



CITY OF REDMOND

CITY HALL
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REVISED
CITY COUNCIL
March 23, 2021
Council Chambers • 411 SW 9th Street

COUNCIL MEMBERS

George Endicott
Mayor

Jay Patrick
Council President

Jon Bullock
Councilor

Krisanna
Clark-Endicott
Councilor

Clifford Evelyn
Councilor

Ed Fitch
Councilor

Shannon
Wedding
Councilor

MARCH 23, 2021

REGULAR MEETING AGENDA

6:00 PM

I. CALL TO ORDER / ESTABLISH A QUORUM

II. BLESSING - Pastor Jim Holm, City Center Church

III. PLEDGE OF ALLEGIANCE

IV. COMMENTS FROM CITIZENS AT THE MEETING

V. CONSENT AGENDA

- A. Minutes of January 26, 2021
- B. 2021 Surface Transportation Block Grant, Master Grant Fund Exchange Agreement No. 34781 (TR2103)
- C. Art Donation Acceptance: "Nest" by artist Skye Kimel

VI. PROCLAMATIONS

- A. Arbor Week

VII. PRESENTATIONS

- A. Quartz Park Update

VIII. BID AWARDS / BID REJECTIONS

- A. 2021 Overlay Project Bid Award to Tri-County Paving, LLC: \$342,390.00
- B. 2021 Type III Slurry Seal Project Bid Award to Doolittle Construction (TR2103): \$400,000
- C. 2021 Liquid Roads Project Bid Award to TopLoc Asphalt Maintenance, LLC, DBA: Central Oregon Asphalt Sealing: \$99,890.00

IX. PUBLIC HEARINGS

- A. Ord. #2021-01 - An ordinance concerning the vacation of SW Salmon Avenue from SW 6th Street to SW 1st Street.

- B. Ord. #2021-02 - An ordinance approving a Master Development Plan, Tentative Subdivision, and an amendment to the 2040 Greater Redmond Area Comprehensive Plan and Zone Map. (Kinton Estates)

X. ACTION ITEMS

- A. Res. #2021-04 - A resolution declaring certain territory as being annexed to and incorporated within the City of Redmond.
- B. Annexation Agreements with Nicko Properties, LLC (Tax Lot 141333C000300), Arron Curtis (Tax Lot 151330BC00900), Arch Holding Company, LLC (Tax Lot 151330BC00700), and Michael Malone (Tax Lot 1513290001200)

XI. MAYOR'S COMMENTS

XII. COUNCIL COMMENTS

- A. Councilor Evelyn's Written Comments
- B. Councilor Fitch's Written Comments

XIII. CITY MANAGER COMMENTS

XIV. ADDITIONAL COMMENTS FROM CITIZENS AT THE MEETING

XV. ADJOURN

Regular Council meetings are broadcast live on COTV11 – BendBroadband Channel 11 beginning at 6:00 p.m. on the 2nd and 4th Tuesdays of each month. Rebroadcasts are scheduled for the non-meeting Tuesdays at 6:00 p.m.

The City of Redmond encourages all citizens to participate in its programs and activities. This meeting location is accessible to people with disabilities. Requests for accommodation may include sign language interpreter service, assistive listening devices, materials in an alternate format or any other accommodation. If any accommodations are needed, please contact the ADA Coordinator at 541-504-3036 or access@redmondoregon.gov. Requests should be made as soon as possible, but at least 3 business days prior to the scheduled meeting.

The City of Redmond does not discriminate on the basis of disability status in the admission or access to, or treatment, or employment in, its programs or activities

SPECIAL CITY COUNCIL WORKSHOP OF THE CITY OF REDMOND WAS HELD JANUARY 26, 2021, VIA GOTOMEETING.

COUNCIL MEMBERS PRESENT: Jon Bullock – Krisanna Clark-Endicott – George Endicott – Clifford Evelyn – Ed Fitch – Jay Patrick – Shannon Wedding

MEDIA PRESENT: None

Mayor Endicott called the workshop to order at 6:00 p.m.

CURRENT EVENTS

Redmond Fire and Rescue Deputy Chief Jeff Puller updated the Council on COVID-19 vaccinations occurring at the Fairgrounds and the elimination of orthopedic trauma surgery from St Charles Redmond. The Redmond facility will now be a Level 4 trauma center. Chief Puller took questions from the Council.

GOALSETTING PART 1

A. Organization Operational Dashboards and Needs

Chief Financial Officer Jason Neff provided the Council with a presentation on the operational health of the City which identified staffing and vehicles/equipment needs across departments. Mr. Neff explained that due to continued population growth of the City, 36 new staff members will be needed over the next four years. Over the past four years, 49 were hired. Areas most in need include Police officers and support staff, Parks, Engineering, Facilities Maintenance, Central Services, and Information Technology.

In response to comments from Mayor Endicott, City Manager Keith Witcosky explained that the workload of IT staff has been significantly impacted by COVID-19 and the amount of technology they are managing.

Councilor Fitch stated that including the needed monies in addition to the overall General Fund percentage would provide the Council with another visual aid of department needs. Councilor Bullock added that for additional context a report showing the amount of funding needed to move the gauge for General Fund departments to orange or yellow categories for would be helpful as well. Mayor Endicott noted not all departments will have all their needs funded so viewing it in terms of longevity would be beneficial as well.

B. Q & A on Achievements

Mayor Endicott explained that every staff report lists a Council goal and the Fiscal Year (FY) 20/21 Achievements correlate to those goals. City Manager Keith Witcosky shared the Achievements for the first half of the FY which is not realistic or accurate in terms of an overall view of the work being done. In October 2021, a final recap of the FY 20/21 Achievements will be brought back to Council for a full review. Mr. Witcosky reviewed each major category of the goals noting the Achievements reflect the workload volume of staff. Various questions and comments from Council were addressed.

C. Section by Section Review/Input from Council Members

i. Additional Revised Goals/Edits

Mr. Witcosky explained that the set of goals being proposed for consideration includes various goals submitted by the Council as well as those proposed by the Leadership Team. The Council has several very important policy issues that do not always translate into a specific goal, so the Leadership Team tracks those items separately outside of the actual goals.

After discussion by the Council, the Fiscal Year 2021/2022 are proposed as follows:

1. SUSTAIN OPERATIONS

Provide or enhance current levels of operations in all facets of municipal service delivery.

- A. Provide critical and necessary services for the entire City.
 - i. Strive to achieve a level of Police services required to make Redmond the “safest community in Oregon”.
 - a. Make efforts to scale staffing needs in proportion to population growth.
 - b. Achieve a high standard of professionalism and efficiency in the conduct of Police work such as investigating crimes and accidents, arresting violators, and addressing traffic safety issues.
 - c. Pursue opportunities to educate and partner with the community to enhance safety.
 - d. Advance initiative for a new Police Station through land acquisition and appropriate needs analysis, and financial strategies. Target new facility opening by 2024/2025.
 - ii. Provide City water and wastewater operations to meet or exceed public health standards.
 - a. Fully evaluate Wastewater Treatment Plant expansion options and complete the design for the preferred option.
 - 1. Leverage potential relocation with opportunity to connect residents to recreational opportunities outside of the UGB (Deschutes River, Smith Rock, BLM trails, etc.).
 - iii. Ensure appropriate investment in Central Services staffing and infrastructure to support efficient delivery of City services.
- B. Increase the efficiency and/or effectiveness with which the City provides public services.
 - i. Explore opportunities to increase efficiencies and economies of scale through sharing of services and resources with other public agencies.
 - ii. Endeavor to ensure all enterprise activities (water, wastewater, stormwater, airport, golf, and community development) earn sufficient income to meet operating expenses including capital maintenance and replacement.
 - iii. Take continual steps to make City services more user/business friendly.
 - iv. Seek and achieve efficiencies through the acquisition and implementation of new technologies.
 - v. Incorporate strategic use of technology, social media, the internet and other tools to inform and communicate with citizens and stakeholders.
 - vi. Seek opportunities to strategically use City capital assets such as buildings and properties.
 - vii. Improve the energy independence of City owned facilities and transportation fleet operations. Develop short and long-term strategies for increasing energy efficiency and utilizing renewable resources.

- C. Explore opportunities to augment revenues to support existing operations and infrastructure maintenance.
- D. Establish and adhere to best practice and sound financial policies associated with operating contingencies; fund balances/reserves/debt service ratios; and other metrics.
 - i. Maintain sufficient fund balance/reserves in the General Operating Funds and enterprise funds to accommodate cyclical cash flow needs as well as a reasonable contingency for unexpected financial liabilities.
 - ii. Ensure the City can remain healthy during economic downturns.
- E. Prioritize municipal services to match community needs and desires with available funding.
- F. Take necessary actions to enhance and maintain the credit rating of the City and its affiliated entities.
- G. Manage financial affairs in a transparent, responsible and consistent manner.

2. EFFECTIVE STEWARDSHIP AND EMPLOYEE INVESTMENT

Cultivate a work environment that acknowledges employees are our most valuable asset.

- A. Foster productivity, learning and growth, and recognize employees are the foundation of success.
 - i. Promote an environment that retains and attracts a diverse, highly qualified and motivated workforce by offering training/career development, leadership opportunities and other motivating challenges.
 - ii. Maintain positive, productive and collaborative labor relations.
 - iii. Assure employment contracts are fiscally sustainable.
 - iv. Emphasize succession planning to maintain the long-term health of the organization.
 - v. Celebrate staff effort and achievement.
 - vi. Respond to the organizational need to lift the post COVID morale, productivity and working relationships.
- B. Maintain a clear strategic direction and policy guidance as a foundation for a creative, innovative and efficient work environment.
 - i. Support an organizational culture of collaboration, performance, accountability, and teamwork.
 - ii. Look for opportunities to improve efficiency through appropriate delegation of decision-making authority.
- C. Commit to clear and collaborative lines of communication between City leadership and City Council.

3. CITY INFRASTRUCTURE

Preserve and enhance the City's infrastructure to balance population growth with necessary infrastructure.

- A. Endeavor to adequately maintain the City's roads, utility infrastructure, parks and pedestrian/bicycle infrastructure.
- B. Maintain a 5-year Capital Improvement Program that drives decisions and is updated annually through a public process.
- C. Leverage General Fund revenues by exploring resource development opportunities, grants and other sources of revenue to address City's infrastructure needs.
- D. Develop the City's infrastructure pursuant to the priorities identified in the City's infrastructure systems plans.
- E. Look for opportunities to fund elements of the ADA Transition Plan over the long term. Ensure implementation is facilitated in cooperation and with input from the mobility community and the general public.
- F. Seek solutions and financing strategies to improve sidewalk connectedness, particularly in older, established neighborhoods that lack sidewalk infrastructure.

4. ECONOMIC DEVELOPMENT

Develop and maintain an environment that promotes and supports a strong, healthy and diverse economic base.

- A. Support local businesses and individuals through state and federally allocated COVID CARES resources to assist in the economic recovery of the pandemic.
- B. Help existing businesses within the city thrive and foster opportunities for new business and job growth.
 - i. Promote the connection between the business community and the related services provided by Central Oregon Community College's (COCC) Technology Education Center, Redmond Economic Development, Inc. (REDI), Redmond Chamber of Commerce, and State agencies.
 - ii. Work with REDI, EDCO, and other partners to facilitate new traded sector business development in Redmond.
- C. Maintain Redmond's reputation as "the place to do business in Central Oregon".
 - i. Provide incentive programs that are regionally and nationally competitive and targeted towards businesses that create family-wage jobs.
 - ii. Ensure an adequate supply of planned commercial and industrial land.
 - iii. Provide well planned, maintained, high quality infrastructure that create competitive advantages for business and community growth.
 - iv. Make efforts to offset infrastructure costs with state and federal resources.
- D. Invest in infrastructure on key opportunity sites that facilitates commercial and industrial site readiness.
 - i. Take the necessary steps to increase water and sewer service to strategic lands that are currently unserved or underserved.

- ii. Increase access to Large Lot Industrial lands by examining opportunities to connect 19th Street to Hwy. 97 access points south towards Quarry Road.
- E. Support the expansion of educational opportunities.
 - i. Strengthen the City's relationship with the Redmond School District, the Redmond Proficiency Academy, COCC, and other educational institutions.
 - ii. Support the expansion, relocation and/or creation of new institutions of higher education into the Central Oregon region.
 - iii. Look for opportunities to get City departments involved in internship programs through REDI and the Better Together initiative.

5. REDMOND AIRPORT / ROBERTS FIELD

Establish Redmond Municipal Airport as the best airport of its size in the country.

- A. Maintain safety and security as the number one priority for the airport.
- B. Promote business activities on airport lands located inside the fence line.
 - i. Attract aviation related businesses to airport property within the fence line.
 - ii. Apply leasing strategies that are flexible and attractive to tenants yet comply with FAA and TSA requirements.
 - iii. Aggressively pursue physical improvements to airport facilities, increase amenities and enhance the customer experience.
 - iv. Pursue State, FAA, and other funding for development, expansion and preservation of the airport's physical facilities.
- C. Maximize the development potential of airport lands located outside the fence line.
 - i. Create and implement standardized leases for current and future leased properties.
 - ii. Ensure long-term relationships with property developers contain enforceable benchmarks and performance measures.
 - iii. Examine existing plans to determine viability of bringing water, sewer, and other necessary utilities, to undeveloped and unserved airport lands.
 - iv. Identify opportunities, in collaboration with the FAA, to incentivize and accelerate outside the fence land development.
 - v. Work with REDI to determine the market for industrial parcels on Old Juniper Golf Course and other lands.
- D. Provide exceptional air service opportunities.
 - i. Actively work with the Central Oregon Air Service Team (COAST) to market the airport and the region to attract new commercial air carriers, and new and expanded routes.

- ii. Encourage regional cooperation to create a sustainable air service development funding strategy that could provide necessary incentives to attract additional commercial air carrier service.
- iii. Market the airport as an asset to commercial aviation businesses other than passenger carriers.
- iv. Use the Airport terminal and other opportunities to promote City amenities and attractions.

6. COMMUNITY ENHANCEMENT AND PARTICIPATION

Create an image and identity that generates community pride and ensures a high level of livability.

- A. Improve and beautify City assets through volunteer efforts.
- B. Improve the quality and amenities of Redmond neighborhoods.
- C. Invest in the use of public participation and community engagement in public policy decisions.
 - i. Use innovative approaches to public outreach and effective public participation to all members of the community.
 - ii. Recognize and celebrate the work of the volunteers who serve on City committees and commissions.
 - iii. Celebrate the diversity of our community through Committees and Commissions.
 - iv. Increase knowledge and awareness of citywide diversity, equity and inclusion and determine if City Council should take additional steps to advance a DEI initiative.
- D. In partnership with the Chamber and service organizations, plan for a community celebration when public health metrics dictate it is safe to do so.
- E. Beautify and improve the major transportation corridors within the city.
- F. Plan, promote and develop bicycle and pedestrian facilities.
- G. Strive for an interconnected parks and open spaces.
 - i. Collaborate with community partners to ensure Redmond residents have access to parks and open space amenities.
 - ii. Incorporate Community Gardens into the development concepts for Skyline Village.
- H. Initiate a “Be Neighborly” campaign to raise community awareness about behaviors which diminish the quality of life of others such as, dogs off leash, speeding, ignoring pedestrians at crosswalks, etc.

7. COMPREHENSIVE PLANNING

Enhance the quality of life through adoption of programs, policies, and standards that manage growth while maintaining Redmond’s small-town feel.

- A. Promote quality development.
 - i. Use the City Code and other tools, to incorporate the Great Neighborhood Principles for both new and infill development.

- ii. Review and drive livability goals for design requirements in residential and commercial development in Redmond.
- B. Support orderly annexation from Urban Growth Boundary.
- C. Work with partners on Emergency Management and Preparedness.
 - i. Coordinate emergency planning and preparedness exercises that require mobilization of facilities such as the Redmond Airport.
 - ii. Participate in Cascadia related emergency planning and preparedness.
- D. Identify housing objectives, policies, and implementation strategies to diversify the range of housing choices.
 - i. Assess the need for lower income housing units throughout the community and propose tools to City Council to address these needs.
 - a. Use metrics to report progress annually.
 - ii. Work with Deschutes County and appropriate neighboring communities to reduce homelessness and participate in community conversations to advance this topic.
- E. Pursue opportunities and work with Cascades East Transit to develop and promote public transit.

8. REGIONAL COOPERATION

Recognize Central Oregon as a whole is stronger than the sum of its individual parts and regional relationships are critical in Redmond's planning and decision-making process.

- A. Participate in and support the work of the Central Oregon Cities Organization (COCO) and League of Oregon Cities (LOC).
- B. Maintain Redmond's positive working relationship with regional, national and statewide entities and governments.
 - i. Support countywide recreation initiatives through partnerships with the Redmond Area Park and Recreation District.
 - ii. Examine opportunities to create connections between Fairground activities/uses and Redmond.
 - iii. Strategically promote the placement and appointment of Redmond representatives to committees that have state and regional significance.
 - iv. Strategically promote Redmond priorities and initiatives to appointed and elected state officials and statewide committees.
 - v. Maintain Council liaison assignments and advocacy on the Central Oregon Area Commission on Transportation; the Central Oregon Council on Aging; the Central Oregon Intergovernmental Council; the Deschutes County Fair Board and Fair Association; Deschutes Water Alliance; Economic Development for Central Oregon; Greater Redmond Historic Society; Housing Works; Local Officials Advisory Committee; Local Public Safety Coordinating Council; NeighborImpact; Oregon Mayors Association; Redmond Area Park and Recreation District; Redmond Chamber of Commerce; Redmond Economic Development, Inc.; and the Redmond School District Board.

- C. Participate in the activities and groups that are addressing water related issues affecting the Deschutes River Basin.
- D. Provide leadership and participation on efforts to pursue funding opportunities to implement the Council adopted US 97 Corridor Improvement Plan.

9. URBAN RENEWAL

Deploy resources to encourage investment and advance the goals of the City's urban renewal areas.

- A. Advance objectives of the Downtown Urban Renewal Plan to maintain the vitality of the downtown core; provide sufficient parking; make productive use of land; create opportunities for new development; relieve traffic problems and improve pedestrian safety; and provide new public amenities and open spaces
- B. Advance objectives in the South Highway 97 Urban Renewal Plan including creation of an urban renewal advisory committee, staffing, and pursuit of leverage opportunities for projects and programs.
- C. Invest in infrastructure projects that that leverages job creation and private investment and advance public objectives.
- D. Pursue catalytic projects through programs that leverage private investment, job growth, accelerate the growth of the tax base.
- E. Proactively encourage absentee landlords to invest in their properties and increase the value of their buildings.

Mr. Witcosky recapped the list of policy issues as 1) transit planning and funding; 2) how the City finances projects; 3) marijuana and dispensaries; 4) affordable housing tools; 5) homelessness; 6) diversity, equity, and inclusion; 7) Convention Visitor's Bureau strategic plan and tourism investments; 8) livability related city code; 9) Airport land development strategies; 10) reroute discussion with ODOT. Capital improvement projects that Council will receive regular updates on include 1) Airport terminal expansion; 2) wastewater treatment plant expansion; 3) new police station; 4) Juniper Golf Course; 5) Skyline Village.

There being no further business, the workshop was adjourned at 8:13 p.m.

Prepared by Kelly Morse, City Recorder

APPROVED by the City Council and SIGNED by the Mayor this 23rd day of March 2021.

George Endicott, Mayor

ATTEST:

Kelly Morse, City Recorder



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STAFF REPORT

DATE: March 23, 2021
TO: Redmond City Council
Keith Witcosky, City Manager
THROUGH: John Roberts, Deputy City Manager
Bill Duerden, Public Works Director
FROM: Julie Lovrien, Administrative Services Supervisor
SUBJECT: 2021 Surface Transportation Block Grant, Master Grant Fund Exchange Agreement No. 34781 (TR2103)

Addresses Council Goal:

3C. Leverage General Fund revenues by exploring resource development opportunities, grants and other sources of revenue to address City's infrastructure needs.

Report in Brief:

This item requests City Council authorization to enter into a Master Agreement with the Oregon Department of Transportation (ODOT) for the Fund Exchange Program (see attached agreement No. 34781). This item also requests authorization for the City Manager to sign the annual Funding Request Letters per the terms of the Master Agreement.

Background:

The Federal Highway Administration's Surface Transportation Block Grant (STBG) program replaces the Surface Transportation Program and provides flexible multi-modal funding that can be used for a broad range of transportation projects. Funds are allocated to states and distributed to cities, counties and metropolitan planning organizations through a population-based formula. The use of STBG funds are limited to Federal Aid eligible streets, which make up about one-third of the City's street system.

The Fund Exchange program administered by ODOT provides local jurisdictions the option of exchanging federal STBG funds for State Highway Fund dollars. This program provides a flexible funding option for delivering transportation improvement projects without being constrained by federal requirements such as being limited to only Federal Aid eligible streets.

The funds are exchanged at a ratio of \$0.94 state for \$1.00 federal in 2021 to offset the costs for administering the program. The ratio will be adjusted to \$0.90 state for \$1.00 federal starting in 2022 and going forward.

Discussion:

The attached intergovernmental agreement with ODOT provides the framework for the Fund Exchange Program. It has a term from January 1, 2021, through September 30, 2024, and details the process by which state funds may be requested each year. The agreement also establishes the exchange rate and provides the requirements associated with use of the exchange program.

The City expects to receive approximately \$377,000 in state funds in 2021 and less than \$500,000 per year for the remaining two years of the agreement. These funds will be allocated to the City's street maintenance program such as the annual slurry seal project.

Fiscal Impact:

Funding from the STBG program is anticipated each year and included in the budgeting process. The Fiscal Year 2020/2021 Budget includes \$339,400 in estimated STBG Funds revenue within the Transportation - Infrastructure Maintenance sub-fund (see attached Budget Detail).

Alternative Courses of Action:

1. Approve the Agreement.

2. Reject the Agreement.
3. Request more information.

Recommendation / Suggested Motion:

"I move to approve the Fund Exchange Program Master Grant Agreement No. 34781 with the Oregon Department of Transportation and authorize the City Manager to sign the annual Funding Request Letters per the terms of the agreement."

BUDGET DETAIL

Transportation Fund		FY 2017/18 Actual	FY 2018/19 Actual	FY 2019/20 Budget	FY 2020/21 Proposed Budget	FY 2020/21 Approved Budget	FY 2020/21 Adopted Budget
22118-01-000-06-00-97	Chgs Svc From Other Fund	25,268	41,068	39,168	39,959	39,959	39,959
22118-01-000-06-00-98	Contractual Services	3,882	1,315	1,400	4,080	4,080	4,080
22118-01-000-06-85-05	ISF Central Services	79,455	82,990	86,723	94,003	94,003	94,003
22118-01-000-06-85-10	ISF IT	16,877	25,065	22,401	31,739	31,739	31,739
22118-01-000-06-85-15	ISF Risk Management	9,966	9,693	9,033	10,306	10,306	10,306
TOTAL MATERIALS & SERVICES		622,138	620,120	632,270	788,777	788,777	788,777
Capital Outlay							
22118-01-000-07-00-03	Machinery & Equipment	7,500	-	-	-	-	-
TOTAL CAPITAL OUTLAY		7,500	-	-	-	-	-
TOTAL SUB-FUND EXPENDITURE		1,213,162	1,257,142	1,344,945	1,522,363	1,522,363	1,522,363
NET SUB-FUND		(51,184)	21,657	-	-	-	-

Sub-fund: Transportation - Infrastructure Maintenance

Resources

22161-01-000-04-30-50	STP Funds	-	-	309,000	339,400	339,400	339,400
22161-01-000-04-80-10	Interest - Investment	8,060	21,464	10,000	6,600	6,600	6,600
22161-01-000-04-86-10	Intrafund Tfrs-from Operations	1,000,000	1,150,000	1,160,000	1,000,000	1,000,000	1,000,000
22161-01-000-04-99-00	Beginning Fund Balance	422,127	459,758	363,495	801,620	801,620	801,620
TOTAL RESOURCES		1,430,187	1,631,222	1,842,495	2,147,620	2,147,620	2,147,620

Materials & Services

22161-01-000-06-02-05	Asphalt Maintenance	407,216	485,988	320,000	600,000	600,000	600,000
22161-01-000-06-02-10	Bridge Maintenance	-	-	90,000	94,000	94,000	94,000
22161-01-000-06-02-15	Signage	68,930	55,838	55,000	55,000	55,000	55,000
22161-01-000-06-02-20	Surface Seals	339,954	304,090	657,500	600,000	600,000	600,000
22161-01-000-06-02-25	Sidewalk Maint	27,950	14,179	30,000	35,000	35,000	35,000
22161-01-000-06-02-30	Striping	17,340	22,877	45,000	45,000	45,000	45,000
22161-01-000-06-02-35	Legend Painting	30,095	13,981	25,000	35,000	35,000	35,000
22161-01-000-06-02-40	Vegetation Maintenance	3,843	20,183	15,000	40,000	40,000	40,000
22161-01-000-06-02-45	Street Sweeping	6,451	10,828	10,000	12,000	12,000	12,000
22161-01-000-06-02-50	Shoulder Maintenance	8,813	11,277	15,000	15,000	15,000	15,000
22161-01-000-06-02-55	Concrete Repair	54,625	51,570	55,000	60,000	60,000	60,000
22161-01-000-06-02-60	Snow & Ice Maintenance	5,214	1,137	6,000	26,000	26,000	26,000
TOTAL MATERIALS & SERVICES		970,429	991,948	1,323,500	1,617,000	1,617,000	1,617,000

Reserve

22161-01-000-12-00-20	Reserve for Future Expend	-	-	518,995	530,620	530,620	530,620
TOTAL RESERVE		-	-	518,995	530,620	530,620	530,620

TOTAL SUB-FUND EXPENDITURE		970,429	991,948	1,842,495	2,147,620	2,147,620	2,147,620
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NET SUB-FUND		459,758	639,275	-	-	-	-
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Sub-fund: Transportation - Capital Vehicle & Equipment

Resources

22163-01-000-04-80-10	Interest - Investment	64	1,830	-	-	-	-
22163-01-000-04-86-10	Intrafund Tfr - from Operations	165,000	170,000	225,000	225,000	225,000	225,000
22163-01-000-04-99-00	Beginning Fund Balance	46,313	35,647	155,000	140,900	140,900	140,900
TOTAL RESOURCES		211,377	207,477	380,000	365,900	365,900	365,900

Capital Outlay

22163-01-000-07-00-03	Machinery & Equipment	50,930	-	-	-	-	-
22163-01-000-07-00-04	Heavy Equipment	83,366	50,869	215,000	225,000	225,000	225,000
22163-01-000-07-00-06	Vehicles	41,434	-	55,000	-	-	-
TOTAL CAPITAL OUTLAY		175,730	50,869	270,000	225,000	225,000	225,000

Reserve

22163-01-000-12-00-20	Reserve for Future Expend	-	-	110,000	140,900	140,900	140,900
TOTAL RESERVE		-	-	110,000	140,900	140,900	140,900

TOTAL SUB-FUND EXPENDITURE		175,730	50,869	380,000	365,900	365,900	365,900
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NET SUB-FUND		35,647	156,608	-	-	-	-
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Sub-fund: Transportation - SDC Improvement

Resources

22179-01-000-04-80-10	Interest - Investment	86,360	178,647	138,000	82,500	82,500	82,500
22179-01-000-04-75-45	Installment Pymt-Int	272	547	-	-	-	-
22179-01-000-04-75-10	SDC's Improvement	402,823	648,225	584,541	486,620	486,620	486,620
22179-01-000-04-75-40	Installment Improve-Princ	653	3,493	-	-	-	-
22179-01-000-04-75-15	Disc. SDC's Improvement	1,084,256	1,119,073	894,309	1,297,564	1,297,564	1,297,564
22179-01-000-04-99-00	Beginning Fund Balance	6,379,169	6,665,568	6,008,493	8,560,967	8,560,967	8,560,967
TOTAL RESOURCES		7,953,532	8,615,553	7,625,343	10,427,651	10,427,651	10,427,651

Materials & Services

**MASTER GRANT AGREEMENT
OREGON DEPARTMENT OF TRANSPORTATION
FUND EXCHANGE PROGRAM (FEX)**

This Master Grant Agreement (“Agreement”) is made and entered into by and between the **State of Oregon**, acting by and through its Department of Transportation (“ODOT”), and the **City of Redmond**, acting by and through its Governing Body, (“Recipient”), both referred to individually or collectively as “Party” or “Parties.”

- 1. Effective Date.** This Agreement shall become effective on the date this Agreement is fully executed and approved as required by applicable law (the “Effective Date”). The availability of Grant Funds (as defined in Section 3) shall be from January 1, 2021 to September 30, 2024 (the “Term”).
- 2. Agreement Documents.** This Agreement consists of this document and the following documents attached to this Agreement:

Exhibit A: **Recipient Requirements**
Exhibit B: **Subagreement Insurance Requirements**
Exhibit C: **Direct Deposit/ACH Credit Authorization**
Exhibit D: **Funding Request Letter template**

In the event of a conflict between two or more of the documents comprising this Agreement, the language in the document with the highest precedence shall control. The precedence of each of the documents comprising this Agreement is as follows, listed from highest precedence to lowest precedence: this Agreement without Exhibits; Exhibit A; Exhibit B; Exhibit C; Exhibit D.

- 3. Grant Funds.** Pursuant to the Federal-Aid Project Guidelines and Working Agreement among ODOT, the Association of Oregon Counties and the League of Oregon Cities No. 32588 dated August 23, 2018, ODOT will annually make state funds available for which Recipient may exchange Recipient’s annual allocation of federal Surface Transportation Block Grant funds (“STBG Funds”). The state funds that ODOT annually makes available for exchange are referred to in this Agreement as the “Grant Funds.” ODOT will annually determine the amount of STBG Funds, and hence Grant Funds, available to the Recipient and announce the STBG Funds amount via ODOT’s website in January of each year.
- 4. Exchange Rate.** During the Term, ODOT will exchange Recipient’s annual allocation of STBG Funds for Grant Funds at the following rates:
 - a.** Ninety-four cents (\$0.94) in Grant Funds for one dollar (\$1.00) of STBG Funds until December 31, 2021.
 - b.** Ninety cents (\$0.90) in Grant Funds for one dollar (\$1.00) of STBG Funds January 1, 2022 and after.

5. Eligible Projects and Costs.

- a. Use of Grant Funds.** Grant Funds may only be used for transportation projects that are State Highway Trust Fund eligible, that is, those that are consistent with Article IX, Section 3a, of the Oregon Constitution (each such State Highway Trust Fund eligible transportation project is referred to in this Agreement as a “Project”). Grant Funds may be used for all phases of a Project, including, but not limited to, preliminary engineering, right of way, utility relocation, and construction.
- b. Eligible Costs.** Recipient shall use Grant Funds only for its actual costs to deliver Projects consistent with the terms of this Agreement (“Eligible Costs”).
 - i.** Eligible Costs are actual costs of Recipient to the extent those costs are:
 - A.** reasonable, necessary and directly used for a Project;
 - B.** permitted by generally accepted accounting principles established by the Governmental Accounting Standards Board, as reasonably interpreted by the State, to be capitalized to an asset that is part of a Project; and
 - C.** eligible or permitted uses of the Grant Funds under the Oregon Constitution, the statutes and laws of the state of Oregon, and this Agreement.
 - ii.** Eligible Costs can include the purchase of aggregate or equipment, provided that:
 - A.** purchases or production of aggregate must be roadway-related and exclusively used for roadway work; and
 - B.** purchased equipment must be used exclusively for roadway purposes for the useful life of the equipment. Recipient shall clearly describe in the Funding Request, as that capitalized term is defined in Section 6.a., how it plans to use said equipment on roadways and for roadway purposes. In the event that the equipment is not used for roadway purposes, Recipient shall pay to ODOT the fair market rental value for Recipient’s non-roadway use of the equipment. The useful life and the fair market rental value of the equipment shall be determined by ODOT, based on the type and condition of equipment.
 - iii.** Eligible Costs do NOT include:
 - A.** loans or grants to be made to third parties; or
 - B.** any expenditures incurred before the Effective Date or after the Availability Termination Date.

6. Grant Funds Distribution Process

- a.** To receive a distribution of Grant Funds during the Term, Recipient shall submit a funding request letter to the ODOT Contact for approval (a “Funding Request”). The Funding Request

must be on Recipient letterhead and include all information set forth in the letter template attached as Exhibit D. If Recipient chooses not to request Grant Funds in a calendar year, the year's Grant Funds amount will accumulate ("bank") for Recipient's future use. ODOT's distribution of Grant Funds will be limited to Recipient's cumulative amount of Grant Funds available at the time a Funding Request is submitted. ODOT will not advance any Grant Funds based on anticipated future allocations of STBG Funds.

- b. Upon approving a Funding Request, ODOT will disburse the requested Grant Funds amount to Recipient via electronic funds transfer to the deposit account designated in Exhibit C.
 - c. ODOT's obligation to disburse Grant Funds to Recipient is subject to the satisfaction, with respect to each disbursement, of each of the following conditions precedent:
 - i. ODOT has received funding, appropriations, limitations, allotments, or other expenditure authority sufficient to allow ODOT, in the exercise of its reasonable administrative discretion, to make the disbursement.
 - ii. Recipient is in compliance with the terms of this Agreement.
 - iii. Recipient's representations and warranties set forth in Section 7 are true and correct on the date of disbursement with the same effect as though made on the date of disbursement.
 - d. **Recovery of Grant Funds.** Any Grant Funds disbursed to Recipient under this Agreement that are expended in violation of one or more of the provisions of this Agreement ("Misspent Funds") must be returned to ODOT. Recipient shall return all Misspent Funds to ODOT promptly after ODOT's written demand and no later than fifteen (15) days after ODOT's written demand.
7. **Representations and Warranties of Recipient.** Recipient represents and warrants to ODOT as follows:
- a. **Organization and Authority.** Recipient is duly organized and validly existing under the laws of the State of Oregon and is eligible to receive the Grant Funds. Recipient has full power, authority and legal right to make this Agreement and to incur and perform its obligations hereunder, and the making and performance by Recipient of this Agreement (1) have been duly authorized by all necessary action of Recipient and (2) do not and will not violate any provision of any applicable law, rule, regulation, or order of any court, regulatory commission, board, or other administrative agency or any provision of Recipient's Articles of Incorporation or Bylaws, if applicable, (3) do not and will not result in the breach of, or constitute a default or require any consent under any other agreement or instrument to which Recipient is a party or by which Recipient or any of its properties may be bound or affected. No authorization, consent, license, approval of, filing or registration with or notification to any governmental body or regulatory or supervisory authority is required for the execution, delivery or performance by Recipient of this Agreement.
 - b. **Binding Obligation.** This Agreement has been duly executed and delivered by Recipient and constitutes a legal, valid and binding obligation of Recipient, enforceable in accordance with its

terms subject to the laws of bankruptcy, insolvency, or other similar laws affecting the enforcement of creditors' rights generally.

- c. **No Solicitation.** Recipient's officers, employees, and agents shall neither solicit nor accept gratuities, favors, or any item of monetary value from contractors, potential contractors, or parties to subagreements. No member or delegate to the Congress of the United States or State of Oregon employee shall be admitted to any share or part of this Agreement or any benefit arising therefrom.
- d. **No Debarment.** Neither Recipient nor its principals is presently debarred, suspended, or voluntarily excluded from any federally-assisted transaction, or proposed for debarment, declared ineligible or voluntarily excluded from participating in this Agreement by any state or federal agency. Recipient agrees to notify ODOT immediately if it is debarred, suspended or otherwise excluded from any federally assisted transaction for any reason or if circumstances change that may affect this status, including without limitation upon any relevant indictments or convictions of crimes.
- e. **Compliance with Oregon Taxes, Fees and Assessments.** Recipient is, to the best of the undersigned(s) knowledge, and for the useful life of this Agreement will remain, current on all applicable state and local taxes, fees and assessments.

8. Records Maintenance and Access; Audit.

- a. **Records, Access to Records and Facilities.** Recipient shall make and retain proper and complete books of record and account and maintain all fiscal records related to this Agreement in accordance with all applicable generally accepted accounting principles, generally accepted governmental auditing standards and state minimum standards for audits of municipal corporations. Recipient shall ensure that each of its subrecipients and subcontractors complies with these requirements. ODOT, the Secretary of State of the State of Oregon (the "Secretary") and their duly authorized representatives shall have access to the books, documents, papers and records of Recipient that are directly related to this Agreement, the Grant Funds, or any Project funded by this Agreement, for the purpose of making audits and examinations. In addition, ODOT, the Secretary and their duly authorized representatives may make and retain excerpts, copies, and transcriptions of the foregoing books, documents, papers, and records. Recipient shall permit authorized representatives of ODOT and the Secretary to perform site reviews, and to inspect all vehicles, real property, facilities and equipment purchased by Recipient as part of this Agreement, and any transportation services rendered by Recipient. Without limiting the foregoing, ODOT may request, and Recipient shall provide, documentation of expenditures to confirm that Recipient uses Grant Funds only for State Highway Trust Fund eligible purposes. ODOT may also conduct on-site inspections of any Project funded under this Agreement to ensure that the Project is State Highway Trust Fund eligible.
- b. **Retention of Records.** Recipient shall retain and keep accessible all books, documents, papers, and records that are directly related to this Agreement, the Grant Funds or any Project funded by this Agreement for a period of six (6) years after final payment. If there are unresolved audit questions at the end of the period described in this section, Recipient shall retain the records until the questions are resolved.

- c. **Expenditure Records.** Recipient shall document the expenditure of all Grant Funds disbursed by ODOT under this Agreement. Recipient shall create and maintain all expenditure records in accordance with generally accepted accounting principles and in sufficient detail to permit ODOT to verify how the Grant Funds were expended.

This Section 8 shall survive any expiration or termination of this Agreement.

9. Recipient Subagreements and Procurements

- a. **Subagreements.** Recipient may enter into agreements with sub-recipients, contractors or subcontractors (collectively, “subagreements”) for performance of this Agreement.
 - i. All subagreements must be in writing, executed by Recipient and must incorporate and pass through all of the applicable requirements of this Agreement to the other party or parties to the subagreement(s). Use of a subagreement does not relieve Recipient of its responsibilities under this Agreement.
 - ii. Recipient shall require all of its contractors performing work under this Agreement to name ODOT as a third party beneficiary of Recipient’s subagreement with the Contractor and to name ODOT as an additional or “dual” obligee on contractors’ payment and performance bonds.
 - iii. Recipient shall provide ODOT with a copy of any signed subagreement, as well as any other purchasing or contracting documentation, upon ODOT’s request at any time. Recipient must report to ODOT any material breach of a term or condition of a subagreement within ten (10) days of Recipient discovering the breach.
- b. **Subagreement indemnity; insurance.**

Recipient’s subagreement(s) shall require the other party to such subagreements(s) that is not a unit of local government as defined in ORS 190.003, if any, to indemnify, defend, save and hold harmless State of Oregon, the Oregon Transportation Commission and its members, the Department of Transportation, their officers, agents and employees from and against any and all claims, actions, liabilities, damages, losses, or expenses, including attorneys’ fees, arising from a tort, as now or hereafter defined in ORS 30.260, caused, or alleged to be caused, in whole or in part, by the negligent or willful acts or omissions of the other party to Recipient’s subagreement or any of such party’s officers, agents, employees or subcontractors (“Claims”). It is the specific intention of the Parties that ODOT shall, in all instances, except for Claims arising solely from the negligent or willful acts or omissions of ODOT, be indemnified by the other party to Recipient’s subagreement(s) from and against any and all Claims.

- i. Any such indemnification shall also provide that neither Recipient’s subrecipient(s), contractor(s) nor subcontractor(s), nor any attorney engaged by Recipient’s subrecipient(s), contractor(s) nor subcontractor(s) shall defend any claim in the name of ODOT or any agency of the State of Oregon, nor purport to act as legal representative of the State of Oregon or any of its agencies, without the prior written consent of the Oregon Attorney General. The State may, at any time at its election, assume its own defense and settlement in the event that it determines that Recipient’s subrecipient is prohibited from defending the State, or that

Recipient's subrecipient is not adequately defending the State's interests, or that an important governmental principle is at issue or that it is in the best interests of the State to do so. The State reserves all rights to pursue claims it may have against Recipient's subrecipient if the State of Oregon elects to assume its own defense.

- ii. For Projects that are on or along a state highway, Recipient shall require its contractor(s) to meet the minimum insurance requirements provided in Exhibit B. Recipient may specify insurance requirements of its contractor(s) above the minimum insurance requirements specified in Exhibit B. Recipient shall verify its contractor(s) meet the insurance requirements in Exhibit B.
- iii. Recipient shall determine insurance requirements, insurance types and amounts, as deemed appropriate based on the risk of the work outlined within the subagreement. Recipient shall specify insurance requirements and require its contractor(s) to meet the insurance requirements. Recipient shall obtain proof of the required insurance coverages, as applicable, from any contractor providing services related to the subagreement.
- iv. Recipient shall require its contractor(s) to require and verify that all subcontractors carry insurance coverage that the contractor(s) deems appropriate based on the risks of the subcontracted work.
- c. **Procurements.** Recipient shall make purchases of any equipment, materials, or services comply with Oregon law, including all applicable provisions of the Oregon Public Contracting Code, Oregon Revised Statute (ORS) 279 A, B, and C, and rules, ensuring that:
 - i. All applicable clauses required by federal statute, executive orders and their implementing regulations are included in each competitive procurement; and
 - i. All procurement transactions are conducted in a manner providing full and open competition.
- d. **Conflicts of Interest.** Recipient's public officials shall comply with Oregon's government ethics laws, ORS 244.010 *et seq.*, as those laws may be subsequently amended.

10. Termination

- a. **Mutual Termination.** This Agreement may be terminated by mutual written consent of the Parties.
- b. **Termination by ODOT.** ODOT may terminate this Agreement effective upon delivery of written notice of termination to Recipient, or at such later date as may be established by ODOT in such written notice, under any of the following circumstances:
 - i. If Recipient takes any action pertaining to this Agreement without the approval of ODOT and which under the provisions of this Agreement would have required ODOT's approval;
 - ii. If Recipient fails to perform any of its other obligations under this Agreement, and that failure continues for a period of 10 calendar days after the date ODOT delivers Recipient written

notice specifying such failure. ODOT may agree in writing to an extension of time if it determines Recipient instituted and has diligently pursued corrective action;

- iii. If ODOT fails to receive funding, appropriations, limitations or other expenditure authority sufficient to allow ODOT, in the exercise of its reasonable administrative discretion, to continue to make payments for performance of this Agreement;
 - iv. If Federal or state laws, rules, regulations or guidelines are modified or interpreted in such a way that is no longer allowable or no longer eligible for funding under this Agreement; or
 - v. If a Project funded under this Agreement would not produce results commensurate with the further expenditure of funds.
- c. **Termination by Either Party.** Either Party may terminate this Grant Agreement upon at least ten (10) days' notice to the other Party and failure of the other Party to cure within the period provided in the notice, if the other Party fails to comply with any of the terms of this Grant Agreement.
- d. **Rights upon Termination; Remedies.** Any termination of this Grant Agreement shall not prejudice any rights or obligations accrued before termination. The remedies set forth in this Grant Agreement are cumulative and are in addition to any other rights or remedies available at law or in equity.

11. GENERAL PROVISIONS

- a. **Indemnity.** RECIPIENT SHALL INDEMNIFY AND DEFEND ODOT AND ITS OFFICERS, EMPLOYEES AND AGENTS FROM AND AGAINST ALL CLAIMS, SUITS, ACTIONS, LOSSES, DAMAGES, LIABILITIES, COSTS AND EXPENSES OF ANY NATURE WHATSOEVER ARISING OUT OF, OR RELATING TO THE INTENTIONAL MISCONDUCT, OR RECKLESS OR NEGLIGENT ACTS OR OMISSIONS OF RECIPIENT OR ITS OFFICERS, EMPLOYEES, SUBCONTRACTORS, OR AGENTS UNDER THIS AGREEMENT.

ODOT shall reasonably cooperate in good faith, at Recipient's reasonable expense, in the defense of a covered claim. Recipient shall select counsel reasonably acceptable to the Oregon Attorney General to defend such claim and all costs of such counsel shall be borne by Recipient. Counsel must accept appointment as a Special Assistant Attorney General under ORS Chapter 180 before such counsel may act in the name of, or represent the interests of, ODOT, its officers, employees or agents. ODOT may elect to assume its own defense with an attorney of its own choice and its own expense at any time ODOT determines important governmental interests are at stake. ODOT agrees to promptly provide Recipient with notice of any claim that may result in an indemnification obligation hereunder. Subject to the limitations noted above, Recipient may defend such claim with counsel of its own choosing provided that no settlement or compromise of any such claim shall occur without the consent of ODOT, which consent shall not be unreasonably withheld, conditioned or delayed.

- b. **Contribution.**

- i. If any third party makes any claim or brings any action, suit or proceeding alleging a tort as now or hereafter defined in ORS 30.260 (“Third Party Claim”) against ODOT or Recipient with respect to which the other Party may have liability, the notified Party must promptly notify the other Party in writing of the Third Party Claim and deliver to the other Party a copy of the claim, process, and all legal pleadings with respect to the Third Party Claim. Each Party is entitled to participate in the defense of a Third Party Claim, and to defend a Third Party Claim with counsel of its own choosing. Receipt by a Party of the notice and copies required in this paragraph and meaningful opportunity for the Party to participate in the investigation, defense and settlement of the Third Party Claim with counsel of its own choosing are conditions precedent to that Party’s liability with respect to the Third Party Claim.
- ii. With respect to a Third Party Claim for which ODOT is jointly liable with Recipient (or would be if joined in the Third Party Claim), ODOT shall contribute to the amount of expenses (including attorneys’ fees), judgments, fines and amounts paid in settlement actually and reasonably incurred and paid or payable by Recipient in such proportion as is appropriate to reflect the relative fault of ODOT on the one hand and of the Recipient on the other hand in connection with the events which resulted in such expenses, judgments, fines or settlement amounts, as well as any other relevant equitable considerations. The relative fault of ODOT on the one hand and of Recipient on the other hand shall be determined by reference to, among other things, the Parties’ relative intent, knowledge, access to information and opportunity to correct or prevent the circumstances resulting in such expenses, judgments, fines or settlement amounts. ODOT’s contribution amount in any instance is capped to the same extent it would have been capped under Oregon law, including the Oregon Tort Claims Act, ORS 30.260 to 30.300, if ODOT had sole liability in the proceeding.
- iii. With respect to a Third Party Claim for which Recipient is jointly liable with ODOT (or would be if joined in the Third Party Claim), Recipient shall contribute to the amount of expenses (including attorneys’ fees), judgments, fines and amounts paid in settlement actually and reasonably incurred and paid or payable by ODOT in such proportion as is appropriate to reflect the relative fault of Recipient on the one hand and of ODOT on the other hand in connection with the events which resulted in such expenses, judgments, fines or settlement amounts, as well as any other relevant equitable considerations. The relative fault of Recipient on the one hand and of ODOT on the other hand shall be determined by reference to, among other things, the Parties’ relative intent, knowledge, access to information and opportunity to correct or prevent the circumstances resulting in such expenses, judgments, fines or settlement amounts. Recipient’s contribution amount in any instance is capped to the same extent it would have been capped under Oregon law, including the Oregon Tort Claims Act, ORS 30.260 to 30.300, if it had sole liability in the proceeding.
- c. **Dispute Resolution.** The Parties shall attempt in good faith to resolve any dispute arising out of this Agreement. In addition, the Parties may agree to utilize a jointly selected mediator or arbitrator (for non-binding arbitration) to resolve the dispute short of litigation.
- d. **Amendments.** This Agreement may be amended or extended only by a written instrument signed by both Parties and approved as required by applicable law.

- e. Duplicate Payment.** Recipient is not entitled to compensation or any other form of duplicate, overlapping or multiple payments for the same work performed under this Agreement from any agency of the State of Oregon or the United States of America or any other party, organization or individual.
- f. No Third Party Beneficiaries.** ODOT and Recipient are the only Parties to this Agreement and are the only Parties entitled to enforce its terms. Nothing in this Agreement gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly or indirectly, to a third person unless such a third person is individually identified by name herein and expressly described as an intended beneficiary of the terms of this Agreement.
- g. Notices.** Except as otherwise expressly provided in this Agreement, any communications between the Parties hereto or notices to be given hereunder shall be given in writing by personal delivery, email or mailing the same, postage prepaid, to Recipient Contact or ODOT Contact at the address or number set forth on the signature page of this Agreement, or to such other addresses or numbers as either Party may hereafter indicate pursuant to this Section 10(g). Any communication or notice personally delivered shall be deemed to be given when actually delivered. Any communication or notice delivered by facsimile shall be deemed to be given when receipt of the transmission is generated by the transmitting machine, and to be effective against ODOT, such facsimile transmission must be confirmed by telephone notice to ODOT Contact. Any communication by email shall be deemed to be given when the recipient of the email acknowledges receipt of the email. Any communication or notice mailed shall be deemed to be given when received.
- h. Governing Law, Consent to Jurisdiction.** This Agreement shall be governed by and construed in accordance with the laws of the State of Oregon without regard to principles of conflicts of law. Any claim, action, suit or proceeding (collectively, "Claim") between ODOT (or any other agency or department of the State of Oregon) and Recipient that arises from or relates to this Agreement shall be brought and conducted solely and exclusively within the Circuit Court of Marion County in the State of Oregon. In no event shall this section be construed as a waiver by the State of Oregon of any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the eleventh amendment to the Constitution of the United States or otherwise, from any Claim or from the jurisdiction of any court. Each party hereby consents to the exclusive jurisdiction of such court, waives any objection to venue, and waives any claim that such forum is an inconvenient forum.
- i. Compliance with Law.** Recipient shall comply with all federal, state and local laws, regulations, executive orders and ordinances applicable to this Agreement or to implementation of Projects funded by this Agreement, including without limitation as described in Exhibit A. Without limiting the generality of the foregoing, Recipient expressly agrees to comply with (i) Title VI of Civil Rights Act of 1964; (ii) Title V and Section 504 of the Rehabilitation Act of 1973; (iii) the Americans with Disabilities Act of 1990 and ORS 659A.142; (iv) all regulations and administrative rules established pursuant to the foregoing laws; and (v) all other applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations. Recipient agrees to comply with the requirements of ORS 366.514, Use of Highway Fund for footpaths and bicycle trails.

- j. Insurance; Workers' Compensation.** All employers, including Recipient, that employ subject workers who provide services in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. Employer's liability insurance with coverage limits of not less than \$500,000 must be included. Recipient shall ensure that each of its subrecipient(s), contractor(s), and subcontractor(s) complies with these requirements.
- k. Independent Contractor.** Recipient shall perform as an independent contractor and not as an agent or employee of ODOT. Recipient has no right or authority to incur or create any obligation for or legally bind ODOT in any way. ODOT cannot and will not control the means or manner by which Recipient performs the work, except as specifically set forth in this Agreement. Recipient is responsible for determining the appropriate means and manner of performing its work. Recipient acknowledges and agrees that Recipient is not an "officer", "employee", or "agent" of ODOT, as those terms are used in ORS 30.265, and shall not make representations to third parties to the contrary.
- l. Severability.** If any term or provision of this Agreement is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the Parties shall be construed and enforced as if this Agreement did not contain the particular term or provision held to be invalid.
- m. Counterparts.** This Agreement may be executed in two or more counterparts, each of which is an original and all of which together are deemed one agreement binding on all Parties, notwithstanding that all Parties are not signatories to the same counterpart.
- n. Integration and Waiver.** This Agreement, including all Exhibits, constitutes the entire agreement between the parties on the subject matter hereof. There are no understandings, agreements, or representations, oral or written, not specified herein regarding this Agreement. The delay or failure of either party to enforce any provision of this Agreement shall not constitute a waiver by that party of that or any other provision. Recipient, by the signature below of its authorized representative, acknowledges that it has read this Agreement, understands it, and agrees to be bound by its terms and conditions.

SIGNATURE PAGE TO FOLLOW

THE PARTIES, by execution of this Agreement, acknowledge that their signing representatives have read this Agreement, understand it, and agree to be bound by its terms and conditions.

Recipient Name, by and through its elected officials

By _____
(Legally designated representative)

Name _____
(printed)

Date _____

By _____

Name _____
(printed)

Date _____

**LEGAL REVIEW APPROVAL
(If required in Recipient's process)**

By _____
Recipient's Legal Counsel

Date _____

Recipient Contact:

Julie Lovrien
243 E Antler Ave
Redmond, 97756
541-504-2024
julie.lovrien@redmondoregon.gov

STATE OF OREGON, by and through its Department of Transportation

By _____
Statewide Investment Management Section Manager

Name _____
(printed)

Date _____

APPROVAL RECOMMENDED

By _____
Program & Funding Services Manager

Name _____
(printed)

Date _____

ODOT Contact:

Shelley Bokor
555 13th Street NE
Salem, OR 97301
503-986-3621
shelley.a.bokor@odot.state.or.us

EXHIBIT A

Recipient Requirements

1. Recipient shall comply with all applicable provisions of ORS 279C.800 to 279C.870 pertaining to prevailing wage rates and including, without limitation, that workers shall be paid not less than rates in accordance with ORS 279C.838 and 279C.840 pertaining to wage rates and ORS 279C.836 pertaining to having a public works bond filed with the Construction Contractors' Board.
2. Recipient shall notify ODOT's Contact in writing when any contact information changes during the Agreement.
3. Recipient shall, at its own expense, maintain and operate all roadways and equipment funded by this Agreement upon completion and throughout the useful life at a minimum level that is consistent with normal depreciation or service demand or both. The Parties agree that the useful life of any roadway work is defined as seven (7) years from its completion date (the "Project Useful Life").
4. Recipient shall maintain insurance policies with responsible insurers or self-insurance programs, insuring against liability and risk of direct physical loss, damage or destruction, at least to the extent that similar insurance is customarily carried by governmental units constructing, operating and maintaining similar facilities or equipment.
5. **Americans with Disabilities Act Compliance**
 - a. **State Highway:** For portions of a Project located on or along the State Highway System or a State-owned facility ("state highway"):
 - i. Recipient shall utilize ODOT standards to assess and ensure Project compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 as amended (together, "ADA"), including ensuring that all sidewalks, curb ramps, pedestrian-activated signals, shared use path, transit stop, park-and-ride, on-street parking, or any other feature that might need to be accessible meet current ODOT Highway Design Manual standards;
 - ii. Recipient shall follow ODOT's processes for design, construction, or alteration of sidewalks, curb ramps, pedestrian-activated signals, shared use path, transit stop, park-and-ride, on-street parking, or any other feature that might need to be accessible including using the ODOT Highway Design Manual, ODOT Design Exception process, ODOT Standard Drawings, ODOT Construction Specifications, providing a temporary pedestrian accessible route plan and current ODOT Curb Ramp Inspection form;
 - iii. At completion of a Project funded by this Agreement, Recipient shall send a completed ODOT Curb Ramp Inspection Form 734-5020 to the address on the form and to State's Project Manager for each curb ramp constructed or altered as part of the Project. The completed form is the documentation required to show that each curb ramp meets ODOT standards and is ADA compliant. ODOT's fillable Curb Ramp Inspection Form and instructions are available at the following address:

<https://www.oregon.gov/ODOT/Engineering/Pages/Accessibility.aspx>

- iv. Recipient shall promptly notify ODOT of a Project's completion and allow ODOT to inspect Project sidewalks, curb ramps, pedestrian-activated signals shared use path, transit stop, park-and-ride, on-street parking, or any other feature that might need to be accessible located on or along a state highway prior to release of any Recipient contractor.
 - v. Recipient shall ensure that temporary pedestrian routes are provided through or around any Project work zone. Any such temporary pedestrian route shall include directional and informational signs, comply with ODOT standards, and include accessibility features equal to or better than the features present in the existing pedestrian facility. Recipient shall also ensure that advance notice of any temporary pedestrian route is provided in accessible format to the public, people with disabilities, disability organizations, and ODOT at least 10 days prior to the start of construction.
- b. Local Roads:** For portions of a Project located on Recipient roads or facilities that are not on or along a state highway:
- i. Recipient shall ensure that the Project is designed, constructed and maintained in compliance with the ADA.
 - ii. Recipient may follow its own processes or may use ODOT's processes for design, construction, or alteration of sidewalks, curb ramps, and pedestrian-activated signals, including using the ODOT Highway Design Manual, ODOT Design Exception process, ODOT Standard Drawings, ODOT Construction Specifications, providing a temporary pedestrian accessible route plan and current Curb Ramp Inspection form, available at:

<https://www.oregon.gov/ODOT/Engineering/Pages/Accessibility.aspx>;

Additional ODOT resources are available at the above-identified link. ODOT has made its forms, processes, and resources available for Recipient's use and convenience.
 - iii. Recipient assumes sole responsibility for ensuring compliance with the ADA, including when Recipient uses ODOT forms and processes. Recipient acknowledges and agrees that ODOT is under no obligation to review or approve Project plans or inspect completed Projects to confirm ADA compliance.
 - iv. Recipient shall ensure that temporary pedestrian routes are provided through or around any Project work zone. Any such temporary pedestrian route shall include directional and informational signs and include accessibility features equal to or better than the features present in the existing pedestrian route. Recipient shall also ensure that advance notice of any temporary pedestrian route is provided in accessible format to the public, people with disabilities, and disability organizations prior to the start of construction.
- c. Recipient shall ensure that any portions under Recipient's maintenance jurisdiction are maintained in compliance with the ADA throughout the useful life of Projects funded by this Agreement. This includes, but is not limited to, Recipient ensuring that:

- i. Pedestrian access is maintained as required by the ADA,
 - ii. Any complaints received by Recipient identifying sidewalk, curb ramp, or pedestrian-activated signal safety or access issues are promptly evaluated and addressed,
 - iii. Recipient, or abutting property owner, pursuant to local code provisions, performs any repair or removal of obstructions needed to maintain the Project in compliance with the ADA requirements that were in effect at the time the Project was constructed or altered,
 - iv. Any future alteration work on Project or Project features during the useful life of the Project complies with the ADA requirements in effect at the time the future alteration work is performed, and
 - v. Applicable permitting and regulatory actions are consistent with ADA requirements.
- d. Maintenance obligations in this Section 5 shall survive termination of this Agreement.

6. Work Performed within ODOT's Right of Way

- a. Prior to the commencement of work, Recipient shall obtain, or require its contractor to obtain, permission from the appropriate ODOT District Office to work on or along the state highway. This Agreement does not provide permission to work on or along the state highway.
- b. If a Project includes traffic control devices (see ODOT's Traffic Manual, Chapter 5, for a description of traffic control devices) on or along a state highway, Recipient shall, pursuant to Oregon Administrative Rule (OAR) 734-020-0430, obtain the approval of the State Traffic Engineer prior to design or construction of any traffic control device being installed.
- c. Recipient shall enter into a separate traffic signal agreement with ODOT to cover obligations for any traffic signal being installed on a state highway.
- d. Recipient shall ensure that its electrical inspectors possess a current State Certified Traffic Signal Inspector certificate before the inspectors inspect electrical installations on state highways. The ODOT's District Office shall verify compliance with this requirement before construction. The permit fee should also cover the State electrician's supplemental inspection.

7. General Standards

All Projects funded by this Agreement shall be completed within industry standards and best practices to ensure that the functionality and serviceability of the program's investment meets the intent of the application and the program.

EXHIBIT B

Subagreement Insurance Requirements

1. GENERAL.

- a. If the Project is on or along a state highway, Recipient shall require in its first tier subagreements with entities that are not units of local government as defined in ORS 190.003, if any, to: i) obtain insurance specified under TYPES AND AMOUNTS and meeting the requirements under ADDITIONAL INSURED, “TAIL” COVERAGE, NOTICE OF CANCELLATION OR CHANGE, and CERTIFICATES OF INSURANCE before performance under the subagreement commences, and ii) maintain the insurance in full force throughout the duration of the subagreement. The insurance must be provided by insurance companies or entities that are authorized to transact the business of insurance and issue coverage in the State of Oregon and that are acceptable to ODOT. Recipient shall not authorize work to begin under subagreements until the insurance is in full force. Thereafter, Recipient shall monitor continued compliance with the insurance requirements on an annual or more frequent basis. Recipient shall incorporate appropriate provisions in the subagreement permitting it to enforce compliance with the insurance requirements and shall take all reasonable steps to enforce such compliance. In no event shall Recipient permit work under a subagreement when Recipient is aware that the contractor is not in compliance with the insurance requirements. As used in this section, “first tier” means a subagreement in which the Recipient is a Party.
- b. The insurance specified below is a minimum requirement that the contractor within the subagreement shall meet. Recipient may determine insurance types and amounts in excess to the minimum requirement as deemed appropriate based on the risks of the work outlined within the subagreement.
- c. Recipient shall require the contractor(s) to require that all of its subcontractors carry insurance coverage that the contractor deems appropriate based on the risks of the subcontracted work. Contractor shall obtain proof of the required insurance coverages, as applicable, from any subcontractor providing Services related to the Contract.

2. TYPES AND AMOUNTS.

- a. **WORKERS COMPENSATION.**
All employers, including Contractor, that employ subject workers, as defined in ORS 656.027, shall comply with ORS 656.017 and shall provide **Workers' Compensation Insurance** coverage for those workers, unless they meet the requirement for an exemption under ORS 656.126(2). The coverage shall include Employer's Liability Insurance with limits not less than \$500,000 each accident. **Contractor shall require compliance with these requirements in each of its subcontractor contracts.**
- b. **COMMERCIAL GENERAL LIABILITY.**
Commercial General Liability Insurance shall be issued on an occurrence basis covering bodily injury and property damage and shall include personal and advertising injury liability, products and completed operations, and contractual liability coverage. When work to be performed includes operations or activity within 50 feet of any railroad property, bridge, trestle, track,

roadbed, tunnel, underpass or crossing, the Contractor shall provide the Contractual Liability – Railroads CG 24 17 endorsement, or equivalent, on the Commercial General Liability policy. Amounts below are a minimum requirement as determined by ODOT:

Coverage shall be written on an occurrence basis in an amount of not less than \$1,000,000 per occurrence. Annual aggregate limit shall not be less than \$2,000,000.

c. AUTOMOBILE Liability Insurance: Automobile Liability.

Automobile Liability Insurance covering Contractor’s business-related automobile use covering all owned, non-owned, or hired vehicles for bodily injury and property. This coverage may be written in combination with the Commercial General Liability Insurance (with separate limits for Commercial General Liability and Automobile Liability). Amount below is a minimum requirement as determined by ODOT:

Coverage shall be written with a combined single limit of not less than \$1,000,000.

d. ADDITIONAL INSURED.

The Commercial General Liability Insurance and Automobile Liability Insurance must include the **“State of Oregon, the Oregon Transportation Commission and the Department of Transportation, and their respective officers, members, agents and employees”** as an **endorsed** Additional Insured but only with respect to the contractor’s activities to be performed under the Subcontract. Coverage shall be primary and non-contributory with any other insurance and self-insurance.

Additional Insured Endorsements on the Commercial General Liability shall be written on ISO Form CG 20 10 07 04, or equivalent, with respect to liability arising out of ongoing operations and ISO Form CG 20 37 07 04, or equivalent, with respect to liability arising out of completed operations. Additional Insured Endorsements shall be submitted with the Certificate(s) of Insurance and must be acceptable to the Recipient.

e. “TAIL” COVERAGE.

If any of the required insurance policies is on a “claims made” basis, such as professional liability insurance or pollution liability insurance, the contractor shall maintain either “tail” coverage or continuous “claims made” liability coverage, provided the effective date of the continuous “claims made” coverage is on or before the effective date of the Subcontract, for a minimum of twenty-four (24) months following the later of : (i) the contractor’s completion and Recipient’s acceptance of all Services required under the Subcontract or, (ii) the expiration of all warranty periods provided under the Subcontract. Notwithstanding the foregoing twenty-four (24) month requirement, if the contractor elects to maintain “tail” coverage and if the maximum time period “tail” coverage reasonably available in the marketplace is less than the twenty-four (24) month period described above, then the contractor may request and ODOT may grant approval of the maximum “tail “ coverage period reasonably available in the marketplace. If ODOT approval is granted, the contractor shall maintain “tail” coverage for the maximum time period that “tail” coverage is reasonably available in the marketplace.

f. NOTICE OF CANCELLATION OR CHANGE.

The contractor or its insurer must provide thirty (30) days' written notice to Recipient before cancellation of, material change to, potential exhaustion of aggregate limits of, or non-renewal of the required insurance coverage(s).

g. CERTIFICATE(S) OF INSURANCE.

Recipient shall obtain from the contractor a certificate(s) of insurance for all required insurance before the contractor performs under the Subcontract. The certificate(s) or an attached endorsement must specify: i) **"State of Oregon, the Oregon Transportation Commission and the Department of Transportation, and their respective officers, members, agents and employees"** as an endorsed Additional Insured in regards to the Commercial General Liability and Automobile Liability policies and ii) that all liability insurance coverages shall be primary and non-contributory with any other insurance and self-insurance, with exception of Workers' Compensation..

The Recipient shall immediately notify ODOT of any change in insurance coverage.



EXHIBIT C

DIRECT DEPOSIT/ACH CREDIT AUTHORIZATION

Type of Action: ☐ NEW ENROLLMENT ☐ CHANGE ☐ CANCEL

By selecting the Change box and completing the form with new account information, or by selecting the Cancel box, you revoke your previous authorization for direct deposit.

Payee Information:

LEGAL NAME OF PAYEE (used for tax reporting): _____

BUSINESS NAME (DBA name if different from above): _____

TAXPAYER IDENTIFICATION NUMBER (EIN OR SSN): _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

Type of Bank Account:

☐ Checking account ☐ Savings account

Financial Institution Information (attach voided check or a letter from the bank confirming the account name, routing number, and account number):

FINANCIAL INSTITUTION NAME: _____

NAME(S) ON ACCOUNT: _____

ACCOUNT NUMBER: _____

ROUTING NUMBER: _____

FINANCIAL INSTITUTION ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

Authorization:

I authorize the Oregon Department of Transportation (ODOT) to initiate electronic credits and, if necessary, adjusting debit entries to reverse erroneous electronic payments, to the account designated on this form. I certify that I am authorized to enter into this agreement as the account holder or on behalf of the account holder. I acknowledge that the origination of ACH transactions to the authorized account must comply with the provisions of the law of the State of Oregon and the United States.

International transaction certification – I certify that the entire amount of my direct deposit is NOT ultimately deposited into a financial institution outside the United States.

This authorization will remain in effect until ODOT receives written notification from Payee of its termination in such time and in such manner as to afford ODOT and the depository financial institution a reasonable opportunity to act on it. If Financial Institution information changes, Payee agrees to promptly submit to ODOT an updated Direct Deposit/ACH Credit Authorization.

ODOT/Recipient
Agreement No. 34781

AUTHORIZED NAME: _____
TITLE (if company account): _____
AUTHORIZED SIGNATURE: _____
DATE: _____ TELEPHONE NUMBER: _____

Mail the completed form and voided check or bank letter to:

ODOT Financial Services, MS #21
TEAMS Table Maintenance
355 Capitol St NE
Salem, OR 97301-3871 or
FAX to (503) 986-3907

If you have questions, please call us at (503) 986-4385.

731-0781 (11/2016)

EXHIBIT D

<LETTERHEAD WITH CITY/COUNTY, ADDRESS>

<DATE>

Oregon Department of Transportation
Program & Funding Services
ODOT Mill Creek Building
555 13th Street NE
Salem, OR 97301

To Whom it May Concern:

Pursuant to its Master Grant Agreement no. <IGA #> with ODOT, <CITY/COUNTY> requests its allocation of federal [Surface Transportation Block Grant](#) (STBG) funds to finance the following transportation project(s) eligible under Oregon Constitution Article IX, Section 3a (the "Project"):

<DESCRIPTION OF GAS TAX ELIGIBLE ACTIVITIES/LOCATION>

<CITY/COUNTY> hereby exchanges \$<FEDERAL AMOUNT> in STBG funds for state funds at a ratio of 94 **or 90** cents in state funds for each dollar of STBG funds exchanged. Accordingly, we request ODOT to disburse to <CITY/COUNTY> a total of \$<.94 **or** .90 x FEDERAL AMOUNT> in state funds that <CITY/COUNTY> will use to finance the Project. <CITY/COUNTY>'s Vendor Number is <VENDOR #>.

By signing below, I certify that I am authorized to sign on behalf of the <CITY/COUNTY> and that the <CITY/COUNTY> will use the state funds received in accordance with the limitations of Oregon Constitution Article IX, Section 3a.

Please contact <NAME> at <PHONE NUMBER>, <EMAIL> if you have any questions or concerns regarding this request.

Sincerely,

<SIGNATURE>

<NAME>
<TITLE>
<EMAIL>



CITY OF REDMOND

CITY HALL
411 SW 9th STREET
REDMOND, OR 97756
541.923.7710
FAX: 541.548.0706
info@redmondoregon.gov
redmondoregon.gov

STAFF REPORT

DATE: March 23, 2021
TO: Redmond City Council
THROUGH: Keith Witcosky, City Manager
John Roberts, Deputy City Manager
FROM: Jackie Abslag, CDD Programs Coordinator
SUBJECT: Art Donation Acceptance: "Nest" by artist Skye Kimel

Addresses Council Goal:

6. Community Enhancement: Create an image and identity that generates a sense of community pride, ensures a high quality of life and safety for our citizens, and attracts new residents and businesses and facilitates opportunities for success.

Report in Brief:

This report recommends City Council accept the donated sculpture, "Nest" by artist Skye Kimel, through the City's public art program.

Background:

The City Council created the Redmond Commission for Art in Public Places (RCAPP) in January 2006. One of the primary charges of RCAPP was to establish guidelines and procedures for accepting donated art. Towards that end, RCAPP established and Council adopted Guidelines for Art Acquisition, Maintenance, Deaccession and Donations. The guidelines specify conditions for acceptance.

RCAPP evaluated the subject donation "Nest" based on the criteria specified in the guidelines and determined it met all of the criteria. Permanent location to be determined.

Visual of Donation - Nest by local artist, Skye Kimel; valued at \$6,000



Discussion:

The City has been supporting a public art program since 2006, with the successful procurement of numerous pieces of art. To date, thirteen sculptures and three original paintings have been donated to the City. Per the RCAPP guidelines, art pieces recommended by the committee require acceptance by the City Council. If the City Council formally accepts this donation it will increase the City's art donations to seventeen.

Fiscal Impact:

Cost to the City is the annual insurance policy (approximately \$600) that provides coverage for all of Redmond's art pieces.

Alternative Courses of Action:

1. Do not accept the donation.
2. Approve the donation.
3. Take no action and request more information

Recommendation / Suggested Motion:

"I move to accept the donation of "Nest" by artist, Skye Kimel as recommended by the Redmond Committee for Art in Public Places."

City of Redmond PROCLAMATION

A proclamation designating April 4-10, 2021, as

ARBOR WEEK

WHEREAS, in 1872 Arbor Day, a special day set aside for the planting of trees, was first celebrated in Nebraska; and

WHEREAS, Arbor Day is the day set aside to plant ceremonial trees, educate children and adults about the importance of trees, and honor the important role trees play in our daily lives; and

WHEREAS, trees provide shade and habitat for wildlife, improve air and water quality, reduce the erosion of precious topsoil, increase property values and economic vitality in business areas, contribute to a sense of community pride and ownership, and add beauty to communities; and

WHEREAS, the City of Redmond recognizes that our urban forest is a necessity and is an integral part of the City's infrastructure and ecosystems; and

WHEREAS, the City of Redmond is committed to provide resources to maintain and enhance the urban forest; and

WHEREAS, the City of Redmond is now recognized as a "Tree City USA" recipient for fostering programs which increase the number and health of our trees; and

WHEREAS, the City of Redmond recognizes April 30, 2021, as National Arbor Day.

NOW, THEREFORE BE IT RESOLVED THAT Council hereby proclaims the week of April 4-10, 2021, to be **ARBOR WEEK** in the City of Redmond and citizens are encouraged through the City to become more involved with the planting and stewardship of the urban forest in celebration of **ARBOR WEEK**.

APPROVED by the City Council and **SIGNED** by the Mayor this 23rd day of March 2021.

The City of Redmond, Oregon

George Endicott, Mayor

ATTEST:

Kelly Morse, City Recorder



CITY OF REDMOND

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STAFF REPORT

DATE: March 23, 2021
TO: Redmond City Council
Keith Witcosky, City Manager
THROUGH: John Roberts, Deputy City Manager
Bill Duerden, Public Works Director
FROM: Annie McVay, Parks Division Manager
SUBJECT: Quartz Park Update

Addresses Council Goal:

6 F. Strive for an interconnected community of parks and open spaces.

Report in Brief:

This presentation is a follow-up to the discussion held with Council on March 2 regarding: Updated cost information and park configuration.

Background:

Redmond's Dry Canyon provides recreational amenities throughout its four-mile length including a heavily used paved trail connecting many areas of the city. The trail terminates on the south end at Quartz Avenue, an undeveloped section of the Dry Canyon, that is identified in the 2018 Parks Master Plan as a location for a new neighborhood park.

In March 2020, the Quartz Park project had a low confidence planning estimate of \$1.5 million for design and construction. About \$651,000 was included in the Fiscal Year (FY) 2020/2021 budget with the remainder to be included in the FY 2021/2022 budget.

In May 2020, a planning effort concluded using the services of a landscape architect to assist with the public involvement and concept planning for the area. A community survey and online forums were used to solicit input on the amenities to include in the proposed park. About 150 residents participated in the survey and 120 in the feedback forums showing strong interest for a park project. A concept plan was developed from this input and includes: a parking lot, restroom building, play structures and games, concrete and asphalt pathways, irrigation, landscaping, open lawn and natural areas.

In November 2020, a design contract was awarded to Szabo Landscape Architecture in the amount of \$143,619 to bring the concept plan to final design. The scope of the contract includes preparing construction documents and assisting with construction oversight. A third-party cost estimator was brought in to review the project as part of the design process. Through this review, the project scope was reduced and refined to result in a moderate confidence construction cost estimate of \$2.7 million.

At \$7.58/square foot, the estimated cost for Quartz Park compares favorably to the average cost for parks of \$12.00/square foot. The final scope is a compromise between providing the amenities desired by the community and price. Approximately \$100,000 has been expended toward the project for design and initial site work.

On March 2, 2021, Staff briefed Council on the increased cost estimate and sought direction to proceed with the project. Discussions included: concern and mitigation for potential pedestrian crossing hazard on Quartz Avenue; location of parking; the benefit provided to the surrounding neighborhood; and support by the Parks Committee to proceed with the project. Council requested additional information from staff and parks committee representatives regarding how the increased cost may affect other park projects before providing direction.

Discussion:

This presentation continues the discussion by providing additional background about the park system, the ten-year

project priorities provided by the 2018 Parks Master Plan, the major near-term projects that support those priorities, and the estimated funding needs versus the planned funding availability.

Members from the Parks Committee to include the Chair and Vice Chair will be present to assist in the discussion.

Fiscal Impact:

The Quartz Park project is funded through Parks System Development Charges (SDCs). The total cost for both design and construction has a moderate confidence estimate of \$2.9 million.

The project is expected to span two fiscal years with \$651,536 included in the FY 2020/21 budget. There is currently \$3.3 million in SDC funds held in reserve and available to fund the remainder of the project in FY 2021/22.

Alternative Courses of Action:

1. Provide Staff with direction to proceed with the design and construction of Quartz Park.
2. Request additional information.
3. Do not approve proceeding with the Quartz Park project.

Recommendation / Suggested Motion:

No motion required. General direction requested to proceed with the design and construction of Quartz Park.

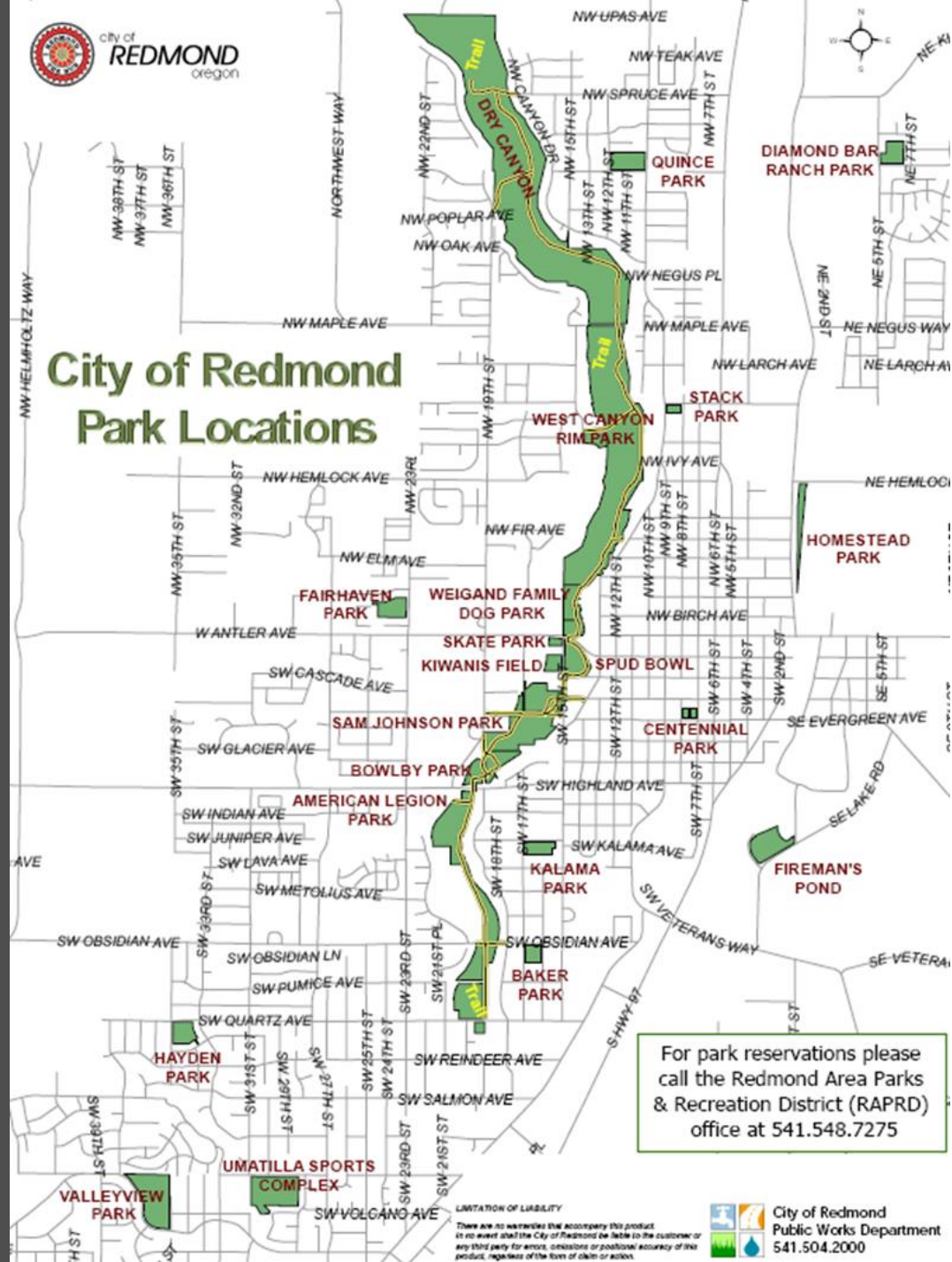


MARCH 23, 2021



- **Follow-up to March 2, 2021 Worksession**
 - Invite Parks Committee Members
 - Discuss Purpose and Role of Quartz Park
 - Discuss Configuration
 - Discuss Trade-offs of Increased Costs

PURPOSE



- 26 Developed Parks
- 3.8 miles of Dry Canyon Trail
- Over 250 acres undeveloped open space
- Juniper Golf Course
- RAPRD Partnership

PARK SYSTEM



PARK CATEGORIES

Community Parks

- 10 - 40 acres (>15 acres if possible)
- Serve 2-mile radius
- More facilities available (on-site parking, restrooms)
- Central/South Dry Canyon and Umatilla Parks

Neighborhood Parks

- 3 – 5 acres
- Serve ½-mile radius
- Mostly pedestrian access
- Baker and Quince Parks

Mini Parks

- Less than one acre
- Serve ¼-mile radius
- Stack Park

Special Use Facilities

- Single-purpose recreational areas
- Stand-alone sites
- Various sizes
- Homestead Pump Track, Dog Park, Juniper Golf Course

Natural Resource/Open Space

- Undeveloped lands, natural state
- Passive recreation secondary objective
- Can provide linked corridors
- North end of Dry Canyon

Private HOA Parks

- Similar to Mini Parks
- Supplements but not part of public park system

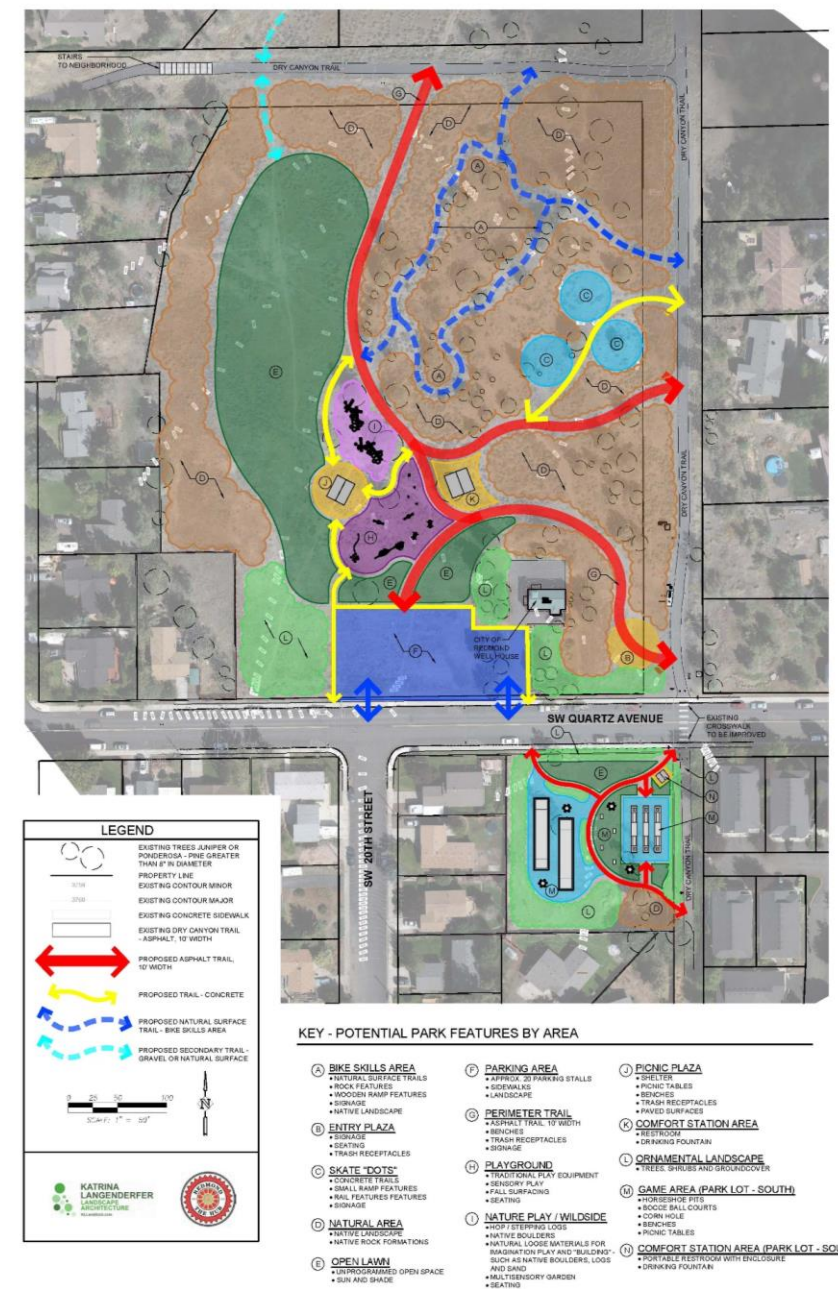


QUARTZ DESIGN ELEMENTS

Amenities include:

- Parking lot
- Restroom
- Play structures
- Paved pathways
- Bike skills area
- Irrigation/landscaping
- Open lawn area
- Game area
- Enhanced crosswalk

Park size: 7.9 acres



QUARTZ PARK

MASTER PLAN - JULY 2020



QUARTZ IN CONTEXT/RESOURCES AND PROJECTS

Projects Under Discussion	Timeline	Estimated Cost
Quartz Park	2020/2021	\$2.7 - \$4 million
Maple Avenue Staircase	2021	\$325,000
Umatilla Play Structure	2021/2022	\$250,000
Central Dry Canyon	2022 - 2024	\$3 - \$7 million
Neighborhood Park Renovation	2023	\$300,000
Pershall Community Park	2024+	\$10 million +

SDC Balance and Estimated Annual Generation:

- \$6.1 million balance
- \$2.3 million per year



OPTIONS

- **Proceed with current design**
 - Complete design and construct this summer, or;
 - Delay bid until fall 2021 (with construction in 2022)
- **Reduce project scope and phase**
 - Remove area south of Quartz Ave: \$165,000
 - Remove restrooms (materials only): \$130,000



QUESTIONS?



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STAFF REPORT

DATE: March 23, 2021
TO: Redmond City Council
Keith Witcosky, City Manager
THROUGH: John Roberts, Deputy City Manager
Bill Duerden, Public Works Director
FROM: Brad Haynes, Street Operations Manager
SUBJECT: 2021 Overlay Project Bid Award to Tri-County Paving, LLC: \$342,390.00

Addresses Council Goal:

3. Preserve and enhance the City's infrastructure to position the City to accommodate growth.

Report in Brief:

This item requests City Council award the 2021 Overlay Project to Tri-County Paving, LLC in the amount of \$342,390.

Background:

The City maintains approximately 173.5 miles of roadway valued at more than \$150 million. Each year, the City invests a substantial amount of resources into maintaining and improving this asset through a variety of surface treatments to include crack sealing, seal coats, slurry seals, and overlays.

The City uses a computerized pavement management program and a third-party consultant to assist with prioritizing streets for treatment in order to maintain a Pavement Condition Index rating in the low 80's (Good Condition). Approximately 2.4 miles of City streets have been identified for overlay treatment as indicated on the attached map.

Discussion:

The City publicly advertised the 2021 Overlay Project with an Invitation to Bid (ITB) on February 3, 2021 per ORS Section 279C. Three bids were received and publicly read on March 3, 2021. Bids were received from the following contractors:

<u>Contractor</u>	<u>Bid Amount</u>
1. Tri-County Paving, LLC	\$342,390.00
2. Knife River Corp	\$368,500.00
3. High Desert Aggregate & Paving	\$418,220.00

Tri-County Paving, LLC was the lowest responsible bidder. The bid was slightly more than the City estimate of \$320,000. Notice of Intent to Award was issued on March 8, 2021. This project has a completion date of September 1, 2021.

Fiscal Impact:

Funding for this expenditure is included in the Fiscal Year 2020/21 budget within the Transportation - Infrastructure Maintenance Sub-fund: \$600,000 (see attached).

