00	0%	0%	1.00	0%	0%
Retail	1.00	0%	0%	1.00	0%	0%
Restaurant	1.00	0%	0%	1.00	0%	0%
Cinema/Entertainment	1.00	0%	0%	1.00	0%	0%
Residential	1.00	0%	0%	1.00	0%	0%
Hotel	1.00	0%	0%	1.00	0%	0%
All Other Land Uses[2]	1.00	0%	0%	1.00	0%	0%

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		9	20	0	0	0
Retail	2		16	0	7	0
Restaurant	7	10		0	5	0
Cinema/Entertainment	0	0	0		0	0
Residential	2	11	25	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	2,465	890	1,575
Internal Capture Percentage	9%	13%	7%
External Vehicle-Trips[5]	2,237	776	1,461
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	22%	91%
Retail	24%	20%
Restaurant	48%	19%
Cinema/Entertainment	N/A	N/A
Residential	3%	3%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Springrock Subdivision	**Organization:**	CR Engineering, Inc.
Project Location:	Ada County, Idhao	**Performed By:**	Brandon Atchley
Scenario Description:	Build-Out	**Date:**	05-Apr-19
Analysis Year:	2040	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	60	TSF	70	11	59
Retail	851	4	TSF	196	100	96
Restaurant	Multi	6, 6, 2	TSF	193	112	81
Cinema/Entertainment				0		
Residential	210 (220)	1925 (252)	DU	1,873	1,180	693
Hotel				0		
All Other Land Uses[2]	Other	--	--	158	58	100
				2,490	1,461	1,029

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00	0%	0%	1.00	0%	0%
Retail	1.00	0%	0%	1.00	0%	0%
Restaurant	1.00	0%	0%	1.00	0%	0%
Cinema/Entertainment	1.00	0%	0%	1.00	0%	0%
Residential	1.00	0%	0%	1.00	0%	0%
Hotel	1.00	0%	0%	1.00	0%	0%
All Other Land Uses[2]	1.00	0%	0%	1.00	0%	0%

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		8	2	0	1	0
Retail	2		28	0	25	0
Restaurant	2	33		0	15	0
Cinema/Entertainment	0	0	0		0	0
Residential	6	10	16	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	2,490	1,461	1,029
Internal Capture Percentage	12%	10%	14%
External Vehicle-Trips[5]	2,194	1,313	881
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	91%	19%
Retail	51%	57%
Restaurant	41%	62%
Cinema/Entertainment	N/A	N/A
Residential	3%	5%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

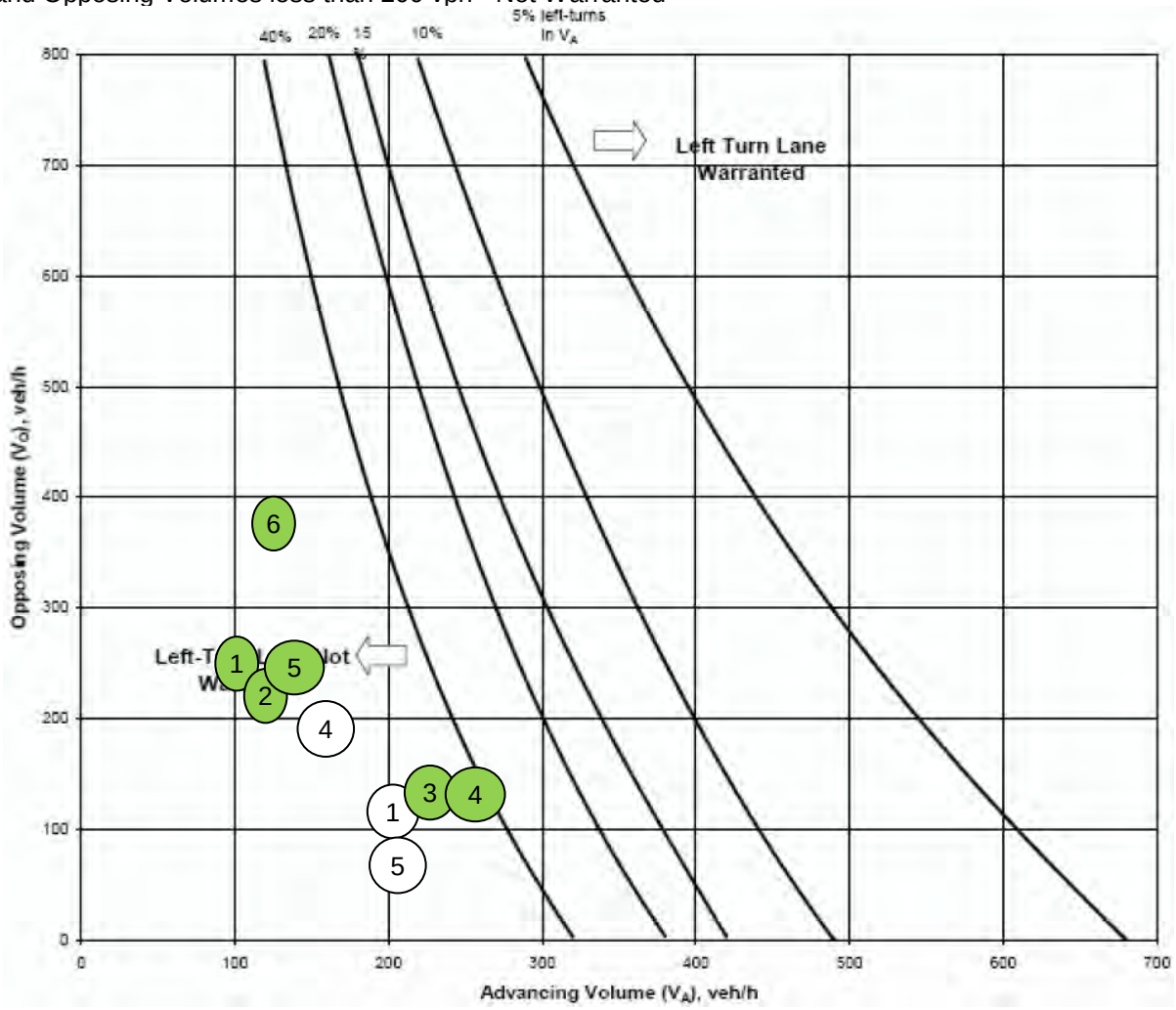
APPENDIX G: TURN LANE WARRANT WORKSHEETS

Springrock Subdivision
ACHD Left-Turn Lane Analysis - Two-Lane Roadway with 50 mph or greater posted speed

2019 Existing Traffic

	Intersection	Approach	Speed Limit (mph)	Peak Hour	Advancing Volume (vph)	Opposing Volume (vph)	Left-Turn Volume (%)	Meet Warrant?
1	Kuna Road & Locust Grove Road	EB	50	AM	204	112	4%	No
				PM	97	240	6%	No
2	Kuna Road & Eagle Road	EB	50	AM	196	108	1%	No*
				PM	114	220	3%	No
3	Kuna Road & Eagle Road	WB	50	AM	108	196	2%	No*
				PM	220	114	1%	No
4	Hubbard Road & Cloverdale Road	SB	50	AM	158	197	44%	No
				PM	256	126	5%	No
5	Hubbard Road & Cloverdale Road	NB	50	AM	202	88	2%	No
				PM	132	242	5%	No
6	Tenmile Creek Road & Pleasant Valley Road	NB	50	AM	191	137	1%	No*
				PM	120	371	26%	No

* Advancing and Opposing Volumes less than 200 vph - Not Warranted

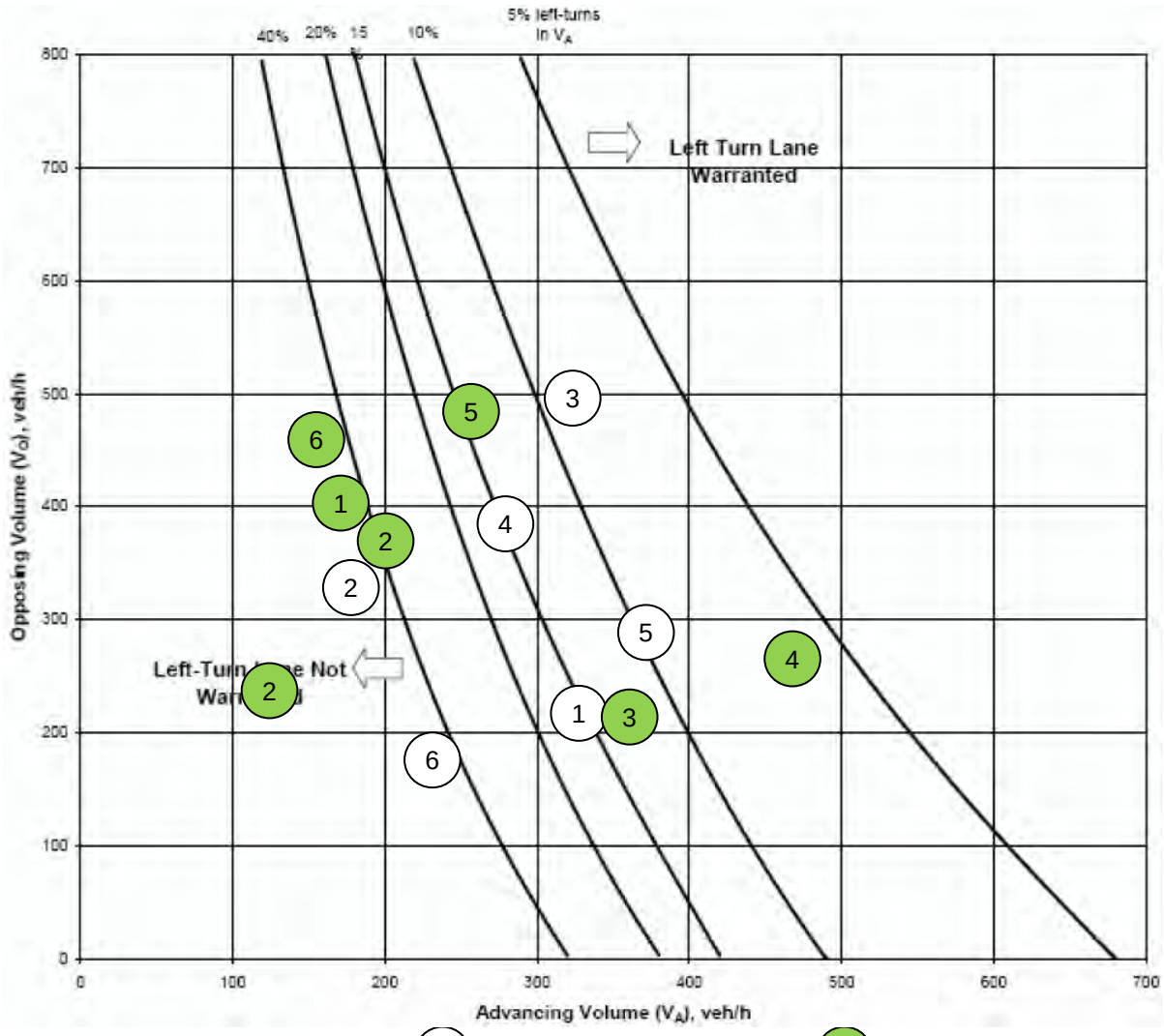


Weekday AM (1) Weekday PM (1)

Springrock Subdivision
ACHD Left-Turn Lane Analysis - Two-Lane Roadway with 50 mph or greater posted speed

2025 Background Traffic

	Intersection	Approach	Speed Limit (mph)	Peak Hour	Advancing Volume (vph)	Opposing Volume (vph)	Left-Turn Volume (%)	Meet Warrant?
1	Kuna Road & Locust Grove Road	EB	50	AM	330	193	4%	No
				PM	171	393	6%	No
2	Kuna Road & Eagle Road	EB	50	AM	319	187	1%	No
				PM	199	361	3%	No
3	Kuna Road & Eagle Road	WB	50	AM	187	319	2%	No
				PM	361	199	1%	No
4	Hubbard Road & Cloverdale Road	SB	50	**AM**	**279**	**378**	**40%**	**Yes**
				PM	474	247	5%	No
5	Hubbard Road & Cloverdale Road	NB	50	AM	386	168	2%	No
				PM	257	452	4%	No
6	Tenmile Creek Road & Pleasant Valley Road	NB	50	AM	230	164	1%	No
				PM	148	443	28%	No