Alternative Courses of Action:

1. Approve the contract.
2. Request additional information.
3. Reject all bids for asphalt overlay work.

Recommendation / Suggested Motion:

"I move to award the 2021 Overlay Project to Tri-County Paving, LLC in the amount of \$342,390.00 and authorize the City Manager to execute the contract."

BUDGET DETAIL

Transportation Fund		FY 2017/18 Actual	FY 2018/19 Actual	FY 2019/20 Budget	FY 2020/21 Proposed Budget	FY 2020/21 Approved Budget	FY 2020/21 Adopted Budget
22118-01-000-06-00-97	Chgs Svc From Other Fund	25,268	41,068	39,168	39,959	39,959	39,959
22118-01-000-06-00-98	Contractual Services	3,882	1,315	1,400	4,080	4,080	4,080
22118-01-000-06-85-05	ISF Central Services	79,455	82,990	86,723	94,003	94,003	94,003
22118-01-000-06-85-10	ISF IT	16,877	25,065	22,401	31,739	31,739	31,739
22118-01-000-06-85-15	ISF Risk Management	9,966	9,693	9,033	10,306	10,306	10,306
TOTAL MATERIALS & SERVICES		622,138	620,120	632,270	788,777	788,777	788,777
Capital Outlay							
22118-01-000-07-00-03	Machinery & Equipment	7,500	-	-	-	-	-
TOTAL CAPITAL OUTLAY		7,500	-	-	-	-	-
TOTAL SUB-FUND EXPENDITURE		1,213,162	1,257,142	1,344,945	1,522,363	1,522,363	1,522,363
NET SUB-FUND		(51,184)	21,657	-	-	-	-

Sub-fund: Transportation - Infrastructure Maintenance

Resources							
22161-01-000-04-30-50	STP Funds	-	-	309,000	339,400	339,400	339,400
22161-01-000-04-80-10	Interest - Investment	8,060	21,464	10,000	6,600	6,600	6,600
22161-01-000-04-86-10	Intrafund Tfrs-from Operations	1,000,000	1,150,000	1,160,000	1,000,000	1,000,000	1,000,000
22161-01-000-04-99-00	Beginning Fund Balance	422,127	459,758	363,495	801,620	801,620	801,620
TOTAL RESOURCES		1,430,187	1,631,222	1,842,495	2,147,620	2,147,620	2,147,620
Materials & Services							
22161-01-000-06-02-05	Asphalt Maintenance	407,216	485,988	320,000	600,000	600,000	600,000
22161-01-000-06-02-10	Bridge Maintenance	-	-	90,000	94,000	94,000	94,000
22161-01-000-06-02-15	Signage	68,930	55,838	55,000	55,000	55,000	55,000
22161-01-000-06-02-20	Surface Seals	339,954	304,090	657,500	600,000	600,000	600,000
22161-01-000-06-02-25	Sidewalk Maint	27,950	14,179	30,000	35,000	35,000	35,000
22161-01-000-06-02-30	Striping	17,340	22,877	45,000	45,000	45,000	45,000
22161-01-000-06-02-35	Legend Painting	30,095	13,981	25,000	35,000	35,000	35,000
22161-01-000-06-02-40	Vegetation Maintenance	3,843	20,183	15,000	40,000	40,000	40,000
22161-01-000-06-02-45	Street Sweeping	6,451	10,828	10,000	12,000	12,000	12,000
22161-01-000-06-02-50	Shoulder Maintenance	8,813	11,277	15,000	15,000	15,000	15,000
22161-01-000-06-02-55	Concrete Repair	54,625	51,570	55,000	60,000	60,000	60,000
22161-01-000-06-02-60	Snow & Ice Maintenance	5,214	1,137	6,000	26,000	26,000	26,000
TOTAL MATERIALS & SERVICES		970,429	991,948	1,323,500	1,617,000	1,617,000	1,617,000
Reserve							
22161-01-000-12-00-20	Reserve for Future Expend	-	-	518,995	530,620	530,620	530,620
TOTAL RESERVE		-	-	518,995	530,620	530,620	530,620
TOTAL SUB-FUND EXPENDITURE		970,429	991,948	1,842,495	2,147,620	2,147,620	2,147,620
NET SUB-FUND		459,758	639,275	-	-	-	-

Sub-fund: Transportation - Capital Vehicle & Equipment

Resources							
22163-01-000-04-80-10	Interest - Investment	64	1,830	-	-	-	-
22163-01-000-04-86-10	Intrafund Tfr - from Operations	165,000	170,000	225,000	225,000	225,000	225,000
22163-01-000-04-99-00	Beginning Fund Balance	46,313	35,647	155,000	140,900	140,900	140,900
TOTAL RESOURCES		211,377	207,477	380,000	365,900	365,900	365,900
Capital Outlay							
22163-01-000-07-00-03	Machinery & Equipment	50,930	-	-	-	-	-
22163-01-000-07-00-04	Heavy Equipment	83,366	50,869	215,000	225,000	225,000	225,000
22163-01-000-07-00-06	Vehicles	41,434	-	55,000	-	-	-
TOTAL CAPITAL OUTLAY		175,730	50,869	270,000	225,000	225,000	225,000
Reserve							
22163-01-000-12-00-20	Reserve for Future Expend	-	-	110,000	140,900	140,900	140,900
TOTAL RESERVE		-	-	110,000	140,900	140,900	140,900
TOTAL SUB-FUND EXPENDITURE		175,730	50,869	380,000	365,900	365,900	365,900
NET SUB-FUND		35,647	156,608	-	-	-	-

Sub-fund: Transportation - SDC Improvement

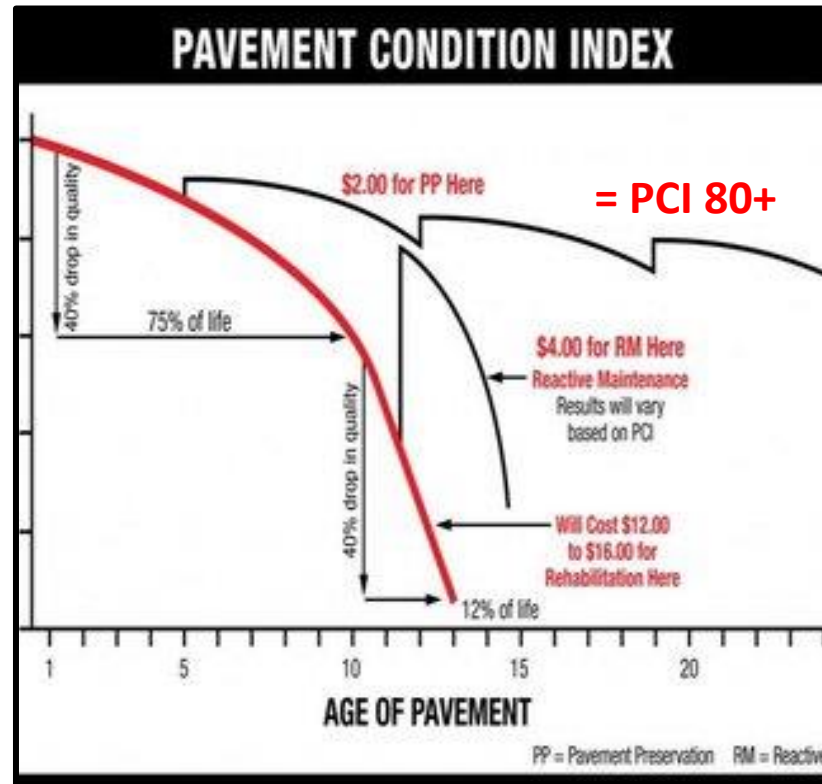
Resources							
22179-01-000-04-80-10	Interest - Investment	86,360	178,647	138,000	82,500	82,500	82,500
22179-01-000-04-75-45	Installment Pymt-Int	272	547	-	-	-	-
22179-01-000-04-75-10	SDC's Improvement	402,823	648,225	584,541	486,620	486,620	486,620
22179-01-000-04-75-40	Installment Improve-Princ	653	3,493	-	-	-	-
22179-01-000-04-75-15	Disc. SDC's Improvement	1,084,256	1,119,073	894,309	1,297,564	1,297,564	1,297,564
22179-01-000-04-99-00	Beginning Fund Balance	6,379,169	6,665,568	6,008,493	8,560,967	8,560,967	8,560,967
TOTAL RESOURCES		7,953,532	8,615,553	7,625,343	10,427,651	10,427,651	10,427,651

Materials & Services



2021 PAVEMENT MAINTENANCE PROJECTS AWARD OF CONTRACTS

CITY COUNCIL MEETING
MARCH 23, 2021



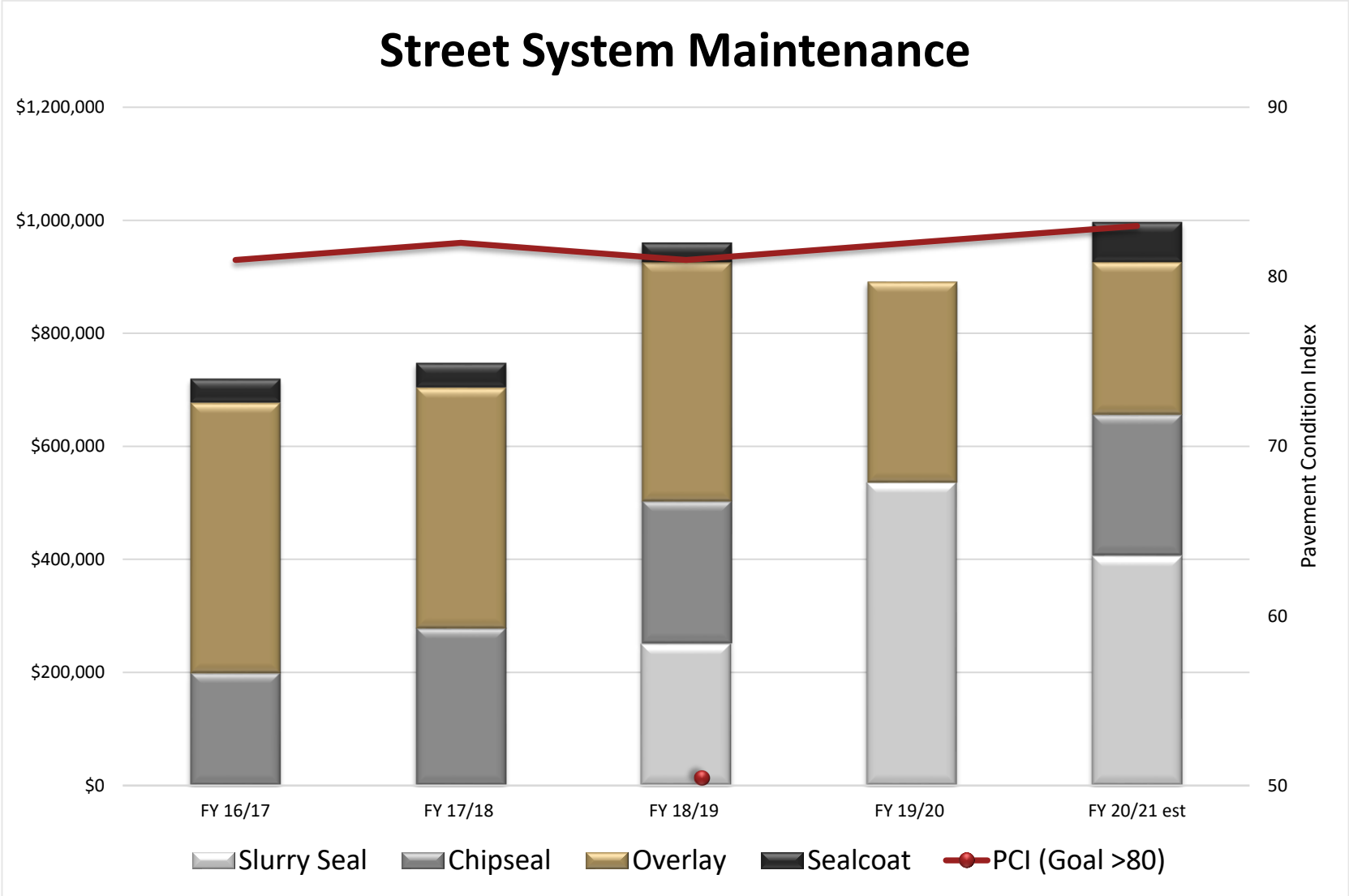
**PREVENTATIVE TREATMENT TO
EXTEND PAVEMENT LIFE**

**CITY INVESTS AROUND \$1M/YEAR
TO MAINTAIN STREETS**

WHY/WHAT



INVESTMENT HISTORY



TREATMENT METHODS



OVERLAY



SLURRY SEAL



LIQUID ROADS



CHIP SEAL



2021 OVERLAY PROJECT

BIDS RECEIVED (3):



TRI COUNTY PAVING LLC

KNIFE RIVER CORPORATION-NORTHWEST

HIGH DESERT AGGREGATE INC

BID AMOUNT:

\$342,390.00

\$368,500.00

\$418,220.00

ESTIMATE

\$320,000.00

PROJECT COMPLETION DATE:

SEPTEMBER 1, 2021

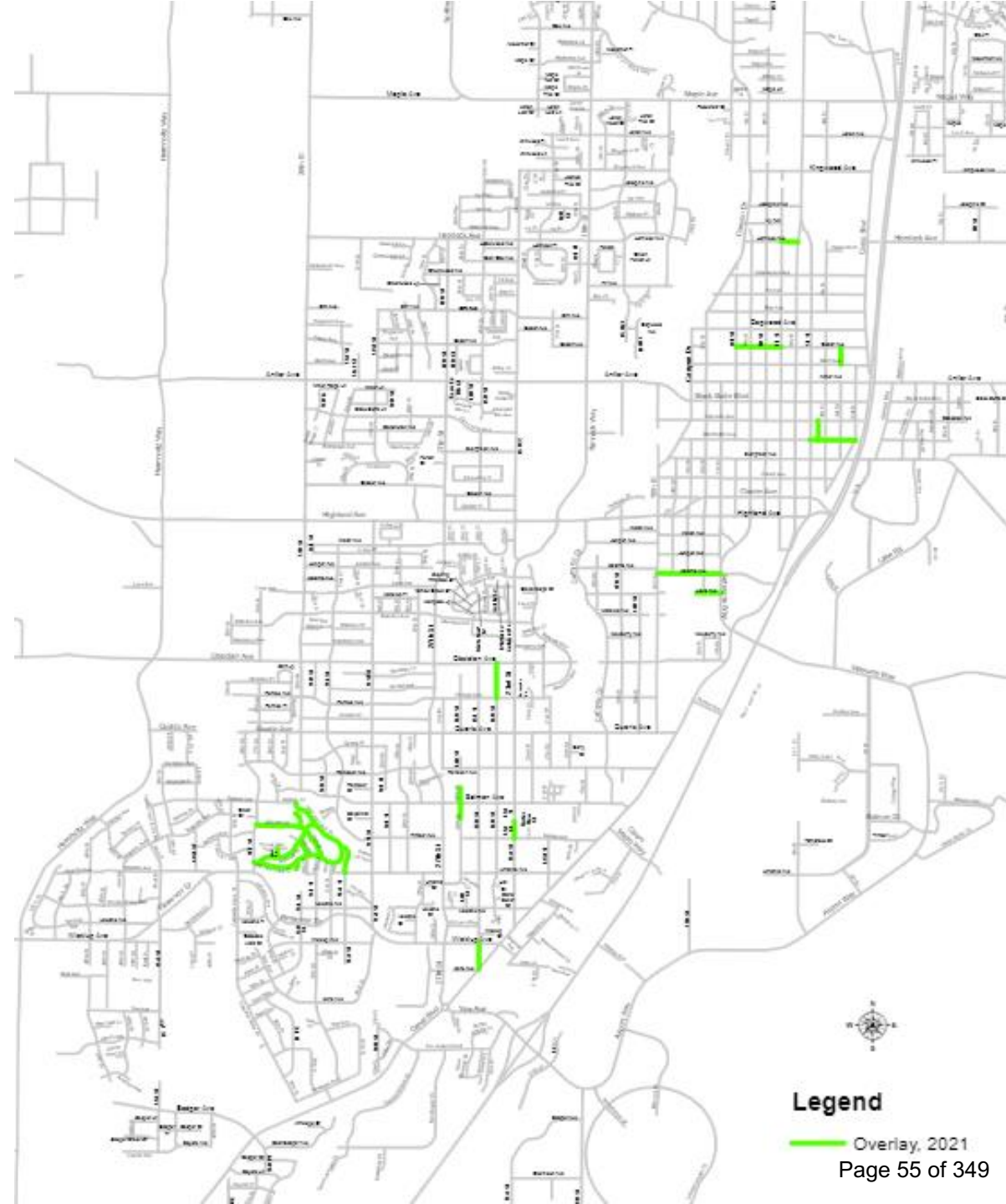
**OVERLAY
CONTRACT
SUMMARY**

2021 WORKSCOPE AND LOCATIONS

SLIDE / 6

OVERLAY

- Pavement Removal
- 2.40 Miles of Overlay
- Taper Grind at the Curb



Legend

Overlay, 2021
Page 55 of 349



2021 TYPE III SLURRY SEAL PROJECT

BIDS RECEIVED (2):

★ **DOOLITTLE CONSTRUCTION**
VSS INTERNATIONAL, INC

BID AMOUNT:

\$323,170.00 *
\$411,850.00

ESTIMATE

\$400,000.00

***NTE AMOUNT OF \$400,000 ESTABLISHED FOR CONTRACT VALUE**

PROJECT COMPLETION DATE:

SEPTEMBER 1, 2021

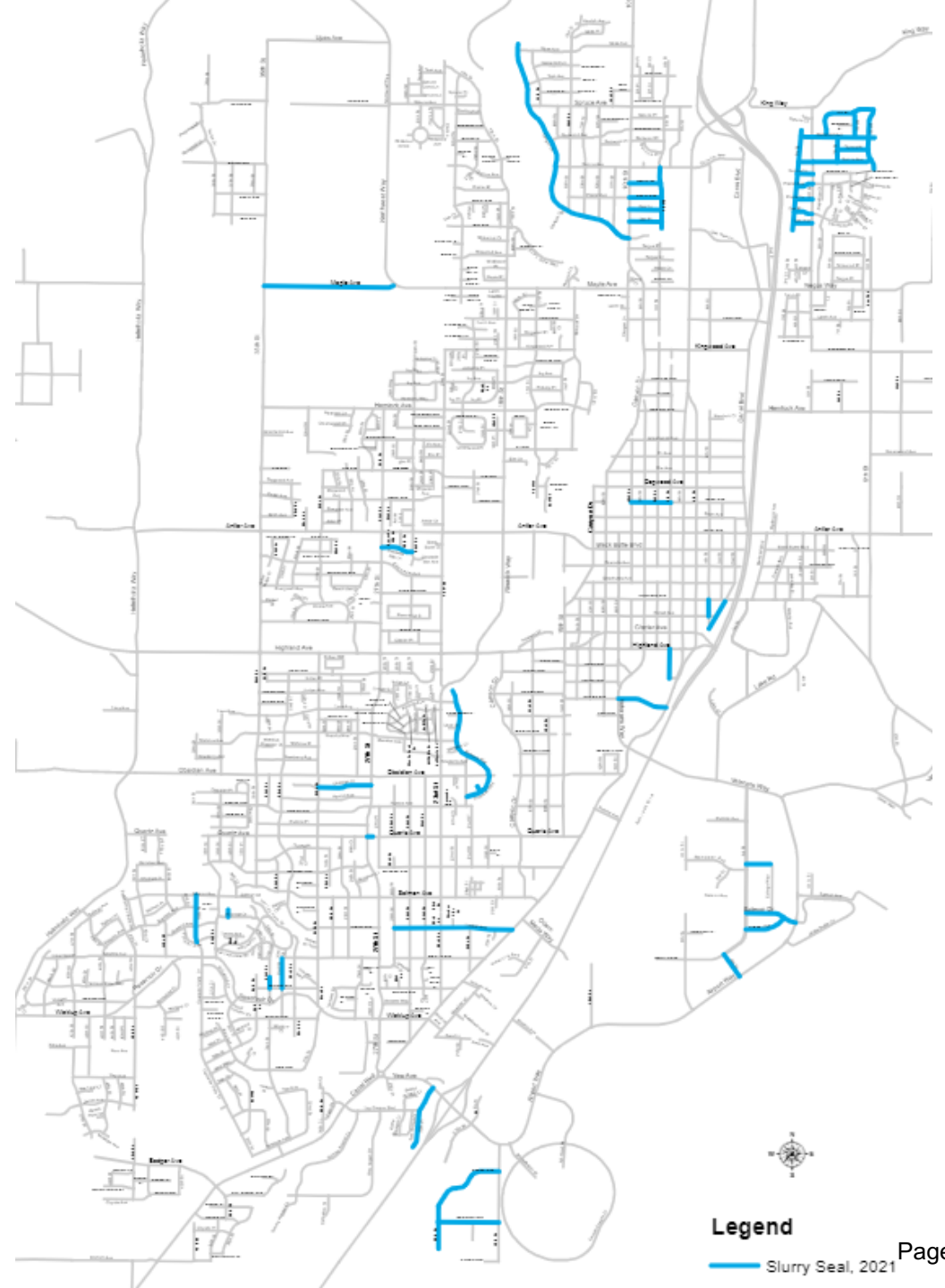
**SLURRY SEAL
CONTRACT
SUMMARY**

2021 WORKSCOPE AND LOCATIONS

SLIDE / 8

TYPE III SLURRY SEAL

- Type III Slurry Seal
- Application
- 10 Miles of Treatment





LIQUID ROADS CONTRACT SUMMARY

2021 LIQUID ROADS PROJECT

BIDS RECEIVED (3):

BID AMOUNT:



CENTRAL OREGON ASPHALT SEALING

\$99,890.00

SIERRA SANTA FE CORPORATION

\$108,980.46

TRI COUNTY PAVING, LLC

\$134,694.00

ESTIMATE

\$119,300.37

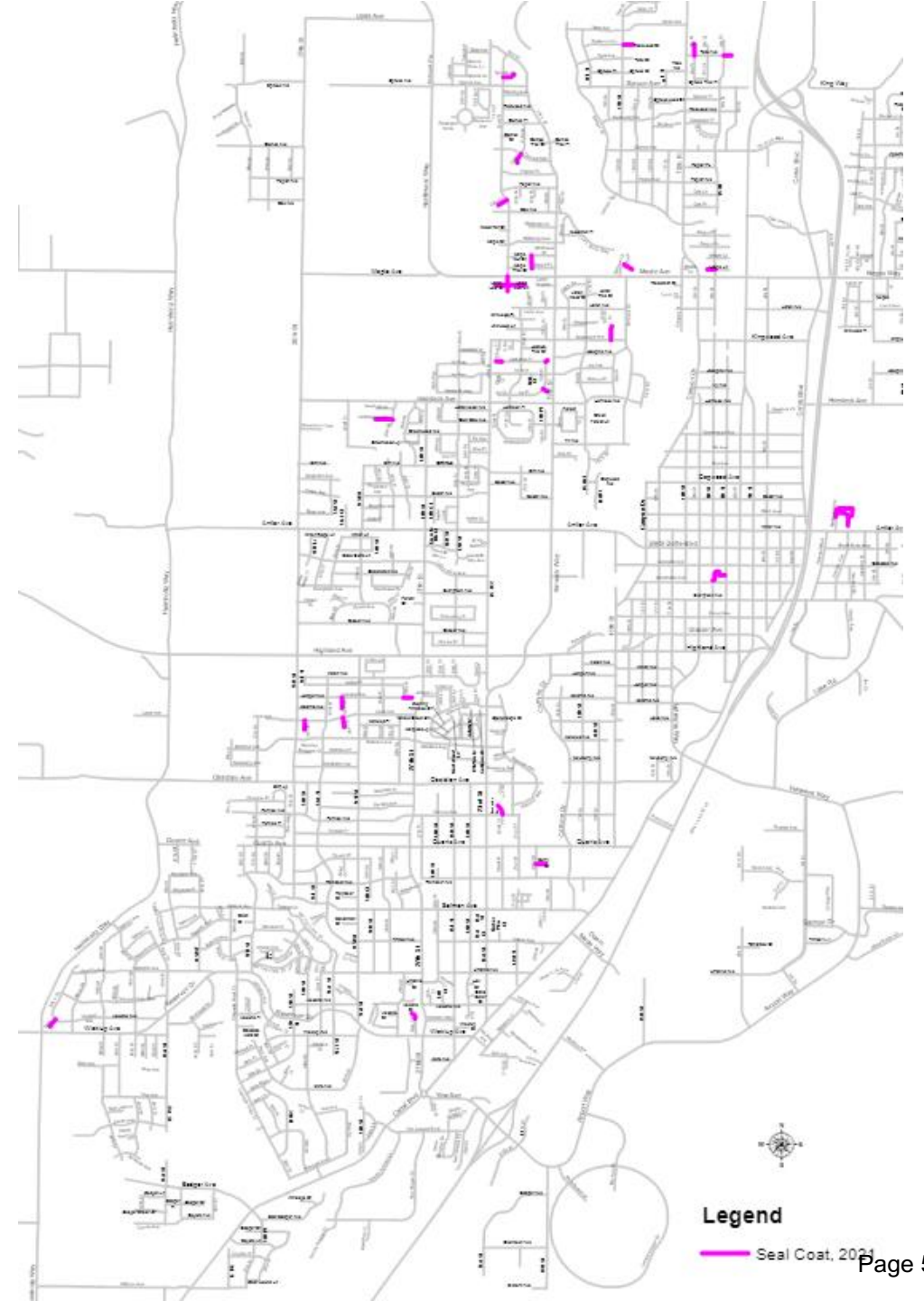
PROJECT COMPLETION DATE:

SEPTEMBER 1, 2021

2021 WORKSCOPE AND LOCATIONS

LIQUID ROADS

- 42,760 SQ YD of Treatment
- 60% Streets, 40% Parking
Lots
- 1 Mile of Liquid Roads



The logo is a circular seal. It features a dark outer ring. Inside this is a lighter ring with a serrated, sunburst-like edge. The word "REDMOND" is written in a serif font along the top arc of this inner ring, and "THE HUB" is written along the bottom arc. In the center of the seal is a stylized sunburst or wheel-like pattern. Overlaid on the center of the seal is the word "QUESTIONS?" in a large, white, sans-serif font.

QUESTIONS?



CITY OF REDMOND

CITY HALL
411 SW 9th STREET
REDMOND, OR 97756
541.923.7710
FAX: 541.548.0706
info@redmondoregon.gov
redmondoregon.gov

STAFF REPORT

DATE: March 23, 2021
TO: Redmond City Council
Keith Witcosky, City Manager
THROUGH: John Roberts, Deputy City Manager
Bill Duerden, Public Works Director
FROM: Brad Haynes, Street Operations Manager
SUBJECT: 2021 Type III Slurry Seal Project Bid Award to Doolittle Construction (TR2103): \$400,000

Addresses Council Goal:

Goal #3: Preserve and enhance the City's infrastructure to position the City to accommodate growth.

Report in Brief:

This item requests City Council award the 2021 Type III Slurry Seal Project to Doolittle Construction, Inc. in the not to exceed amount of \$400,000.

Background:

The City maintains approximately 173.5 miles of roadway and parking lots valued at more than \$150 million. Each year, the City invests a substantial amount of resources into maintaining and improving this asset through a variety of surface treatments to include crack sealing, seal coats, slurry seals and overlays.

The City uses a computerized pavement management program and a third-party consultant to assist with prioritizing streets for treatment in order to maintain a Pavement Condition Index rating in the low 80's (Good Condition). Approximately 8 miles of City streets were identified for Type III Slurry Seal treatment as indicated on the attached map.

Discussion:

The City publicly advertised for construction services per ORS Section 279C. Two bids were received and publicly read on March 3, 2021, from the following contractors:

<u>Contractor</u>	<u>Bid Amount</u>
1. Doolittle Construction	\$323,170.00
2. VSS International Inc.	\$411,850.00

Doolittle Construction is the lowest responsible bidder. The bid was less than the City estimate of \$400,000. A contract value not to exceed \$400,000 is established to allow for the addition of scope based on the unit prices included in the bid. Notice of Intent to Award was issued on March 8, 2021. This contract has a completion date of September 1, 2021.

Fiscal Impact:

Funding for this expenditure is included in the Fiscal Year 20/21 budget within the Transportation - Infrastructure Maintenance sub-fund: \$600,000 (see attached).

Alternative Courses of Action:

1. Approve the contract.
2. Request additional information.
3. Reject all bids for the 2021 Type III Slurry Seal Project.

Recommendation / Suggested Motion:

"I move to award the 2021 Type III Slurry Seal Project to Doolittle Construction in the not to exceed amount of \$400,000.00 and authorize the City Manager to execute the contract."

BUDGET DETAIL

Transportation Fund		FY 2017/18 Actual	FY 2018/19 Actual	FY 2019/20 Budget	FY 2020/21 Proposed Budget	FY 2020/21 Approved Budget	FY 2020/21 Adopted Budget
22118-01-000-06-00-97	Chgs Svc From Other Fund	25,268	41,068	39,168	39,959	39,959	39,959
22118-01-000-06-00-98	Contractual Services	3,882	1,315	1,400	4,080	4,080	4,080
22118-01-000-06-85-05	ISF Central Services	79,455	82,990	86,723	94,003	94,003	94,003
22118-01-000-06-85-10	ISF IT	16,877	25,065	22,401	31,739	31,739	31,739
22118-01-000-06-85-15	ISF Risk Management	9,966	9,693	9,033	10,306	10,306	10,306
TOTAL MATERIALS & SERVICES		622,138	620,120	632,270	788,777	788,777	788,777
Capital Outlay							
22118-01-000-07-00-03	Machinery & Equipment	7,500	-	-	-	-	-
TOTAL CAPITAL OUTLAY		7,500	-	-	-	-	-
TOTAL SUB-FUND EXPENDITURE		1,213,162	1,257,142	1,344,945	1,522,363	1,522,363	1,522,363
NET SUB-FUND		(51,184)	21,657	-	-	-	-

Sub-fund: Transportation - Infrastructure Maintenance

Resources							
22161-01-000-04-30-50	STP Funds	-	-	309,000	339,400	339,400	339,400
22161-01-000-04-80-10	Interest - Investment	8,060	21,464	10,000	6,600	6,600	6,600
22161-01-000-04-86-10	Intrafund Tfrs-from Operations	1,000,000	1,150,000	1,160,000	1,000,000	1,000,000	1,000,000
22161-01-000-04-99-00	Beginning Fund Balance	422,127	459,758	363,495	801,620	801,620	801,620
TOTAL RESOURCES		1,430,187	1,631,222	1,842,495	2,147,620	2,147,620	2,147,620
Materials & Services							
22161-01-000-06-02-05	Asphalt Maintenance	407,216	485,988	320,000	600,000	600,000	600,000
22161-01-000-06-02-10	Bridge Maintenance	-	-	90,000	94,000	94,000	94,000
22161-01-000-06-02-15	Signage	68,930	55,838	55,000	55,000	55,000	55,000
22161-01-000-06-02-20	Surface Seals	339,954	304,090	657,500	600,000	600,000	600,000
22161-01-000-06-02-25	Sidewalk Maint	27,950	14,179	30,000	35,000	35,000	35,000
22161-01-000-06-02-30	Striping	17,340	22,877	45,000	45,000	45,000	45,000
22161-01-000-06-02-35	Legend Painting	30,095	13,981	25,000	35,000	35,000	35,000
22161-01-000-06-02-40	Vegetation Maintenance	3,843	20,183	15,000	40,000	40,000	40,000
22161-01-000-06-02-45	Street Sweeping	6,451	10,828	10,000	12,000	12,000	12,000
22161-01-000-06-02-50	Shoulder Maintenance	8,813	11,277	15,000	15,000	15,000	15,000
22161-01-000-06-02-55	Concrete Repair	54,625	51,570	55,000	60,000	60,000	60,000
22161-01-000-06-02-60	Snow & Ice Maintenance	5,214	1,137	6,000	26,000	26,000	26,000
TOTAL MATERIALS & SERVICES		970,429	991,948	1,323,500	1,617,000	1,617,000	1,617,000
Reserve							
22161-01-000-12-00-20	Reserve for Future Expend	-	-	518,995	530,620	530,620	530,620
TOTAL RESERVE		-	-	518,995	530,620	530,620	530,620
TOTAL SUB-FUND EXPENDITURE		970,429	991,948	1,842,495	2,147,620	2,147,620	2,147,620
NET SUB-FUND		459,758	639,275	-	-	-	-

Sub-fund: Transportation - Capital Vehicle & Equipment

Resources							
22163-01-000-04-80-10	Interest - Investment	64	1,830	-	-	-	-
22163-01-000-04-86-10	Intrafund Tfr - from Operations	165,000	170,000	225,000	225,000	225,000	225,000
22163-01-000-04-99-00	Beginning Fund Balance	46,313	35,647	155,000	140,900	140,900	140,900
TOTAL RESOURCES		211,377	207,477	380,000	365,900	365,900	365,900
Capital Outlay							
22163-01-000-07-00-03	Machinery & Equipment	50,930	-	-	-	-	-
22163-01-000-07-00-04	Heavy Equipment	83,366	50,869	215,000	225,000	225,000	225,000
22163-01-000-07-00-06	Vehicles	41,434	-	55,000	-	-	-
TOTAL CAPITAL OUTLAY		175,730	50,869	270,000	225,000	225,000	225,000
Reserve							
22163-01-000-12-00-20	Reserve for Future Expend	-	-	110,000	140,900	140,900	140,900
TOTAL RESERVE		-	-	110,000	140,900	140,900	140,900
TOTAL SUB-FUND EXPENDITURE		175,730	50,869	380,000	365,900	365,900	365,900
NET SUB-FUND		35,647	156,608	-	-	-	-

Sub-fund: Transportation - SDC Improvement

Resources							
22179-01-000-04-80-10	Interest - Investment	86,360	178,647	138,000	82,500	82,500	82,500
22179-01-000-04-75-45	Installment Pymt-Int	272	547	-	-	-	-
22179-01-000-04-75-10	SDC's Improvement	402,823	648,225	584,541	486,620	486,620	486,620
22179-01-000-04-75-40	Installment Improve-Princ	653	3,493	-	-	-	-
22179-01-000-04-75-15	Disc. SDC's Improvement	1,084,256	1,119,073	894,309	1,297,564	1,297,564	1,297,564
22179-01-000-04-99-00	Beginning Fund Balance	6,379,169	6,665,568	6,008,493	8,560,967	8,560,967	8,560,967
TOTAL RESOURCES		7,953,532	8,615,553	7,625,343	10,427,651	10,427,651	10,427,651

Materials & Services



CITY OF REDMOND

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REDMOND, OR 97756
541.923.7710
FAX: 541.548.0706
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STAFF REPORT

DATE: March 23, 2021
TO: Redmond City Council
Keith Witcosky, City Manager
THROUGH: John Roberts, Deputy City Manager
Bill Duerden, Public Works Director
FROM: Brad Haynes, Street Operations Manager
SUBJECT: 2021 Liquid Roads Project Bid Award to TopLoc Asphalt Maintenance, LLC, DBA: Central Oregon Asphalt Sealing: \$99,890.00

Addresses Council Goal:

3. Preserve and enhance the City's infrastructure to position the City to accommodate growth.

Report in Brief:

This item requests City Council award the 2021 Liquid Roads Project to TopLoc Asphalt Maintenance, LLC, DBA: Central Oregon Asphalt Sealing in the amount of \$99,890. This project will provide surface treatment for City streets (\$59,635) and parking lots (\$40,255).

Background:

The City maintains approximately 173.5 miles of roadway and parking lots valued at more than \$150 million. Each year, the City invests a substantial amount of resources into maintaining and improving this asset through a variety of surface treatments to include crack sealing, seal coats, slurry seals and overlays.

The City uses a computerized pavement management program and a third-party consultant to assist with prioritizing streets for treatment in order to maintain a Pavement Condition Index rating in the low 80's (Good Condition). Approximately 1 mile of City streets and parking lots were identified for Liquid Roads (seal coat) treatment as indicated on the attached map.

Discussion:

The City publicly advertised for construction services per ORS Section 279C. Three bids were received and publicly read on March 3, 2021 from the following contractors:

<u>Contractor</u>	<u>Bid Amount</u>
1. TopLoc Asphalt Maintenance, LLC, DBA: Central Oregon Asphalt Sealing	\$99,890.00
2. Sierra Santa Fe Corporation	\$108,980.64
3. Tri-County Paving, LLC	\$134,694.00

TopLoc Asphalt Maintenance, LLC, DBA: Central Oregon Asphalt Sealing is the lowest responsible bidder. The bid amount is less than the City estimate of \$119,300. Notice of Intent to Award was issued on March 8, 2021. This contract has a completion date of September 1, 2021.

Fiscal Impact:

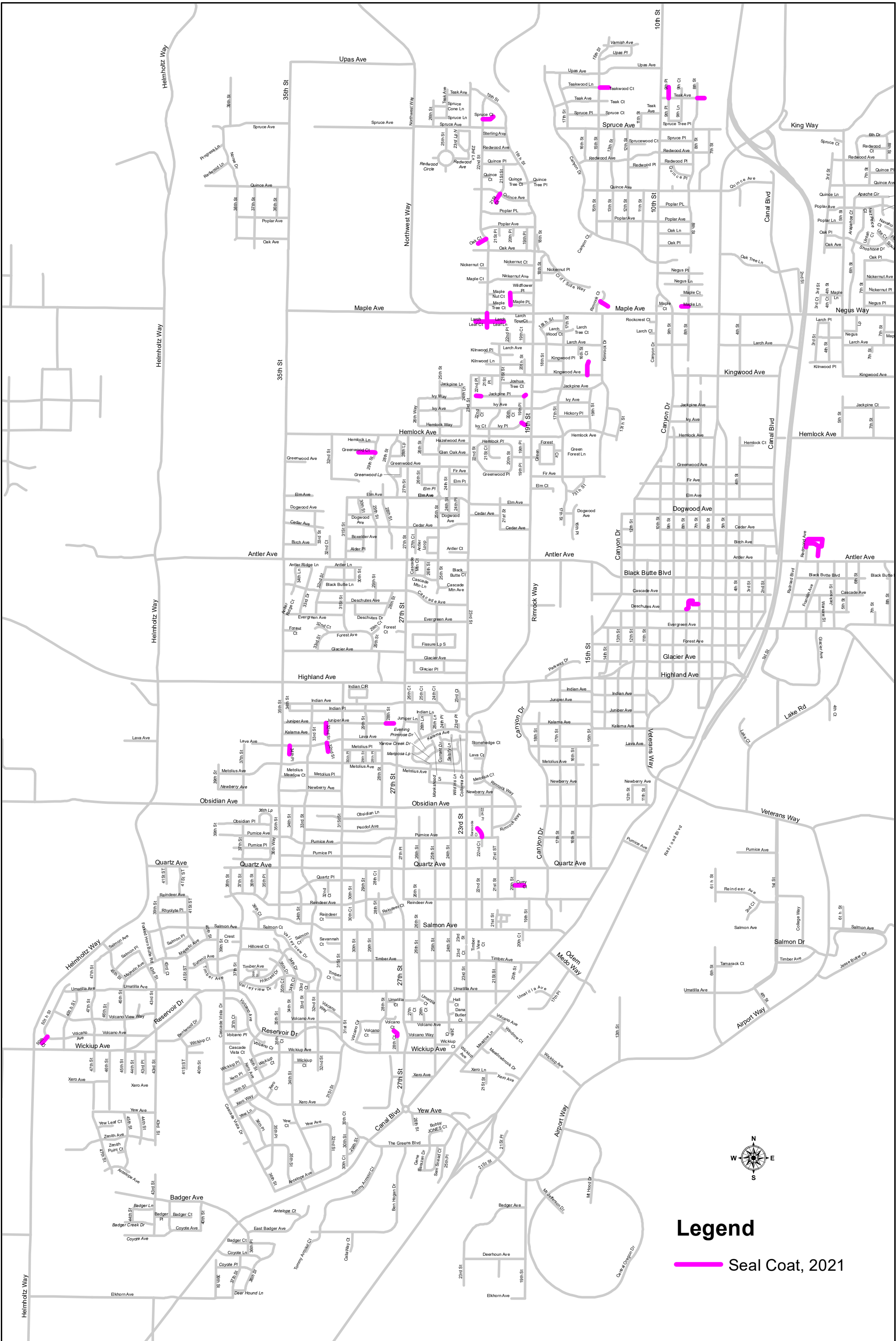
Funding for this expenditure is included in the FY 20/21 budget within the Transportation - Infrastructure Maintenance (\$600,000) and Parks & Facilities - Facilities Maintenance (\$51,500) sub-funds (see attached).

Alternative Courses of Action:

1. Approve the contract.
2. Request additional information.
3. Reject all bids for the Liquid Roads Project.

Recommendation / Suggested Motion:

"I move to award the 2021 Liquid Roads Project to TopLoc Asphalt Maintenance, LLC, DBA: Central Oregon Asphalt Sealing in the amount of \$99,890.00 and authorize the City Manager to execute the contract."



BUDGET DETAIL

Transportation Fund		FY 2017/18 Actual	FY 2018/19 Actual	FY 2019/20 Budget	FY 2020/21 Proposed Budget	FY 2020/21 Approved Budget	FY 2020/21 Adopted Budget
22118-01-000-06-00-97	Chgs Svc From Other Fund	25,268	41,068	39,168	39,959	39,959	39,959
22118-01-000-06-00-98	Contractual Services	3,882	1,315	1,400	4,080	4,080	4,080
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22118-01-000-06-85-10	ISF IT	16,877	25,065	22,401	31,739	31,739	31,739
22118-01-000-06-85-15	ISF Risk Management	9,966	9,693	9,033	10,306	10,306	10,306
TOTAL MATERIALS & SERVICES		622,138	620,120	632,270	788,777	788,777	788,777
Capital Outlay							
22118-01-000-07-00-03	Machinery & Equipment	7,500	-	-	-	-	-
TOTAL CAPITAL OUTLAY		7,500	-	-	-	-	-
TOTAL SUB-FUND EXPENDITURE		1,213,162	1,257,142	1,344,945	1,522,363	1,522,363	1,522,363
NET SUB-FUND		(51,184)	21,657	-	-	-	-

Sub-fund: Transportation - Infrastructure Maintenance

Resources							
22161-01-000-04-30-50	STP Funds	-	-	309,000	339,400	339,400	339,400
22161-01-000-04-80-10	Interest - Investment	8,060	21,464	10,000	6,600	6,600	6,600
22161-01-000-04-86-10	Intrafund Tfrs-from Operations	1,000,000	1,150,000	1,160,000	1,000,000	1,000,000	1,000,000
22161-01-000-04-99-00	Beginning Fund Balance	422,127	459,758	363,495	801,620	801,620	801,620
TOTAL RESOURCES		1,430,187	1,631,222	1,842,495	2,147,620	2,147,620	2,147,620
Materials & Services							
22161-01-000-06-02-05	Asphalt Maintenance	407,216	485,988	320,000	600,000	600,000	600,000
22161-01-000-06-02-10	Bridge Maintenance	-	-	90,000	94,000	94,000	94,000
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22161-01-000-06-02-30	Striping	17,340	22,877	45,000	45,000	45,000	45,000
22161-01-000-06-02-35	Legend Painting	30,095	13,981	25,000	35,000	35,000	35,000
22161-01-000-06-02-40	Vegetation Maintenance	3,843	20,183	15,000	40,000	40,000	40,000
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22161-01-000-06-02-55	Concrete Repair	54,625	51,570	55,000	60,000	60,000	60,000
22161-01-000-06-02-60	Snow & Ice Maintenance	5,214	1,137	6,000	26,000	26,000	26,000
TOTAL MATERIALS & SERVICES		970,429	991,948	1,323,500	1,617,000	1,617,000	1,617,000
Reserve							
22161-01-000-12-00-20	Reserve for Future Expend	-	-	518,995	530,620	530,620	530,620
TOTAL RESERVE		-	-	518,995	530,620	530,620	530,620
TOTAL SUB-FUND EXPENDITURE		970,429	991,948	1,842,495	2,147,620	2,147,620	2,147,620
NET SUB-FUND		459,758	639,275	-	-	-	-

Sub-fund: Transportation - Capital Vehicle & Equipment

Resources							
22163-01-000-04-80-10	Interest - Investment	64	1,830	-	-	-	-
22163-01-000-04-86-10	Intrafund Tfr - from Operations	165,000	170,000	225,000	225,000	225,000	225,000
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TOTAL RESOURCES		211,377	207,477	380,000	365,900	365,900	365,900
Capital Outlay							
22163-01-000-07-00-03	Machinery & Equipment	50,930	-	-	-	-	-
22163-01-000-07-00-04	Heavy Equipment	83,366	50,869	215,000	225,000	225,000	225,000
22163-01-000-07-00-06	Vehicles	41,434	-	55,000	-	-	-
TOTAL CAPITAL OUTLAY		175,730	50,869	270,000	225,000	225,000	225,000
Reserve							
22163-01-000-12-00-20	Reserve for Future Expend	-	-	110,000	140,900	140,900	140,900
TOTAL RESERVE		-	-	110,000	140,900	140,900	140,900
TOTAL SUB-FUND EXPENDITURE		175,730	50,869	380,000	365,900	365,900	365,900
NET SUB-FUND		35,647	156,608	-	-	-	-

Sub-fund: Transportation - SDC Improvement

Resources							
22179-01-000-04-80-10	Interest - Investment	86,360	178,647	138,000	82,500	82,500	82,500
22179-01-000-04-75-45	Installment Pymt-Int	272	547	-	-	-	-
22179-01-000-04-75-10	SDC's Improvement	402,823	648,225	584,541	486,620	486,620	486,620
22179-01-000-04-75-40	Installment Improve-Princ	653	3,493	-	-	-	-
22179-01-000-04-75-15	Disc. SDC's Improvement	1,084,256	1,119,073	894,309	1,297,564	1,297,564	1,297,564
22179-01-000-04-99-00	Beginning Fund Balance	6,379,169	6,665,568	6,008,493	8,560,967	8,560,967	8,560,967
TOTAL RESOURCES		7,953,532	8,615,553	7,625,343	10,427,651	10,427,651	10,427,651

Materials & Services

BUDGET DETAIL

Parks & Facilities Fund		FY 2017/18 Actual	FY 2018/19 Actual	FY 2019/20 Budget	FY 2020/21 Proposed Budget	FY 2020/21 Approved Budget	FY 2020/21 Adopted Budget
Sub-fund: Parks & Facilities - Facilities Maintenance							
Resources							
22219-01-000-04-25-20	Urban Renewal	-	7,226	8,821	10,414	10,414	10,414
22219-01-000-04-40-98	Refunds/Reimbursements	1,089	-	-	-	-	-
22219-01-000-04-80-10	Interest - Investment	558	3,418	-	-	-	-
22219-01-000-04-85-40	ISF Facilities Maintenance	618,525	766,664	873,230	1,031,021	1,031,021	1,031,021
22219-01-000-04-99-00	Beginning Fund Balance	24,365	16,123	106,789	193,184	193,184	193,184
TOTAL RESOURCES		644,537	793,430	988,840	1,234,619	1,234,619	1,234,619
Personnel Services							
22219-01-000-05-00-01	Regular Pay	289,701	264,570	415,250	484,233	484,233	484,233
22219-01-000-05-00-03	Overtime	3,537	2,328	2,500	2,500	2,500	2,500
22219-01-000-05-00-12	Vac/Comp/Holiday Buy Back	2,404	-	-	-	-	-
22219-01-000-05-20-11	Employer Social Security	17,986	16,216	25,746	30,022	30,022	30,022
22219-01-000-05-20-12	Employer Medicare	4,207	3,793	6,021	7,021	7,021	7,021
22219-01-000-05-20-30	Employer PERS	30,991	34,896	93,444	104,242	104,242	104,242
22219-01-000-05-20-41	Medical Insurance	84,385	81,227	140,830	139,582	139,582	139,582
22219-01-000-05-20-42	VEBA Contribution	3,395	2,585	9,685	10,416	10,416	10,416
22219-01-000-05-20-43	HRA Contribution	3,858	7,997	8,940	11,088	11,088	11,088
22219-01-000-05-20-50	Life Insurance	125	124	188	212	212	212
22219-01-000-05-20-51	Accidental D & D	22	21	33	37	37	37
22219-01-000-05-20-52	SAIF	5,275	4,441	10,017	11,664	11,664	11,664
22219-01-000-05-20-53	Long-Term Disability	682	648	1,112	1,185	1,185	1,185
22219-01-000-05-20-62	FSA	151	145	211	238	238	238
TOTAL PERSONNEL SERVICES		446,721	418,990	713,977	802,440	802,440	802,440
Materials & Services							
22219-01-000-06-00-04	Uniforms and Clothing	1,564	1,115	1,200	1,200	1,200	1,200
22219-01-000-06-00-03	Housekeeping	25,154	17,412	20,000	20,000	20,000	20,000
22219-01-000-06-00-05	Electronic Equip & Supplies	-	229	-	-	-	-
22219-01-000-06-00-06	Small Tools & Minor Equip	13,279	7,422	7,500	7,500	7,500	7,500
22219-01-000-06-00-07	Safety Supplies	469	104	1,000	1,000	1,000	1,000
22219-01-000-06-00-10	Furnishings & Fixtures	293	90	-	-	-	-
22219-01-000-06-00-12	Building Maintenance	30,298	35,114	40,000	40,000	40,000	40,000
22219-01-000-06-00-24	Phone & Internet	894	716	1,000	1,000	1,000	1,000
22219-01-000-06-00-29	Radio Maintenance	2,523	-	-	-	-	-
22219-01-000-06-00-41	Printing	35	33	-	-	-	-
22219-01-000-06-00-48	Rentals/Leases	170	-	500	1,000	1,000	1,000
22219-01-000-06-00-60	Dues, Subs, Memberships	-	-	100	-	-	-
22219-01-000-06-00-61	Travel & Training	3,321	2,850	5,000	5,000	5,000	5,000
22219-01-000-06-00-74	External Vehicle & Equip Maint	1,837	-	-	-	-	-
22219-01-000-06-00-75	Parts & Inventory	-	494	1,500	1,000	1,000	1,000
22219-01-000-06-00-77	Fuel	3,194	4,697	4,000	6,000	6,000	6,000
22219-01-000-06-00-84	Systems Maintenance	2,371	1,074	-	51,500	51,500	51,500
22219-01-000-06-00-86	Licenses & Permits	310	827	5,000	5,000	5,000	5,000
22219-01-000-06-00-87	Employee Physicals	1,303	770	300	300	300	300
22219-01-000-06-00-92	Software Maintenance	2,260	1,130	5,000	5,000	5,000	5,000
22219-01-000-06-00-94	Temporary Personnel Services	12,094	-	-	-	-	-
22219-01-000-06-00-98	Contractual Services	11,250	34,436	35,000	35,000	35,000	35,000
22219-01-000-06-85-05	ISF Central Services	29,928	36,330	42,556	47,863	47,863	47,863
22219-01-000-06-85-10	ISF IT	5,863	14,595	16,036	23,330	23,330	23,330
22219-01-000-06-85-15	ISF Risk Management	10,800	10,280	12,084	15,460	15,460	15,460
22219-01-000-06-85-30	ISF Fleet Services	5,484	5,092	2,087	5,026	5,026	5,026
TOTAL MATERIALS & SERVICES		164,694	174,810	199,863	272,179	272,179	272,179
Intrafund Transfers							
22219-01-000-13-00-63	Intrafund Tfrs-to CVE	17,000	37,500	75,000	160,000	160,000	160,000
TOTAL INTRAFUND TRANSFERS		17,000	37,500	75,000	160,000	160,000	160,000
TOTAL SUB-FUND EXPENDITURE		628,414	631,300	988,840	1,234,619	1,234,619	1,234,619
NET SUB-FUND		16,123	162,131	-	-	-	-
Sub-fund: Parks & Facilities - Capital Vehicle & Equipment							
Resources							
22263-01-000-04-80-10	Interest - Investment	94	886	-	-	-	-
22263-01-000-04-86-10	Intrafund Tfrs-from Operations	110,000	97,500	150,000	340,000	340,000	340,000
22263-01-000-04-99-00	Beginning Fund Balance	14,783	18,543	26,560	65,000	65,000	65,000
TOTAL RESOURCES		124,877	116,928	176,560	405,000	405,000	405,000
Capital Outlay							
22263-01-000-07-00-03	Machinery & Equipment	-	-	50,000	285,000	285,000	285,000
22263-01-000-07-00-04	Heavy Equipment	66,495	-	-	-	-	-
22263-01-000-07-00-06	Vehicles	39,840	68,833	100,000	120,000	120,000	120,000
TOTAL CAPITAL OUTLAY		106,334	68,833	150,000	405,000	405,000	405,000
Reserve							



CITY OF REDMOND

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redmondoregon.gov

STAFF REPORT

DATE: March 23, 2021
TO: Redmond City Council
THROUGH: Keith Witcosky, City Manager
John Roberts, Deputy City Manager
FROM: Mike Caccavano, City Engineer
SUBJECT: Ord. #2021-01 - An ordinance concerning the vacation of SW Salmon Avenue from SW 6th Street to SW 1st Street.

Addresses Council Goal:

4.B.iii. Provide well planned, maintained, high quality infrastructure that create competitive advantages for business and community growth.

Report in Brief:

This item includes a public hearing and consideration of an ordinance for vacation of Salmon Avenue right-of-way between SW 6th Street and SW 1st Street. This is the second of two required City Council actions to vacate a right-of-way.

A map showing the subject right-of-ways is attached for reference.

Background:

This item was first considered by City Council on January 12, 2021. A concern was raised by Council about relinquishing the right-of-way and the difficulty of re-acquiring it in the future if it was needed. Council requested additional background information to gain a better understanding of the process and purpose of street vacations.

A subsequent Council worksession occurred February 16, 2021, to discuss the right-of-way vacation process, the decision process for keeping or vacating right-of-way, and the reasons for vacating a portion of Salmon Avenue in particular. After discussion Council approved initiating the vacation and scheduled a public hearing for March 23, 2021.

The impetus for vacating the subject right-of-way began when McKenzie Cascade Construction submitted a land use application to develop industrial property adjacent to and south of their office and equipment yard. McKenzie Cascade, working with Redmond Economic Development, Inc. (REDI), is planning to create industrial space to help meet demand in Redmond.

McKenzie Cascade's property fronts SW 6th Street and SW Salmon Avenue. A condition of approval to develop their property would include infrastructure improvements to both streets to meet "to and through" code requirements. The City and REDI worked with the Oregon Department of Transportation (ODOT) to obtain an Immediate Opportunity Fund grant to offset a portion of the construction costs for SW 6th Street.

The adopted Transportation System Plan (TSP) calls for a new connection between SW Salmon Avenue and Highway 97 at SW Quartz Avenue. This collector street will function better if it lines up with the existing SW Salmon Drive east of 1st Street providing a continuous alignment through to Airport Way. With Salmon Avenue located to the south side of the adjacent airport owned parcel, the existing 30 feet of Salmon Avenue right-of-way on the north side of the parcel is not needed. The existing right-of-way proposed to be vacated is 300 feet north of the proposed alignment and does not provide significant benefit to the properties to the north since they have access via other streets.

Background on Right-of-Way Vacation:

Right-of-way is typically a long strip of land used as a road for public access. In Oregon, a right-of-way allows a City or other entity to use land for public purposes. A City does not own the land outright, but does own the right to control its use. Right-of-way vacation is a process governed by Oregon Revised Statutes that allows a City to give up the right to use

the land and return control to the original owner or their successor.

In this situation, thirty feet of right-of-way on SW Salmon Avenue between SW 6th and SW 1st Street was created with an undated survey (County Survey 11106). This survey dedicated right-of-way along section and quarter section lines as required for Redmond's street grid. However, street rights-of-way are typically 60 feet wide. The other 30 feet needed for a full Salmon Avenue right-of-way is located on City owned airport property, but has not been dedicated.

There are no existing street improvements between SW 6th and SW 1st Streets. The creation of a new 60 foot right-of-way on the airport property will enable the City to dedicate the right-of-way in a more appropriate location that has alignment with the Transportation System Plan and meets needs of future businesses better.

Discussion:

Reasons to support the vacation of the existing 30 foot right-of-way include:

- The existing right-of-way creates alignment issues and using it would be inconsistent with the City's recently adopted Transportation System Plan (TSP). The TSP envisions connectivity with Quartz Avenue to the west.
- All property owners have acknowledged their willingness to vacate the right-of-way.
- The airport property would not be encumbered by two rights-of-way, just one.
- Adjacent businesses will be able to use the additional property once vacated.
- The City does not need, or currently use, the property in the existing right-of-way.
- Better alignment would be created to help a proposed business to the south.

A vacated right-of-way is returned to the property that dedicated it. In this instance, the right-of-way was dedicated by the properties to the north and the vacated right-of-way will accrue to those properties on the north side.

Oregon Revised Statutes have requirements for the right-of-way vacation process:

- All property owners immediately adjacent to the right-of-way to be vacated must give their consent. All of the adjacent parcels (listed below) have provided consent:
 - Tax lot 151321AD 01200, 2511 342 SW Reindeer Ave. Lawrence R. and Trisa Lindsay.
 - Tax lot 151321AD 01400, 2235 SW 2nd Ct., Ralph J. Affatati Revocable Living Trust.
 - Tax lot 151321AD 01500, 2234 SW 2nd Vt., Ralph J. Affatati.
 - Tax lot 151321AD 02200, 2241 SW 1st St., L&M Weaver Trust et al.
 - Tax lot 151321D0 00100, 2303 SW 1st St., City of Redmond.
- Two-thirds of the property owners within 200 feet of either side and 400 feet of either end of the proposed right-of-way vacation must give their consent. Consent has been obtained from all but one of the property owners in the vicinity of the proposed vacation. One property owner did not respond.
- Utilities must be contacted to determine if they have facilities within the right-of-way. All private utilities were contacted and there were no objections to the proposed vacation. There are no City water, sewer or storm drainage facilities in the right-of-way proposed for vacation.

There are two required steps for a City to legally vacate a right-of-way:

- Step 1 - "Initiation". This step determines if the City is willing to relinquish the right-of-way and if so, set a public hearing date.
- Step 2 - "Public hearing". This step the City Council conducts a public hearing to decide to proceed to adopt an ordinance vacating the subject right-of-way.

This action is Step 2, conducting a public hearing and considering the vacation ordinance.

Fiscal Impact:

In vacating this right-of-way the City will need to dedicate 60 feet of right-of-way along the south boundary of Tax Lot 151321D0 00100.

Alternative Courses of Action:

1. Conduct the public hearing and approve Ordinance 2021-01.
2. Conduct the public hearing and do not approve Ordinance 2021-01.
3. Request additional information.

As required by City Charter, notices regarding this ordinance coming before the Council were posted in three public

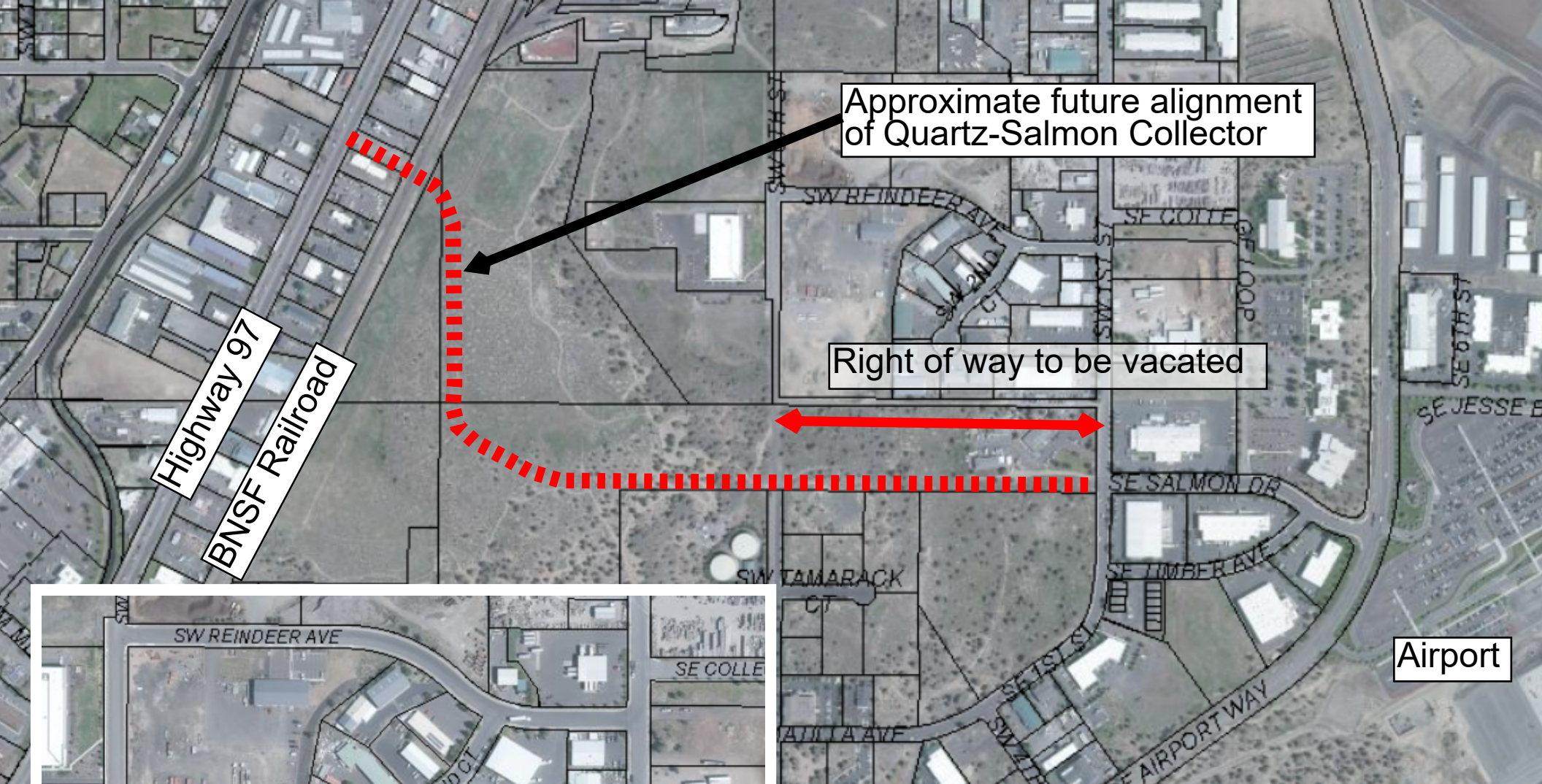
places (the Library, the Police Department, and the Redmond Chamber of Commerce) on March 16, 2021. In addition, the notices were posted and available for review in City Hall.

Recommendation / Suggested Motion:

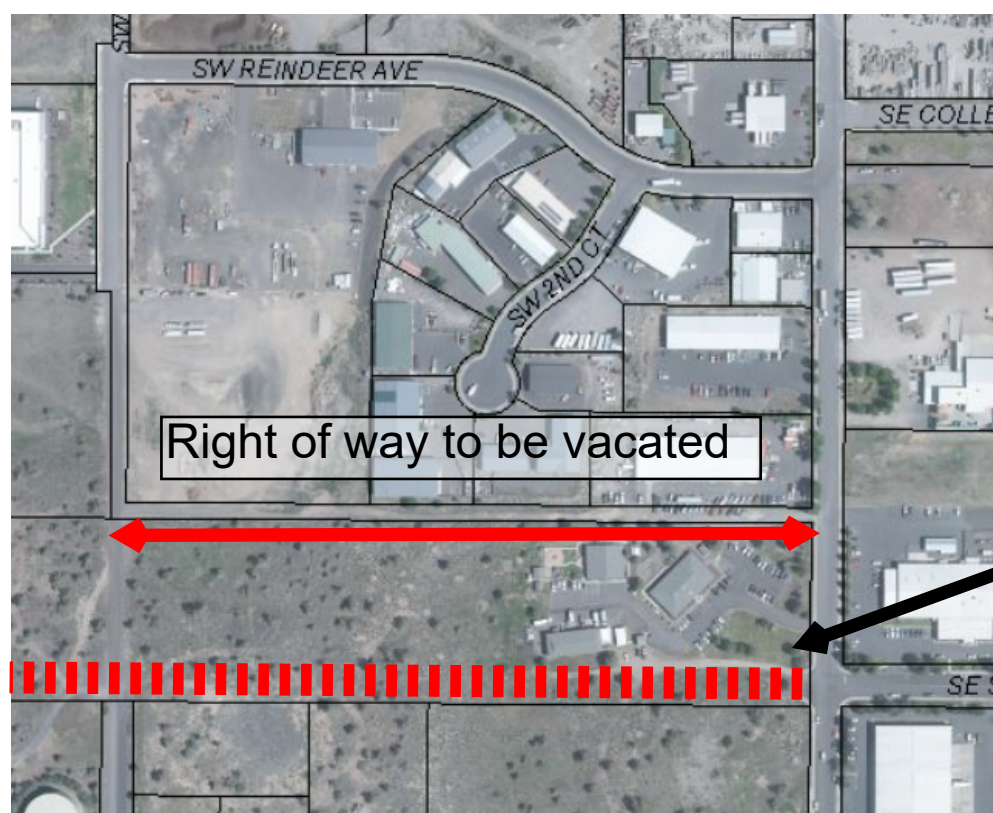
Option #1. "I move to have a first and second reading of Ord. #2021-01, by title only." (Voice vote)

(City Attorney will read ordinance by title only, twice.)

"I move to adopt Ord. #2021-01." (Roll call vote)



Overview



Closer view

AFTER RECORDING RETURN TO:
City Recorder's Office
City of Redmond
411 SW 9th St
Redmond, OR 97756

**CITY OF REDMOND
ORDINANCE NO. 2021-01**

AN ORDINANCE CONCERNING THE VACATION OF SW SALMON AVENUE FROM SW 6TH STREET TO SW 1ST STREET.

WHEREAS, the City Council, pursuant to ORS 271.130, initiated vacation proceedings for the public right-of-way referred to above and shown in Exhibits "A" and "B" attached hereto; and

WHEREAS, a hearing was held March 23, 2021, at the regularly scheduled City Council meeting and notice for that meeting was duly published.

NOW, THEREFORE, THE CITY OF REDMOND ORDAINS AS FOLLOWS:

SECTION ONE - FINDINGS

The City Council finds that this vacation is in the best interest of the City of Redmond and will not prejudice any public interest and will not adversely affect the market value of the affected properties.

SECTION TWO – VACATION

The public right-of-way and traveled way shown in Exhibits "A" and "B" attached hereto should be and hereby is vacated as public right-of-way.

SECTION THREE – TITLE TO VACATED RIGHT-OF-WAY

Pursuant to ORS 271.140, title to the vacated right-of-way shall attach to Lot 5 and Lot 9, Murphy Industrial Tracts Phase 1, Part of Lot 6 Murphy Industrial Tracts Phase 1 (described in Deschutes County Records Book 462 Page 780) and that parcel of land described in Deschutes County Recording Instrument 2020-48510 in the City of Redmond, Deschutes County, Oregon.

PASSED by the City Council and **APPROVED** by the Mayor this 23rd day of March 2021.

George Endicott, Mayor

ATTEST:

Kelly Morse, City Recorder

EXHIBIT "A"

LAND LOCATED IN THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 21, TOWNSHIP 15 SOUTH, RANGE 13 EAST, WILLAMETTE MERIDIAN, CITY OF REDMOND, DESCHUTES COUNTY, OREGON, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE CENTER EAST 1/6TH CORNER OF SAID SECTION 21;

THENCE ALONG THE SOUTHERLY BOUNDARY OF SAID SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 21, NORTH 89°54'06" EAST 30.00 FEET TO THE POINT OF BEGINNING;

THENCE LEAVING SAID BOUNDARY NORTH 0°09'04" WEST 30.00 FEET TO A POINT ON THE NORTHERLY RIGHT OF WAY OF SALMON AVENUE, SAID POINT BEING ALSO THE SOUTHWEST CORNER OF LOT 9 OF MURPHY INDUSTRIAL TRACTS PHASE 1, CS 12738, DESCHUTES COUNTY SURVEY RECORDS;

THENCE ALONG SAID NORTHERLY RIGHT OF WAY NORTH 89°54'06" EAST 1266.99 FEET TO A POINT, SAID POINT BEING THE INTERSECTION OF SAID NORTHERLY RIGHT OF WAY OF SALMON AVENUE AND THE WESTERLY RIGHT OF WAY OF SOUTHWEST 1ST STREET;

THENCE LEAVING SAID NORTHERLY RIGHT OF WAY SOUTH 0°16'47" EAST 30.00 FEET TO A POINT, SAID POINT BEING THE INTERSECTION OF THE WESTERLY RIGHT OF WAY OF SOUTHWEST 1ST STREET AND SAID SOUTHERLY BOUNDARY OF THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 21;

THENCE ALONG SAID SOUTHERLY BOUNDARY SOUTH 89°54'06" WEST 1267.06 FEET TO THE POINT OF BEGINNING.

CONTAINS 38,011 SQUARE FEET OR 0.87 ACRES, MORE OR LESS.

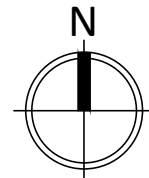
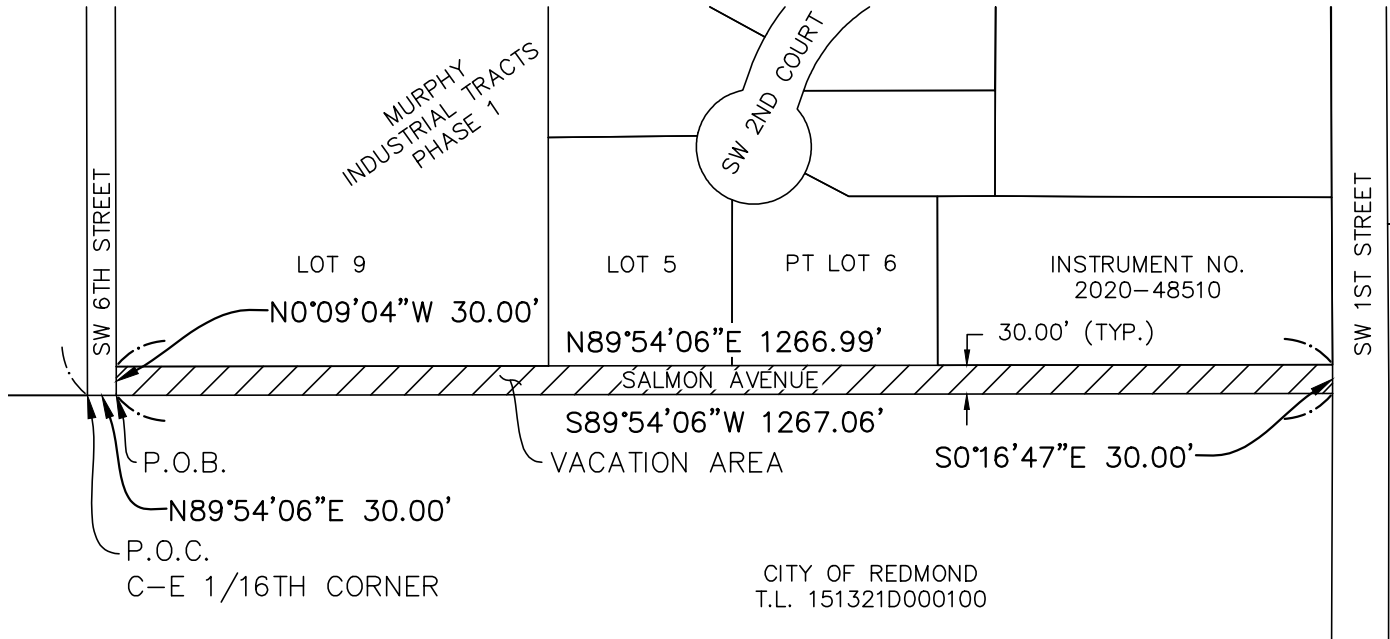
BEARINGS BASED ON MURPHY INDUSTRIAL TRACTS PHASE 1, CS 12738, DESCHUTES COUNTY SURVEY RECORDS.

THIS PROPERTY IS DEPICTED ON THE ATTACHED MAP TITLED EXHIBIT "B" WHICH IS INCORPORATED HEREIN BY THIS REFERENCE.



EXHIBIT "B"

LOCATED IN THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 21,
TOWNSHIP 15 SOUTH, RANGE 13 EAST, WILLAMETTE MERIDIAN,
CITY OF REDMOND, DESCHUTES COUNTY, OREGON



200 FEET

P.O.C. = POINT OF COMMENCEMENT
P.O.B. = POINT OF BEGINNING
VACATION AREA = 38,011 SQUARE FEET OR 0.87 ACRES +/-
BEARINGS BASED ON CS 12738, MURPHY INDUSTRIAL TRACTS PHASE 1,
DESCHUTES COUNTY SURVEY RECORDS



549 SW MILL VIEW WAY
SUITE 100
BEND, OREGON 97702
(541) 633-3140
www.beconeng.com

FOR:
ROB LINDSAY
342 SW REINDEER AVE
REDMOND, OREGON 97756

REGISTERED
PROFESSIONAL
LAND SURVEYOR

[Signature]

OREGON
DEC. 16, 2009
ERIK J. HUFFMAN
70814

RENEWES: JUN. 30, 2021

DATE: 11/05/2020

SCALE: 1" = 200'

DRAWN BY: AJH

PROJ: 19021



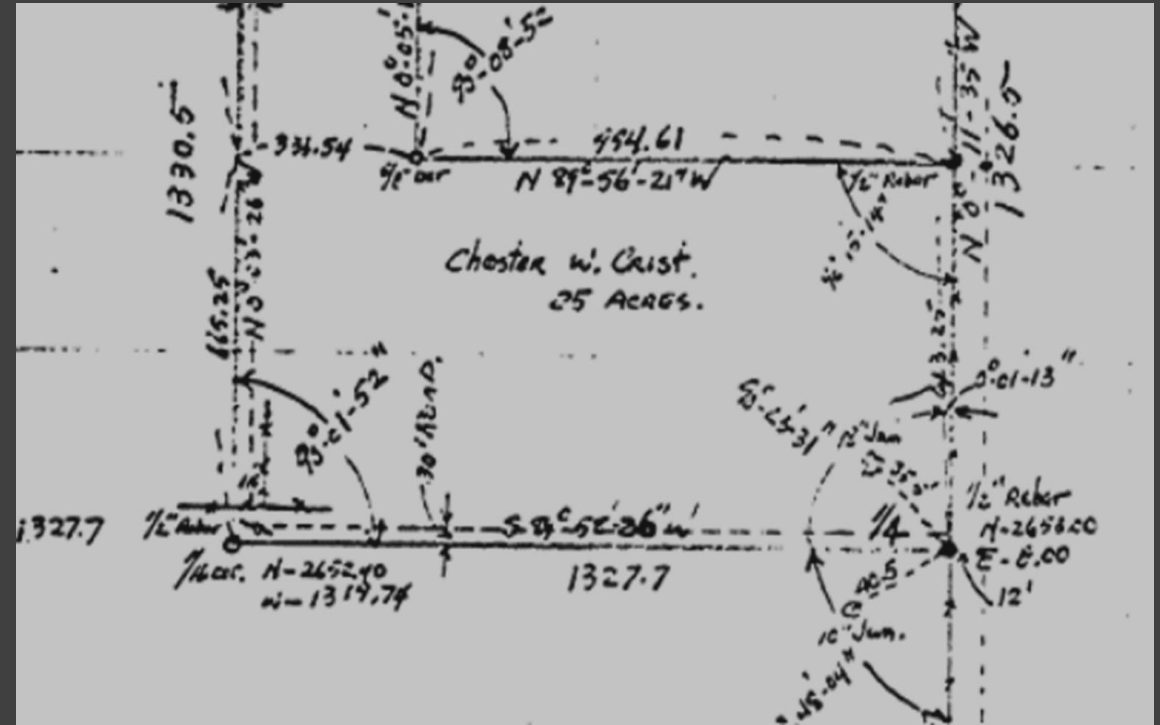
SW SALMON AVENUE RIGHT-OF-WAY VACATION PUBLIC HEARING & CONSIDERATION OF VACATION ORDINANCE

REDMOND CITY COUNCIL
MARCH 23, 2021

SLIDE / 1



TWO-STEP CITY COUNCIL PROCESS



1. **Initiation:** City Council approves motion to consider vacation and schedules public hearing



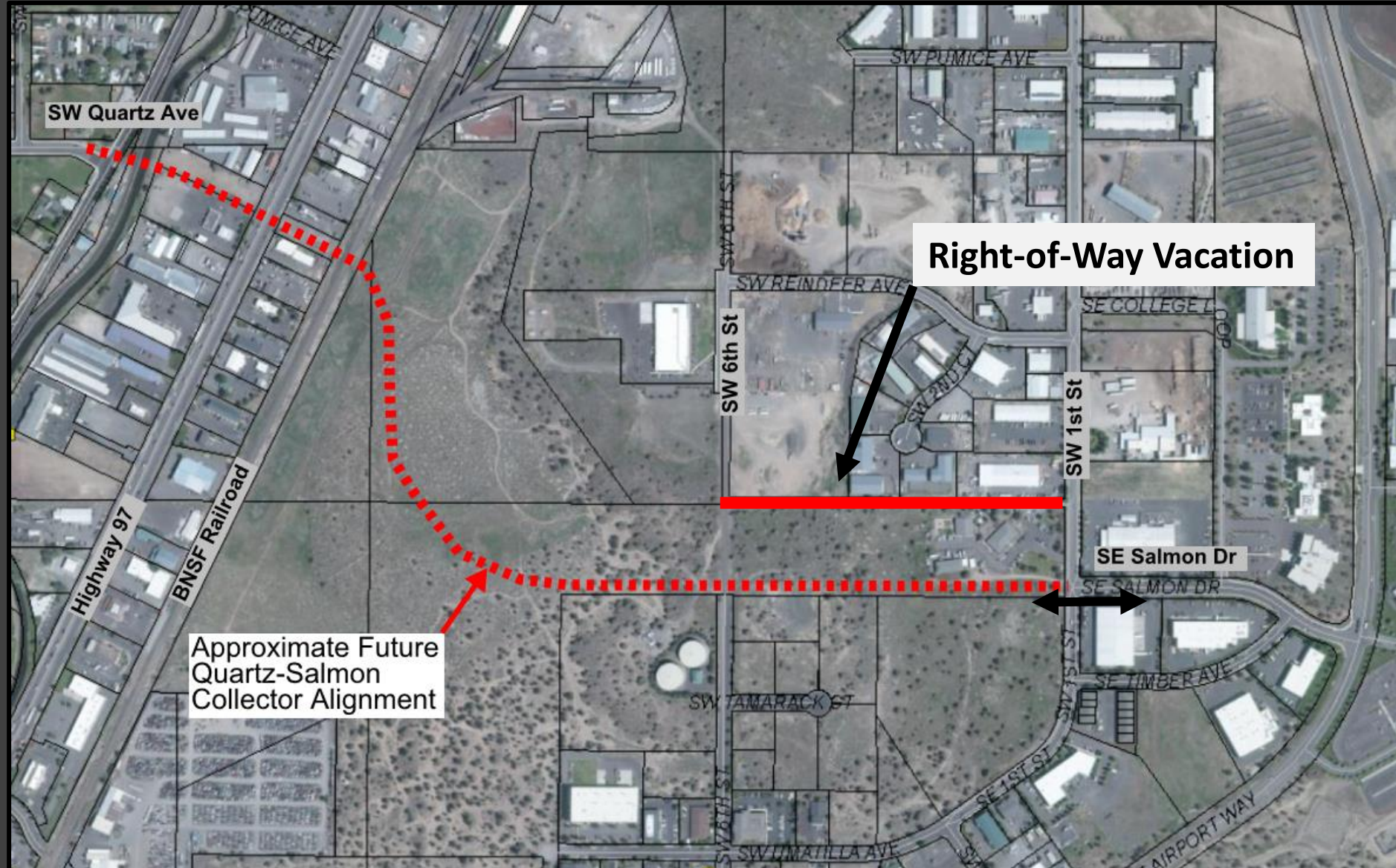
2/16/21

2. **Public Hearing:** City Council takes public input and considers a vacation ordinance

3/23/21



SW SALMON AVE. LOCATION



SW SALMON AVE. LOCATION



CONSENT REQUIRED FROM ADJACENT PROPERTY OWNERS

- ALL PROPERTY OWNERS IMMEDIATELY ADJACENT TO RIGHT OF WAY TO BE VACATED
- 2/3 OF PROPERTY OWNERS WITHIN 200 FEET OF EACH SIDE AND 400 FEET OF EACH END



WHY VACATE?

- Properties to north access other streets
- Vacated right-of-way provides added industrial land
- 300' Street Spacing
- 2 rights-of-way encumber airport property
- Industrial development to south benefits from Salmon Ave.



A photograph of a street intersection. In the foreground, a road with a double yellow line leads towards the intersection. On the left, a dark car is partially visible. On the right, a red octagonal stop sign is mounted on a pole. The background features several tall evergreen trees and a building under a sky with scattered clouds. A semi-transparent grey rectangle is centered over the road.

QUESTIONS?





CITY OF REDMOND

CITY HALL
411 SW 9th STREET
REDMOND, OR 97756
541.923.7710
FAX: 541.548.0706
info@redmondoregon.gov
redmondoregon.gov

STAFF REPORT

DATE: March 23, 2021
TO: Redmond City Council
Keith Witcosky, City Manager
THROUGH: John Roberts, Deputy City Manager
Deborah McMahon, Planning Manager
FROM: Kyle Roberts, Senior Planner
SUBJECT: Ord. #2021-02 - An ordinance approving a Master Development Plan, Tentative Subdivision, and an amendment to the 2040 Greater Redmond Area Comprehensive Plan and Zone Map. (Kinton Estates)

Addresses Council Goal:

7.COMPREHENSIVE PLANNING: Enhance the quality of life through adoption of programs, policies, and standards that balance growth while maintaining our unique character.

A. Promote quality development.

B. Support orderly annexation from Urban Growth Boundary.

Report in Brief:

This item requests City Council approve:

- A Master Development Plan.
- 64-lot Tentative Subdivision.
- Comprehensive Plan and Zone Map Amendment to rezone a property from the R-2 (Limited Residential) to R-3 (Limited Residential) and R-4 (General Residential) zone districts.

Background:

The subject property is 16.25 acres and is located at 4860 SW Badger Avenue, northwest of Ridgeview High School and outside Redmond city limits (locator map attached).

The property owner submitted a petition for annexation and the Council approved an annexation agreement in June 2020. Approval of this ordinance will allow the subject property to be formally annexed via Resolution No. 2021-04.

The property is part of the Southwest Area Plan (SWAP), which was adopted by the City in 2014 to help guide future development of land that was brought into the Redmond Urban Growth Boundary. The Plan recommends a variety of uses within its boundary, including low, medium, and high density residential, mixed use neighborhood, and public facility uses. The Plan designates the subject property as future R-2 zoned land.

Discussion:

The applicant proposes a Master Development Plan pursuant to the annexation agreement that includes subdividing the property into 64 individual lots as well as rezoning 11.22 acres from R-2 to R-3 and 5.03 acres from R-2 to R-4. Lot sizes range from 6,000 to 8,445 square feet in size and will be developed in five phases.

The rezoning will result in greater density for the subject property than contemplated in the Southwest Area Plan. However, the immediate surrounding areas currently zoned R-4 have not developed at the density anticipated (i.e., density in these areas is lower than zoning allows for).

In light of density of the surrounding properties, staff finds the applicant's request to rezone the subject property to R-3 and R-4 appropriate. It is anticipated that the requested zone change will result in an overall density similar to what was envisioned in the SWAP. Additionally, as a result of the recently adopted House Bill 2001 ('Missing Middle Housing'), it is also expected that residential areas within SWAP will begin experiencing a greater mix of housing types and a modest increase in density.

The proposed development will extend existing infrastructure west across the COID B lateral. The street grid and sidewalk system will be extended and along with a linear neighborhood park, the development will extend the canal trail that will provide connectivity to Ridgeview High School and adjacent developments.

Conditions have been added to the approval to ensure all appropriate street, access, water and sewer improvements, and dedications are completed (Exhibit A).

Staff has reviewed the applicant's 'burden of proof' and finds that the proposal complies with all required findings. The 'Conclusionary Findings' are contained in Ordinance #2021-02 (Exhibit B) and indicate how the proposal complies with all applicable criteria and the Redmond Development Code (Chapter 8).

The other exhibits included as part of this staff report and ordinance include:

- Exhibit C - Project Plans
- Exhibit D - Public Comment
- Exhibit E - Transportation Impact Study
- Exhibit F - Burden of Proof

The Planning Commission held a public hearing to review the proposal on February 1, 2021. Oral public testimony centered around questions about impacts to adjacent properties. Following the hearing, an in-depth discussion took place, in which the Planning Commission voted unanimously to recommend Council approve the proposal. The bulk of the discussion at the hearing centered on access and a neighboring property owner's concerns over higher density.

Fiscal Impact:

There are no initial costs which are the responsibility of the City. All applicable SDCs will be paid prior to permit issuance. The City will be responsible for ongoing maintenance of the streets, water and sewer systems.

Alternative Courses of Action:

After conducting the public hearing and considering all evidence and testimony:

1. Accept the Planning Commission recommendation to approve.
2. Accept the Planning Commission recommendation, make additional modifications and approve.
3. Continue the public hearing and leave the written record open to request additional information.
4. Deny the Planning Commission recommendation.

As required by City Charter, notices regarding this public hearing were posted in three places (the Library, the Police Department, and the Redmond Chamber of Commerce) in addition to City Hall on March 16, 2021, and three copies of the ordinance were available for review at City Hall.

Recommendation / Suggested Motion:

"I move to have a first and second reading of Ordinance #2021-02 by title only." (Voice vote)

(City Attorney will read ordinance by title only, twice.)

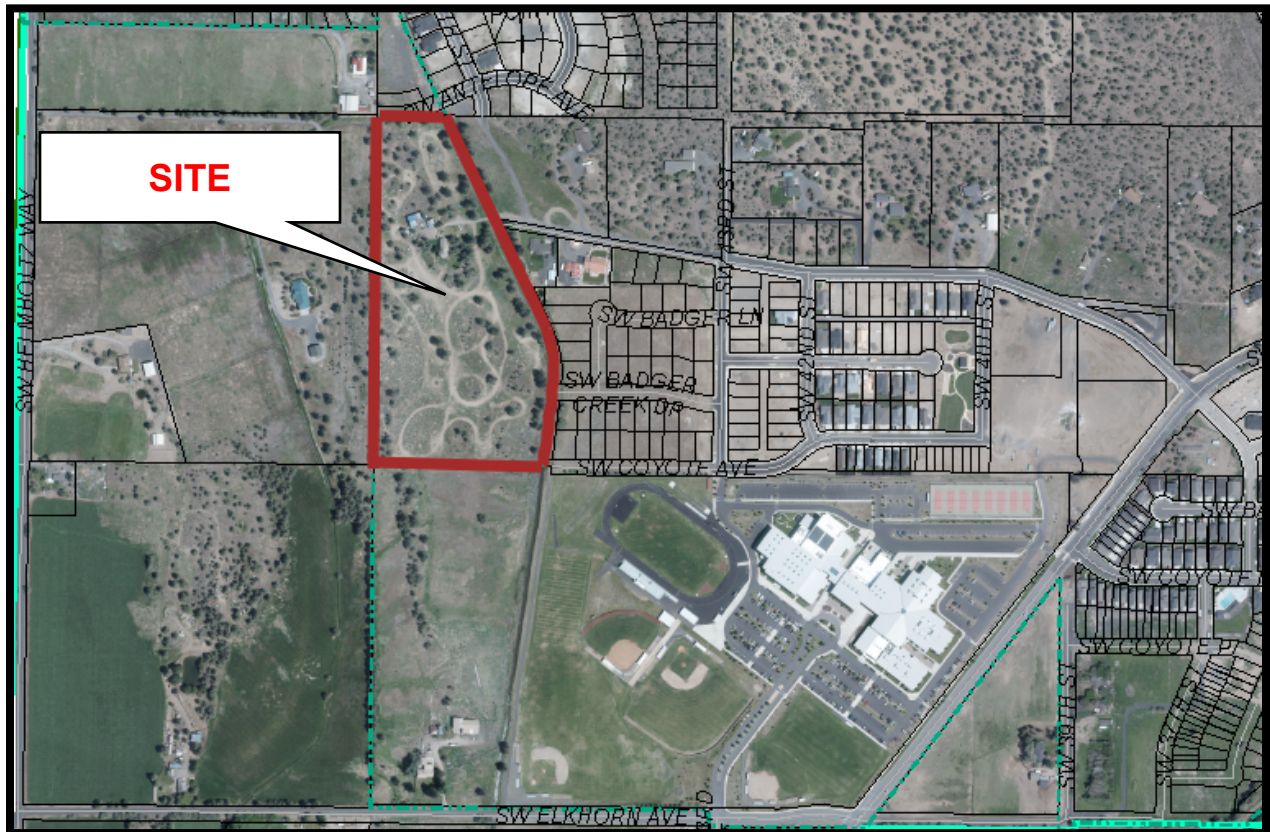
"I move to approve Ordinance #2021-02." (Roll call vote)

Locator Map & Subject Property

Kinton Estates

4860 SW Badger Avenue

Deschutes County Tax Lot #151330CA00300; Redmond, OR 97756



**CITY OF REDMOND
ORDINANCE NO. 2021-02**

AN ORDINANCE APPROVING A MASTER DEVELOPMENT PLAN, TENTATIVE SUBDIVISION, AND AN AMENDMENT TO THE 2040 GREATER REDMOND AREA COMPREHENSIVE PLAN AND ZONE MAP.

WHEREAS, an application has been made to rezone a portion of 4860 SW Badger Avenue (Deschutes County Tax Lot #151330CA00300) Redmond, OR 957756; and

WHEREAS, the request is to rezone 11.22 acres from R-2 (Limited Residential) to R-3 (Limited Residential) and the remaining portion of the property (5.03 acres) from R-2 (Limited Residential) to R-4 (General Residential) for Kinton Estates; and

WHEREAS, the City of Redmond has adopted zoning and planning regulations in accordance with Oregon Revised Statutes Chapter 227 that regulate and control the development of land within the City; and

WHEREAS, the City of Redmond City Council has adopted a set of goals that include: "Enhance the quality of life through adoption of programs, policies, and standards that balance growth while maintaining our unique character"; and

WHEREAS, the Redmond Comprehensive Plan is the product of hundreds of citizens from the public and private sector who participated in the outreach and planning process; and

WHEREAS, the Redmond Comprehensive Plan 2020 Addendum contains multiple visioning statements, including statements on improving urban form and community design; and

WHEREAS, the City of Redmond has set the action steps necessary to implement the goals and policies in the Comprehensive Plan related to the vision; and

WHEREAS, the Redmond Urban Area Planning Commission held a public hearing on February 1, 2021 and, after reviewing the record and gathering public testimony, has recommended that the Redmond City Council approve the Master Development Plan, Tentative Subdivision, and Amendment to the Comprehensive Plan and Zone Map to rezone a portion of the property (11.22 acres) from R-2 (Limited Residential) to R-3 (Limited Residential) and the remaining portion of the property (5.03 acres) from R-2 (Limited Residential) to R-4 (General Residential) for a 64-lot subdivision, subject to conditions of approval; and

WHEREAS, the City Council held a public hearing on March 23, 2021 to consider the recommendation of the Redmond Urban Area Planning Commission, review the existing record and gather additional evidence and public testimony; and

WHEREAS, the City Council has received the Planning Commission's recommendation and, after receiving additional evidence and testimony, determined that the requested Master Development Plan, Tentative Subdivision, and Amendment to the Comprehensive Plan and Zone Map to rezone a portion of the property (11.22 acres) from R-2 (Limited Residential) to R-3 (Limited Residential) and the remaining portion of the property (5.03 acres) from R-2 (Limited Residential) to R-4 (General Residential) is in compliance with the Redmond Development Code and would contribute to the Redmond Comprehensive Plan goals and policies; and

WHEREAS, the City Council finds the findings for the Master Development Plan, Tentative Subdivision, and Amendment to the Comprehensive Plan and Zone Map to rezone a portion of the property (11.22 acres) from R-2 (Limited Residential) to R-3 (Limited Residential) and the remaining portion of the property (5.03 acres) from R-2 (Limited Residential) to R-4 (General Residential) have fully addressed the City's Comprehensive Plan amendment process, the applicable state law, the Statewide Planning Goals and the City's standards and criteria for an amendment to the Redmond Development Code; and,

WHEREAS, the City Council finds that the proposed the Master Development Plan, Tentative Subdivision, and Amendment to the Comprehensive Plan and Zone Map to rezone a portion of the property (11.22 acres) from R-2 (Limited Residential) to R-3 (Limited Residential) and the remaining portion of the property (5.03 acres) from R-2 (Limited Residential) to R-4 (General Residential), furthers the interests of the City.

NOW, THEREFORE, THE CITY OF REDMOND ORDAINS AS FOLLOWS:

SECTION ONE: The City of Redmond hereby approves the Master Development Plan, Tentative Subdivision, and Amendment to Comprehensive Plan and Zone Map to rezone a portion of the property (11.22 acres) from R-2 (Limited Residential) to R-3 (Limited Residential) and the remaining portion of the property (5.03 acres) from R-2 (Limited Residential) to R-4 (General Residential), subject to the conditions of approval. The Decision and Conditions, Findings, and Project Plans are attached hereto as "Exhibits A, B, and C."

SECTION TWO: In support of the approval, the City of Redmond hereby adopts the findings, which are attached hereto as Exhibit B, which were prepared by City staff and demonstrate compliance with the Redmond Development Code, Section 8.0300 – Master Development Plans, Section 8.0760 – Amendments, and Section 8.2335 – Tentative Subdivision, and the applicable Statewide Planning Goals.

SECTION THREE: SEVERABILITY. The provisions of this Ordinance are severable. The invalidity of any section, clause, sentence, or provision of this Ordinance shall not affect the validity of any other part of this Ordinance, which can be given without such invalid part, or parts.

PASSED by the City Council and **APPROVED** by the Mayor this 23rd day of March 2021.

George Endicott, Mayor

ATTEST:

Kelly Morse, City Recorder

EXHIBITS A & B

DECISION AND CONDITIONS, FINDINGS FOR APPROVAL OF KINTON ESTATES MASTER DEVELOPMENT PLAN, COMPREHENSIVE PLAN AND ZONE MAP AMENDMENT, AND 64-LOT TENTATIVE SUBDIVISION

FILE NUMBER: Kinton Estates | City File 711-20-000129-MD, 711-20-000130-ZMA, 711-20-000131-SUB

REQUEST: Approval of a Master Development Plan, Comprehensive Plan Zone Map Amendment R-2 (Limited Residential) to R-3 (Limited Residential) and R-4 (General Residential)], and 64-lot Subdivision consisting of 64 residential lots on a 16.25-acre parcel

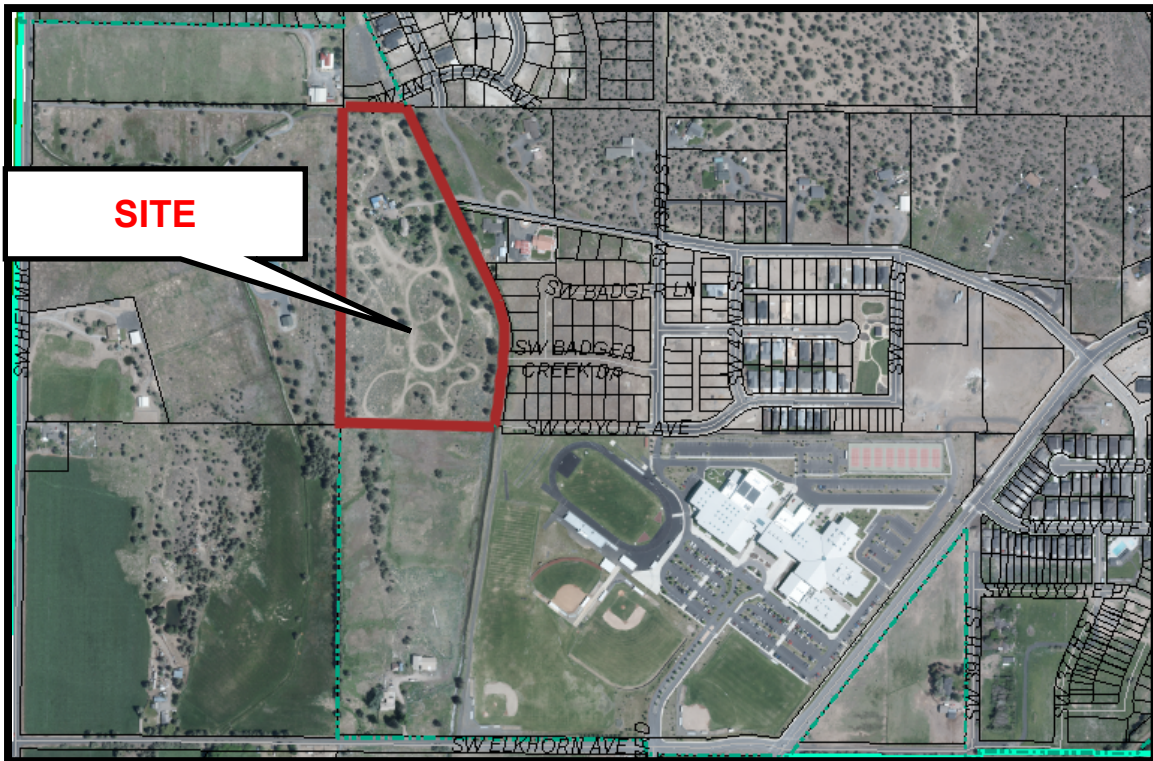
LOCATION: 4860 SW Badger Avenue (Tax Lot #151330CA00300) in Redmond, OR 97756

APPLICANT: Emerio Design, LLC / Steve Miller

STAFF: Kyle Roberts, Senior Planner

HEARINGS BODY: Redmond City Council
Redmond Urban Area Planning Commission

DATE & TIME: March 23, 2021 at 6:00 PM in front of the Redmond City Council;
February 1, 2021 at 4:30 PM in front of the Redmond Urban Area Planning Commission; Meetings held virtually



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DECISION: APPROVAL WITH CONDITIONS

SUMMARY

Approval of a Master Development Plan, Zone Map Amendment R-2 (Limited Residential) to R-3 (Limited Residential) and R-4 (General Residential)], and 64-lot Tentative Subdivision consisting of 64 residential lots on a 16.25-acre parcel.

A full plan set with preliminary site plan, street layout, and proposed zoning is provided in Exhibit C.

COMMENTS

Informational comments from City departments and related agencies concerning this project are presented in the record.

At the time of the completion of this staff report, there was no public comment received from notified property owners by the Planning Division concerning this application during the comment period, however, there was testimony at the hearing.

The following EXHIBITS compromise the record for this matter and included herein:

- Exhibit A – Decision and Conditions of Approval
- Exhibit B – Conclusionary Findings
- Exhibit C – Project Plans
- Exhibit D – Letters Received
- Exhibit E – Transportation Impact Study Memorandum
- Exhibit F – Applicant Burden of Proof
- Exhibit G – Annexation Agreement

The following are also included herein by reference in this land use decision and are located in the record for this matter and are on-file with the Community Development Department:

- Master Development Plan, Zone Map Amendment, and Subdivision applications and materials submitted by the applicant on September 25, 2020
- City department and related agency comments
- Public Hearing Notices published in *The Redmond Spokesman* on January 20, 2021 and March 10, 2021
- Adjacent Property Owner Notices mailed on January 7, 2021 and February 25, 2021
- February 1, 2021 Planning Commission Public Hearing Staff Report
- February 1, 2021 Planning Commission Public testimony received

EXHIBIT A – DECISION AND CONDITIONS OF APPROVAL

DECISION

Based on the submitted plans, findings and conclusions, the City Council approves Kinton Estates (City File 711-20-000129-MD, 711-20-000130-ZMA, 711-20-000131-SUB), subject to the conditions of approval below.

CONDITIONS OF APPROVAL

The following conditions of approval shall be required:

1. Prior to City approval of Final Plat and/or Site and Design Review approval for any phase or building, the applicant shall submit the following:
 - a. An updated title report to the City including all exceptions materials.
 - b. Revised Master Plan showing any changes required as part of the public review process.
 - c. Public art locations at entrance to trail easement midblock, and at southern park area. See Annexation agreement for per lot payment requirements.
 - d. A meandering trail design for the canal trail; landscaping materials for the linear park; location of bollard lighting along trail & park access points; and park must be privately maintained through an HOA/CCR's.
 - e. A catalog of building design types and finalized building style/design elements for each type of structure.
 - f. In order to assure the Homeowners Association maintains and repairs any needed improvements (including streets, trails, landscaping, undeveloped phases and properties), the applicant shall make the City of Redmond a party to the Covenants, Conditions, and Restrictions. The CC&R's shall be reviewed and subject to City approval.
2. The Master Development Plan approval expires two (2) years from City Council approval unless the project is initiated as determined by the City of Redmond.
3. Any substantial alteration to the approved plans, except as modified by the following conditions of approval, shall be subject to the standards and procedures in Article II "Modifications" of the Redmond Development Code.
4. All public improvements and utilities (i.e. sewer and water) must be designed, installed and constructed as approved by the City of Redmond and in full compliance with the City's Standards & Specifications. Preliminary drawings, plans and design for all streets, alleys and rights-of-way shall be submitted to the Public Works Department for approval prior to installation. Sidewalks may not be bonded, unless approved by the City. Private improvements such as trails, parks, open space, plazas, etc. will require public access easements.
5. As proposed Lot 45 is a corner lot, it will need to be a minimum of 55 feet in frontage.
6. SW Badger Avenue will need to be a minor collector street with limited access, which will require access reconfiguration of four lots (Lots 1, 15, 16, and 17) on the northwest and southwest side of SW Badger Avenue. Any access points will need to be approved by the City Engineer.
7. All proposed lots abutting Tracts A, B, and C (i.e., the linear park) shall not permit rear property line sight-obscuring fencing over four feet in height until the canal is piped. Wrought iron, or other non-sight-obscuring fence may be used. Chain link or cyclone fencing is not allowed.

8. Public art must be incorporated into the development in the linear park or it's access points.
9. The applicant shall supply information that addresses criteria #3, #5, and #8 of Section 8.2220 of the Redmond Development Code. The applicant should be prepared to discuss this at the City Council public hearing. If the responses are adequate, staff would support a recommendation of approval.
10. Public access easements are required to be dedicated along all project trails prior to approval of a final plat containing a trail. Coordinate with COID as necessary.
11. Design and components of proposed recreational amenities to be installed on Tract C must be submitted to the City for review and approval prior to installation.
12. An easement for access to Central Oregon Irrigation District (COID) piped irrigation facilities shall be dedicated prior to approval of a final plat containing the irrigation facilities. Prior to COID signing a final plat, water rights will need to be removed.
13. All land disturbed during construction shall be revegetated/landscaped immediately after construction is complete and dust created during construction shall be properly mitigated at all times, so as to not create significant impacts upon the neighboring properties. Only land associated with a particular phase of construction may be disturbed and future phases shall remain in native vegetation.
14. Construction Plans: Prior to City sign-off on construction plans for any phase, a separate set of construction drawings shall be submitted to the Engineering Department for all required and/or proposed public improvements and subdivision site grading with the following items incorporated:
 - A. Transportation: All public streets shall be designed, constructed and dedicated to current City of Redmond Standards & Specifications and Transportation System Plan standards. All streets shall be extended to the limits of each phase unless otherwise approved. Street signage, lane striping, street lights and postal box installation shall be required. Transportation SDC credits may be given for the cost of additional construction required for conformance to the City collector and arterial street standards on eligible projects specified in the City's adopted Capital Improvement Plan. The Tentative Subdivision Plan including typical street/path cross-sections shall be revised based on the following:
 - B. Street Storm Drainage: Shall comply with all City standards.
 - C. Lot Access: Shall comply with all City standards.
 - D. Traffic Impacts: Shall comply with all City standards.
 - E. Water: Shall comply with all City standards.
 - F. Wastewater: Shall comply with all City standards.
 - G. Subdivision Grading and Drainage: A subdivision site grading and drainage plan shall be required upon development each phase. A separate site grading and drainage plan shall be required for all subsequent high-density residential, non-residential or mixed use/commercial development. All storm water runoff and drainage shall be maintained on each lot and shall not drain onto public streets, neighboring properties or irrigation canals/ditches except as provided for in City standards. Storm water runoff from private property shall not impact public right-of-way or easements unless otherwise approved by the Public Works Director or City Engineer.
 - H. Irrigation Canals or Laterals – Irrigation canals, laterals or ditches (including private) that are located within or that cross public streets to be constructed with this proposed partition shall be piped underground with C-900 PVC, Ductile Iron or as approved by COID and the City.

Please note; the City may be interested in acquiring any water rights that may be required to be transferred as a result of subdividing.

////////////////////// END OF CONDITIONS ////////////////////////

EXHIBIT B – CONCLUSIONARY FINDINGS

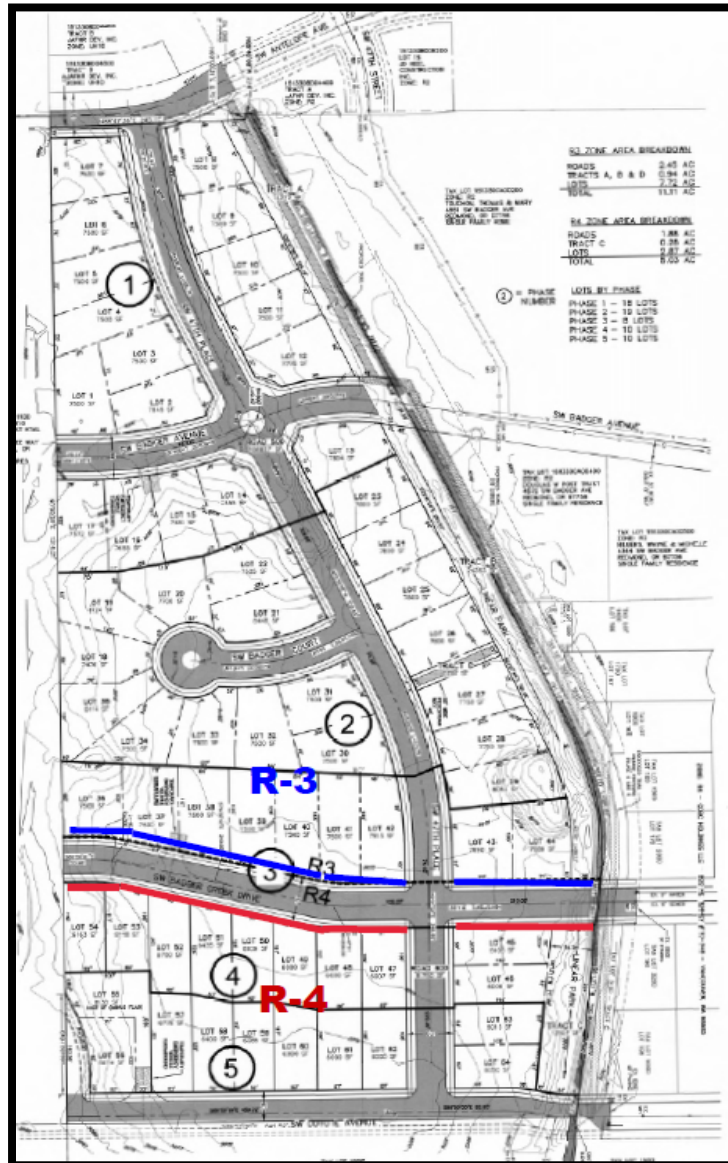


Figure 2 - Proposed Zone Change Layout

I. APPLICABLE CRITERIA:

The following are the applicable sections from the Oregon Revised Statutes, Oregon Administrative Rules, the City of Redmond Urban Area Comprehensive Plan, the Southwest Area Plan (as an element of the Comprehensive Plan), and the Redmond Development Code:

- City of Redmond Urban Area 2020 Comprehensive Plan
- City of Redmond Framework Plan
- City of Redmond Southwest Area Plan (SWAP)
- City of Redmond Transportation System Plan
- City of Redmond Public Facility Master Plans
- City of Redmond Park Master Plan
- Oregon Revised Statutes (ORS) – ORS 197.250
- Oregon Administrative Rules (OAR):
 - Division 12, Transportation Planning Rule – OAR 660-012-0000
 - Division 15, Statewide Planning Goals and Guidelines – OAR 660-015-0000
- City of Redmond Development Code:
 - Section 8.0300, Master Development Plans
 - Sections 8.0750 – 8.0775, Amendments
 - Section 8.2220, Phased Development Plan; Sections 8.2235 – 8.2240, Tentative Subdivision; Sections 8.2700 – 8.2720, Design Standards & Improvements; and Section 8.2820, Access Management Standards

II. BACKGROUND & HISTORY:

In 2006, the Redmond added more than 2,300 acres of “urbanizable” land along the City’s western boundary to its Urban Growth Boundary (UGB), including the subject parcel. At the same time, a Framework Plan was adopted by the City as part of the expanded UGB to provide general guidance for future land uses, densities, neighborhood amenities and the necessary public facilities and services to serve the parcels.

Subsequently, in 2014, the City adopted the Southwest Area Plan (SWAP) that set forth a land use concept, comprehensive plan designations, and related public facilities for the area surrounding Ridgeview High School. The SWAP serves as a basis and, quasi-conceptual land use master plan that provides guidance for future land uses. As shown in *Figure 3* below, the SWAP has designated the subject property as residential, more specifically, R-2 (Limited Residential) zoning district. The purpose of R-2 is to provide for low density residential neighborhoods for primarily single-family residences and a mix of other housing types.

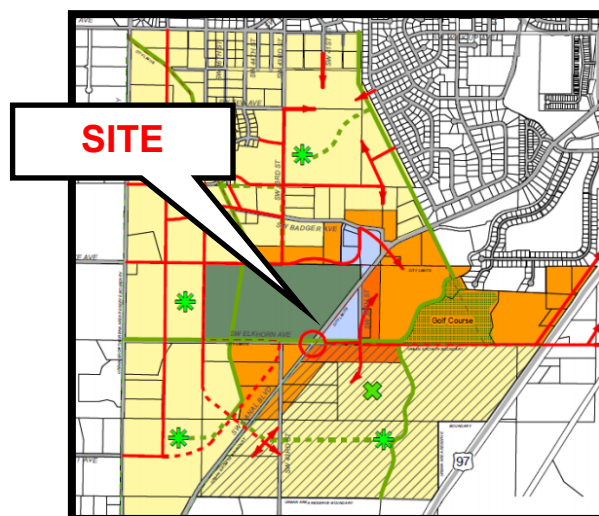


Figure 3 – City of Redmond Southwest Area Plan (SWAP)

Proposal:

The applicant is requesting an amendment to the City of Redmond Zoning Map from UH-10 to R-3 and R-4, Master Development Plan approval, and Tentative Subdivision approval for 64 residential lots on the subject 16.25-acre parcel located within the Redmond Urban Growth Boundary. As shown in *Figure 4* below, the development is proposed to build out in five phases. Although designated as R-2 zoning per the SWAP, the applicant is requesting flexibility to allow for re-zoning of 11.11 acres (property located north of SW Badger Creek Drive) to R-3 and the remaining 5.03 acres to R-4.

The applicant has stated that rezoning will allow for the creation of 20 additional lots. Moreover, the applicant has argued that due to the subject property's unique location on the west side of the COID B lateral, a rezone will allow for increased densities that will help facilitate and off-set the financial burden of extending three streets and utilities across and under the COID B lateral. Lastly, two zoning districts will provide for greater flexibility in providing a variety of lot sizes, housing types, and price points.



Figure 4 - Kinton Estates Site Plan

Phase No.	No. of Lots	Range of Lot Sizes	Zoning District
Phase 1	17	7,500 – 7,854 sq. ft.	R-3 (Limited Residential)
Phase 2	18	7,500 – 8,445 sq. ft.	R-3 (Limited Residential)
Phase 3	9	7,500 – 7,690 sq. ft.	R-3 (Limited Residential)
Phase 4	10	6,000 – 6,700 sq. ft.	R-4 (General Residential)
Phase 5	10	6,000 – 8,138 sq. ft.	R-4 (General Residential)

III. SITE DESCRIPTION:

The project area is generally described as 4860 SW Badger Avenue located in southwest Redmond; Tax Map and Lot #151330CA00300. The property lies directly west of the COID Lateral B, south of Antelope Avenue, and north of Coyote Avenue. The subject property is 16.25-acres in size, is generally flat, and has a historic use as a residential homesite. See area outlined in red in *Figure 1* on page 1.

IV. SUMMARY:

1. This is a proposed Master Development Plan, Zone Map Amendment, and Tentative Subdivision for approval of a master development planned 64-lot residential subdivision on a 16.25-acre property.
2. The findings and supporting materials, all demonstrate the proposed Master Development Plan, Comprehensive Plan Zone Map Amendment, and Tentative Subdivision are consistent with the Statewide Planning Goals, the Redmond Comprehensive Plan, the City Council Goals and other policies adopted by the City.
3. The criteria set forth in Redmond Development Code Section 8.0300, Sections 8.0750 – 8.0775, Sections 8.2235 – 8.2240, Sections 8.2700 – 8.2720, and Section 8.2820 are addressed below, as well as all applicable state laws and requirements.

V. FINDINGS AND CONCLUSIONS:

Redmond Development Code Sections 8.0300, 8.0750 – 8.0775, 8.2235 – 8.2240, 8.2700 – 8.2720, and 8.2820 set forth the procedure and standards for approval.

1. **MASTER DEVELOPMENT PLAN:** Section 8.0300 (Master Development Plans) sets forth the four (4) criteria that must be met:

A. *Whether the proposed Plan is generally consistent with the Framework Plan and is consistent with an adopted Area Plan and Comprehensive Plan in terms of land use, density, transportation systems and networks, adequacy of infrastructure and open space.*

- **Staff Finding:** Staff has examined the record in this matter and finds the applicant has met the criteria because the proposal is generally consistent with the Framework Plan, Southwest Area Plan (SWAP), and Comprehensive Plan in terms of land use, density, transportation systems, adequacy of infrastructure, and open space. The SWAP incorporates the Framework Plan and Comprehensive Plan into its policies and goals. The SWAP recommends that the subject parcel provide a variety of lot sizes within the density range established for the R-2 zone district. Furthermore, it recommends a variety of single-family housing types and designs that are affordable to people with a wide range of incomes. This master plan will utilize the R-3 and R-4 zone districts rather than R-2. As such, the plan consists of single-family at a greater density and provides for a mix of housing types. The master plan consists of interconnected streets, complete with sidewalks and bike lanes, that will connect to existing streets that abut the subject property. Additionally, there will be a 10-foot wide asphalt trail adjacent to the COID canal that will provide connectivity to future developments to the north. Open space is provided in the form of a linear park along the subject

property's eastern boundary adjacent to the COID canal. According to City Engineering, there is adequate capacity to serve the project, but that will need to be confirmed prior to application for site and design review.

B. Whether the proposed Plan is generally suitable for the area in which it is proposed, considering existing and planned neighborhoods, shopping and employment areas; and natural resources and hazards.

- **Staff Finding:** Staff has examined the record in this matter and finds the applicant has met the criteria by demonstrating compliance with the Comprehensive Plan and the SWAP and through compliance with the required conditions of approval. The proposed plan – with its mix of housing types (varied lot sizes for single-family), trail along the canal, and over an acre linear park – is suitable for the area. Additionally, the interconnected streets, complete with sidewalks and bike lanes, and trail provide for great connectivity to adjacent existing and future residential developments as well as the Ridgeview High School located to the southeast.

C. Whether the proposed Plan is functionally integrated with developed or planned areas.

- **Staff Finding:** Staff has examined the record in this matter and finds the applicant has met the criteria because the master plan proposes similar land uses and densities as the existing and planned areas around it and extends the existing street grid through the property and provides trail and sidewalk connections that will help functionally integrate it with surrounding developed and planned areas.

D. The proposed plan meets the applicable Great Neighborhood Principles in Section 8.3050. (Note: In Section 8.0300.3.C.13, it further states that “in instances where the property proposed for a Master Development Plan is located within the boundary of an adopted Area Plan, the Master Development Plan shall also address the Great Neighborhood Principles according to the specificity provided in the Area Plan.”)

- **Staff Finding:** Each element of the Great Neighborhood Principles is addressed below. Staff has examined the record in this matter and finds the applicant has met the criteria or can meet the criteria through conditions of approval as further detailed below.

a. Transportation. Connect people and places through a complete grid street network and trail system that invites walking and bicycling and provides convenient access to parks, schools, neighborhood service centers, and possible future transit stops.

- **Staff Finding:** Staff has examined the record in this matter and finds the applicant has met the criteria because the proposal includes a complete interconnected system of public streets, sidewalks, and bike lanes. Additionally, a multi-use trail along the canal is proposed and convenient access to the trail will be provided in the middle of the large block adjacent to Tract B of the linear park. Altogether, these will all provide convenient and efficient access throughout and within the neighborhood.

b. Housing. A mix of housing types and densities should be integrated into the design of new neighborhoods.

- **Staff Finding:** Staff has examined the record in this matter and finds the applicant has met the criteria as the master plan provides for a mix of housing types by way of various sizes of single-family lots throughout the development. The lots are varied and intermingled to provide variety and avoid monotony within the neighborhood.

- c. *Open spaces, greenways, recreation. All new neighborhoods shall provide useable open spaces with recreation amenities that are integrated to the larger community. Central parks and plazas shall be used to create public gathering places. Incorporate significant geological features such as rock outcroppings, stands of clustered native trees, etc. into the design of new neighborhoods. Neighborhood and community parks shall be shown in appropriate locations consistent with policies in Redmond's Parks Master Plan.*

Staff Finding: Staff has examined the record in this matter and finds the applicant has met the criteria. While the property does not contain significant geological features to incorporate into the neighborhood design, the master development plan has incorporated a linear park, greenway, and a trail. The linear park serves as a public gathering area, accessible to the entire neighborhood. The applicant has indicated that Tract C may include recreational amenities such as playground equipment. The trail also spans the entire eastern edge of the development, adjacent to the COID canal. The creation of an HOA and CCRs will be required for the required private maintenance of the linear park.

The master development plan will include a public trailhead at the southeast corner of the development, adjacent to the COID canal, per the Parks Master Plan. The trailhead will be located at the intersection of the COID canal trail and SW Coyote Avenue.

- d. *Integrated design elements. Streets, civic spaces, signage, and architecture shall be coordinated to establish a coherent and distinct character for the Master Development Plan. Plans may integrate design themes with adjacent developed or planned areas.*

- **Staff Finding:** Staff has examined the record in this matter and finds the applicant has met the criteria. The applicant has stated that the project will have identification signs and landscaping at the primary entrances from SW Coyote Avenue and SW Antelope Avenue that will match to make it apparent to the public that they are entering a specific neighborhood with a specific residential character. The linear park will have signs and potential for art and landscaping at neighborhood entrances. All homes within the development will be constructed by one builder with the architecture of the individual home plans varied to avoid a monotonous feel, but relate in theme, color and external fixtures in order to give the neighborhood a distinct character.

- e. *Diverse mix of activities. A variety of uses is encouraged in order to create vitality and bring many activities of daily living within walking and biking distance or a short drive of homes.*

- **Staff Finding:** Staff has examined the record in this matter and finds the applicant has met the criteria. The master plan illustrates that the development will include a mix of residential unit types – primarily single-family with duplexes

on corner lots. Proposed is a trail and linear park spanning the entire eastern edge of the neighborhood for both active and passive recreation areas that will be within walking or biking distance from all of the proposed homes.

- f. Public art. Public art is encouraged at the gateways to neighborhoods and/or in and around the center of neighborhoods to provide focal points.*
- **Staff Finding:** Staff has examined the record in this matter and finds the applicant has met the criteria. There are opportunities for public art throughout the proposed development. For example, at the mini-roundabout on SW 47th Place and/or in the linear park or it's access points.
- g. Scenic views. Identify and preserve scenic views and corridors of the Cascade Range, Ochoco Mountains, and Smith Rock. Streets and common or public open spaces should be located and oriented to capture and preserve scenic views for the public. Minimize visual clutter within scenic corridors.*
- **Staff Finding:** Staff has examined the record in this matter and finds the applicant has met the criteria to the extent that it can, given that the property is relatively flat, with no slopes facing the mountain views to the west. However, the majority of the streets on which individual lots front are oriented in an east/west manner. Absent the streetlights and street trees, these streets will create open public corridors that provide views to the mountains in the west.
- h. Urban – rural interface. Urban development shall interface with rural areas through open space buffers at least 100 feet wide and the length of the urban development, excluding public streets, or shall be transitioned from higher density development to lower density development at the urban - rural interface, or utilize other appropriate and equivalent transitional elements.*
- **Staff Finding:** Staff has examined the record in this matter and finds that the criteria is not applicable, as the site is surrounded either by existing urban development or areas within the Urban Growth Boundary that are slated for urban development within the next 20 years.
- i. Integrated design elements. Streets, civic spaces, signage, and architecture shall be coordinated to establish a coherent and distinct place in the community, and unique character of the specific area in which the Master Plan is proposed.*
- **Staff Finding:** Note: criteria i. is a repeat of criteria d. above; see staff finding under criteria i.
- j. "Pocket Parks" or "tot lots" shall be incorporated into medium and high density zoned residential subdivisions and site plans. These areas shall be developed for every twenty-five lots/units, a minimum of 1,500 square feet and privately maintained.*

Staff Finding: Staff has examined the record in this matter and finds the applicant has met the criteria. As the master plan will be comprised of 64 medium and high-density residential lots, between 2-3 pocket parks would be required that would need to be a minimum of 3,000 – 4,500 square feet of pocket park. As currently planned, the applicant has chosen to provide a lesser number of parks but meet and exceed the minimum square footage of park. A total of 50,830

square feet (1.22 acres) of parkland is provided via a linear park comprised of three tracts (24,393, 14,272, and 12,167 square feet in size).

The park must be privately maintained. Additionally, all proposed lots abutting the linear park (Tracts A, B, and C) shall not permit fencing over four feet in height until the canal is piped. Restricting fencing heights along the linear park will prevent a canyon-like effect for the narrow strip of parkland sandwiched between the lots and canal. It will also help to ensure that more eyes are on the open canal.

- k. *Canal trails. If canals or laterals are present, multi-use trails at least 10 feet wide shall be provided, subject to the Central Oregon Irrigation District's review and approval. Pedestrian amenities such as benches and trash receptacles shall be provided at appropriate locations.*
- **Staff Finding:** Staff has examined the record in this matter and finds the applicant has met the criteria. The eastern boundary of the property is defined by a COID lateral. A 10-foot-wide trail is proposed along this route (centered within 34-foot-wide Tracts A, B, and C as shown on the site plan). Pedestrian amenities will be required at time of development.
- l. *Green Design. Environmentally friendly and energy efficient design is encouraged for public and private infrastructure, architecture and building orientation, open spaces and natural areas and transportation facilities. In addition, the planting of native, drought-resistant trees is encouraged to provide shade and to minimize water usage.*
- **Staff Finding:** The proposed lot arrangement allows for the use of solar building design and the City's current building code advocates for low energy usage, low energy materials, and reduced water flow requirements. Additionally, the designated linear park is strongly encouraged to include a landscape plan that minimizes water usage.

2. **AMENDMENTS:** Chapter 8, Sections 8.0750 through 8.0775 (Amendments) sets forth the procedure and standards for an amendment to the text of the Code or to the adopted Comprehensive Plan or Zoning map. Section 8.0760 - Criteria for Amendments, sets forth the four (4) criteria that the applicant shall show the proposed change is:

A. *In conformity with all applicable State Statutes;*

- **Staff Finding:** Staff has examined the record in this matter and finds the applicant meets the criteria. The State Statutes that directly apply to this application include:

ORS 197.610, *Local Government Notice of Amendment or New Regulation*

ORS 197.250, *Compliance with Goals Required*

ORS 197.763, *Conduct of Local Quasi-Judicial Land Use Hearings; Notices*

The applicable City of Redmond Code standards (sections 8.0750 to 8.0775, *Amendment Procedures and Notice Requirements*), and, (sections 8.1010 through 8.1035, and 8.1300 through 8.1380, *Land Use Procedures*), were developed in compliance with the applicable State Statutes listed above regarding noticing and public hearings. Applicability of the Statewide Planning

Goals is addressed in greater detail below. Those findings, incorporated by reference herein, show compliance with the applicable Statutes listed above.

With regard to the Statutory noticing requirements referenced above, notice of the proposed amendment has been provided to DLCD and the public hearings advertised in the local newspaper (public notice) as required by City Code and State Statute.

With regard to the Statutory public hearing requirements referenced above, this proposal is subject to Sections 8.1300 through 8.1380 of the Redmond Development Code, which implement the quasi-judicial Statutory requirements in similar fashion have been met. Subsequently, the Planning Commission and (ultimately) City Council's public hearing and review processes meet the statutory requirements for the purpose of the review.

Oregon Administrative Rule 660-012, Transportation Planning Rule.

Notwithstanding the Statutory requirements addressed herein, the Oregon Administrative Rules (OAR's) also implement the Statutes. The applicable Rule addressed in this document is ORS 660-012, the Transportation Planning Rule (TPR). The proposed findings addressing the specific elements of the TPR are included in the Transportation Impact Analysis (TIA) submitted with this application. These findings are incorporated by reference herein as evidence of compliance with the TPR rather than being copied over into this burden of proof statement.

Based on the City of Redmond's conformance with the procedural requirements of this land use process and the conformance with the TPR, the proposed Master Development Plan and Zone Change conforms to applicable State Statutes and Administrative Rules.

B. In conformity with the Statewide planning goals whenever they are determined to be applicable:

- **Staff Finding:** Staff has examined the record in this matter and finds the applicant meets the criteria. The applicant has provided their findings in the attached Applicant Burden of Proof as to how the project is in conformance with the applicable Statewide planning goals. Staff has reviewed them and agree with their findings. Based on those findings, staff finds that the proposed change is in conformance with the Statewide Planning Goals.

C. In conformity with the Redmond Comprehensive Plan, land use requirements and policies:

- **Staff Finding:** Staff has examined the record in this matter and finds the applicant meets the criteria. The applicant has provided their findings in the attached Applicant Burden of Proof. Staff has reviewed them and agree with their findings. Based on those findings, staff finds that the proposed Comprehensive Plan and Zoning Amendment conform to the Comprehensive Plan.

D. That there is a change in circumstances or further studies justifying the amendment or mistake in the original zoning:

- **Staff Finding:** Staff has examined the record in this matter and finds the applicant meets the criteria. The areas currently zoned R-4 in the area have not developed at the density level anticipated (i.e., density in these areas is lower than anticipated). Therefore, staff finds the applicant's request to rezone the subject property to R-3 and R-4 appropriate, which will result in higher densities than contemplated with SWAP's R-2 zoning designation of the property. To that end, it is anticipated that the requested zone change will result in density similar to developments in the immediate surrounding area.

Additionally, as evidenced by the recently adopted House Bill 2001, there is a great need for mixed housing types, namely middle housing. As such, a greater mix of housing types will result throughout the SWAP. All of the aforementioned changes together contemplated and directed the proposed zone change and demonstrate compliance with this criterion.

3. **TENTATIVE SUBDIVISION APPROVAL:** Section 8.2220, Sections 8.2235 – 8.2236; and Sections 8.2700 – 8.2720 set forth the applicable criteria that must be met for tentative subdivision approval:

Section 8.2220, Phased Development Plan

1. *Overall development plan, including phase or unit sequence.*
2. *Show compliance with all applicable land division standards and policies as described in this Article.*
3. *Schedule of improvements initiation and completion.*
4. *Overall transportation and traffic pattern plan showing compliance with grid street standards, and for land within the North Redmond US 97 Interchange Area Management Plan (IAMP), compliance with the Local Street Connectivity Plan (Comprehensive Plan Addendum Chapter 9 Transportation Element figure 1).*
5. *General program for phasing timetable projection.*
6. *Development plans for any common elements or facilities.*
7. *If the proposed subdivision is believed to have an additional impact upon adjacent lands or lands within the general vicinity, the Hearings Body may require an additional impact analysis for various aspects of the development thought to cause such impacts.*
8. *Street tree plan.*
9. *Program for addressing applicable Great Neighborhood Principles in Section 8.0330(3)(C)(13) and adopted Area Plans.*

- **Staff Finding:** The applicant has not addressed criteria 3, 5, and 8 above; therefore, these criteria are not met.

Section 8.2235, Required Findings for Tentative Subdivision Approval.

1. The Hearings Body shall approve no application for a subdivision unless the following requirements are met:
 - A. *Proposal is in compliance with ORS Chapter 92, the Comprehensive Plan, the Transportation System Plan (TSP) and applicable zoning.*

- **Staff Finding:** Upon approval by the City of Redmond, the applicant will have a licensed professional land surveyor prepare a final subdivision plat map in accordance with ORS 92.010 to 92.192. The subdivision plat map will be establishing 64 lawfully established lots, and dedications of all public streets,

including SW 47th Place, SW Badger Avenue, SW Badger Court, SW Badger Creek Drive, and SW Coyote Avenue. No lots shall be sold prior to final plat recording. The subject property is currently zoned UH-10 and designated as R-2 on the 2020 greater Redmond area Comprehensive plan. The applicant has requested a zone map amendment, rezoning 45 proposed lots to R-3 and the remaining 20 lots to R-4. The submittal requirements for a subdivision application require a traffic impact study if there are more than 20 lots, and as this development will have 64 lots, a traffic impact study has been submitted. The applicant is proposing sidewalks for pedestrian access and paved roads for vehicular access. Applicable zoning criteria is addressed in the applicant's burden of proof.

B. Proposal does not conflict with acquired public access easements within or adjacent to the subdivision.

- **Staff Finding:** The proposed subdivision does not conflict with public access easements on the parcel or adjacent to it.

C. Each lot is suited for the use intended or offered.

- **Staff Finding:** Each proposed lot is of sufficient size for the residential uses as intended.

D. The Subdivision will not exceed the operational capacity of public facilities and services as identified in the city's Water and Wastewater Master Plan and the Transportation System, which are required to serve the development, or a determination that sufficient capacity can be provided.

- **Staff Finding:** According to City Engineering, there is sufficient capacity in the City's Water and Wastewater system for water and sewer services to the proposed 64 residential lots proposed in the development.

E. A Water rights division plan has been approved by the applicable irrigation district.

- **Staff Finding:** The subject property falls within the Central Oregon Irrigation District. There are no water rights associated with the property.

F. The subdivision contributes to orderly development and land use patterns in the area, and provides for the preservation of natural features and resources such as streams, lakes, natural vegetation, special terrain features.

- **Staff Finding:** The subdivision is consistent with other existing and proposed subdivisions in the area. Existing street stubs on the east side of the canal will be extended across the canal to continue the orderly development of the transportation system and surrounding land use patterns. There are no streams or lakes located on the property. There are no special terrain features on the subject property.

2. Access Management proposals comply with the standards set forth in Section 8.2820 and all other applicable standards.

- **Staff Finding:** Refer to Section 8.2820 below.

Section 8.2240, Improvement Requirements

1. *In the approval of a subdivision, the Community Development Director or Hearings Body shall consider the need for street and other improvements. All streets in new subdivisions, except for planned unit developments (PUD's), shall be dedicated to the public without reservation or restriction.*
 - **Staff Finding:** The City's Engineering Department has reviewed the proposed subdivision as it relates to streets and street improvements. Based on the feedback the applicant received from the City's Engineering Department, the proposed subdivision has been designed accordingly.
2. *Private alley Access.*
 - **Staff Finding:** There are no private alley accesses proposed in this development. This criterion is not applicable.
3. *The subdivider shall record the required (including but not limited to) land division agreement, public improvement agreement, shared access agreement or shared well agreement, as may be applicable, with the Deschutes County Clerk's Office at the time of recording of the final subdivision plat.*
 - **Staff Finding:** The applicant will record all required land division agreements with the County Clerk at the time of recording the final plat.
4. *Paved access is guaranteed to each lot.*
 - **Staff Finding:** The applicant is proposing paved access/streets to all lots in this development.
5. *Each lot is to be connected to the City water and sewer system pursuant to Section 4.007 of the Code of the City of Redmond.*
 - **Staff Finding:** The applicant is proposing connection with the City of Redmond water and sewer system. Upon receiving land use approval for the subdivision, the developer will submit detailed civil plans to the City's Engineering Department for review and approval prior to construction of the subdivision.
6. *All required public utilities are available.*
 - **Staff Finding:** By extending streets, water and sewer services across the COID B lateral as proposed, all required public utilities will be available to the subject property for the proposed development.

Section 8.2700, Compliance Required

1. *Any land division or development shall be in compliance with the design and improvement standards and requirements of this section, and all other applicable provisions, as set forth in this Chapter.*

Section 8.2705, Blocks, Lots and Parcels

1. *Blocks. The resulting or proposed length, width and shape of blocks shall take into account the requirements for adequate building lot sizes, street widths, access needs and topographical limitations.*
 - A. *No block shall be more than 660 feet in length between street center lines unless it is adjacent to an arterial street, or unless topography or the location of adjoining streets justifies an exception, and is so approved by the reviewing authority. In MUN, MUE and MULW zones, block lengths shall be an average of 330 feet, except where required to meet grid street or access management requirements.*
 - **Staff Finding:** The development does not create any blocks with lengths in excess of 660 feet. This criterion is met.
 - B. *The recommended minimum length of a block along an arterial street is 1,320 feet, except that along such blocks, a public right-of-way for pedestrian and bicycle access shall be dedicated at or nearest the mid-point of the block length as is practical. The right-of-way shall be a minimum of 10 feet wide, with an all weather surface a minimum of 5 feet wide, constructed and centered within the right-of-way.*
 - **Staff Finding:** The subject property is not along arterial street and is therefore not subject to this criterion.
 - C. *A block shall have sufficient width to provide for 2 tiers of lots unless topography, the location of adjoining streets, or adjacency to an arterial street justifies an exception.*
 - **Staff Finding:** Given that the development abuts the COID B lateral canal along the site's eastern property boundary, full compliance with this criterion is difficult to impossible. Absent the challenge presented by the canal, all other blocks provide for two tiers of lots. Staff finds this criterion is met.
 - D. *Where appropriate at approved cul-de-sacs, dead-end streets, or along blocks approved at more than the maximum block length standard, pedestrian and bicycle access corridors shall be required to be constructed between lots to minimize travel distance between subdivisions, parks, school, and collector or arterial streets. Access corridors shall be located to provide a reasonably direct connection between likely pedestrian destinations and shall be consistent with the City of Redmond Bicycle Refinement Plan where applicable. A reasonably direct connection is a route which minimizes out of direction travel for people likely to use the connection considering terrain, safety and likely destination. The Community Development Director or Hearings Body may determine based on evidence in the record that construction of a separate access corridor is inappropriate or impractical. Such evidence may include but is not limited to:*
 1. *When the nature of abutting existing development makes construction of an access corridor impractical.*
 2. *When the access corridor would cross a natural area with significant natural habitat and construction would be incompatible with protection of natural values.*
 3. *When the access corridor would cross topography where slopes exceed 30% or where path grade would exceed 12% slope; or*
 4. *When a cul-de-sac or dead-end street abuts rural resource land at the urban growth boundary. In industrial zones, this standard may be waived at the discretion of the Community Development Director or Hearings Body when it*

is determined that the City's grid street standards should not be applied to the industrial development.

- **Staff Finding:** A pedestrian and/or bicycle access corridor is not warranted to minimize travel distance between subdivisions, parks, school, and collector or arterial streets because the maximum block length standard is not exceeded. It is important to note that a pedestrian connection to the east has been proposed between Lots 26 and 27 to minimize travel distance between SW Badger Avenue and SW Badger Creek Drive to provide convenient access to the linear park along the COID canal.

2. *Lots and Parcels. The size, width, and orientation of newly created lots and parcels shall be appropriate for the location of the land division and for the type of development and use contemplated. Lots and parcels shall be generally rectangular in shape, and shall be consistent with the lot size provisions of the zoning standards and the density requirements as established in the City of Redmond Comprehensive Plan. Notwithstanding these requirements, the following exceptions may apply:*

- A. *In areas beyond the City Limits where public sewer is not currently available, minimum lot and parcel sizes shall permit compliance with the requirements of the Department of Environmental Quality and County sanitarian, and shall be sufficient to permit adequate sewage disposal. Any problems posed by soil structure and water table as related to sewage disposal by septic tank shall be addressed and resolved in the applicant's initial plan.*
- B. *Where property is zoned and planned for business or industrial use, other widths and areas may be permitted by the Community Development Director or Hearings Body. Depth and width of properties reserved or laid out for commercial and industrial purposes shall be adequate to provide for the off-street service and parking facilities required by the type of use and development contemplated.*
- C. *In steep terrain, increased lot or parcel sizes may be required to avoid excessive cuts, fills, and steep driveways.*

- **Staff Finding:** The lots are generally rectangular shaped as much as possible and will accommodate the residential uses proposed. The lots will be served with City sewer, this is not for planned business or on steep terrain.

3. *Frontage. Each newly created lot and parcel shall abut upon a public street other than an alley for at least 50 feet, except for lots fronting on the bulb of a cul-de-sac, then the minimum frontage shall be 30 feet. Flag lots shall have no less than 20' of street frontage measured at the property line. Lots created as part of a Planned Unit Development shall meet the same frontage requirements listed herein, except such frontage may be allowed along private streets. Vehicular access shall be provided as specified in Section 8.2820, Access Management Standards, of this Chapter, or as specified in Section 8.2705(6) below, for residential lots and parcels abutting collector and arterial streets. All lot and parcels shall be addressed from the primary public street frontage, not including alleys.*

- **Staff Finding:** All proposed lots have 50 feet of frontage. Each cul-de-sac lot has a minimum of 30 feet of street frontage. Lot 55 is a flag lot with the flag pole not less than the required 20 feet wide. These criteria are met.

4. *Side Lot or Parcel Lines. All side lot lines shall be at right angles to street lines or radial to curved streets wherever practical except as provided for in subsection (10) of this section.*

- **Staff Finding:** All property lines are perpendicular or radial to the curves to the greatest degree feasible. This criterion is met.

5. Through/Double Frontage Lots and Parcels. Through lots or parcels, and lots or parcels with double frontage shall be avoided whenever possible, including lots or parcels created adjacent to Collector and Arterial Streets, but not including alley frontage as described in Section 8.2705(6) below, except when they are necessary due to an irregular parent lot or parcel configuration, or are necessitated by topography or other unique circumstance.

- **Staff Finding:** There are no proposed double frontage lots proposed for this subdivision. This criterion is met.

6. Residential Lots and Parcels Abutting Collector and Arterial Streets. Lots and parcels created adjacent to Collector and Arterial streets shall be oriented so that the front elevation of the residential development faces the Collector or Arterial Street. Vehicular access shall be provided pursuant to Section 8.2820, Access Management Standards, of this Chapter. In instances where direct vehicular driveway access to lot or parcel from the Collector or Arterial street is not permissible, alley access shall be provided to the rear of the lot or parcel in accordance with the design standards included in Section 8.2710(3) of this Chapter.

- **Staff Finding:** There are no proposed lots that are adjacent to a collector or arterial street. This criterion is not applicable.

7. Corner Lots and Parcels. Corner lots and parcels shall be 5 feet more in width than other lots and parcels and also shall have sufficient extra width to meet the additional side yard requirements of the zoning district in which they are located.

- **Staff Finding:** All proposed corner lots, with exception of Lot 45, are five feet wider than the minimum lot frontage of 50 feet and have sufficient extra width to accommodate side yard requirements. Proposed Lot 45 will need to be a minimum of 55 feet in frontage.

8. Special Building Setback Lines. If special building setback lines, in addition to those required by the applicable zoning, are to be established in a development, they shall be shown on the final plat of the development and included in the deed restrictions.

- **Staff Finding:** No special setback lines are needed, proposed, or required.

9. Large Building Lots; Re-division. In the case where lots or parcels are of a size and shape that future re-division is possible, the Community Development Director or Hearings Body may require that the blocks be of a size and shape so that they may be re-divided into building sites, and the development approval and site restrictions may require provision for the extension and opening of streets at intervals which will permit a subsequent redivision of any tract of land into lots or parcels of smaller sizes than originally platted, and in conformance with the density provisions established in the City of Redmond Comprehensive Plan for the existing or intended Zone. A plan indicating the ability for redivision according to these standards may be required as part of the initial land division process.

- **Staff Finding:** This requirement is not applicable because the proposal already has lots close to the minimum possible and therefore not able to be re-subdivided.

10. Solar Access. As much solar access as feasible shall be provided each lot and parcel in every new subdivision or partition considering topography, development pattern, and existing vegetation.

The boundary lines of lots and parcels, as far as feasible, shall be oriented to provide solar access at ground level at the southern building line of the adjoining lot to the north two hours before and after the solar zenith from September 22 to March 21. If it is not feasible to provide solar access to the southern building line the solar access, if feasible, shall be provided at 10 feet above ground level at the southern boundary line two hours before and after the solar zenith from September 22 to March 21, and three hours before and after the solar zenith from March 22 to September 21. This solar access shall be protected by solar height restrictions on burdened properties for the benefit of lots receiving the solar access pursuant to Section 8.0370, of the City of Redmond Development Code, Solar Access Standards. If the solar access for any lot, either at the southern building line or at 10 feet above the southern building line, is not feasible, supporting information may be required with the application.

- **Staff Finding:** This criterion has been met as far as feasible. When new information is submitted, it will be accessed on a lot by lot basis.

11. Curvilinear Street and Block Design. Although a basic grid street design with minimum and maximum block lengths are requirements of this section, a curvilinear street/block design is encouraged for the purpose of adding interest to new subdivision development.

- **Staff Finding:** The subdivision has incorporated a curvilinear street/block design with exception of SW Coyote Avenue.

12. Flag Lots. A flag lot shall be considered as a "flag lot" if the pole of the flag lot is less than half the width of the average lot width. For flag lots, the following shall be required:

A. Flag poles shall be no less than 20' wide.

- **Staff Finding:** There is one proposed flag lot meeting the above definition.

B. Flag lot development, if allowed by the zone, is limited to one duplex or single family dwelling per lot. All zone regulations apply, including the minimum required lot size and setbacks unless setback reductions are allowed as described in (E).

- **Staff Finding:** Only one home is proposed for the one flag lot.

C. Each flag lot shall contain a minimum 16' wide paved driveway.

- **Staff Finding:** The flag lot will provide a 16-foot paved driveway.

D. A flag lot is exempt from the 50 foot street frontage requirement; however a minimum of 20 feet of street frontage is required.

- **Staff Finding:** The proposed flag lot meets the frontage requirement of 20 feet.

E. Front and/or rear yard setbacks may be reduced to no less than 10' subject to review and approval by the Community Development Director. The orientation of any structure (determination of front) may be suggested by the property owner, and is subject to the review and approval of the Community Development Director or designate. The location(s) of all structures immediately adjacent to any flag lot shall be shown on a site plan (1) during planning review and during the act of creating any new flag lot, and (2) during a building permit review for any structure built on a flag lot.

- **Staff Finding:** The lot will be subject to above setbacks when building permits are submitted.

F. No flag lot shall be partitioned or further divided.

- **Staff Finding:** It is recognized that Lot 55 shall not be further divided.

G. The “pole” of the flag lot shall be no longer than 150’ measured from the street intersection to the beginning of the base of the flag.

- **Staff Finding:** The length of the “pole” for Lot 55 is 100 feet. This criterion is met.

H. The “pole” of the flag shall not be included in the minimum lot size calculation.

- **Staff Finding:** Proposed Lot 55 is 6,137 square feet without the flag pole, thus meeting the minimum lot size without the pole being included.

I. Flag lots shall be exempt from street tree requirements unless the street frontage portion of the flag lot is 30’ or greater.

- **Staff Finding:** Street trees will not be required for Lot 55 as the frontage is less than 30 feet.

J. Flag lots are prohibited along or abutting the Dry Canyon Rim.

- **Staff Finding:** The property is not subject to this rule as the property does not abut the Dry Canyon Rim.

K. Two off-street parking spaces shall be provided for each dwelling unit on a flag lot.

- **Staff Finding:** This criterion will need to be met when building permits are submitted.

Section 8.2710, Streets

1. *General. Streets shall be in conformance with the City of Redmond Transportation System Plan as specified herein.*
 - A. *Except along Arterial Street, public streets shall be spaced a maximum of 660 feet between centerlines. The purpose is to provide a street grid pattern of through streets to facilitate traffic movement. Street designs shall conform to topography and other existing natural and man-made conditions. Illustrative examples of other conditions include the dry canyon, main COI canal, Highway 97, and the Burlington Northern Railroad tracks.*
 - B. *All proposed streets, sidewalks, bike lanes and pedestrian pathways shall connect to other streets, sidewalks bike lanes and pedestrian pathways within a development and to existing and planned streets, sidewalks, bike lanes and pedestrian pathways outside the development. Such facilities shall serve existing and planned parks, schools or other public lands within a neighborhood.*
 - C. *To the maximum extent possible, new local streets shall align and connect with existing local streets and collectors, and in certain special cases arterial streets. Cul-de-sac*

streets shall be permitted only where no feasible connection with an adjacent street exists, or if the local street connection would be to an arterial street and the function of the arterial street may be diminished as determined through the land use review process, or the block length would be less than that which is permitted by Section 8.2705(1)(B).

D. Consideration should be given to alternative street designs other than required herein in the City's non-residential land use zones to allow for more effective developments. Such designs may be considered and approved during the subdivision or partition process without need for variance.

E. All proposed or required streets and alleys shall comply with Section 8.2820 Access Management Standards, the Transportation System Plan, and with Local Street Connectivity Plans adopted as part of the transportation element of the Comprehensive Plan.

➤ **Staff Finding:** The proposed development complies with these criteria. There are no arterial streets adjacent to or within the proposed development. The development's proposed streets, sidewalks, and bike lanes connect to other streets, sidewalks, and bike lanes within the development and to existing and planned streets, sidewalks, and bike lanes outside the development. Additionally, the proposed trail will connect to trail(s) outside the development.

2. **Existing Streets.** Whenever existing streets, adjacent to or within a tract, are of inadequate width to accommodate the increase in traffic expected from the land division or by the City's transportation policies as determined through a transportation impact analysis, additional right-of-way shall be provided at the time of the land division by the applicant. During consideration of the tentative plat for the subdivision or partition, the Hearings Body shall determine whether the improvements to existing streets, adjacent to or within the tract, are required. If so determined, such improvements shall be required as a condition of approval of the tentative plat. Improvements to adjacent streets shall be required where traffic on said streets shall be directly affected by the proposed subdivision. Notwithstanding these provisions, off-site improvements to streets not within or adjacent to the development may be required when impacts resulting from the development necessitate such improvements as demonstrated through a transportation impact analysis.

➤ **Staff Finding:** The proposed streets and connections have been proposed in accordance to the City's TSP and other applicable associated standards.

3. **Minimum Right-of-Way and Roadway Width.** The street right-of-way and roadway surfacing widths shall be in conformance with the standards as specified in Table 1 below:

Table 1 - City of Redmond Right of Way and Roadway Design and Cross-Section Standards

Pavement	Width (ft)		Right-of-Travel		Bike		Parking**
	Standard	(minimum)	Way	Lanes	Sidewalks	Lanes**	
Residential Alley	16 ft		20 ft	n/a	none	shared	none
Commercial Alley	20 ft		20 ft	n/a	none	shared	none
Local Residential*****	36 ft		60 ft	2***	5 ft	shared	both sides (unstriped)
	28 ft*		60 ft	2***	5 ft	shared	one side (unstriped)
	24 ft*		60 ft	2***	5 ft	shared	none
Local Industrial	40 ft	38 ft	60 ft	2***	5 ft	shared	optional (unstriped)

Industrial Collector	40 ft	38 ft	80 ft	2	5 ft	6 ft	none
Minor Collector	40 ft	36 ft****	60 ft	2	5 ft	shared	both sides (8 ft)
Major Collector	36-50 ft	36 ft****	80 ft	2	5 ft	6 ft	none
Minor Arterial (3-lane)	50 ft	48 ft	100 ft	3	7 ft	6 ft	none
Minor Arterial (5-lane)	74 ft	72 ft	100 ft	5	7 ft	6 ft	none

Notes:

**May be constructed only in conjunction with the creation of covenants, conditions and restrictions (CCR's) and the establishment of a homeowners association (HOA) for the development. The CCR's shall provide that the primary responsibility for parking enforcement shall be the HOA, with the City of Redmond also being acknowledged in the CCR's as a beneficiary for such parking enforcement as a violation of the land use decision and/or city code.*

***In certain cases, bike lanes may be reduced to 5 ft, parking may be reduced to 7 ft, and travel lanes to 11 ft at the discretion of the City Engineer. ***Unstriped travel lanes*

*****36 ft in existing built-out areas*

******All streets less than 28 feet wide shall be no longer than 300 feet in length, unless such streets include at least one (1) parking bay per lot, located along each lot frontage for the entire length of such street, up to the maximum block length. Streets 300 feet or less in length shall not have any direct driveway access. In no case shall any street less than 28 feet wide intersect with any other street less than 28 feet wide.*

- **Staff Finding:** All proposed streets and right-of-way widths have been reviewed by the Engineering Department and are found to be in conformance with the standards in Table 1 above.

4. *Future Extension of Streets. When necessary to give access to or permit a satisfactory future division of adjoining land, streets shall be extended to the boundary of the subdivision or partition and the resulting dead-end streets may be approved without a permanent turn around if they are 150 feet or less in length, although, an adequate temporary turn around to ensure emergency vehicle access must be provided if such streets are greater than 150 feet in length.*

- **Staff Finding:** The Engineering Department has reviewed the proposed streets abutting this proposed development. This criterion is met.

5. *Collector and Arterial Street Access. Notwithstanding the provisions of Section 8.2705 of this Chapter, if a land division abuts or contains an existing or proposed collector or arterial street, the Community Development Director or Hearings Body may require other treatments, including but not limited to frontage roads, necessary for adequate protection of residential properties and to afford separation of through and local traffic. Provision may be made for emergency access. All frontage roads shall comply with the City of Redmond Transportation System Plan.*

- **Staff Finding:** The proposed development does not abut a collector or arterial street. This criterion is not applicable.

6. *Streets Adjacent to Railroads, Freeways and Parkways. When the area to be subdivided or partitioned is residentially zoned and abuts a railroad, freeway, or parkway, a provision may be required for a street approximately parallel to and on each side of such right-of-way at a distance suitable for use of the land between the street and railroad, freeway or parkway. In the case of a railroad, there shall be a land strip of not less than 25 feet in width adjacent and along the railroad right-of-way for screen planting between the railroad right-of-way and residential property. If the intervening property between such parallel streets and a freeway or a parkway is less than 80 feet in width, such intervening property shall be dedicated to park or thoroughfare use. The intersections of such parallel streets, where they intersect with streets that cross a railroad, shall be determined with due consideration as cross streets of a minimum distance required for approach grades to a future grade separation and right-of-way widths of the cross street.*

- **Staff Finding:** The proposed development does not abut a railroad, freeway, or parkway. This criterion is not applicable.
7. *Continuation of Streets. Subdivision or partition streets which constitute the continuation of streets in contiguous territory shall be aligned so that their center lines coincide. Where straight line continuations are not possible, such center lines shall be continued as curves. These streets or the continuation of streets in contiguous territory may be required by the Community Development Director or Hearings Body where such continuation is necessary to maintain the function of the street or desirable in the surrounding area. Where solar orientation would not be possible if the street area continued, a new pattern may be started that is solar oriented.*
- **Staff Finding:** The Engineering Department has reviewed the proposed streets and connections in accordance to City of Redmond's TSP and other applicable associated standards. This criterion is met.
8. *Lot Layout. Local residential streets should be oriented on an east/west axis to the greatest possible extent to insure solar access for lots within the subdivision or partition.*
- **Staff Finding:** This criterion is met as much as feasible when taking into consideration the shape of lots and providing continuity with connecting grid street design.
9. *Street Names. Except for extensions of existing streets, no street name shall be used which will duplicate or be confused with the name of an existing street in a nearby city or in the county. Street names and numbers shall conform to the established pattern in the City, including the continuation of street names across intersecting streets, and shall be subject to the approval of the Fire Department or the responsible agency.*
- **Staff Finding:** Street names will be reviewed and approved by the City of Redmond and/or Redmond Fire and Rescue prior to approval of the final plat.
10. *Sidewalks. Sidewalks are required to be installed on both sides of a public street and in any special pedestrian way within the subdivision or partition except that in the case of collectors, arterials, special industrial districts or in steep terrain, the Hearings Body may approve a subdivision or partition without sidewalk if alternative pedestrian routes are available or provided by the developer. Sidewalks shall be required along routes to existing or future school and park sites.*
- **Staff Finding:** The proposed development will include sidewalks five-foot-wide sidewalks on both sides of all proposed streets with exception of SW Coyote Avenue and SW Antelope Avenue. These two streets will have sidewalks only on one side. This criterion is met.
11. *Bicycle Routes. If appropriate to the extension of a system of bicycle routes, existing or planned pursuant to the City of Redmond Bicycle Refinement Plan, the Community Development Director or the Hearings Body may require the installation of separate bicycle lanes within streets and/or separate bicycle paths.*
- **Staff Finding:** The proposed development includes streets that will have bicycle lanes according to City standards.
12. *Intersection Angles. Street intersections shall be as near right angles as possible except where topography or existing conditions requires a lesser angle, but in no case shall the acute angle be less than as permitted by the adopted City of Redmond Public Works Standards and Specifications.*

- **Staff Finding:** All street intersecting angles are at 90 degrees. This criterion is met.

13. *Alignment. Staggered street alignment shall whenever possible leave a minimum of 200 feet distance between the center line of the streets, but in no case be less than as permitted by Standards and Specifications.*

- **Staff Finding:** There are no proposed staggered street alignments.

14. *Narrow Streets. Local residential grid streets designed at widths less than 36 feet as described in Section 8.2710(3)(Table 1), shall be permitted when the subdivision design is found to be in compliance with the following:*

- A. *Narrow streets may only be permitted for continuous full length blocks internal to a Subdivision or Planned Unit Development with street connections at both ends.*
- B. *Lots adjoining the narrow streets shall be a minimum of 5000 square feet and have a street minimum 50 feet of frontage.*
- C. *Sidewalks shall be separated from the curb by a landscape strip with street trees conforming with Public Works Standards and Specifications.*
- D. *Curb cuts along the narrow street shall not be less than the minimum width required within the adopted City of Redmond Public Works Standards and Specifications.*

- **Staff Finding:** Narrow streets are not being proposed; therefore this criterion is not applicable.

Section 8.2715, Fundamental Design Elements.

1. *Lighting. The subdivider or partitioner shall provide underground wiring to the City standards and a base for any proposed ornamental street lights at locations approved by the affected utility company.*

- **Staff Finding:** Street lights may be a requirement of the City of Redmond during the approval of the construction plans.

2. *Multiple Access Points. Whenever possible, a minimum of two points of access to the subdivision or partition shall be provided to provide assured access for emergency vehicles and ease resident evacuation.*

- **Staff Finding:** Based on the surrounding land uses, no additional access points are possible beyond the 2-3 access points being proposed. This criterion is met.

3. *Water/Sewer. All subdivisions and partitions shall provide water and sewer lines constructed to City standards and specifications approved by the City Engineer. All lots or parcels shall be served from the City of Redmond water and sewer systems or by water and sewer systems acceptable to the City. Water and sewer mains and service lines shall be installed prior to the curbing and paving of new streets in all new subdivisions or partitions.*

- **Staff Finding:** All lots will be served from the City of Redmond water and sewer systems. Water and sewer mains and service lines will be installed prior to the curbing and paving of new streets as required.

4. *Underground Utilities. All permanent utility service and minor power transmission lines that are within or immediately adjacent to lots in a subdivision or parcels in a partition shall be provided*

from underground facilities unless otherwise approved by the CDD Director or Hearings Body. The subdivider or partitioner or developer shall be responsible for complying with requirements of this section and shall:

- A. Obtain a permit from the Public Works Director or designee for placement for all underground utilities within the public right-of-way.*
- B. Make all necessary arrangements with the utility companies and other persons or corporations affected by the installation of such underground utilities and facilities in accordance with rules and regulations of the Public Utility Commission of the State of Oregon.*
- C. All underground utilities, water lines, sanitary sewer lines and storm drains installed in streets shall be constructed prior to the surfacing of such streets to the extent practicable, and water and sanitary sewer service lines shall be placed to such lengths as will negate the necessity for disturbing the street improvements when service connections are made.*

➤ **Staff Finding:** Utilities will be provided to each lot with underground facilities.

- 5. Preservation of Natural Features. Existing trees, vegetation and natural features (i.e. rock outcrops) add character to the development and shall be preserved to the greatest extent practicable. All trees over 8 inches d.b.h. shall be noted and shown on the tentative plat.*

➤ **Staff Finding:** There are no existing natural features located on the subject property that warrant special protections or preservation with the development of the proposed subdivision.

- 6. Scenic Views. Significant views shall be taken into consideration during subdivision design. The establishment of view corridors, building envelopes, building height restrictions or similar methods shall be employed for the retention and protection of views from individual lots and from public spaces to the greatest degree practicable as determined through the land use review process. Such measures shall be shown on the final plat and included in deed restrictions.*

➤ **Staff Finding:** Scenic views are primarily to the west/southwest. The applicant has met the criteria to the extent that it can, given that the property is relatively flat, with no slopes facing the mountain views to the west. However, the majority of the streets on which individual lots front are oriented in an east/west manner. Absent the streetlights and street trees, these streets will create open public corridors that provide views to the mountains in the west.

7. Land for Public Purposes.

- A. If the City has an interest in acquiring a portion of a proposed development for a public purpose, it shall notify the property owner as soon as the City Council authorizes the transaction to proceed.*
- B. Within a development, or adjacent to a development in contiguous property owned by the developer, a parcel of land of not more than 5% of the gross area of the development may be required to be set aside and dedicated to the public for parks and recreation purposes by the developer. The parcel of land, if required, shall be determined to be suitable for the park and/or recreation purpose(s) intended, and the city may require the development of the land for the park or recreation use intended or identified as a need within the community.*
- C. In the event no such area is available that is found to be suitable for parks and/or recreation uses, the developer may be required, in lieu of setting aside land to pay to the appropriate parks and recreation agency a sum of money equal to the market value of the area required for dedication, plus the additional funds necessary for the development thereof if so*

required; if such is required, the money may only be utilized for capital improvements by the appropriate parks and recreation agency.

- D. *The foregoing land and development or money dedication (if require) may be provided for in lieu of an equal value of systems development charge assessment for parks if so approved by the collecting agency in accordance with the applicable provisions of the system development charge ordinance. If the collecting agency will not permit the land or money dedication in lieu of an applicable systems development charge, then the land and development or money dedication shall not be required.*
- E. *If the nature and design, or approval, of a development is such that over 30% of the tract of land to be developed is dedicated to public uses such as streets, water or sewer system facilities and the like, then the requirements of this subsection shall be reduced so that the total obligation of the developer to the public does not exceed 30%.*

- **Staff Finding:** The applicant is proposing that Tracts A, B, and C be comprised of a linear park. The 1.22-acre linear park must be privately maintained.

8. Easements.

- A. *Utility Easements. Easements shall be provided along property lines when necessary for the placement of underground utilities and to provide the subdivision or partition with electric power, communication facilities, street lighting, sewer lines, water lines, gas lines, or drainage. Such easements shall be labeled "Public Utility Easement" on the tentative and final plat; they shall be at least 12 feet in width and centered on lot lines where possible, unless determined otherwise by the City Engineer or designate. Excepting utility pole guylines easements along the rear of lots adjacent to unsubdivided land may be reduced to 10 feet in width, unless determined otherwise by the City Engineer or designate.*

- **Staff Finding:** The proposed subdivision includes the necessary utility easements for the placement of underground utilities and to provide the subdivision with electric power, communication facilities, street lighting, sewer lines, water lines, gas lines, or drainage.

- B. *Drainage. If a tract is traversed by a water course, such as a drainage way, channel or stream, there shall be provided a stormwater easement or drainage right-of-way conforming substantially with the lines of the water course or in such further width as will be adequate for the purpose. Streets or parkways parallel to major water courses and drainage ways may be required.*

- **Staff Finding:** COID comments have been provided to the applicant. No additional assessment or requirement is needed.

Section 8.2720, Grading of Building Sites.

Grading of building sites shall conform to the following standards unless physical conditions demonstrate the propriety of other standards:

1. *Slopes shall be less than or equal to 3 to 1 (horizontal to vertical) unless slope reinforcement and low maintenance surfaces are provided. Cut slopes as steep as 1 to 1 are permitted in native rock material if that material is suitable to stand at the slope without raveling. Toe of full slopes steeper than 3 to 1 and top of cut slope shall be no closer than 2 feet from the property line.*
2. *Structural engineering must be provided for retaining walls higher than four feet from the base of the footing to the top of the retaining portion of the wall and for retaining walls of any height that support a surcharge such as a structure, roadway or slope greater than 4 to 1.*

3. *Stormwater must be controlled in accordance with the City of Redmond Public Works Standards and Specifications to avoid erosion and impacts to adjacent property.*
4. *Cuts and fills greater than 5 feet from original ground to final grade should be avoided.*
5. *Foundations should be stepped or other measures used to minimize cuts and fills. Slopes steeper than 3:1 shall be landscaped, terraced, or receive other treatment to reduce the visual impact and minimize the need for maintenance.*
6. *Areas that require engineered fill to support structures, roadways or for other reasons shall be noted in the grading plan. Design and placement of engineered fill shall be under the direction of a licensed professional engineer. Fill material shall be tested and approved by the engineer prior to placement and tested with suitable methods after compaction. Fill in areas that do not support a structure shall be suitable with a minimum of voids and organic material.*
7. *The composition of soil for fill and the characteristics of lots and parcels made useable by fill shall be suitable for the purpose intended.*
8. *When filling or grading is contemplated by the subdivider or partitioner, they shall submit plans showing existing and finished grades for the approval of the City Engineer. In reviewing these plans, the City Engineer shall consider the need for drainage and effect of filling an adjacent property.*
9. *Grading shall be finished in such a manner as not to create steep banks or unsightly areas to adjacent property.*
10. *Any land that requires engineered fill shall be so noted on the plat. Design and placement of engineered fill shall be under the direction of a licensed professional engineer.*

- **Staff Finding:** The applicant will submit a final grading and drainage plan to the Engineering Department for review and approval as part of the civil plan review process.

Section 8.2820, Access Management Standards.

All land divisions shall be in compliance with the following standards.

1. *Driveway spacing and corner clearance as follows:*

<u>Roadway Classification</u>	<u>Minimum Access Driveway Spacing</u>	<u>Minimum Access Clearance to Corner</u>	<u>Intersection Spacing (Min.)</u>
Local Street	No restrictions	30 feet	165 feet
Minor Collector	50 feet	80 feet	330 feet
Major Collector	165 feet	165 feet	330 feet
Minor Arterial	330 feet	330 feet	¼ mile
Major Arterial	ODOT Stds	ODOT Stds	ODOT Stds

2. *In all instances, access near an intersection shall be located beyond the influence of standing queues and opposing left turns sharing a continuous two-way left turn lane. The requirement may result in greater corner clearance or access spacing than the minimum distance indicated.*
3. *Every lot or parcel shall be permitted an access. In the event that the access management standards cannot be achieved, shared access with adjacent property shall be explored and provided where available.*
4. *Access shall be taken from the lower order street or alley unless otherwise approved by Public Works and/or ODOT through the land use process.*

5. *Unless adequate demonstration of site of necessity, intersection safety and functionality is provided, through the land use review process, new lots and/or parcels will be limited to a single vehicular access.*
6. *The access management standards apply to new development, redevelopment, subdivision and partitioning of land.*
7. *Corner clearance is measured from the edge of right of way to the nearest edge of access. Spacing is measured from centerline of access/intersection to centerline of access/intersection.*
8. *Adequate intersection sight distance and clear zone shall be maintained at all access/driveway locations per AASHTO standards (American Association of State Highway and Transportation Officials).*
9. *Public Works may require supporting information, including but not limited to traffic count data, trip generation, Transportation Impact Analysis study, etc. in order to make a proper determination of access/driveway location.*
10. *Access within the North Redmond US 97 Interchange Area Management Plan (IAMP) shall also conform to the "North Redmond US 97 Interchange Area Management Plan (IAMP)" provision of Chapter 9 Transportation Element of the Comprehensive Plan Addendum and Policy 12 of Chapter 14 of the Comprehensive Plan.*

- **Staff Findings:** No driveways are being proposed at this time. All future driveways will be reviewed for compliance with this criterion during the building permit review process for the future dwellings.

VI. CONCLUSION:

Based upon the submitted plans, materials, and the proposed findings and conditions of approval included herein, staff believes that all requirements can be fulfilled to support the Master Development Plan, Comprehensive Plan and Zone Map Amendment from R-2 (Limited Residential) to R-3 (Limited Residential) and R-4 (General Residential), and Tentative Subdivision of the subject property consistent with all applicable City policies, rules, and regulations.