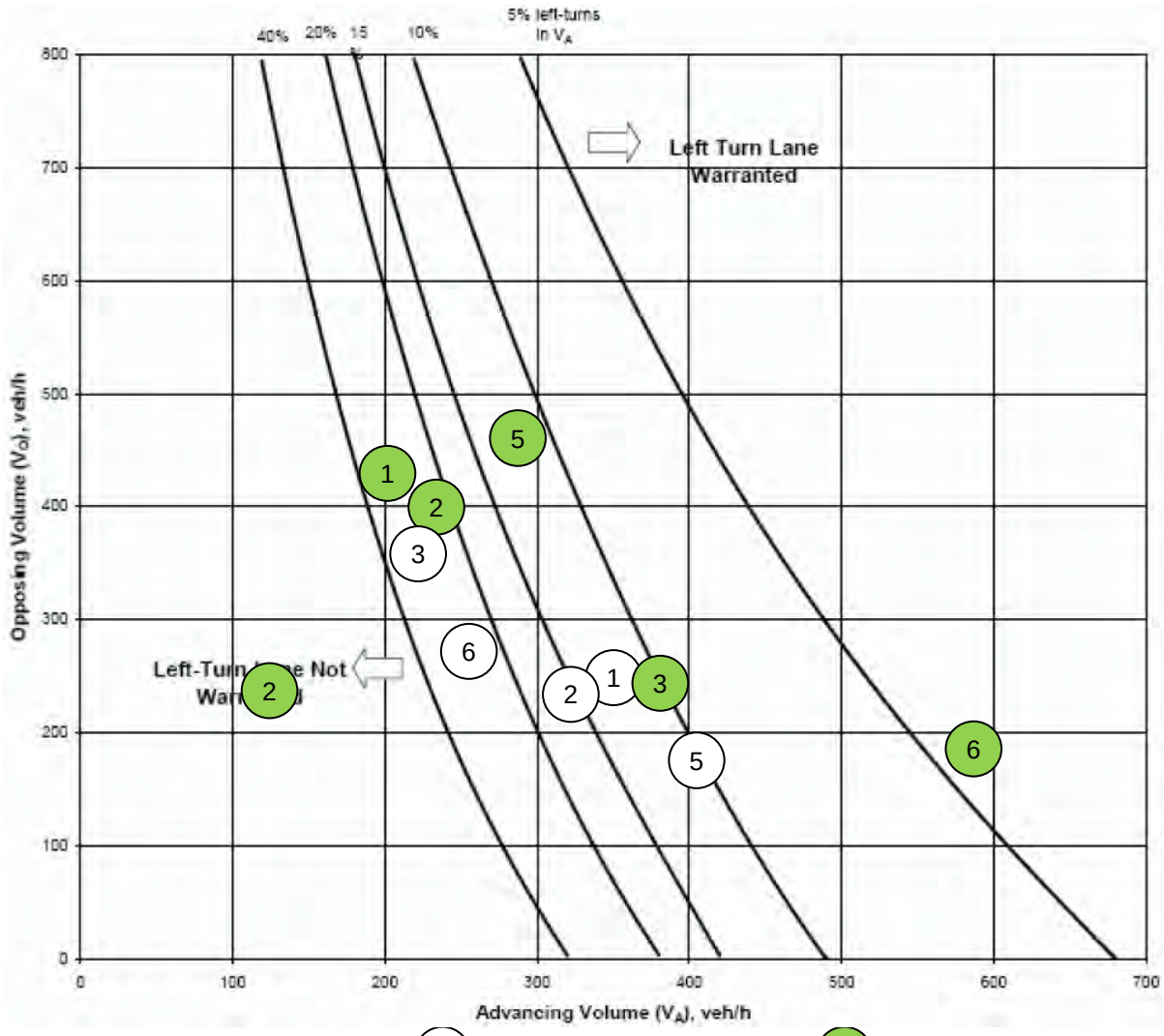


Weekday AM (1) Weekday PM (1)

Springrock Subdivision
ACHD Left-Turn Lane Analysis - Two-Lane Roadway with 50 mph or greater posted speed

2025 Total Traffic

	Intersection	Approach	Speed Limit (mph)	Peak Hour	Advancing Volume (vph)	Opposing Volume (vph)	Left-Turn Volume (%)	Meet Warrant?
1	Kuna Road & Locust Grove Road	EB	50	AM	350	226	4%	No
				PM	200	413	5%	No
2	Kuna Road & Eagle Road	EB	50	AM	339	220	1%	No
				PM	228	381	2%	No
3	Kuna Road & Eagle Road	WB	50	AM	220	339	1%	No
				PM	381	228	1%	No
4	Hubbard Road & Cloverdale Road	SB	50	**AM**	**Satisfied Under 2025 Background Conditions**			
				PM				
5	Hubbard Road & Cloverdale Road	NB	50	AM	406	168	2%	No
				PM	286	452	3%	No
6	Tenmile Creek Road & Pleasant Valley Road	NB	50	AM	246	259	8%	No
				PM	**171**	**581**	**38%**	**Yes**

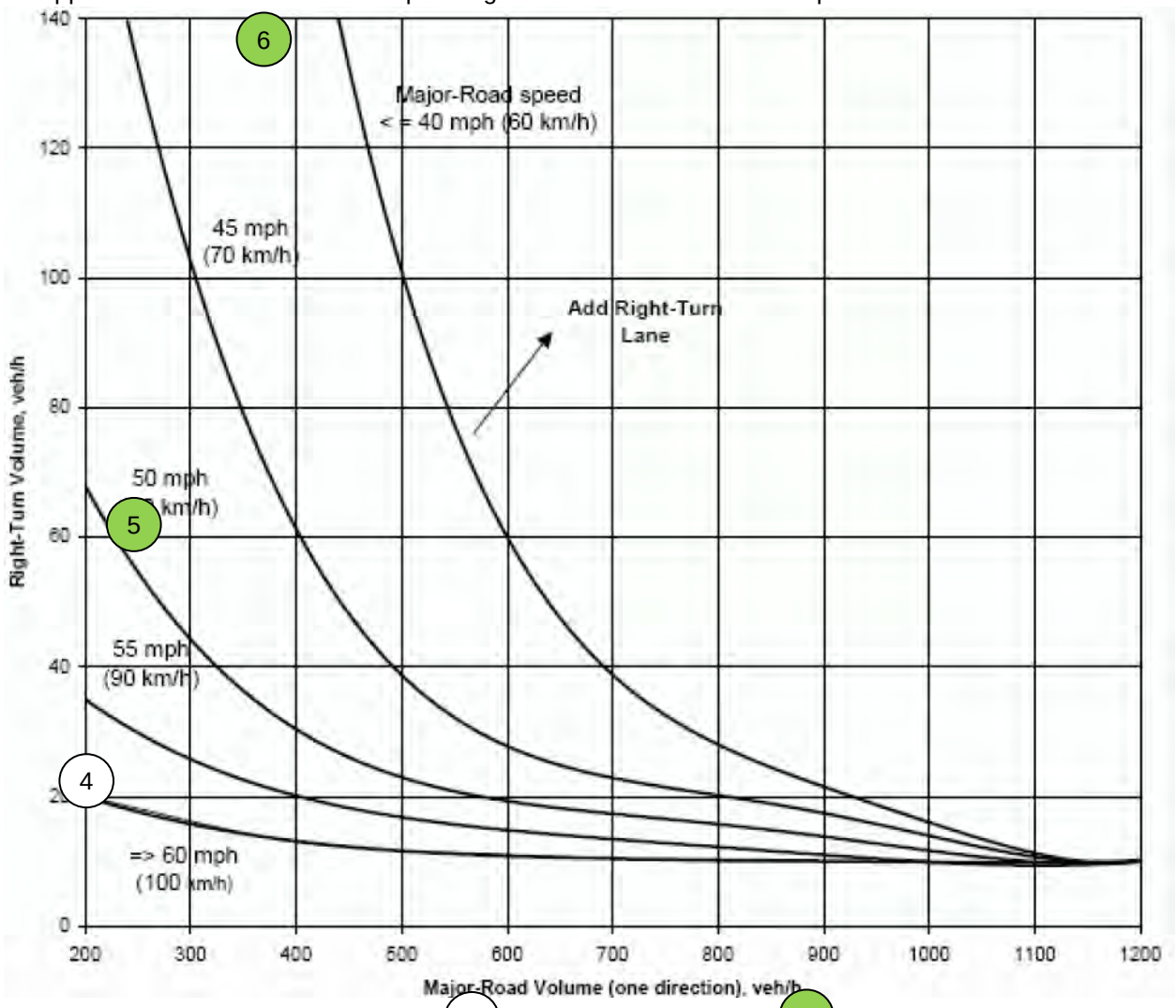


Springrock Subdivision
ACHD Right-turn Lane Guidelines for Two-Lane Roadways

2019 Existing Traffic

	Intersection	Approach	Speed Limit (mph)	Peak Hour	Right-Turn Volume (vph)	Major Road Volume (vph)	Meet Warrant?
1	Kuna Road & Locust Grove Road	WB	50	AM	4	112	No*
				PM	7	240	No*
2	Kuna Road & Eagle Road	WB	50	AM	0	108	No*
				PM	3	220	No*
3	Kuna Road & Eagle Road	EB	50	AM	14	196	No*
				PM	17	114	No*
4	Hubbard Road & Cloverdale Road	NB	50	AM	19	202	No
				PM	2	132	No*
5	Hubbard Road & Cloverdale Road	SB	50	AM	33	158	No*
				PM	**60**	**256**	**Yes**
6	Tenmile Creek Road & Pleasant Valley Road	SB	50	AM	3	137	No*
				PM	**170**	**371**	**Yes**

*Total approach volume less than 200 vph or right-turn volume less than 10 vph = not warranted



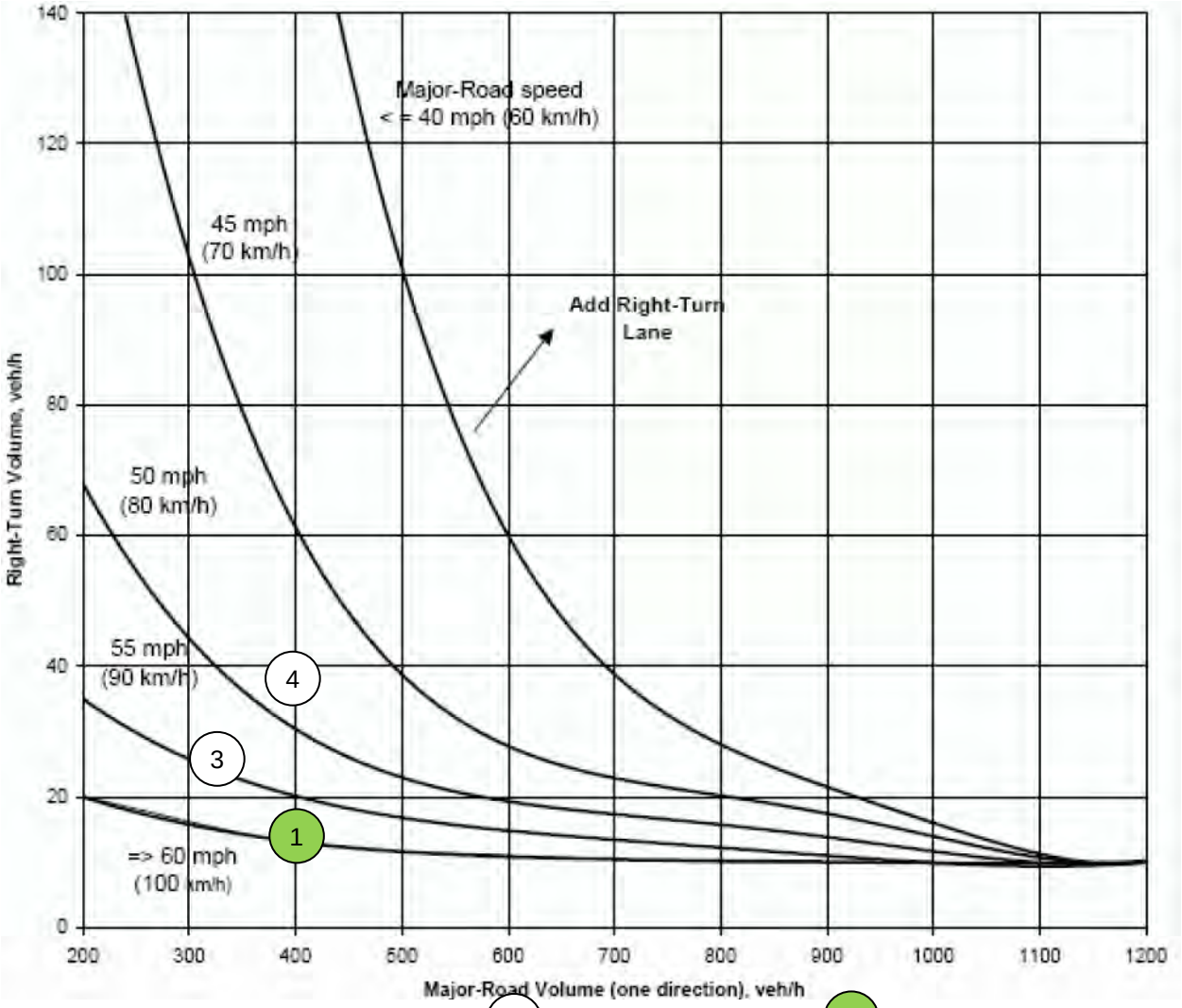
AM Peak 1 PM Peak 1

Springrock Subdivision
ACHD Right-turn Lane Guidelines for Two-Lane Roadways

2025 Background Traffic

	Intersection	Approach	Speed Limit (mph)	Peak Hour	Right-Turn Volume (vph)	Major Road Volume (vph)	Meet Warrant?
1	Kuna Road & Locust Grove Road	WB	50	AM	7	193	No*
				PM	12	393	No
2	Kuna Road & Eagle Road	WB	50	AM	1	187	No*
				PM	6	361	No*
3	Kuna Road & Eagle Road	EB	50	AM	22	319	No
				PM	27	199	No*
4	Hubbard Road & Cloverdale Road	NB	50	AM	**35**	**386**	**Yes**
				PM	7	257	No*
5	Hubbard Road & Cloverdale Road	SB	50	AM	Met Under Existing Conditions		
				PM			
6	Tenmile Creek Road & Pleasant Valley Road	SB	50	AM	Met Under Existing Conditions		
				PM			