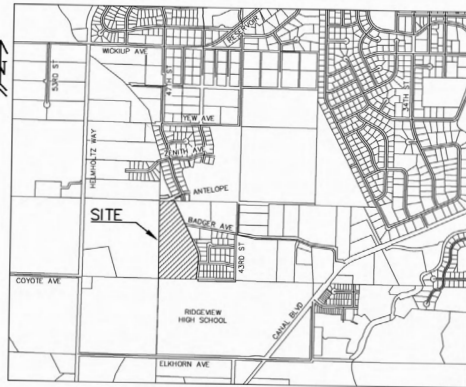
Prepared by:
 Kyle Roberts
 Senior Planner

EXHIBIT C - PROJECT PLANS

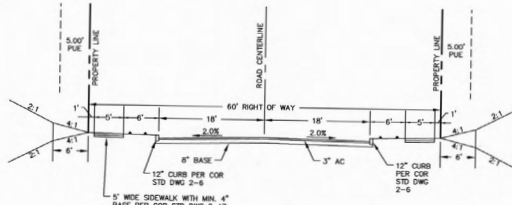
KINTON ESTATES

A 64 LOT SUBDIVISION, ZONE CHANGE AND MAP AMENDMENT

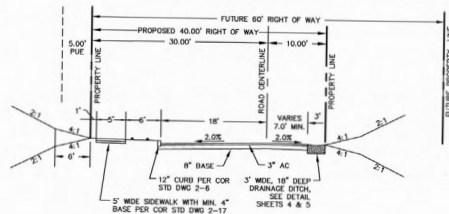
LOCATED IN THE NE 1/4 SW 1/4 OF SECTION 30,
TOWNSHIP 15 SOUTH, RANGE 13 EAST, W.M.,
DESCHUTES COUNTY, OREGON



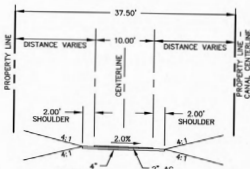
VICINITY MAP
SCALE: 1"=1000'



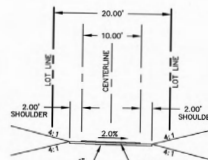
CROWN ROAD CROSS SECTION - SW BADGER AVENUE,
SW 47TH, SW BADGER COURT & SW BADGER CREEK DRIVE
SCALE: 1"=10'



CROWN 3/4 STREET CROSS SECTION
SW COYOTE AVENUE AND SW ANTELOPE AVENUE
SCALE: 1"=10'



TRAIL CROSS SECTION
SCALE: 1"=10'



PEDESTRIAN PATH SECTION
SCALE: 1"=10'



OWNER/DEVELOPER:
ED BARTHOLOWY
18485 SW SCHOLLS FERRY ROAD
BEAVERTON, OR 97007

ENGINEERING & SURVEYING:
TYE ENGINEERING & SURVEYING, INC.
725 NW HILL STREET
BEND, OREGON 97703

SITE ADDRESS:
4860 SW BADGER AVE, REDMOND, OR 97756
TAX MAP & LOT: 15-13-30 00 01401
CURRENT DESCHUTES COUNTY ZONE: UH10
OUTSIDE CITY OF REDMOND LIMITS
WITHIN THE UGB
COMPREHENSIVE PLAN ZONE: R2 (SW AREA PLAN)
PROPOSED ZONE: R3 AND R4
TOTAL AREA: 16.14 ACRES
PRESENT USE: SINGLE FAMILY RESIDENCE
PROPOSED USE: 64 LOT SUBDIVISION
NO. OF LOTS IN R3: 45, 7500 SF TO 8445 SF
NO. OF LOTS IN R4: 20, 6000 SF TO 8138 SF
WATER: CITY OF REDMOND
SEWER: PACIFIC POWER
PHONE: CENTURYLINK
GAS: CASCADE NATURAL GAS
IRRIGATION DIST: CENTRAL OREGON IRRIGATION DISTRICT

SHEET INDEX:
SHEET 1: COVER & INFORMATION
SHEET 2: EXISTING CONDITIONS
SHEET 3: LOT LAYOUT
SHEET 4: ROAD CONNECTIVITY
SHEET 5: UTILITIES, ROAD, TRAIL IMPROVEMENTS



JOB NO. 2225 - BADGER AVENUE SUBDIVISION
DATE: JANUARY 20, 2021
DRAWN BY: P.A.T.
SCALE: 1"=400'
DWG: 2225_Badger_Ave_Subdivision_option-C.dwg

KINTON ESTATES
64 LOT SUBDIVISION
COVER SHEET

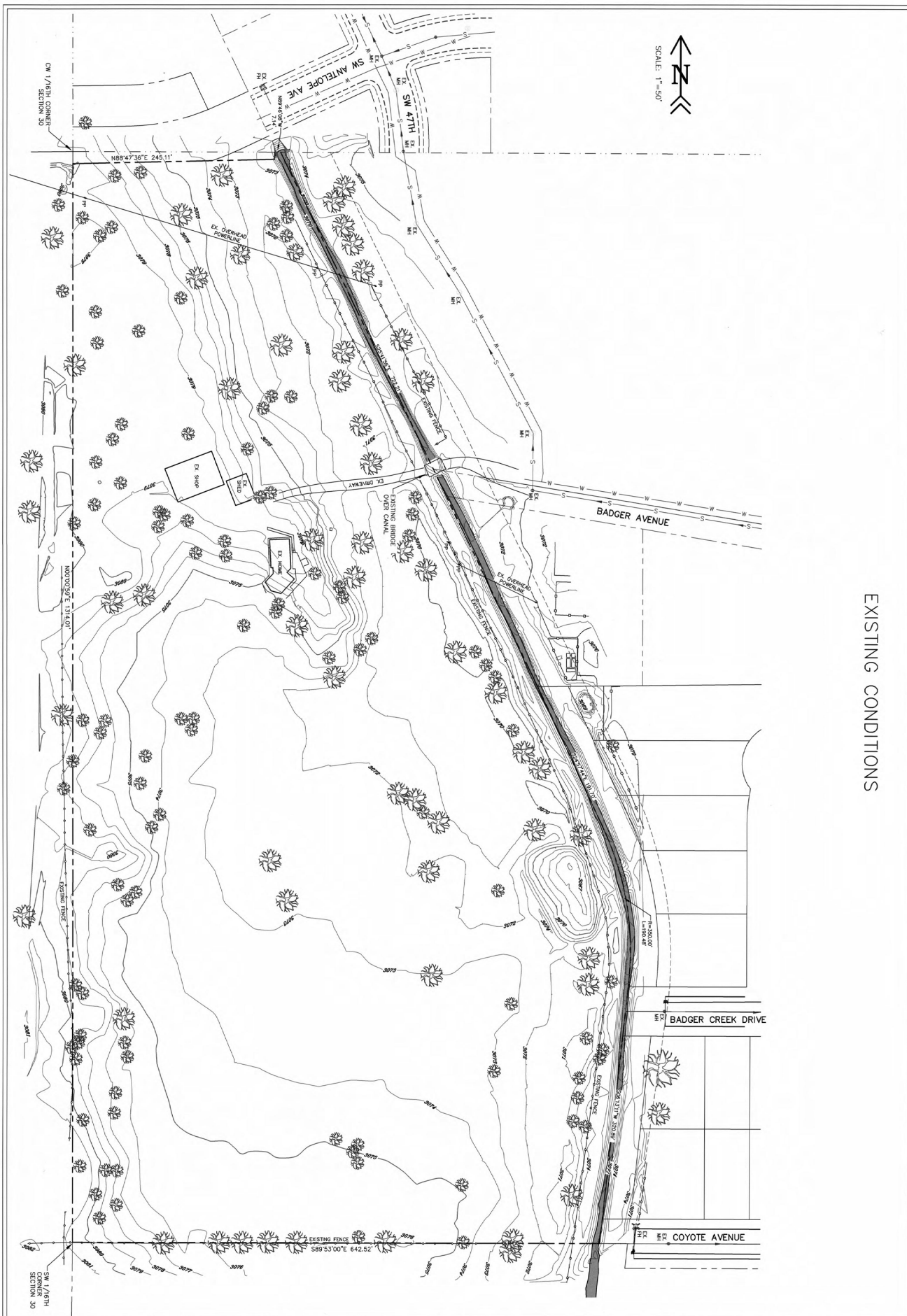
FOR:
ED BARTHOLOWY
KINTON LAND & BISON, LLC
18485 SW SCHOLLS FERRY RD
BEAVERTON, OR 97007

TYE ENGINEERING & SURVEYING, INC.
725 NW HILL STREET
BEND, OREGON 97703
PH: 541-389-4555
EMAIL: office@tyeengineering.com
WWW.TYEENGINEERING.COM



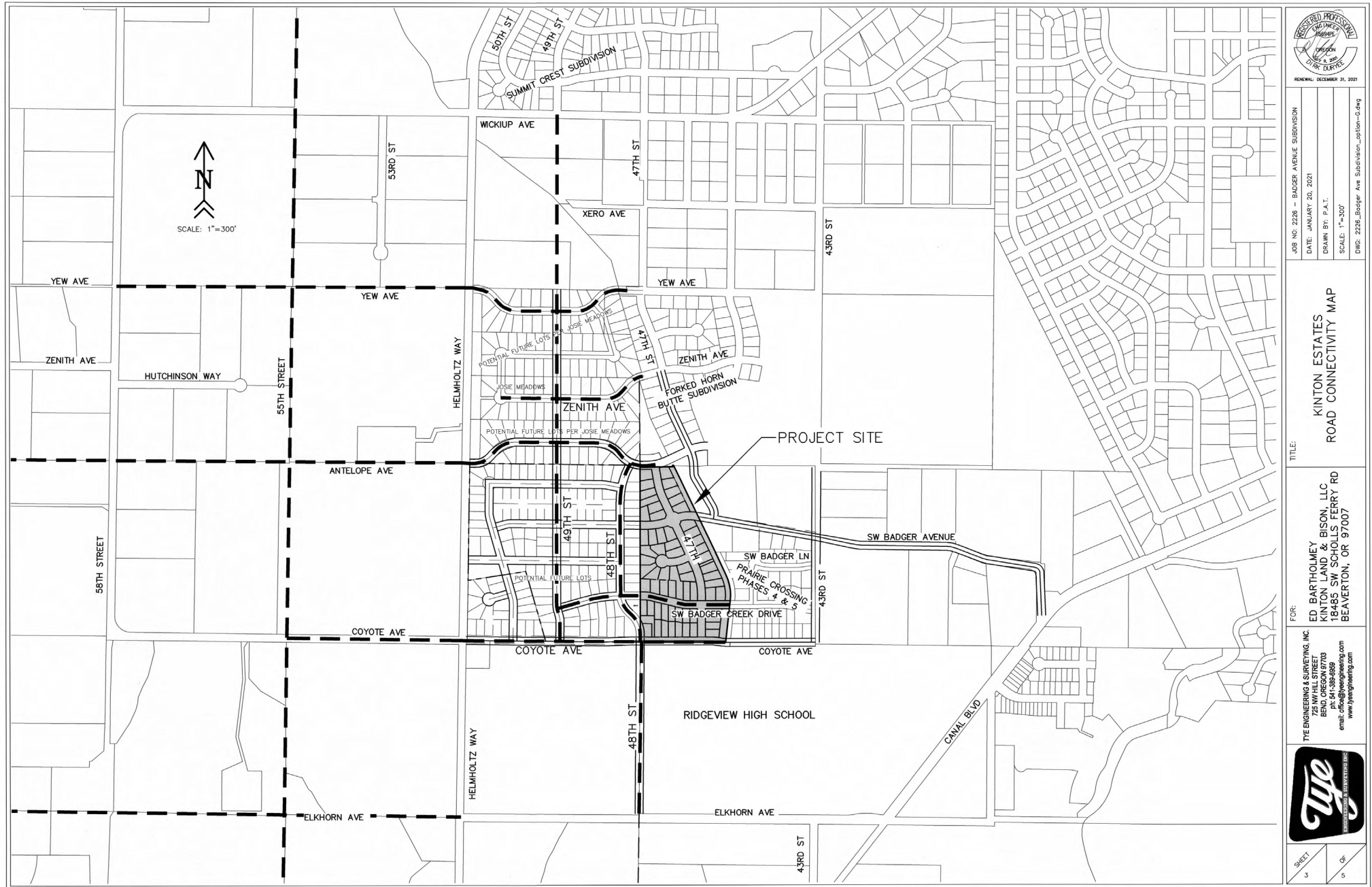
SHEET
1 OF 5

EXISTING CONDITIONS



SHEET 2 5		TYE ENGINEERING & SURVEYING, INC. 725 NW HILL STREET BEND, OREGON 97703 ph: 541-389-6959 email: office@tyeengineering.com www.tyeengineering.com	FOR: ED BARTHOLMEY KINTON LAND & BISON, LLC 18485 SW SCHOLLS FERRY RD BEAVERTON, OR 97007	TITLE: KINTON ESTATES 64 LOT SUBDIVISION EXISTING CONDITIONS	JOB NO: 2226 - BADGER AVENUE SUBDIVISION
					DATE: JANUARY 20, 2021 DRAWN BY: P.A.T. SCALE: 1"=50' DWG: 2226_Badger Ave Subdivision_option-G.dwg





JOB NO: 2226 - BADGER AVENUE SUBDIVISION
 DATE: JANUARY 20, 2021
 DRAWN BY: P.A.T.
 SCALE: 1"=300'
 DWG: 2226_Badger Ave Subdivision_option-5.dwg

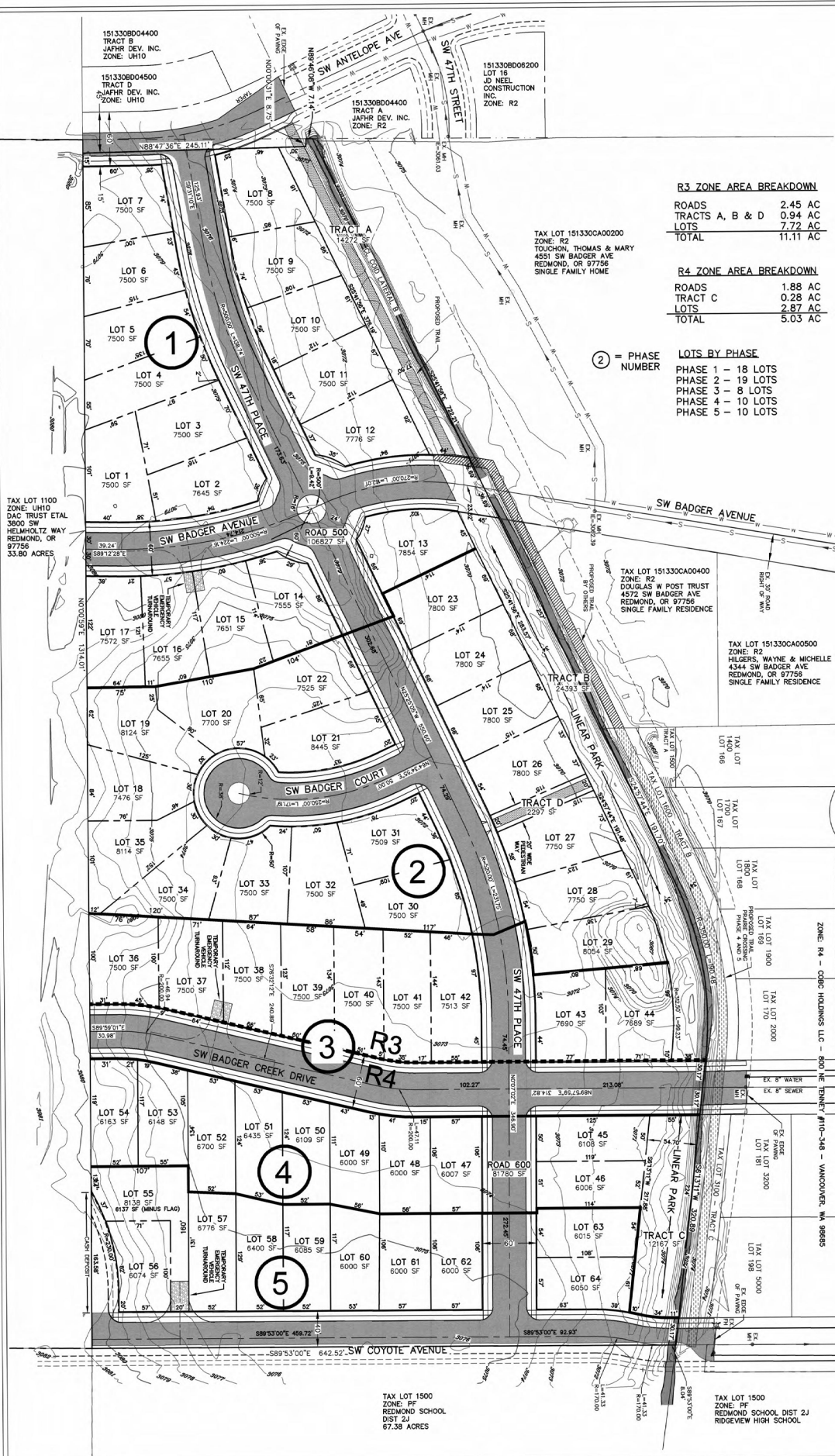
TITLE:
 KINTON ESTATES
 ROAD CONNECTIVITY MAP

FOR:
 ED BARTHOLOMEY
 KINTON LAND & BISON, LLC
 18485 SW SCHOLLS FERRY RD
 BEAVERTON, OR 97007

TYE ENGINEERING & SURVEYING, INC.
 725 NW HILL STREET
 BEND OREGON 97703
 email: office@tyeengineering.com
 www.tyeengineering.com



SHEET
 3
 OF
 15



R3 ZONE AREA BREAKDOWN

ROADS	2.45 AC
TRACTS A, B & D	0.94 AC
LOTS	7.72 AC
TOTAL	11.11 AC

R4 ZONE AREA BREAKDOWN

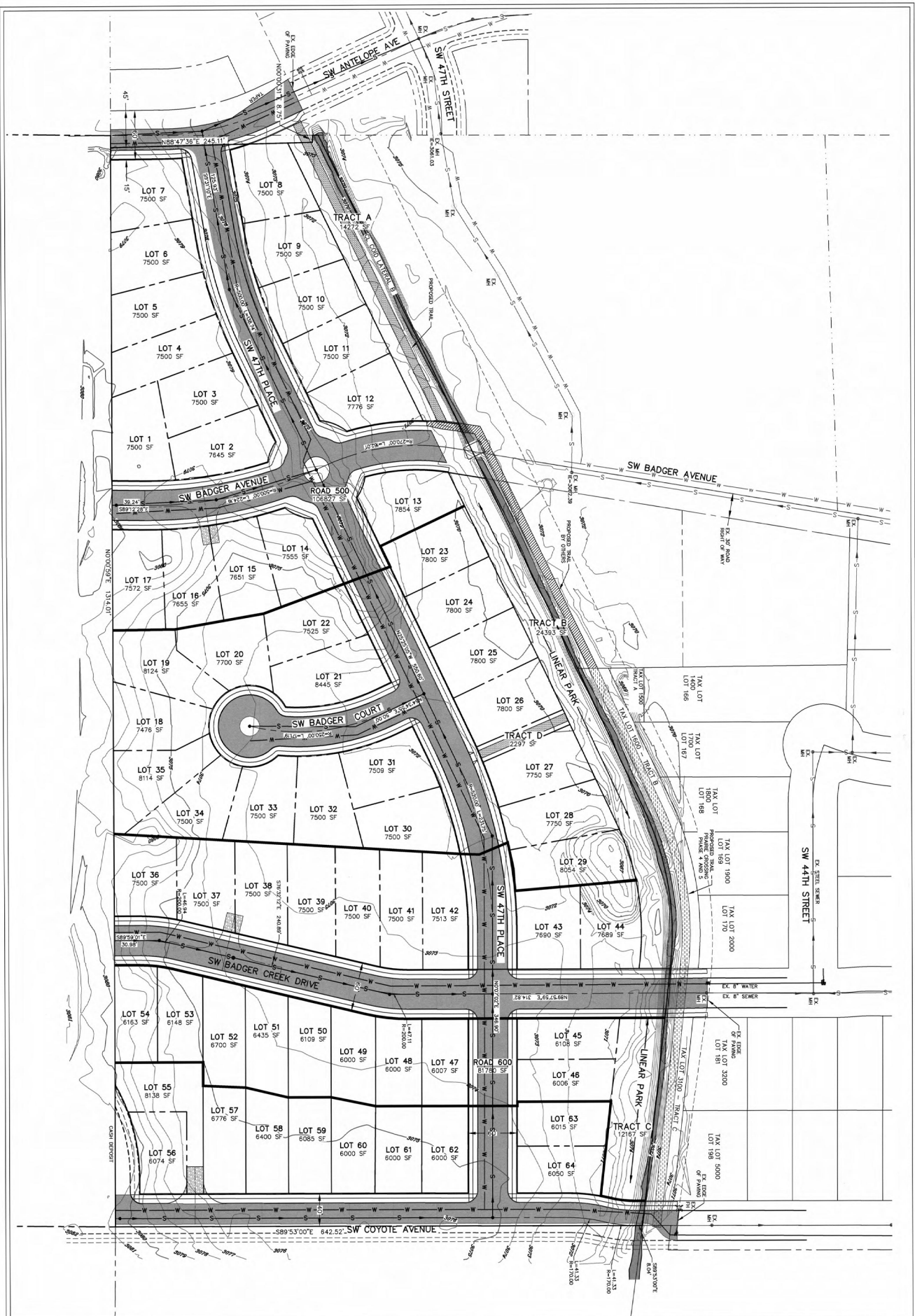
ROADS	1.88 AC
TRACT C	0.28 AC
LOTS	2.87 AC
TOTAL	5.03 AC

② = PHASE NUMBER

LOTS BY PHASE

- PHASE 1 - 18 LOTS
- PHASE 2 - 19 LOTS
- PHASE 3 - 8 LOTS
- PHASE 4 - 10 LOTS
- PHASE 5 - 10 LOTS

TYE ENGINEERING & SURVEYING, INC. 725 NW HILL STREET BEND, OREGON 97703 ph: 541-389-6559 email: office@tyeengineering.com www.tyeengineering.com	FOR: ED BARTHOLOWEY KINTON LAND & BISON, LLC 18485 SW SCHOLLS FERRY RD BEAVERTON, OR 97007	TITLE: KINTON ESTATES 64 LOT SUBDIVISION LOT LAYOUT	JOB NO: 2226 - BADGER AVENUE SUBDIVISION DATE: JANUARY 20, 2021 DRAWN BY: P.A.T. SCALE: 1"=60' DWG: 2226_Badger Ave Subdivision_option-G.dwg
	RECEIVED JAN 20 2021 PLANNING DEPARTMENT		



SHEET 5 OF 5		TYE ENGINEERING & SURVEYING, INC. 725 NW HILL STREET BEND, OREGON 97703 PH: 541-389-6959 email: office@tyeengineering.com www.tyeengineering.com	FOR: ED BARTHOLMEY KINTON LAND & BISON, LLC 18485 SW SCHOLLS FERRY RD BEAVERTON, OR 97007	TITLE: KINTON ESTATES 64 LOT SUBDIVISION INFRASTRUCTURE-UTILITIES	JOB NO: 2226 - BADGER AVENUE SUBDIVISION
					DATE: JANUARY 20, 2021 DRAWN BY: P.A.T. SCALE: 1"=60' DWG: 2226_Badger Ave Subdivision_option-2.dwg

From: [Doug and Kathy Post](#)
To: [Kyle Roberts](#)
Subject: Kinton Estates 711-20-000129-PLNG (MD)
Date: Monday, March 15, 2021 2:07:05 PM

[EXTERNAL]: This email originated from outside of the city. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Mr. Roberts,

We have reviewed the plat map provided in the public notice letter dated February 25, 2021 and have the following concerns in regard to the project:

Badger Avenue road between SW 43rd Street and COID irrigation canal

From the intersection with Southwest 43rd to the proposed development, Badger Avenue currently has only a 30 foot right of way. The western half of this section is not even paved, it is a dirt/gravel road and the other section is asphalt that is only 26' wide. It would be unsafe to add any significant traffic flow onto this section of Badger Avenue at this time. It is not even close to city standards for a minor collector and would pose a safety issue.

When the Badger Avenue PUD gets developed and the city required right of way is acquired (60 feet) this section of Badger Avenue would be able to handle the increased traffic. **In the meantime, it would be prudent to gate off Badger Avenue at the canal crossing and use it for emergency vehicle access only.**

There are three other access points for this development which can be used until Badger Avenue is brought up to city requirements for a minor collector.

Canal Trail

The lot layout of Kinton Estates included with the notice of public hearing shows the proposed canal trail going through the "linear park" only on the northern 25% of the development. The plat then shows the trail shifting to adjoining properties on the opposite side of the canal for the balance of the subdivision.

The "staff findings" indicates at least six times that the canal trail will be along the east side of the development centered in the "linear park". **This makes sense and is contrary to the map provided with the notice of hearing.**

This trail needs to be located in the linear park. At least one adjacent property owner does not want the trail going through their property. We would think that future canal trail walkers would rather be walking through a park and on a dedicated trail, rather than a dirt path that is also used by the COID ditch rider. We also suspect that COID would prefer that the trail was not on their maintenance road if there was an easy alternative. Locating it in the park appears to be the wiser and safer alternative.

Sincerely,
 Doug and Kathy Post
dkknpost@msn.com
 541-588-0537



Date:	September 17, 2020
To:	Mike Caccavano, PE & David Pilling, City of Redmond
From:	Joe Bessman, PE
Project Reference No.:	1422
Project Name:	Badger Avenue Subdivision Transportation Impact Analysis



This memorandum provides a Transportation Impact Analysis (TIA) and Transportation Planning Rule analysis (TPR) for the proposed Badger Avenue 65-Lot Subdivision located in Redmond, Oregon, in compliance with Redmond Development Code 8.2815 and Oregon Administrative Rule 660-12-0060. This Transportation report follows the prior submittal of scoping materials and discussions with staff, and is proposing to make minor modifications to the internal local street network within the conceptual SWAP framework plan.

PROJECT OVERVIEW

The site of the proposed development is a 16.25-acre parcel, tax lot 1513300001401, currently zoned *Urban Holding 10 (UH10)*. This parcel is within the Urban Growth Boundary (UGB), but outside the City limits. The location of the site is shown in Figure 1.

This site is included in the Southwest Area Plan (SWAP) that was approved in September 2014. This plan provides a comprehensive land use and public infrastructure plan for the southwest area of the City of Redmond. The SWAP designates the site for residential zoning, *Residential 2 (R-2)*, as shown in Figure 2. While the proposed development is seeking R-4 zoning, the density proposed (4.0 units per acre) is within the range of the R-2 zoning (2.0 to 5.0 units per acre) and below the 4.5 units per acre density assumed for the R-2 lands within the SWAP. The purpose of the rezone to R-4 is to avoid the minimum lot size limitations of the R-2 zoning that, when coupled with ROW dedications would preclude reaching these targeted densities. Accordingly, the rezone is consistent with these prior plans that form the basis for the City's Transportation System Plan.

Figure 3 shows the proposed site layout. This layout includes a new grid street system which is planned to connect the site to three east-west area roadways. The surrounding area to the north, east, and west are planned to be or are currently identified for residential zoning. Ridgeview High School and additional land designated as *Public Facility* are located to the south. In the near-term, the site will have access to the transportation system from the extension of SW Badger Avenue. The SWAP also designates a trail system as indicated by the green lines on the map. One of the primary trails is planned along the east side of the site along the canal lateral.

Annexation and rezoning will require a Transportation Impact Analysis to City standards and compliance with the State's Transportation Planning Rule section on Plan and Land Use Regulation Amendments (OAR 660-12-0060).

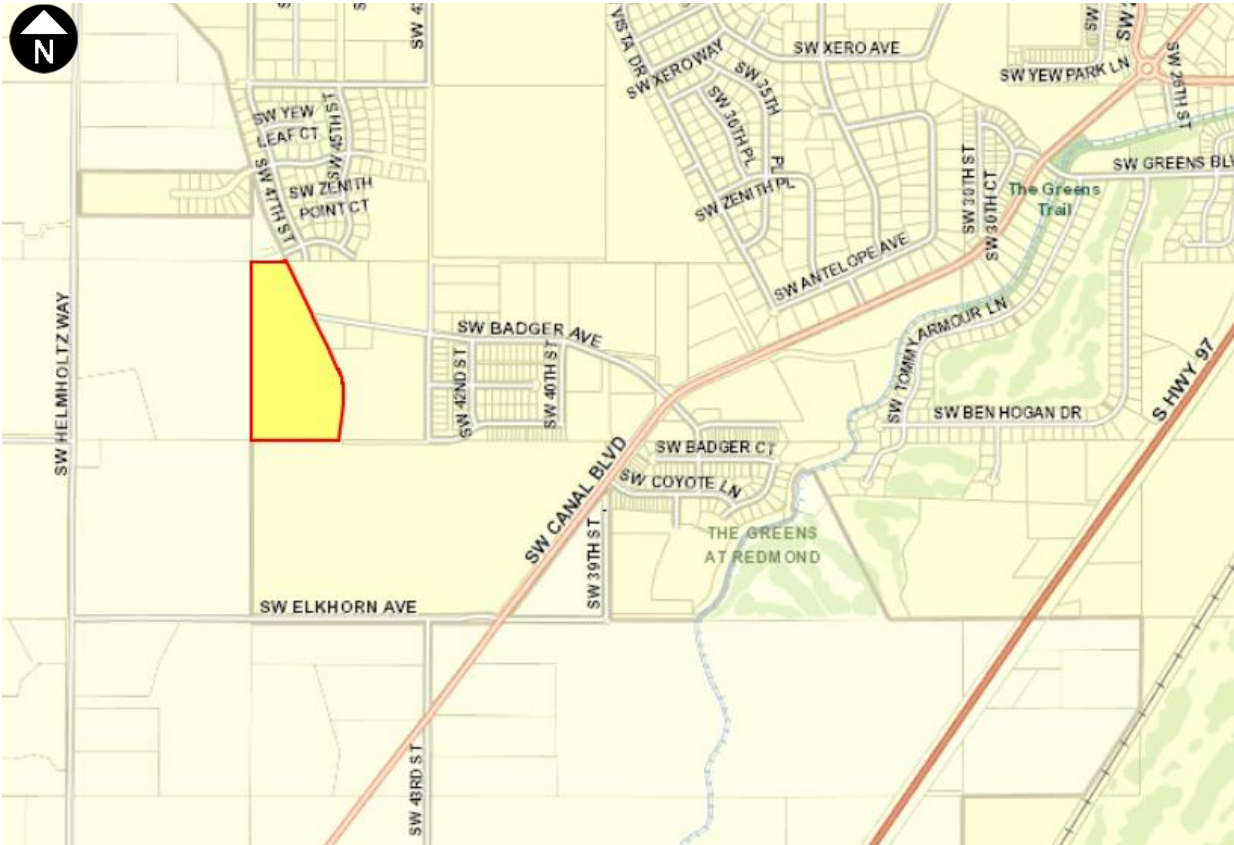


Figure 1. Site Vicinity Map. Source: Deschutes County DIAL

PROPOSED DEVELOPMENT PLAN

Development plans for this parcel include subdivision into 65 lots for single-family residential uses. Figure 3 depicts the preliminary site plan for the subdivision. Consistent with SWAP, SW Antelope Avenue will run through a portion of the north side of the site, SW Badger Avenue will be extended through the top third of the site, and SW Coyote Avenue will be partially built on the south side of the site. An additional north-south road (SW 47th Place) and east-west road (SW Badger Creek Drive) will be built to local street standards with a 60-foot right-of-way and will connect to the planned streets and provide access to the residential lots. Primary access to the subdivision will be provided by the extension of SW Badger Avenue, which is identified as a *Local Street* within the City's adopted plans.

The site plan depicts a strip of land on the east side of the site that will be developed as a trail consistent with the SWAP, preserving the existing Lateral B canal that runs along the length of the site. The canal lateral is not being relocated with this project so will remain an open channel, with three new box culvert crossings of the canal provided through the subject development.

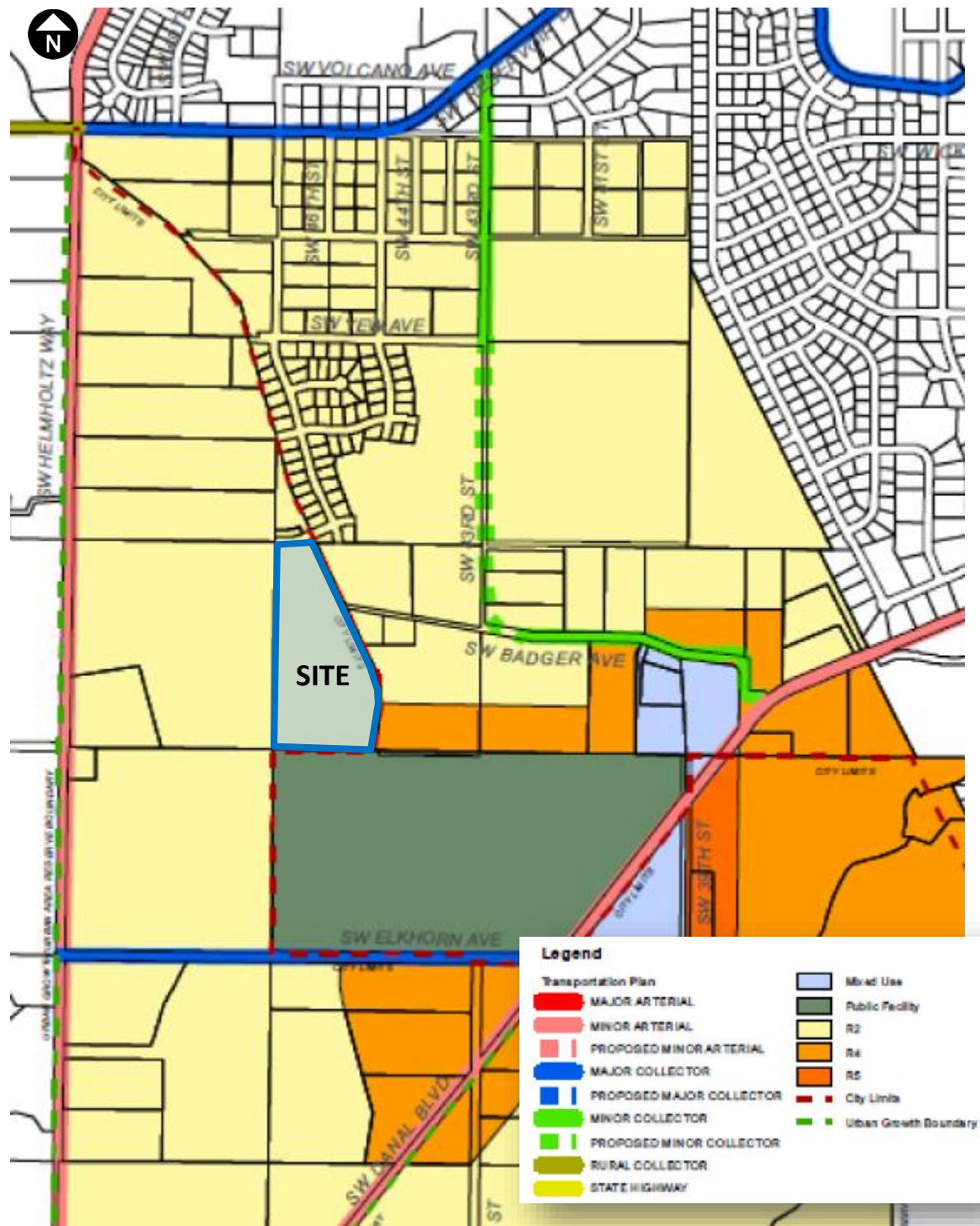


Figure 2. City of Redmond Southwest Area Plan. Source: City of Redmond Ordinance No. 2014-17.

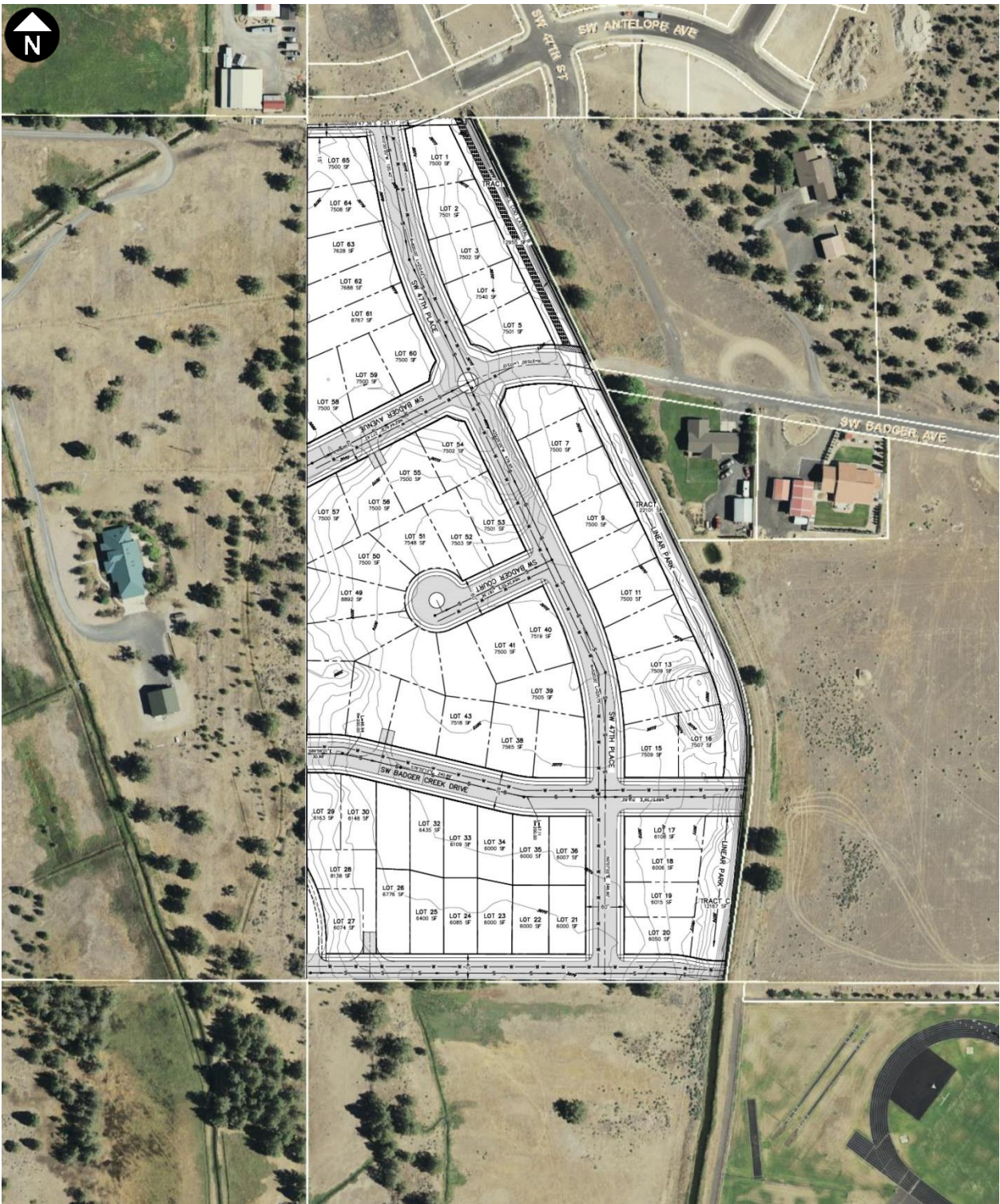


Figure 3. Preliminary Site Plan. (Source: Tye Engineering & Surveying, Inc. Dated August 27, 2020)

SITE CIRCULATION AND CONNECTIVITY

A critical element of this project is to extend the street grid in an orderly manner that supports City plans to develop adjacent properties. The City's SWAP plan identifies various grid and local streets within this area arranged in a manner that extends and connects into existing portions of streets, as shown in Figure 4. The proposed site layout varies from this plan only with the alignment of SW 47th Place; instead of locating this road along the western boundary (as SW 48th Avenue) the layout shows this road bisecting the property. With the size of this parcel, this alignment avoids creating a row of double-frontage lots while providing the same connectivity north to SW Antelope Avenue and south to Coyote Avenue. Consistent with the SWAP plan, with surrounding development patterns there are no accommodations to extend this local street north of SW Antelope Avenue regardless of its specific alignment.

The site layout is shown in Figure 5 along with a shadow plat of lands surrounding the site. This shows an efficient spacing of local streets to serve the individual homesites with the layout provided, avoiding double-frontage lots and responding to the transverse alignment of the canal lateral. This includes at least two property-depths of spacing between all of the local street intersections while avoiding impacts to the canal lateral along the eastern site boundary.

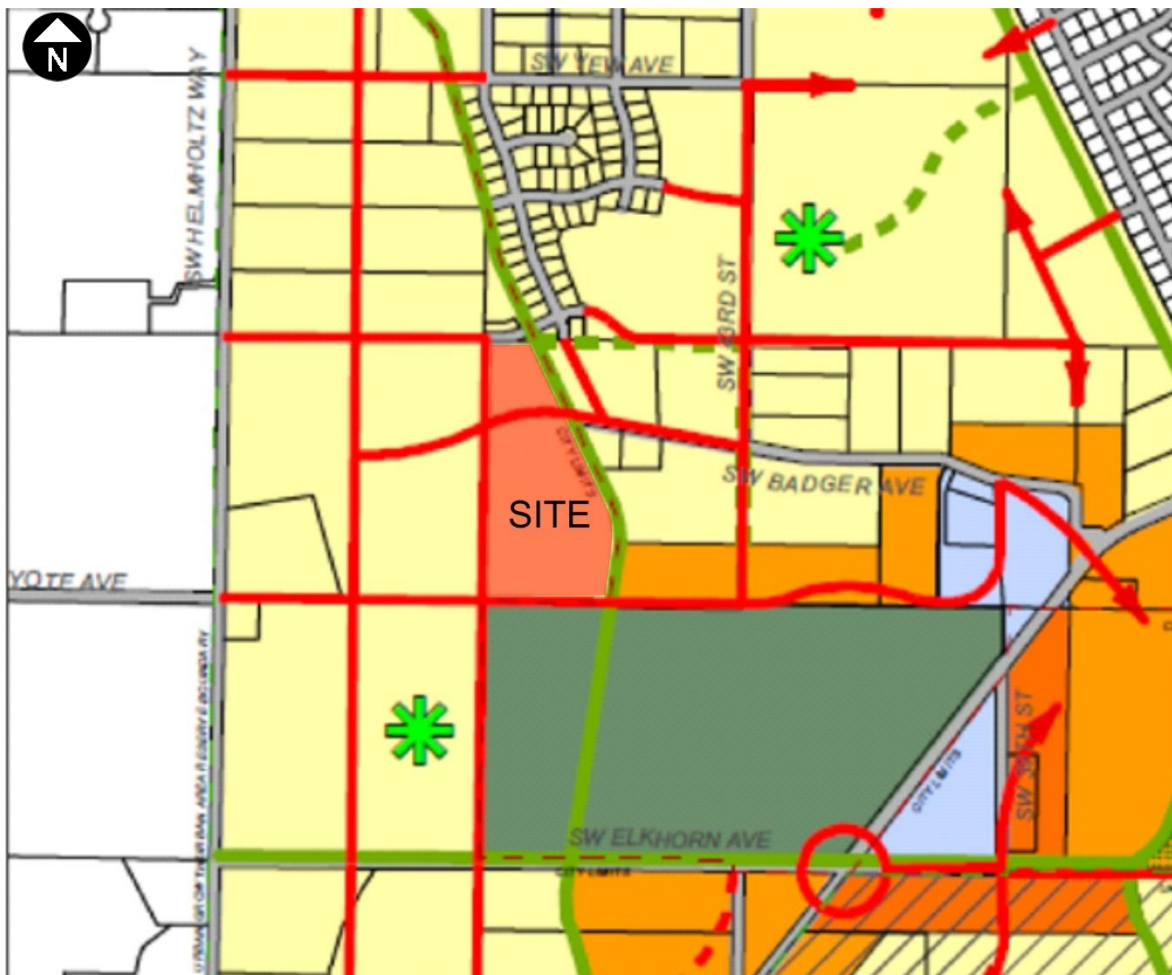


Figure 4. SWAP Connectivity Plan.

Solid Red: Grid Street; Dashed Red: Local Street; Green: Primary Trail, Green Dashed: Secondary Trail

Source: SWAP Exhibit "A", September 9, 2014

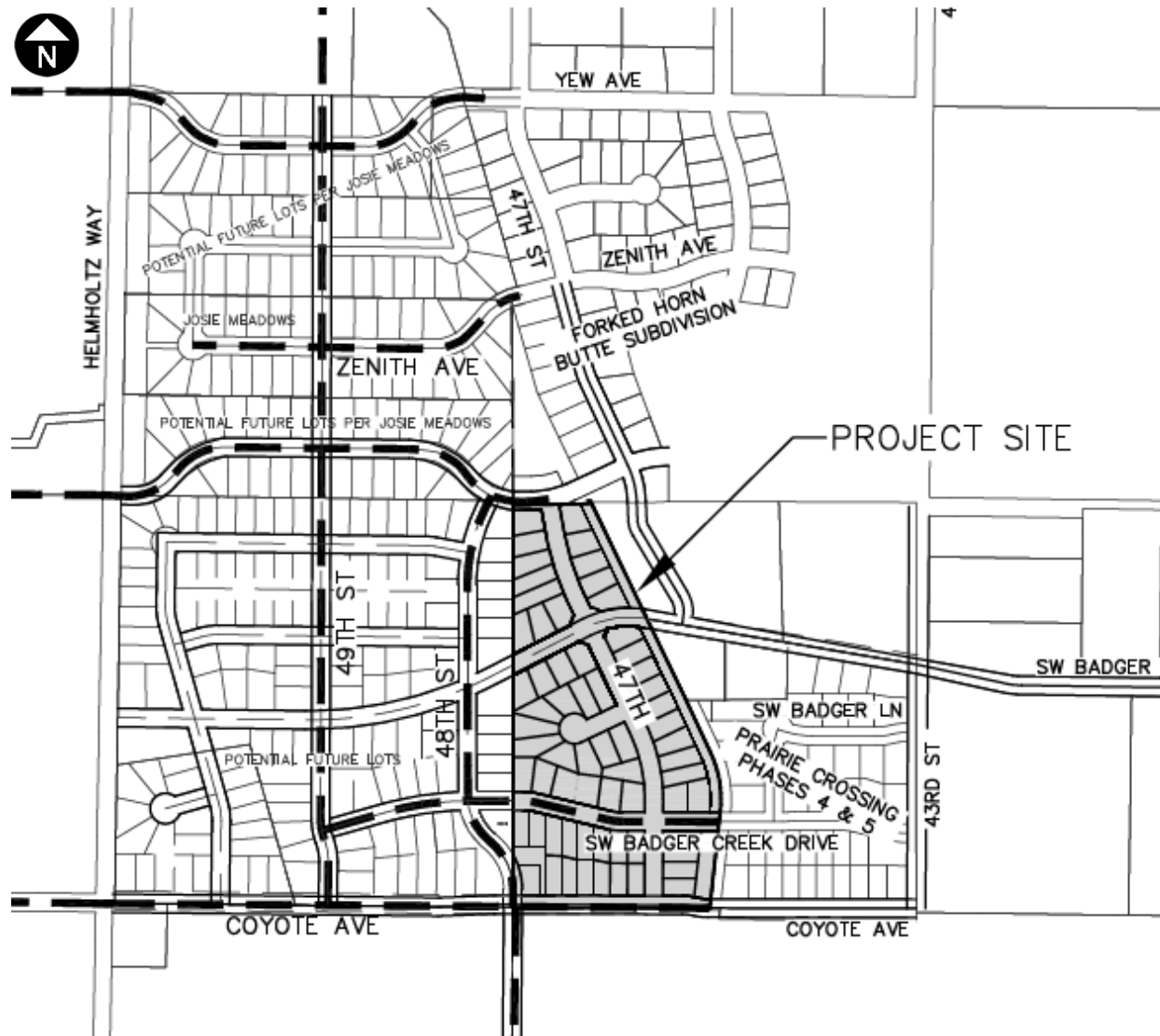


Figure 5. Surrounding development plans. Source: Tye Engineering & Surveying.

To manage the speed of traffic on Badger Avenue a traffic circle is proposed at the intersection with 47th Street. Additional review and coordination will be required with City staff as this design progresses to ensure adequate vehicle design accommodations along this *local street*. It was noted that the draft Transportation System Plan is contemplating upgrading Badger Avenue to a *Minor Collector*. While neither classification is intended for highway trucks (WB67) as a design vehicle, this upgraded classification may require larger single-unit truck or short tractor trailer trucks as a design vehicle, and may require a mountable circle more similar to a mini-roundabout (but without the same higher-capacity needs).

EXISTING TRANSPORTATION FACILITIES

The functional classification of the surrounding transportation corridors is also illustrated within the Southwest Area Plan map in Figure 2 (which will be slightly modified when the City's Draft TSP is adopted to show SW Badger Avenue as a Minor Collector from SW Canal Boulevard to SW Helmholtz Way). Further descriptions of the characteristics of the roadways supporting the proposed development are included below:

- SW Antelope Avenue is a *local street* that has been newly constructed with the residential development to the north. At the City's request, SW Antelope Avenue will be extended to the site, providing alternate site access to the north end of the development. SW Antelope Avenue has sidewalks, curb, and gutter.
- SW Badger Avenue is currently classified as a *Minor Collector* between SW 43rd Street and SW Canal Boulevard. It will serve as the main access route from the Badger Avenue Subdivision to SW Canal Boulevard. It was recently improved to a full two-lane section with curbs and gutters on both sides of the roadway and sidewalks on the south side. To the east of SW 43rd Street the paved roadway becomes gravel. The roadway appears to terminate at the Lateral B irrigation canal. A bridge is provided to cross the canal to serve the Badger Subdivision site. Improvements on the portion of SW Badger Avenue between the site and SW 43rd Street were presumably conditioned with the approved developments to the north (Badger PUD) and south (Prairie Crossing) of SW Badger Avenue. With buildout of these developments, it is expected that the whole section of SW Badger Avenue between the site and SW Canal Boulevard will be improved to *Minor Collector* standards as depicted in the draft Transportation System Plan dated March of 2020.
- SW Canal Boulevard, a *Minor Arterial*, provides a major northeast-southwest route parallel to US 97 in Redmond. The speed is posted at 35 miles per hour throughout the study area. Continuous sidewalks are provided along the west side of the road and on the east side of the road north of SW Zenith Street – SW Greens Boulevard. The cross section varies between two and three lanes with bicycle lanes on both the east and west side of the road.
- SW Elkhorn Avenue is classified as a *Major Collector* running east-west south of SW Badger Avenue. The roadway is minimally paved with centerline striping aside from school frontages, where curbs, bicycle lanes, and pedestrian facilities are provided. No speed limit is posted with the exception of a School Speed Limit 20 posting along the school frontage.
- SW Yew Avenue is classified as a *Minor Arterial* and connects SW Canal Boulevard to the US 97 ramps on SE Airport Way. SW Yew Avenue has a three-lane cross-section with continuous bicycle lanes and sidewalks on both sides of the roadway. The posted speed is 35 miles per hour.
- SW 27th Street is classified as a *Minor Arterial* and provides a north-south connection from SW Canal Boulevard to Oregon 126. It has a three-lane cross-section with continuous bicycle lanes and sidewalks on both sides of the roadway. The posted speed is 35 miles per hour.
- SW Odem Medo Road is classified as a *Major Collector* and connects SW Canal Boulevard to US 97. It has a three-lane cross-section with continuous bicycle lanes and sidewalks on both sides of the roadway. Although the total length is less than a quarter mile, this roadway serves a number of commercial developments. No speed signs are posted.
- SW Wickiup Avenue intersects SW Canal Boulevard a little over a mile north of the site as the minor street of a two-way stop-controlled intersection. SW Wickiup Avenue has a two-lane cross-section and a posted speed limit of 35 miles per hour. It is classified as a *Major Collector* between SW Canal Boulevard and SW 31st Street where it turns into Reservoir Drive and provides a regional connection between SW Helmholtz Way and SW Canal Boulevard. Within this section this

roadway has bicycle lanes and curbtight sidewalks. To the east of SW Canal Boulevard, SW Wickiup Avenue is a local street with no sidewalks or bicycle lanes.

PEDESTRIAN AND CYCLIST NETWORK

With new development in the area, sidewalks are being built that will connect the proposed site to the pedestrian and bicyclist network. Sidewalks are built on SW Badger Avenue between SW 43rd Street and SW Canal Boulevard, providing a pedestrian connection into the downtown area. There are currently no improvements to SW Badger Avenue between the site and SW 43rd Street. With the development of the adjacent Prairie Crossing Phase 2 Subdivision and Badger Avenue PUD, frontage improvements with sidewalks are expected to complete the pedestrian connection between the site and SW Canal Boulevard with the exception of an approximately 440-foot section on the south side of SW Badger Avenue that abuts two existing residences. These improvements will be extended into the site with the proposed street network.

Additionally, the new subdivision directly north of the site will be connected to the Badger Avenue Subdivision via the extension of SW Antelope Avenue. All the roads within this subdivision include sidewalks.

The planned shared-use path on the east edge of the site along the canal will extend in the future south to SW Canal Boulevard and north to Helmholtz Way providing another multimodal connection. Currently, cyclists share the roadways with motorists along the surrounding roadways.

TRANSIT SERVICE

The City of Redmond does not have its own fixed route transit system within City boundaries. On-demand transit services are provided to the site with 24-hour advance notice, though this service is limited to weekdays between 6:30 a.m. and 6:00 p.m.

Regional (inter-community) transit service is provided through Cascades East Transit's *Community Connector* system, with service to Madras, Prineville, Sisters, and Bend. Buses travel to and from Bend at approximately 90-minute headways, with service only provided on weekdays. Service to Madras, Sisters, and Prineville is more limited throughout the day, and generally only available during the commute periods. Regional transit service is provided from the corner of Deschutes Avenue and SW 9th Street, next to the Redmond Deschutes Public Library.

Fares within Zones 2 and 3 (see Figure 6) are \$1.50 for a single ride without transfers. Multizone fares are \$3.75 per ride without transfers. Discounted fares are available for disabled riders and senior citizens. Monthly passes are also available and provide a lower per-ride cost.

Regional transit service is available outside of Central Oregon to Portland, Eugene, Ontario, Chemult, Salem, and Prairie City through RIDE daily. These services are available from the Bend Hawthorne station.

RIDE SHARING

Ride sharing is available within Central Oregon through online providers such as UBER and LYFT. The service boundary for LYFT is more limited, providing on-demand service throughout Bend, Redmond, Prineville, Terrebonne, and Sisters. Uber service boundaries include Warm Springs, Madras, and La Pine. These on-demand ride sharing services are available all days and hours, with ride costs based on distances.

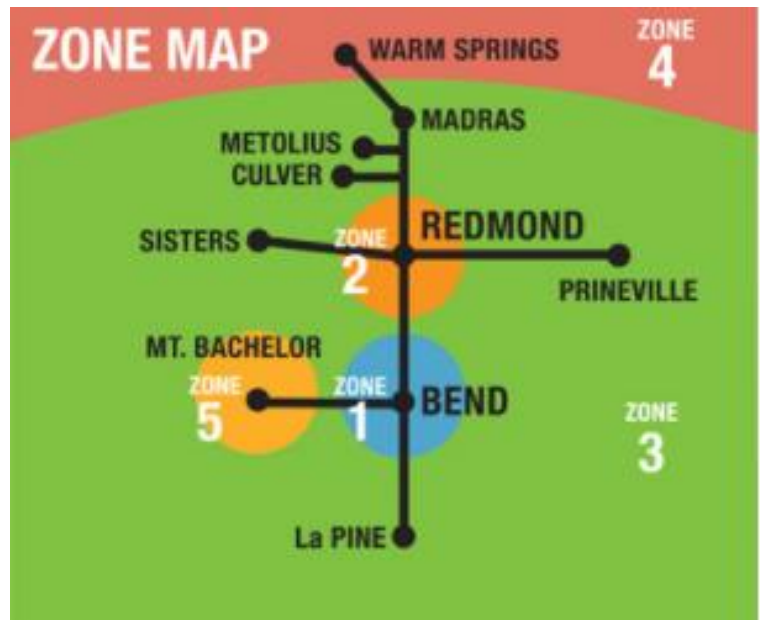


Figure 6. Cascades East Transit Zone Map

ROADWAY SAFETY

This section provides a safety review of the transportation infrastructure serving the proposed development based on review of historical crash records submitted through the DMV and maintained by ODOT, as well as field review of area conditions, roadway and intersection geometrics, and available sight lines.

HISTORICAL CRASH REVIEW

Historical crash records were obtained through ODOT Crash Analysis and Reporting System (CARS) from the period between January 2013 and December 2017. This reflects the most recent five-year period available. Crashes that are required to be reported during this period include those that involve at least one motor vehicle, involve any level of personal injury, or that result in \$1,500 or more in property damage.

Table 1 summarizes the number and severity of reported crashes at each of the study area intersections. The table also provides a crash rate per million entering vehicles, which is often used to assess whether a geometric or traffic control deficiency is present when the crash rate is greater than 1.0 per million entering vehicles. ODOT also provides crash rates separated by control type and the number of approaches, which better distinguish between varying intersection forms and are provided for reference.

Table 1. Crash Summary

Intersection	Number of Crashes	Crash Severity			Crash Rate per MEV	ODOT 90 th % Rate
		Fatal	Injury	Non-Injury		
1: SW 47 th Place / SW Antelope Avenue	0	0	0	0	0.00	4ST: 1.080 <i>Rural</i>
2: SW 43 rd Street / SW Badger Avenue	1	0	0	1	3.22	4ST: 1.080 <i>Rural</i>
3: SW Canal Boulevard / SW Elkhorn Avenue	3	0	2	1	0.27	4ST: 0.408 <i>Urban</i>
4: SW Canal Boulevard / SW Badger Avenue	2	0	1	1	0.16	3ST: 0.293 <i>Urban</i>
5: SW Canal Boulevard / SW Yew Avenue – SW 27 th St	13	0	2	11	0.50	<i>Roundabout</i>
6: SW Canal Boulevard / SW Wickiup Avenue	0	0	0	0	0.00	4ST: 0.408 <i>Urban</i>
7: SW Canal Boulevard / SW Odem Medo Road	9	1	5	3	0.31	3SG: 0.509 <i>Urban</i>

4ST: Four-legged stop-controlled, 3ST: Three-legged stop-controlled

As shown in Table 1, the low-volume intersection of SW 43rd Street/SW Badger Avenue experienced a crash rate greater than 1.0 crashes per million entering vehicles and beyond ODOT's 90th percentile crash rates. In addition, one fatality was reported at the SW Canal Boulevard/SW Odem Medo Road intersection. Both intersections are discussed further below. Table 2 summarizes the types of collisions that occurred at the study intersections.

Table 2. Reported Collision Types

Intersection	Rear-End	Turning	Angle	Fixed-Object	Other
1: SW 47 th Place / SW Antelope Avenue	0	0	0	0	0
2: SW 43 rd Street / SW Badger Avenue	0	0	0	1	0
3: SW Canal Boulevard / SW Elkhorn Avenue	0	2	1	0	0
4: SW Canal Boulevard / SW Badger Avenue	1	0	1	0	0
5: SW Canal Boulevard / SW Yew Avenue – SW 27 th St	5	0	5	3	0
6: SW Canal Boulevard / SW Wickiup Avenue	0	0	0	0	0
7: SW Canal Boulevard / SW Odem Medo Road	5	2	0	0	2 <i>Pedestrian</i>

SW 43rd Street / SW Badger Avenue

One crash was reported at the SW 43rd Street/SW Badger Avenue intersection in year 2013. It was a fixed object collision that occurred at 3:00 a.m. and was not associated with drugs or excessive speed. The vehicle left the road while traveling in the southbound direction and the crash resulted in property damage only. This single crash resulted in a crash rate over 1.00 due to the very low volume estimated to be using this intersection. No crash patterns or safety issues were observed at this intersection and no mitigation is necessary.

Canal Boulevard / Odem Medo Road

A fatal accident occurred at this intersection at 5:00 p.m. on Monday, November 23, 2015. Sunset was at 4:30 p.m. that day, resulting in clear but dark conditions. According to the crash records, a 65-year old male pedestrian dressed in dark clothing disregarded the traffic signal indication crossed Canal Boulevard without the right-of-way, from the southeast to the northwest side of the road. A 57-year-old female driver was traveling southwest along Canal Boulevard straight through the Odem Medo Road intersection when she hit and killed the pedestrian. Despite the fact that the driver tested positive for being under the influence of drugs, the crash database indicates that she was not at-fault as she had the green signal indication.

The other pedestrian crash investigated within the five-year analysis period occurred at 3:00 p.m. on Saturday, February 16, 2013. A pedestrian within the crosswalk was traveling to the northeast along Canal Boulevard and was struck by a vehicle driven by a 70-year old female turning right from Odem Medo Road onto Canal Boulevard. The 29-year-old female pedestrian sustained moderate injuries in the collision.

INTERSECTION SIGHT DISTANCE

The site is proposed to connect to the existing street network through the extension of SW Badger Avenue through the site and through a new connection to the extension of SW Antelope Avenue. No new intersections are being proposed on the existing section of SW Badger Avenue. The new intersection between SW 47th Place and SW Antelope Avenue will have no conflicting traffic from the east until such time the region north and west of the site is developed and SW Antelope Avenue is extended. The location of the future intersection was visited to ensure no existing sight distance obstructions were present, and none were observed during field review.

Sight distance information and requirements are based on the standard reference *A Policy on Geometric Design of Highways and Streets, 6th Edition* published by the American Association of State Highway and Transportation Officials (AASHTO) in 2011, commonly referred to as the *Green Book*. The required distances for intersection sight triangles are discussed further below and pertain to the SW 47th Place/SW Antelope Avenue intersection at such time that SW Antelope Avenue intersection extends further west and provides access to vehicles. With development of the Badger Avenue Subdivision, the intersection will only be serving eastbound left-turn and northbound right-turn movements, which do not conflict.

Intersection Sight Triangles

For minor-street stop-control intersections, intersection sight triangles are based on guidance cited within Conditions B1 (left-turn from minor road) and B2 (right-turn from minor road) of the *Green Book*. All distances are measured from a vertex point located 14.5 feet from the major-road travel way along the center of the approaching travel lane, accounting for comfortable positioning distance from the travel

way (6.5 feet) and the distance from the front of the vehicle to the driver eye (8.0 feet). The assumed eye height is 3.5 feet above the departing road for passenger vehicles. The object height is also 3.5 feet above the major road, providing enough space on the approaching vehicle to recognize it. Figure 7 illustrates the recommended intersection sight distance measurements at a typical local street intersection that will be required to be maintained as the subdivision is developed.

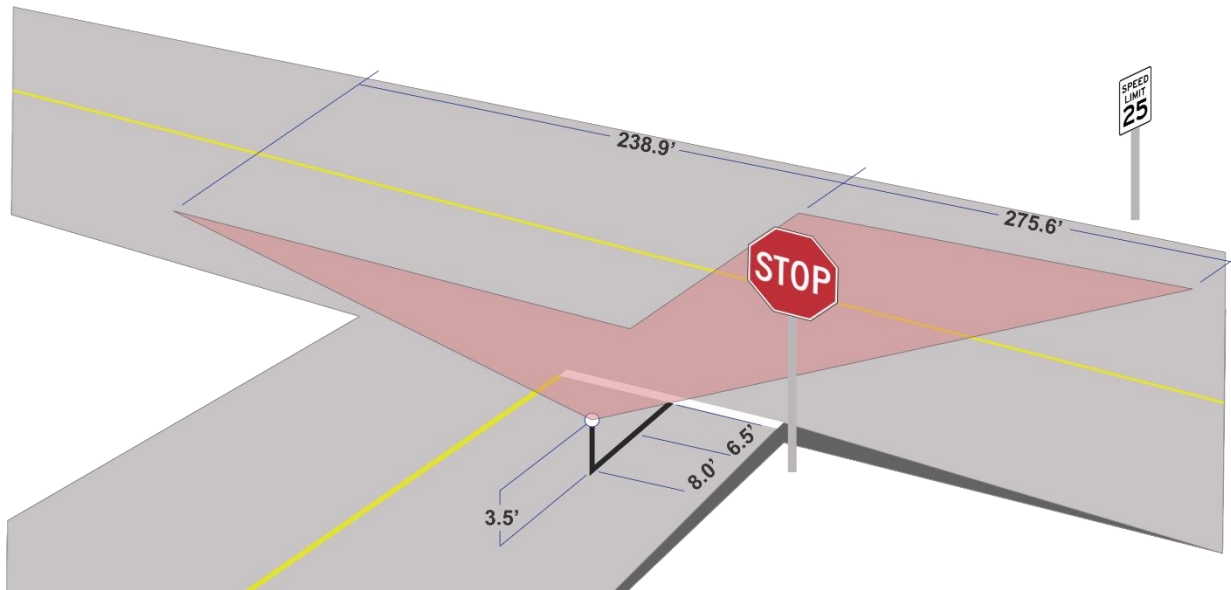


Figure 7. Recommended Intersection Sight Distance Dimensions.

TRAFFIC OPERATIONS

This section of the report describes the impacts of the site on the transportation system.

TRIP GENERATION ESTIMATES

The standard reference *Trip Generation Manual 10th Edition*, published by the Institute of Transportation Engineers (ITE) was used to calculate the trip generation of the proposed development. The Land Use Category that best describes the proposed development is category 210: *Single-Family Detached Housing*, which is described within the ITE Manual as follows:

Single-family detached housing includes all single-family detached homes on individual lots. A typical site surveyed is a suburban subdivision.

Existing land use of the site is that of one single-family residence, which will provide a trip credit to reduce the impact of the proposed development. There are no vested trips applied to this analysis, nor are there pass-by trips available for residential uses. Table 3 details the trip generation estimates based on the application of the above category.

Table 3. Trip Generation Comparison

Land Use	ITE Code	Size	Daily Trips	Weekday PM Peak Hour		
				Total	In	Out
Existing Use						
Single-Family Detached Housing	210	1	9 <i>(9.44/unit)</i>	1 <i>(0.99/unit)</i>	1 <i>(63%)</i>	0 <i>(37%)</i>
Proposed Use						
Single-Family Detached Housing	210	65 units	614 <i>(9.44/unit)</i>	64 <i>(0.99/unit)</i>	40 <i>(63%)</i>	24 <i>(37%)</i>
Net Impact of Development			605	63	39	24

As shown in Table 3, the proposed 65-lot subdivision is expected to generate 605 weekday daily trips, including 63 trips during the critical weekday p.m. peak hour. Redmond Development Code requires a Transportation Impact Analysis for all new developments expected to generate more than 20 weekday p.m. peak hour trip ends and for all rezone projects. Therefore, a traffic study is required as presented within this document.

TRIP DISTRIBUTION AND TRIP ASSIGNMENT

The trip distribution pattern was developed based on area travel patterns as collected as part of other area traffic studies. The estimated trip distribution and assignment for the weekday p.m. peak hour is shown in Figure 8.

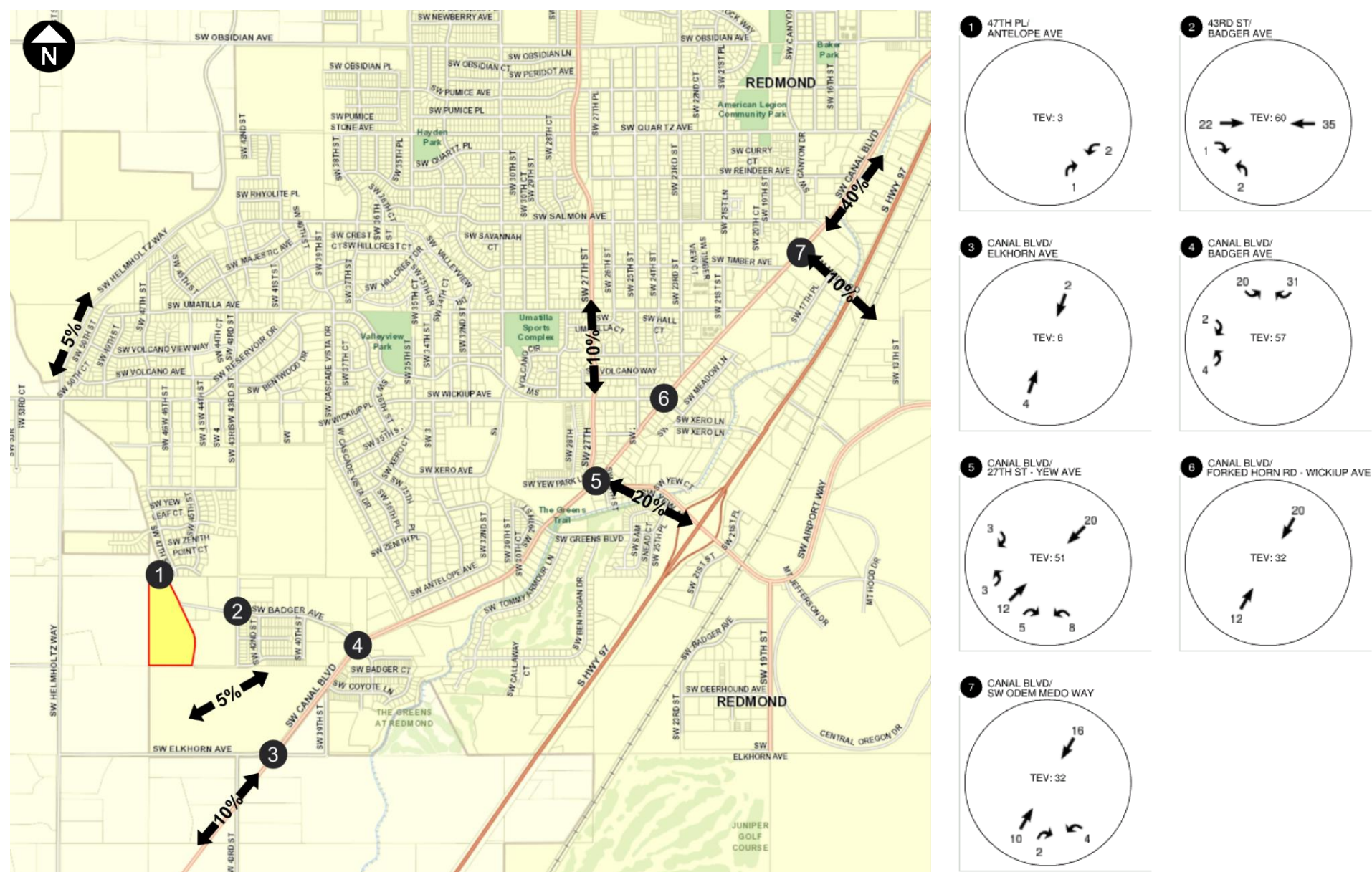


Figure 8. Estimated Trip Distribution and Assignment, Weekday PM Peak Hour.

STUDY INTERSECTIONS

Redmond Development Code 8.3035(8)(B) requires the TIA to study:

1. All site access intersections
2. Nearest intersecting collector or arterial street upstream and downstream of the development.
3. Any other collector or arterial street intersection that would experience an increase of 25 additional peak hour trips.
4. Additional intersection requested by staff.

Based on these requirements, the TIA study area includes:

- SW 47th Place / SW Antelope Avenue (northern site access)
- SW 43rd Street / SW Badger Avenue (eastern site access)
- SW Canal Boulevard / SW Badger Avenue
- SW Canal Boulevard / SW 27th Street – SW Yew Avenue
- SW Canal Boulevard / SW Forked Horn Road – SW Wickiup Avenue
- SW Canal Boulevard / SW Odem Medo Road

Additionally requested by City staff for review are:

- SW Canal Boulevard / SW Elkhorn Avenue (Included in Redmond 5-year Capital Improvement Project List)

ANALYSIS YEARS

Redmond Development Code 8.2815(6) requires operational analysis of the following year conditions:

- 2020 – Existing Conditions
- 2023 – Estimated Completion year
- 2028 – Five year forecast beyond final phase.

To meet the State's Transportation Planning Rule (OAR 660-12-0060) requirements, year 2040 analysis of these intersections is also included within this report.

OPERATIONAL ANALYSIS

Traffic operations analysis were prepared using Synchro 10 software and implementing the Highway Capacity Manual 6th Edition operations methods for roundabout, signalized and stop-controlled intersections. All traffic operations within this report reflect peak fifteen-minute conditions. The City of Redmond Development Code 8.2815(1) contains the City operational requirements for intersections. Performance standards in the City of Redmond vary based on intersection control type as summarized below:

- LOS "E" or better during the peak fifteen minutes of the peak hours of the average weekday.
- Unsignalized minor street approaches should operate with a volume-to-capacity ratio of 0.90 or less and with a 95th percentile queue of less than four vehicles during the peak hour.

Study intersections, traffic control, roadway jurisdiction, and operational standards/mobility targets throughout the study area are summarized in Table 4.

Table 4. Study Area Intersection Operational Standards and Mobility Targets

Intersection	Traffic Control	Jurisdiction	Performance/ Mobility Standard
1: SW 47 th Place / SW Antelope Avenue	Unsignalized	City of Redmond	v/c < 0.90 95 th % Queue < 100 ft
2: SW 43 rd Street / SW Badger Avenue	Unsignalized	City of Redmond	v/c < 0.90 95 th % Queue < 100 ft
3: SW Canal Boulevard / SW Elkhorn Avenue	Unsignalized	City of Redmond	v/c < 0.90 95 th % Queue < 100 ft
4: SW Canal Boulevard / SW Badger Avenue	Unsignalized	City of Redmond	v/c < 0.90 95 th % Queue < 100 ft
5: SW Canal Boulevard / SW Yew Avenue – SW 27 th St	Roundabout	City of Redmond	LOS E
6: SW Canal Boulevard / SW Wickiup Avenue	Unsignalized	City of Redmond	v/c < 0.90 95 th % Queue < 100 ft
7: SW Canal Boulevard / SW Odem Medo Road	Signalized	City of Redmond	LOS E

Year 2020 Existing Traffic Conditions

With the current COVID-19 conditions any new traffic counts would not be reflective of typical conditions. Accordingly, historical counts were compiled from throughout the study area to approximate current 2019/2020 travel volumes. Count dates ranged from 2017 to 2020 and are summarized in Table 5.

Table 5. Study Intersection Counts

Intersection	Count Date	Years of Growth	Source
1: SW 47 th Place / SW Antelope Avenue	n/a	n/a	Intersection will be constructed with project development.
2: SW 43 rd Street / SW Badger Avenue	n/a	n/a	Counts approximated assuming 20% of development from Phases 2 and 3 from the Badger Avenue PUD 2017.
3: SW Canal Boulevard / SW Elkhorn Avenue	3/4/2020	0	Counts collected for 'The Barn' TIA
4: SW Canal Boulevard / SW Badger Avenue	3/4/2020	0	Counts collected for 'The Barn' TIA
5: SW Canal Boulevard / SW Yew Avenue – SW 27 th St	6/20/2017	3	Counts collected for Canal Boulevard Multifamily TIA
6: SW Canal Boulevard / SW Wickiup Avenue	n/a	n/a	Counts collected 8/29/2018 for Canal Boulevard Townhomes TIA appeared low. The turning movement patterns from this count were used to approximate 2020 turning movement volumes.
7: SW Canal Boulevard / SW Odem Medo Road	4/18/2017	3	Counts collected for TSP update

Historical traffic volumes were then increased by an annual growth rate of 1.7-percent, which is consistent with regional planning efforts in the site vicinity (as shown in Table 6). This applied growth rate was coupled with the inclusion of trips from the numerous area projects.

Table 6. Forecast Growth (2017 to 2040)

Intersection	Year 2017 Base Entering Volumes Weekday PM Peak Hour	Year 2040 Future Entering Volumes Weekday PM Peak Hour	Annual Growth
SW Canal Boulevard / SW Odem Medo Way	1,461	1,889	1.3%
SW Canal Boulevard / SW Yew Avenue – SW 27 th St	1,310	1,925	2.0%
Average			1.7%

The existing year 2020 traffic conditions reflect the estimated current operations throughout the study area during the weekday p.m. peak hour. This analysis is used to calibrate operational models to field conditions, and in conjunction with historical safety information, is intended to help understand and prioritize transportation system improvement needs.

Historical traffic counts employed within this analysis were collected between the hours of 4:00 and 6:00 p.m. on their respective collection dates. Figure 9 depicts the projected 2020 traffic volumes applied within the existing conditions analysis. Results of the existing conditions analysis are presented in Table 7. This shows that all the study area intersections are currently operating acceptably.

Year 2023 Traffic Forecasts

Year 2023 traffic forecasts for the site were developed with continued use of the annual growth rate of 1.7-percent to account for regional population growth. The regional application of this growth rate coupled with approved development trips will likely provide a conservative estimate of area growth rates as it double-counts the increase in traffic volumes and assumes that the master-planned area projects are fully built-out by 2023.

Planned and Funded Projects

Recently added to the City's Five-Year Capital Improvement Plan is the improvement of study intersection 3, SW Canal Boulevard / SW Elkhorn Avenue for the purposes of safety improvements focused on the adjacent high school. This project was not assumed within the analysis but is described within the mitigation section of this report.

Table 7. Summary of Existing Intersection Operations, Weekday PM Peak Hour

Intersection	Performance/ Mobility Standard	LOS	Delay (s/veh)	v/c Ratio	95 th % Queue	Acceptable?
1: SW 47 th Place / SW Antelope Avenue	v/c < 0.90 95 th % Queue < 100 ft					
2: SW 43 rd Street / SW Badger Avenue	v/c < 0.90 95 th % Queue < 100 ft	WB L: A	WB L: 7.2	WB L: 0.01	WB L: 0 ft	Yes
3: SW Canal Boulevard / SW Elkhorn Avenue	v/c < 0.90 95 th % Queue < 100 ft	EB L: LOS B WB LTR: LOS B	EB L: 14.2 WB LTR: 11.9	EB L: 0.20 WB LTR: 0.01	EB L: 25 ft EB TR: 0 ft WB LTR: 0 ft	Yes
4: SW Canal Boulevard / SW Badger Avenue	v/c < 0.90 95 th % Queue < 100 ft	EB L: LOS C WB L: LOS C	EB L: 16.9 WB L: 15.5	EB L: 0.10 WB L: 0.01	EB L: 25 ft WB L: 0 ft	Yes
5: SW Canal Boulevard / SW Yew Avenue – SW 27 th St	LOS E	Overall: LOS A EB LTR: LOS A WB LTR: LOS A NB LTR: LOS A SB LTR: LOS A	Overall: 9.9 EB LTR: 5.5 WB LTR: 13.6 NB LTR: 7.7 SB LTR: 7.9	EB LTR: 0.20 WB LTR: 0.65 NB LTR: 0.42 SB LTR: 0.28	EB LTR: 1 Vehicle WB LTR: 5 Vehicles NB LTR: 2 Vehicles SB LTR: 1 Vehicle	Yes
6: SW Canal Boulevard / SW Wickiup Avenue	v/c < 0.90 95 th % Queue < 100 ft	EB LTR: LOS C WB LTR: LOS B	EB LTR: 18.7 WB LTR: 13.9	EB LTR: 0.25 WB LTR: 0.04	EB LTR: 25 ft WB LTR: 25 ft	Yes
7: SW Canal Boulevard / SW Odem Medo Road	≥ LOS E	LOS D	42.2	0.44	NB LT: 5 ft NB T: 260 ft NB R: 60 ft WB LT: 140 ft WB R: 70 ft SB L: 120 ft SB TR: 180 ft	Yes

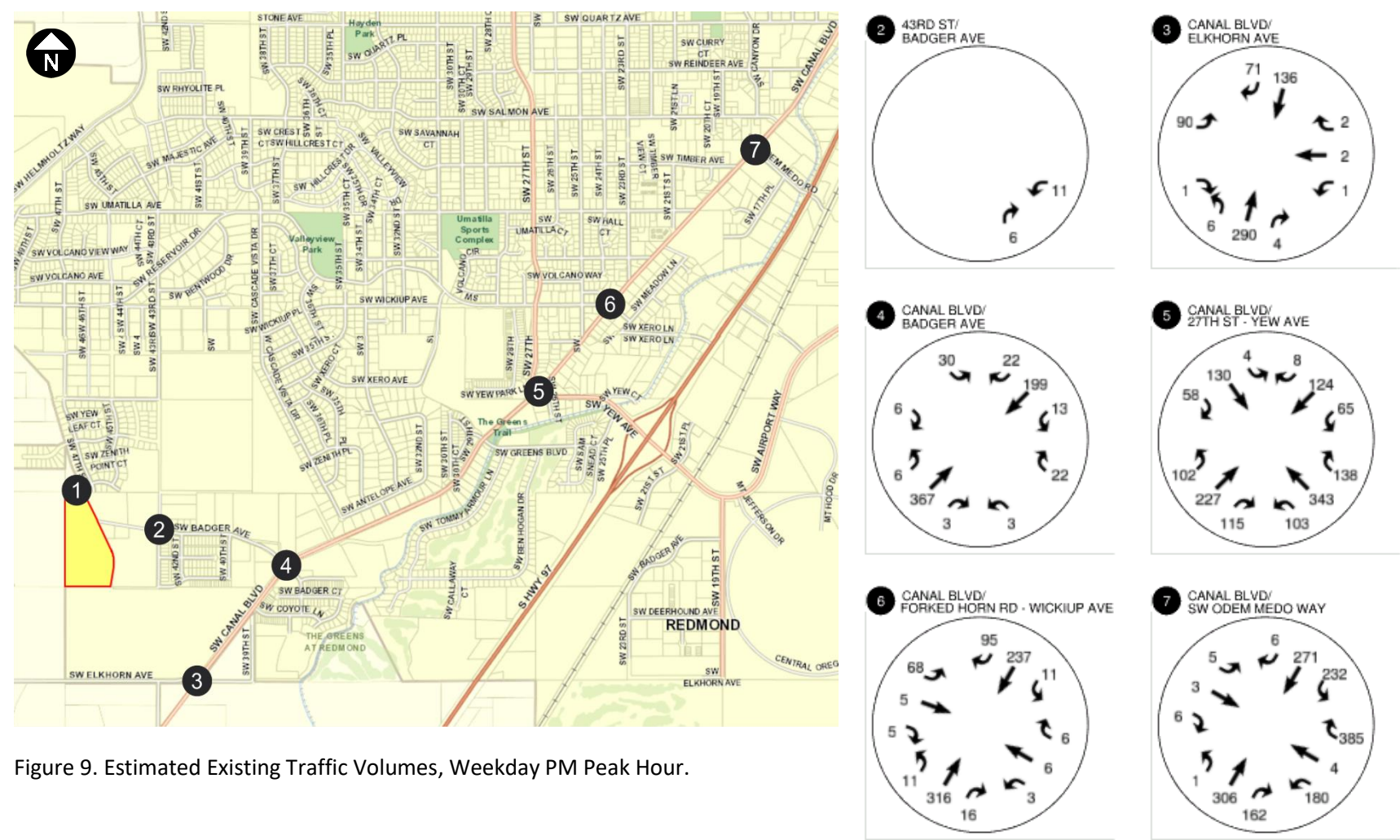


Figure 9. Estimated Existing Traffic Volumes, Weekday PM Peak Hour.

Approved Development Trips

A review was conducted of approved or in-process projects in the site vicinity that would impact area intersections since the time counts were collected. This includes the Badger PUD, Village at Riverview, and Prairie Crossing Phase 2, Triple Ridge, volume changes associated with the Ridgeview High School access modifications, and The Barn Food Hall. Each of these developments are served by the SW Canal Boulevard corridor. To account for the impact of the nearby residential developments this study includes the site-generated trips from these projects using the travel forecasts from the submitted traffic studies. Some general assumptions were made about the level of development complete in each of the study years. These assumptions are summarized in Table 8.

Table 8. Approved/Pending Development Trip Assumptions

Development	Trip Generation Weekday PM Peak Hour	Estimated Level of Development		
		2020	2023	2028
Badger PUD	292	33% <i>Phase 2 complete</i>	70% <i>Phases 1 and 2 complete, Phase 3 partially built</i>	100%
Village at Riverview	94	30%	60%	100%
Prairie Crossing Phase 2	42	0%	100%	100%
Triple Ridge PUD	293	60% <i>Phases 1 and 2 complete</i>	100%	100%
Ridgeview High School Access Modifications	n/a	Not Complete	Complete	Complete
The Barn Food Hall	50	0%	100%	100%

The inclusion of regional growth and approved development trips were used to forecast year 2023 “No-Build” conditions within the site vicinity. The resulting volumes are depicted in Figure 10. The analysis results are summarized in Table 9 and show that all study intersections are expected to meet operation standards.

Year 2023 ‘With Site’ Conditions

Year 2023 conditions with the proposed development were prepared by adding the no-build conditions with site generated trips from the Badger Avenue Subdivision. This analysis includes the current intersection configurations. The resulting volumes are also depicted in Figure 10 and the operational analysis of “with-site” conditions are also summarized in Table 9. As shown in the table, all intersections are expected to meet City standards with the Badger Avenue Subdivision, with the SW Canal Boulevard/SW Badger Avenue operating with high (LOS “F”) left-turn delays and approaching a 100-foot queue with or without the project.

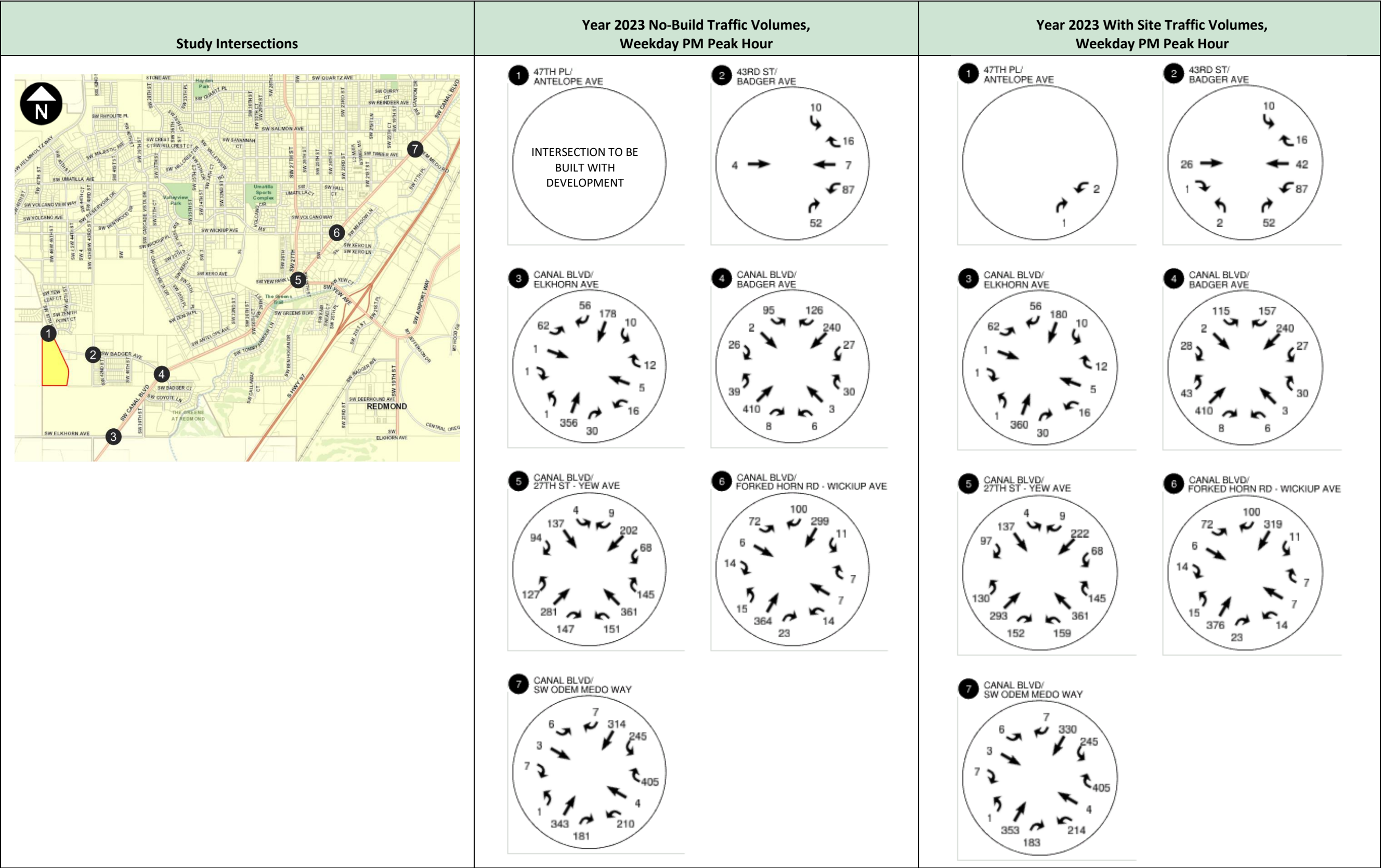


Figure 10. 2023 Traffic Volumes, Weekday PM Peak Hour

Table 9. Summary of Year 2023 Build-Out Intersection Operations, Weekday PM Peak Hour

Intersection	Performance/ Mobility Standard	2023 Background Conditions				2023 With Site Conditions				Acceptable?
		LOS	Delay (s/veh)	v/c Ratio	95 th % Queue	LOS	Delay (s/veh)	v/c Ratio	95 th % Queue	
1: SW 47 th Place / SW Antelope Avenue	v/c < 0.90 95 th % Queue < 100 ft					NB LR: LOS A	NB LR: 8.3	NB: 0.01	NB LR: 25 ft	Yes
2: SW 43 rd Street / SW Badger Avenue	v/c < 0.90 95 th % Queue < 100 ft	NB LTR: LOS A SB LTR: LOS B	NB LTR: 8.5 SB LTR: 10.9	NB LTR: 0.06 SB LTR: 0.02	NB LTR: 25 ft SB LTR: 25 ft	NB LTR: LOS A SB LTR: LOS B	NB LTR: 8.8 SB LTR: 11.5	NB LTR: 0.06 SB LTR: 0.02	NB LTR: 25 ft SB LTR: 25 ft	Yes
3: SW Canal Boulevard / SW Elkhorn Avenue	v/c < 0.90 95 th % Queue < 100 ft	EB L: LOS C WB LTR: LOS B	EB L: 16.7 WB LTR: 13.9	EB L: 0.18 WB LTR: 0.08	EB L: 25 ft EB TR: 25 ft WB LTR: 25 ft	EB L: LOS C WB LTR: LOS B	EB L: 16.6 WB LTR: 14.0	EB L: 0.18 WB LTR: 0.08	EB L: 25 ft EB TR: 25 ft WB LTR: 25 ft	Yes
4: SW Canal Boulevard / SW Badger Avenue	v/c < 0.90 95 th % Queue < 100 ft	EB L: LOS E WB L: LOS C	EB L: 39.9 WB L: 22.8	EB L: 0.52 WB L: 0.03	EB L: 75 ft WB L: 25 ft	EB L: LOS F WB L: LOS C	EB L: 52.0 WB L: 23.8	EB L: 0.65 WB L: 0.03	EB L: 100 ft WB L: 25 ft	Yes
5: SW Canal Boulevard / SW Yew Avenue – SW 27 th St	LOS E	Overall: LOS B EB LTR: LOS A WB LTR: LOS C NB LTR: LOS A SB LTR: LOS B	Overall: 14.7 EB LTR: 7.5 WB LTR: 22.7 NB LTR: 9.8 SB LTR: 11.4	EB LTR: 0.30 WB LTR: 0.80 NB LTR: 0.54 SB LTR: 0.44	EB LTR: 1 Vehicle WB LTR: 9 Vehicles NB LTR: 3 Vehicles SB LTR: 2 Vehicles	Overall: LOS C EB LTR: LOS A WB LTR: LOS C NB LTR: LOS B SB LTR: LOS B	Overall: 15.7 EB LTR: 7.9 WB LTR: 24.8 NB LTR: 10.3 SB LTR: 12.3	EB LTR: 0.31 WB LTR: 0.83 NB LTR: 0.56 SB LTR: 0.47	EB LTR: 1 Vehicle WB LTR: 9 Vehicles NB LTR: 4 Vehicles SB LTR: 3 Vehicles	Yes
6: SW Canal Boulevard / SW Wickiup Avenue	v/c < 0.90 95 th % Queue < 100 ft	EB LTR: LOS C WB LTR: LOS C	EB LTR: 23.3 WB LTR: 17.7	EB LTR: 0.34 WB LTR: 0.10	EB LTR: 50 ft WB LTR: 25 ft	EB LTR: LOS C WB LTR: LOS C	EB LTR: 24.8 WB LTR: 18.5	EB LTR: 0.36 WB LTR: 0.10	EB LTR: 50 ft WB LTR: 25 ft	Yes
7: SW Canal Boulevard / SW Odem Medo Road	LOS E	LOS E	56.2	0.58	NB LT: 5 ft NB T: 340 ft NB R: 80 ft WB LT: 155 ft WB R: 60 ft SB L: 155 ft SB TR: 245 ft	LOS E	55.6	0.59	NB LT: 5 ft NB T: 350 ft NB R: 85 ft WB LT: 160 ft WB R: 60 ft SB L: 165 ft SB TR: 260 ft	Yes

Year 2028 Planning Analysis

Analysis of conditions five years beyond build-out were also assessed to assist with long-range planning efforts. This future scenario was conducted for both the background conditions developed through the application of continued regional growth and inclusion of planned development trips, and the “With Site” conditions with the addition of site-generated trips. The forecast volumes are depicted in Figure 11 and the results of the analysis are summarized in Table 10.

As shown in Table 10, the eastbound left-turn movement at the SW Canal Boulevard/SW Badger Avenue intersection is expected to operate over its carrying capacity and with high delays (LOS “F”), with the 95th percentile queues exceeding 100 feet during the weekday p.m. peak hour with the proposed development. As discussed in this report, this intersection will require capacity improvements (signalization) as identified within the City’s Transportation System Plan. All other intersections are expected to continue to meet City standards through the year 2028, albeit with the SW Canal Boulevard/SW Yew Avenue roundabout nearing its carrying capacity on the westbound approach due to the high volume of traffic exiting US 97.

Year 2040 Transportation Planning Rule Analysis

The 2040 future operations analysis with and without the proposed annexation and rezoning was assessed in accordance with Transportation Planning Rule (TPR) requirements. The intent of the TPR is to coordinate State and local plans and service providers, and ensure that land use and transportation are coordinated to provide a safe, efficient, and accessible system. As the property is included within the SWAP boundaries, growth assumptions for these lands were included in the City’s Draft Transportation System Plan. Once adopted, the project will be fully brought into compliance with the Transportation Planning Rule.

As the Transportation System Plan has only completed its Planning Commission hearing, review was also conducted for compliance with the adopted Transportation System Plan. Growth forecasts were prepared using a macro-level travel demand model-based approach. This is the same forecasting process (and travel demand modeling information) as is being applied within the City’s Transportation System Plan. The regional travel demand models identify current and projected population (by housing types) and employment (by category) forecasts by individual zones (Transportation Analysis Zone, or TAZ) throughout the City. Existing census data is used to help calibrate the model’s trip generation parameters. These TAZ areas are connected by roads, with information input on roadway classification, number of lanes, speeds, and intersection types. Trips within the model distribute throughout the roadway network based on overall travel times, providing estimates of weekday daily and weekday p.m. peak hour trip forecasts.

The base and future year segment travel forecasts are then combined with turning movement count data within the iterative NCHRP 255 process, which factors and converts the model’s link volumes into turning volumes that can be assessed using microscopic analysis tools. These intersection turning patterns are developed individually, then combined and adjusted for balancing and area context. The resulting forecast volumes are shown in Figure 12 and the results of the analysis are summarized in Table 11.