*Total approach volume less than 200 vph or right-turn volume less than 10 vph = not warranted



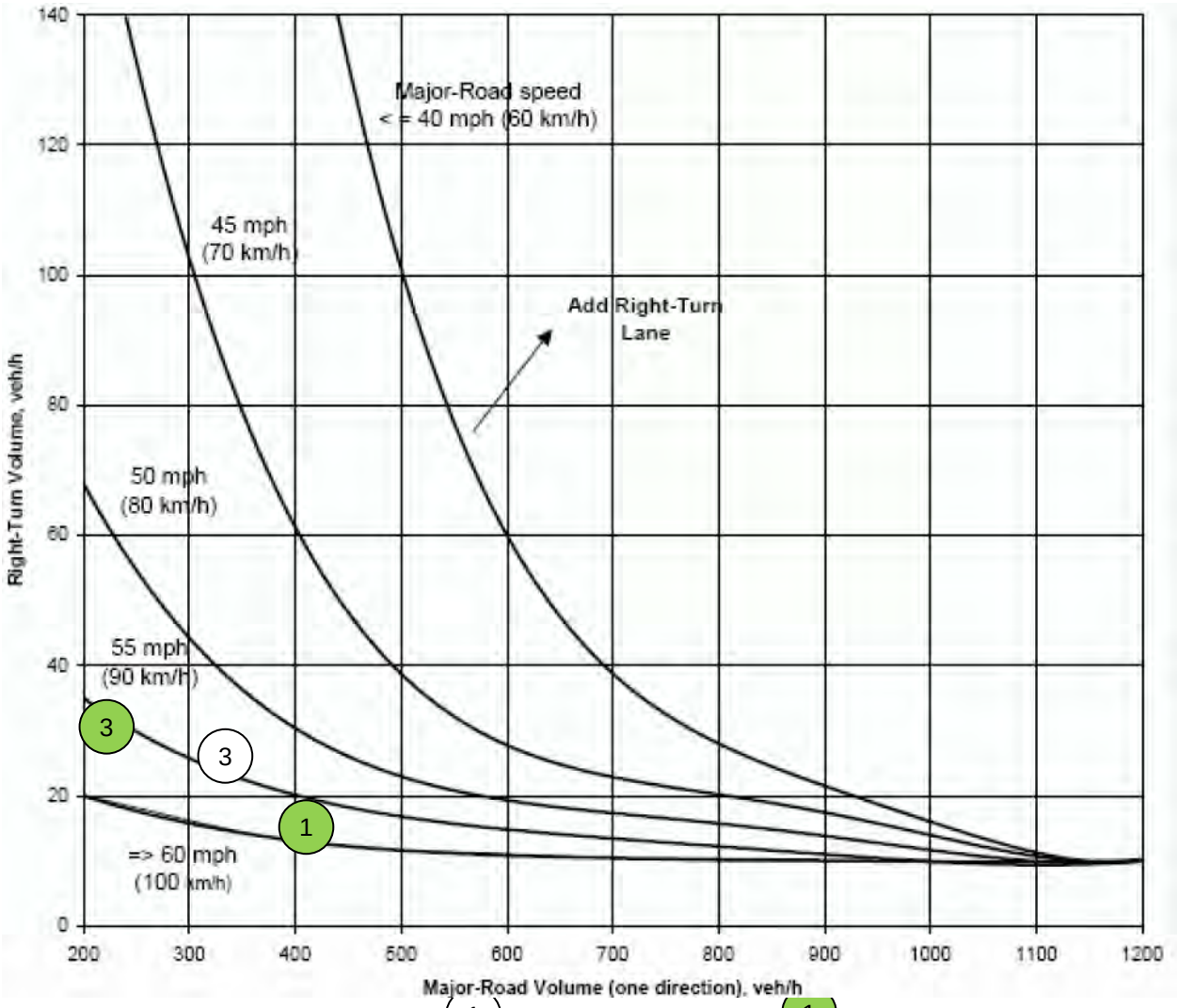
AM Peak 1 PM Peak 1

Springrock Subdivision
ACHD Right-turn Lane Guidelines for Two-Lane Roadways

2025 Total Traffic

Intersection		Approach	Speed Limit (mph)	Peak Hour	Right-Turn Volume (vph)	Major Road Volume (vph)	Meet Warrant?
1	Kuna Road & Locust Grove Road	WB	50	AM	7	226	No*
				PM	12	413	No
2	Kuna Road & Eagle Road	WB	50	AM	1	220	No*
				PM	6	381	No*
3	Kuna Road & Eagle Road	EB	50	AM	22	339	No
				PM	27	228	No
4	Hubbard Road & Cloverdale Road	NB	50	AM	Met Under Background Conditions		
				PM			
5	Hubbard Road & Cloverdale Road	SB	50	AM	Met Under Existing Conditions		
				PM			
6	Tenmile Creek Road & Pleasant Valley Road	SB	50	AM	Met Under Existing Conditions		
				PM			

*Total approach volume less than 200 vph or right-turn volume less than 10 vph = not warranted



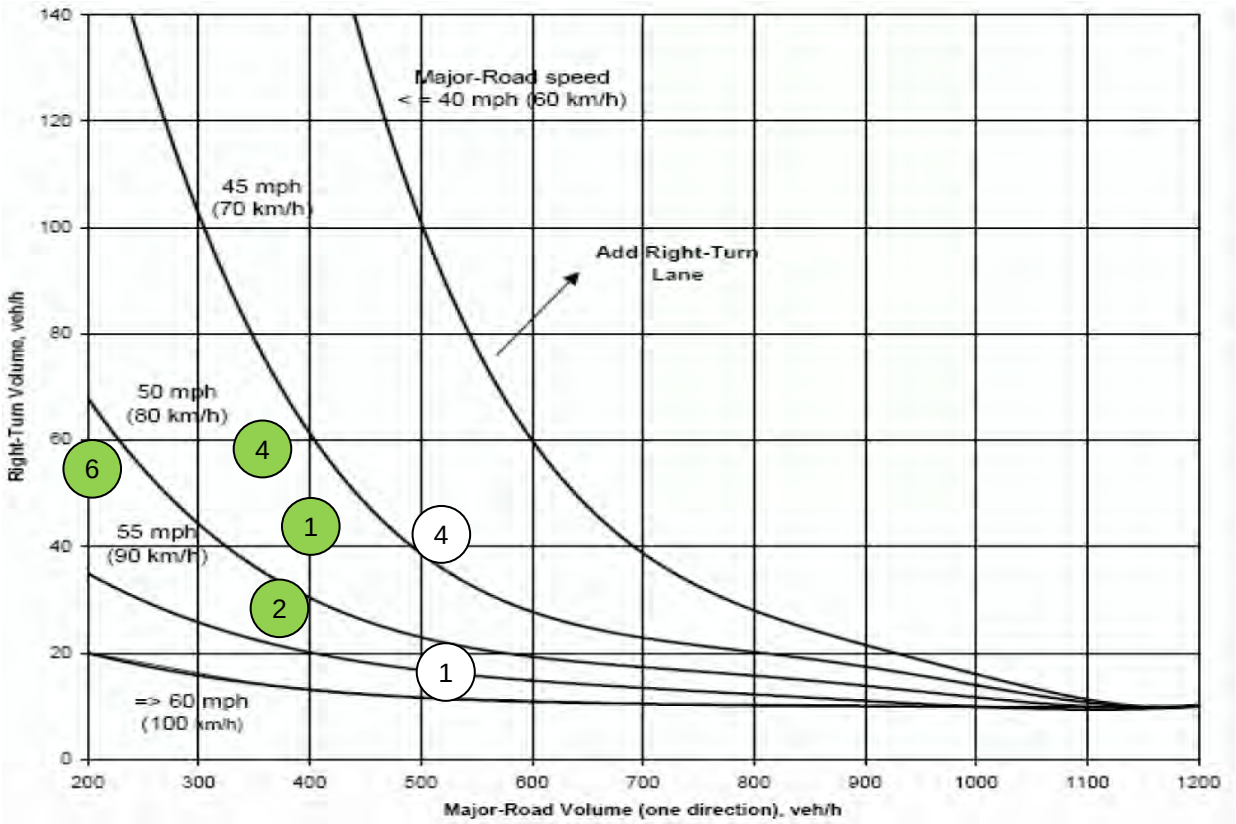
AM Peak (1) PM Peak (1)

Springrock Subdivision
ACHD Right-turn Lane Guidelines for Two-Lane Roadways

2025 Total Traffic - Site Accesses

	Intersection	Approach	Speed Limit (mph)	Peak Hour	Right-Turn Volume (vph)	Major Road Volume (vph)	Meet Warrant?
1	Access A (Int #15) and Five Mile Rd	SB	35	AM	13	513	No
				PM	41	397	No
2	Access B (Int #16) and Five Mile Rd	SB	35	AM	9	517	No*
				PM	26	366	No
3	Internal Collector and Five Mile Rd (Int #17)	NB	35	AM	49	196	No*
				PM	34	127	No*
4	Access D (Int #19) and Five Mile Rd	SB	35	AM	17	70	No*
				PM	53	208	No
5	Access E (Int #19) and Five Mile Rd	NB	35	AM	0	126	No*
				PM	0	84	No*
6	Access F (Int #20) and Five Mile Rd	SB	35	AM	19	47	No*
				PM	59	134	No*
7	Access G (Int #20) and Five Mile Rd	NB	35	AM	0	60	No*
				PM	0	42	No*
8	Access H (Int #21) and Five Mile Rd	SB	35	AM	19	25	No*
				PM	60	64	No*
9	Internal Collector and 10Mile Crk Rd (Int #22)	EB	35	AM	2	413	No*
				PM	6	96	No*

*Total approach volume less than 200 vph or right-turn volume less than 10 vph = not warranted



AM Peak (1) PM Peak (1)

APPENDIX H: SIGNAL WARRANT WORKSHEETS

PRELIMINARY TRAFFIC SIGNAL WARRANTS ANALYSIS SUMMARY

Intersection: Columbia Road & Cloverdale Road

Within Isolated Community or Major Street Speed Exceeds 40 mph: Yes

Traffic Conditions: 2025 Background

Major Street Information

Major Street Name: Cloverdale Road

Approach Direction: Northbound-Southbound

Number of Lanes for Moving Traffic on Each Approach: 1 lane

Posted Speed Limit: 50 mph

Total Approach Volume: 9,990 vpd

Minor Street Information

Minor Street Name: Columbia Road

Approach Direction: Eastbound-Westbound

Number of Lanes for Moving Traffic on Each Approach: 1 lane

Posted Speed Limit: 50 mph

Higher Minor Approach Volume: 2,970 vpd

Traffic Signal Warrant Analysis Findings

Warrants	Applicable?	Warrant Met?
Warrant 1, Eight-Hour Vehicular Volume	Yes	Yes
Warrant 2, Four-Hour Vehicular Volume	Yes	Yes
Warrant 3, Peak Hour	No	na
Warrant 4, Pedestrian Volume	No	na
Warrant 5, School Crossing	No	na
Warrant 6, Coordinated Signal System	No	na
Warrant 7, Crash Experience	No	na
Warrant 8, Roadway Network	No	na
Warrant 9, Intersection Near a Grade Crossing	No	na

2025 Build-Out Year Background Traffic Volume		
	Cloverdale Road (Major Street)	Columbia Road (Minor Street)
Hour Interval Begin	Combined Volume (vph)	Higher Approach Volume (vph)
00:00	37	11
01:00	35	8
02:00	22	9
03:00	24	5
04:00	48	14
05:00	193	64
06:00	530	172
07:00	657	262
08:00	491	205
09:00	461	159
10:00	466	152
11:00	525	148
12:00	541	162
13:00	526	173
14:00	646	167
15:00	739	190
16:00	904	229
17:00	981	249
18:00	701	175
19:00	482	130
20:00	447	124
21:00	290	82
22:00	168	55
23:00	79	22
Total	9,993	2,967