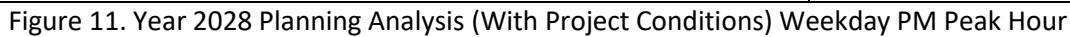


Table 10. Summary of Year 2028 Intersection Operations, Weekday PM Peak Hour

Intersection	Performance/ Mobility Standard	2028 With Site Conditions				Acceptable?
		LOS	Delay (s/veh)	v/c Ratio	95 th % Queue	
1: SW 47 th Place / SW Antelope Avenue	v/c < 0.90 95 th % Queue < 100 ft	NB LR: LOS A	NB LR: 8.3	0.01	NB LR: 25 ft	Yes
2: SW 43 rd Street / SW Badger Avenue	v/c < 0.90 95 th % Queue < 100 ft	NB LTR: LOS A SB LTR: LOS B	NB LTR: 8.8 SB LTR: 11.6	NB LTR: 0.07 SB LTR: 0.02	NB LTR: 25 ft SB LTR: 25 ft	Yes
3: SW Canal Boulevard / SW Elkhorn Avenue	v/c < 0.90 95 th % Queue < 100 ft	EB L: LOS C WB LTR: LOS B	EB L: 18.6 WB LTR: 14.9	EB L: 0.23 WB LTR: 0.09	EB L: 25 ft EB TR: 25 ft WB LTR: 25 ft	Yes
4: SW Canal Boulevard / SW Badger Avenue	v/c < 0.90 95 th % Queue < 100 ft	EB L: LOS F WB L: LOS D	EB L: >50.0 WB L: 30.6	EB L: >1.0 WB L: 0.08	EB L: 225 ft WB L: 25 ft	No
5: SW Canal Boulevard / SW Yew Avenue – SW 27 th St	LOS E	Overall: LOS D EB LTR: LOS A WB LTR: LOS E NB LTR: LOS B SB LTR: LOS C	Overall: 25.3 EB LTR: 9.3 WB LTR: 46.5 NB LTR: 12.5 SB LTR: 16.1	EB LTR: 0.37 WB LTR: 0.97 NB LTR: 0.65 SB LTR: 0.57	EB LTR: 2 Vehicles WB LTR: 16 Vehicles NB LTR: 5 Vehicles SB LTR: 4 Vehicles	Yes
6: SW Canal Boulevard / SW Wickiup Avenue	v/c < 0.90 95 th % Queue < 100 ft	EB LTR: LOS D WB LTR: LOS C	EB LTR: 31.3 WB LTR: 20.8	EB LTR: 0.45 WB LTR: 0.12	EB LTR: 75 ft WB LTR: 25 ft	Yes
7: SW Canal Boulevard / SW Odem Medo Road	LOS E	LOS E	67.6	0.67	NB LT: 5 ft NB T: 400 ft NB R: 95 ft WB LT: 170 ft WB R: 60 ft SB L: 270 ft SB TR: 345 ft	Yes

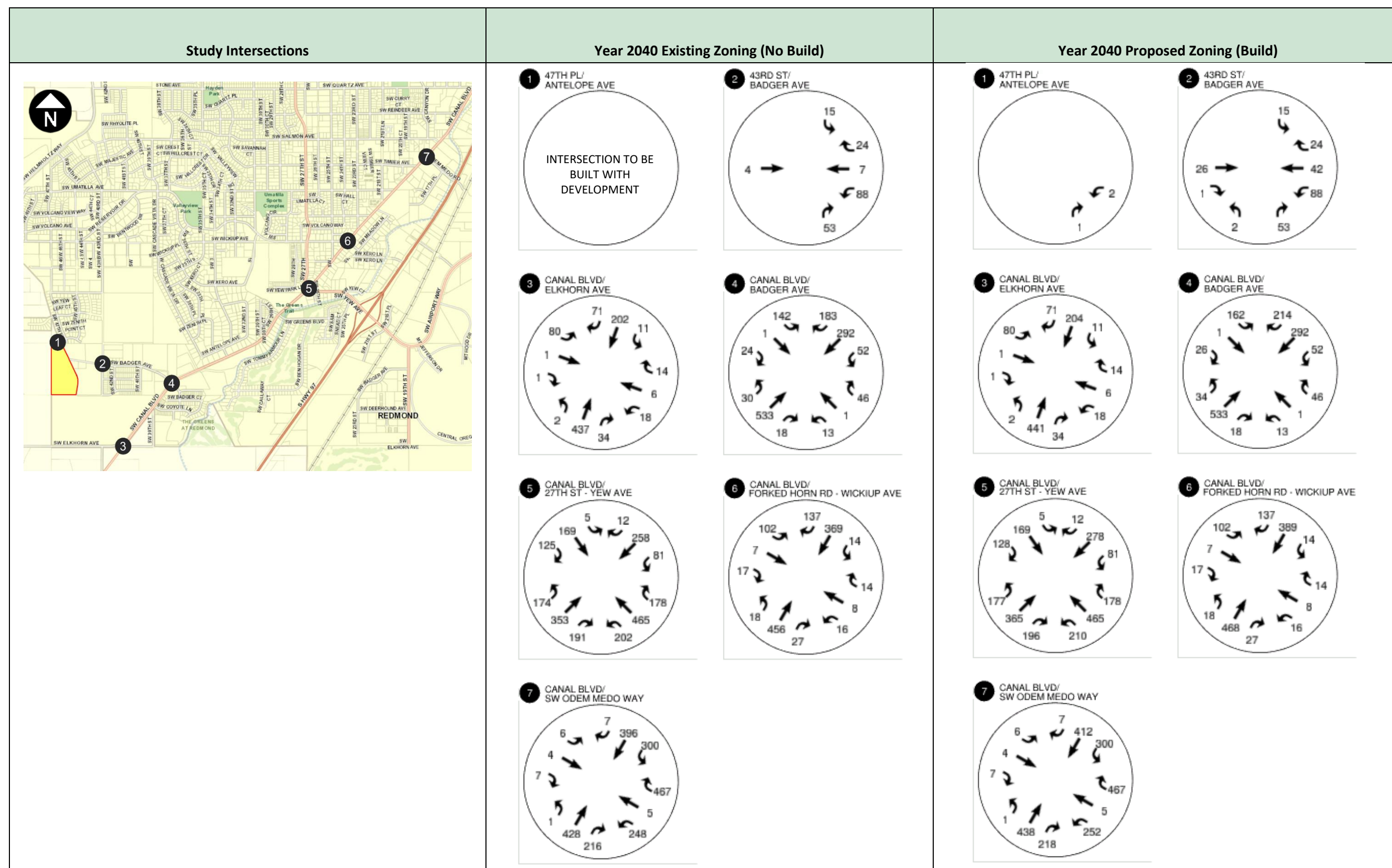


Figure 12. Future Year 2040 Traffic Volumes, Weekday PM Peak Hour

Table 11. Summary of Year 2040 Intersection Operations, Weekday PM Peak Hour

Intersection	Performance/ Mobility Standard	2040 No-Build				2040 With Project				Acceptable?
		LOS	Delay (s/veh)	v/c Ratio	95 th % Queue	LOS	Delay (s/veh)	v/c Ratio	95 th % Queue	
1: SW 47 th Place / SW Antelope Avenue	v/c < 0.90 95 th % Queue < 100 ft					NB LR: LOS A	NB LR: 8.3	0.01	NB LR: 25 ft	Yes
2: SW 43 rd Street / SW Badger Avenue	v/c < 0.90 95 th % Queue < 100 ft	NB LTR: LOS A SB LTR: LOS B	NB LTR: 8.5 SB LTR: 11.0	NB LTR: 0.06 SB LTR: 0.03	NB LTR: 25 ft SB LTR: 25 ft	NB LTR: LOS A SB LTR: LOS B	NB LTR: 8.8 SB LTR: 11.7	NB LTR: 0.06 SB LTR: 0.03	NB LTR: 25 ft SB LTR: 25 ft	Yes
3: SW Canal Boulevard / SW Elkhorn Avenue	v/c < 0.90 95 th % Queue < 100 ft	EB L: LOS C WB LTR: LOS C	EB L: 21.4 WB LTR: 16.0	EB L: 0.29 WB LTR: 0.11	EB L: 50 ft EB TR: 25 ft WB LTR: 25 ft	EB L: LOS C WB LTR: LOS C	EB L: 21.5 WB LTR: 16.1	EB L: 0.29 WB LTR: 0.11	EB L: 50 ft EB TR: 25 ft WB LTR: 25 ft	Yes
4: SW Canal Boulevard / SW Badger Avenue	v/c < 0.90 95 th % Queue < 100 ft	EB L: LOS F WB L: LOS E	EB L: >50.0 WB L: 35.1	EB L: >1.00 WB L: 0.11	EB L: 275 ft WB L: 25 ft	EB L: LOS F WB L: LOS E	EB L: >50.0 WB L: 37.0	EB L: >1.00 WB L: 0.12	EB L: 350 ft WB L: 25 ft	No
5: SW Canal Boulevard / SW Yew Avenue – SW 27 th St	LOS E	Overall: LOS F EB LTR: LOS B WB LTR: LOS F NB LTR: LOS C SB LTR: LOS C	Overall: 53.5 EB LTR: 10.6 WB LTR: >50.0 NB LTR: 16.2 SB LTR: 22.9	EB LTR: 0.43 WB LTR: >1.00 NB LTR: 0.74 SB LTR: 0.68	EB LTR: 2 Vehicles WB LTR: 29 Vehicles NB LTR: 7 Vehicles SB LTR: 5 Vehicles	Overall: LOS F EB LTR: LOS B WB LTR: LOS F NB LTR: LOS C SB LTR: LOS D	Overall: >50.0 EB LTR: 11.2 WB LTR: >50.0 NB LTR: 17.2 SB LTR: 26.2	EB LTR: 0.45 WB LTR: >1.00 NB LTR: 0.76 SB LTR: 0.73	EB LTR: 2 Vehicles WB LTR: 30 Vehicles NB LTR: 8 Vehicles SB LTR: 6 Vehicles	No
6: SW Canal Boulevard / SW Wickiup Avenue	v/c < 0.90 95 th % Queue < 100 ft	EB LTR: LOS F WB LTR: LOS C	EB LTR: 52.1 WB LTR: 22.1	EB LTR: 0.67 WB LTR: 0.17	EB LTR: 125 ft WB LTR: 25 ft	EB LTR: LOS F WB LTR: LOS C	EB LTR: 59.4 WB LTR: 23.3	EB LTR: 0.71 WB LTR: 0.17	EB LTR: 125 ft WB LTR: 25 ft	No
7: SW Canal Boulevard / SW Odem Medo Road	LOS E	LOS E	76.6	0.75	NB LT: 5 ft NB T: 450 ft NB R: 110 ft WB LT: 175 ft WB R: 60 ft SB L: 340 ft SB TR: 390 ft	LOS E	76.1	0.76	NB LT: 5 ft NB T: 465 ft NB R: 110 ft WB LT: 180 ft WB R: 60 ft SB L: 340 ft SB TR: 410 ft	Yes

As shown in Table 11, three of the study intersections on SW Canal Boulevard are expected to exceed the City's operation standards within the year 2040 horizon period analysis:

- SW Canal Boulevard/SW Badger Avenue: The eastbound left-turn movement is expected to continue to exceed the City's standards with the current two-way stop-control operations.
- SW Canal Boulevard/SW Yew Avenue – SW 27th Street: The westbound approach to the roundabout is expected to operate with high delays and exceed capacity with or without the annexation.
- SW Canal Boulevard/SW Wickiup Avenue: The eastbound movement is expected to meet the City's v/c ratio standard but operate with 95th percentile queues of 125 feet (five vehicles) during the weekday p.m. peak hour with or without the annexation.

These issues highlight the critical role of SW Canal Boulevard in serving the SWAP lands in southern Redmond and the need for additional connections.

INTERSECTION MITIGATION

All intersections are projected to meet City standards with buildout in the year 2023. The 2040 analysis shows that there are three study intersections that do not meet standards with or without the annexation and subsequent development of the Badger Avenue Subdivision. Each of these are discussed below.

SW Canal Boulevard/SW Badger Avenue

This intersection is expected to meet City operation standards with buildout of the Badger Avenue subdivision in 2023. During the planning horizons of 2028 and 2040, the eastbound movement at this intersection is expected to operate with high delays and eventually exceed capacity in 2040. The currently adopted Transportation System Plan does not identify any improvements for this intersection. However, the City's draft Transportation System Plan identifies the need for either a traffic signal or roundabout at this intersection. This is estimated to cost \$500,000 for a traffic signal or \$3.1 million for a roundabout in 2018 dollars. The city includes this intersection in a table labeled "Priority Intersection Capacity Improvements." With either treatment implemented the intersection will operate acceptably without or with the proposed development. For TPR purposes a significant impact does not occur as improvements have already been identified by the City.

In addition, as discussed below and shown in Figure 13, the western extension of SW Badger Avenue to SW Helmholtz Way will also reduce the reliance of area development on this intersection.

SW Canal Boulevard / SW Yew Avenue – SW 27th Street

The single-lane roundabout at the SW Canal Boulevard/SW Yew Avenue – SW 27th Street intersection is expected to operate with high delays and exceed capacity on the westbound approach in the 2040 horizon with or without the annexation and subsequent development of the Badger Avenue subdivision. The draft Transportation System Plan identifies this intersection for a potential roundabout expansion.

- Canal Boulevard/Yew Avenue – potential expansion of this roundabout; the operational benefits of an improvement should be balanced against the cost and potential impacts to adjacent properties.

This analysis is premised on continued reliance of the SW Canal Boulevard corridor to support development of the SWAP lands. The forecast modeling does not include the extension of SW Elkhorn Avenue over the US 97 corridor, which will help reduce travel along the SW Canal Boulevard corridor if implemented.

In addition, the travel demand modeling does not include the western extension of SW Badger Avenue or its planned connection to the SW Helmholtz Way corridor. With the completion of this connection many of the new developments surrounding Ridgeview High School will be able to connect to SW Helmholtz Way, as shown in Figure 13.

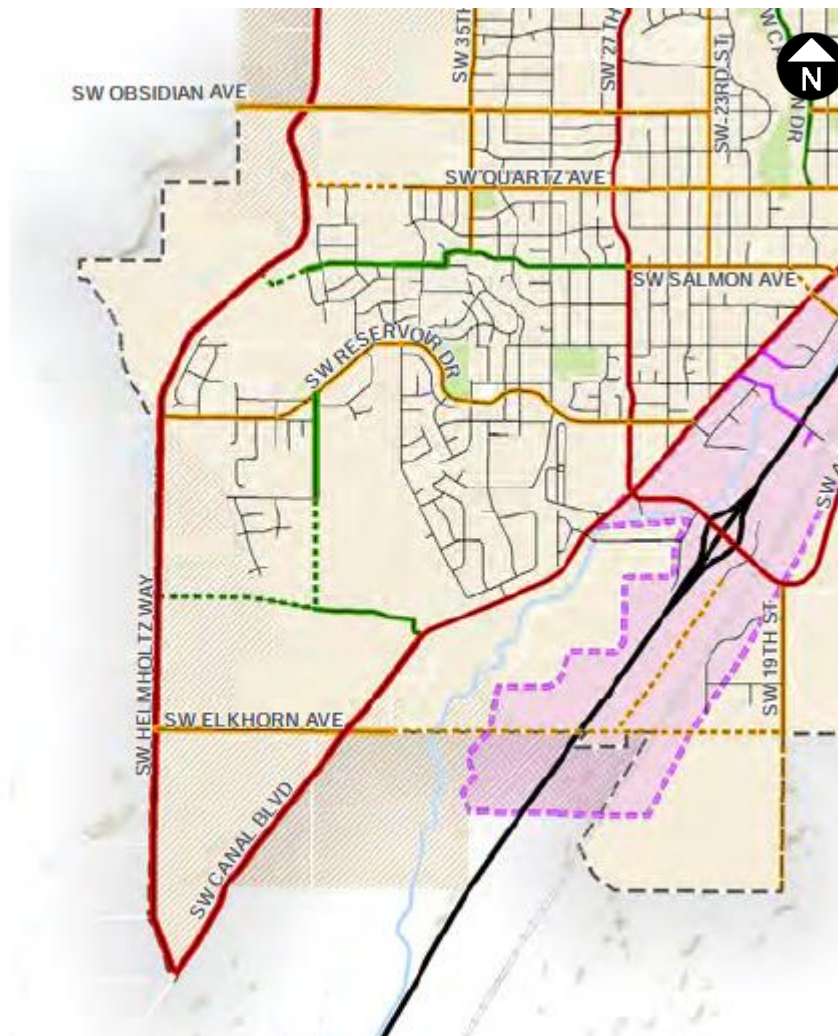


Figure 13. Draft Transportation System Plan Functional Classification Map.

As the subject property extends Badger Avenue west toward SW Helmholtz Way the project supports the Transportation System Plan's identified mitigation measures. This project will address needs throughout the SW Canal Boulevard corridor as shown in the adopted TSP with the "Westside Arterial" concept for Helmholtz Way. The need to provide additional improvements at the SW Canal Boulevard/SW Yew Avenue intersection will be dependent on the timing of these alternative connections.

SW Canal Boulevard / SW Wickiup Avenue

The eastbound movement is expected to operate with higher delays and with a 95th percentile queue of 125 feet during the peak 15 minutes of the weekday p.m. peak hour in 2040 with or without the annexation and development. The eastbound movement has adequate capacity to accommodate the demand and there are alternate routes available.

The City of Redmond recently reconstructed this intersection to include a new left-turn lane along SW Canal Boulevard in the northbound and southbound directions, and to complete sidewalks and accessible ramps on all corners. There are no projects identified within the City's TSP, and a specific analysis of this intersection was not included within the City's plan. It was noted that alternate routing options are available to motorists if delays do occur at the intersection, as shown in Figure 14.

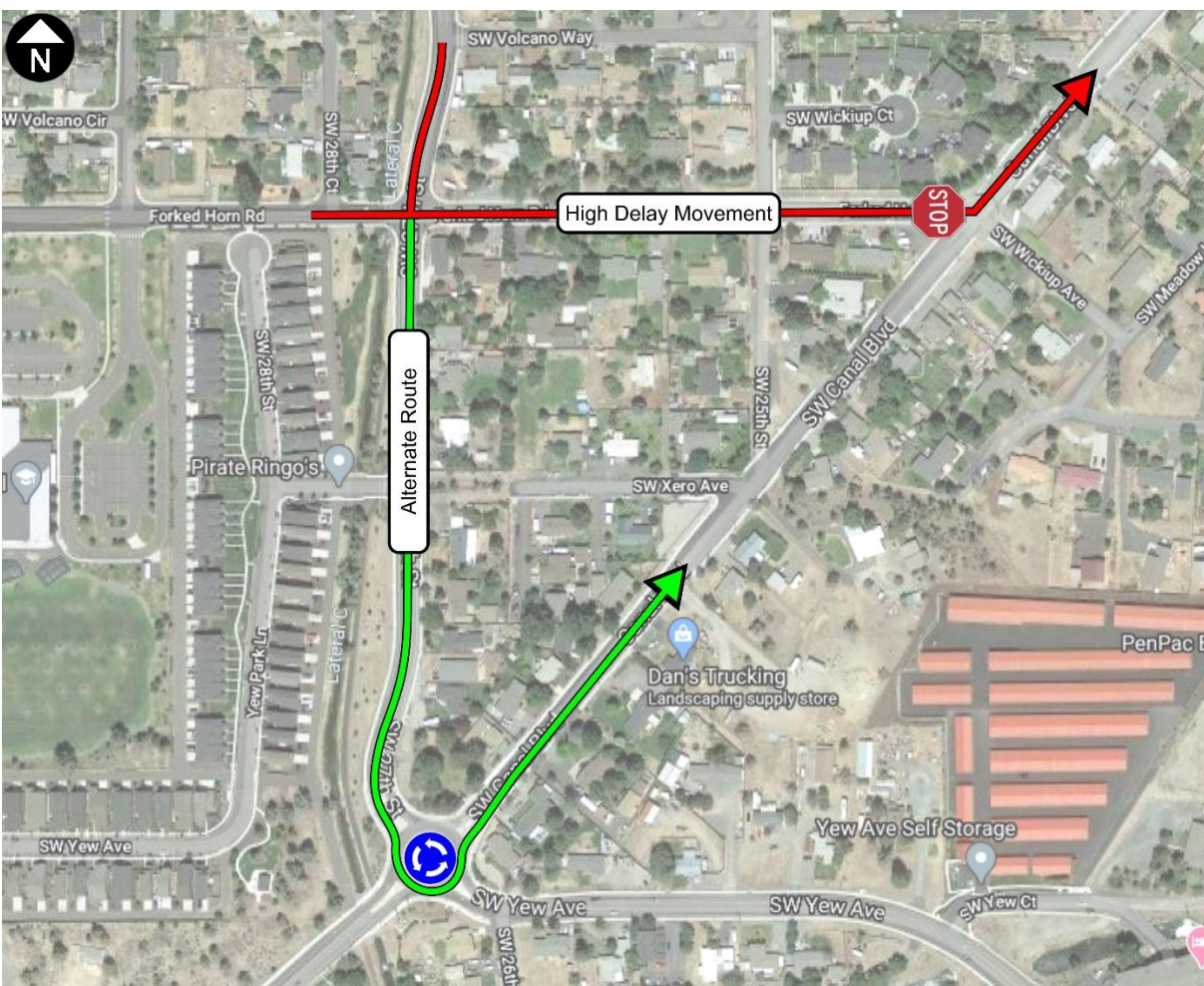


Figure 14. Alternative Routing Option to avoid Wickiup Avenue delays.

MUTCD SIGNAL WARRANTS

Traffic signal warrants are the criteria identified within the Manual on Uniform Traffic Control Devices that describe the minimum conditions under which a traffic signal should be further considered. There are nine separate warrant criteria as listed below:

1. Warrant 1, Eight-Hour Vehicular Volume
2. Warrant 2, Four-Hour Vehicular Volume
3. Warrant 3, Peak Hour
4. Warrant 4, Pedestrian Volume
5. Warrant 5, School Crossing
6. Warrant 6, Coordinated Signal System
7. Warrant 7, Crash Experience
8. Warrant 8, Roadway Network
9. Warrant 9, Intersection Near a Grade Crossing

Within this study, volume-based MUTCD Signal Warrants #1, #2, and #3 were reviewed at the stop-controlled intersection of SW Canal Boulevard and SW Badger Avenue. Table 12 summarizes the findings of this analysis.

Table 12. Summary of MUTCD Signal Warrant Review: SW Canal Boulevard / SW Badger Avenue

Volume-Based Warrant Summary				
Warrant No.	Description	Warrant Factor	2023 With Site	2028 With Site
Warrant 1:	Eight-Hour Vehicular Volume	100%	Yes	Yes
Warrant 2:	Four-Hour Vehicular Volume	100%	No	Yes
Warrant 3:	Peak Hour	100%	No	No

As shown, Warrant #1 is expected to be met at site build-out, with both Warrants #1 and #2 expected to be met at the SW Canal Boulevard/SW Badger Avenue intersection approximately five-years after site build-out (2028). This assumes that the in-process developments are fully built out in addition to the Badger Avenue Subdivision, and aligns with the identification of this project within the City's draft TSP (Project I46) as a *Priority Intersection Capacity Improvement*.

LEFT-TURN LANE WARRANTS

Turn lane warrants are reviewed based on guidance within the ODOT Transportation Planning and Analysis Unit's publication *Analysis Procedures Manual*. Left-turn lane warrants are based on the posted roadway speed, bidirectional traffic volume, and percentage of the total volume turning left. The left-turn lane warrants are essentially a cost-benefit calculation of the safety benefits provided by separating through and turning traffic versus the construction costs. Left-turn lane warrants do not apply to stop-controlled minor-street approaches. A summary of the study area intersections and the applicability of left-turn lane warrants is summarized in Table 13.

Table 13. Summary of Left-Turn Lane Warrant Applicability

Intersection	Left-Turn Lane Warrants Applicable?	Notes
1: SW 47 th Place / SW Antelope Avenue	No	Local street intersection; turn lane warrants would not be applicable.
2: SW 43 rd Street / SW Badger Avenue	Yes	Turn lane evaluated for westbound approach. No vehicles are projected to make eastbound left-turn maneuver.
3: SW Canal Boulevard / SW Elkhorn Avenue	No	Existing left-turn lanes already provided.
4: SW Canal Boulevard / SW Badger Avenue	No	Existing left-turn lanes already provided.
5: SW Canal Boulevard / SW Yew Avenue – SW 27 th St	No	Roundabout intersection; turn lane warrants would not be applicable.
6: SW Canal Boulevard / SW Wickiup Avenue	No	Existing left-turn lanes already provided.
7: SW Canal Boulevard / SW Odem Medo Road	No	Signalized intersection; turn lane warrants would not be applicable.

As shown in Table 13, most of the study intersections already have left-turn lanes installed. The need for a left-turn lane was evaluated for the westbound approach at the SW 43rd Street/SW Badger Avenue intersection for 2023 'With Site' conditions during the weekday p.m. peak hour and is shown in Figure 15. As shown in the figure, a westbound left-turn lane is warranted. Badger Avenue frontage improvements are currently being reviewed by the City of Redmond as part of the adjacent development project; the subject property does not contribute toward the left-turn demand.

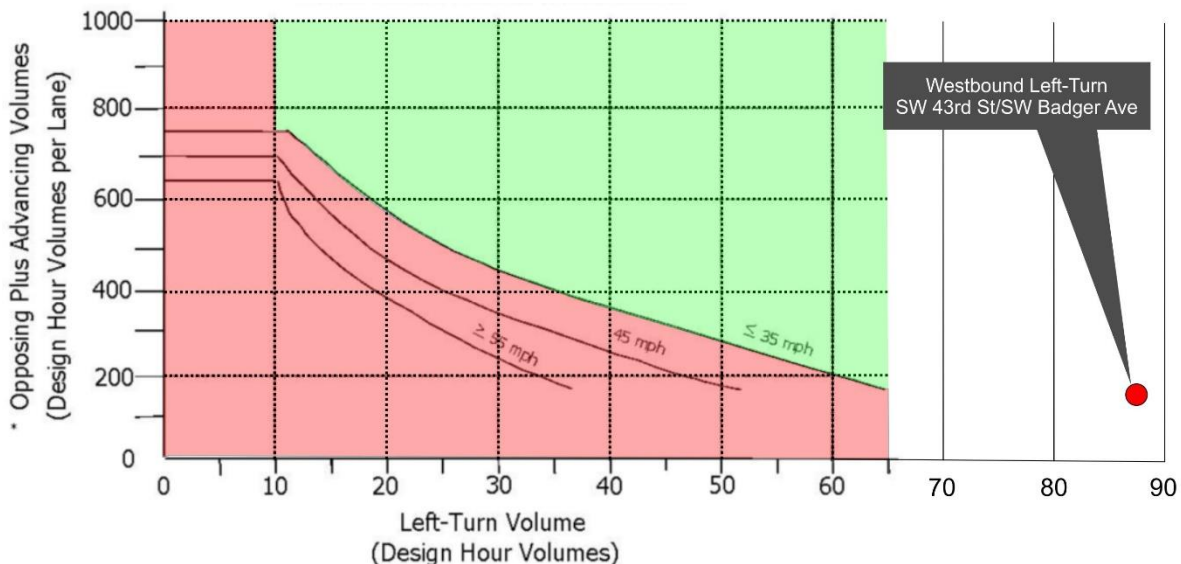


Figure 15. Left-Turn Lane Evaluation: 2023 Total Traffic Volumes, Weekday PM Peak Hour.

RIGHT-TURN LANE WARRANTS

The purpose of a right-turn lane is to improve safety and capacity of a roadway by reducing the speed differential between through vehicles and decelerating vehicles. Within an urban environment, facility design considerations should include the increased pedestrian crossing distance, higher resultant through speeds, and right-of-way/streetscape impacts. Right turn lanes are typically reviewed based on the ODOT methodology for rural highways; as such, discretion and engineering judgement is required in applying these criteria to urban roadways. These standards do not apply to signalized or roundabout intersections where right-turn lanes are provided for capacity improvements rather than as a safety treatment. Table 14 summarizes the applicability of these warrants to the study intersections.

Table 14. Summary of Right-Turn Lane Warrant Applicability

Intersection	Right-Turn Lane Warrants Applicable?	Notes
1: SW 47 th Place / SW Antelope Avenue	No	Local, very-low volume street intersection; turn lane warrants would not be applicable.
2: SW 43 rd Street / SW Badger Avenue	Yes (Not recommended)	Installation of a right-turn deceleration lane would conflict with facility goals and would not be recommended.
3: SW Canal Boulevard / SW Elkhorn Avenue	Yes	Existing southbound right-turn lane. Need for northbound right-turn lane evaluated.
4: SW Canal Boulevard / SW Badger Avenue	Yes	A roundabout or traffic signal is planned at this intersection in the future. Installation of a right-turn deceleration lane may conflict with future improvements and facility goals.
5: SW Canal Boulevard / SW Yew Avenue – SW 27 th St	No	A single-lane roundabout has been constructed at this intersection so right-turn lane warrants would not apply.
6: SW Canal Boulevard / SW Wickiup Avenue	Yes (Not recommended)	Installation of a right-turn deceleration lane would conflict with facility goals and would not be recommended.
7: SW Canal Boulevard / SW Odem Medo Road	No	A traffic signal controls this intersection so right-turn lane warrants would not apply.

Figure 16 depicts the right-turn lane warrant evaluation at each intersection where warrants could be applicable. As shown in the figure, right-turn lane warrant criteria are met for the southbound approach at the SW Canal Boulevard/SW Badger Avenue and SW Canal Boulevard/SW Wickiup Avenue intersection based on volumes. Additional details on both locations are summarized below.

SW Canal Boulevard / SW Badger Avenue

Right-turn lane warrant criteria are met for the southbound approach at the SW Canal Boulevard/SW Badger Avenue intersection in 2023 with site development. This criterion is also met during the 2023 background volumes during the weekday p.m. peak hour due to the additional approved development on SW Badger Avenue. The draft TSP identifies the need for a roundabout or traffic signal at this location. Given the transition to urbanization of this intersection, a right-turn deceleration lane was not considered

appropriate as an interim improvement due to the increase in cross-section width and higher turning speeds.

SW Canal Boulevard / SW Wickiup Avenue

Right-turn lane warrant criteria are met for the southbound approach at the SW Canal Boulevard/SW Wickiup Avenue intersection in 2023 with site development. Based on the estimated existing 2020 volumes during the weekday p.m. peak hour, this criterion is also met today. This intersection is located in an urban environment with high pedestrian activity. During the August 29, 2018 count, 49 pedestrians were recorded between 4:00 and 6:00 p.m. A southbound right-turn deceleration lane is not recommended at this intersection due to the increase in cross-section width, higher turning speeds, and potential conflict with pedestrians.

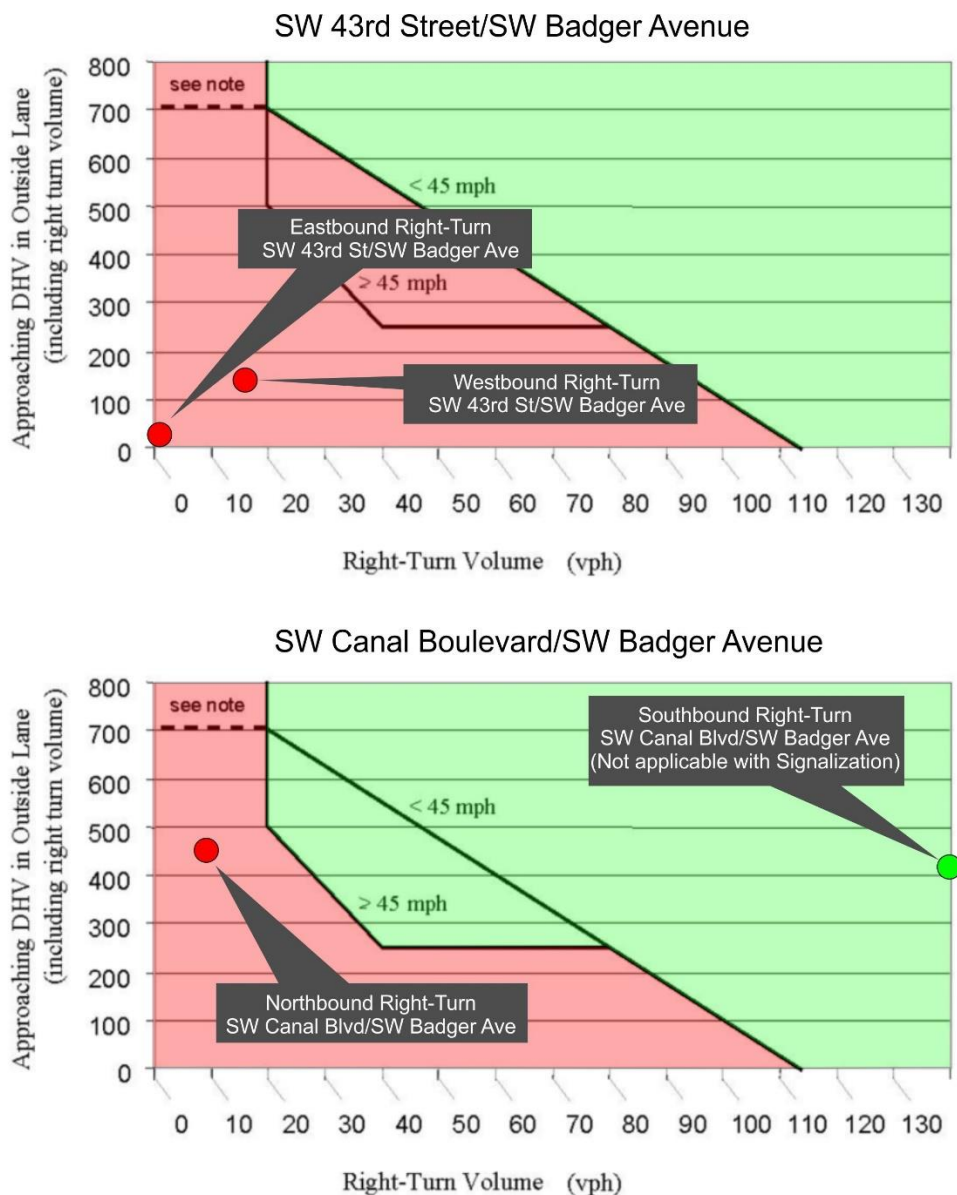


Figure 16. Right-Turn Warrant Assessment, Year 2023 “With Project” Conditions.

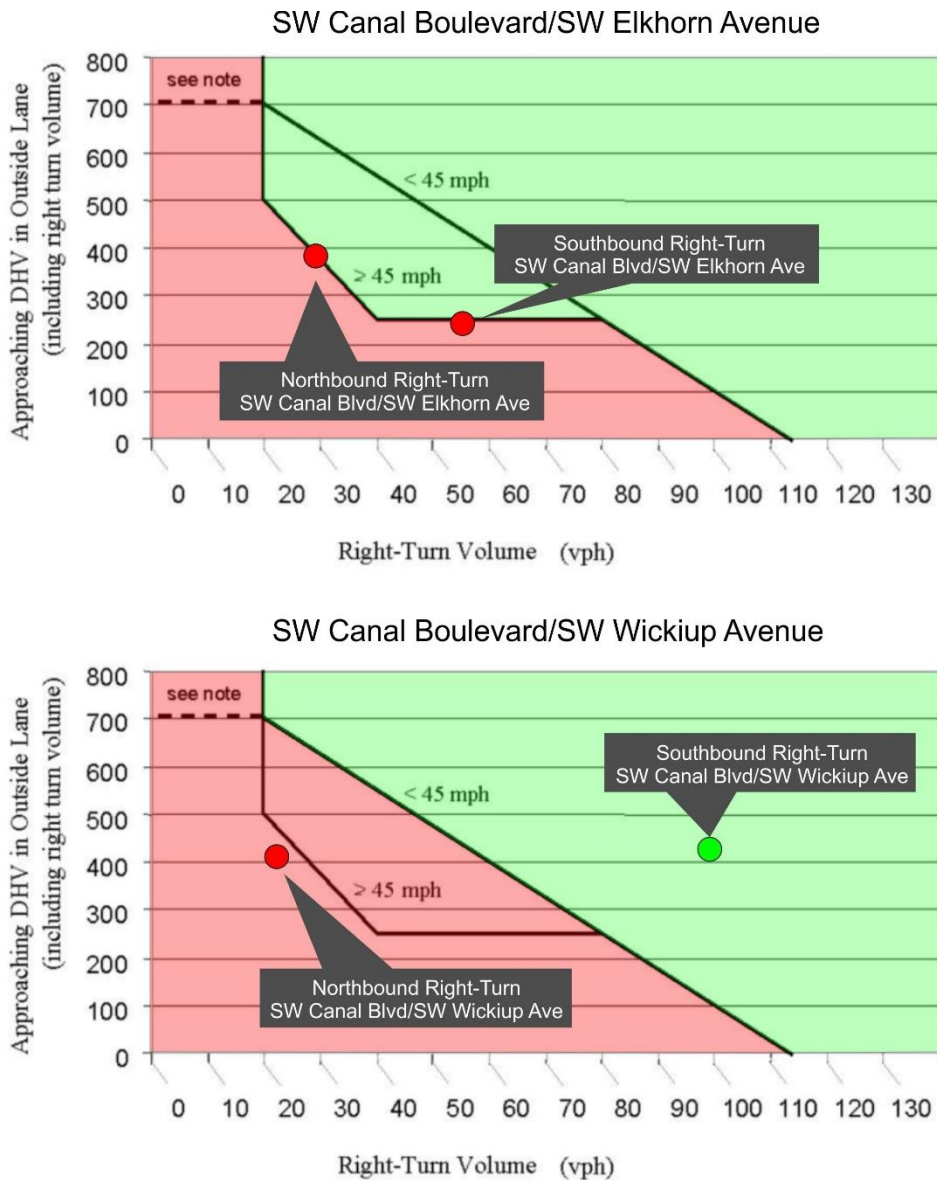


Figure 17. Right-Turn Warrant Assessment, Year 2023 “With Project” Conditions.

TRANSPORTATION PLANNING RULE COMPLIANCE

Oregon Administrative Rule 660-12-0060 describes the relevant criteria for annexation and zone change. Essentially, OAR 660-12 provides requirements to ensure transportation facilities are appropriately planned and coordinated to ensure a safe and efficient system. Section -0060 ensures that any changes to this planning continues to be coordinated with affected agencies and does not impact the plans without providing appropriate mitigation measures.

The analysis provided within this report shows that there are three locations identified as deficient in the horizon year (2040) with or without the rezone. The rezone does not cause any intersections that are performing acceptably to fail to meet City standards, but does result in incremental degradation of the

three intersections. However, the mitigation for the identified deficiencies along the SW Canal Boulevard corridor are mitigated by planned intersection projects, the northern and western extension of SW Badger Avenue (which this project will help to construct), and a planned extension of Elkhorn Avenue east over the US 97 and BNSF corridors to connect with SW 19th Street near the fairgrounds.

While this application includes a modification of the SWAP plans to rezone the lands R-4 instead of R-2, this does not change the underlying land use assumptions within the City's prior or current planning. The 2014 SWAP materials show that the R-2 designation was intended to serve an average of 4.5 units per acre, but achieving this density is not possible within the R-2 zoning given the ROW requirements and minimum lot size. With the rezone and submittal of the concurrent site plan application showing 65 residential units (4.0 units per acre) the rezoning to R-4 allows the project to remain consistent with the SWAP, as shown in Figure 18.

District	Zoning	Area Designation (Acres)			ITE Land Use	Allowable Density in Zone
		Current Zoning	Future Zoning	Change		
Residential 2	R-2	288.23	709.76	+421.03	ITE 210 Single Family Res	Est. 4.5 homes/acre
Residential 4	R-4	50.81	145.50	+94.69	ITE 230 Townhome/Condo	Est. 9.0 units/acre
Residential 5	R-5	0.00	22.33	+22.33	ITE 220 Apartment	Est. 15 units/acre
Urban Holding	UH-10	372.37	0.00	-372.37	ITE 210 Single Family Res	Est. 1 unit/5 acres
Public Facility	PF	70.96	70.96	No Change	Existing High School/ITE 520 Elementary School	1,400 student HS Est. 800 student elementary school
Urban Area Reserve	UAR	227.50	0.00	-227.50	ITE 210 Single Family Res	Est. 1 unit/5 acres
Mixed-Use Neighborhood	MUN	0.00	20.93	+20.93	ITE 230/ITE 820 Townhome/Retail	Res: 9 units/acre Retail: 0.10 FAR
Park	PARK	0.00	31.95	+31.95	ITE 411 City Park	n/a

Figure 18. SWAP Land Use Assumptions.

Source: City of Redmond Ordinance No. 2014-17.

In addition, the City's Draft Transportation System Plan assumes development within the SWAP lands and already accounts for the proposed rezone within the off-site transportation system. The only change noted within the TSP to support the SWAP is the extension of Badger Avenue and reclassification from a *Local Street* to a *Minor Collector*. As this classification of road retains the same 60-foot right-of-way section no changes would be needed to the site layout presented in this report. Accordingly, mitigation is provided to significant project impacts through planned transportation improvements and the pending adoption of the Draft Transportation System Plan that fully accounts for the SWAP lands, as was outlined within Section 4-A of the SWAP. Table 15 summarizes TPR compliance for the project.

Table 15. Summary of Criteria in OAR 660-012-0060

Section	Criteria	Applicable?
1	Describes how to determine if a proposed land use action results in a significant impact.	Yes, see response below
2	Describes measures for complying with Criterion #1 where a significant impact is determined.	Yes, see response below
3	Describes measures for complying with Criteria #1 and #2 without assuring that the allowed land uses are consistent with the function, capacity and performance standards of the facility.	No
4	Determinations under Criteria #1, #2, and #3 are coordinated with other local agencies.	Yes (Application will require coordination with ODOT and Deschutes County)
5	Indicates that the presence of a transportation facility shall not be the basis for an exception to allow development on rural lands.	No
6	Indicates that local agencies should credit developments that provide a reduction in trips.	No
7	Outlines requirements for a local street plan, access management plan, or future street plan.	No
8	Defines a mixed-use, pedestrian-friendly neighborhood.	No
9	Outlines requirements under which a local government may find that an amendment to a zoning map does not significantly affect an existing and planned transportation facility.	No
10	Outlines requirements under which a local government may amend a plan without applying performance standards related to motor vehicle traffic congestion, delay or travel time.	No
11	Outlines requirements under which a local government may approve an amendment with partial mitigation.	No

As noted in Table 15, there are eleven criteria that apply to Plan and Land Use Regulation Amendments. Of these, only Criteria #1, #2, and #4 are applicable to the proposed land use action. Criterion #1 is provided below in *italics* with responses shown in standard font.

OAR 660-012-0060 (1) Where an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule, to assure that allowed land uses are consistent with the identified function, capacity,

and performance standards (e.g. level of service, volume-to-capacity ratio, etc.) of the facility. A plan or land use regulation amendment significantly affects a transportation facility if it would:

(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

(b) Change standards implementing a functional classification system; or

(c) As measured at the end of the planning period identified in the adopted transportation system plan:

(A) Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or

(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.

Response: The analysis showed that the SW Canal Boulevard/SW Badger Avenue and SW Canal Boulevard/SW Yew Avenue-SW 27th Street intersections are expected to have operational needs in 2040 with or without the annexation and zone change. The draft TSP identifies the need for improvements at both intersections. A traffic signal or roundabout is recommended at the SW Canal Boulevard/SW Badger Avenue intersection and expansion of the roundabout at SW Canal Boulevard/SW Yew Avenue - SW 27th Street is considered (if roadway connections are not adequate). The recommended mitigations will allow both intersections to meet City standards regardless of the proposed Badger Avenue Subdivision. Therefore, this project does not have a significant impact.

No recommended improvements were identified at the SW Canal Boulevard/SW Wickiup Avenue intersection, but alternative travel routes are available to support the eastbound left-turn demands that experience high delays long-term. The City recently reconstructed improvements at this intersection (new turn lanes and sidewalk/accessibility improvements) as part of the SW Canal Boulevard streetscape project, and no additional changes are recommended.

(2) If a local government determines that there would be a significant effect, then the local government must ensure that allowed land uses are consistent with the identified function, capacity, and performance standards of the facility measured at the end of the planning period identified in the adopted TSP through one or a combination of the remedies listed in (a) through (e) below, unless the amendment meets the balancing test in subsection (2)(e) of this section or qualifies for partial mitigation in section (11) of this rule. A local government using subsection (2)(e), section (3), section (10) or section (11) to approve an amendment recognizes that additional motor vehicle traffic congestion may result and that other facility providers would not be expected to provide additional capacity for motor vehicles in response to this congestion.

(a) Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.

(b) Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of this division; such amendments shall include a funding plan or mechanism consistent with section (4) or include an amendment to the transportation finance plan so that the facility, improvement, or service will be provided by the end of the planning period.

Response: The City's Draft Transportation System Plan includes consistent development assumptions for the SWAP lands and identifies needed improvements at two of the deficient intersections, as well as new roadway connections within the area to provide travel options. This also includes an upgraded section (Minor Collector) along Badger Avenue that will extend west to Helmholtz Way. The combination of these measures, and provision of adequate right-of-way along Badger Avenue will support these plans and will mitigate the long-term intersection needs.

(c) Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.

(d) Providing other measures as a condition of development or through a development agreement or similar funding method, including, but not limited to, transportation system management measures or minor transportation improvements. Local governments shall, as part of the amendment, specify when measures or improvements provided pursuant to this subsection will be provided.

Response: The subject property will extend SW Badger Avenue west toward SW Helmholtz Avenue. This roadway extension allows traffic from the subject property and surrounding developments to travel west instead of consolidating onto SW Canal Boulevard. In addition, the project will provide System Development Charge funding toward the long-term needs throughout the system as included in the TSP.

The extension of SW Badger Avenue is classified as a Local Street in the current Transportation System Plan. However, it is shown as a *Minor Collector* in the draft TSP (which also accounts for the development of the subject property). Either section fits within the 60-foot right-of-way proposed and can be supported with the plan as shown.

(e) Providing improvements that would benefit modes other than the significantly affected mode, improvements to facilities other than the significantly affected facility, or improvements at other locations, if:

(A) The provider of the significantly affected facility provides a written statement that the system-wide benefits are sufficient to balance the significant effect, even though the improvements would not result in consistency for all performance standards;

(B) The providers of facilities being improved at other locations provide written statements of approval; and

(C) The local jurisdictions where facilities are being improved provide written statements of approval.

Response: It is anticipated that the extension of SW Badger Avenue to connect with SW Helmholtz Way could reroute about 25 percent of the site-generated trips, along with similar portions of trips from surrounding developments located north of Ridgeview High School. While this connection to SW Helmholtz Way will not be completed with the subject application, the project builds toward the City's transportation infrastructure master plan (TSP) and remains consistent with the SWAP land use assumptions that are incorporated into the City's Draft Transportation System Plan.

As the project does not propose direct mitigation for each of the deficient locations we would request that a letter be provided from the City of Redmond in compliance with OAR 660-12-0060(2)(e)(A) if staff is in agreement with the project improvements (extension of Badger Avenue and payment of Transportation SDCs) providing equitable mitigation for the impacts as presented herein.

SUMMARY OF FINDINGS

The Transportation Impact Analysis prepared for the proposed Badger Avenue Subdivision identified the following:

- The proposed 16.25-acre subdivision is planned to consist of 65 single family detached homes with primary access provided from the extension of SW Badger Avenue west of its current terminus and the extension of SW Antelope Avenue to the north.
- Development of the site requires annexation into the City of Redmond and rezoning to *Residential 4 (R-4)*. The SWAP identified these lands for R-2 zoning, but with consistent land use assumptions to the plan that is proposed.
- The development is estimated to generate 605 weekday daily trips of which 63 trips (39 in, 24 out) are expected to occur during the weekday p.m. peak hour.
- No sight distance issues were identified on the roadway extensions into the site.
- There are no crash patterns within the study area identified from review of historical crash data.
- Traffic operations show that all study intersections are expected to meet City operation standards with buildout of the site in the year 2023.
- The year 2028 planning analysis showed that all intersections are expected to meet City standards with the exception of the SW Canal Boulevard/SW Badger Avenue intersection. This eastbound left-turn movement is expected to operate with high delays and 95th percentile queues exceeding 100 feet. The draft Transportation System Plan identifies the need for a roundabout or traffic signal at this intersection in the future.
- For TPR compliance, while the subject property is included within the SWAP a comprehensive transportation analysis was not prepared as part of these plans. This comprehensive analysis was included within the City's Transportation System Plan Update, which has not yet been formally adopted. In the interim period, Transportation Planning Rule compliance was assessed within this report. This showed that by the year 2040 the following study intersections will be deficient:
 - SW Canal Boulevard/SW Badger Avenue – plans are already identified to signalize this intersection or construct a roundabout.
 - SW Canal Boulevard/SW Yew Avenue – SW 27th Street – plans are identified in the draft TSP to consider widening the roundabout pending the success of rerouting traffic through other area connections.
 - SW Canal Boulevard/SW Wickiup Avenue – no improvements are identified at this intersection within the Draft TSP or the South Highway 97 plan. Alternate connections to the SW Canal Boulevard/Yew Avenue roundabout are available for the left-turning vehicles at this location, so no mitigation is recommended.

- Minimum volume-based MUTCD signal warrant criteria are projected to be met at the SW Canal Boulevard/SW Badger Avenue intersection for Warrant 1 with project build-out, and Warrants 1 and 2 in the year 2028 assuming surrounding developments are fully built out. The City's draft TSP identifies the need for a traffic signal or roundabout at this location in the future as a Priority Project.
- Left-turn lanes have been installed at all study intersections on SW Canal Boulevard. Left-turn lanes are warranted at the SW Badger Avenue/SW 43rd Street intersection but will be provided with adjacent development.
- Right-turn deceleration lanes are warranted based on the ODOT methodology at two locations:
 - SW Canal Boulevard/SW Badger Avenue – this would not be applicable with the planned improvements to a signalized or roundabout intersection and so would not be recommended.
 - SW Canal Boulevard/SW Wickiup Avenue – a right-turn deceleration lane would be inconsistent with the urban character and the recently completed streetscape improvements and is not recommended.

RECOMMENDATIONS

The following recommendations are provided to support the rezoning and development of the Badger Avenue Subdivision with the concurrent site plan application:

- The project will be required to support “to and through” street connections. The site plan shows that these will include SW 47th Place, SW Badger Avenue, and SW Badger Creek Drive, along with dedication for the future SW Antelope Avenue extension. These local street layouts provide minor changes to the SWAP layout to avoid double-frontage lots, resulting in a more efficient street layout with the same overall connections.
- The project will be required to extend SW Badger Avenue west of its current terminus. While this facility is currently classified as a *Local Street*, the Draft Transportation System Plan identifies the need to reclassify Badger Avenue as a *Minor Collector*. Either classification is contained within a 60-foot right-of-way and can be incorporated as part of future civil plan submittals.
- With the upgraded classification of SW Badger Avenue to a *Minor Collector*, the design of the proposed traffic circle will need to be coordinated with the City's engineering department to ensure that the layout can accommodate anticipated design vehicle needs.
- The subdivision layout includes three box culvert crossings over the canal lateral along the eastern property boundary to meet the City's “to and through” connectivity requirements.
- The project will complete its section of the trail system along the canal lateral as identified within SWAP.
- Pending adoption of the Draft TSP, it is requested that the City Engineer provide a letter stating that the mitigation provided (extension of Badger Avenue through the subject property and payment of transportation SDCs) is adequate to offset the project impact. This letter will provide direct compliance with the TPR under OAR 660-12-0060(2)(e)(A).
- The project will contribute to the City's long-range transportation needs through payment of Transportation System Development Charges.

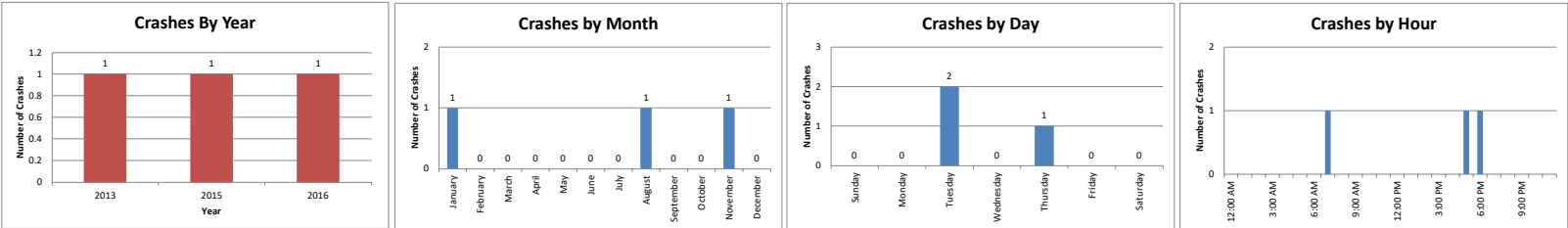
With these recommendations the proposed project can comply with the City's transportation requirements. Please let me know if you have any questions related to the findings of this Transportation Impact Analysis at (503) 997-4473 or at joe@transightconsulting.com.

Attachments:

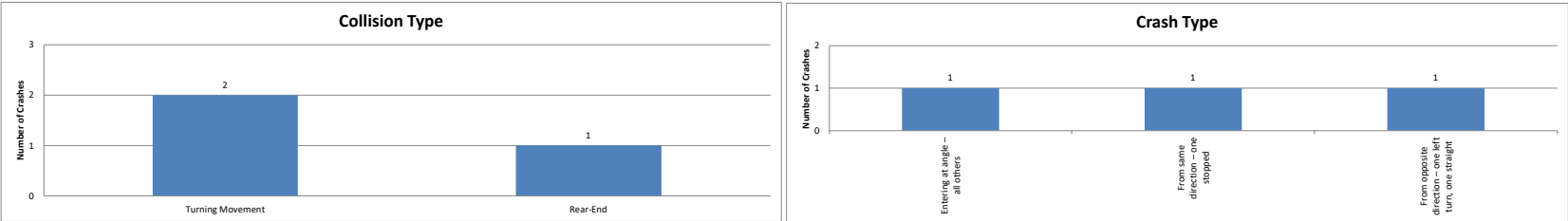
- Crash Analysis Worksheets
- Traffic Count Worksheets
- Year 2020 Existing Conditions LOS Worksheets
- Year 2023 Background Conditions LOS Worksheets
- Year 2023 Total Traffic Conditions LOS Worksheets
- Year 2028 Background Conditions LOS Worksheets
- Year 2028 Total Traffic Conditions, LOS Worksheets
- Year 2040 Background Conditions LOS Worksheets
- Year 2040 Total Traffic Conditions, LOS Worksheets
- MUTCD Signal Warrant Analysis

Project Name: Badger Avenue Subdivision
Project Number: 1422
Query Information: Canal Blvd / Elkhorn Ave
Date Queried: Jan 2013 - Dec 2017
Data Provider: ODOT Crash Analysis Reporting Unit
Analyst: KLH
Summary Date: 4/15/2020
Text File Name:
Filters Applied: : County: Deschutes

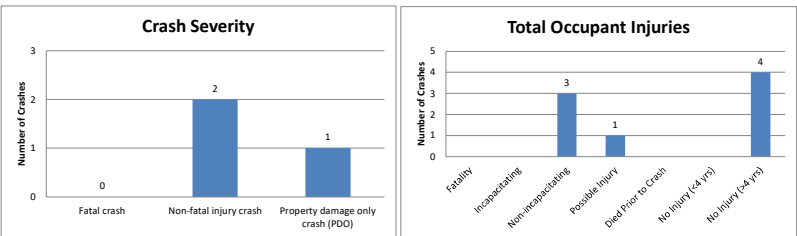
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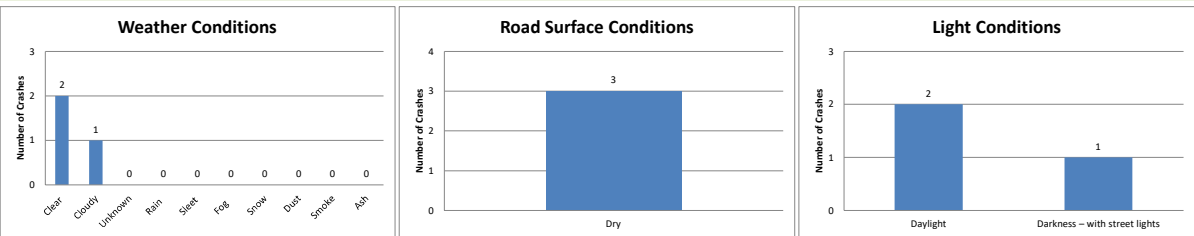
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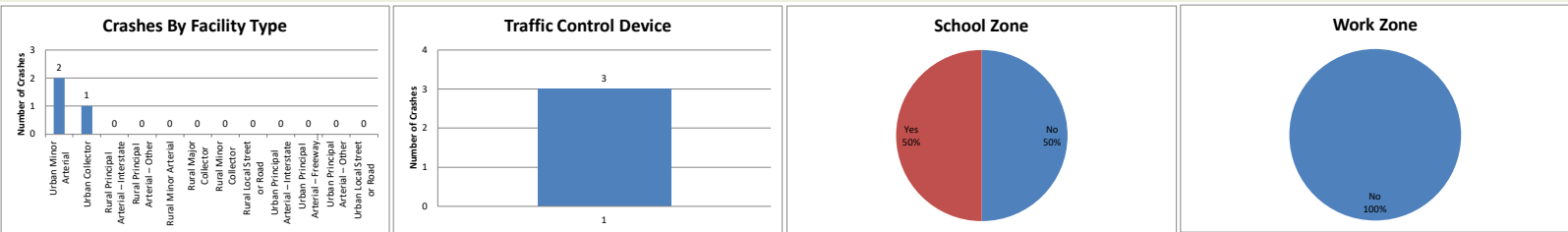
Crash Severity



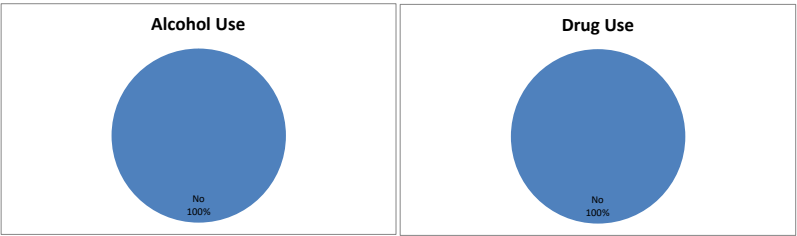
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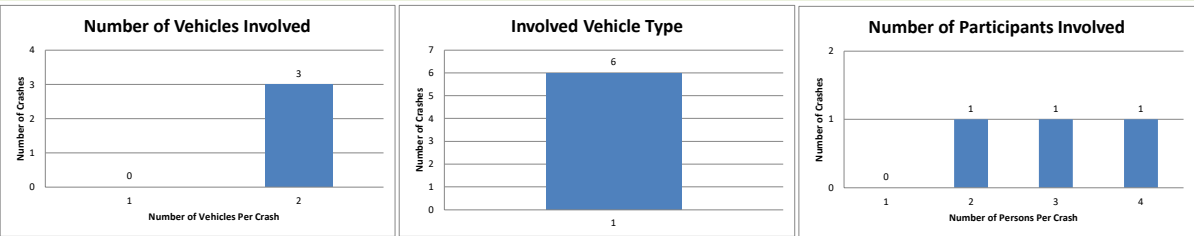
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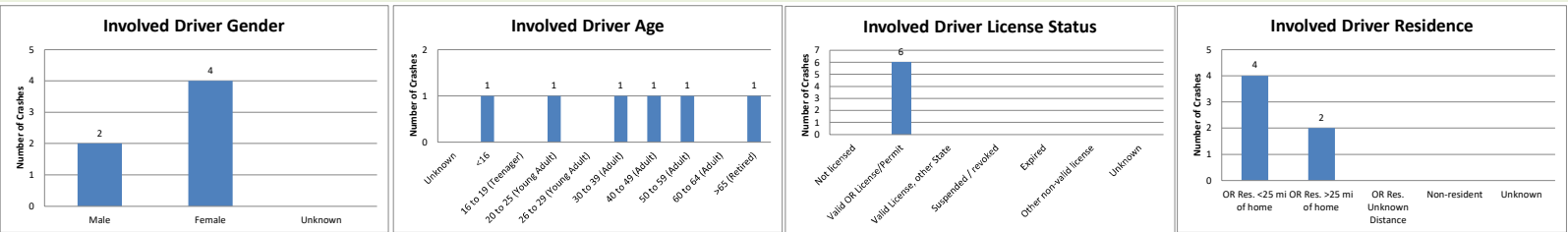
Driving Impairments



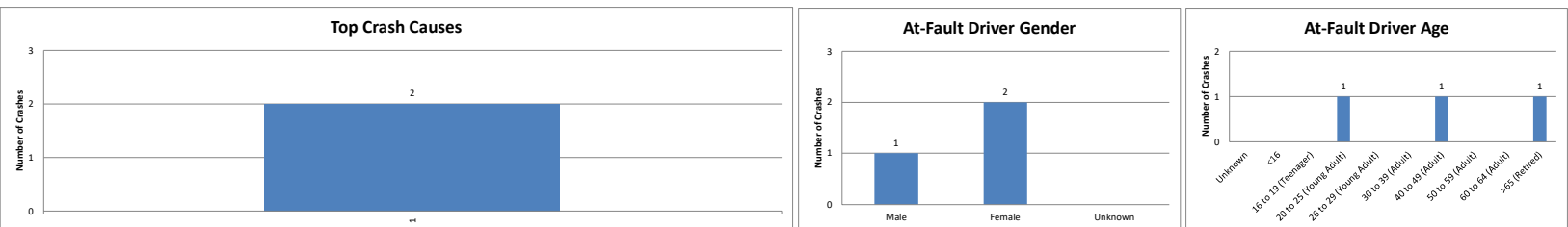
Vehicles and Occupants



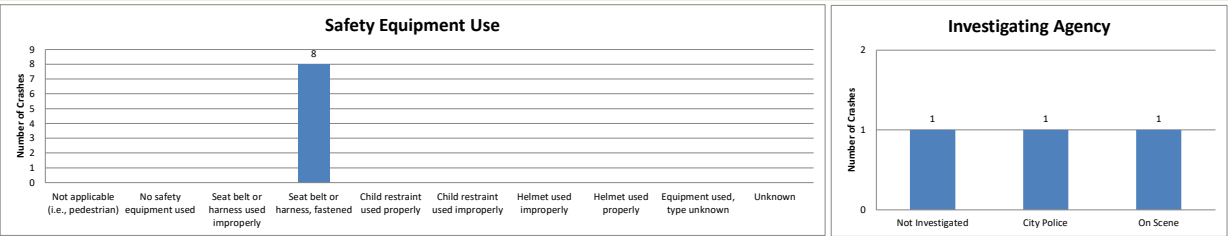
Involved Driver Characteristics



At-Fault Driver Characteristics

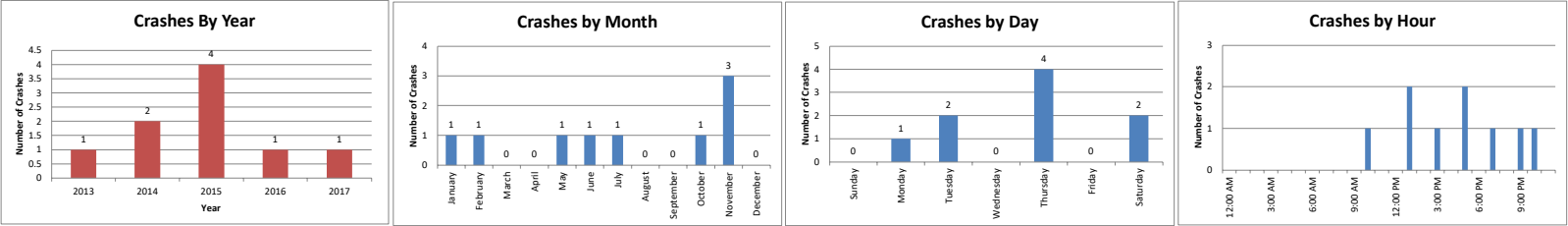


Other Crash Characteristics

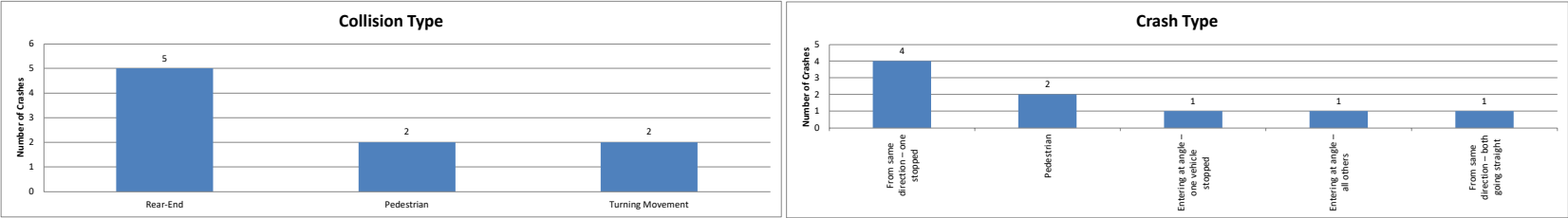


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Project Number: 1422
Query Information: Canal Blvd / Odem Medo Ave
Date Queried: Jan 2013 - Dec 2017
Data Provider: ODOT Crash Analysis Reporting Unit
Analyst: KLH
Summary Date: 4/15/2020
Text File Name:
Filters Applied: : County: Deschutes

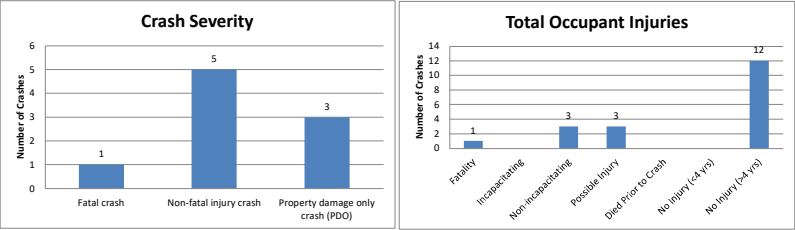
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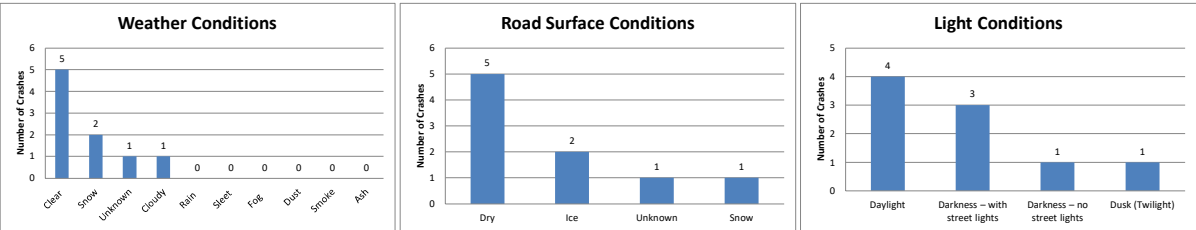
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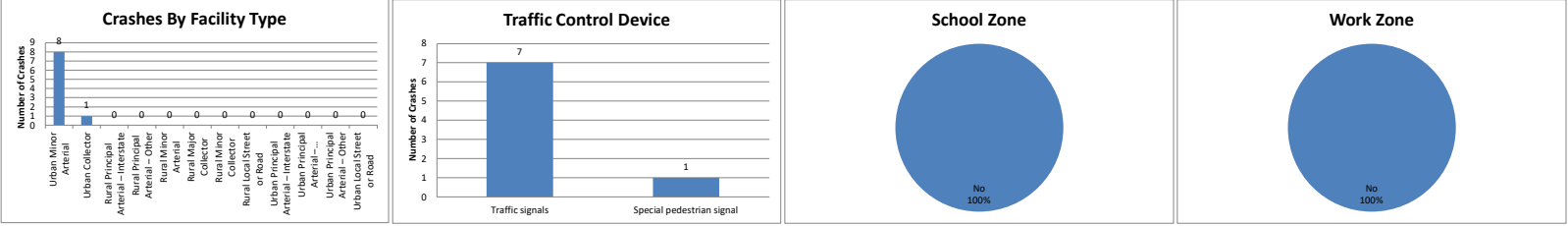
Crash Severity



Crash Environment Characteristics



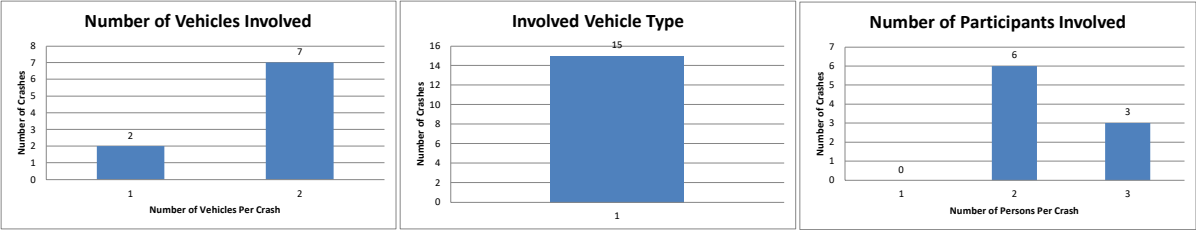
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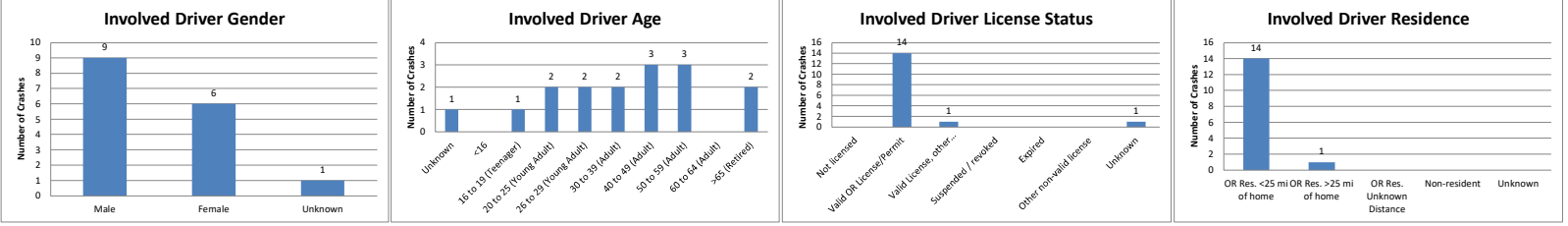
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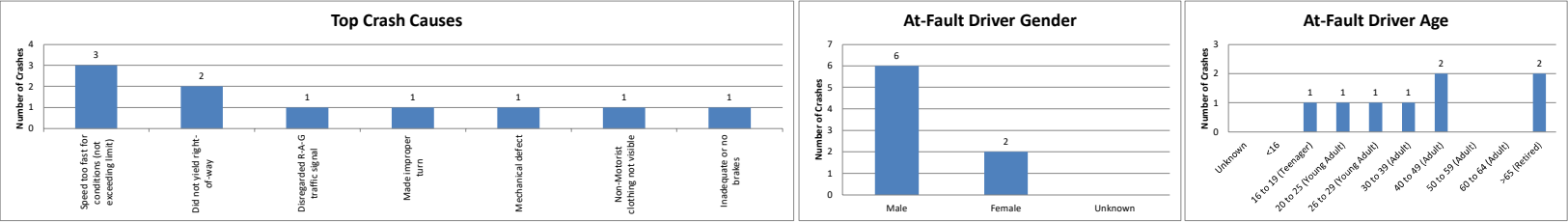
Vehicles and Occupants



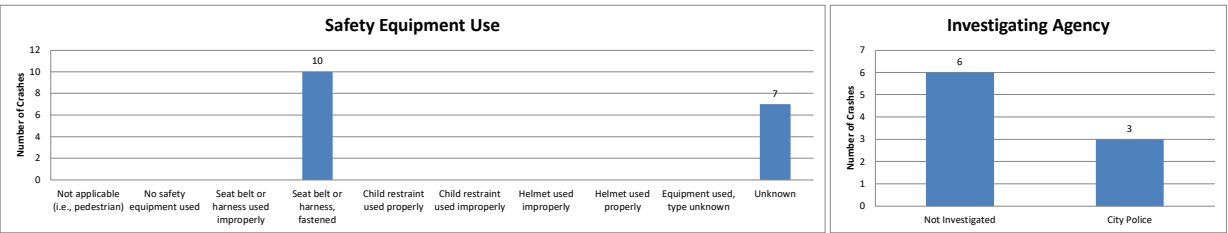
Involved Driver Characteristics



At-Fault Driver Characteristics

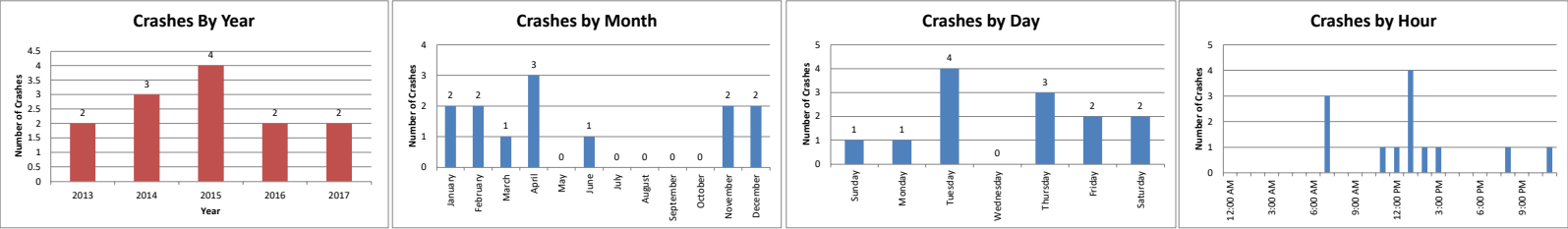


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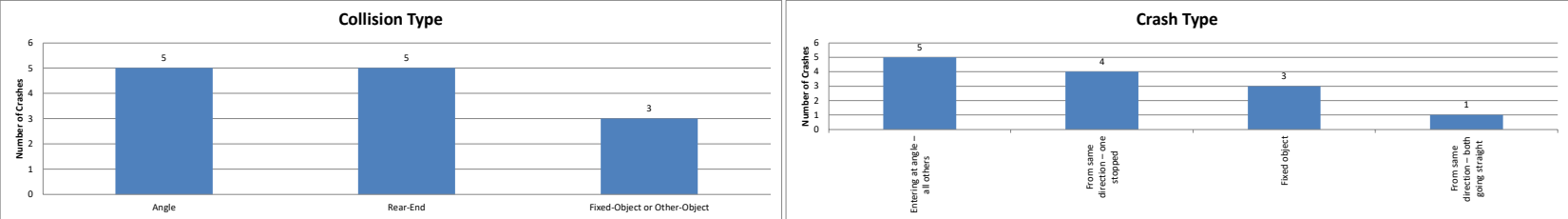


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Project Number: 1422
Query Information: Canal Blvd / Yew Ave
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Data Provider: ODOT Crash Analysis Reporting Unit
Analyst: KLH
Summary Date: 4/15/2020
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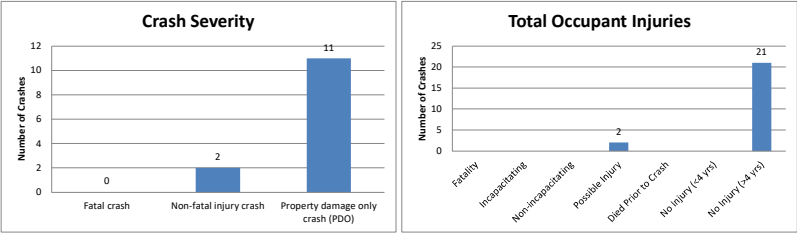
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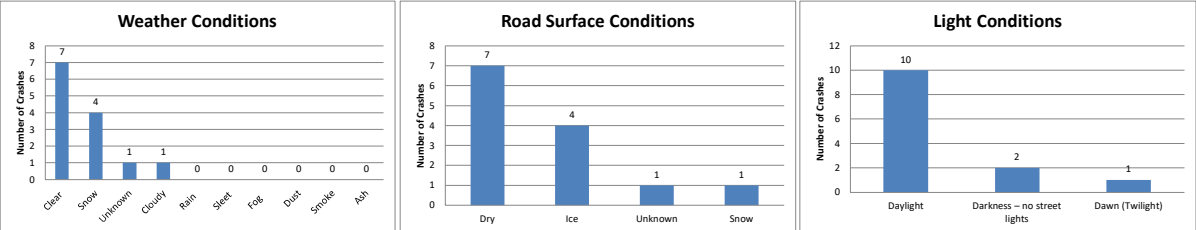
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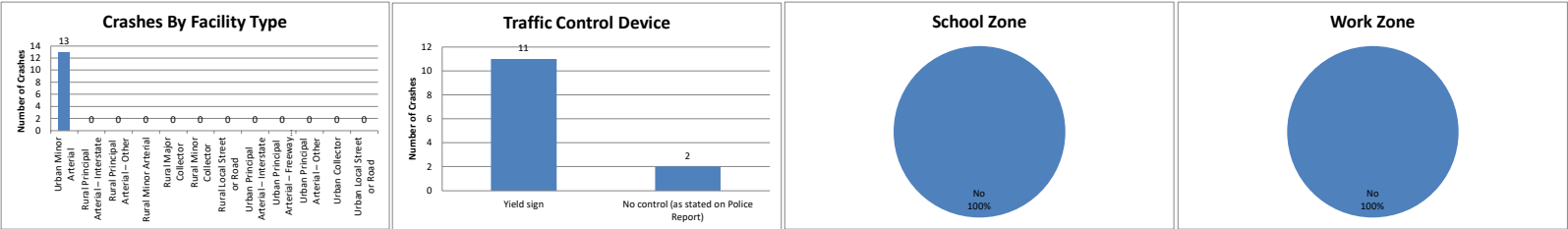
Crash Severity



Crash Environment Characteristics



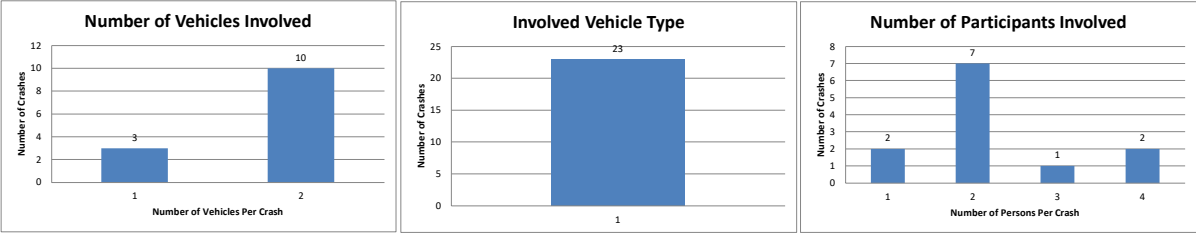
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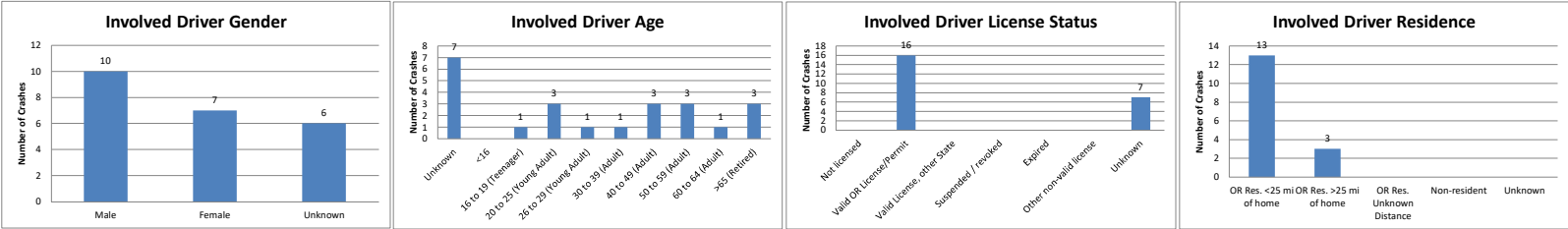
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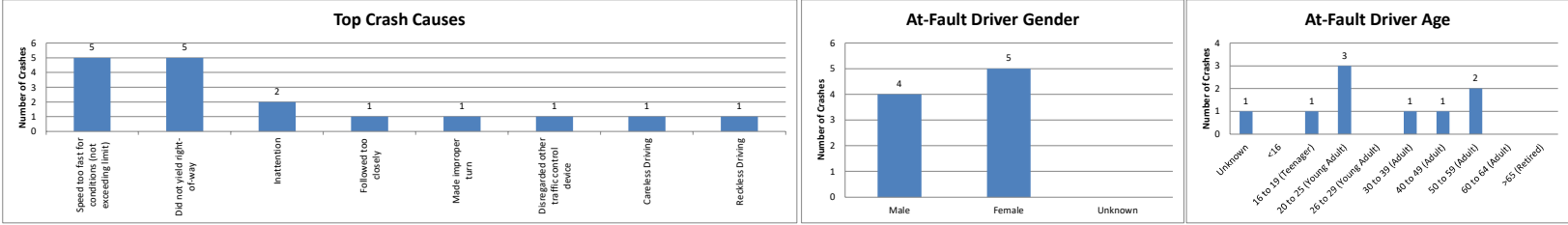
Vehicles and Occupants



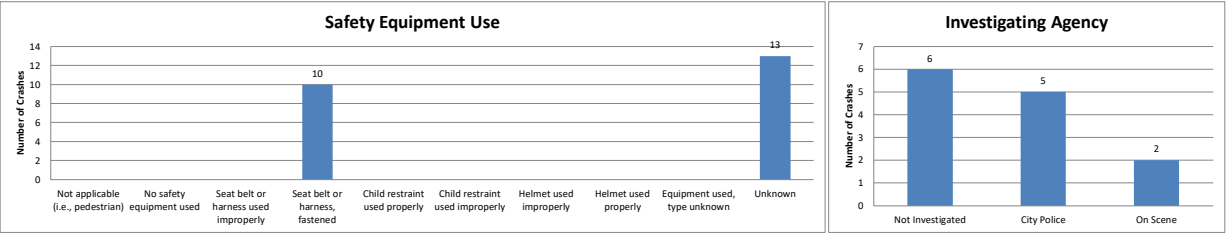
Involved Driver Characteristics



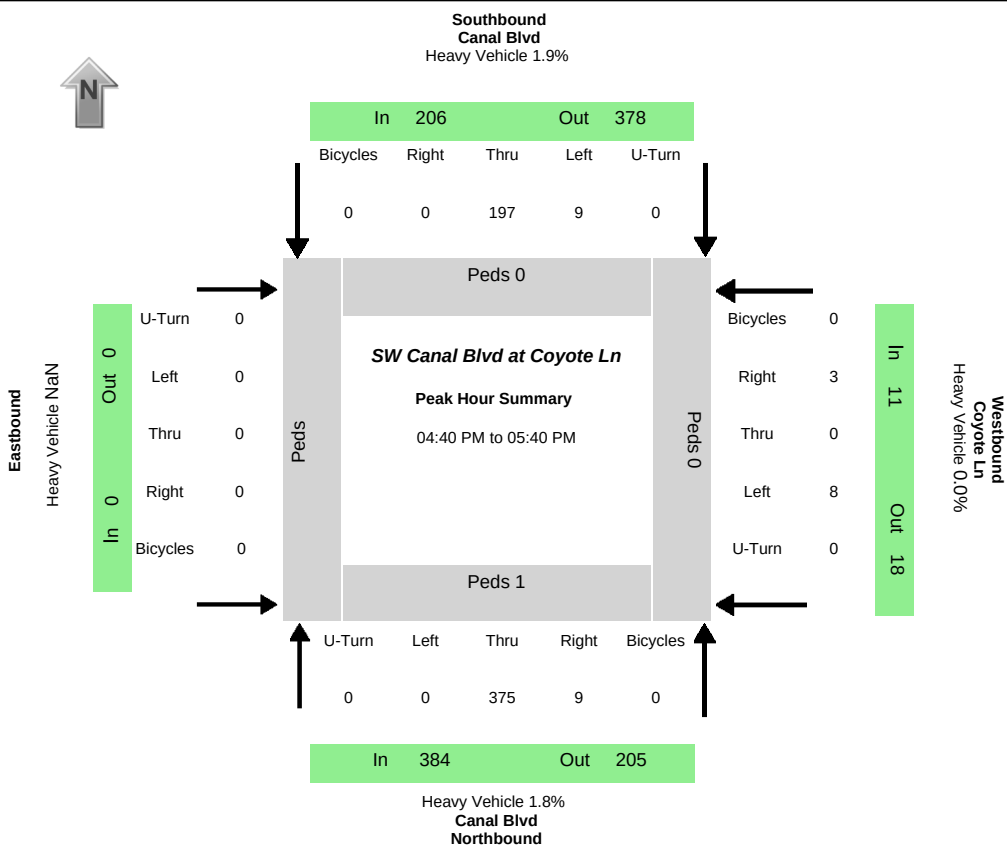
At-Fault Driver Characteristics



Other Crash Characteristics



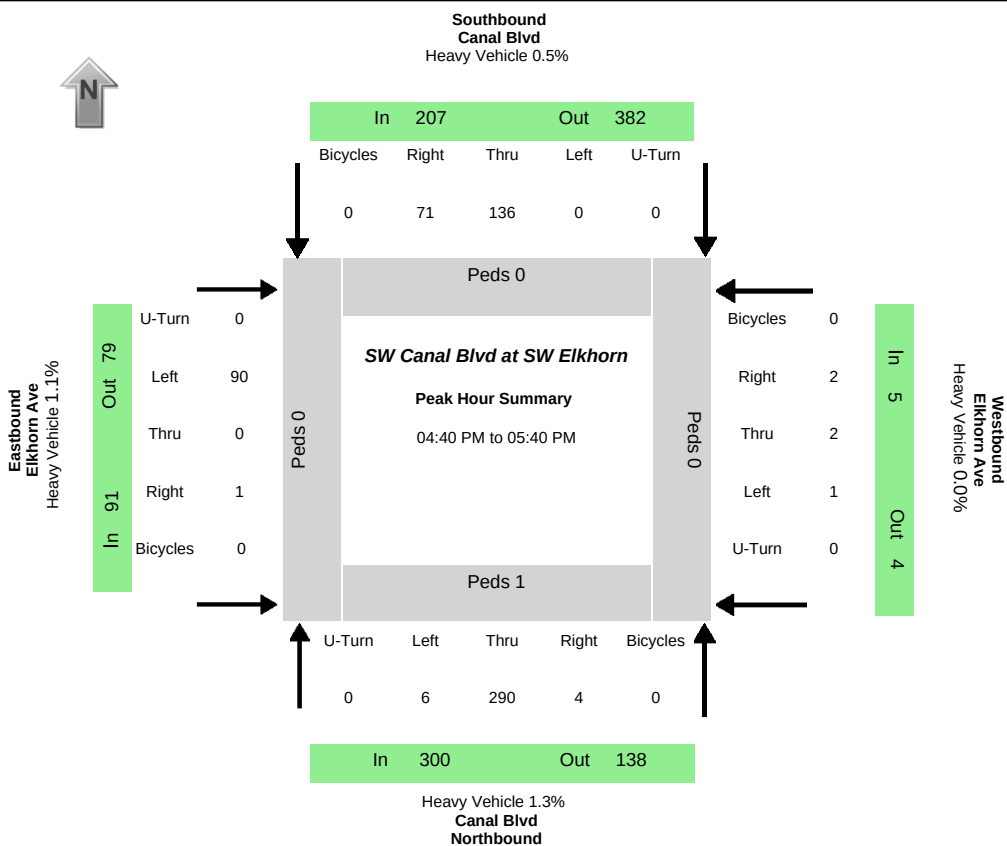
Data Provided by K-D-N.com 503-594-4224	
N/S street	Canal Blvd
E/W street	Coyote Ln
City, State	Redmond OR
Site Notes	
Location	44.23588 - -121.214289
Start Date	Wednesday, March 04, 2020
Start Time	02:00:00 PM
Weather	
Study ID #	
Peak Hour Start	04:40:00 PM
Peak 15 Min Start	05:00:00 PM
PHF (15-Min Int)	0.90



Peak-Hour Volumes (PHV)																							
Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
0	375	9	0	9	197	0	0	0	0	0	0	8	0	3	0	384	206	0	11	205	378	0	18
Percent Heavy Vehicles																							
0.0%	1.9%	0.0%	0.0%	11.1%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	1.9%	NaN	0.0%	1.5%	1.9%	NaN	5.6%
PHV- Bicycles																PHV - Pedestrians							
Northbound				Southbound				Eastbound				Westbound				Sum	in Crosswalk				Sum		
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn		NB	SB	EB	WB			
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All Vehicle Volumes																							
Time	Northbound Canal Blvd				Southbound Canal Blvd				Eastbound				Westbound Coyote Ln				15 Min Sum	1 HR Sum					
	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn							
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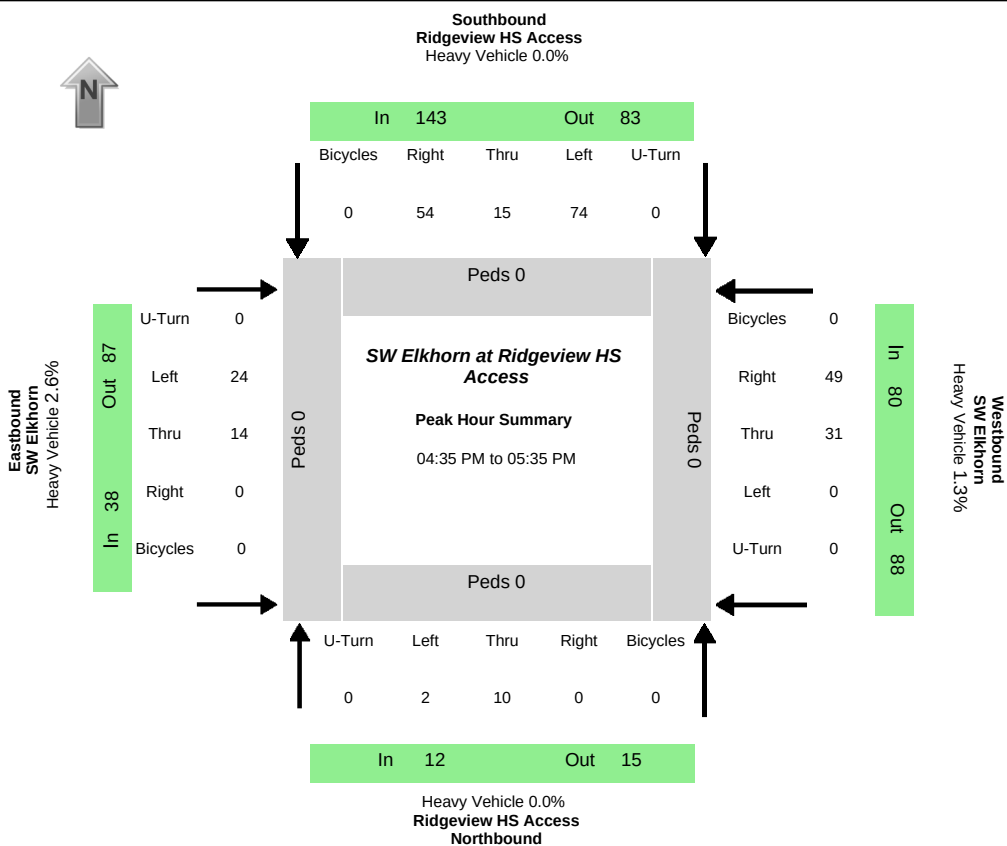
Data Provided by K-D-N.com 503-594-4224	
N/S street	Canal Blvd
E/W street	Elkhorn Ave
City, State	Redmond OR
Site Notes	
Location	44.233038 - -121.217328
Start Date	Wednesday, March 04, 2020
Start Time	02:00:00 PM
Weather	
Study ID #	
Peak Hour Start	04:40:00 PM
Peak 15 Min Start	05:05:00 PM
PHF (15-Min Int)	0.91



Peak-Hour Volumes (PHV)																							
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Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
6	290	4	0	0	136	71	0	90	0	1	0	1	2	2	0	300	207	91	5	138	382	79	4
Percent Heavy Vehicles																							
0.0%	1.4%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	0.5%	1.1%	0.0%	0.7%	1.3%	0.0%	0.0%
PHV- Bicycles																PHV - Pedestrians							
Northbound				Southbound				Eastbound				Westbound					in Crosswalk						
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Sum	NB	SB	EB	WB	Sum		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1		
All Vehicle Volumes																							
Time	Northbound Canal Blvd				Southbound Canal Blvd				Eastbound Elkhorn Ave				Westbound Elkhorn Ave				15 Min Sum	1 HR Sum					
	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn							
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03:00:00 PM	0	11	0	0	0	11	6	0	8	1	1	0	0	0	0	0	126	427					
03:05:00 PM	1	11	0	0	0	12	7	0	5	0	3	0	0	0	1	0	125	433					
03:10:00 PM	0	28	0	0	0	9	5	0	5	0	1	0	0	0	0	0	126	449					
03:15:00 PM	0	8	0	0	0	6	5	0	8	0	0	0	0	0	0	0	115	429					
03:20:00 PM	1	13	0	0	0	9	4	0	2	0	0	0	0	0	0	0	104	424					
03:25:00 PM	1	11	0	0	0	17	2	0	4	0	0	0	3	0	0	0	94	430					
03:30:00 PM	0	11	0	0	0	22	5	0	4	0	1	0	1	0	0	0	111	445					
03:35:00 PM	0	3	0	0	0	11	2	0	3	0	0	0	0	0	0	0	101	434					
03:40:00 PM	1	27	0	0	0	8	3	0	7	0	0	0	0	0	0	0	109	447					
03:45:00 PM	0	25	0	0	0	12	2	0	4	0	0	0	0	0	0	0	108	460					
03:50:00 PM	1	21	0	0	0	7	2	0	2	0	0	0	0	0	0	0	122	452					
03:55:00 PM	0	16	0	0	0	5	5	0	4	0	0	0	0	0	0	0	106	435					

04:00:00 PM	0	21	0	0	0	16	2	0	4	0	0	0	1	0	0	0	107	441
04:05:00 PM	0	16	0	0	0	9	2	0	2	0	0	0	0	0	0	0	103	430
04:10:00 PM	0	13	0	0	0	12	3	0	2	0	0	0	0	1	0	0	104	413
04:15:00 PM	0	21	0	0	0	8	4	0	1	0	0	0	3	0	0	0	97	423
04:20:00 PM	0	20	0	0	0	16	1	0	2	0	0	0	1	1	3	0	112	438
04:25:00 PM	1	15	1	0	0	7	6	0	1	0	0	0	0	0	1	0	113	432
04:30:00 PM	0	16	0	0	0	9	2	1	2	0	0	0	0	0	0	0	106	418
04:35:00 PM	0	15	0	0	0	10	5	0	2	0	0	0	0	0	0	0	94	431
04:40:00 PM	0	17	0	0	0	13	10	0	2	0	0	0	0	0	0	0	104	427
04:45:00 PM	1	22	0	0	0	9	8	0	4	0	0	0	0	0	0	0	118	428
04:50:00 PM	0	26	0	0	0	20	5	0	3	0	1	0	0	0	0	0	141	450
04:55:00 PM	2	25	1	0	0	7	6	0	5	0	0	0	0	0	0	0	145	466
05:00:00 PM	0	15	0	0	0	10	11	0	8	0	0	0	0	0	0	0	145	466
05:05:00 PM	1	32	2	0	0	13	7	0	11	0	0	0	0	0	0	0	156	503
05:10:00 PM	0	21	0	0	0	10	6	0	15	0	0	0	1	1	0	0	164	526
05:15:00 PM	0	20	0	0	0	9	6	0	11	0	0	0	0	0	0	0	166	535
05:20:00 PM	1	20	0	0	0	15	2	0	9	0	0	0	0	0	1	0	148	539
05:25:00 PM	0	21	0	0	0	8	3	0	8	0	0	0	0	1	1	0	136	549
05:30:00 PM	0	31	0	0	0	13	5	0	9	0	0	0	0	0	0	0	148	577
05:35:00 PM	1	40	1	0	0	9	2	0	5	0	0	0	0	0	0	0	158	603
05:40:00 PM	0	28	0	0	1	5	5	0	2	0	0	0	0	0	0	0	157	602
05:45:00 PM	2	18	0	0	0	13	3	0	0	0	0	0	0	0	1	0	136	595
05:50:00 PM	0	12	0	0	1	9	5	0	2	0	0	0	0	0	0	0	107	569
05:55:00 PM	0	19	0	0	0	8	4	0	1	0	0	0	0	0	0	0	98	555

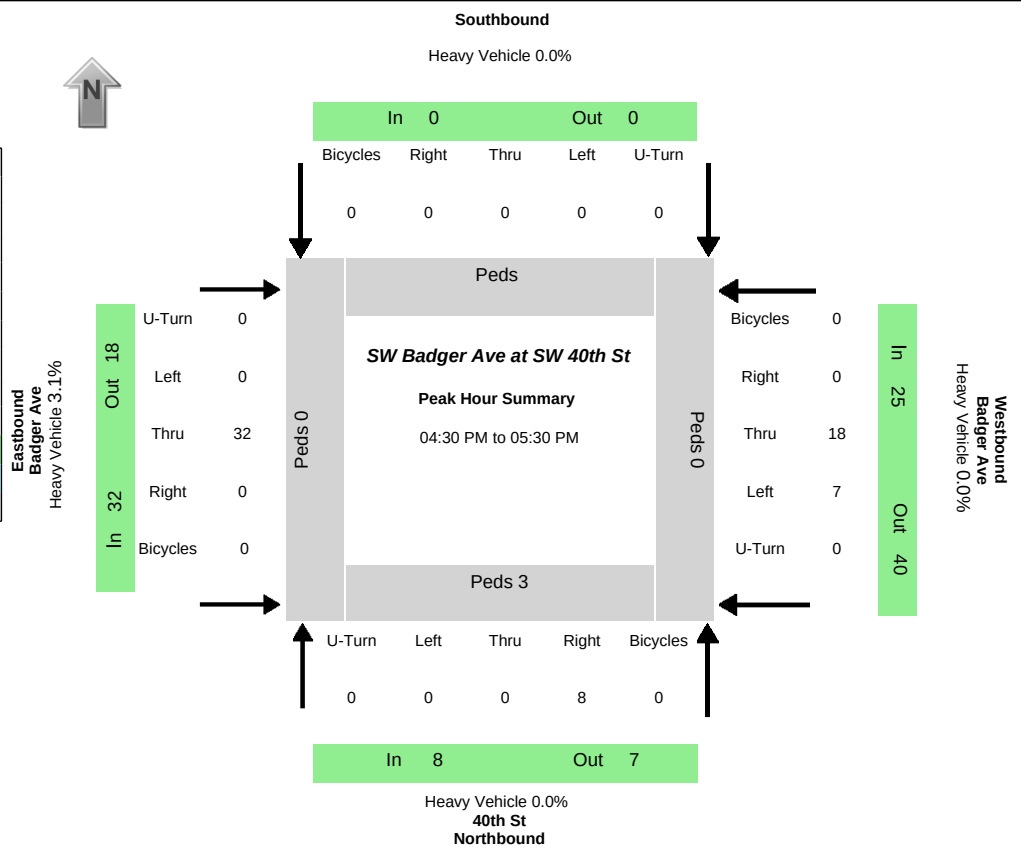
Data Provided by K-D-N.com 503-594-4224	
N/S street	Ridgeview HS Access
E/W street	SW Elkhorn
City, State	Redmond OR
Site Notes	
Location	44.233015 - -121.219484
Start Date	Wednesday, March 04, 2020
Start Time	02:00:00 PM
Weather	
Study ID #	
Peak Hour Start	04:35:00 PM
Peak 15 Min Start	05:00:00 PM
PHF (15-Min Int)	0.70



Peak-Hour Volumes (PHV)																							
Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
2	10	0	0	74	15	54	0	24	14	0	0	0	31	49	0	12	143	38	80	15	83	87	88
Percent Heavy Vehicles																							
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.1%	0.0%	0.0%	0.0%	3.2%	0.0%	0.0%	0.0%	0.0%	2.6%	1.3%	0.0%	0.0%	1.1%	1.1%
PHV- Bicycles																PHV - Pedestrians							
Northbound				Southbound				Eastbound				Westbound					in Crosswalk						
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Sum	NB	SB	EB	WB	Sum		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
All Vehicle Volumes																							
Time	Northbound Ridgeview HS Access				Southbound Ridgeview HS Access				Eastbound SW Elkhorn				Westbound SW Elkhorn				15 Min Sum	1 HR Sum					
	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn							
02:00:00 PM	0	0	0	0	3	1	0	1	1	1	0	0	0	0	3	0							
02:05:00 PM	0	1	0	0	2	1	0	0	1	1	0	0	0	2	4	0							
02:10:00 PM	0	2	0	0	8	1	0	0	2	0	0	0	0	1	5	0	41						
02:15:00 PM	1	0	0	0	5	1	0	0	0	4	0	0	1	2	6	0	51						
02:20:00 PM	0	0	0	0	4	1	1	0	0	2	0	0	1	1	5	0	54						
02:25:00 PM	0	1	0	0	5	0	1	1	2	0	0	0	0	1	0	0	46						
02:30:00 PM	0	2	0	0	1	0	1	0	4	2	0	0	0	1	2	0	39						
02:35:00 PM	0	1	0	0	2	2	3	0	2	1	0	0	0	0	3	0	38						
02:40:00 PM	0	1	0	0	1	0	2	0	4	1	0	0	0	2	5	0	43						
02:45:00 PM	0	1	1	0	5	1	2	0	4	1	0	0	0	1	4	0	50						
02:50:00 PM	0	1	0	0	5	1	3	0	4	3	0	0	0	1	10	0	64						
02:55:00 PM	1	3	0	0	4	0	0	0	0	1	0	0	0	1	11	0	69	199					
03:00:00 PM	0	0	0	0	8	1	1	0	1	1	0	0	0	0	6	0	67	207					
03:05:00 PM	0	0	0	0	5	2	1	0	0	3	0	0	0	3	5	0	58	214					
03:10:00 PM	1	0	0	0	6	8	2	0	2	1	0	0	0	2	4	0	63	221					
03:15:00 PM	1	1	0	0	6	5	1	0	1	1	0	0	1	2	2	0	66	222					
03:20:00 PM	0	0	0	0	2	2	3	0	1	0	0	0	0	1	4	0	60	220					
03:25:00 PM	0	0	0	0	2	0	2	0	0	2	0	0	0	1	2	0	43	218					
03:30:00 PM	1	0	0	0	3	1	0	0	2	2	0	0	0	4	1	0	36	219					
03:35:00 PM	0	0	0	0	4	1	1	0	0	1	0	0	0	1	1	0	32	214					
03:40:00 PM	0	1	0	0	4	2	0	0	1	1	0	0	0	3	1	0	36	211					
03:45:00 PM	1	1	0	0	4	0	2	0	0	3	0	0	0	2	1	0	36	205					
03:50:00 PM	1	1	0	0	1	0	0	0	0	1	0	0	0	1	2	0	34	184					
03:55:00 PM	0	0	0	0	1	0	1	0	0	2	0	0	0	1	5	0	31	173					

04:00:00 PM	1	0	0	0	5	1	0	0	0	0	0	0	0	1	1	0	0	26	164
04:05:00 PM	1	0	0	0	1	2	1	0	0	0	0	0	0	0	1	1	0	26	152
04:10:00 PM	0	0	0	0	1	1	1	0	0	1	0	0	0	0	5	0	0	25	135
04:15:00 PM	0	1	0	0	0	0	0	0	1	1	0	0	0	0	4	0	0	23	121
04:20:00 PM	1	0	0	0	1	1	1	0	0	1	1	0	0	0	2	0	0	24	116
04:25:00 PM	1	0	0	0	1	1	0	0	0	0	0	0	0	2	3	2	0	25	117
04:30:00 PM	0	0	0	0	1	1	0	0	0	1	0	0	0	0	1	1	0	23	108
04:35:00 PM	0	0	0	0	0	0	3	0	1	2	0	0	0	0	5	0	0	26	110
04:40:00 PM	0	1	0	0	1	0	1	0	1	2	0	0	0	0	6	3	0	31	112
04:45:00 PM	0	0	0	0	3	2	1	0	6	1	0	0	0	0	2	8	0	49	121
04:50:00 PM	0	2	0	0	3	0	0	0	2	1	0	0	0	0	3	2	0	51	127
04:55:00 PM	0	0	0	0	3	0	2	0	2	2	0	0	0	0	1	7	0	53	134
05:00:00 PM	0	3	0	0	8	1	6	0	1	4	0	0	0	0	2	9	0	64	159
05:05:00 PM	0	0	0	0	9	1	3	0	3	0	0	0	0	0	2	6	0	75	176
05:10:00 PM	0	1	0	0	14	3	9	0	5	1	0	0	0	0	3	3	0	97	206
05:15:00 PM	1	0	0	0	9	4	12	0	1	0	0	0	0	0	2	4	0	96	232
05:20:00 PM	0	2	0	0	8	3	6	0	1	0	0	0	0	0	1	2	0	95	247
05:25:00 PM	0	0	0	0	6	1	6	0	0	1	0	0	0	0	3	1	0	74	255
05:30:00 PM	1	1	0	0	10	0	5	0	1	0	0	0	0	0	1	4	0	64	273
05:35:00 PM	0	0	0	0	4	0	1	0	0	0	1	0	0	0	1	2	0	50	271
05:40:00 PM	0	2	0	0	1	1	1	0	2	1	0	0	0	0	2	3	0	45	269
05:45:00 PM	0	0	0	0	1	0	1	0	1	1	0	0	0	0	2	3	0	31	255
05:50:00 PM	1	0	0	0	0	1	1	0	1	0	0	0	1	1	1	2	0	30	250
05:55:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	3	0	22	238

Data Provided by K-D-N.com 503-594-4224	
N/S street	40th St
E/W street	Badger Ave
City, State	Redmond OR
Site Notes	
Location	44.238658 - -121.215587
Start Date	Wednesday, March 04, 2020
Start Time	04:00:00 PM
Weather	
Study ID #	
Peak Hour Start	04:30:00 PM
Peak 15 Min Start	05:05:00 PM
PHF (15-Min Int)	0.74



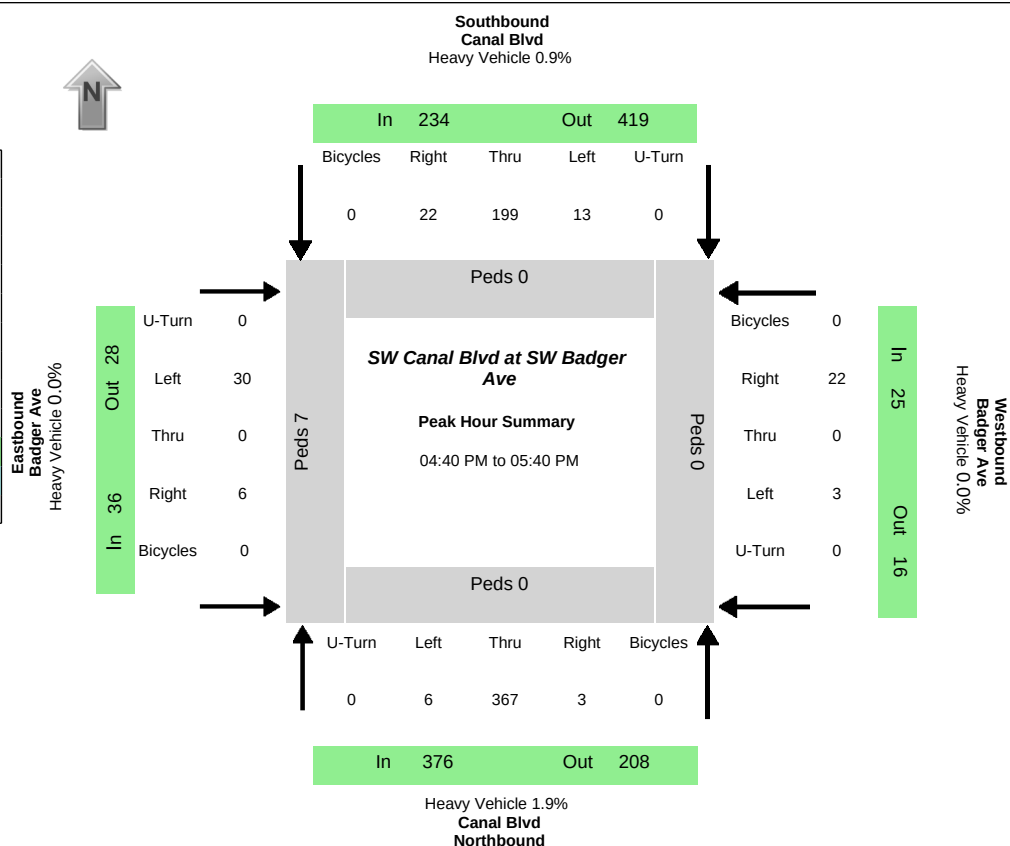
Peak-Hour Volumes (PHV)																							
Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
0	0	8	0	0	0	0	0	0	32	0	0	7	18	0	0	8	0	32	25	7	0	18	40
Percent Heavy Vehicles																							
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	0.0%	0.0%	0.0%	0.0%	2.5%

PHV- Bicycles												PHV - Pedestrians				
Northbound				Southbound				Eastbound				Westbound				Sum
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Sum
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

All Vehicle Volumes																	
Time	Northbound 40th St				Southbound				Eastbound Badger Ave				Westbound Badger Ave				Sum
	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	
04:00:00 PM	0	0	0	0					3	0	0	0	0	1	0	0	
04:05:00 PM	0	0	0	0					5	0	0	0	0	3	0	0	
04:10:00 PM	0	0	0	0					5	0	0	0	0	0	0	0	17
04:15:00 PM	0	0	0	0					2	0	0	0	1	2	0	0	18
04:20:00 PM	0	0	0	0					3	0	0	0	0	2	0	0	15
04:25:00 PM	0	0	0	0					2	0	0	0	1	2	0	0	15
04:30:00 PM	0	0	0	0					4	0	0	0	1	2	0	0	17
04:35:00 PM	0	1	0	0					3	0	0	0	0	0	0	0	16
04:40:00 PM	0	0	0	0					1	0	0	0	1	0	0	0	13
04:45:00 PM	0	0	0	0					2	0	0	0	0	5	0	0	13
04:50:00 PM	0	1	0	0					2	0	0	0	0	1	0	0	13
04:55:00 PM	0	1	0	0					0	0	0	0	1	2	0	0	15 60
05:00:00 PM	0	1	0	0					2	0	0	0	0	0	0	0	11 59
05:05:00 PM	0	1	0	0					5	0	0	0	1	2	0	0	16 60
05:10:00 PM	0	1	0	0					4	0	0	0	1	2	0	0	20 63
05:15:00 PM	0	1	0	0					3	0	0	0	1	0	0	0	22 63
05:20:00 PM	0	0	0	0					1	0	0	0	0	2	0	0	16 61
05:25:00 PM	0	1	0	0					5	0	0	0	1	2	0	0	17 65
05:30:00 PM	0	0	0	0					1	0	0	0	1	3	0	0	17 63
05:35:00 PM	0	0	0	0					3	0	0	0	1	0	0	0	18 63
05:40:00 PM	0	1	0	0					1	0	0	0	0	0	0	0	11 63
05:45:00 PM	0	0	0	0					2	0	0	0	0	1	0	0	9 59
05:50:00 PM	0	0	0	0					1	0	0	0	1	0	0	0	7 57
05:55:00 PM	0	0	0	0					1	0	0	0	0	3	0	0	9 57

N/S street	Canal Blvd
E/W street	Badger Ave
City, State	Redmond OR
Site Notes	
Location	44.23755 - -121.21244
Start Date	Wednesday, March 04, 2020
Start Time	04:00:00 PM
Weather	
Study ID #	

Peak Hour Start	04:40:00 PM
Peak 15 Min Start	05:05:00 PM
PHF (15-Min Int)	0.89

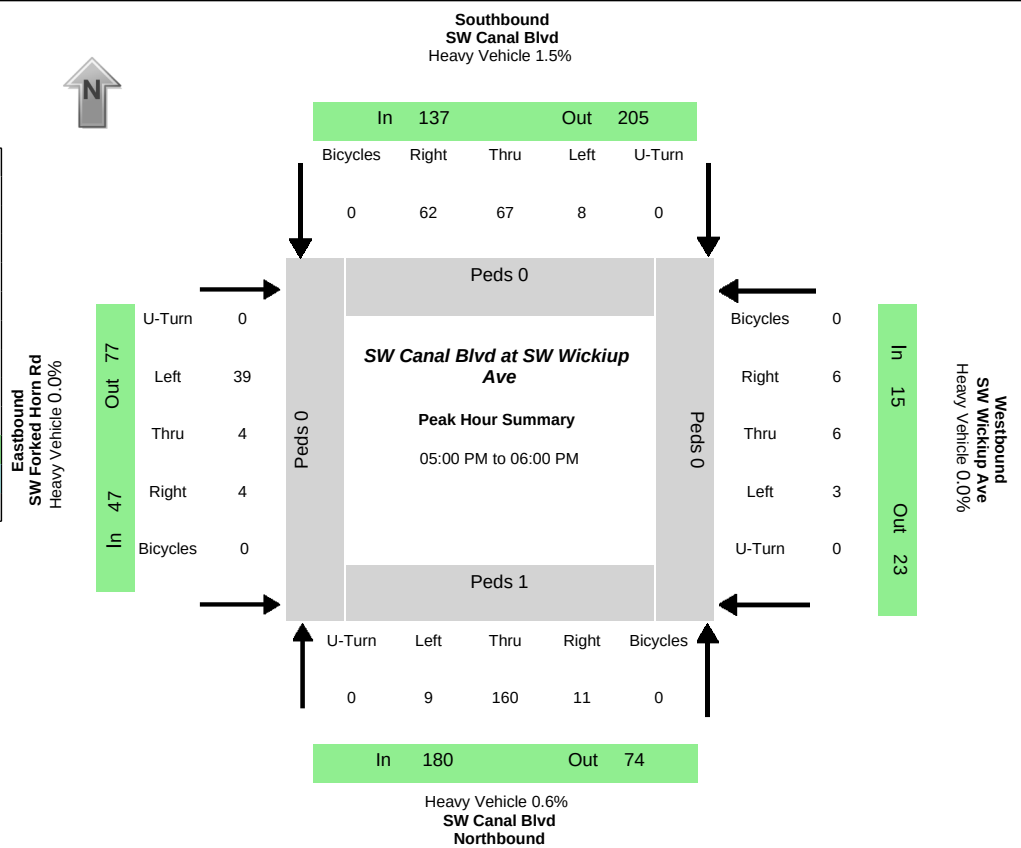


Peak-Hour Volumes (PHV)																							
Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
6	367	3	0	13	199	22	0	30	0	6	0	3	0	22	0	376	234	36	25	208	419	28	16
Percent Heavy Vehicles																							
0.0%	1.9%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	0.9%	0.0%	0.0%	1.0%	1.7%	0.0%	0.0%

PHV- Bicycles																PHV - Pedestrians					
Northbound				Southbound				Eastbound				Westbound				Sum	in Crosswalk				Sum
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn		NB	SB	EB	WB	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	

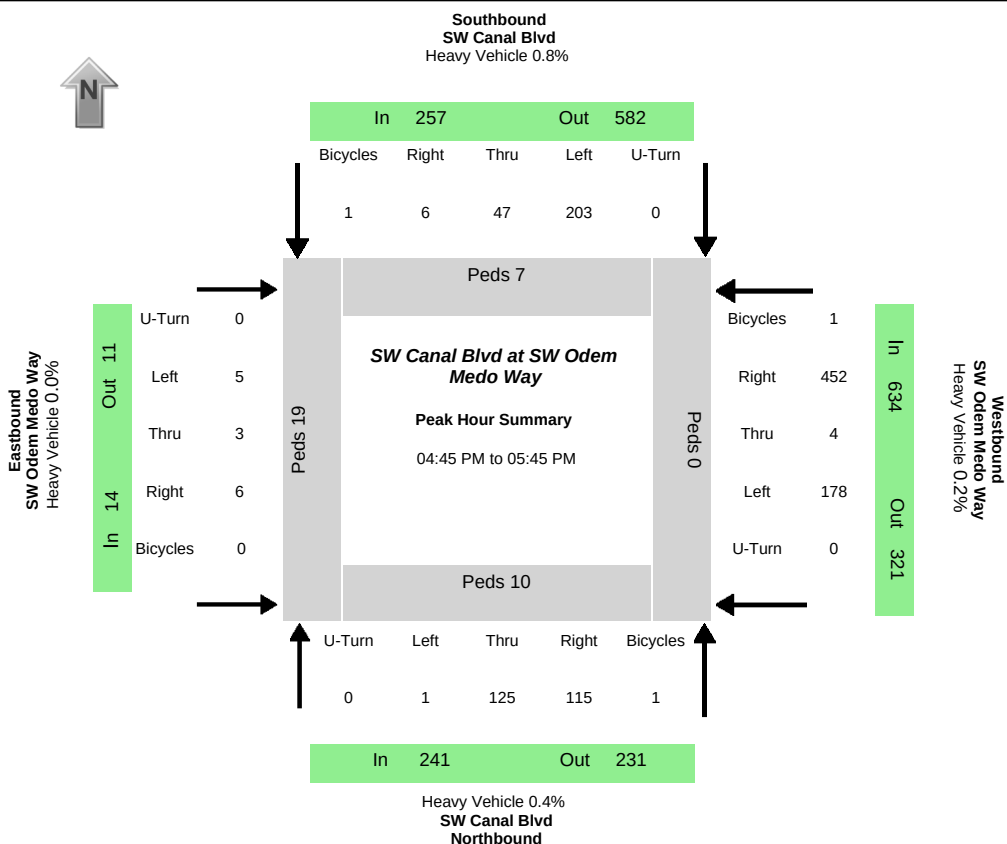
All Vehicle Volumes																		
Time	Northbound Canal Blvd				Southbound Canal Blvd				Eastbound Badger Ave				Westbound Badger Ave				15 Min	1 HR
	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Sum	Sum
04:00:00 PM	0	23	0	0	0	13	2	1	4	0	0	0	0	0	0	2	0	
04:05:00 PM	0	18	0	0	0	12	3	0	4	0	1	0	0	0	3	0		
04:10:00 PM	1	19	0	0	2	10	0	0	4	0	3	0	1	0	1	0	127	
04:15:00 PM	2	22	0	0	2	14	1	0	0	0	1	0	1	0	2	0	127	
04:20:00 PM	1	26	1	0	1	16	1	0	2	0	2	0	0	0	2	0	138	
04:25:00 PM	1	17	1	0	1	8	2	0	0	0	2	0	0	0	0	0	129	
04:30:00 PM	1	18	0	0	0	13	3	0	3	0	0	0	0	0	5	0	127	
04:35:00 PM	0	15	1	0	1	11	0	0	3	0	2	0	2	0	2	0	112	
04:40:00 PM	0	13	0	0	3	24	1	0	0	0	1	0	1	0	5	0	128	
04:45:00 PM	0	33	0	0	0	20	6	0	4	0	0	0	0	0	1	0	149	
04:50:00 PM	0	27	0	0	3	17	1	0	1	0	2	0	1	0	1	0	165	
04:55:00 PM	2	23	0	0	0	12	1	0	1	0	0	0	0	0	3	0	159 543	
05:00:00 PM	0	22	0	0	1	24	0	0	3	0	0	0	0	0	2	0	147 550	
05:05:00 PM	0	44	0	0	2	18	3	0	3	0	0	0	0	0	0	0	164 579	
05:10:00 PM	0	35	1	0	1	14	1	0	5	0	0	0	0	0	3	0	182 598	
05:15:00 PM	1	30	0	0	1	17	1	0	6	0	0	0	0	0	3	0	189 612	
05:20:00 PM	1	24	0	0	1	18	1	0	0	0	1	0	1	0	0	0	166 607	
05:25:00 PM	0	33	1	0	0	11	3	0	4	0	2	0	0	0	1	0	161 630	
05:30:00 PM	2	28	1	0	0	14	1	0	2	0	0	0	0	0	1	0	151 636	
05:35:00 PM	0	55	0	0	1	10	3	0	1	0	0	0	0	0	2	0	176 671	
05:40:00 PM	0	26	0	0	3	14	0	0	2	0	2	0	0	0	1	0	169 671	
05:45:00 PM	0	25	0	0	0	17	1	0	1	0	0	0	0	0	0	0	164 651	
05:50:00 PM	1	16	0	0	1	12	0	0	1	0	0	0	0	0	0	0	123 629	
05:55:00 PM	0	11	0	0	2	15	2	0	1	0	0	0	0	0	0	1	107 616	

Data Provided by K-D-N.com 503-594-4224	
N/S street	SW Canal Blvd
E/W street	SW Forked Horn Rd
City, State	Redmond OR
Site Notes	
Location	44.247483 - -121.195158
Start Date	Wednesday, August 29, 2018
Start Time	04:00:00 PM
Weather	
Study ID #	
Peak Hour Start	05:00:00 PM
Peak 15 Min Start	05:00:00 PM
PHF (15-Min Int)	0.92



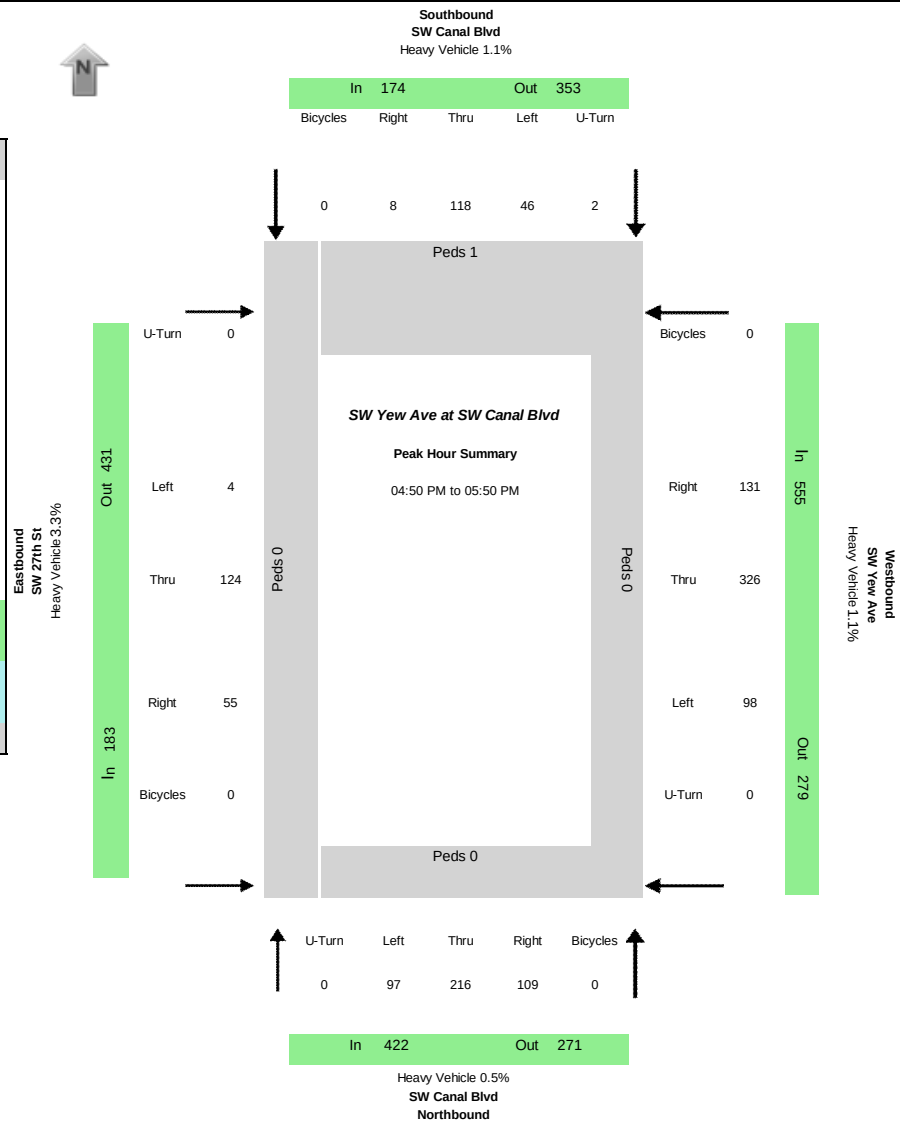
Peak-Hour Volumes (PHV)																							
Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
9	160	11	0	8	67	62	0	39	4	4	0	3	6	6	0	180	137	47	15	74	205	77	23
Percent Heavy Vehicles																							
0.0%	0.6%	0.0%	0.0%	0.0%	1.5%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	1.5%	0.0%	0.0%	1.4%	0.5%	1.3%	0.0%
PHV - Bicycles																PHV - Pedestrians							
Northbound				Southbound				Eastbound				Westbound				Sum	in Crosswalk				Sum		
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn		NB	SB	EB	WB			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
All Vehicle Volumes																							
Time	Northbound SW Canal Blvd				Southbound SW Canal Blvd				Eastbound SW Forked Horn Rd				Westbound SW Wickiup Ave				15 Min	1 HR					
	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Sum	Sum					
04:00:00 PM	0	20	1	0	0	0	1	0	5	0	0	0	0	0	0	0							
04:05:00 PM	2	12	0	0	1	6	4	0	4	1	0	0	0	0	1	0							
04:10:00 PM	0	9	1	0	1	7	2	0	4	0	1	0	0	0	0	0	83						
04:15:00 PM	1	10	1	0	1	4	1	0	2	0	0	0	0	0	1	0	77						
04:20:00 PM	1	11	1	0	0	5	2	0	0	0	1	0	0	0	0	0	67						
04:25:00 PM	0	14	1	0	2	10	2	0	3	0	0	0	0	0	3	0	77						
04:30:00 PM	0	10	0	0	1	7	5	0	1	1	0	0	1	0	0	0	82						
04:35:00 PM	1	10	0	0	0	9	3	0	5	1	1	0	1	1	1	0	94						
04:40:00 PM	0	11	0	0	2	7	3	0	3	1	0	0	0	0	2	0	88						
04:45:00 PM	1	11	0	0	1	3	2	0	1	0	0	0	0	0	0	0	81						
04:50:00 PM	0	10	0	0	1	7	8	0	1	0	1	0	0	0	0	0	76						
04:55:00 PM	1	9	1	0	0	6	2	0	1	2	0	0	0	0	0	0	69	317					
05:00:00 PM	0	13	0	0	0	5	4	0	4	1	0	0	0	0	1	0	78	318					
05:05:00 PM	1	19	0	0	0	7	7	0	2	1	1	0	2	0	1	0	91	328					
05:10:00 PM	2	14	1	0	1	3	6	0	5	1	1	0	0	0	0	0	103	337					
05:15:00 PM	1	8	2	0	1	7	7	0	1	0	0	0	0	0	0	0	102	343					
05:20:00 PM	0	15	1	0	1	5	3	0	5	0	0	0	0	0	0	0	91	352					
05:25:00 PM	0	19	1	0	0	9	3	0	2	0	0	0	0	1	1	0	93	353					
05:30:00 PM	1	10	2	0	0	9	5	0	7	1	0	0	0	1	0	0	102	363					
05:35:00 PM	0	11	1	0	1	7	3	0	4	0	0	0	0	1	1	0	101	359					
05:40:00 PM	1	11	0	0	1	6	11	0	4	0	1	0	0	2	0	0	102	367					
05:45:00 PM	1	16	2	0	0	1	5	0	1	0	1	0	0	0	0	0	93	375					
05:50:00 PM	2	8	0	0	3	3	3	0	2	0	0	0	0	1	1	0	87	370					
05:55:00 PM	0	16	1	0	0	5	5	0	2	0	0	0	1	0	1	0	81	379					

Data Provided by K-D-N.com 503-594-4224	
N/S street	SW Canal Blvd
E/W street	SW Odem Medo Way
City, State	Redmond OR
Site Notes	
Location	44.253479 - -121.187406
Start Date	Wednesday, August 29, 2018
Start Time	04:00:00 PM
Weather	
Study ID #	
Peak Hour Start	04:45:00 PM
Peak 15 Min Start	05:05:00 PM
PHF (15-Min Int)	0.89



Peak-Hour Volumes (PHV)																							
Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
1	125	115	0	203	47	6	0	5	3	6	0	178	4	452	0	241	256	14	634	231	582	11	321
Percent Heavy Vehicles																							
0.0%	0.8%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.4%	0.8%	0.0%	0.2%	0.4%	0.2%	0.0%	0.6%
PHV- Bicycles																PHV - Pedestrians							
Northbound				Southbound				Eastbound				Westbound				Sum	in Crosswalk				Sum		
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn		NB	SB	EB	WB			
0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0		3	10	7	19		0	36
All Vehicle Volumes																							
Time	Northbound SW Canal Blvd				Southbound SW Canal Blvd				Eastbound SW Odem Medo Way				Westbound SW Odem Medo Way				15 Min Sum	1 HR Sum					
	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn							
04:00:00 PM	0	9	14	0	18	2	0	0	1	0	0	0	7	0	28	0							
04:05:00 PM	0	14	9	0	23	2	0	0	0	0	0	0	8	0	42	0							
04:10:00 PM	2	9	11	0	16	6	0	0	0	0	0	0	10	1	40	0	272						
04:15:00 PM	0	5	11	0	15	2	3	0	0	0	0	0	4	1	45	0	279						
04:20:00 PM	1	4	7	0	9	7	1	0	0	2	1	0	6	0	44	0	263						
04:25:00 PM	2	10	9	0	20	3	1	0	0	0	0	0	13	0	44	0	270						
04:30:00 PM	1	5	8	0	18	2	0	0	0	0	0	0	13	0	33	0	264						
04:35:00 PM	0	8	10	0	23	4	1	0	0	0	0	0	17	0	41	0	286						
04:40:00 PM	0	7	8	0	11	5	0	0	0	0	0	0	11	0	32	0	258						
04:45:00 PM	0	6	7	0	25	2	0	0	0	0	0	0	15	0	34	0	267						
04:50:00 PM	0	6	10	0	10	5	0	0	0	0	0	0	20	1	39	0	254						
04:55:00 PM	0	13	6	0	13	1	2	0	0	0	0	0	12	0	28	0	255	1055					
05:00:00 PM	0	9	9	0	24	6	0	0	0	1	0	0	8	0	31	0	254	1064					
05:05:00 PM	0	17	13	0	13	7	0	0	1	0	0	0	14	0	49	0	277	1080					
05:10:00 PM	0	18	7	0	21	3	0	0	0	0	0	0	19	0	52	0	322	1105					
05:15:00 PM	0	8	5	0	16	5	0	0	0	0	0	0	17	0	38	0	323	1108					
05:20:00 PM	1	11	10	0	19	4	1	0	0	0	0	0	13	0	35	0	303	1120					
05:25:00 PM	0	11	7	0	11	5	1	0	0	0	0	0	14	2	41	0	275	1110					
05:30:00 PM	0	9	13	0	11	2	2	0	1	1	3	0	16	1	41	0	286	1130					
05:35:00 PM	0	14	17	0	22	3	0	0	2	1	3	0	13	0	35	0	302	1136					
05:40:00 PM	0	3	11	0	18	4	0	0	1	0	0	0	17	0	29	0	293	1145					
05:45:00 PM	0	8	9	0	15	1	0	0	1	0	0	0	9	0	35	0	271	1134					
05:50:00 PM	0	5	8	0	20	5	0	0	0	0	0	0	15	0	37	0	251	1133					
05:55:00 PM	0	12	9	0	18	2	0	0	1	0	0	0	7	0	31	0	248	1138					

Data Provided by K-D-N.com 503-594-4224	
N/S street	SW Canal Blvd
E/W street	SW 27th St
City, State	Redmond OR
Site Notes	
Location	44.244219 - -121.199063
Start Date	Tuesday, June 20, 2017
Start Time	04:00:00 PM
Weather	
Study ID #	
Peak Hour Start	04:50:00 PM
Peak 15 Min Start	05:10:00 PM
PHF (15-Min Int)	0.94



Peak-Hour Volumes (PHV)																							
Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
97	216	109	0	46	118	8	2	4	124	55	0	98	326	131	0	422	174	183	555	271	353	431	279
Percent Heavy Vehicles																							
0.0%	0.5%	0.9%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	4.0%	1.8%	0.0%	1.0%	1.5%	0.0%	0.0%	0.5%	1.1%	3.3%	1.1%	0.7%	0.8%	1.2%	2.2%
PHV- Bicycles																PHV - Pedestrians							
Northbound				Southbound				Eastbound				Westbound				Sum	in Crosswalk				Sum		
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Sum	NB	SB	EB	WB	Sum		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
All Vehicle Volumes																							
Time	Northbound SW Canal Blvd				Southbound SW Canal Blvd				Eastbound SW 27th St				Westbound SW Yew Ave				15 Min	1 HR					
	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Sum	Sum					
04:00:00 PM	3	11	5	0	3	10	2	0	0	12	2	0	6	20	5	0							
04:05:00 PM	4	12	9	0	3	13	2	0	0	15	1	0	5	31	5	0							
04:10:00 PM	5	17	11	0	3	10	6	0	0	15	3	0	10	28	11	0	298						
04:15:00 PM	7	7	9	0	4	12	8	0	0	11	3	0	6	22	8	0	316						
04:20:00 PM	4	17	5	0	4	17	6	0	0	15	4	0	5	21	12	0	326						
04:25:00 PM	4	17	7	0	10	6	7	0	0	7	4	0	9	24	9	0	311						
04:30:00 PM	11	17	7	0	4	7	3	0	0	8	1	0	5	21	5	0	303						
04:35:00 PM	5	16	7	0	4	9	1	0	1	13	4	0	7	29	9	0	298						
04:40:00 PM	8	22	4	0	4	7	2	0	0	12	3	0	6	19	4	0	285						
04:45:00 PM	4	13	6	0	0	8	0	0	0	16	4	0	8	22	10	0	287						
04:50:00 PM	8	23	5	0	3	10	0	0	0	7	2	0	14	24	11	0	289						
04:55:00 PM	2	15	12	0	4	8	1	0	1	9	7	0	12	34	15	0	318	1212					
05:00:00 PM	9	22	11	0	1	8	1	0	0	8	8	0	9	22	11	0	337	1243					
05:05:00 PM	4	22	8	0	5	7	1	0	0	13	4	0	6	33	7	0	340	1253					
05:10:00 PM	7	20	13	0	6	13	1	0	0	16	5	0	7	29	13	0	350	1264					
05:15:00 PM	7	8	6	0	3	12	0	0	0	12	4	0	7	25	16	0	340	1267					
05:20:00 PM	9	17	10	0	5	10	0	0	1	13	7	0	10	29	12	0	353	1280					
05:25:00 PM	11	20	12	0	6	11	1	0	0	17	4	0	3	26	9	0	343	1296					
05:30:00 PM	7	10	13	0	5	10	1	0	1	9	4	0	7	28	12	0	350	1314					
05:35:00 PM	11	25	7	0	5	14	0	0	1	8	1	0	9	21	9	0	338	1320					
05:40:00 PM	13	23	6	0	1	7	1	2	0	8	7	0	6	21	7	0	320	1331					
05:45:00 PM	9	11	6	0	2	8	1	0	0	4	2	0	8	34	9	0	307	1334					
05:50:00 PM	10	9	4	0	6	7	0	0	0	8	3	0	4	19	7	0	273	1304					
05:55:00 PM	6	18	5	0	0	0	0	0	0	14	1	0	7	18	6	0	246	1259					

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	0	0	0	11	0	0	0	0	6	0	0	0
Future Vol, veh/h	0	0	0	11	0	0	0	0	6	0	0	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	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	13	0	0	0	0	7	0	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	1	0	0	27	27	1	31	27	0
Stage 1	-	-	-	-	-	-	1	1	-	26	26	-
Stage 2	-	-	-	-	-	-	26	26	-	5	1	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	-	-	-	1635	-	-	988	870	1090	982	870	-
Stage 1	-	-	-	-	-	-	1027	899	-	997	878	-
Stage 2	-	-	-	-	-	-	997	878	-	1022	899	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	1635	-	-	-	863	1090	969	863	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	863	-	969	863	-
Stage 1	-	-	-	-	-	-	1027	899	-	997	871	-
Stage 2	-	-	-	-	-	-	989	871	-	1015	899	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			7.2						0		
HCM LOS							-			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	-	-	-	1635	-	-	-				
HCM Lane V/C Ratio	-	-	-	-	0.008	-	-	-				
HCM Control Delay (s)	-	0	-	-	7.2	0	-	0				
HCM Lane LOS	-	A	-	-	A	A	-	A				
HCM 95th %tile Q(veh)	-	-	-	-	0	-	-	-				

HCM 6th TWSC
3: Canal Blvd & Elkhorn Ave

Year 2020 Existing Conditions
Weekday PM Peak Hour

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	90	0	1	1	2	2	6	290	4	0	136	71
Future Vol, veh/h	90	0	1	1	2	2	6	290	4	0	136	71
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	250	-	-	-	-	-	100	-	-	50	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	99	0	1	1	2	2	7	319	4	0	149	78

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	486	486	149	524	562	321	227	0
Stage 1	149	149	-	335	335	-	-	-
Stage 2	337	337	-	189	227	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-
Pot Cap-1 Maneuver	495	484	903	467	439	724	1353	-
Stage 1	858	778	-	683	646	-	-	-
Stage 2	681	645	-	817	720	-	-	-
Platoon blocked, %								-
Mov Cap-1 Maneuver	490	482	903	465	437	724	1353	-
Mov Cap-2 Maneuver	490	482	-	465	437	-	-	-
Stage 1	854	778	-	680	643	-	-	-
Stage 2	673	642	-	816	720	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.1	11.9	0.2	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1353	-	-	490	903	527	1248	-	-
HCM Lane V/C Ratio	0.005	-	-	0.202	0.001	0.01	-	-	-
HCM Control Delay (s)	7.7	-	-	14.2	9	11.9	0	-	-
HCM Lane LOS	A	-	-	B	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.7	0	0	0	-	-

HCM 6th TWSC
4: Canal Blvd & Badger Ave

Year 2020 Existing Conditions
Weekday PM Peak Hour

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	0	6	3	0	22	6	367	3	13	199	22
Future Vol, veh/h	30	0	6	3	0	22	6	367	3	13	199	22
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	120	-	-	100	-	-	150	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	2	0	2	2	2	0	0	2	2	0	0
Mvmt Flow	34	0	7	3	0	25	7	412	3	15	224	25

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	707	696	237	698	707	414	249	0
Stage 1	267	267	-	428	428	-	-	-
Stage 2	440	429	-	270	279	-	-	-
Critical Hdwy	7.1	6.52	6.2	7.12	6.52	6.22	4.1	-
Critical Hdwy Stg 1	6.1	5.52	-	6.12	5.52	-	-	-
Critical Hdwy Stg 2	6.1	5.52	-	6.12	5.52	-	-	-
Follow-up Hdwy	3.5	4.018	3.3	3.518	4.018	3.318	2.2	-
Pot Cap-1 Maneuver	353	365	807	355	360	638	1328	-
Stage 1	743	688	-	605	585	-	-	-
Stage 2	600	584	-	736	680	-	-	-
Platoon blocked, %								-
Mov Cap-1 Maneuver	335	358	807	347	354	638	1328	-
Mov Cap-2 Maneuver	335	358	-	347	354	-	-	-
Stage 1	739	679	-	602	582	-	-	-
Stage 2	574	581	-	720	671	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.7	11.5	0.1	0.5
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1328	-	-	335	807	347	638	1144	-	-
HCM Lane V/C Ratio	0.005	-	-	0.101	0.008	0.01	0.039	0.013	-	-
HCM Control Delay (s)	7.7	-	-	16.9	9.5	15.5	10.9	8.2	-	-
HCM Lane LOS	A	-	-	C	A	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	0.1	0	-	-

Intersection				
Intersection Delay, s/veh	9.9			
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	204	622	472	210
Demand Flow Rate, veh/h	204	622	472	210
Vehicles Circulating, veh/h	311	354	211	584
Vehicles Exiting, veh/h	483	329	304	392
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.5	13.6	7.7	7.9
Approach LOS	A	B	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	204	622	472	210
Cap Entry Lane, veh/h	1005	962	1113	761
Entry HV Adj Factor	1.000	1.000	1.000	1.000
Flow Entry, veh/h	204	622	472	210
Cap Entry, veh/h	1005	962	1113	761
V/C Ratio	0.203	0.647	0.424	0.276
Control Delay, s/veh	5.5	13.6	7.7	7.9
LOS	A	B	A	A
95th %tile Queue, veh	1	5	2	1

HCM 6th TWSC
6: Canal Blvd & Forked Horn Rd - Wickiup Ave

Year 2020 Existing Conditions
Weekday PM Peak Hour

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	68	5	5	3	6	6	11	316	16	11	237	95
Future Vol, veh/h	68	5	5	3	6	6	11	316	16	11	237	95
Conflicting Peds, #/hr	1	0	0	0	0	1	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	-	-	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, %	0	0	0	0	0	0	0	1	0	0	1	2
Mvmt Flow	74	5	5	3	7	7	12	343	17	12	258	103

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	718	718	310	715	761	353	361	0	0	360	0	0
Stage 1	334	334	-	376	376	-	-	-	-	-	-	-
Stage 2	384	384	-	339	385	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	347	357	735	348	337	695	1209	-	-	1210	-	-
Stage 1	684	647	-	649	620	-	-	-	-	-	-	-
Stage 2	643	615	-	680	614	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	333	350	735	336	330	694	1209	-	-	1210	-	-
Mov Cap-2 Maneuver	333	350	-	336	330	-	-	-	-	-	-	-
Stage 1	677	641	-	643	614	-	-	-	-	-	-	-
Stage 2	623	609	-	663	608	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	18.7		13.9		0.3		0.3	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1209	-	-	346 420	1210	-	-
HCM Lane V/C Ratio	0.01	-	-	0.245 0.039	0.01	-	-
HCM Control Delay (s)	8	-	-	18.7 13.9	8	-	-
HCM Lane LOS	A	-	-	C B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.9 0.1	0	-	-

Queues
7: Canal Blvd & SW Odem Medo Way

Year 2020 Existing Conditions

Weekday PM Peak Hour

								
Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	14	192	401	1	319	169	242	288
v/c Ratio	0.10	0.58	0.65	0.00	0.36	0.22	0.36	0.24
Control Delay	28.2	35.8	8.4	10.0	19.4	6.3	8.6	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.2	35.8	8.4	10.0	19.4	6.3	8.6	9.9
Queue Length 50th (ft)	4	89	0	0	92	6	34	41
Queue Length 95th (ft)	21	138	66	3	#260	59	117	176
Internal Link Dist (ft)	252	800			6121			765
Turn Bay Length (ft)			100	75		75	100	
Base Capacity (vph)	394	417	668	640	875	781	671	1224
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.46	0.60	0.00	0.36	0.22	0.36	0.24

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

7: Canal Blvd & SW Odem Medo Way

Year 2020 Existing Conditions
Weekday PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	3	6	180	4	385	1	306	162	232	271	6
Future Volume (vph)	5	3	6	180	4	385	1	306	162	232	271	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes		0.98			1.00	0.96	1.00	1.00	0.94	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	0.99	1.00	
Frt		0.94			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1732			1794	1548	1805	1881	1516	1774	1893	
Flt Permitted		0.98			0.95	1.00	0.58	1.00	1.00	0.42	1.00	
Satd. Flow (perm)		1732			1794	1548	1108	1881	1516	781	1893	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	5	3	6	188	4	401	1	319	169	242	282	6
RTOR Reduction (vph)	0	6	0	0	0	326	0	0	83	0	0	0
Lane Group Flow (vph)	0	8	0	0	192	75	1	319	86	242	288	0
Confl. Peds. (#/hr)	10		7	7		10			19	19		
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	1%	0%	1%	0%	0%
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)		1.4			14.9	14.9	34.7	33.6	33.6	50.2	44.6	
Effective Green, g (s)		1.4			14.9	14.9	34.7	33.6	33.6	50.2	44.6	
Actuated g/C Ratio		0.02			0.19	0.19	0.43	0.42	0.42	0.63	0.56	
Clearance Time (s)		4.5			4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		30			334	288	490	790	636	640	1055	
v/s Ratio Prot		c0.00			c0.11		0.00	0.17		c0.06	0.15	
v/s Ratio Perm						0.05	0.00		0.06	c0.18		
v/c Ratio		0.27			0.57	0.26	0.00	0.40	0.14	0.38	0.27	
Uniform Delay, d1		38.8			29.7	27.8	12.8	16.2	14.3	7.2	9.2	
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		4.8			2.4	0.5	0.0	1.5	0.4	0.4	0.6	
Delay (s)		43.6			32.1	28.3	12.8	17.7	14.7	7.6	9.9	
Level of Service		D			C	C	B	B	B	A	A	
Approach Delay (s)		43.6			29.5			16.7			8.8	
Approach LOS		D			C			B			A	
Intersection Summary												
HCM 2000 Control Delay			19.0		HCM 2000 Level of Service					B		
HCM 2000 Volume to Capacity ratio			0.44									
Actuated Cycle Length (s)			80.0		Sum of lost time (s)					18.0		
Intersection Capacity Utilization			58.6%		ICU Level of Service					B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

7: Canal Blvd & SW Odem Medo Way

Year 2020 Existing Conditions
Weekday PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↑	↔	↔	↔	↔
Traffic Volume (veh/h)	5	3	6	180	4	385	1	306	162	232	271	6
Future Volume (veh/h)	5	3	6	180	4	385	1	306	162	232	271	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.98	0.98		0.98	1.00		0.96
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1885	1900	1885	1900	1900
Adj Flow Rate, veh/h	5	3	6	188	4	401	1	319	169	242	282	6
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	1	0	1	0	0
Cap, veh/h	23	14	28	399	8	354	548	787	657	530	944	20
Arrive On Green	0.04	0.04	0.04	0.22	0.22	0.22	0.00	0.42	0.42	0.09	0.51	0.51
Sat Flow, veh/h	596	357	715	1774	38	1574	1810	1885	1574	1795	1852	39
Grp Volume(v), veh/h	14	0	0	192	0	401	1	319	169	242	0	288
Grp Sat Flow(s),veh/h/ln	1668	0	0	1811	0	1574	1810	1885	1574	1795	0	1891
Q Serve(g_s), s	0.7	0.0	0.0	7.4	0.0	18.0	0.0	9.5	5.6	5.8	0.0	7.0
Cycle Q Clear(g_c), s	0.7	0.0	0.0	7.4	0.0	18.0	0.0	9.5	5.6	5.8	0.0	7.0
Prop In Lane	0.36		0.43	0.98		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	65	0	0	408	0	354	548	787	657	530	0	964
V/C Ratio(X)	0.22	0.00	0.00	0.47	0.00	1.13	0.00	0.41	0.26	0.46	0.00	0.30
Avail Cap(c_a), veh/h	375	0	0	408	0	354	659	787	657	530	0	964
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.3	0.0	0.0	26.9	0.0	31.0	13.5	16.4	15.2	11.1	0.0	11.3
Incr Delay (d2), s/veh	1.6	0.0	0.0	0.8	0.0	88.6	0.0	1.6	0.9	0.6	0.0	0.8
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(50%),veh/ln	0.3	0.0	0.0	3.2	0.0	15.3	0.0	4.1	2.0	2.1	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.9	0.0	0.0	27.7	0.0	119.6	13.5	17.9	16.2	11.7	0.0	12.1
LnGrp LOS	D	A	A	C	A	F	B	B	B	B	A	B
Approach Vol, veh/h		14			593			489			530	
Approach Delay, s/veh		38.9			89.9			17.3			11.9	
Approach LOS		D			F			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	37.9		7.6	4.6	45.3		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	18.5		18.0	5.0	21.0		18.0				
Max Q Clear Time (g_c+I1), s	7.8	11.5		2.7	2.0	9.0		20.0				
Green Ext Time (p_c), s	0.0	1.4		0.0	0.0	1.2		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				42.2								
HCM 6th LOS				D								

Intersection												
Int Delay, s/veh	6.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	4	0	87	7	16	0	0	52	10	0	0
Future Vol, veh/h	0	4	0	87	7	16	0	0	52	10	0	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	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	5	0	102	8	19	0	0	61	12	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	27	0	0	5	0	0	227	236	5	258	227	18
Stage 1	-	-	-	-	-	-	5	5	-	222	222	-
Stage 2	-	-	-	-	-	-	222	231	-	36	5	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1600	-	-	1630	-	-	733	668	1084	699	676	1066
Stage 1	-	-	-	-	-	-	1022	896	-	785	723	-
Stage 2	-	-	-	-	-	-	785	717	-	985	896	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1600	-	-	1630	-	-	697	625	1084	627	633	1066
Mov Cap-2 Maneuver	-	-	-	-	-	-	697	625	-	627	633	-
Stage 1	-	-	-	-	-	-	1022	896	-	785	677	-
Stage 2	-	-	-	-	-	-	735	671	-	929	896	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			5.8			8.5			10.9		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	1084	1600	-	-	1630	-	-	627				
HCM Lane V/C Ratio	0.056	-	-	-	0.063	-	-	0.019				
HCM Control Delay (s)	8.5	0	-	-	7.4	0	-	10.9				
HCM Lane LOS	A	A	-	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.2	0	-	-	0.2	-	-	0.1				

HCM 6th TWSC
3: Canal Blvd & Elkhorn Ave

Year 2023 No-Build Conditions
Weekday PM Peak Hour

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	1	1	16	5	12	1	356	30	10	178	56
Future Vol, veh/h	62	1	1	16	5	12	1	356	30	10	178	56
Conflicting Peds, #/hr	1	0	0	0	0	1	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	250	-	-	-	-	-	100	-	-	50	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	1	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	68	1	1	18	5	13	1	391	33	11	196	62
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	638	644	196	660	690	409	258	0	0	424	0	0
Stage 1	218	218	-	410	410	-	-	-	-	-	-	-
Stage 2	420	426	-	250	280	-	-	-	-	-	-	-
Critical Hdwy	7.11	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.11	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	391	394	850	379	371	647	1318	-	-	1146	-	-
Stage 1	787	726	-	623	599	-	-	-	-	-	-	-
Stage 2	613	589	-	759	683	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	375	390	850	375	367	646	1318	-	-	1146	-	-
Mov Cap-2 Maneuver	375	390	-	375	367	-	-	-	-	-	-	-
Stage 1	786	719	-	622	598	-	-	-	-	-	-	-
Stage 2	594	588	-	750	676	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	16.5			13.9			0			0.3		
HCM LOS	C			B								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1318	-	-	375	535	441	1146	-	-			
HCM Lane V/C Ratio	0.001	-	-	0.182	0.004	0.082	0.01	-	-			
HCM Control Delay (s)	7.7	-	-	16.7	11.8	13.9	8.2	-	-			
HCM Lane LOS	A	-	-	C	B	B	A	-	-			
HCM 95th %tile Q(veh)	0	-	-	0.7	0	0.3	0	-	-			

HCM 6th TWSC
4: Canal Blvd & Badger Ave

Year 2023 No-Build Conditions
Weekday PM Peak Hour

Intersection												
Int Delay, s/veh	5.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	95	2	26	6	3	30	39	410	8	27	240	126
Future Vol, veh/h	95	2	26	6	3	30	39	410	8	27	240	126
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	7	7	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	120	-	-	100	-	-	150	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	1	0
Mvmt Flow	107	2	29	7	3	34	44	461	9	30	270	142
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	973	966	341	978	1033	473	412	0	0	477	0	0
Stage 1	401	401	-	561	561	-	-	-	-	-	-	-
Stage 2	572	565	-	417	472	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	233	257	706	232	234	595	1158	-	-	1096	-	-
Stage 1	630	604	-	516	513	-	-	-	-	-	-	-
Stage 2	509	511	-	617	562	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	206	239	706	209	217	591	1158	-	-	1089	-	-
Mov Cap-2 Maneuver	206	239	-	209	217	-	-	-	-	-	-	-
Stage 1	606	587	-	493	490	-	-	-	-	-	-	-
Stage 2	459	488	-	573	546	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	33.3			14.2			0.7			0.6		
HCM LOS	D			B								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1158	-	-	206	620	209	511	1089	-	-		
HCM Lane V/C Ratio	0.038	-	-	0.518	0.051	0.032	0.073	0.028	-	-		
HCM Control Delay (s)	8.2	-	-	39.9	11.1	22.8	12.6	8.4	-	-		
HCM Lane LOS	A	-	-	E	B	C	B	A	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	2.7	0.2	0.1	0.2	0.1	-	-		

Intersection				
Intersection Delay, s/veh	14.7			
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	250	699	590	297
Demand Flow Rate, veh/h	258	709	592	297
Vehicles Circulating, veh/h	450	438	228	690
Vehicles Exiting, veh/h	537	382	480	457
Ped Vol Crossing Leg, #/h	0	0	1	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.5	22.7	9.8	11.4
Approach LOS	A	C	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	258	709	592	297
Cap Entry Lane, veh/h	872	883	1094	683
Entry HV Adj Factor	0.970	0.986	0.997	1.000
Flow Entry, veh/h	250	699	590	297
Cap Entry, veh/h	845	871	1090	683
V/C Ratio	0.296	0.803	0.541	0.435
Control Delay, s/veh	7.5	22.7	9.8	11.4
LOS	A	C	A	B
95th %tile Queue, veh	1	9	3	2

HCM 6th TWSC
6: Canal Blvd & Forked Horn Rd - Wickiup Ave

Year 2023 No-Build Conditions
Weekday PM Peak Hour

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	72	6	14	14	7	7	15	364	23	11	299	100
Future Vol, veh/h	72	6	14	14	7	7	15	364	23	11	299	100
Conflicting Peds, #/hr	1	0	0	0	0	1	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	-	-	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, %	0	0	0	0	0	0	0	1	0	0	1	2
Mvmt Flow	78	7	15	15	8	8	16	396	25	12	325	109
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	854	857	380	856	899	410	434	0	0	421	0	0
Stage 1	404	404	-	441	441	-	-	-	-	-	-	-
Stage 2	450	453	-	415	458	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	281	297	671	280	281	646	1136	-	-	1149	-	-
Stage 1	627	603	-	599	580	-	-	-	-	-	-	-
Stage 2	592	573	-	619	570	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	266	290	671	264	274	645	1136	-	-	1149	-	-
Mov Cap-2 Maneuver	266	290	-	264	274	-	-	-	-	-	-	-
Stage 1	618	597	-	591	572	-	-	-	-	-	-	-
Stage 2	569	565	-	592	564	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	23.3		17.7		0.3		0.2					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1136	-	-	295	313	1149	-	-				
HCM Lane V/C Ratio	0.014	-	-	0.339	0.097	0.01	-	-				
HCM Control Delay (s)	8.2	-	-	23.3	17.7	8.2	-	-				
HCM Lane LOS	A	-	-	C	C	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	1.5	0.3	0	-	-				

Queues
7: Canal Blvd & SW Odem Medo Way

Year 2023 No-Build Conditions

Weekday PM Peak Hour



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	18	240	455	1	385	203	275	361
v/c Ratio	0.13	0.61	0.66	0.00	0.57	0.32	0.49	0.33
Control Delay	27.3	34.1	7.4	13.0	28.8	10.0	14.1	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	34.1	7.4	13.0	28.8	10.0	14.1	13.8
Queue Length 50th (ft)	5	109	0	0	139	18	46	63
Queue Length 95th (ft)	24	157	60	3	#336	79	#154	241
Internal Link Dist (ft)	252	800			6121			765
Turn Bay Length (ft)			100	75		75	100	
Base Capacity (vph)	394	445	726	500	680	639	561	1109
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.54	0.63	0.00	0.57	0.32	0.49	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

7: Canal Blvd & SW Odem Medo Way

Year 2023 No-Build Conditions
Weekday PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	3	7	210	4	405	1	343	181	245	314	7
Future Volume (vph)	6	3	7	210	4	405	1	343	181	245	314	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes		0.98			1.00	0.96	1.00	1.00	0.94	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.94			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1724			1793	1548	1805	1881	1516	1781	1893	
Flt Permitted		0.98			0.95	1.00	0.55	1.00	1.00	0.28	1.00	
Satd. Flow (perm)		1724			1793	1548	1037	1881	1516	523	1893	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	7	3	8	236	4	455	1	385	203	275	353	8
RTOR Reduction (vph)	0	8	0	0	0	355	0	0	96	0	0	0
Lane Group Flow (vph)	0	10	0	0	240	100	1	385	107	275	361	0
Confl. Peds. (#/hr)	10		7	7		10			19	19		
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	1%	0%	1%	0%	0%
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)		2.8			17.5	17.5	27.3	26.2	26.2	46.2	40.6	
Effective Green, g (s)		2.8			17.5	17.5	27.3	26.2	26.2	46.2	40.6	
Actuated g/C Ratio		0.03			0.22	0.22	0.34	0.33	0.33	0.58	0.51	
Clearance Time (s)		4.5			4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		60			392	338	364	616	496	545	960	
v/s Ratio Prot		c0.01			c0.13		0.00	c0.20		c0.10	0.19	
v/s Ratio Perm						0.06	0.00		0.07	0.19		
v/c Ratio		0.17			0.61	0.29	0.00	0.62	0.22	0.50	0.38	
Uniform Delay, d1		37.5			28.2	26.1	17.4	22.7	19.5	10.3	12.0	
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.4			2.8	0.5	0.0	4.7	1.0	0.7	1.1	
Delay (s)		38.8			31.0	26.6	17.4	27.5	20.5	11.0	13.1	
Level of Service		D			C	C	B	C	C	B	B	
Approach Delay (s)		38.8			28.1			25.0			12.2	
Approach LOS		D			C			C			B	
Intersection Summary												
HCM 2000 Control Delay			22.1		HCM 2000 Level of Service				C			
HCM 2000 Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			80.0		Sum of lost time (s)				18.0			
Intersection Capacity Utilization			61.8%		ICU Level of Service				B			
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

7: Canal Blvd & SW Odem Medo Way

Year 2023 No-Build Conditions
Weekday PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	3	7	210	4	405	1	343	181	245	314	7
Future Volume (veh/h)	6	3	7	210	4	405	1	343	181	245	314	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.98	0.99		0.98	1.00		0.96
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
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1885	1900	1885	1900	1900
Adj Flow Rate, veh/h	7	3	8	236	4	455	1	385	203	275	353	8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0	0	1	0	1	0	0
Cap, veh/h	27	12	31	401	7	354	491	780	651	478	936	21
Arrive On Green	0.04	0.04	0.04	0.22	0.22	0.22	0.00	0.41	0.41	0.09	0.51	0.51
Sat Flow, veh/h	645	277	737	1781	30	1574	1810	1885	1573	1795	1849	42
Grp Volume(v), veh/h	18	0	0	240	0	455	1	385	203	275	0	361
Grp Sat Flow(s),veh/h/ln	1659	0	0	1811	0	1574	1810	1885	1573	1795	0	1890
Q Serve(g_s), s	0.8	0.0	0.0	9.5	0.0	18.0	0.0	12.0	6.9	6.8	0.0	9.3
Cycle Q Clear(g_c), s	0.8	0.0	0.0	9.5	0.0	18.0	0.0	12.0	6.9	6.8	0.0	9.3
Prop In Lane	0.39		0.44	0.98		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	71	0	0	407	0	354	491	780	651	478	0	957
V/C Ratio(X)	0.26	0.00	0.00	0.59	0.00	1.28	0.00	0.49	0.31	0.58	0.00	0.38
Avail Cap(c_a), veh/h	373	0	0	407	0	354	602	780	651	478	0	957
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.1	0.0	0.0	27.7	0.0	31.0	13.7	17.3	15.8	12.2	0.0	12.1
Incr Delay (d2), s/veh	1.9	0.0	0.0	2.2	0.0	147.9	0.0	2.2	1.2	1.7	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(50%),veh/ln	0.4	0.0	0.0	4.2	0.0	21.1	0.0	5.3	2.5	2.6	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	0.0	0.0	29.9	0.0	178.9	13.7	19.5	17.0	13.9	0.0	13.2
LnGrp LOS	D	A	A	C	A	F	B	B	B	B	A	B
Approach Vol, veh/h	18			695			589			636		
Approach Delay, s/veh	39.0			127.4			18.6			13.5		
Approach LOS	D			F			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	37.6		7.9	4.6	45.0		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	18.5		18.0	5.0	21.0		18.0				
Max Q Clear Time (g_c+l1), s	8.8	14.0		2.8	2.0	11.3		20.0				
Green Ext Time (p_c), s	0.0	1.3		0.0	0.0	1.4		0.0				
Intersection Summary												
HCM 6th Ctrl Delay	56.2											
HCM 6th LOS	E											

Intersection						
Int Delay, s/veh	5.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	2	0	0	1
Future Vol, veh/h	0	0	2	0	0	1
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	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	2	0	0	1
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1	0	5	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	4	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1635	-	1022	1090
Stage 1	-	-	-	-	1028	-
Stage 2	-	-	-	-	1024	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1635	-	1021	1090
Mov Cap-2 Maneuver	-	-	-	-	1021	-
Stage 1	-	-	-	-	1027	-
Stage 2	-	-	-	-	1024	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		7.2		8.3	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1090	-	-	1635	-	
HCM Lane V/C Ratio	0.001	-	-	0.001	-	
HCM Control Delay (s)	8.3	-	-	7.2	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Intersection												
Int Delay, s/veh	5.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	26	1	87	42	16	2	0	52	10	0	0
Future Vol, veh/h	0	26	1	87	42	16	2	0	52	10	0	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	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	31	1	102	49	19	2	0	61	12	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	68	0	0	32	0	0	295	304	32	325	295	59
Stage 1	-	-	-	-	-	-	32	32	-	263	263	-
Stage 2	-	-	-	-	-	-	263	272	-	62	32	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1546	-	-	1593	-	-	661	613	1048	632	620	1012
Stage 1	-	-	-	-	-	-	990	872	-	747	694	-
Stage 2	-	-	-	-	-	-	747	688	-	954	872	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1546	-	-	1593	-	-	627	572	1048	564	578	1012
Mov Cap-2 Maneuver	-	-	-	-	-	-	627	572	-	564	578	-
Stage 1	-	-	-	-	-	-	990	872	-	747	648	-
Stage 2	-	-	-	-	-	-	697	642	-	898	872	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	4.4	8.8	11.5
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1023	1546	-	-	1593	-	-	564
HCM Lane V/C Ratio	0.062	-	-	-	0.064	-	-	0.021
HCM Control Delay (s)	8.8	0	-	-	7.4	0	-	11.5
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.2	-	-	0.1

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	1	1	16	5	12	1	360	30	10	180	56
Future Vol, veh/h	62	1	1	16	5	12	1	360	30	10	180	56
Conflicting Peds, #/hr	1	0	0	0	0	1	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	250	-	-	-	-	-	100	-	-	50	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	1	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	68	1	1	18	5	13	1	396	33	11	198	62

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	645	651	198	667	697	414	260	0	0	429	0	0
Stage 1	220	220	-	415	415	-	-	-	-	-	-	-
Stage 2	425	431	-	252	282	-	-	-	-	-	-	-
Critical Hdwy	7.11	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.11	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	387	390	848	375	367	643	1316	-	-	1141	-	-
Stage 1	785	725	-	619	596	-	-	-	-	-	-	-
Stage 2	609	586	-	757	681	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	372	386	848	371	363	642	1316	-	-	1141	-	-
Mov Cap-2 Maneuver	372	386	-	371	363	-	-	-	-	-	-	-
Stage 1	784	718	-	618	595	-	-	-	-	-	-	-
Stage 2	590	585	-	748	674	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.6	14	0	0.3
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1316	-	-	372	531	437	1141	-	-
HCM Lane V/C Ratio	0.001	-	-	0.183	0.004	0.083	0.01	-	-
HCM Control Delay (s)	7.7	-	-	16.8	11.8	14	8.2	-	-
HCM Lane LOS	A	-	-	C	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.7	0	0.3	0	-	-

Intersection												
Int Delay, s/veh	7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	115	2	28	6	3	30	43	410	8	27	240	157
Future Vol, veh/h	115	2	28	6	3	30	43	410	8	27	240	157
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	7	7	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	120	-	-	100	-	-	150	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	1	0
Mvmt Flow	129	2	31	7	3	34	48	461	9	30	270	176

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	998	991	358	1004	1075	473	446	0	0	477	0	0
Stage 1	418	418	-	569	569	-	-	-	-	-	-	-
Stage 2	580	573	-	435	506	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	224	248	691	222	221	595	1125	-	-	1096	-	-
Stage 1	616	594	-	511	509	-	-	-	-	-	-	-
Stage 2	504	507	-	604	543	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	198	229	691	198	204	591	1125	-	-	1089	-	-
Mov Cap-2 Maneuver	198	229	-	198	204	-	-	-	-	-	-	-
Stage 1	590	577	-	486	484	-	-	-	-	-	-	-
Stage 2	452	482	-	558	528	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	43.6		14.4		0.8		0.5	
HCM LOS	E		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1125	-	-	198	609	198	504	1089	-	-
HCM Lane V/C Ratio	0.043	-	-	0.653	0.055	0.034	0.074	0.028	-	-
HCM Control Delay (s)	8.3	-	-	52	11.3	23.8	12.7	8.4	-	-
HCM Lane LOS	A	-	-	F	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	3.9	0.2	0.1	0.2	0.1	-	-

Intersection				
Intersection Delay, s/veh	15.7			
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	253	707	612	318
Demand Flow Rate, veh/h	261	717	614	318
Vehicles Circulating, veh/h	479	454	228	701
Vehicles Exiting, veh/h	540	388	512	470
Ped Vol Crossing Leg, #/h	0	0	1	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.9	24.8	10.3	12.3
Approach LOS	A	C	B	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	261	717	614	318
Cap Entry Lane, veh/h	847	868	1094	675
Entry HV Adj Factor	0.970	0.986	0.997	1.000
Flow Entry, veh/h	253	707	612	318
Cap Entry, veh/h	821	857	1090	675
V/C Ratio	0.308	0.826	0.562	0.471
Control Delay, s/veh	7.9	24.8	10.3	12.3
LOS	A	C	B	B
95th %tile Queue, veh	1	9	4	3

HCM 6th TWSC
6: Canal Blvd & Forked Horn Rd - Wickiup Ave

Year 2023 With Project
Weekday PM Peak Hour

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	72	6	14	14	7	7	15	376	23	11	319	100
Future Vol, veh/h	72	6	14	14	7	7	15	376	23	11	319	100
Conflicting Peds, #/hr	1	0	0	0	0	1	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	-	-	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, %	0	0	0	0	0	0	0	1	0	0	1	2
Mvmt Flow	78	7	15	15	8	8	16	409	25	12	347	109

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	889	892	402	891	934	423	456	0	0	434	0	0
Stage 1	426	426	-	454	454	-	-	-	-	-	-	-
Stage 2	463	466	-	437	480	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	266	283	653	265	268	635	1115	-	-	1136	-	-
Stage 1	610	589	-	589	573	-	-	-	-	-	-	-
Stage 2	583	566	-	602	558	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	252	276	653	249	261	634	1115	-	-	1136	-	-
Mov Cap-2 Maneuver	252	276	-	249	261	-	-	-	-	-	-	-
Stage 1	601	583	-	581	565	-	-	-	-	-	-	-
Stage 2	560	558	-	575	552	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	24.8		18.5		0.3		0.2	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1115	-	-	280	298	1136	-
HCM Lane V/C Ratio	0.015	-	-	0.357	0.102	0.011	-
HCM Control Delay (s)	8.3	-	-	24.8	18.5	8.2	-
HCM Lane LOS	A	-	-	C	C	A	-
HCM 95th %tile Q(veh)	0	-	-	1.6	0.3	0	-

Queues
7: Canal Blvd & SW Odem Medo Way

Year 2023 With Project
Weekday PM Peak Hour



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	18	244	455	1	397	206	275	379
v/c Ratio	0.13	0.62	0.65	0.00	0.58	0.32	0.50	0.34
Control Delay	27.3	34.1	7.4	13.0	29.5	10.2	14.7	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	34.1	7.4	13.0	29.5	10.2	14.7	14.1
Queue Length 50th (ft)	5	111	0	0	145	19	47	68
Queue Length 95th (ft)	24	158	60	3	#350	81	#161	256
Internal Link Dist (ft)	252	800			6121			765
Turn Bay Length (ft)			100	75		75	100	
Base Capacity (vph)	394	447	727	494	679	639	549	1105
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.55	0.63	0.00	0.58	0.32	0.50	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

7: Canal Blvd & SW Odem Medo Way

Year 2023 With Project
Weekday PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	3	7	214	4	405	1	353	183	245	330	7
Future Volume (vph)	6	3	7	214	4	405	1	353	183	245	330	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes		0.98			1.00	0.96	1.00	1.00	0.94	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.94			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1724			1793	1548	1805	1881	1516	1781	1893	
Flt Permitted		0.98			0.95	1.00	0.54	1.00	1.00	0.27	1.00	
Satd. Flow (perm)		1724			1793	1548	1020	1881	1516	502	1893	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	7	3	8	240	4	455	1	397	206	275	371	8
RTOR Reduction (vph)	0	8	0	0	0	355	0	0	96	0	0	0
Lane Group Flow (vph)	0	10	0	0	244	100	1	397	110	275	379	0
Confl. Peds. (#/hr)	10		7	7		10			19	19		
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	1%	0%	1%	0%	0%
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)		2.8			17.6	17.6	27.4	26.3	26.3	46.1	40.5	
Effective Green, g (s)		2.8			17.6	17.6	27.4	26.3	26.3	46.1	40.5	
Actuated g/C Ratio		0.03			0.22	0.22	0.34	0.33	0.33	0.58	0.51	
Clearance Time (s)		4.5			4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		60			394	340	360	618	498	533	958	
v/s Ratio Prot		c0.01			c0.14		0.00	c0.21		c0.10	0.20	
v/s Ratio Perm						0.06	0.00		0.07	0.20		
v/c Ratio		0.17			0.62	0.29	0.00	0.64	0.22	0.52	0.40	
Uniform Delay, d1		37.5			28.2	26.0	17.3	22.8	19.4	10.5	12.2	
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.4			2.9	0.5	0.0	5.1	1.0	0.8	1.2	
Delay (s)		38.8			31.1	26.5	17.3	27.9	20.5	11.3	13.4	
Level of Service		D			C	C	B	C	C	B	B	
Approach Delay (s)		38.8			28.1			25.4			12.5	
Approach LOS		D			C			C			B	
Intersection Summary												
HCM 2000 Control Delay			22.2		HCM 2000 Level of Service				C			
HCM 2000 Volume to Capacity ratio			0.59									
Actuated Cycle Length (s)			80.0		Sum of lost time (s)				18.0			
Intersection Capacity Utilization			62.4%		ICU Level of Service				B			
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

7: Canal Blvd & SW Odem Medo Way

Year 2023 With Project
Weekday PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	3	7	214	4	405	1	353	183	245	330	7
Future Volume (veh/h)	6	3	7	214	4	405	1	353	183	245	330	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.98	0.99		0.98	1.00		0.96
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
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1885	1900	1885	1900	1900
Adj Flow Rate, veh/h	7	3	8	240	4	455	1	397	206	275	371	8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0	0	1	0	1	0	0
Cap, veh/h	27	12	31	401	7	354	478	780	651	470	937	20
Arrive On Green	0.04	0.04	0.04	0.22	0.22	0.22	0.00	0.41	0.41	0.09	0.51	0.51
Sat Flow, veh/h	645	277	737	1781	30	1574	1810	1885	1573	1795	1851	40
Grp Volume(v), veh/h	18	0	0	244	0	455	1	397	206	275	0	379
Grp Sat Flow(s),veh/h/ln	1659	0	0	1811	0	1574	1810	1885	1573	1795	0	1891
Q Serve(g_s), s	0.8	0.0	0.0	9.7	0.0	18.0	0.0	12.5	7.1	6.8	0.0	9.9
Cycle Q Clear(g_c), s	0.8	0.0	0.0	9.7	0.0	18.0	0.0	12.5	7.1	6.8	0.0	9.9
Prop In Lane	0.39		0.44	0.98		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	71	0	0	407	0	354	478	780	651	470	0	957
V/C Ratio(X)	0.26	0.00	0.00	0.60	0.00	1.28	0.00	0.51	0.32	0.59	0.00	0.40
Avail Cap(c_a), veh/h	373	0	0	407	0	354	588	780	651	470	0	957
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.1	0.0	0.0	27.8	0.0	31.0	13.7	17.4	15.8	12.3	0.0	12.2
Incr Delay (d2), s/veh	1.9	0.0	0.0	2.4	0.0	147.9	0.0	2.4	1.3	1.9	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	4.3	0.0	21.1	0.0	5.5	2.6	2.6	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	0.0	0.0	30.2	0.0	178.9	13.7	19.8	17.1	14.2	0.0	13.4
LnGrp LOS	D	A	A	C	A	F	B	B	B	B	A	B
Approach Vol, veh/h	18			699			604			654		
Approach Delay, s/veh	39.0			127.0			18.9			13.7		
Approach LOS	D			F			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	37.6		7.9	4.6	45.0		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	18.5		18.0	5.0	21.0		18.0				
Max Q Clear Time (g_c+I1), s	8.8	14.5		2.8	2.0	11.9		20.0				
Green Ext Time (p_c), s	0.0	1.2		0.0	0.0	1.5		0.0				
Intersection Summary												
HCM 6th Ctrl Delay	55.6											
HCM 6th LOS	E											

Intersection						
Int Delay, s/veh	5.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	2	0	0	1
Future Vol, veh/h	0	0	2	0	0	1
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	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	2	0	0	1
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1	0	5	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	4	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1635	-	1022	1090
Stage 1	-	-	-	-	1028	-
Stage 2	-	-	-	-	1024	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1635	-	1021	1090
Mov Cap-2 Maneuver	-	-	-	-	1021	-
Stage 1	-	-	-	-	1027	-
Stage 2	-	-	-	-	1024	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		7.2		8.3	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1090	-	-	1635	-	
HCM Lane V/C Ratio	0.001	-	-	0.001	-	
HCM Control Delay (s)	8.3	-	-	7.2	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	26	1	88	42	16	2	0	53	10	0	0
Future Vol, veh/h	0	26	1	88	42	16	2	0	53	10	0	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	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	31	1	104	49	19	2	0	62	12	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	68	0	0	32	0	0	299	308	32	330	299	59
Stage 1	-	-	-	-	-	-	32	32	-	267	267	-
Stage 2	-	-	-	-	-	-	267	276	-	63	32	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1546	-	-	1593	-	-	657	609	1048	627	616	1012
Stage 1	-	-	-	-	-	-	990	872	-	743	692	-
Stage 2	-	-	-	-	-	-	743	685	-	953	872	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1546	-	-	1593	-	-	623	568	1048	559	574	1012
Mov Cap-2 Maneuver	-	-	-	-	-	-	623	568	-	559	574	-
Stage 1	-	-	-	-	-	-	990	872	-	743	645	-
Stage 2	-	-	-	-	-	-	692	638	-	896	872	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			4.5			8.8			11.6		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	1023	1546	-	-	1593	-	-	559				
HCM Lane V/C Ratio	0.063	-	-	-	0.065	-	-	0.021				
HCM Control Delay (s)	8.8	0	-	-	7.4	0	-	11.6				
HCM Lane LOS	A	A	-	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.2	0	-	-	0.2	-	-	0.1				

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	71	1	1	16	5	12	2	397	31	10	194	63
Future Vol, veh/h	71	1	1	16	5	12	2	397	31	10	194	63
Conflicting Peds, #/hr	1	0	0	0	0	1	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	250	-	-	-	-	-	100	-	-	50	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	1	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	78	1	1	18	5	13	2	436	34	11	213	69

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	702	709	213	728	761	454	282	0	0	470	0	0
Stage 1	235	235	-	457	457	-	-	-	-	-	-	-
Stage 2	467	474	-	271	304	-	-	-	-	-	-	-
Critical Hdwy	7.11	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.11	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	354	362	832	341	337	610	1292	-	-	1102	-	-
Stage 1	770	714	-	587	571	-	-	-	-	-	-	-
Stage 2	578	561	-	739	667	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	339	358	832	337	333	609	1292	-	-	1102	-	-
Mov Cap-2 Maneuver	339	358	-	337	333	-	-	-	-	-	-	-
Stage 1	768	707	-	586	570	-	-	-	-	-	-	-
Stage 2	559	560	-	730	660	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	18.6		14.9		0		0.3	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1292	-	-	339	501	401	1102	-	-
HCM Lane V/C Ratio	0.002	-	-	0.23	0.004	0.09	0.01	-	-
HCM Control Delay (s)	7.8	-	-	18.8	12.2	14.9	8.3	-	-
HCM Lane LOS	A	-	-	C	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.9	0	0.3	0	-	-

HCM 6th TWSC
4: Canal Blvd & Badger Ave

Year 2028 Planning Analysis
Weekday PM Peak Hour

Intersection												
Int Delay, s/veh	20.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	146	2	34	11	3	41	50	442	15	46	252	193
Future Vol, veh/h	146	2	34	11	3	41	50	442	15	46	252	193
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	7	7	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	120	-	-	100	-	-	150	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	1	0
Mvmt Flow	164	2	38	12	3	46	56	497	17	52	283	217

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1138	1129	392	1141	1229	513	500	0	0	521	0	0
Stage 1	496	496	-	625	625	-	-	-	-	-	-	-
Stage 2	642	633	-	516	604	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	180	206	661	179	179	565	1075	-	-	1056	-	-
Stage 1	559	549	-	476	480	-	-	-	-	-	-	-
Stage 2	466	476	-	546	491	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 150	184	661	153	160	561	1075	-	-	1049	-	-
Mov Cap-2 Maneuver	~ 150	184	-	153	160	-	-	-	-	-	-	-
Stage 1	530	522	-	448	452	-	-	-	-	-	-	-
Stage 2	402	448	-	487	466	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	131.3		16.8		0.8		0.8	
HCM LOS	F		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1075	-	-	150	578	153	479	1049	-	-
HCM Lane V/C Ratio	0.052	-	-	1.094	0.07	0.081	0.103	0.049	-	-
HCM Control Delay (s)	8.5	-	-	160.8	11.7	30.6	13.4	8.6	-	-
HCM Lane LOS	A	-	-	F	B	D	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	8.8	0.2	0.3	0.3	0.2	-	-

Notes												
~: Volume exceeds capacity			\$: Delay exceeds 300s			+: Computation Not Defined			*: All major volume in platoon			

Intersection				
Intersection Delay, s/veh	25.3			
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	285	785	689	355
Demand Flow Rate, veh/h	293	795	691	355
Vehicles Circulating, veh/h	546	508	249	783
Vehicles Exiting, veh/h	592	432	590	520
Ped Vol Crossing Leg, #/h	0	0	1	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	9.3	46.5	12.5	16.1
Approach LOS	A	E	B	C
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	293	795	691	355
Cap Entry Lane, veh/h	791	822	1070	621
Entry HV Adj Factor	0.972	0.987	0.997	1.000
Flow Entry, veh/h	285	785	689	355
Cap Entry, veh/h	768	811	1067	621
V/C Ratio	0.371	0.967	0.646	0.572
Control Delay, s/veh	9.3	46.5	12.5	16.1
LOS	A	E	B	C
95th %tile Queue, veh	2	16	5	4

HCM 6th TWSC
6: Canal Blvd & Forked Horn Rd - Wickiup Ave

Year 2028 Planning Analysis
Weekday PM Peak Hour

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↵	↵		↵	↵	
Traffic Vol, veh/h	78	6	15	15	7	7	16	417	24	12	356	108
Future Vol, veh/h	78	6	15	15	7	7	16	417	24	12	356	108
Conflicting Peds, #/hr	1	0	0	0	0	1	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	-	-	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, %	0	0	0	0	0	0	0	1	0	0	1	2
Mvmt Flow	85	7	16	16	8	8	17	453	26	13	387	117
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	981	985	446	983	1030	467	504	0	0	479	0	0
Stage 1	472	472	-	500	500	-	-	-	-	-	-	-
Stage 2	509	513	-	483	530	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	231	250	617	230	235	600	1071	-	-	1094	-	-
Stage 1	576	562	-	557	546	-	-	-	-	-	-	-
Stage 2	550	539	-	569	530	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	217	243	617	215	228	599	1071	-	-	1094	-	-
Mov Cap-2 Maneuver	217	243	-	215	228	-	-	-	-	-	-	-
Stage 1	567	555	-	548	537	-	-	-	-	-	-	-
Stage 2	526	530	-	541	524	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	31.3		20.8		0.3		0.2					
HCM LOS	D		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1071	-	-	242	259	1094	-	-				
HCM Lane V/C Ratio	0.016	-	-	0.445	0.122	0.012	-	-				
HCM Control Delay (s)	8.4	-	-	31.3	20.8	8.3	-	-				
HCM Lane LOS	A	-	-	D	C	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	2.1	0.4	0	-	-				

Queues
7: Canal Blvd & SW Odem Medo Way

Year 2028 Planning Analysis

Weekday PM Peak Hour



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	19	270	496	1	439	224	299	419
v/c Ratio	0.13	0.63	0.66	0.00	0.71	0.38	0.61	0.39
Control Delay	27.5	33.0	7.0	14.0	34.9	11.7	21.4	16.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	33.0	7.0	14.0	34.9	11.7	21.4	16.6
Queue Length 50th (ft)	5	122	0	0	176	26	54	81
Queue Length 95th (ft)	25	167	59	3	#400	94	#266	#341
Internal Link Dist (ft)	252	800			6121			765
Turn Bay Length (ft)			100	75		75	100	
Base Capacity (vph)	396	470	771	449	621	596	494	1070
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.57	0.64	0.00	0.71	0.38	0.61	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

7: Canal Blvd & SW Odem Medo Way

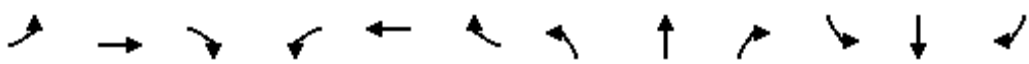
Year 2028 Planning Analysis
Weekday PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	4	7	235	5	441	1	391	199	266	366	7
Future Volume (vph)	6	4	7	235	5	441	1	391	199	266	366	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.96	1.00	1.00	0.94	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.94			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1733			1794	1548	1805	1881	1516	1787	1894	
Flt Permitted		0.98			0.95	1.00	0.52	1.00	1.00	0.18	1.00	
Satd. Flow (perm)		1733			1794	1548	983	1881	1516	343	1894	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	7	4	8	264	6	496	1	439	224	299	411	8
RTOR Reduction (vph)	0	8	0	0	0	378	0	0	100	0	1	0
Lane Group Flow (vph)	0	11	0	0	270	118	1	439	124	299	418	0
Confl. Peds. (#/hr)	10		7	7		10			19	19		
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	1%	0%	1%	0%	0%
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)		2.8			19.1	19.1	24.9	23.8	23.8	44.6	39.0	
Effective Green, g (s)		2.8			19.1	19.1	24.9	23.8	23.8	44.6	39.0	
Actuated g/C Ratio		0.03			0.24	0.24	0.31	0.30	0.30	0.56	0.49	
Clearance Time (s)		4.5			4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		60			428	369	317	559	451	485	923	
v/s Ratio Prot		c0.01			c0.15		0.00	c0.23		c0.13	0.22	
v/s Ratio Perm						0.08	0.00		0.08	0.22		
v/c Ratio		0.19			0.63	0.32	0.00	0.79	0.27	0.62	0.45	
Uniform Delay, d1		37.5			27.3	25.1	19.0	25.8	21.5	12.4	13.5	
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.5			3.0	0.5	0.0	10.6	1.5	2.3	1.6	
Delay (s)		39.0			30.3	25.6	19.0	36.4	23.0	14.7	15.1	
Level of Service		D			C	C	B	D	C	B	B	
Approach Delay (s)		39.0			27.3			31.8			14.9	
Approach LOS		D			C			C			B	
Intersection Summary												
HCM 2000 Control Delay			24.7	HCM 2000 Level of Service				C				
HCM 2000 Volume to Capacity ratio			0.67									
Actuated Cycle Length (s)			80.0	Sum of lost time (s)					18.0			
Intersection Capacity Utilization			66.6%	ICU Level of Service					C			
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

7: Canal Blvd & SW Odem Medo Way

Year 2028 Planning Analysis
Weekday PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↑	↔	↔	↔	↔
Traffic Volume (veh/h)	6	4	7	235	5	441	1	391	199	266	366	7
Future Volume (veh/h)	6	4	7	235	5	441	1	391	199	266	366	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.98	0.99		0.98	1.00		0.96
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
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1885	1900	1885	1900	1900
Adj Flow Rate, veh/h	7	4	8	264	6	496	1	439	224	299	411	8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0	0	1	0	1	0	0
Cap, veh/h	27	15	30	399	9	354	447	778	650	441	938	18
Arrive On Green	0.04	0.04	0.04	0.22	0.22	0.22	0.00	0.41	0.41	0.09	0.51	0.51
Sat Flow, veh/h	615	352	703	1771	40	1574	1810	1885	1573	1795	1856	36
Grp Volume(v), veh/h	19	0	0	270	0	496	1	439	224	299	0	419
Grp Sat Flow(s),veh/h/ln	1670	0	0	1811	0	1574	1810	1885	1573	1795	0	1892
Q Serve(g_s), s	0.9	0.0	0.0	10.9	0.0	18.0	0.0	14.3	7.8	7.5	0.0	11.3
Cycle Q Clear(g_c), s	0.9	0.0	0.0	10.9	0.0	18.0	0.0	14.3	7.8	7.5	0.0	11.3
Prop In Lane	0.37		0.42	0.98		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	72	0	0	408	0	354	447	778	650	441	0	956
V/C Ratio(X)	0.26	0.00	0.00	0.66	0.00	1.40	0.00	0.56	0.34	0.68	0.00	0.44
Avail Cap(c_a), veh/h	376	0	0	408	0	354	558	778	650	441	0	956
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.0	0.0	0.0	28.2	0.0	31.0	13.8	18.0	16.1	13.2	0.0	12.6
Incr Delay (d2), s/veh	1.9	0.0	0.0	4.0	0.0	196.4	0.0	2.9	1.5	4.1	0.0	1.5
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(50%),veh/ln	0.4	0.0	0.0	5.0	0.0	25.9	0.0	6.3	2.9	3.1	0.0	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.9	0.0	0.0	32.2	0.0	227.4	13.8	20.9	17.5	17.4	0.0	14.0
LnGrp LOS	D	A	A	C	A	F	B	C	B	B	A	B
Approach Vol, veh/h	19			766			664			718		
Approach Delay, s/veh	38.9			158.6			19.8			15.4		
Approach LOS	D			F			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	37.5		8.0	4.6	44.9		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	18.5		18.0	5.0	21.0		18.0				
Max Q Clear Time (g_c+I1), s	9.5	16.3		2.9	2.0	13.3		20.0				
Green Ext Time (p_c), s	0.0	0.8		0.0	0.0	1.5		0.0				
Intersection Summary												
HCM 6th Ctrl Delay	67.6											
HCM 6th LOS	E											

HCM 6th TWSC
1: 47th PI & Antelope Ave

Year 2040 "No Build" Conditions
Weekday PM Peak Hour

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
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	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	0	0	0	0
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	1	0	2	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1635	-	1026	1090
Stage 1	-	-	-	-	1028	-
Stage 2	-	-	-	-	1028	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1635	-	1026	1090
Mov Cap-2 Maneuver	-	-	-	-	1026	-
Stage 1	-	-	-	-	1028	-
Stage 2	-	-	-	-	1028	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0		0		
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	-	-	-	1635	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	0	-	-	0	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

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	0	4	0	88	7	24	0	0	53	15	0	0
Future Vol, veh/h	0	4	0	88	7	24	0	0	53	15	0	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	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	5	0	104	8	28	0	0	62	18	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	36	0	0	5	0	0	235	249	5	266	235	22
Stage 1	-	-	-	-	-	-	5	5	-	230	230	-
Stage 2	-	-	-	-	-	-	230	244	-	36	5	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1588	-	-	1630	-	-	724	657	1084	691	669	1061
Stage 1	-	-	-	-	-	-	1022	896	-	777	718	-
Stage 2	-	-	-	-	-	-	777	708	-	985	896	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1588	-	-	1630	-	-	688	614	1084	619	626	1061
Mov Cap-2 Maneuver	-	-	-	-	-	-	688	614	-	619	626	-
Stage 1	-	-	-	-	-	-	1022	896	-	777	671	-
Stage 2	-	-	-	-	-	-	726	662	-	928	896	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			5.4			8.5			11		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	1084	1588	-	-	1630	-	-	619				
HCM Lane V/C Ratio	0.058	-	-	-	0.064	-	-	0.029				
HCM Control Delay (s)	8.5	0	-	-	7.4	0	-	11				
HCM Lane LOS	A	A	-	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.2	0	-	-	0.2	-	-	0.1				

HCM 6th TWSC
3: Canal Blvd & Elkhorn Ave

Year 2040 "No Build" Conditions
Weekday PM Peak Hour

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	80	1	1	18	6	14	2	437	34	11	202	71
Future Vol, veh/h	80	1	1	18	6	14	2	437	34	11	202	71
Conflicting Peds, #/hr	1	0	0	0	0	1	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	250	-	-	-	-	-	100	-	-	50	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	1	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	88	1	1	20	7	15	2	480	37	12	222	78
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	761	767	222	789	827	500	300	0	0	517	0	0
Stage 1	246	246	-	503	503	-	-	-	-	-	-	-
Stage 2	515	521	-	286	324	-	-	-	-	-	-	-
Critical Hdwy	7.11	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.11	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	323	335	823	311	309	575	1273	-	-	1059	-	-
Stage 1	760	706	-	555	545	-	-	-	-	-	-	-
Stage 2	544	535	-	726	653	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	306	331	823	307	305	574	1273	-	-	1059	-	-
Mov Cap-2 Maneuver	306	331	-	307	305	-	-	-	-	-	-	-
Stage 1	758	698	-	554	544	-	-	-	-	-	-	-
Stage 2	522	534	-	716	646	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	21.2			16			0			0.3		
HCM LOS	C			C								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1273	-	-	306	472	370	1059	-	-			
HCM Lane V/C Ratio	0.002	-	-	0.287	0.005	0.113	0.011	-	-			
HCM Control Delay (s)	7.8	-	-	21.4	12.7	16	8.4	-	-			
HCM Lane LOS	A	-	-	C	B	C	A	-	-			
HCM 95th %tile Q(veh)	0	-	-	1.2	0	0.4	0	-	-			

HCM 6th TWSC
4: Canal Blvd & Badger Ave

Year 2040 "No Build" Conditions
Weekday PM Peak Hour

Intersection												
Int Delay, s/veh	27											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	142	1	24	13	1	46	30	533	18	52	292	183
Future Vol, veh/h	142	1	24	13	1	46	30	533	18	52	292	183
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	7	7	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	120	-	-	100	-	-	150	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	1	0
Mvmt Flow	160	1	27	15	1	52	34	599	20	58	328	206
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1251	1241	431	1245	1334	616	534	0	0	626	0	0
Stage 1	547	547	-	684	684	-	-	-	-	-	-	-
Stage 2	704	694	-	561	650	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 151	176	629	152	155	494	1044	-	-	965	-	-
Stage 1	525	521	-	442	452	-	-	-	-	-	-	-
Stage 2	431	447	-	516	468	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 125	159	629	134	140	491	1044	-	-	959	-	-
Mov Cap-2 Maneuver	~ 125	159	-	134	140	-	-	-	-	-	-	-
Stage 1	508	490	-	425	434	-	-	-	-	-	-	-
Stage 2	372	429	-	463	440	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	204.9		18.3		0.4		0.9					
HCM LOS	F		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1044	-	-	125	562	134	466	959	-	-		
HCM Lane V/C Ratio	0.032	-	-	1.276	0.05	0.109	0.113	0.061	-	-		
HCM Control Delay (s)	8.6	-	-	238.9	11.7	35.1	13.7	9	-	-		
HCM Lane LOS	A	-	-	F	B	E	B	A	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	10.2	0.2	0.4	0.4	0.2	-	-		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

Intersection				
Intersection Delay, s/veh	53.5			
Intersection LOS	F			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	318	899	764	373
Demand Flow Rate, veh/h	328	911	766	373
Vehicles Circulating, veh/h	577	566	278	907
Vehicles Exiting, veh/h	703	478	627	570
Ped Vol Crossing Leg, #/h	0	0	1	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	10.6	113.0	16.2	22.9
Approach LOS	B	F	C	C
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	328	911	766	373
Cap Entry Lane, veh/h	766	775	1039	547
Entry HV Adj Factor	0.969	0.987	0.997	1.000
Flow Entry, veh/h	318	899	764	373
Cap Entry, veh/h	742	765	1036	547
V/C Ratio	0.428	1.176	0.737	0.682
Control Delay, s/veh	10.6	113.0	16.2	22.9
LOS	B	F	C	C
95th %tile Queue, veh	2	29	7	5

HCM 6th TWSC
6: Canal Blvd & Forked Horn Rd - Wickiup Ave

Year 2040 "No Build" Conditions
Weekday PM Peak Hour

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	102	7	17	16	8	14	18	456	27	14	369	137
Future Vol, veh/h	102	7	17	16	8	14	18	456	27	14	369	137
Conflicting Peds, #/hr	1	0	0	0	0	1	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	-	-	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, %	0	0	0	0	0	0	0	1	0	0	1	2
Mvmt Flow	111	8	18	17	9	15	20	496	29	15	401	149

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1070	1071	476	1070	1131	512	550	0	0	525	0	0
Stage 1	506	506	-	551	551	-	-	-	-	-	-	-
Stage 2	564	565	-	519	580	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	201	223	593	201	205	566	1030	-	-	1052	-	-
Stage 1	552	543	-	522	519	-	-	-	-	-	-	-
Stage 2	514	511	-	544	503	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	184	216	593	185	198	565	1030	-	-	1052	-	-
Mov Cap-2 Maneuver	184	216	-	185	198	-	-	-	-	-	-	-
Stage 1	542	535	-	512	509	-	-	-	-	-	-	-
Stage 2	482	501	-	512	496	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	52.1		22.1		0.3		0.2	
HCM LOS	F		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1030	-	-	205	251	1052	-
HCM Lane V/C Ratio	0.019	-	-	0.668	0.165	0.014	-
HCM Control Delay (s)	8.6	-	-	52.1	22.1	8.5	-
HCM Lane LOS	A	-	-	F	C	A	-
HCM 95th %tile Q(veh)	0.1	-	-	4.1	0.6	0	-

Queues
7: Canal Blvd & SW Odem Medo Way

Year 2040 "No Build" Conditions

Weekday PM Peak Hour



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	19	285	525	1	481	243	337	453
v/c Ratio	0.13	0.63	0.67	0.00	0.91	0.46	0.64	0.43
Control Delay	27.5	31.9	6.8	14.0	53.3	14.0	25.1	17.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	31.9	6.8	14.0	53.3	14.0	25.1	17.9
Queue Length 50th (ft)	5	126	0	0	218	36	75	97
Queue Length 95th (ft)	25	173	59	3	#449	107	#339	#386
Internal Link Dist (ft)	252	800			6121			765
Turn Bay Length (ft)			100	75		75	100	
Base Capacity (vph)	396	485	801	391	531	531	526	1047
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.59	0.66	0.00	0.91	0.46	0.64	0.43

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

7: Canal Blvd & SW Odem Medo Way

Year 2040 "No Build" Conditions

Weekday PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	4	7	248	5	467	1	428	216	300	396	7
Future Volume (vph)	6	4	7	248	5	467	1	428	216	300	396	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.96	1.00	1.00	0.94	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.94			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1733			1794	1548	1805	1881	1516	1787	1894	
Flt Permitted		0.98			0.95	1.00	0.50	1.00	1.00	0.16	1.00	
Satd. Flow (perm)		1733			1794	1548	953	1881	1516	307	1894	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	7	4	8	279	6	525	1	481	243	337	445	8
RTOR Reduction (vph)	0	8	0	0	0	392	0	0	107	0	1	0
Lane Group Flow (vph)	0	11	0	0	285	133	1	481	136	337	452	0
Confl. Peds. (#/hr)	10		7	7		10			19	19		
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	1%	0%	1%	0%	0%
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)		2.8			20.2	20.2	21.0	20.0	20.0	43.5	38.0	
Effective Green, g (s)		2.8			20.2	20.2	21.0	20.0	20.0	43.5	38.0	
Actuated g/C Ratio		0.03			0.25	0.25	0.26	0.25	0.25	0.54	0.48	
Clearance Time (s)		4.5			4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		60			452	390	260	470	379	518	899	
v/s Ratio Prot		c0.01			c0.16		0.00	c0.26		c0.15	0.24	
v/s Ratio Perm						0.09	0.00		0.09	0.20		
v/c Ratio		0.19			0.63	0.34	0.00	1.02	0.36	0.65	0.50	
Uniform Delay, d1		37.5			26.6	24.4	21.8	30.0	24.7	14.7	14.5	
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.5			2.9	0.5	0.0	47.6	2.6	2.9	2.0	
Delay (s)		39.0			29.4	25.0	21.8	77.6	27.3	17.6	16.5	
Level of Service		D			C	C	C	E	C	B	B	
Approach Delay (s)		39.0			26.5			60.7			17.0	
Approach LOS		D			C			E			B	
Intersection Summary												
HCM 2000 Control Delay			34.0		HCM 2000 Level of Service				C			
HCM 2000 Volume to Capacity ratio			0.75									
Actuated Cycle Length (s)			80.0		Sum of lost time (s)				18.0			
Intersection Capacity Utilization			71.1%		ICU Level of Service				C			
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary
7: Canal Blvd & SW Odem Medo Way

Year 2040 "No Build" Conditions
Weekday PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	4	7	248	5	467	1	428	216	300	396	7
Future Volume (veh/h)	6	4	7	248	5	467	1	428	216	300	396	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.98	0.99		0.98	1.00		0.96
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
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1885	1900	1885	1900	1900
Adj Flow Rate, veh/h	7	4	8	279	6	525	1	481	243	337	445	8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0	0	1	0	1	0	0
Cap, veh/h	27	15	30	399	9	354	423	778	650	414	939	17
Arrive On Green	0.04	0.04	0.04	0.22	0.22	0.22	0.00	0.41	0.41	0.09	0.51	0.51
Sat Flow, veh/h	615	352	703	1773	38	1574	1810	1885	1573	1795	1859	33
Grp Volume(v), veh/h	19	0	0	285	0	525	1	481	243	337	0	453
Grp Sat Flow(s),veh/h/ln	1670	0	0	1811	0	1574	1810	1885	1573	1795	0	1892
Q Serve(g_s), s	0.9	0.0	0.0	11.6	0.0	18.0	0.0	16.1	8.6	7.5	0.0	12.5
Cycle Q Clear(g_c), s	0.9	0.0	0.0	11.6	0.0	18.0	0.0	16.1	8.6	7.5	0.0	12.5
Prop In Lane	0.37		0.42	0.98		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	72	0	0	408	0	354	423	778	650	414	0	956
V/C Ratio(X)	0.26	0.00	0.00	0.70	0.00	1.48	0.00	0.62	0.37	0.81	0.00	0.47
Avail Cap(c_a), veh/h	376	0	0	408	0	354	533	778	650	414	0	956
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.0	0.0	0.0	28.5	0.0	31.0	13.9	18.5	16.3	16.7	0.0	12.9
Incr Delay (d2), s/veh	1.9	0.0	0.0	5.2	0.0	231.6	0.0	3.7	1.6	11.8	0.0	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(50%),veh/ln	0.4	0.0	0.0	5.4	0.0	29.3	0.0	7.2	3.2	4.4	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.9	0.0	0.0	33.7	0.0	262.6	13.9	22.2	18.0	28.5	0.0	14.6
LnGrp LOS	D	A	A	C	A	F	B	C	B	C	A	B
Approach Vol, veh/h	19			810			725			790		
Approach Delay, s/veh	38.9			182.0			20.7			20.5		
Approach LOS	D			F			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	37.5		8.0	4.6	44.9		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	18.5		18.0	5.0	21.0		18.0				
Max Q Clear Time (g_c+I1), s	9.5	18.1		2.9	2.0	14.5		20.0				
Green Ext Time (p_c), s	0.0	0.2		0.0	0.0	1.5		0.0				
Intersection Summary												
HCM 6th Ctrl Delay	76.6											
HCM 6th LOS	E											

Intersection						
Int Delay, s/veh	5.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	2	0	0	1
Future Vol, veh/h	0	0	2	0	0	1
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	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	2	0	0	1
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1	0	5	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	4	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1635	-	1022	1090
Stage 1	-	-	-	-	1028	-
Stage 2	-	-	-	-	1024	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1635	-	1021	1090
Mov Cap-2 Maneuver	-	-	-	-	1021	-
Stage 1	-	-	-	-	1027	-
Stage 2	-	-	-	-	1024	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		7.2		8.3	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1090	-	-	1635	-	
HCM Lane V/C Ratio	0.001	-	-	0.001	-	
HCM Control Delay (s)	8.3	-	-	7.2	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Intersection												
Int Delay, s/veh	5.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	26	1	88	42	24	2	0	53	15	0	0
Future Vol, veh/h	0	26	1	88	42	24	2	0	53	15	0	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	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	31	1	104	49	28	2	0	62	18	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	77	0	0	32	0	0	303	317	32	334	303	63
Stage 1	-	-	-	-	-	-	32	32	-	271	271	-
Stage 2	-	-	-	-	-	-	271	285	-	63	32	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1535	-	-	1593	-	-	653	602	1048	623	613	1007
Stage 1	-	-	-	-	-	-	990	872	-	739	689	-
Stage 2	-	-	-	-	-	-	739	679	-	953	872	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1535	-	-	1593	-	-	619	561	1048	556	571	1007
Mov Cap-2 Maneuver	-	-	-	-	-	-	619	561	-	556	571	-
Stage 1	-	-	-	-	-	-	990	872	-	739	642	-
Stage 2	-	-	-	-	-	-	689	633	-	896	872	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			4.2			8.8			11.7		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	1022	1535	-	-	1593	-	-	556				
HCM Lane V/C Ratio	0.063	-	-	-	0.065	-	-	0.032				
HCM Control Delay (s)	8.8	0	-	-	7.4	0	-	11.7				
HCM Lane LOS	A	A	-	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.2	0	-	-	0.2	-	-	0.1				

HCM 6th TWSC
3: Canal Blvd & Elkhorn Ave

Year 2040 "With Project" Conditions
Weekday PM Peak Hour

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	80	1	1	18	6	14	2	441	34	11	204	71
Future Vol, veh/h	80	1	1	18	6	14	2	441	34	11	204	71
Conflicting Peds, #/hr	1	0	0	0	0	1	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	250	-	-	-	-	-	100	-	-	50	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	1	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	88	1	1	20	7	15	2	485	37	12	224	78

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	768	774	224	796	834	505	302	0	0	522	0	0
Stage 1	248	248	-	508	508	-	-	-	-	-	-	-
Stage 2	520	526	-	288	326	-	-	-	-	-	-	-
Critical Hdwy	7.11	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.11	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	320	332	820	307	306	571	1270	-	-	1055	-	-
Stage 1	758	705	-	551	542	-	-	-	-	-	-	-
Stage 2	541	532	-	724	652	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	303	328	820	303	302	570	1270	-	-	1055	-	-
Mov Cap-2 Maneuver	303	328	-	303	302	-	-	-	-	-	-	-
Stage 1	756	697	-	550	541	-	-	-	-	-	-	-
Stage 2	519	531	-	714	645	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	21.5		16.1		0		0.3	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1270	-	-	303	469	366	1055	-	-
HCM Lane V/C Ratio	0.002	-	-	0.29	0.005	0.114	0.011	-	-
HCM Control Delay (s)	7.8	-	-	21.7	12.7	16.1	8.5	-	-
HCM Lane LOS	A	-	-	C	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.2	0	0.4	0	-	-

Intersection												
Int Delay, s/veh	41.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	162	1	26	13	1	46	34	533	18	52	292	214
Future Vol, veh/h	162	1	26	13	1	46	34	533	18	52	292	214
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	7	7	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	120	-	-	100	-	-	150	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	1	0
Mvmt Flow	182	1	29	15	1	52	38	599	20	58	328	240
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1276	1266	448	1271	1376	616	568	0	0	626	0	0
Stage 1	564	564	-	692	692	-	-	-	-	-	-	-
Stage 2	712	702	-	579	684	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 145	171	615	146	146	494	1014	-	-	965	-	-
Stage 1	514	512	-	437	448	-	-	-	-	-	-	-
Stage 2	427	443	-	504	452	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 119	154	615	127	131	491	1014	-	-	959	-	-
Mov Cap-2 Maneuver	~ 119	154	-	127	131	-	-	-	-	-	-	-
Stage 1	495	481	-	418	428	-	-	-	-	-	-	-
Stage 2	367	424	-	450	425	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	294.5		18.8			0.5			0.8			
HCM LOS	F		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1014	-	-	119	554	127	464	959	-	-		
HCM Lane V/C Ratio	0.038	-	-	1.53	0.055	0.115	0.114	0.061	-	-		
HCM Control Delay (s)	8.7	-	-	\$ 341.6	11.9	37	13.8	9	-	-		
HCM Lane LOS	A	-	-	F	B	E	B	A	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	13.1	0.2	0.4	0.4	0.2	-	-		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection				
Intersection Delay, s/veh	58.3			
Intersection LOS	F			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	321	907	785	395
Demand Flow Rate, veh/h	331	919	787	395
Vehicles Circulating, veh/h	607	581	278	918
Vehicles Exiting, veh/h	706	484	660	582
Ped Vol Crossing Leg, #/h	0	0	1	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	11.2	124.4	17.2	26.2
Approach LOS	B	F	C	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	331	919	787	395
Cap Entry Lane, veh/h	743	763	1039	541
Entry HV Adj Factor	0.969	0.987	0.997	1.000
Flow Entry, veh/h	321	907	785	395
Cap Entry, veh/h	720	753	1036	541
V/C Ratio	0.446	1.205	0.757	0.730
Control Delay, s/veh	11.2	124.4	17.2	26.2
LOS	B	F	C	D
95th %tile Queue, veh	2	30	8	6

HCM 6th TWSC
6: Canal Blvd & Forked Horn Rd - Wickiup Ave

Year 2040 "With Project" Conditions
Weekday PM Peak Hour

Intersection												
Int Delay, s/veh	7.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Vol, veh/h	102	7	17	16	8	14	18	468	27	14	389	137
Future Vol, veh/h	102	7	17	16	8	14	18	468	27	14	389	137
Conflicting Peds, #/hr	1	0	0	0	0	1	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	-	-	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, %	0	0	0	0	0	0	0	1	0	0	1	2
Mvmt Flow	111	8	18	17	9	15	20	509	29	15	423	149

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1105	1106	498	1105	1166	525	572	0	0	538	0	0
Stage 1	528	528	-	564	564	-	-	-	-	-	-	-
Stage 2	577	578	-	541	602	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	190	212	576	190	196	556	1011	-	-	1040	-	-
Stage 1	538	531	-	514	512	-	-	-	-	-	-	-
Stage 2	506	504	-	529	492	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	173	205	576	174	189	555	1011	-	-	1040	-	-
Mov Cap-2 Maneuver	173	205	-	174	189	-	-	-	-	-	-	-
Stage 1	527	524	-	504	502	-	-	-	-	-	-	-
Stage 2	474	494	-	497	485	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	59.4		23.3		0.3		0.2	
HCM LOS	F		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1011	-	-	193	238	1040	-
HCM Lane V/C Ratio	0.019	-	-	0.71	0.174	0.015	-
HCM Control Delay (s)	8.6	-	-	59.4	23.3	8.5	-
HCM Lane LOS	A	-	-	F	C	A	-
HCM 95th %tile Q(veh)	0.1	-	-	4.5	0.6	0	-

Queues

Year 2040 "With Project" Conditions

7: Canal Blvd & SW Odem Medo Way

Weekday PM Peak Hour



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	19	289	525	1	492	245	337	471
v/c Ratio	0.13	0.63	0.67	0.00	0.94	0.47	0.64	0.45
Control Delay	27.5	31.6	6.6	14.0	59.0	14.3	25.1	18.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	31.6	6.6	14.0	59.0	14.3	25.1	18.4
Queue Length 50th (ft)	5	128	0	0	225	37	74	103
Queue Length 95th (ft)	25	177	59	3	#463	109	#337	#408
Internal Link Dist (ft)	252	800			6121			765
Turn Bay Length (ft)			100	75		75	100	
Base Capacity (vph)	396	487	803	383	524	525	526	1038
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.59	0.65	0.00	0.94	0.47	0.64	0.45

Intersection Summary

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

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

7: Canal Blvd & SW Odem Medo Way

Year 2040 "With Project" Conditions

Weekday PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	4	7	252	5	467	1	438	218	300	412	7
Future Volume (vph)	6	4	7	252	5	467	1	438	218	300	412	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.96	1.00	1.00	0.94	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.94			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1733			1794	1548	1805	1881	1516	1787	1894	
Flt Permitted		0.98			0.95	1.00	0.49	1.00	1.00	0.17	1.00	
Satd. Flow (perm)		1733			1794	1548	937	1881	1516	312	1894	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	7	4	8	283	6	525	1	492	245	337	463	8
RTOR Reduction (vph)	0	8	0	0	0	390	0	0	108	0	1	0
Lane Group Flow (vph)	0	11	0	0	289	135	1	492	137	337	470	0
Confl. Peds. (#/hr)	10		7	7		10			19	19		
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	1%	0%	1%	0%	0%
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)		2.8			20.6	20.6	20.6	19.6	19.6	43.1	37.6	
Effective Green, g (s)		2.8			20.6	20.6	20.6	19.6	19.6	43.1	37.6	
Actuated g/C Ratio		0.03			0.26	0.26	0.26	0.25	0.25	0.54	0.47	
Clearance Time (s)		4.5			4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		60			461	398	252	460	371	518	890	
v/s Ratio Prot		c0.01			c0.16		0.00	c0.26		c0.15	0.25	
v/s Ratio Perm						0.09	0.00		0.09	0.20		
v/c Ratio		0.19			0.63	0.34	0.00	1.07	0.37	0.65	0.53	
Uniform Delay, d1		37.5			26.3	24.2	22.1	30.2	25.1	14.6	15.0	
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.5			2.7	0.5	0.0	61.8	2.8	2.9	2.2	
Delay (s)		39.0			29.0	24.7	22.1	92.0	27.9	17.5	17.2	
Level of Service		D			C	C	C	F	C	B	B	
Approach Delay (s)		39.0			26.2			70.6			17.3	
Approach LOS		D			C			E			B	
Intersection Summary												
HCM 2000 Control Delay			37.1		HCM 2000 Level of Service					D		
HCM 2000 Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			80.0		Sum of lost time (s)					18.0		
Intersection Capacity Utilization			71.8%		ICU Level of Service					C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

7: Canal Blvd & SW Odem Medo Way

Year 2040 "With Project" Conditions
Weekday PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	4	7	252	5	467	1	438	218	300	412	7
Future Volume (veh/h)	6	4	7	252	5	467	1	438	218	300	412	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.98	0.99		0.98	1.00		0.96
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
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1885	1900	1885	1900	1900
Adj Flow Rate, veh/h	7	4	8	283	6	525	1	492	245	337	463	8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0	0	1	0	1	0	0
Cap, veh/h	27	15	30	399	8	354	410	778	650	408	940	16
Arrive On Green	0.04	0.04	0.04	0.22	0.22	0.22	0.00	0.41	0.41	0.09	0.51	0.51
Sat Flow, veh/h	615	352	703	1774	38	1574	1810	1885	1573	1795	1861	32
Grp Volume(v), veh/h	19	0	0	289	0	525	1	492	245	337	0	471
Grp Sat Flow(s),veh/h/ln	1670	0	0	1811	0	1574	1810	1885	1573	1795	0	1893
Q Serve(g_s), s	0.9	0.0	0.0	11.8	0.0	18.0	0.0	16.6	8.7	7.5	0.0	13.1
Cycle Q Clear(g_c), s	0.9	0.0	0.0	11.8	0.0	18.0	0.0	16.6	8.7	7.5	0.0	13.1
Prop In Lane	0.37		0.42	0.98		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	72	0	0	408	0	354	410	778	650	408	0	956
V/C Ratio(X)	0.26	0.00	0.00	0.71	0.00	1.48	0.00	0.63	0.38	0.83	0.00	0.49
Avail Cap(c_a), veh/h	376	0	0	408	0	354	520	778	650	408	0	956
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.0	0.0	0.0	28.6	0.0	31.0	13.9	18.7	16.3	17.0	0.0	13.0
Incr Delay (d2), s/veh	1.9	0.0	0.0	5.6	0.0	231.6	0.0	3.9	1.7	13.1	0.0	1.8
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(50%),veh/ln	0.4	0.0	0.0	5.6	0.0	29.3	0.0	7.5	3.2	4.5	0.0	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.9	0.0	0.0	34.2	0.0	262.6	13.9	22.5	18.0	30.1	0.0	14.8
LnGrp LOS	D	A	A	C	A	F	B	C	B	C	A	B
Approach Vol, veh/h	19			814			738			808		
Approach Delay, s/veh	38.9			181.5			21.0			21.2		
Approach LOS	D			F			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	37.5		8.0	4.6	44.9		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	18.5		18.0	5.0	21.0		18.0				
Max Q Clear Time (g_c+I1), s	9.5	18.6		2.9	2.0	15.1		20.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	1.4		0.0				
Intersection Summary												
HCM 6th Ctrl Delay	76.1											
HCM 6th LOS	E											



Project #: 1422
 Project Name: Badger Ave Subdivision
 Analyst: JWW
 Date: 9/14/2020
 North-South Street: Canal Boulevard
 East-West Street: Badger Avenue
 Intersection: Canal Boulevard/Badger Avenue
 Scenario: Year 2023 With-Site Conditions

Volume-Based Warrant Summary			
Warrant No.	Description	Warrant Factor	Met?
Warrant 1:	Eight-Hour Vehicular Volume	100%	Yes
Warrant 2:	Four-Hour Vehicular Volume	100%	No
Warrant 3:	Peak Hour	100%	No

Volume Adjustment Factor: 1.0
 North-South Approach: Major
 East-West Approach: Minor
 Major Street No. Thru Lanes: 1
 Minor Street No. Thru Lanes: 1
 Speed Factor (Speed >40mph): No
 Population Factor (Population <10,000): No
 Warrant Factor: 100%
 Peak Hour/Daily Count: Peak Hour

Major Road	Minor Road
Rural Interstate	Rural Interstate
Rural Principal Arterial	Rural Principal Arterial
Rural Minor Arterial	Rural Minor Arterial
Rural Major Collector	Rural Major Collector
Rural Minor Collector	Rural Minor Collector
Urban Interstate	Urban Interstate
Urban Other Frwy & Expwy	Urban Other Frwy & Expwy
Urban Principal Arterial	Urban Principal Arterial
Urban Minor Arterial	Urban Minor Arterial

Case: 9 Case: 9

Peak Hour Traffic Volumes			
Major Street		Minor Street	
NB	SB	EB	WB
460	424	145	39

Planning Growth Factors		
NB	1.00	1.00
SB	1.00	
EB	1.00	
WB	1.00	

Traffic Volumes		Traffic Volume Profile				Hourly Profiles (NCHRP 03-110)	
		Major Street		Minor Street		Major Street Profile	Minor Street Profile
		NB	SB	EB	WB		
12:00 AM	Highest Hour	460	424	145	39	1.00	1.00
2	Highest Hour	435	401	137	37	0.95	0.95
3	Highest Hour	429	396	135	36	0.93	0.93
4	Highest Hour	411	379	130	35	0.89	0.89
5	Highest Hour	405	373	128	34	0.88	0.88
6	Highest Hour	405	373	128	34	0.88	0.88
7	Highest Hour	386	356	122	33	0.84	0.84
8	Highest Hour	380	351	120	32	0.83	0.83
9	Highest Hour	368	339	116	31	0.80	0.80
10	Highest Hour	343	317	108	29	0.75	0.75
11	Highest Hour	331	305	104	28	0.72	0.72
12	Highest Hour	325	300	102	28	0.71	0.71
13	Highest Hour	313	288	99	27	0.68	0.68
14	Highest Hour	270	249	85	23	0.59	0.59
15	Highest Hour	215	198	68	18	0.47	0.47
16	Highest Hour	202	187	64	17	0.44	0.44
17	Highest Hour	141	130	44	12	0.31	0.31
18	Highest Hour	117	107	37	10	0.25	0.25
19	Highest Hour	61	57	19	5	0.13	0.13
20	Highest Hour	43	40	14	4	0.09	0.09
21	Highest Hour	37	34	12	3	0.08	0.08
22	Highest Hour	25	23	8	2	0.05	0.05
23	Highest Hour	12	11	4	1	0.03	0.03
24	Highest Hour	12	11	4	1	0.03	0.03



Project #: 1422
 Project Name: Badger Ave Subdivision
 Analyst: JWW
 Date: 9/14/2020
 North-South Street: Canal Boulevard
 East-West Street: Badger Avenue
 Intersection: Canal Boulevard/Badger Avenue
 Scenario: Year 2028 With-Site Conditions

Volume-Based Warrant Summary			
Warrant No.	Description	Warrant Factor	Met?
Warrant 1:	Eight-Hour Vehicular Volume	100%	Yes
Warrant 2:	Four-Hour Vehicular Volume	100%	Yes
Warrant 3:	Peak Hour	100%	No

Volume Adjustment Factor: 1.0
 North-South Approach: Major
 East-West Approach: Minor
 Major Street No. Thru Lanes: 1
 Minor Street No. Thru Lanes: 1
 Speed Factor (Speed >40mph): No
 Population Factor (Population <10,000): No
 Warrant Factor: 100%
 Peak Hour/Daily Count: Peak Hour

Major Road	Minor Road
Rural Interstate	Rural Interstate
Rural Principal Arterial	Rural Principal Arterial
Rural Minor Arterial	Rural Minor Arterial
Rural Major Collector	Rural Major Collector
Rural Minor Collector	Rural Minor Collector
Urban Interstate	Urban Interstate
Urban Other Frwy & Expwy	Urban Other Frwy & Expwy
Urban Principal Arterial	Urban Principal Arterial
Urban Minor Arterial	Urban Minor Arterial

Case: 9 Case: 9

Peak Hour Traffic Volumes			
Major Street		Minor Street	
NB	SB	EB	WB
506	491	182	55

Planning Growth Factors		
NB	1.00	1.00
SB	1.00	
EB	1.00	
WB	1.00	

Traffic Volumes		Traffic Volume Profile				Hourly Profiles (NCHRP 03-110)	
		Major Street		Minor Street		Major Street Profile	Minor Street Profile
		NB	SB	EB	WB		
12:00 AM	Highest Hour	506	491	182	55	1.00	1.00
2	Highest Hour	479	465	172	52	0.95	0.95
3	Highest Hour	472	458	170	51	0.93	0.93
4	Highest Hour	452	439	163	49	0.89	0.89
5	Highest Hour	445	432	160	48	0.88	0.88
6	Highest Hour	445	432	160	48	0.88	0.88
7	Highest Hour	425	412	153	46	0.84	0.84
8	Highest Hour	418	406	150	45	0.83	0.83
9	Highest Hour	405	393	146	44	0.80	0.80
10	Highest Hour	378	367	136	41	0.75	0.75
11	Highest Hour	364	354	131	40	0.72	0.72
12	Highest Hour	358	347	129	39	0.71	0.71
13	Highest Hour	344	334	124	37	0.68	0.68
14	Highest Hour	297	288	107	32	0.59	0.59
15	Highest Hour	236	229	85	26	0.47	0.47
16	Highest Hour	223	216	80	24	0.44	0.44
17	Highest Hour	155	151	56	17	0.31	0.31
18	Highest Hour	128	124	46	14	0.25	0.25
19	Highest Hour	67	65	24	7	0.13	0.13
20	Highest Hour	47	46	17	5	0.09	0.09
21	Highest Hour	40	39	15	4	0.08	0.08
22	Highest Hour	27	26	10	3	0.05	0.05
23	Highest Hour	13	13	5	1	0.03	0.03
24	Highest Hour	13	13	5	1	0.03	0.03

CIVIL ENGINEERS & PLANNERS

**Applicant's Burden of Proof Statement
City of Redmond Master Development Plan (Final Area Plan)**

Request: An amendment to the City of Redmond Zoning Map from UH-10 to R3 and R4, Master Development Plan approval and Annexation for a 16.25-acre parcel located within the Redmond Urban Growth Boundary.

**Applicant/
Owner:** Ed Bartholemy
18485 SW Scholls Ferry Rd.
Beaverton, OR 97007
503-628-0526
edb@kintonland.com

Location: 4860 SW Badger Ave., Redmond, OR. Tax Map and Lot # 15-13-30 / 1401. The property lies on the west side of the COID Lateral B, south of Antelope Ave, and north of Coyote Avenue.

Agents: Dirk Duryee / Tye Engineering & Surveying LLC
Joe Bessman P.E., Transight Consulting, LLC
Steve Miller, Emerio Design, LLC

I. APPLICABLE CRITERIA:

The following are the applicable sections from The City of Redmond Urban Area Comprehensive Plan, the Southwest Area Plan (as an element of the Comprehensive Plan) and the Redmond Development Code, Chapter 8 of the Redmond Development Code:

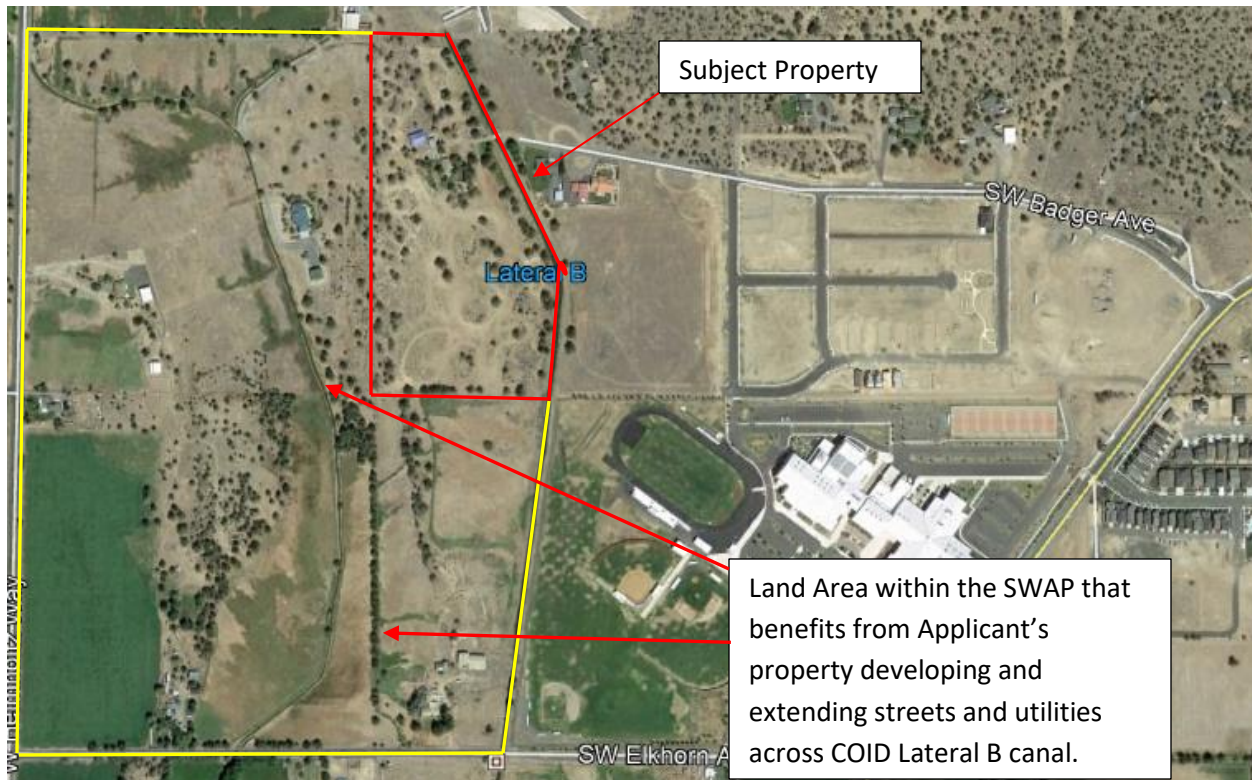
- The City of Redmond Urban Area 2020 Comprehensive Plan.
- The City of Redmond Framework Plan
- City of Redmond Southwest Area Plan (SWAP)
- City of Redmond Transportation System Plan
- City of Redmond Public Facility Master Plans (water, Wastewater)
- City of Redmond Park Master Plan
- Oregon Revised Statutes (ORS) – ORS 197.250
- Oregon Administrative Rules (OAR)
 - Division 12, Transportation Planning Rule – OAR 660-012-0000
 - Division 15, Statewide Planning Goals and Guidelines – OAR 660-015-0000
- The City of Redmond Development Code, Chapter 8;

- Section 8.0300, Master Development Plans
- Sections 8.0750 through 8.0775, Amendments

**Because many of the criteria are redundant in the overlap between the Statewide Planning Goals, the City of Redmond Comprehensive Plan and the Redmond Development Code, there are references to the reader within this document to the applicable section where the similar criteria has already been addressed by the proposed findings. Additionally, some of the plans and documents listed above (Transportation System Plan, Public Facility Master Plans, and Park Master Plan) are not addressed directly in this document, but are addressed as per their inclusion in and applicability to the other elements listed above.*

II. BACKGROUND & HISTORY: The City of Redmond added more than 2,300 acres of “urbanizable” land to its Urban Growth Boundary (UGB) in July 2006 but did not complete detailed land use planning steps for all of that land. Rather, a “Framework Plan” was adopted by the City of Redmond as part of the expanded UGB to provide guidance for future land uses, densities, neighborhood amenities and necessary public facilities and services. At this same time, the City adopted an “Area Planning” program to provide property owners and the city a process for completing the planning steps necessary for annexation and development of lands within the UGB expansion area. The Southwest Area Plan (SWAP) which was adopted by the City in 2014 sets forth a land use concept, comprehensive plan designations, and related public facilities and amenities for a portion of the area included in the 2006 UGB expansion. The SWAP was created for overall coordinated planning of vacant lands within the boundary (including the subject property) and was intended to be the implementing guide for compliance with the Statewide Planning Goals, the Redmond Comprehensive Plan and the Redmond Framework Plan. Within the SWAP are maps (adopted as the official Comprehensive Plan map for the area) and policies that guide development – and include flexibility in final Zoning Map designations, based on a design that enhances and fulfills the overall intent of the SWAP as all elements are integrated.

As noted above, the adopted Framework Plan and Area Planning performed by the City between 2006 and 2014 was done to help provide guidance and concepts for the 2,300 acres of land that was added to the City Urban Growth Boundary. Additionally, the SWAP, which is part of the City’s Comprehensive Plan, contains policies to help guide development in the SWAP, but also includes flexibility in the final Zoning Map designates. Due to the subject properties unique location on the west side of the COID B lateral, it is imperative that any future zoning of the subject property allow for densities that will help facilitate and off-set the financial burden of extending three (3) streets and utilities across and under the COID B lateral. Based on the Applicant’s meetings with COID, it’s the applicant’s understanding that three (3) box culverts will be required for the street crossings, and all utilities will need to be trenched or bored underneath the canal. As shown in the aerial photo below, the subject property is a key property to the future development of land within the SWAP south of SW Antelope Ave., west of the COID B lateral, and north of SW Elkhorn Ave.



As part of this application, the Applicant is seeking the flexibility contained within the SWAP to allow the final zoning of the subject property to be R-3 and R-4, as opposed to the R-2 designation shown on the SWAP map, which illustrates the intended land uses. The difference between zoning the subject property R-3 and R-4, as opposed to entirely R-2, is approximately a 20-lot difference. In addition, having two (2) separate zoning districts on the subject property, similar to the property located on the east side of the COID canal (i.e. Prairie Crossing Ph. 4 & 5), is greater flexibility in providing a variety of lot sizes, housing types, and price points. Thus, due to the unique shape of the subject property, required canal crossings, and the City's policy to provide a range of housing types within the SWAP, the Applicant is respectfully requesting R-3 and R-4 zoning of the subject property in order to accomplish all of these goals.

It is the applicant's contention that conformance with the SWAP policies and Redmond Development Code implements the Statewide Planning Goals, the Redmond Comprehensive Plan (including the Great Neighborhood Principles), and the Redmond Framework Plan, as well as all public facility and park plans, based upon the findings included therewith when the SWAP was adopted. Therefore, the primary focus of the proposed Master Development Plan and Zone boundaries as submitted herein is based on the direction provided by the SWAP and the applicable criteria in the Redmond Development Code.

The proposed findings in this burden of proof document, along with the submitted drawings and reports that comprise the application packet, demonstrate compliance with the elements of the SWAP and applicable criteria of the Redmond Development Code. Compliance with the Statewide Planning Goals, the Redmond Comprehensive Plan and the Redmond Framework Plan is discussed in Sections VI. A., B., and C., of this document below.

- III. PROPOSAL:** The proposal includes applications for an amendment to the City of Redmond Zoning Map from UH-10 to R3 and R4, Master Development Plan approval and Annexation for a 16.25-acre parcel located within the Redmond Urban Growth Boundary. In addition, the Applicant is also seeking Tentative Subdivision Plan approval for the subdivision. The subdivision plans have been designed to be in conformance with and in reliance upon the approved master Development Plan. The proposal is further intended to comply with the City of Redmond's Comprehensive Plan Text and Map, including the SWAP as an element of the Comprehensive Plan for this specific area of the community, as well as the master planning requirements of the Redmond Development Code and the Annexation Agreement for the property.
- IV. SITE DESCRIPTION:** The project area is generally described as: 4860 SW Badger Ave., Redmond, OR. Tax Map and Lot # 15-13-30 / 1401. The property lies on the west side of the COID Lateral B, south of Antelope Ave, and north of Coyote Avenue. The subject property is 16.25-acres in size, is generally flat and has a historic use as a residential homesite. See area outlined in red in the aerial photo below.



V. APPLICATION MATERIALS: The following materials are submitted by the applicant as part of the required application packet:

1. Proposed Findings and Conclusions (Applicant's Burden of Proof Statement).
2. Transportation Impact Analysis, Kittelson & Associates, Inc. September, 2020
3. Drawing / Plan Package (collectively comprising the Master Development Plan), including:
 - a. Cover Sheet (Sheet 1) – property boundaries and surrounding ownership
 - b. Existing Conditions (Sheet 2) – topography and physical features
 - c. Street Connectivity Map and Shadow Plat of Property to the West (Sheet 3)
 - d. Zoning & Land Use (C1.3) – Comprehensive Plan/Zoning boundaries, lot sizes, trail and street cross sections, supplemental amenities (i.e. recreation center, trailhead)
 - e. Street & Utility Plan (Sheet 5) – street configuration, intersection details, water and sewer alignments
4. Title Report / Subdivision Guarantee
5. Deed of ownership (Statutory Warranty Deed)
6. Application fees paid in full

VI. PROPOSED FINDINGS:

A. STATEWIDE PLANNING GOALS

B. CITY OF REDMOND URBAN AREA 2020 COMPREHENSIVE PLAN (Comprehensive Plan)

C. CITY OF REDMOND FRAMEWORK PLAN (Framework Plan)

Proposed Finding:

The City of Redmond has an adopted and acknowledged (by LCDC) Comprehensive Plan, including a Transportation System Plan, Public Facilities Plans and a Parks Plan as elements thereof. Together, these provide the policy basis required by State Law and the Statewide Planning Goals for necessary land use Planning in the City of Redmond. The City has adopted development requirements (the Redmond Development Code - RDC) which implement the broad goals and policies of the acknowledged Comprehensive Plan. The RDC requirements include the specific design and development elements that must be included in all development plans proposed in the City. Additionally, the City has adopted Area Plans which provide greater specificity for land within the expanded UGB (as discussed in Section II., "Background & History" above) that will be annexed upon completion of a Master Development Plan and Zone change approval as specified in Policy #11 of the Comprehensive Plan and Section 8.0300 of the RDC. The adopted Southwest Area Plan (SWAP), which is specific to the area within which the project property lies, provides an intermediate step between the more generalized comprehensive and framework planning, and specific site development plans (i.e. a Master Development Plan). The SWAP includes implementation tools such as a proposed Land Use Plan map, transportation and public facility project lists and plans, and code amendments aimed at providing specific guidance for compliance with all of Redmond's land use and development planning documents. Thus, when the SWAP was adopted, it was contemplated that by demonstrating compliance with the provisions of the SWAP as listed therein and the applicable sections of the RDC, a proposed Master Development Plan and subsequent Zone change was inherently compliant

with the Statewide Planning Goals, the Redmond Comprehensive Plan and the City of Redmond Framework Plan. In fact, policy 6-C (Comprehensive Plan/Zoning Code/Application process), #1. directs the following:

1. *“Develop a master plan review process for properties within the SWAP and other adopted Area Plans which acknowledge the degree of planning completed via the Area Planning process and provide incentives (i.e. reduced application fees) for certain features such as tree planting, and park and trail development.”*

This is further reinforced by Section 7-D of the SWAP which states:

7-D Land Use Planning (excerpted from SWAP)

“The SWAP is adopted as a specific planning element of the City of Redmond Urban Area 2020 Comprehensive Plan and is intended to implement the Great Neighborhood Principles which were adopted as guiding tenets of the Comprehensive Plan for land brought into the expanded UGB in 2006. Further, the SWAP is also based on the City of Redmond Framework Plan which established overarching land use patterns for the expanded UGB. By implementing both the Great Neighborhood Principles and the Framework Plan, the SWAP is establishing a land use planning process to guide decision making for future development within the SWAP that has a factual basis that and implements the Comprehensive Plan.”

On the basis of this direction, conformance of the proposed Master Development Plan and Zone change with the applicable provisions of the SWAP and RDC is discussed under Sections VI. D., and VI. E., of this document.

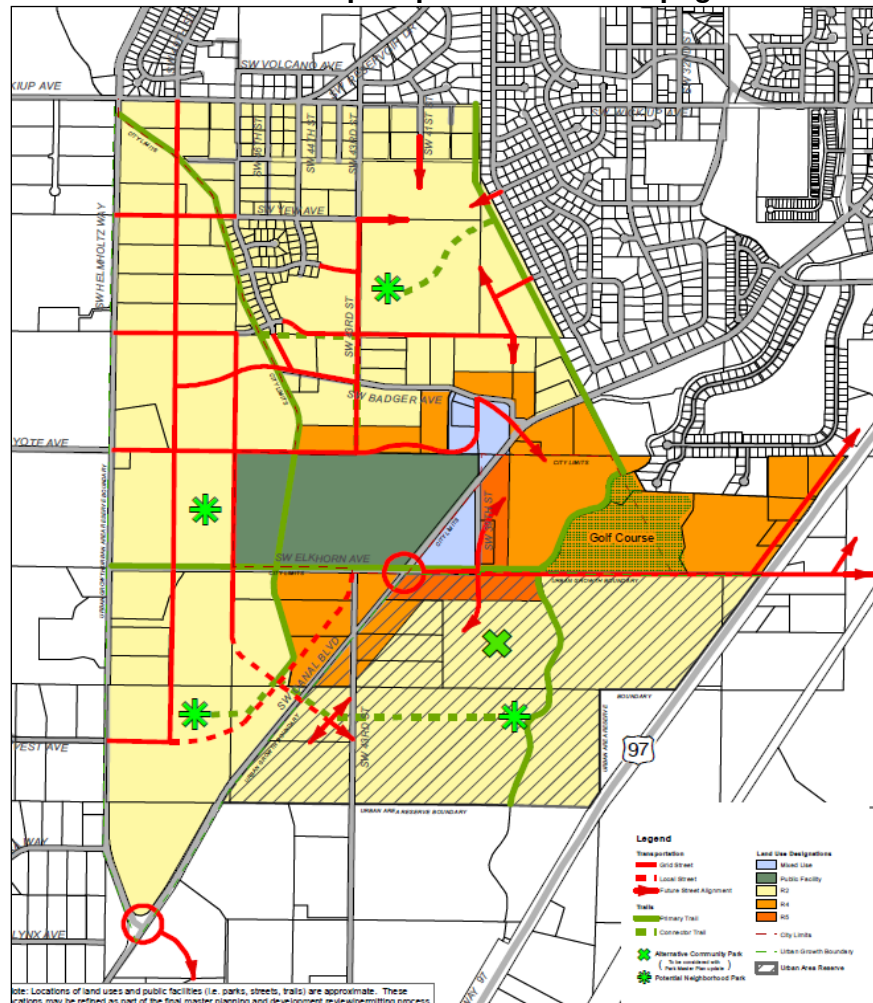
As was stated under Section II., above, it is the applicant’s contention that conformance with the SWAP policies and goals and Redmond Development Code then implements the Statewide Planning Goals, the Redmond Comprehensive Plan (including the Great Neighborhood Principles), and the Redmond Framework Plan, as well as all public facility and park plans, based upon the findings included therewith when the SWAP and recent amendment to the RDC regarding Master Development Plans were adopted. All of the findings and the processes that resulted in adoption of those plans and amendments are incorporated by reference herein as support for this proposed finding.

D. CITY OF REDMOND SOUTHWEST AREA PLAN (SWAP)

Background: Because approval of the Master Development Plan and Zone change request are contingent upon demonstrating consistency with the SWAP, it is important that the background and purpose of the Plan be understood. A brief synopsis of the Plan and process is provided below.

The Southwest Area Plan (SWAP) was adopted by the City of Redmond in the Fall, 2014, as an element of the City of Redmond Comprehensive Plan. The complete SWAP, including all graphics and policies, are included by reference herein. The SWAP map, which illustrates the intended land uses and provides the Comprehensive Plan designations for this area, is included below. As is stated in the proposed findings addressing the Redmond Framework Plan above, the SWAP is the implementation element of that Plan.

Graphic provided on next page



When developed, the SWAP went through a series of urban design exercises held between the Project Team, the Project Advisory Committee, the Technical Advisory Committee, and the public in order to arrive at the mix of residential, commercial, employment, and public uses represented in the SWAP Land Use Plan map. The public, government agencies, and other stakeholders were given opportunities to participate in development of the SWAP through advisory committee meetings, public forums, newsletters, mailings, and online media.

The plan for optimal relationships between residential, commercial, public and open land uses, and transportation uses is represented in the Land Use Plan map (above), which was developed as a joint effort between the project team, advisory committees, and members of the public.

A large part of the SWAP planning area is designated for residential uses, which are applicable to the subject property and shown on the proposed Master Development Plan. By in large, these zones make efficient use of the land and make for more vibrant neighborhood centers and viable transportation options. The desired mix of land uses was integrated with

a transportation system that provides internal circulation as well as connections to surrounding areas and supports the use of transportation options.

Urban services will be provided according to City public facility master plans as well as to project lists, conceptual plans, and code amendments adopted as part of the SWAP. Annexation and development are not to be permitted without provision of these urban services. Development patterns following the SWAP Land Use Plan are relatively dense for the City of Redmond and will make efficient use of the investment in public facilities and services.

The transportation system in Redmond includes roadway, sidewalk, and trail/path facilities. These facilities provide viable transportation options and connections throughout the area, between community destinations, as well as to adjacent areas. Street cross-sections proposed in the SWAP support safety in the transportation system.

Notwithstanding the higher degree of specificity that the SWAP provides over the Comprehensive Plan and Framework Plan, both the SWAP text and the findings adopted to support the SWAP indicate that refinements during the formal Master Planning are expected and permitted in order to encourage good design and to account for practical factors. It is these refinements in the SWAP that are encouraged during the formal Master Planning that the Applicant is seeking to take advantage of as it relates to the rezoning of the subject property. As noted above, the Applicant is requesting R-3 and R-4 zoning of the subject property, as opposed to the R-2 zoning shown on the SWAP map, to help facilitate the required public improvements. The “Findings” adopted in support of the SWAP include the following language:

“The Comprehensive Plan designation and zoning designation boundaries may be slightly modified during the SWAP implementation (e.g. the final master planning, development review and permitting process) to account for practical factors such as rights of way, physical constraints, property boundaries, etc., as long as such modifications do not significantly alter the mix of land uses and densities indicated, and are consistent with the goals and objectives of this plan and the City’s Comprehensive Plan.”

“However, during land use review and permitting processes (including the master planning, rezoning, subdivision, and site development processes), the Development Policies and Guidelines included in Section 6 of the SWAP (subject to the implementation language listed therein) shall be included and considered as part of the master plan and development designs as applicable design and review criteria.”

Proposed Finding: Specific elements of the SWAP, including elements of the map (land use designations, boundaries, street designs and extensions, trails, parks, etc.) and the guiding policies in Chapter 6 of the Plan are addressed below as applicable to the proposed Master Development Plan.

- **SWAP Chapter 6 Policies**

The “Overview” as provided in the SWAP discusses the review process for Master Development Plans, including the criteria in the Redmond Development Code, and specifies how the policies in this Chapter are intended to be used. This section states:

*“As stated herein, no new land use/zoning districts are proposed within the SWAP boundary - all land use designations shown on the Comprehensive Plan map (Figure 2.1), are included in the existing City of Redmond Development Code. The existing Code requirements (and any subsequent amendments thereto) pertaining to permitted land uses, development standards and development review criteria will govern future proposals within each district as established in the Development Code. Additionally, all Development Code requirements for master planning and zoning map amendments included therein also apply. **Notwithstanding these basic requirements of the Redmond Development Code for development within each district, the specific Development Policies and Guidelines listed below shall be considered for implementation as part of development plans during the master planning and site development phases required for all lands within the SWAP boundary. These Policies and Guidelines are intended to compliment the already adopted City Master Plans (Parks, Facilities, etc.), as well as the figures included herein, and shall be applicable to and used as criteria during the review of all final land use master plans and site specific development proposals within the SWAP.”***

The applicable elements of Chapter 6 of the SWAP are addressed below:

- **R-2 District (Applicant’s proposal is R-3, which is not part of the SWAP policies)**
 1. Encourage a variety of lot sizes within the density range established for this zone.

Proposed Finding: A large parcel (approximately 11 acres in size) is reserved for the proposed R-3 zoning and is situated in the central/northern part of the project. There are 45 proposed single-family residential lots in the area of the subject property proposed to be zoned R-3 (i.e. area between SW Badger Creek Drive and SW Antelope Ave.). The lots include a mixture of medium sized (approximately 7,500 sq. ft.) to large sized (approximately 8,800 sq. ft.), with an overall density (gross density) in the zone of 4.05 units per acre (11.11 gross acres). When applying the 25% land area reduction for streets and other required infrastructure, the net developable area is 8.34 acres. Thus, the net density for the proposed R-3 zoned portion of the site is 5.4 units per acre. Per the City’s Comprehensive Plan, the R-2 zones “planned urban densities are expected to average 3 dwelling units per acre with densities ranging from 2 units per net acre to 5 units per net acre”.

Although this density is slightly above the target density of 2 to 5 dwelling units per net acre for the R-2 zone, the overall density of the development (and full variety of housing types), is well within the required density for all proposed zones combined. This design is allowed by and encouraged for this purpose set forth in policy #6 below.

2. Encourage a variety of single-family housing types and designs that are affordable to people with a wide range of incomes – disperse such housing types throughout the planning area.

Proposed Finding: This policy encourages but does not require such a mix. Nonetheless, the R-3 zoned area provides a variety of medium to large lot sizes which will be developed with a variety of home styles, sizes and price ranges. Additionally, rather than providing “static” lot sizes and home sizes in continuous repetition, the lot sizes and homes are varied and intermingled to provide variety and avoid monotony within the neighborhood. Lastly, the composite of the SWAP plan provides for a variety of single-family housing types and designs that can be affordable to people with a wide range of incomes and disperses the housing types throughout the planning area through the diffident zoning districts contemplated in the

SWAP. As such, with the combination of the recently adopted House Bill, HB2001, and the fact that mixed housing types will result throughout the SWAP with the mix of zoning districts, the Applicant's proposal satisfies this policy by furthering the concepts of the SWAP with the development of the subject property.

3. Allow average density calculations for subdivision of properties with multiple residential zoning designations to encourage a greater mix of housing types and creative subdivision design – with respect to the transition of densities and buffering of housing types described herein.

Proposed Finding: As stated in the proposed finding under policy #1 above, the 5.4 units per net acre density for the R-3 zone is slightly above the R-2 zones target density of 2 to 5 dwelling units per net acre. However, the overall density of the development (and full variety of housing types), is well within the required density for all the zones combined (R-4 and R-3). This design relies upon a mix of housing types, and a transition and buffering between housing types in the overall development. On the basis that the other components of the Master Development Plan contribute to creative design, along with the design elements for housing discussed herein, this policy is fulfilled.

When combining the density of the R-4 and R-3 zones (R-4 discussed below), the overall density of the development is approximately 10.7 units per acre. This exceeds the 5 units per acre overall average that was anticipated when the UGB was expanded and included the project area as mostly R-2 zoned residential land, but is less than the 6 to 14 units contemplated for R-4 zoned property. Also, as stated previously, this design relies upon a mix of housing types, and a transition and buffering between housing types in the overall development. On the basis that the other components of the Master Development Plan contribute to creative design, along with the design elements for housing discussed herein, this policy is fulfilled.

4. Encourage a variety of housing types and designs that are affordable to people with a wide range of incomes – disperse such housing types throughout the planning area.

Proposed Finding: As is stated above, this policy encourages but does not require such a mix. Nonetheless, the R-3 zoned area provides a variety of lot sizes which will be developed with a variety of home styles, sizes and price ranges. The styles range from larger (2,000 plus square feet) single family homes, to smaller SFH's. Additionally, rather than providing "static" lot sizes and home sizes in continuous repetition, the lot sizes and homes are varied and intermingled to provide variety and avoid monotony within the neighborhood.

This variety of housing types, on a variety of lot sizes, ensures that the residential components in the R-3 zone will provide a multitude of housing choices for persons of a variety of income levels.

- **R-4 District**

1. For single family development, smaller lot/medium density development shall be provided.

Proposed Finding: There are 20 proposed single-family residential lots in the area of the subject property proposed to be zoned R-4 (i.e. area between SW Coyote Ave. and SW Badger Creek Drive). The lots include a mixture of small (approximately 6,000 sq. ft.) to medium sized (approximately 6,500 sq. ft.), with an overall density (gross density) in the zone

of 3.97 units per acre (5.03 gross acres). When applying the 25% land area reduction for streets and other required infrastructure, the net developable area is 3.77 acres. Thus, the net density is 5.3 units per acre. Although this density is slightly below the target density of 6 to 14 dwelling units per acre for the R-4 zone, the overall density of the development (and full variety of housing types), is well within the required density for all the zones combined. This design is allowed by and encouraged for this purpose set forth in policy #6 below.

2. For multi-family development, a mixture of duplex, multi-family dwelling and multi-family complex development shall be provided.

Proposed Finding: No multi-family development is proposed for the R-4 zoned portion of the project. Thus, this policy does not apply.

3. Housing densities shall have the highest concentrations along primary streets and activity centers, and shall be designed to provide transitional buffers (from higher density to lower density) between activity centers and the adjoining single family residential (R-2) zone.

Proposed Finding: Because of the unique shape of the property and surrounding physical features and zoning, no portion of the project abuts any primary (arterial/collector) streets, activity centers or R-2 zones. However, within the R-4 zoned portion of the project the lot sizes are smaller, with higher density, and located at the southern portion of the site adjacent to SW Coyote Avenue. The proposed R-4 zoning will be separated from the proposed R-3 zoning to the north by SW Badger Creek Drive and transitions to larger lots with lower density. In addition, the neighboring property to the east (i.e. Prairie Crossing Ph. 4-5) also has R-4 zoning located between SW Coyote Ave. and SW Badger Creek Drive, so this proposal matches the zoning and lot sizes recently approved through the Prairie Crossing Ph. 4 & 5 development. This design provides the transitional buffer between housing types envisioned by this policy.

4. Encourage a mix of housing types and lot sizes within the density range established for this Zone.

Proposed Finding: This policy encourages but does not require such a mix. Nonetheless, the R-4 zoned area provides a variety of smaller lot sizes which will be developed with a variety of home styles, sizes and price ranges. Additionally, rather than providing “static” lot sizes and home sizes in continuous repetition, the lot sizes and homes are varied and intermingled to provide variety and avoid monotony within the neighborhood.

5. Encourage a variety of housing types and designs that are affordable to people with a wide range of incomes – disperse such housing types throughout the planning area.

Proposed Finding: As is stated above, this policy encourages but does not require such a mix. Nonetheless, the R-4 zoned area provides a variety of lot sizes which will be developed with a variety of home styles, sizes and price ranges. The styles range from larger (2,000 plus square feet) single family homes, to smaller SFH’s. Additionally, rather than providing “static” lot sizes and home sizes in continuous repetition, the lot sizes and homes are varied and intermingled to provide variety and avoid monotony within the neighborhood.

6. Allow average density calculations for subdivision of properties with multiple residential zoning designations to encourage a greater mix of housing types and

creative subdivision design – with respect to the transition of densities and buffering of housing types described herein.

Proposed Finding: As stated in the proposed finding under policy #1 above, the 5.3 unit per acre density for the R-4 zone is slightly below the target density of 6 to 14 dwelling units per acre. However, the overall density of the development (and full variety of housing types), is well within the required density for all the zones combined. This design relies upon a mix of housing types, and a transition and buffering between housing types in the overall development. On the basis that the other components of the Master Development Plan contribute to creative design, along with the design elements for housing discussed herein, this policy is fulfilled.

- **Housing - General**

1. Housing should be oriented to maximize solar access.

Proposed Finding: The parent parcel has a unique shape that is dictated by the surrounding the COID canal along the entire eastern property boundary. The shape of the parcel forces certain development designs that are not possible on a rectangular parcel. The physical location of the canal acts as a barrier to development that would provide practical connections to the west. Thus, the primary north/south running road internal to the development follows the canal alignment and includes lots situated in the same manner. However, elsewhere in the development, east/west running roads with lots fronting these streets (and not the north/south connecting streets) provide lots/homes that receive the maximum amount of solar access practicable (based on the east/west travel of the sun, and the sun crossing the southern sky).

2. Housing density should be minimized, with larger lots created, on the sloped properties having views of the Cascade Mountains.

Proposed Finding: The site is relatively flat and does not have any slopes facing the Cascade Mountain. Thus, this policy is not applicable.

3. Housing on lots located on streets which front public parks shall be oriented so that the front of the house faces the street/park.

Proposed Finding: The only public park in the project is the linear park on the east side of the site located along the COID canal. This trailhead and/or linear park is in this location per the City of Redmond Parks Master Plan. As stated above, the unique shape of the parent property prohibits some configurations as specified herein, and dictates design that uses the site efficiently and in a practical manner (considering infrastructure design standards). Due to these factors, it is not possible to construct lots that face the public park/trailhead.

4. All housing shall comply with the City Residential Design Standards as established in the Development Code, with multiple designs encouraged and repetitive designs highly discouraged.

Proposed Finding: This standard is not applicable at this time. The Residential Design standards as listed in the City of Redmond Development Code are administered for conformance when individual plans are submitted for home construction. The future house plans will illustrate that the base lot design will intermingle lot sizes, and subsequently home styles, throughout the development. This will prevent the repetitive home designs and sizes

as envisioned by this policy. Ultimately, the future housing designs will ensure that the neighborhood has a unique feel with a blending of home styles and sizes that are available to a variety of income levels and will retain value over time.

- **Streets – General**

1. All local, collector and arterial streets (including all grid streets) shall be extended as shown on Figure 3.1.

Proposed Finding: The subject property abuts SW Antelope Ave. (northern property boundary), SW Coyote Ave. (southern property boundary), SW Badger Ave., and SW Badger Creek Drive (both streets abut the eastern boundary of the COID canal) The proposed Master Development Plan shows a future construction of Badger Avenue within the project as the development ensues. It is anticipated that the individual tentative subdivision phases will determine the point at which the construction of Badger Avenue becomes necessary. Nonetheless, the project does anticipate such extensions for all streets listed above as discussed in this policy.

The City's Master Development Plan also shows a new street running along the site's western property boundary. However, due to the site's unique shape and COID canal running along the site's eastern property boundary, it's not practical to locate the street shown in the City's Master Development Plan along the western property boundary of the site. Instead, the applicant proposes to shift the street approximately 100-feet to the west and then transition the street back to the desired location at the southwest corner of the site. The Applicant's proposed location for the street makes more efficient use of the subject property's unique configuration, avoids conflicting intersections at the north end of the site along SW Antelope Avenue, and still allows for the street to realign at the southwest corner of the property. In addition, the subject property is also substantially burdened with three (3) canal crossings (i.e. SW Badger Ave., SW Badger Creek Dr., and SW Coyote Ave.), which not only significantly increases the cost of developing the subject property, but also provides the conduit for the developing the rest of the land in the Southwest Area Plan (SWAP) west of the COID canal.

2. Encourage alley development for new single-family residential neighborhoods.

Proposed Finding: Because this policy says that alley development is "encouraged" and not required, none of the proposed lots have alley access. This is somewhat necessary due to the unique lot configuration, location of the COID canal, and required extension of four (4) existing streets, which prevents the alley access design concept from being practical.

3. Update the City Transportation System Plan (TSP) and Capital Improvement Program (CIP) to ensure implementation of the transportation improvements and elements included in the SWAP. All transportation elements specifically noted herein for additional study and design shall be considered in such updates.

Proposed Finding: This policy is not applicable to individual Master Development Plan proposals. Rather, when the SWAP was adopted, it was specific direction by the City to itself to consider such factors when the TSP is updated in the future.

4. Street extension and circulation plans shall be consistent with the street network identified in the SWAP.

Proposed Finding: Except for locating a north/south street along the sites western property boundary, the proposed Master Development Plan includes the street circulation pattern that is anticipated by the City of Redmond TSP and the SWAP. The SWAP shows an internal subdivision street connection extending from a future extension of SW Badger Avenue and SW Badger Creek Drive east to west through the site along the southern property boundary northward (through the site) to eventually connect with future development on the adjacent property to the west. In addition, the SWAP shows external subdivision street connections extending from a future extension of SW Antelope Ave. and SW Coyote Ave. along the northern and southern property boundary, respectively, to eventually connect with future development on the adjacent property to the west. Eventually, such streets, when connected to the development to the west, is anticipated to provide a connection between SW Helmholtz Way to Canal Boulevard where it intersects with Badger Road. All proposed streets will ultimately intersect with a series (multiple) cross (grid) streets that provide connectivity to the surrounding transportation system and beyond. This design, which prevents a “straight line thoroughfare” through the development provides the connection shown on the SWAP plan but does not create a dangerous high speed way through the residential development.

5. Locate and orient more intensive land uses along and toward Arterial and Collector streets.

Proposed Finding: Even though there are no Arterial or Collector streets adjacent to or within the project, as stated previously, the R-4 zoning is proposed along the sites southern property boundary adjacent to SW Coyote Avenue, which is anticipated to carry a higher volume of traffic than other streets in the project.

Since there are no Arterial and Collector streets adjacent to or within the proposed subdivision, the above criterion does not apply to the Applicant’s proposal.

6. Incorporate opportunities for future transit service and use into the design of the street system and private development as provided in the Comprehensive Plan.

Proposed Finding: The project does not include any frontages on either an Arterial or Collector street. All proposed streets within the development will be local residential streets which are not capable of incorporating a transit stop within the public right-of-way. Such locations would be more appropriate east of the site along SW Badger Rd. where it is designated as a Minor Collector on the City’s Transportation System Plan (TSP). Since there are no designated Arterial or Collector streets adjacent to or within the proposed development, it’s not practical to incorporate opportunities for a future transit service within the proposed subdivision. As such, it is the Applicant’s believe that the above policy does not apply to the Applicant’s proposal since there are no Arterial or Collector streets identified on the City’s TSP adjacent to or within the proposed development.

7. All streets shall be developed to City Standards and Specifications, unless otherwise approved during the land use master planning and review processes.

Proposed Finding: The street cross sections and intersection details included with the submitted plans illustrate that all streets will be constructed to City of Redmond design standards. All local streets show street lanes, sidewalks, and landscaped plater areas with street trees per city standards and specifications. This will be a requirement of the future engineered plans submitted for each phase of development. The City of Redmond Engineering Department will ensure such adherence at that time.

8. Allow flexibility in street designs where enhancements to bicycle and pedestrian facilities are incorporated, and where improved aesthetic components of the street (i.e. street trees, landscaping, street lighting) are included.

Proposed Finding: Such flexibility is not necessarily possible or necessary with this plan. However, all streets will be constructed to include such amenities as required by City of Redmond Standards and Specifications.

9. Allow flexibility in on-street parking designs on Arterial and Collector streets in relation to improved safety for bike lanes and sidewalks.

Proposed Finding: As mentioned previously, there are no Arterial and Collector streets within or adjacent to the proposed subdivision; therefore, the above criterion does not apply to the Applicant's proposal.

- **Local Streets**

1. Local streets (including all grid streets) that "stub" into the boundary of the SWAP, shall be extended as new development occurs.

Proposed Finding: The design includes the extension of four (4) local streets (i.e. SW Antelope Ave., SW Badger Ave., SW Badger Creek Dr., and SW Coyote Ave.) into the site from the adjacent Prairie Crossing Ph. 4 & 5 subdivision. All four (4) proposed street extensions provide a new local grid street pattern for the area and are stubbed to the adjoining property to the west. All such extensions as shown on the submitted plans were anticipated by the City of Redmond per the SWAP. No other extension of local streets from adjoining properties into the subject project are available or necessary.

Additionally, the application includes a Transportation Impact Analysis (TIA) that addresses the traffic impacts of the proposal and suggests no off-site improvements are necessary to mitigate the traffic impacts associated with the proposed subdivision (the findings and designs included in the TIA are incorporated by reference herein). The Applicant's proposal satisfies this policy.

2. The existing rights of way for SW 39th Street and SW 43rd Street may be considered for vacation with the City update of the TSP and/or master planning of the adjoining properties, with such vacation dependent upon the City's determination of their need and value to the overall plan at such time, and their contribution toward development within the area.

Proposed Finding: The subject property does not abut SW 39th Street and/or SW 43rd Street; therefore, the above policy does not apply to the Applicant's proposal.

- **Collector and Arterial Streets**

1. The intersection of SW Canal Boulevard and SW Elkhorn Avenue will be an area of special consideration as the City TSP is updated. A design that takes into consideration the potential for adjoining commercial development and the existing high school (for pedestrian and bicycle crossing) shall be considered. A specific design shall be developed and included in the TSP.

Proposed Finding: The subject property does not abut SW Canal Boulevard and/or SW Elkhorn Avenue; therefore, the above policy does not apply to the Applicant's proposal.

2. The intersection of SW Canal Boulevard and SW Helmholtz Way will be an area of special consideration as the City TSP is updated. A specific design shall be developed and included in the TSP.

Proposed Finding: This policy is not applicable to the Applicant's proposal as the subject property does not abut the SW Canal Boulevard and SW Helmholtz Way intersection.

3. A reduced speed zone along SW Canal Boulevard between SW Elkhorn Avenue and SW Badger Avenue should be considered as road improvements are made and further development occurs in this area.

Proposed Finding: This policy is not applicable to the Applicant's proposal as the subject property does not abut SW Canal Boulevard between SW Elkhorn Avenue and SW Badger Avenue.

Nevertheless, the applicant is in favor of this policy and supports the City's desire for reduced speeds along SW Canal Boulevard between SW Elkhorn Ave. and SW Badger Ave. as it is located adjacent to Ridgeview High School.

- **Sidewalks**

1. Include wider sidewalks in lieu of off-street trails along street corridors between public destinations (i.e. schools, parks, commercial areas and connector trails) where such trails are not possible.

Proposed Finding: Wider sidewalks are not necessary for the proposed subdivision as there are no Arterial or Collector streets within or adjacent to the subject property. All proposed streets within the project will be local residential streets with 5-foot sidewalks on each side of the streets. However, the Applicant is proposing a "Linear Park" along the site's eastern property boundary adjacent to the COID canal. The linear park will provide opportunities for a trail with wider walkways to allow for a variety of non-motorized transportation options (i.e. walking, biking, skateboarding, etc.).

2. Sidewalks shall be allowed and encouraged to meander within the public right of way or public easements to allow for preservation of trees or other natural features as necessary.

Proposed Finding: There are no known natural features where this will be necessary. However, if it were to arise during the site development, the applicant will work with City staff to implement the design.

- **Trails**

1. Trail development shall be consistent with the City Trail Master Plan (including design), with specific enhancements herein incorporated into such designs.

Proposed Finding: The property abuts the COID Lateral B canal easement along the entire eastern property boundary. As shown on the submitted plans, the design includes a 10-foot-wide asphalt trail centered within a 34 foot wide tract. The Applicant's proposal is to deed the tracts (i.e. Tracts A, B, and C) to the City, similar to the Prairie Crossing Ph. 4 & 5 subdivision tracts along the east side of the canal, and have an easement over the tracts to the benefit of COID. The future design of the trail and linear park will be between the City of Redmond and COID and their respective design specifications. Amenities located with the COID easement will be subject to the requirements of COID about such features within their easement, and the overall trail head design which must be negotiated with the City of Redmond (the City of Redmond Parks master Plan shows this area a trail head, but does not include any specific design standards).

2. Trail corridors should be landscaped when possible or retain significant native vegetation (trees) to the greatest extent possible.

Proposed Finding: Because the primary trail locations are located along and within the COID easements for their facilities, any landscaping is subject to their approval. Typically, COID does not want plants with invasive roots which will compromise the stability of the canal. Low growing landscaping consisting of native vegetation would be most appropriate. The applicant agrees to work with the City and affected agencies to develop a formal landscape plan during site development and construction.

3. Trails should include other amenities (such as benches and signage) as appropriate for the intended use, but not to the degree where such amenities cause loitering or gathering.

Proposed Finding: As noted above, the applicant's proposal is to deed the tracts creating the linear park (i.e. Tracts A, B, and C) to the City similar to what occurred with the Prairie Crossing Ph. 4 & 5 subdivision on the east side of the canal. As such, any future amenities located within these tracts will be determined by City of Redmond with the approval of COID for amenities located with their easements.

4. Locate primary and connector trails in public right of way or dedicated public easements.

Proposed Finding: All primary and connector trails will be located within dedicated right of way (dedicated to the public). The City of Redmond will assume responsibility of the trails upon dedication.

5. Develop a separated greenway/trail connection along the north side of SW Elkhorn Avenue, between SW Helmholtz Way and SW Canal Boulevard to provide an east/west pedestrian/bicycle facility through the center of the project area.

Proposed Finding: This policy is not applicable to this project.

6. Connector trails shall ensure connectivity between residential areas and primary trails, and public gathering areas, such as schools, parks and commercial development.

Proposed Finding: The project includes four (4) mid-block connector locations via the public street system (i.e. SW Antelope Ave., SW Badger Ave., SW Badger Creek Dr., and SW

Coyote Ave.) to the trails along the west side of the COID canal. All connections allow pedestrian and bicycle access no more than 1/8 mile from other such facilities.

7. Multi-purpose trails shall be allowed in place of public sidewalks when deemed an appropriate design based on public benefit as approved through the master planning process.

Proposed Finding: Substitution of trails for sidewalks is not proposed. All streets will have sidewalks and bike lanes per City of Redmond standards, and separate trails, including connector trails, will be constructed as shown on the submitted plans.

8. Update the City Transportation System Plan (TSP) and Capital Improvement Program (CIP) to ensure implementation of the trail improvement projects and elements included in the SWAP.

Proposed Finding: This is not a policy that is intended to be addressed or fulfilled by the applicant. However, it is very important to the project and the SWAP. It is essentially directing the City to update the funding methods and sources for the acquisition, construction, maintenance of trails when they are dedicated and/or built through development projects. It is the applicants understanding that any trail or park amenity dedicated and/or built that is included on the City of Redmond Parks master Plan and/or Transportation System Plan is reimbursable as a master planned project. The applicant will be seeking such reimbursement upon dedication and/or construction. The applicant is aware that such reimbursement may be negotiable in its form.

9. Provide for safe trail crossings of arterial and collector streets through the use of clearly marked facilities (painted, signalized, grade-separated, etc.) as appropriate for the site that are consistent with City standards and regulations, and with this Plan.

Proposed Finding: There are no direct trail crossings of arterial and collector streets that are part of this proposal. Thus, this policy is not applicable.

- **Public Amenities**

1. Funding methods for public amenities (including acquisition of park land and trail easements), should be considered and prioritized with annual budgeting and capital facilities planning as the SWAP develops.

Proposed Finding: As stated above, this is not a policy that is intended to be addressed or fulfilled by the applicant. Rather, it is intended to be addressed by the City. However, it is very important to the project and the SWAP. It is essentially directing the City to update the funding methods and sources for the acquisition, construction, maintenance of trails when they are dedicated and/or built through development projects. It is the applicants understanding that any trail or park amenity dedicated and/or built that is included on the City of Redmond Parks master Plan and/or Transportation System Plan is reimbursable as a master planned project. The applicant will be seeking such reimbursement upon dedication and/or construction. The applicant is aware that such reimbursement may be negotiable in its form.

2. The need for and development of public amenities should take into consideration the timing and potential for development as influenced by the three subareas shown in Figure 3.2.

Proposed Finding: All public amenities necessary to support the various stages of development are proposed for construction at such time as the corresponding phase in which they are located is developed. Engineered plans for the public infrastructure will be submitted for review to the City of Redmond Engineering Division at that time.

- **Building Design**

1. Building design elements for the MUN district shall be as established in the City of Redmond Development Code.

Proposed Finding: The above policy does not apply to the Applicant's proposal because there are no MUN districts proposed or identified in the SWAP for the subject property.

- **Landscaping, Grading and Native Vegetation**

1. Allow thinning of native vegetation (juniper trees) with new development, but not clear cutting – especially on slopes. The “value” (intrinsic) of juniper (individually and as grouped) needs to be evaluated and determined during design.

Proposed Finding: The property has been 95% cleared of native vegetation in the past and converted to residential land. Thus, there is no native vegetation to be retained that adds intrinsic value to the project.

2. Grading of slopes for new development, including subdivision design, should take into consideration scenic views of the Cascade Mountains from such areas – grading shall occur so that scenic views are retained from the sloped areas to the greatest extent possible.

Proposed Finding: The property is relatively flat and does not contain any significant slopes offering such views.

3. Subdivision design should orient streets and lots to take maximize solar exposure to the greatest extent practicable.

Proposed Finding: The parent parcel has a unique shape that is dictated by the COID canal along the entire eastern property boundary. The shape of the parcel forces certain development designs that are not possible on a rectangular parcel. The physical location of the canal acts as a barrier to development that would provide practical connections to the west. Thus, the primary north/south running road internal to the development follows the canal alignment and includes lots situated in the same manner. However, elsewhere in the development, east/west running roads with lots fronting these streets (and not the north/south connecting streets) provide lots/homes that receive the maximum amount of solar access practicable (based on the east/west travel of the sun, and the sun crossing the southern sky).

- **Annexation and UGB Expansion**

1. Annexation of land outside of the City limits shall not occur until such time as final master plans and rezoning is completed, unless otherwise approved through direction of the City Council.

Proposed Finding: The application herein is for approval of a Master Development Plan and Zone Change. Concurrent with these applications, the applicant is submitting the necessary documentation for annexation. Upon approval of the Master development Plan and Zone by the City Council, the applicant is requesting concurrent approval for the annexation.

SWAP Chapter 7 Policies

In addition to the policies in Chapter 6 that relate to the overall elements of the Master Development Plan, there are specific policies in Chapter 7 for transportation elements. These are listed and addressed below.

7-L Transportation

To address the general transportation needs described within the City's Transportation System Plan and amend the TSP to incorporate policies that address the higher densities and additional lands, the following policies are recommended:

- Development of the City's TSP update and supporting land use models should incorporate the increased density assumptions from the SWAP lands to ensure that the regional impacts are adequately mitigated. Specific analysis of collector and arterial intersections along the SWAP boundaries will be required to appropriately assess the impacts.

Proposed Finding: This policy provides direction to the City of Redmond to consider the impacts of the build-out of the SWAP when updating its TSP. It is not specific direction to property owners when proposing a Master Development Plan. However, a Transportation Impact Analysis (TIA) was submitted with this application to address the specific impacts of the development. The TIA addresses OAR 660-012, the Transportation Planning Rule (TPR) which requires an assessment of the impacts of the development 20 years into the future – based on build out of the project and surrounding area. The analysis of impacts and suggested mitigation are referenced in proposed findings below, and incorporated in entirety by reference herein. More specifically though, the findings addressing the specific elements of the TPR are incorporated by reference herein as evidence of compliance with the TPR rather than being copied over into this burden of proof statement.

- Transportation infrastructure supporting the SWAP lands should be designed to reduce reliance on US 97. This should include limited connections from the SWAP lands to the highway and supporting investments in the parallel system. The connectivity to US 97 should be balanced with the ability of the Yew Avenue interchange to serve the additional trips.

Proposed Finding: The proposed development will be accessed primarily from SW Badger Ave. via Canal Dr./Blvd. (arterial). Both of these are streets are owned and maintained by the City of Redmond. Per the City's TSP, and as discussed in the submitted TIA, Badger Avenue, SW Antelope Ave., and Coyote Avenue will all eventually be extend further to the west to

connect with SW Helmholtz Way thereby providing an alternative east/west and north/south route and reducing the overall impact and reliance on Canal Dr./Blvd., Yew Ave., and Hwy 97.

- Consistent with the current TSP, Elkhorn Avenue should be improved to urban standards and considered as a priority east-west connection from Helmholtz east to SW 19th Street. Improvements at the Airport Way/19th Street intersection and the Helmholtz intersection will help to develop a southern arterial roadway system.

Proposed Finding: None of the intersection noted above are under the applicant's control and the proposed subdivision does not impact Elkhorn Ave. and/ or east-west connection from Helmholtz east to SW 19th Street, or improvements at the Airport Way/19th Street intersection and the Helmholtz intersection. As such, the above policy does not apply to the Applicant's proposal.

- Helmholtz Way should be improved to City standards to provide multimodal infrastructure to the area supporting its rural to urban transition. The adopted City of Redmond Transportation System Plan has identified this connection as the Westside Arterial with a three- to five-lane section. The need for extending the five-lane section should be assessed within the City's update to the TSP.

Proposed Finding: Helmholtz Way is not adjacent to the subject property and is not applicable to this proposal. Notwithstanding, this policy provides direction to the City of Redmond to consider the impacts of the build-out of the SWAP when updating its TSP. It is not specific direction to property owners when proposing a Master Development Plan.

- Canal Boulevard should be improved to urban standards consistent with the adopted TSP. Additional improvements outside the City boundary may be desirable to coordinate with Deschutes County that would allow this route to serve as an alternative connection south to Bend.

Proposed Finding: Canal Boulevard is not adjacent to the subject property and is not applicable to this proposal. Notwithstanding, this policy provides direction to the City of Redmond to consider the impacts of the build-out of the SWAP when additional improvements outside the City boundary may be desirable to coordinate with Deschutes County. It is not specific direction to property owners when proposing a Master Development Plan.

Notwithstanding the above findings, the TIA does discuss off-site impacts at the Canal Boulevard/Yew Avenue intersection and the Canal Boulevard/Elkhorn Avenue intersection. The complete findings regarding these intersections are included in the TIA, and are incorporated by reference herein – a summary is discussed below.

The TIA indicates that the existing TSP design improvements at the Yew intersection were based on build out of the surrounding area, including the subject property which is included in the TSP, and no further mitigation is necessary. Building on this premise is the TSP expectation that as Elkhorn Avenue is extended eastward in the future, over Highway 97, a significant reduction on the pressure on Yew Avenue will result. Nonetheless, during the interim, no further mitigation is necessary at the Canal Boulevard/Yew Avenue intersection.

Engineered plans demonstrating consistency with City of Redmond design standards and specifications will be submitted with individual phases of the project.

- Infrastructure and supporting facilities for transit service, pedestrians, and cyclists should be incorporated into the SWAP design standards. This may require updates to the pedestrian and bicycle master plans within the TSP to reflect the proposed connections.

Proposed Finding: As discussed multiple times in this document, the project includes a multitude of trails (primary and connector), sidewalks and bike lanes that will all be built to City standards. Transit stops will not be possible with this project as there are no Arterial or Collector streets adjacent to or withing the site. Based on these and the other findings included herein, this policy is satisfied.

- Existing skewed intersection approach angles should be reconfigured with conventional (orthogonal) angles to improve visibility and provide consistent turning speeds.

Proposed Finding: There are no existing skewed intersection approach angles impacting the site. However, due to the existing alignment of SW Badger Ave. and the City's plans to have the street turn towards the south as it exits the subject site, there will be a skewed intersection created at SW 47th Place and SW Badger Avenue. To address this issue, the applicant is proposing a "mini roundabout" to facilitate the redirection of SW Badger Avenue to the south. The proposed mini roundabout will be constructed to appropriate engineering design standards and will eliminate the skewed intersection approach angles that would occur without a mini roundabout.

- Existing roadways and trails along the SWAP boundaries should be extended into the SWAP lands to connect the existing and future neighborhoods.

Proposed Finding: All existing roadways extend to the subject property (i.e. SW Antelope Ave., SW Badger Ave., SW Badger Creek Dr., and SW Coyote Ave. are all proposed to be extended through the site as development occurs. These extensions are consistent with the City of Redmond TSP – future design will be built to City of Redmond standards and specifications.

E. CITY OF REDMOND DEVELOPMENT CODE (RDC)

There are multiple sections of the Redmond Development Code that apply to this proposal. The applicable criteria for the underlying **UH-10 zone**, the proposed **Zone Change**, and the **Master Development Plan** are addressed separately below.

• UH-10 ZONE

- Chapter 8, Section 8.0130, (10), the UH-10 Zone. of the Redmond Development Code states:

10. Master Development Plans. The development and approval of an Urban Area Master Plan subject to the provisions of RDC 8.0300 is required as a condition of annexation or, for UH-10 land already in the City, prior to or concurrent with rezoning from UH-10 to other City zoning districts.

Proposed Finding: In conformance with this requirement, the applicant has submitted concurrent requests for a Master Development Plan and Zone change, and has submitted materials to address all relevant criteria as discussed within this document.

- **ZONE CHANGE**

- Chapter 8, Sections 8.0750 through 8.0775 (Amendments) sets forth the procedure and standards for an amendment to the text of the Code or to the adopted Comprehensive Plan or Zoning map.

Criteria for Zone Change

Section 8.0760 - Criteria for Amendments, sets forth the four (4) criteria that must be met:

1. In conformity with all applicable State Statutes;

Proposed Finding: The State Statutes that directly apply to this application include:

1. ORS 197.610, *Local Government Notice of Amendment or New Regulation*
2. ORS 197.250, *Compliance with Goals Required*
3. ORS 197.763, *Conduct of Local Quasi-Judicial Land Use Hearings; Notice Requirements.*

The applicable City of Redmond Code standards (sections 8.0750 to 8.0775, *Amendment Procedures and Notice Requirements*), and, (sections 8.1010 through 8.10355, and 8.1300 through 8.1380, *Land Use Procedures*), were developed in compliance with the applicable State Statutes listed above regarding noticing and public hearings. Applicability of the Statewide Planning Goals is addressed in greater detail below in Section VI. A. of the is document, above – those findings, incorporated by reference herein, show compliance with the applicable Statutes listed above.

With regard to the Statutory noticing requirements referenced above, notice of the proposed amendment has been provided to DLCD and the public hearings advertised in the local newspaper (public notice) as required by City Code and State Statute.

With regard to the Statutory public hearing requirements referenced above, this proposal is subject to Sections 8.1300 through 8.1380 of the Redmond Development Code, which implement the quasi-judicial Statutory requirements in similar fashion have been met. Subsequently, the Planning Commission and (ultimately) City Council's public hearing and review processes meet the Statutory requirements for the purpose of the review.

Oregon Administrative Rule 660-012, Transportation Planning Rule.

Notwithstanding the Statutory requirements addressed herein, the Oregon Administrative Rules (OAR's) also implement the Statutes. The applicable Rule addressed in this document is ORS 660-012, the Transportation Planning Rule (TPR). The proposed findings addressing the specific elements of the TPR are included in the Transportation Impact Analysis (TIA) submitted with this application. These findings are incorporated by reference herein as evidence of compliance with the TPR rather than being copied over into this burden of proof statement.

Based on the City of Redmond's conformance with the procedural requirements of this land use process and the conformance with the TPR, the proposed Master Development Plan and Zone Change conforms to applicable State Statutes and Administrative Rules.

2. In conformity with the State-wide planning goals whenever they are determined to be applicable:

Proposed Finding: The Statewide Planning Goals are addressed in Section VI. A., (above) of this document. The proposed finding addressing the Statewide Planning Goals discusses the fact that by addressing the SWAP as a specific land use plan adopted to implement to the Statewide Planning Goals for this area, this requirement is satisfied. The proposed findings included in that Section are incorporated by reference herein. Based on those findings, the applicant believes that the proposed Master Development Plan and Zone Change conforms to the Statewide Planning Goals.

3. In conformity with the Redmond Comprehensive Plan, land use requirements and policies:

Proposed Finding: The City of Redmond Comprehensive Plan is addressed in Section VI. B., (above) of this document. The proposed finding addressing the Comprehensive Plan discusses the fact that by addressing the SWAP as a specific land use plan adopted to implement to goals and policies of the Comprehensive Plan for this area, this requirement is satisfied. The proposed findings included in that Section are incorporated by reference herein. Based on those findings, the applicant believes that the proposed Master Development Plan and Zone Change conforms to the Comprehensive Plan.

4. That there is a change in circumstances or further studies justifying the amendment or mistake in the original zoning:

Proposed Finding: In the past ten years there have been significant changes that have occurred that justify the proposed Master Development Plan and Zone change. These include: the expansion of the Urban Growth Boundary to include the subject property; the creation and adoption of the SWAP, which provided specific Comprehensive Plan designations (via a map) for the project area and subject property; and, a series of amendments to the City of Redmond Comprehensive Plan and Development Code text providing a more specific process for creating a Master development Plan for the property that is tied to the rezoning and annexation. All of the changes together contemplated and directed the proposed zone change and demonstrate compliance with this criterion.

• MASTER DEVELOPMENT PLANS

- **8.0300 Master Development Plans.** A Master Development Plan is required prior to annexation as a condition of annexation, or after annexation but prior to or concurrent with rezoning from Urban Holding-10 to other City zoning districts. The Master Development Plan shall not create excessive demand on public facilities and services required to serve the development area, and shall not conflict with existing public access easements within or adjacent to the development area. The specific requirements for a Master Development Plan are as follows:

1. Applicability. This section applies to all properties proposed for annexation and/or rezoning from Urban Holding-10 on or after the date of the adoption of this ordinance.
2. Purpose. The purpose of Master Development Plan is to provide:
 - A. Orderly and efficient development of the City consistent with Urban Framework Plans and an adopted Area Plan.
 - B. Compatibility and/or transitions with adjacent developments and the character of the area.
 - C. A compatible mix of uses and activities.
 - D. An interconnected transportation network – grid streets, bicycle routes, and pedestrian trails – within the master plan area and to existing and planned City streets, routes and trails.
 - E. A range of housing choices for areas planned to have residential components.
 - F. A range of open spaces and recreation facilities, as needed to facilitate the Framework Plan and an adopted Area Plan.
 - G. Public and semi-public facilities and services.
 - H. Preservation of historic buildings, scenic views, and natural resources to the greatest extent possible.
 - I. Transitions or buffers between urban development and rural areas.
 - J. Implementation of Redmond's Comprehensive Plan, including adopted Area Plans the Great Neighborhood Planning Principles in described below in 3 (C)(13) below:
3. Procedures for Review.
 - A. General.
Master Development Plans (MDP or PMDP) shall be approved through a quasi-judicial review process. Application procedures and related fees for approval may be streamlined in order to promote timely development of urban planning for land zoned UH-10. The Community Development Director shall inform the applicant during the mandatory pre-application stage if the proposed Master Development Plan area appropriately includes all contiguous UH-10 zoned properties in the plan area. The Community Development Director shall base the determination for the proposed plan area utilizing the following factors:
 - (i) whether there are UH-10 properties that abut or are surrounded by the plan boundary that would reasonably fit within the zoning concept for the area plan;
 - (ii) whether the extension of public services and infrastructure would be enhanced by the inclusion of abutting UH-10 properties;
 - (iii) whether the total acreage of abutting or enclave UH-10 zoned properties is less than the acreage in the proposed plan area; and
 - (iv) there is a community interest that would be served by including additional properties in the plan area.
 - B. Review and approval criteria for Master Development Plans or Partial Master Development Plans
 1. General. In the review of any application for a Development Plan, the Planning Commission and City Council, if required, shall consider the following:
 - a. Whether the proposed Plan is generally consistent with the Framework Plan and is consistent with an adopted Area Plan and Comprehensive Plan in terms of land use, density, transportation systems and networks, adequacy of infrastructure and open space.

Proposed Finding: As stated elsewhere in this document (in the proposed findings) and included by reference herein, the proposal is consistent with the SWAP as the implementing element for the Comprehensive Plan and Framework Plan for the area (including the subject

property).

- b. Whether the proposed Plan is generally suitable for the area in which it is proposed, considering existing and planned neighborhoods, shopping and employment areas; and natural resources and hazards.

Proposed Finding: As stated elsewhere in this document (in the proposed findings) and included by reference herein, the proposal is consistent with the SWAP as the implementing element for the Comprehensive Plan and Framework Plan for the area (including the subject property).

- c. Whether the proposed Plan is functionally integrated with developed or planned areas.

Proposed Finding: Again, by demonstrating compliance with the SWAP as the implementing element of the Comprehensive Plan and Framework Plan (these proposed findings are incorporated by reference herein), this criterion is satisfied.

- d. The proposed plan meets the applicable Great Neighborhood Principles in Section 8.3050.

Proposed Finding: Each element of the Great Neighborhood Principles is addressed below. The proposed findings are included by reference herein. Based on the satisfactory compliance with the Principles as discussed therein, this criterion is satisfied

C. Master Development Plan (MDP) or Partial Master Development Plan (PMDP) Submittal Requirements and Approval Process.

An application for approval shall include the submittal requirements set forth in the City's Land Use Review application form as well as the elements described below.

1. Narrative. A narrative shall set forth the goals and objectives of the plan and describe the urban characteristics of the planned area.
2. Development Plan Map. A map of the plan area and surrounding vicinity shall indicate planned land uses for each land parcel in the area, including plans for park and open space and community facilities, if known. The plan shall show proposed comprehensive plan map designations and zoning. The plan shall include a list of all affected properties with tax lot numbers, current ownership, parcel size, and other information that is pertinent to the plan.
3. Land Use Diagram. The land use diagram shall generally indicate the distribution and location of planned land uses for the master plan area, including plans for park and open space and community facilities, if known. The plan shall show proposed comprehensive plan designations, zoning, and density.
4. Significant Resources Inventory. An inventory of significant natural resources, scenic and historic resources, and open space areas including those identified on the City's adopted inventory and those that have the potential to qualify for protection under Redmond's Goal 5 resource protection program. When significant resources are present, the proposed plan shall include a management plan to protect resource sites;

5. Parks and Open Space. Identify land suitable for park and recreation use in accordance with the needs analysis in the City of Redmond Park Master Plan (Park Plan) and an adopted Area Plan. In particular, where the Park Plan indicates there is a need for neighborhood or community park, the master plan shall identify sites that may be suitable for park development using the design and location criteria from the Park Plan or an adopted Area Plan. Density transfers, SDC credits, dedication, and other value consideration may be identified in the planning process to compensate property owners for land dedicated to public use;
6. Air, Noise, and Water Resources. Review air, noise and water resources that may be impacted by planned development and address how adverse impacts will be avoided or mitigated in compliance with applicable local, state, and federal regulations. The analysis may use City public facility plans, technical studies, and policies to meet this requirement when those plans address how urban development in the plan area can be served. In these instances, the Master Development Plan must show that the envisioned land uses in the plan area are consistent with the land use assumptions in the public facility plans. This requirement is particularly important for storm water management.
7. Natural Hazard Areas. Inventory areas subject to natural hazards, particularly steep slopes, and program urban development that is suitable for the identified hazard areas;
8. Residential Uses. Identify areas planned for housing development, if any, and the proposed zoning districts to be applied. The housing plan must identify a mix of housing types and densities so that the overall density in the area meets or exceeds the housing density objectives for the area that are identified in the Redmond Urban Framework Plan, adopted Area Plans, and the Comprehensive Plan. The Framework Plan and adopted Area Plans provide general guidance on housing densities that need to be achieved in order to meet future housing needs.-Where proposed residential land uses differ from those shown in the Redmond Urban Framework Plan or adopted Area Plans, the master plan shall demonstrate how it meets the overall housing objectives of the Redmond Urban Framework Plan or adopted Area Plans. Applicants may propose new zoning districts when the proposed district(s) in total achieve the housing densities envisioned in the Redmond Urban Framework Plan or adopted Area Plans.
9. Employment Uses. Identify areas planned for employment use and/or mixed uses and the proposed zoning for these areas. Applicants may propose new zoning districts in cases where existing districts are not suitable for the planned development provided the proposed district(s) achieve similar land improvement values and/or employment densities envisioned in the Redmond Urban Framework Plan or adopted Area Plans.
10. Transportation Analysis and Diagram. Prepare a transportation impact analysis including a grid street plan that is consistent with street spacing and connectivity guidelines in the *Redmond Transportation System Plan* (TSP) and adopted Area Plans. Show the proposed classification for all streets down to collector roadways. Show the location of approved TSP improvement projects and any capital improvements that may need to be added to the TSP in order to serve the plan area. Show proposed bicycle pedestrian, and trail routes. Show how planned transportation facilities will connect to transportation facilities in adjacent urban areas.

11. Public Facilities Analysis and Diagram. The plan shall include a conceptual layout of public facilities, including sanitary sewer, water, and storm drainage, needed to support the planned uses. The Public Facilities Analysis must be consistent with the city's adopted *Public Facility Plan* (PFP) and related facility master plans, including improvements related to the adopted Area Plan that may require amending the PFP.
12. North Redmond US 97 Interchange Area Management Plan (IAMP) Compliance. The master plan shall comply with the following policies, if applicable:
 - a. Any property newly annexed within the IAMP area shall have:
 - 1) Direct Access to a local public street other than a state highway consistent with the Local Street Connectivity Plan; and,
 - 2) Any property to be annexed to the City shall relinquish all direct access rights to a state highway as a condition of development approval (when a legal alternative access exists).

Proposed Finding: The application materials submitted in support of the proposed Master Development Plan and Zone change include applicable elements listed above.

13. Great Neighborhood Principles. Master Development Plans shall address applicable Redmond Great Neighborhood Principles described below. ***In instances where the property proposed for a Master Development Plan is located within the boundary of an adopted Area Plan, the Master Development Plan shall also address the Great Neighborhood Principles according to the specificity provided in the Area Plan.***

Proposed Finding: Per the specific direction of this subsection 13 (see bold, italicized text above), the Great Neighborhood principles listed below are addressed individually per the specific design and policy direction as provided in the SWAP.

- a. Transportation. Connect people and places through a complete grid street network and trail system that invites walking and bicycling and provides convenient access to parks, schools, neighborhood service centers, and possible future transit stops.

Proposed Finding: The design includes a complete interconnected series of public streets, sidewalks, City of Redmond master planned trails, and mid-block trail connections that provide access among and between all residential and recreational areas within the development. All facilities will be constructed to City of Redmond standards where applicable, with private facilities built in a similar fashion to match. All surrounding public areas (including schools and parks) and commercial areas will be accessible from all modes of transportation as extended from those constructed internal to this development.

- b. Housing. A mix of housing types and densities should be integrated into the design of new neighborhoods.

Proposed Finding: The housing within the Master Development Plan includes small, medium and larger lot single family residential dwellings. The housing types are located to match the zoning, but includes an intermingling of lot sizes and housing types in order to provide diversity within the neighborhood and to avoid monotony in design. The variety of lot sizes and housing types will ensure that housing is available to meet multiple income levels.

The proposed design, with intermingled housing sizes and types, lends to maintaining property values over time.

- c. Open spaces, greenways, recreation. All new neighborhoods shall provide useable open spaces with recreation amenities that are integrated to the larger community. Central parks and plazas shall be used to create public gathering places. Incorporate into the design of new neighborhoods. Neighborhood and community parks shall be shown in appropriate locations consistent with policies in Redmond's Parks Master Plan.

Proposed Finding: The subject property is void of any existing significant geological features such as rock outcroppings, stands of clustered native trees, etc. that can be integrated into the design of the subdivision. Thus, the design includes a linear park and greenway, trails and public gathering areas created to enhance the livability within the community as intended by this principle.

The Master Development Plan includes a public trailhead at the southeast corner of the site adjacent to the COID canal per the City of Redmond Parks Master Plan. The trailhead is located at the intersection of the COID canal trail and SW Coyote Avenue. The tracts for the trailhead and trail alignments will be dedicated to the City and will be available for general public use and access.

Tract C (12,167 square feet) provides private green space (which may include recreational amenities such as playground equipment) is located in area where it's are easily accessible from all parts of the development. All areas are connected to the public streets, sidewalks and primary City trail system with connector trails located mid-block.

All trail alignments, green spaces and, public park areas will be landscaped with introduced landscaping to include lawn, native and ornamental shrubs, and trees. Landscaping plans will be submitted at such time as the Subdivision application is submitted as necessary.

- d. Integrated design elements. Streets, civic spaces, signage, and architecture shall be coordinated to establish a coherent and distinct character for the Master Development Plan. Plans may integrate design themes with adjacent developed or planned areas.

Proposed Finding: The project will have identification signs and landscaping at the primary entrances from SW Coyote Ave. and SW Antelope Ave. that will match in order to let the public know they are entering a specific neighborhood with a specific residential character. Internally, the open space/pocket park will have signs, possible art and landscaping that will enhance the project entrances. All homes within the development will be constructed by one builder with the architecture of the individual home plans varied to avoid a monotonous feel, but relate in theme, color and external fixtures in order to give the neighborhood a distinct character. The infrastructure (streets, sidewalks, streetlights) will all be developed according to City standards and specifications which will provide continuity throughout the development.

- e. Diverse mix of activities. A variety of uses is encouraged in order to create vitality and bring many activities of daily living within walking and biking distance or a short drive of homes.

Proposed Finding: The Plan illustrates that the neighborhood will include both active and passive recreation areas, as well as public trails. Although not possible within the project itself, the trails and all transportation facilities provide direct access to the adjacent Ridgeview High School, and surrounding properties that have yet to be developed. Notwithstanding the connections to surrounding development and public gathering places, the project contains a smaller pocket park that provide both active and passive recreation opportunities for residents of the neighborhood.

- f. Public art. Public art is encouraged at the gateways to neighborhoods and/or in and around the center of neighborhoods to provide focal points.

Proposed Finding: Specific public art is not proposed at this time (per the listed principle, this is “encouraged” but not required). However, it is most likely that as the project ensues, art and a common design will be incorporated into the primary entrance areas to the neighborhood, as well as within the proposed mini-roundabout on SW 47th Place.

- g. Scenic views. Identify and preserve scenic views and corridors of the Cascade Range, Ochoco Mountains, and Smith Rock. Streets and common or public open spaces should be located and oriented to capture and preserve scenic views for the public. Minimize visual clutter within scenic corridors.

Proposed Finding: The property is relatively flat, with no slopes facing the mountain views to the west. Therefore, it is not possible to arrange individual lots so that every home can take advantage of the views. Once homes are built on the level property, many views will be blocked by all surrounding development. However, the majority of the streets on which individual lots front are oriented in an east/west manner which creates open public corridors that provide views to the mountains in the west. Other than the public infrastructure requirements (streetlights) and street trees, the street corridor will remain free of obstacles to restrict the views.

- h. Urban – rural interface. Urban development shall interface with rural areas through open space buffers at least 100 feet wide and the length of the urban development, excluding public streets, or shall be transitioned from higher density development to lower density development at the urban - rural interface, or utilize other appropriate and equivalent transitional elements.

Proposed Finding: The subject property abuts urban development (either existing or anticipated by zoning designations and the SWAP) on the north, east and west. The property to the south, although not located within the City Limits or UGB, is designated Urban Area Reserve (UAR) on the Comprehensive Plan. This property is owned by the school district and is anticipated to be developed as a middle school. Per the UAR designation, it is anticipated that the property will eventually be brought into the UGB and converted to a public-school use as shown on the adopted SWAP map. Additionally, the future alignment of SW Coyote Avenue, designated as a local street, with a 60-foot right-of-way, will separate the subject property from the adjoining property to the south. Also, as shown on the SWAP map, a buffer as described herein is not required in this location.

- i. Integrated design elements. Streets, civic spaces, signage, and architecture shall be coordinated to establish a coherent and distinct place

in the community, and unique character of the specific area in which the Master Plan is proposed.

Proposed Finding: The project will have identification signs and landscaping at the primary entrances from SW Coyote Ave. and SW Antelope Ave. that will match in order to let the public know they are entering a specific neighborhood with a specific residential character. Internally, the private recreation facility and the open space/pocket park will have signs, architecture and landscaping that will match the project entrances. All homes within the development will be constructed by one builder with the architecture the same or very similar to the illustrations shown on the submitted plans – the individual home plans vary to avoid a monotonous feel, but relate in theme, color and external fixtures in order to give the neighborhood a distinct character. The infrastructure (streets, sidewalks, streetlights) will all be developed according to City standards and specifications which will provide continuity throughout the development.

- j. “Pocket Parks” or “tot lots” shall be incorporated into medium and high density zoned residential subdivisions and site plans. These areas shall be developed for every twenty-five lots/units, a minimum of 1,500 square feet and privately maintained.

Proposed Finding: The proposed Master Development Plan includes 65 single family residential units.

With regard to the single-family portion of the proposed Master Development Plan, the applicant is unsure of exactly how this provision is to be applied – this is a newly adopted provision and the City does not have any history of interpretation or practical implementation into a real project. Based on the pure text, the above principle, 6 separate pocket parks, totaling 9,000 square feet (1,500 square feet each) are required. As written, the provision leaves many questions unanswered, for example: Does this requirement mean separate/individual 1,500 square foot designations, or can the requirement be met with a larger area that combines multiple 1,500 square feet area requirements into a single larger site? Where are such areas to be located? Are there spacing requirements? What elements are to be included in a “tot lot?” If a homeowner’s association (HOA) is not proposed (an HOA is not required to develop a subdivision in the City of Redmond), how will the “private” area be maintained in the future? These questions, with lack of definition in the Code and no history of practical implementation or interpretation has left the applicant to suggest that the proposed Master Development Plan meets this requirement in the following manner.

The Master Development Plan provides three areas within the development that can be utilized to meet this requirement. All three areas are located along the site’s eastern property boundary adjacent to the COID canal. One is located at the southwest corner of the site, among the single family residential lots (i.e. Tract C - approximately 12,167 square feet); one is located north of Tract C, adjacent to the canal (i.e. Tract B - approximately 22,101 square feet); and, the last one is located north of Tract B, adjacent to the canal, (i.e. Tract A - approximately 12,955 square feet). The three pocket park areas combine for approximately 47,223 square feet of area. These areas are located to be equidistant from all elements of the project, and are easily accessible from all areas of the development via trails, sidewalks and public streets. All three tracts are proposed to be dedicated to the City of Redmond as a linear park/trail and will be maintained by the City.

- k. Canal trails. If canals or laterals are present, multi-use trails at least 10 feet wide shall be provided, subject to the Central Oregon Irrigation District's review and approval. Pedestrian amenities such as benches and trash receptacles shall be provided at appropriate locations.

Proposed Finding: As shown on the submitted plan and discussed previously in this document, the canal trail will meet this requirement. Documentation submitted with the application includes a trail design similar to the Prairie Crossing Ph. 4 & 5 development, which was approved by both the City and COID.

- l. Green Design. Environmentally friendly and energy efficient design is encouraged for public and private infrastructure, architecture and building orientation, open spaces and natural areas and transportation facilities. In addition, the planting of native, drought-resistant trees is encouraged to provide shade and to minimize water usage.

Proposed Finding: Such elements, which are encouraged but not required, will be taken into consideration during the more detailed design and construction phases of the project. The applicant is very open to working with the City of Redmond during the infrastructure design/engineering design phase to incorporate elements that are desired by the City if they are feasible for the project.

CONCLUSION: Based upon the submitted Master Development Plan, the Transportation Impact Analysis, and the proposed findings included herein, the applicant believes that all requirements have been fulfilled. The applicant respectfully requests approval of the project.

EMERIO *Design*

CIVIL ENGINEERS & PLANNERS

DATE: January 22, 2021

**APPLICANT/
OWNER:** Ed Bartholemy
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503-628-0526
edb@kintonland.com

**CIVIL ENGINEER,
PLANNING &
SURVEYOR:** Emerio Design, LLC
Attn: Steve Miller
6445 SW Fallbrook Pl., Suite 100
Beaverton, OR 97008
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E-mail: stevem@emeriodesign.com

REQUEST: The applicant is requesting approval of a 64-lot subdivision.

SITE

LOCATION: 4860 SW Badger Ave., Redmond, OR. The property lies on the west side of the COID Lateral B, south of Antelope Ave, and north of Coyote Avenue.

TOTAL

SITE SIZE: 16.25-Acres

LEGAL DESCRIPTION: Tax Map 15-13-30; Tax Lot 1401

APPLICABLE ORDINANCE PROVISIONS:

1. Redmond Urban Area Comprehensive Plan, if any policies and objectives are found to apply.
2. Redmond Code, Chapter 8, Development Regulations

Article I - Zoning Standards

8.0135-8.0140, Limited Residential, R-2 Zone

Article I, Section 8.0370 - Solar Access - Building Setbacks for the Protection of Solar Access.

Article II, Land Use Procedures

Article III, Land Division Standards

8.2000 Title.

8.2005 Purpose.

8.2010 Interpretation.

8.2100 Procedure.

8.2105 Scope of Regulation.

- 8.2110 Minimum Standards.
- 8.2200 Pre-Application Meeting.
- 8.2220 Phased Development Plan.
- 8.2225 Approval of Phased Development Plan.
- 8.2230 Development Following Approval.
- 8.2235 Required Findings for Tentative Subdivision Approval.
- 8.2240 Improvement Requirements.
- 8.2245 Resubmission of Denied Tentative Subdivision Plats.
- 8.2700 Compliance Required.
- 8.2705 Blocks, Lots and Parcels
- 8.2710 Streets
- 8.2715 Fundamental Design Elements
- 8.2720 Grading of Building Sites
- 8.2800 Improvement Procedures
- 8.2805 Improvements in Partitions
- 8.2810 Acceptance of Improvements
- 8.2815 Transportation Impact Analysis
- 8.2820 Access Management Standards
- 8.2825 Street Dedications

CONFORMANCE WITH CITY OF REDMOND DEVELOPMENT CODE APPROVAL CRITERIA

REDMOND DEVELOPMENT CODE, CHAPTER 8

8.0135 Table A, Residential Zones, Uses Permitted. The following uses are allowed outright or conditionally in each of the Residential zones as follows:

O means Permitted Outright
 C means Permitted Conditionally
 N means Not Allowed

LAND USE:	ZONE:					RESTRICTIONS AND REQUIREMENTS:
Residential Uses:	R-1	R-2	R-3	R-4	R-5	
Accessory Building: Sheds, shops, garages excluding railroad cars not in railroad right of way, movable shipping containers, and similar storage containers that are not structures.*	O	O	O	O	O	Detached; includes greenhouse, workshops
Guest House	O	O	O	O	O	No kitchen; uses main houses' sewer & water
Accessory Dwelling Unit / Accessory Suite	O	O	O	O	O	Uses main houses' sewer & water or individual City Services; may have kitchen
Accessory Use	O	O	O	O	O	Includes Home Occupations
Apartments						See Multi-Family Complex / Dwelling
Bed and Breakfast	C	C	C	C	C	
Boarding or Rooming House	N	N	N	N	C	
Cluster Development	N	N	N	C	C	
Cottage Development	N	C*	C	C	C	
Condominium	O	O	O	O	O	State regulated
Duplex	N	O	O	O	O	
Duplex Lot	N	N	O	O	O	
Manufactured Home	N	N	N	N	N	See Single Family Dwelling
Manufactured Home Park	N	N	C	C	C	
Manufactured Home Subdivision	N	N	O	O	O	Subject to compliance w/ applicable ORS
Multi Family Complex (5 + units)	N	N	N	C	O	
Multi Family Dwelling (3 & 4 plex)	N	N	O*	O	O	*In the R-3 zone tri-plexes are allowed on corner lots w/min. of 7,400 sq ft size.
Nursing, Convalescent, and Assisted Living Facility	N	N		C	C	More than 15 people
Planned Unit Development	N	N	C	C	C	
Residential Care Facility	N	N		C	O	Defined in and regulated by ORS
Residential Care Home	O	O	O	O	O	Defined in and regulated by ORS
Single Family Dwelling	O	O	O	O	O	
Townhouse	N	C	O	O	O	

FINDING: The above table shows the permitted uses (conditional and outright) allowed in the R-3 and R-4 zones. The Applicant's proposal is for a single-family residential subdivision, which is allowed outright in the R-3 and R-4 zones. These standards are met as proposed.

8.0140 Table B, Minimum Standards. The following minimum standards apply in each of the Residential zones as follows:

Zone:					
Standard:	R-1	R-2	R-3	R-4	R-5
Minimum Lot size - Square Feet					
Single Family	9,000	9,000	7,500	6,000	6,000
Duplex	NA	^D 10,000	^A 8,000	7,500	7,500
Duplex Lot			4,250	3,750	3,750
Townhouse			E	E	E
Multi-family Dwelling	NA	NA	NA	F	F
Multi-family Complex	NA	NA		F	F
Maximum Density (1 unit per # s.f.)_F			4,250	3,000	2,500
Minimum Setback Distance – See C, F, and H below					
Front Façade, excluding	15	15	15	10	10

garage which must be 20 feet back from property line					
Interior Side	B 5/10	B 5/10	B 5/10	B 5/10	5
Street Side	15	15	15	15	15
Rear	20	20	20	20	5
Garage	20	20	20	20	20
Maximum Building Height_F	32	32	32	40,E	40,E
Minimum Street Frontage					
Standard Street	50	50	50	50	50
Cul-de-sac	30	30	30	30	30
Flag Lot	20	20	20	20	20
Duplex lot (non flag or cul de sac)	N/A	N/A	25	25	25
Townhouse				E	E
A Duplexes permitted only on corner lots					
B Interior side yards must provide a minimum of 5 feet on one side and 10 feet on the other side for single family and duplex residences. Where alley access is provided, both interior side yards may be reduced to 5'. Exceptions to this 10' setback are allowed (1) when the lot was created prior to the adoption of this standard (November 9, 2006); or (2) on cul de sac lots; or (3) on flag lots, or (4) parcels created by partition.					
C Does not include solar setbacks, which are calculated separately					
D Duplexes only allowed on legally created lots of adequate size / created prior to November 9, 2006, otherwise prohibited.					

E	Pursuant to the Townhouse Development Standards in Chapter 8, Article IV Site and Design Review Standards, Section 8.3035.4.f.2, Table A.
F	Does not apply to development standards for Multi-family Dwellings and Multi-family Complexes which are located in Chapter 8, Article IV, Site and Design Review Standards, Section 8.3035.4.E.2., Table A
G.	Street trees are required to be provided in accordance with Section 8.3035(5)(K)
H.	ADU Rear-Yard and Other Setbacks (Zones R-1 and R-2 – <i>no change to setbacks since the lot sizes are quite large.</i>) For all other zones: 2 story ADUs – 20-foot rear yard setback; 2 story ADU that abuts an alley – 10-foot rear yard setback (driveway must still be 20 feet deep) 1 story ADU – 10-foot rear yard setback 1 story ADU that abuts a 20-foot-wide alley – 5-foot rear yard setback (driveway must still be 20 feet deep) ADU abutting a street corner – maintain front yard setback – side may be 5 feet for either 1 or 2 stories (driveway must still be 20 feet deep) ADU cannot extend in front of the house or front yard setback. ADU on lot abutting a commercial/industrial property – 5 foot rear yard setback regardless of height.
	N/A = "not allowed"

FINDING: The proposed subdivision shows lots in compliance with the above table, as proposed. All proposed lots in the R-3 zoned portion of the site have a lot size equal to or greater than 7,500 square feet for single family lots, while the R-4 zoned portion of the site have lot sizes equal to or greater than 6,000 square feet for single family lots. All standard frontages for all proposed lots are over 50' wide, all cul-de-sacs frontages are over 30' wide. These standards are met as proposed.

City of Redmond Code, Chapter 8, Development Regulations, Article I, Section 8.0370 - Solar Access - Building Setbacks for the Protection of Solar Access.

Solar setbacks will be reviewed at the time of building permits through the city's Building Department. Solar setbacks apply to the northern-most lots (Lots 1 through 4) of the subdivision. The applicant can meet with standard subject to condition of approval 7.

LAND PARTITIONING/ SUBDIVISION

8.2000 Title. *These standards shall be known as the City of Redmond Land Division Standards and may be so cited and plead.*

8.2005 Purpose. *In accordance with the provisions of Oregon Revised Statutes (ORS) Chapters 92 and 227, these standards set forth the minimum standards governing the approval of land development, including subdivisions and partitions, as necessary to carry out the Redmond Urban Area Comprehensive Plan and to promote the public health, safety and general welfare. The purposes of these provisions and regulations are to:*

- 1.** *Encourage well planned subdivision and partition development to the end that good livable neighborhoods with all needed amenities and community facilities may be created.*
- 2.** *Encourage development in harmony with the natural environment and within resource carrying capacities.*
- 3.** *Safeguard the interest of the public, the developer and the future lot owner – the Community.*

4. *Improve land records and boundary monumentation.*
5. *Insure equitable processing of subdivision and partition plats, and accomplish to the greatest extent possible the goals and objectives of the Comprehensive Plan for the Redmond Urban Area.*
6. *Provide for orderly and efficient urban development and coordinate development with public facility and service plans and capabilities.*
7. *Promote and maximize the conservation of energy by preserving the option to utilize solar energy and to implement the Comprehensive Plan policies relating to solar energy by encouraging the design of new developments to protect future options to use solar energy by providing for and protecting solar access in the following ways:*
 - A. *By regulating the orientation of streets, lots, and parcels;*
 - B. *By the placement, height and bulk of buildings;*
 - C. *By the placement and growth of vegetation; and,*
 - D. *By preserving options for other alternative energy sources, such as wind, that may be available and necessary in the future.*

FINDING: This narrative contains responses to fulfill the objectives of these code sections. Additionally, the Applicant anticipates the City implementing conditions of approval to further assure that these standards are met.

8.2010 Interpretation. *No person may subdivide or partition land within the City of Redmond except in accordance with ORS Chapter 92 and the provisions of these standards. The provisions of these standards shall be construed to affect the purposes set forth in Section 8.2005 of these standards. These provisions are declared to be the minimum requirements fulfilling such objectives, and, as deemed necessary through the land use review and decision process, the City may impose additional requirements to promote the health, safety and general welfare, and to carry out the Comprehensive Plan of the City. Where conditions set forth herein are less restrictive than comparative conditions imposed by any other provision of these standards, by provision of other applicable local ordinance, resolution or regulation, or by provision of state statute or administrative regulation, the more restrictive shall govern.*

FINDING: The Applicant is aware of the above code section and this narrative contains responses to fulfill the objectives of these code sections in accordance with ORS Chapter 92. The Applicant is also aware that the City may imposed additional requirements to help carry out the provisions of the code.

GENERAL REQUIREMENTS

8.2100 Procedure. *All subdivisions, partitions and other land use actions subject to the provisions of this Chapter shall be processed in accordance with Article 2, Land Use Procedures, of the City of Redmond Development Code.*

FINDING: The above code section is not an actual approval criterion, but rather a reference to the procedures for processing a subdivision in the City of Redmond. The Applicant understands that this application request will be processed in accordance with Article 2, Land Use procedures as described in the body of this narrative.

8.2105 Scope of Regulation. *Before a plat of any subdivision or partition may be recorded, the person proposing the subdivision or the partition, or an authorized agent or representative, shall make an application in writing to the Redmond Community Development Department for approval of the proposed subdivision or partition in accordance with the requirements and procedures established by these standards.*

FINDING: The applicant has applied for the appropriate subdivision application for development of the subject property. This standard is met.

8.2110 Minimum Standards. *No proposed subdivision or partition shall be approved unless it complies with the density requirements of the Comprehensive Plan for Redmond, the applicable Zoning Standards, these standards, and ORS Chapter 92.*

FINDING: These applicable standards are addressed in the body of this narrative.

SUBDIVISION APPLICATION PROCEDURE

8.2200 Pre-Application Meeting. *Prior to submitting a tentative subdivision plat each applicant or their representative is required to meet with the Community Development Director or a designated staff member(s) to review the proposal.*

FINDING: The applicant met with the appropriate staff prior to submittal of the application. This standard is met.

8.2220 Phased Development Plan. *An overall phased development plan shall be submitted for all developments for which phased development is contemplated. The phased development plan shall include but not be limited to, the following elements:*

- 1. Overall development plan, including phase or unit sequence.*
- 2. Show compliance with all applicable land use standards and policies.*
- 3. Schedule of improvements initiation and completion.*
- 4. Overall transportation and traffic pattern plan showing compliance with grid street standards, and for land within the North Redmond US 97 Interchange Area Management Plan (IAMP), compliance with the Local Street Connectivity Plan (Comprehensive Plan Addendum Chapter 9 Transportation Element figure 1).*
- 5. General program for phasing timetable projection.*
- 6. Development plans for any common elements or facilities.*
- 7. If the proposed subdivision is believed to have an additional impact upon adjacent lands or lands within the general vicinity, the Hearings Body may require an additional impact analysis for various aspects of the development thought to cause such impacts.*
- 8. Street tree plan.*

8.2225 Approval of Phased Development Plan. *The Hearings Body shall review a phased development plan at the same time a tentative plat for the first phase is reviewed. A phased development plan may be approved before the tentative plat for the first phase is submitted. The Hearings Body may approve, modify, or disapprove the phased development plan and shall set forth findings for such decision. The Hearings Body may also attach conditions necessary to bring the plan into compliance with all applicable land use standards and policies. Any tentative plat submitted for the plan area shall conform to the phased development plan unless approved otherwise by the City.*

8.2230 Development Following Approval. *Once a phased development plan is approved by the City, the plan shall be binding, upon both the City and the developer. The Hearings Body may attach conditions to any changes proposed that are deemed necessary to insure compliance with the Comprehensive Plan and implementing regulations. After five (5) years from the date of approval of the plan, the City may initiate a review of the plan for conformance with applicable City regulations. If necessary, the City may require changes in the plan to bring it into conformance with new applicable city regulations.*

FINDING: The proposed application is for a five (5) phase development plan. An overall phased development plan has been submitted for the proposed subdivision. The phased development plan includes an overall development plan, including phase or unit sequence, shows compliance with all

applicable land use standards and policies, and schedule of improvements initiation and completion. The Applicant's proposal satisfies the above criteria.

8.2235 Required Findings for Tentative Subdivision Approval.

1. The Hearings Body shall approve no application for a subdivision unless the following requirements are met:

A. Proposal is in compliance with ORS Chapter 92, the Comprehensive Plan, the Transportation System Plan (TSP) and applicable zoning.

FINDING: The submitted Tentative Plan demonstrates compliance with ORS Chapter 92. Compliance with the Comprehensive Plan, Transportation System Plan, and applicable zoning requirements as such are implemented through the adopted and acknowledged City of Redmond Development Code. All applicable standards are addressed with responses in this document. This standard has been met.

B. Proposal does not conflict with acquired public access easements within or adjacent to the subdivision.

FINDING: The proposal does not conflict with known public access easements. This standard is met.

C. Each lot is suited for the use intended or offered.

FINDING: Each proposed lot is of sufficient size for the residential uses as intended. This standard is met.

D. The subdivision will not exceed the operational capacity of public facilities and services as identified in the city's Water and Wastewater Master Plan and the Transportation System Plan, which are required to serve the development, or a determination that sufficient capacity can be provided.

FINDING: The proposal does not adversely impact the operational capacity of public facilities. The potential impacts and public improvements needed for the project have been reviewed and addressed by the Engineering Department in detail. This standard is met, subject to the conditions of approval.

E. A water rights division plan has been approved by the applicable irrigation district.

FINDING: The subject property does not contain any water rights; therefore, the above criterion does not apply to the Applicant's proposal.

F. The subdivision contributes to orderly development and land use patterns in the area, and provides for the preservation of natural features and resources such as streams, lakes, natural vegetation, special terrain features.

FINDING: The subject property is located in the Southwest Area Plan (SWAP) boundary, which is a residentially developed area, and was recently annexed into the City limits. The subject property is located adjacent to the COID B lateral, which will remain in its current location. Existing street stubs on the east side of the canal will be extended across the canal to continue the orderly development of the transportation system and surrounding land use patterns. There are no existing natural features and/or resources such as streams, lakes, natural vegetation, or special terrain features located on the subject property that require protection. The Applicant's proposal satisfies this standard.

2. Access Management proposals comply with the standards set forth in Section 8.2820 and all other applicable standards.

FINDING: Access management standards are reviewed under section 8.2820 of this document as

noted in this standard.

8.2240 Improvement Requirements.

1. ***In the approval of a subdivision, the Community Development Director or Hearings Body shall consider the need for street and other improvements. All streets in new subdivisions, except for planned unit developments (PUD's), shall be dedicated to the public without reservation or restriction.***

FINDING: The Applicant met with the City's Engineering Department prior to submitting the application. The Engineering Dept. has reviewed the proposed subdivision as it relates to streets and street improvements. Based on the feedback the Applicant received from the City's Engineering Dept., the proposed subdivision has been designed accordingly.

Transportation: All public streets have been designed to current City of Redmond Standards & Specifications and Transportation System Plan (TSP) standards and extended to the limits of the project unless otherwise specified. A five (5) ft. minimum width public utility easement (PUE) will be dedicated along all street right-of-way per COR Standard Drawing 2-1.

A) SW Coyote Ave., SW Badger Creek Dr., SW Badger Ave., and SW Antelope Ave. – These local streets are all local grid streets. All of these streets will be extended through the proposed subdivision and improved to City Standards and Specifications as required by City Code. Street improvements conforming to City street standards shall be required per COR Standard Drawing 2-1 and as follows;

B) SW 47th Place and SW Badger Court – local and cul-de-sac streets. Street improvements conforming to City local streets and cul-de-sac grid street standards have been proposed per COR Standard Drawing 2-1 and include new pavement, curb, sidewalk, storm drainage, sixty (60) ft. right-of-way and thirty-eight (38) ft. cul-de-sac radius right-of-way dedication are proposed.

2. ***Private Alley Access. The Community Development Director or Hearings Body may require the applicant to improve a private alley access easement serving two or more lots according to the adopted City of Redmond Public Works Standards and Specifications, as amended.***
 - A. ***Such access easements shall include provisions for permanent, long-term maintenance, including: maintenance measures to be employees; responsible parties; funding; design; timing; and, enforceability. These provisions shall be included as recorded Covenants, Conditions and Restrictions (CCR's) appurtenant to the affected properties.***

FINDING: No alley system is proposed for the development. These standards are not applicable.

3. ***The subdivider shall record the required (including but not limited to) land division agreement, public improvement agreement, shared access agreement or shared well agreement, as may be applicable, with the Deschutes County Clerk's office at the time of recording of the final subdivision plat.***

FINDING: This subdivision, as proposed, will have the needed public improvements as it relates to the city's requirements. Therefore, no land division agreement is needed for the Applicant's proposal.

4. ***Paved access is guaranteed to each lot.***

FINDING: The applicant is proposing paved access/ streets to all lots. This standard is met.

5. ***Each lot is to be connected to the City water and sewer system pursuant to Section 4.007 of the Code of the City of Redmond.***

FINDING: As proposed, each new lot will be connected to City Water and Sewer services. Upon receiving land use approval for the subdivision, the developer will submit detailed civil plans to the City's Engineering Department for review and approval prior to construction of the subdivision.

The Applicant's proposal satisfies the above criterion.

6. All required public utilities are available.

FINDING: By extending streets, water and sewer services across the COID B lateral as proposed, all required public utilities will be available to the subject property for the proposed development. This standard is met.

8.2245 Resubmission of Denied Tentative Subdivision Plats.

- 1. A tentative plat that was previously denied for an area or tract of land shall be resubmitted in accordance with this Chapter, and shall be reviewed in the same manner as any other tentative plat.**

FINDING: This application is not a resubmittal of a previously denied application. This standard is not applicable.

DESIGN STANDARDS AND IMPROVEMENTS

8.2700 Compliance Required.

- 1. Any land division or development shall be in compliance with the design and improvement standards and requirements of this section, and all other applicable provisions, as set forth in this Chapter.**

8.2705 Blocks, Lots and Parcels.

- 1. Blocks. The resulting or proposed length, width and shape of blocks shall take into account the requirements for adequate building lot sizes, street widths, access needs and topographical limitations.**
 - A. No block shall be more than 660 feet in length between street center lines unless it is adjacent to an arterial street, or unless topography or the location of adjoining streets justifies an exception, and is so approved by the reviewing authority. In MUN, MUE and MULW zones, block lengths shall be an average of 330 feet, except where required to meet grid street or access management requirements.**

FINDING: All streets and block lengths within the subdivision comply with the 660-foot maximum block length. These standards are met.

- B. The recommended minimum length of a block along an arterial street is 1,320 feet, except that along such blocks, a public right-of-way for pedestrian and bicycle access shall be dedicated at or nearest the mid-point of the block length as is practical. The right-of-way shall be a minimum of 10 feet wide, with an all weather surface a minimum of 5 feet wide, constructed and centered within the right-of-way.**

FINDING: The proposed subdivision is not adjacent to any arterial streets. This standard does not apply.

- C. A block shall have sufficient width to provide for 2 tiers of lots unless topography, the location of adjoining streets, or adjacency to an arterial street justifies an exception.**

FINDING: Due to the site abutting the COID B lateral along the site's eastern property boundary, the proposed subdivision has provided for blocks with sufficient width to provide for 2 tiers of lots to the maximum extent practicable, except for where the existing canal precludes this design. Base on the shape of the existing lot and location of the COID B lateral, it is not possible to provide 2 tiers of lots throughout the proposed subdivision. The exception is justified. This standard is not applicable.

- D. Where appropriate at approved cul-de-sacs, dead-end streets, or along blocks approved at more than the maximum block length standard, pedestrian and bicycle access corridors shall be required to be constructed between lots to minimize travel distance between subdivisions, parks, school, and collector or arterial streets. Access corridors shall be located to provide a reasonably direct connection between likely pedestrian destinations, and shall be consistent with the City of Redmond Bicycle Refinement Plan where applicable. A reasonably direct connection is a route which minimizes out of direction travel for people likely to use the connection considering terrain, safety and likely destination. The Community Development Director or Hearings Body may determine based on evidence in the record that construction of a separate access corridor is inappropriate or impractical. Such evidence may include but is not limited to:**

- 1. When the nature of abutting existing development makes construction of an access corridor impractical.**
- 2. When the access corridor would cross a natural area with significant natural habitat and construction would be incompatible with protection of natural values.**
- 3. When the access corridor would cross topography where slopes exceed 30% or where path grade would exceed 12% slope; or**
- 4. When a cul-de-sac or dead-end street abuts rural resource land at the urban growth boundary. In industrial zones, this standard may be waived at the discretion of the Community Development Director or Hearings Body when it is determined that the City's grid street standards should not be applied to the industrial development.**

FINDING: Even though the Applicant is proposing a cul-de-sac design as part of the proposed subdivision, a pedestrian and/or bicycle access corridor is not warranted to minimize travel distance between subdivisions, parks, school, and collector or arterial streets because the maximum block length standard is not exceeded. With that being said, based on #2 above, a pedestrian connection to the east has been proposed between Lots 26 & 27 to minimize travel distance between SW Badger Ave. and SW Badger Creek Dr. to provide convenient access to the linear park along the COID canal.

- 2. Lots and Parcels. The size, width, and orientation of newly created lots and parcels shall be appropriate for the location of the land division and for the type of development and use contemplated. Lots and parcels shall be generally rectangular in shape, and shall be consistent with the lot size provisions of the zoning standards and the density requirements as established in the City of Redmond Comprehensive Plan. Notwithstanding these requirements, the following exceptions may apply:**

- A. In areas beyond the City Limits where public sewer is not currently available, minimum lot and parcel sizes shall permit compliance with the requirements of the Department of Environmental Quality and County sanitarian, and shall be sufficient to permit adequate sewage disposal. Any problems posed by soil structure and water table as related to sewage disposal by septic tank shall be addressed and resolved in the applicant's initial plan.**
- B. Where property is zoned and planned for business or industrial use, other**

widths and areas may be permitted by the Community Development Director or Hearings Body. Depth and width of properties reserved or laid out for commercial and industrial purposes shall be adequate to provide for the off-street service and parking facilities required by the type of use and development contemplated.

- C. *In steep terrain, increased lot or parcel sizes may be required to avoid excessive cuts, fills, and steep driveways.***

FINDING: The proposed lots are designed in an appropriate fashion and are rectangular in shape as far as practicable. The lots are sufficiently large enough to serve the intended single-family residential uses. All lots comply with the minimum lot size standard for the zone. The proposal meets the above standards.

- 3. *Frontage. Each newly created lot and parcel shall abut upon a public street other than an alley for at least 50 feet, except for lots fronting on the bulb of a cul-de-sac, then the minimum frontage shall be 30 feet. Flag lots shall have no less than 20' of street frontage measured at the property line. Lots created as part of a Planned Unit Development shall meet the same frontage requirements listed herein, except such frontage may be allowed along private streets. Vehicular access shall be provided as specified in Section 8.2820, Access Management Standards, of this Chapter, or as specified in Section 8.2705(6) below, for residential lots and parcels abutting collector and arterial streets. All lot and parcels shall be addressed from the primary public street frontage, not including alleys.***

FINDING: Each new lot has more than 50 feet of street frontage. Each cul-de-sac lot has a minimum of 30' of street frontage. The proposal is not a PUD. These standards are met.

- 4. *Side Lot or Parcel Lines. All side lot lines shall be at right angles to street lines or radial to curved streets wherever practical except as provided for in subsection (10) of this section.***

FINDING: The submitted plans demonstrate compliance with the above provisions to the greatest degree practicable. The proposal is in general compliance with this standard.

- 5. *Through/Double Frontage Lots and Parcels. Through lots or parcels, and lots or parcels with double frontage shall be avoided whenever possible, including lots or parcels created adjacent to Collector and Arterial Streets, but not including alley frontage as described in Section 8.2705(6) below, except when they are necessary due to an irregular parent lot or parcel configuration, or are necessitated by topography or other unique circumstance.***

FINDING: There are no double frontage lots proposed within the subdivision. This standard is met as proposed.

- 6. *Residential Lots and Parcels Abutting Collector and Arterial Streets. Lots and parcels created adjacent to Collector and Arterial streets shall be oriented so that the front elevation of the residential development faces the Collector or Arterial Street. Vehicular access shall be provided pursuant to Section 8.2820, Access Management Standards, of this Chapter. In instances where direct vehicular driveway access to lot or parcel from the Collector or Arterial street is not permissible, alley access shall be provided to the rear of the lot or parcel in accordance with the design standards included in Section 8.2710(3) of this Chapter.***

FINDING: The subject property does not abut a collector or arterial street. These standards are not applicable.

- 7. *Corner Lots and Parcels. Corner lots and parcels shall be 5 feet more in width than***

other lots and parcels and also shall have sufficient extra width to meet the additional side yard requirements of the zoning district in which they are located.

FINDING: All proposed corner lots in the subdivision at the buildable portion of the lot are 5 feet wider than the minimum lot frontage of 50 feet and have sufficient extra width to accommodate yard/setback requirements on these lots. This standard is met, as proposed.

- 8. *Special Building Setback Lines. If special building setback lines, in addition to those required by the applicable zoning, are to be established in a development, they shall be shown on the final plat of the development and included in the deed restrictions.***

FINDING: No special building setback lines are needed, proposed, or required. This standard is not applicable.

- 9. *Large Building Lots: Re-division. In the case where lots or parcels are of a size and shape that future redivision is possible, the Community Development Director or Hearings Body may require that the blocks be of a size and shape so that they may be redivided into building sites, and the development approval and site restrictions may require provision for the extension and opening of streets at intervals which will permit a subsequent redivision of any tract of land into lots or parcels of smaller sizes than originally platted, and in conformance with the density provisions established in the City of Redmond Comprehensive Plan for the existing or intended Zone. A plan indicating the ability for re-division according to these standards may be required as part of the initial land division process.***

FINDING: Future re-divisions of the subject property are not possible based on lot area requirements, therefore, this standard is not applicable.

- 10. *Solar Access. As much solar access as feasible shall be provided each lot and parcel in every new subdivision or partition considering topography, development pattern, and existing vegetation. The boundary lines of lots and parcels, as far as feasible, shall be oriented to provide solar access at ground level at the southern building line of the adjoining lot to the north two hours before and after the solar zenith from September 22 to March 21. If it is not feasible to provide solar access to the southern building line the solar access, if feasible, shall be provided at 10 feet above ground level at the southern boundary line two hours before and after the solar zenith from September 22 to March 21, and three hours before and after the solar zenith from March 22 to September 21. This solar access shall be protected by solar height restrictions on burdened properties for the benefit of lots receiving the solar access pursuant to Section 8.0370, of the City of Redmond Development Code, Solar Access Standards. If the solar access for any lot, either at the southern building line or at 10 feet above the southern building line, is not feasible, supporting information may be required with the application.***

FINDING: Solar access for lot design has been accommodated as far as feasible given the pre-ordained arrangement of streets, the unique shape of the property, and the COID B lateral along the sites eastern property boundary. This standard is met as far as feasible.

- 11. *Curvilinear Street and Block Design. Although a basic grid street design with minimum and maximum block lengths are requirements of this section, a curvilinear street/block design is encouraged for the purpose of adding interest to new subdivision development.***

FINDING: This standard is a "recommendation" as described. This standard is not applicable. With that being said, the proposed street layout does include a street layout with curvilinear streets and block design.

12. **Flag Lots.** A flag lot shall be considered as a “flag lot” if the pole of the flag lot is less than half the width of the average lot width. For flag lots, the following shall be required:
- A. **Flag poles shall be no less than 20’ wide.**
 - B. **Flag lot development, if allowed by the zone, is limited to one duplex or single family dwelling per lot. All zone regulations apply, including the minimum required lot size and setbacks unless setback reductions are allowed as described in (E).**
 - C. **Each flag lot shall contain a minimum 16’ wide paved driveway.**
 - D. **A flag lot is exempt from the 50 foot street frontage requirement; however a minimum of 20 feet of street frontage is required.**
 - E. **Front and/or rear yard setbacks may be reduced to no less than 10’ subject to review and approval by the Community Development Director. The orientation of any structure (determination of front) may be suggested by the property owner, and is subject to the review and approval of the Community Development Director or designate. The location(s) of all structures immediately adjacent to any flag lot shall be shown on a site plan (1) during planning review and during the act of creating any new flag lot, and (2) during a building permit review for any structure built on a flag lot.**
 - F. **No flag lot shall be partitioned or further divided.**
 - G. **The “pole” of the flag lot shall be no longer than 150’ measured from the street intersection to the beginning of the base of the flag.**
 - H. **The “pole” of the flag shall not be included in the minimum lot size calculation.**
 - I. **Flag lots shall be exempt from street tree requirements unless the street frontage portion of the flag lot is 30’ or greater.**
 - J. **Flag lots are prohibited along or abutting the Dry Canyon Rim.**
 - K. **Two off-street parking spaces shall be provided for each dwelling unit on a flag lot.**

FINDING: One flag lot is being proposed within this subdivision. As proposed, the flat lot (i.e. Lot 55) has a flag pole no less than 20 feet in width, will be able to accommodate a 16 foot wide driveway, the flag pole is less than 150 feet in length, and can accommodate a minimum of two off-street parking spaces for the future single-family dwelling on the lot. The Applicant’s proposal satisfies the above criteria for a flag lot.

8.2710 Streets.

1. **General.** Streets shall be in conformance with the City of Redmond Transportation System Plan (TSP) as specified herein.
- A. **Except along Arterial Street, public streets shall be spaced a maximum of 660 feet between centerlines. The purpose is to provide a street grid pattern of through streets to facilitate traffic movement. Street designs shall conform to topography and other existing natural and man-made conditions. Illustrative examples of other conditions include the dry canyon, main COI canal, Highway 97, and the Burlington Northern Railroad tracks.**
 - B. **All proposed streets, sidewalks, bike lanes and pedestrian pathways shall connect to other streets, sidewalks bike lanes and pedestrian pathways within a development and to existing and planned streets, sidewalks, bike lanes and pedestrian pathways outside the development. Such facilities shall serve existing and planned parks, schools or other public lands within a neighborhood.**
 - C. **To the maximum extent possible, new local streets shall align and connect with existing local streets and collectors, and in certain special cases arterial streets. Cul-de-sac streets shall be permitted only where no feasible connection with an adjacent street exists, or if the local street connection would be to an arterial**

street and the function of the arterial street may be diminished as determined through the land use review process, or the block length would be less than that which is permitted by Section 8.2705(1)(B).

- D.** *Consideration should be given to alternative street designs other than required herein in the City's non-residential land use zones to allow for more effective developments. Such designs may be considered and approved during the subdivision or partition process without need for variance.*
- E.** *All proposed or required streets and alleys shall comply with Section 8.2820 Access Management Standards, the Transportation System Plan, and with Local Street Connectivity Plans adopted as part of the transportation element of the Comprehensive Plan.*

FINDING: The Applicant's proposed street design complies with the above applicable standards. There are not arterial streets adjacent to or within the proposed development. All proposed streets, sidewalks, bike lanes and pedestrian pathways connect to other streets, sidewalks bike lanes and pedestrian pathways within the development and to existing and planned streets, sidewalks, bike lanes and pedestrian pathways outside the development as required.

- 2.** *Existing Streets. Whenever existing streets, adjacent to or within a tract, are of inadequate width to accommodate the increase in traffic expected from the land division or by the City's transportation policies as determined through a transportation impact analysis, additional right-of-way shall be provided at the time of the land division by the applicant. During consideration of the tentative plat for the subdivision or partition, the Hearings Body shall determine whether the improvements to existing streets, adjacent to or within the tract, are required. If so determined, such improvements shall be required as a condition of approval of the tentative plat. Improvements to adjacent streets shall be required where traffic on said streets shall be directly affected by the proposed subdivision. Notwithstanding these provisions, off-site improvements to streets not within or adjacent to the development may be required when impacts resulting from the development necessitate such improvements as demonstrated through a transportation impact analysis.*

FINDING: This standard addresses the assessment of need for the improvement of existing streets abutting a subject property. The proposed streets (and connections) have been proposed in accordance to City of Redmond's TSP and other applicable associated standards.

- 3.** *Minimum Right-of-Way (ROW) and Roadway Width. The street right-of-way and roadway surfacing widths shall be in conformance with the standards as specified in Table 1 below:*

Table 1 - City of Redmond Right of Way and Roadway Design and Cross-Section Standards

Functional Class	Width (ft)		Right-of-Way	Travel Lanes	Sidewalks	Bike Lanes**	Parking**
	Pavement Standard	Pavement (minimum)					
Residential Alley	16 ft		20 ft	n/a	none	shared	none
Commercial Alley	20 ft		20 ft	n/a	none	shared	none
Local Residential****	36 ft		60 ft	2***	5 ft	shared	both sides (unstriped)
	28 ft*		60 ft	2***	5 ft	shared	one side (unstriped)
	24 ft*		60 ft	2***	5 ft	shared	none
Local Industrial	40 ft	38 ft	60 ft	2***	5 ft	shared	optional (unstriped)
Industrial Collector	40 ft	38 ft	80 ft	2	5 ft	6 ft	none
Minor Collector	40 ft	36 ft****	60 ft	2	5 ft	shared	both sides (8 ft)
Major Collector	36-50 ft	36 ft****	80 ft	2	5 ft	6 ft	none
Minor Arterial (3-lane)	50 ft	48 ft	100 ft	3	7 ft	6 ft	none
Minor Arterial (5-lane)	74 ft	72 ft	100 ft	5	7 ft	6 ft	none

Notes:

**May be constructed only in conjunction with the creation of covenants, conditions and restrictions (CCR's) and the establishment of a homeowners association (HOA) for the development. The CCR's shall provide that the primary*

responsibility for parking enforcement shall be the HOA, with the City of Redmond also being acknowledged in the CCR's as a beneficiary for such parking enforcement as a violation of the land use decision and/or city code.

****In certain cases, bike lanes may be reduced to 5 ft, parking may be reduced to 7 ft, and travel lanes to 11 ft at the discretion of the City Engineer.**

*****Unstriped travel lanes**

******36 ft in existing built-out areas**

*******All streets less than 28 feet wide shall be no longer than 300 feet in length, unless such streets include at least one (1) parking bay per lot, located along each lot frontage for the entire length of such street, up to the maximum block length. Streets 300 feet or less in length shall not have any direct driveway access. In no case shall any street less than 28 feet wide intersect with any other street less than 28 feet wide.**

FINDING: All existing and proposed streets abutting the project have been designed in conformance to these standards. These standards are met with the design of the proposed subdivision.

4. ***Future Extension of Streets. When necessary to give access to or permit a satisfactory future division of adjoining land, streets shall be extended to the boundary of the subdivision or partition and the resulting dead-end streets may be approved without a permanent turn around if they are 150 feet or less in length, although, an adequate temporary turn around to ensure emergency vehicle access must be provided if such streets are greater than 150 feet in length.***

FINDING: The Engineering Department reviewed the proposed streets abutting this project and it's the Applicant's understanding that they agree with the proposal in conformance to these standards. These standards are met.

5. ***Collector and Arterial Street Access. Notwithstanding the provisions of Section 8.2705 of this Chapter, if a land division abuts or contains an existing or proposed collector or arterial street, the Community Development Director or Hearings Body may require other treatments, including but not limited to frontage roads, necessary for adequate protection of residential properties and to afford separation of through and local traffic. Provision may be made for emergency access. All frontage roads shall comply with the City of Redmond Transportation System Plan.***

FINDING: The subject property does not abut a collector or arterial street. This standard is not applicable.

6. ***Streets Adjacent to Railroads, Freeways and Parkways. When the area to be subdivided or partitioned is residentially zoned and abuts a railroad, freeway, or parkway, a provision may be required for a street approximately parallel to and on each side of such right-of-way at a distance suitable for use of the land between the street and railroad, freeway or parkway. In the case of a railroad, there shall be a land strip of not less than 25 feet in width adjacent and along the railroad right-of-way for screen planting between the railroad right-of-way and residential property. If the intervening property between such parallel streets and a freeway or a parkway is less than 80 feet in width, such intervening property shall be dedicated to park or thoroughfare use. The intersections of such parallel streets, where they intersect with streets that cross a railroad, shall be determined with due consideration as cross streets of a minimum distance required for approach grades to a future grade separation and right-of-way widths of the cross street.***

FINDING: The subject property does not abut a railroad, freeway, or parkway. This standard does not apply.

7. ***Continuation of Streets. Subdivision or partition streets which constitute the continuation of streets in contiguous territory shall be aligned so that their center lines coincide. Where straight line continuations are not possible, such center lines shall be continued as curves. These streets or the continuation of streets in contiguous territory may be required by the Community Development Director or Hearings Body***

where such continuation is necessary to maintain the function of the street or desirable in the surrounding area. Where solar orientation would not be possible if the street area continued, a new pattern may be started that is solar oriented.

FINDING: The Engineering Department reviewed the proposed streets (and connections) in accordance to City of Redmond's TSP and other applicable associated standards and it is the Applicant's understanding that as proposed the continuation of streets (i.e. SW Antelope Ave., SW Badger Ave., SW Badger Creek Dr., and SW Coyote Ave.) satisfies the above criterion.

- 8. *Lot Layout. Local residential streets should be oriented on an east/west axis to the greatest possible extent to insure solar access for lots within the subdivision or partition.***

FINDING: This standard is a recommendation. Therefore, this standard is not applicable.

- 9. *Street Names. Except for extensions of existing streets, no street name shall be used which will duplicate or be confused with the name of an existing street in a nearby city or in the county. Street names and numbers shall conform to the established pattern in the City, including the continuation of street names across intersecting streets, and shall be subject to the approval of the Fire Department or the responsible agency.***

FINDING: The applicant will coordinate the naming of the new streets (SW 47th Place) with Redmond Fire and Rescue and Deschutes County Addressing.

- 10. *Sidewalks. Sidewalks are required to be installed on both sides of a public street and in any special pedestrian way within the subdivision or partition except that in the case of collectors, arterials, special industrial districts or in steep terrain, the Hearings Body may approve a subdivision or partition without sidewalk if alternative pedestrian routes are available or provided by the developer. Sidewalks shall be required along routes to existing or future school and park sites.***

FINDING: Sidewalks are included in the public improvements required and conditioned for this project. This standard is met.

- 11. *Bicycle Routes. If appropriate to the extension of a system of bicycle routes, existing or planned pursuant to the City of Redmond Bicycle Refinement Plan, the Community Development Director or the Hearings Body may require the installation of separate bicycle lanes within streets and/or separate bicycle paths.***

FINDING: This standard is a "may/ recommendation" standard, not a requirement. This standard is not applicable.

- 12. *Intersection Angles. Street intersections shall be as near right angles as possible except where topography or existing conditions requires a lesser angle, but in no case shall the acute angle be less than as permitted by the adopted City of Redmond Public Works Standards and Specifications.***

- 13. *Alignment. Staggered street alignment shall whenever possible leave a minimum of 200 feet distance between the center line of the streets, but in no case be less than as permitted by Standards and Specifications.***

FINDING: The proposed street intersection is at a right angle as directed by this standard. This standard is met, subject to the conditions of approval.

- 14. *Narrow Streets. Local residential grid streets designed at widths less than 36 feet as described in Section 8.2710(3)(Table 1), shall be permitted when the subdivision design***

is found to be in compliance with the following:

- A. Narrow streets may only be permitted for continuous full length blocks internal to a Subdivision or Planned Unit Development with street connections at both ends.*
- B. Lots adjoining the narrow streets shall be a minimum of 5000 square feet and have a street minimum 50 feet of frontage.*
- C. Sidewalks shall be separated from the curb by a landscape strip with street trees conforming with Public Works Standards and Specifications.*
- D. Curb cuts along the narrow street shall not be less than the minimum width required within the adopted City of Redmond Public Works Standards and Specifications.*

FINDING: No new narrow streets are proposed. The new proposed street is in accordance with city standards. This standard is not applicable.

8.2715 Fundamental Design Elements.

- 1. *Lighting. The subdivider or partitioner shall provide underground wiring to the City standards and a base for any proposed ornamental street lights at locations approved by the affected utility company.***

FINDING: Street lighting is reviewed for compliance by the Engineering Department as a part of the public improvement process. This standard will be reviewed for compliance with the future review of the civil plans.

- 2. *Multiple Access Points. Whenever possible, a minimum of two points of access to the subdivision or partition shall be provided to provide assured access for emergency vehicles and ease resident evacuation.***

FINDING: This standard is a “whenever possible” recommendation standard. Based on the surrounding land uses, no additional access points are possible beyond what is being proposed. This standard is not applicable.

- 3. *Water/Sewer. All subdivisions and partitions shall provide water and sewer lines constructed to City standards and specifications approved by the City Engineer. All lots or parcels shall be served from the City of Redmond water and sewer systems or by water and sewer systems acceptable to the City. Water and sewer mains and service lines shall be installed prior to the curbing and paving of new streets in all new subdivisions or partitions.***

FINDING: Water and sewer construction standards are governed by the City’s Engineering Department. The Applicant met with the City’s Engineering Department staff during the early stages of designing the project and the proposed subdivision has been designed to provide water and sewer lines constructed to City standards and specifications.

All lots will be served from the City of Redmond water and sewer systems. Water and sewer mains and service lines will be installed prior to the curbing and paving of new streets as required by the above criterion.

The Applicant’s proposal satisfies the above criteria.

- 4. *Underground Utilities. All permanent utility service and minor power transmission lines that are within or immediately adjacent to lots in a subdivision or parcels in a partition shall be provided from underground facilities unless otherwise approved by the CDD Director or Hearings Body. The subdivider or partitioner or developer shall be responsible for complying with requirements of this section and shall:***

- A. ***Obtain a permit from the Public Works Director or designee for placement for all underground utilities within the public right-of-way.***
- B. ***Make all necessary arrangements with the utility companies and other persons or corporations affected by the installation of such underground utilities and facilities in accordance with rules and regulations of the Public Utility Commission of the State of Oregon.***
- C. ***All underground utilities, water lines, sanitary sewer lines and storm drains installed in streets shall be constructed prior to the surfacing of such streets to the extent practicable, and water and sanitary sewer service lines shall be placed to such lengths as will negate the necessity for disturbing the street improvements when service connections are made.***

FINDING: All necessary underground utilities appear to be existing, proposed or conditioned for this project. This standard is met.

- 5. ***Preservation of Natural Features. Existing trees, vegetation and natural features (i.e. rock outcrops) add character to the development and shall be preserved to the greatest extent practicable. All trees over 8 inches d.b.h. shall be noted and shown on the tentative plat.***

FINDING: There are no existing natural features located on the subject property that warrant special protections or preservation with the development of the proposed subdivision. However, new street trees will be added to the property which will greatly enhance the overall site. All existing juniper trees over 8 inches d.b.h. located on the property have been noted and shown on the tentative plat.

- 6. ***Scenic Views. Significant views shall be taken into consideration during subdivision design. The establishment of view corridors, building envelopes, building height restrictions or similar methods shall be employed for the retention and protection of views from individual lots and from public spaces to the greatest degree practicable as determined through the land use review process. Such measures shall be shown on the final plat and included in deed restrictions.***

FINDING: The specific location of the subject property was reviewed and taken into consideration in accordance with this standard. Significant views and how to regulate such items are not defined in the Redmond Development Code using a clear and objective process required by State Law for statutorily defined needed housing. Additionally, the standard qualifies and limits itself with terms like "consideration" and "practicable". Given the vagueness of this standard and clear requirements under State and Federal law, this code section has been addressed as far as practicable and found by the Applicant to be not applicable.

- 7. ***Land for Public Purposes.***
 - A. ***If the City has an interest in acquiring a portion of a proposed development for a public purpose, it shall notify the property owner as soon as the City Council authorizes the transaction to proceed.***
 - B. ***Within a development, or adjacent to a development in contiguous property owned by the developer, a parcel of land of not more than 5% of the gross area of the development may be required to be set aside and dedicated to the public for parks and recreation purposes by the developer. The parcel of land, if required, shall be determined to be suitable for the park and/or recreation purpose(s) intended, and the city may require the development of the land for the park or recreation use intended or identified as a need within the community.***
 - C. ***In the event no such area is available that is found to be suitable for parks and/or recreation uses, the developer may be required, in lieu of setting aside land to pay to the appropriate parks and recreation agency a sum of money equal to the market value of the area required for dedication, plus the additional funds necessary for the development thereof if so required; if such is required,***

the money may only be utilized for capital improvements by the appropriate parks and recreation agency.

- D. The foregoing land and development or money dedication (if require) may be provided for in lieu of an equal value of systems development charge assessment for parks if so approved by the collecting agency in accordance with the applicable provisions of the system development charge ordinance. If the collecting agency will not permit the land or money dedication in lieu of an applicable systems development charge, then the land and development or money dedication shall not be required.*
- E. If the nature and design, or approval, of a development is such that over 30% of the tract of land to be developed is dedicated to public uses such as streets, water or sewer system facilities and the like, then the requirements of this subsection shall be reduced so that the total obligation of the developer to the public does not exceed 30%.*

FINDING: Similar to the adjacent Prairie Crossing Phase 4 and 5 subdivision located on the east side of the COID B lateral from the subject property, the Applicant is proposing that Tracts A, B, and C be dedicated to the City for public purposes (i.e. linear park).

8. Easements.

- A. Utility Easements. Easements shall be provided along property lines when necessary for the placement of underground utilities and to provide the subdivision or partition with electric power, communication facilities, street lighting, sewer lines, water lines, gas lines, or drainage. Such easements shall be labeled "Public Utility Easement" on the tentative and final plat; they shall be at least 12 feet in width and centered on lot lines where possible, unless determined otherwise by the City Engineer or designate. Excepting utility pole guylines easements along the rear of lots adjacent to unsubdivided land may be reduced to 10 feet in width, unless determined otherwise by the City Engineer or designate.*

FINDING: The proposed subdivision includes the necessary utility easements for the placement of underground utilities and to provide the subdivision with electric power, communication facilities, street lighting, sewer lines, water lines, gas lines, or drainage.

- B. Drainage. If a tract is traversed by a water course, such as a drainage way, channel or stream, there shall be provided a stormwater easement or drainage right-of-way conforming substantially with the lines of the water course or in such further width as will be adequate for the purpose. Streets or parkways parallel to major water courses and drainage ways may be required.*

FINDING: COID comments have been provided to the applicant. No additional assessment or requirement is needed.

8.2720 Grading of Building Sites. Grading of building sites shall conform to the following standards unless physical conditions demonstrate the propriety of other standards:

- 1. Cut slope ratios shall not exceed one foot vertically to one and one-half feet horizontally.**
- 2. Fill slope ratios shall not exceed one foot vertically to two feet horizontally.**
- 3. The composition of soil for fill and the characteristics of lots and parcels made useable by fill shall be suitable for the purpose intended.**
- 4. When filling or grading is contemplated by the subdivider or partitioner, they shall submit plans showing existing and finished grades for the approval of the City Engineer. In reviewing these plans, the City Engineer shall consider the need for drainage and effect of filling an adjacent property. Grading shall be finished in such a**

- manner as not to create steep banks or unsightly areas to adjacent property.*
5. *Any land that requires engineered fill shall be so noted on the plat. Design and placement of engineered fill shall be under the direction of a licensed professional engineer.*

FINDING: The applicant will supply a final grading and drainage plan (mainly associated with the new street improvements) to the Engineering Department for review and approval as part of the civil plan review process.

8.2800 Improvement Procedures. *In addition to other requirements, public or private improvements to be installed by the applicant either as a requirement of these standards or other applicable regulations or at his own option, shall conform to the requirements of this article:*

1. *Plan Review and Approval. Improvement work shall not be commenced until plans thereof have been reviewed and approved by the Community Development Director or Hearings Body or a designated representative thereof. To the extent necessary for evaluation of a proposed development, such improvement plans may be required before approval of the tentative plat or preliminary map or drawing.*
2. *Public Improvements as Platted. Public improvements shall be designed, installed and constructed as platted and approved by the City Engineering Division, and plans shall be filed with the final plat at the time of recordation or upon completion.*
3. *Inspection. Improvements shall be constructed under the inspection and approval of a city Inspector. Expenses incurred thereby shall be borne by the applicant/owner. The inspector may require changes in sections and details of the improvements if unusual conditions arise during construction to warrant such changes.*
4. *As-Built Plans. A map showing the completed public improvements shall be filed with the Community Development Department upon completion of the improvements.*

FINDING: The proposed subdivision can meet these standards by submitting detailed civil engineering plans to the City's Engineering Department upon gaining land use approval for the proposed development.

8.2805 Improvements in Partitions. *The same improvements may be required to be installed to serve each building site of a partition as are required of a subdivision.*

FINDING: The proposal is not a partition. It is a subdivision. This standard is not applicable.

8.2810 Acceptance of Improvements. *Improvements shall be considered for acceptance after final inspection, after the improvements have been completed.*

FINDING: The proposed subdivision can meet this requirement by making the necessary public improvements as required by the City's Engineering Department. After the public improvements have been completed, then they will be reviewed for acceptance by the City's Engineering Department.