Warrant 1, Eight-Hour Vehicular Volume

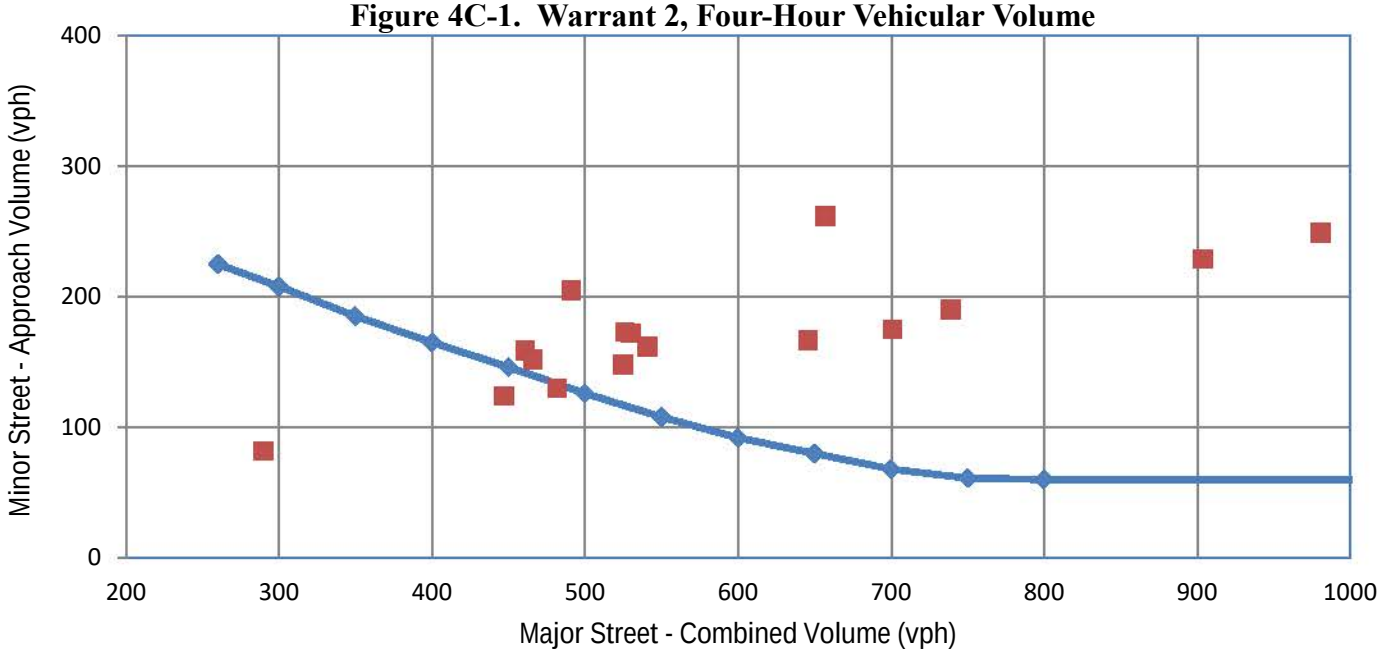
Hour Interval Begin	Cloverdale Road (Major Street) Combined Volume (vph)	Columbia Road (Minor Street) Higher Approach Volume (vph)	Hour Satisfied? Condition A	Condition B
00:00	37	11	Not Satisfied	Not Satisfied
01:00	35	8	Not Satisfied	Not Satisfied
02:00	22	9	Not Satisfied	Not Satisfied
03:00	24	5	Not Satisfied	Not Satisfied
04:00	48	14	Not Satisfied	Not Satisfied
05:00	193	64	Not Satisfied	Not Satisfied
06:00	530	172	Satisfied	Satisfied
07:00	657	262	Satisfied	Satisfied
08:00	491	205	Satisfied	Not Satisfied
09:00	461	159	Satisfied	Not Satisfied
10:00	466	152	Satisfied	Not Satisfied
11:00	525	148	Satisfied	Satisfied
12:00	541	162	Satisfied	Satisfied
13:00	526	173	Satisfied	Satisfied
14:00	646	167	Satisfied	Satisfied
15:00	739	190	Satisfied	Satisfied
16:00	904	229	Satisfied	Satisfied
17:00	981	249	Satisfied	Satisfied
18:00	701	175	Satisfied	Satisfied
19:00	482	130	Satisfied	Not Satisfied
20:00	447	124	Satisfied	Not Satisfied
21:00	290	82	Not Satisfied	Not Satisfied
22:00	168	55	Not Satisfied	Not Satisfied
23:00	79	22	Not Satisfied	Not Satisfied
		Number of Hours Satisfied	**15**	**10**
		Warrant 1 Met?	**Yes**	

Warrant 2, Four-Hour Vehicular Volume

Hour Interval Begin	Cloverdale Road (Major Street) Combined Volume (vph)	Columbia Road (Minor Street) Higher Approach Volume (vph)	Hour Satisfied?
00:00	37	11	Not Satisfied
01:00	35	8	Not Satisfied
02:00	22	9	Not Satisfied
03:00	24	5	Not Satisfied
04:00	48	14	Not Satisfied
05:00	193	64	Not Satisfied
06:00	530	172	Satisfied
07:00	657	262	Satisfied
08:00	491	205	Satisfied
09:00	461	159	Satisfied
10:00	466	152	Satisfied
11:00	525	148	Satisfied
12:00	541	162	Satisfied
13:00	526	173	Satisfied
14:00	646	167	Satisfied
15:00	739	190	Satisfied
16:00	904	229	Satisfied
17:00	981	249	Satisfied
18:00	701	175	Satisfied
19:00	482	130	Not Satisfied
20:00	447	124	Not Satisfied
21:00	290	82	Not Satisfied
22:00	168	55	Not Satisfied
23:00	79	22	Not Satisfied

Number of Hours Satisfied	**13**
Warrant 2 Met?	**Yes**
Within isolated community or major roadway speed exceeds 40 mph?	**Yes**

Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



PRELIMINARY TRAFFIC SIGNAL WARRANTS ANALYSIS SUMMARY

Intersection: Hubbard Road & Cloverdale Road

Within Isolated Community or Major Street Speed Exceeds 40 mph: Yes

Traffic Conditions: 2025 Background

Major Street Information

Major Street Name:	Cloverdale Road	
Approach Direction:	Northbound-Southbound	
Number of Lanes for Moving Traffic on Each Approach:	1	lane
Posted Speed Limit:	50	mph
Total Approach Volume:	9,460	vpd

Minor Street Information

Minor Street Name:	Hubbard Road	
Approach Direction:	Eastbound-Westbound	
Number of Lanes for Moving Traffic on Each Approach:	1	lane
Posted Speed Limit:	50	mph
Higher Minor Approach Volume:	2,450	vpd

Traffic Signal Warrant Analysis Findings

Warrants	Applicable?	Warrant Met?
Warrant 1, Eight-Hour Vehicular Volume	Yes	Yes
Warrant 2, Four-Hour Vehicular Volume	Yes	Yes
Warrant 3, Peak Hour	No	na
Warrant 4, Pedestrian Volume	No	na
Warrant 5, School Crossing	No	na
Warrant 6, Coordinated Signal System	No	na
Warrant 7, Crash Experience	No	na
Warrant 8, Roadway Network	No	na
Warrant 9, Intersection Near a Grade Crossing	No	na

2025 Build-Out Year Background Traffic Volume		
	Cloverdale Road (Major Street)	Hubbard Road (Minor Street)
Hour Interval Begin	Combined Volume (vph)	Higher Approach Volume (vph)
00:00	46	2
01:00	25	4
02:00	29	4
03:00	33	5
04:00	73	16
05:00	283	66
06:00	582	182
07:00	785	276
08:00	573	158
09:00	480	74
10:00	463	84
11:00	509	114
12:00	538	111
13:00	565	127
14:00	557	151
15:00	633	181
16:00	750	313
17:00	750	347
18:00	572	112
19:00	421	35
20:00	345	34
21:00	226	24
22:00	131	20
23:00	87	7
Total	9,456	2,447

Warrant 1, Eight-Hour Vehicular Volume

Hour Interval Begin	Cloverdale Road (Major Street) Combined Volume (vph)	Hubbard Road (Minor Street) Higher Approach Volume (vph)	Hour Satisfied? Condition A	Condition B
00:00	46	2	Not Satisfied	Not Satisfied
01:00	25	4	Not Satisfied	Not Satisfied
02:00	29	4	Not Satisfied	Not Satisfied
03:00	33	5	Not Satisfied	Not Satisfied
04:00	73	16	Not Satisfied	Not Satisfied
05:00	283	66	Not Satisfied	Not Satisfied
06:00	582	182	Satisfied	Satisfied
07:00	785	276	Satisfied	Satisfied
08:00	573	158	Satisfied	Satisfied
09:00	480	74	Not Satisfied	Not Satisfied
10:00	463	84	Not Satisfied	Not Satisfied
11:00	509	114	Satisfied	Not Satisfied
12:00	538	111	Satisfied	Satisfied
13:00	565	127	Satisfied	Satisfied
14:00	557	151	Satisfied	Satisfied
15:00	633	181	Satisfied	Satisfied
16:00	750	313	Satisfied	Satisfied
17:00	750	347	Satisfied	Satisfied
18:00	572	112	Satisfied	Satisfied
19:00	421	35	Not Satisfied	Not Satisfied
20:00	345	34	Not Satisfied	Not Satisfied
21:00	226	24	Not Satisfied	Not Satisfied
22:00	131	20	Not Satisfied	Not Satisfied
23:00	87	7	Not Satisfied	Not Satisfied
		Number of Hours Satisfied	**11**	**10**
		Warrant 1 Met?	**Yes**	

Warrant 2, Four-Hour Vehicular Volume			
	Cloverdale Road (Major Street)	Hubbard Road (Minor Street)	
Hour Interval Begin	Combined Volume (vph)	Higher Approach Volume (vph)	Hour Satisfied?
00:00	46	2	Not Satisfied
01:00	25	4	Not Satisfied
02:00	29	4	Not Satisfied
03:00	33	5	Not Satisfied
04:00	73	16	Not Satisfied
05:00	283	66	Not Satisfied
06:00	582	182	Not Satisfied
07:00	785	276	Satisfied
08:00	573	158	Satisfied
09:00	480	74	Not Satisfied
10:00	463	84	Not Satisfied
11:00	509	114	Not Satisfied
12:00	538	111	Not Satisfied
13:00	565	127	Satisfied
14:00	557	151	Satisfied
15:00	633	181	Satisfied
16:00	750	313	Satisfied
17:00	750	347	Satisfied
18:00	572	112	Satisfied
19:00	421	35	Not Satisfied
20:00	345	34	Not Satisfied
21:00	226	24	Not Satisfied
22:00	131	20	Not Satisfied
23:00	87	7	Not Satisfied

Number of Hours Satisfied	**8**
Warrant 2 Met?	**Yes**
Within isolated community or major roadway speed exceeds 40 mph?	**Yes**

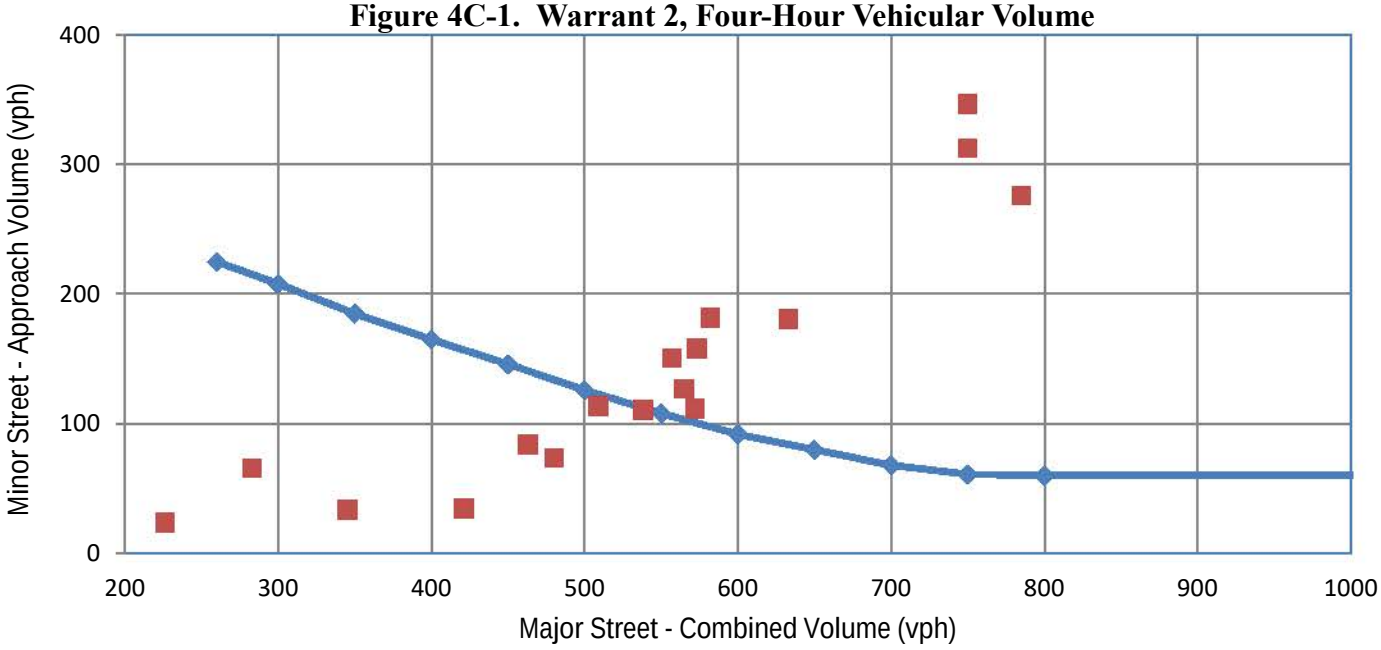



Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume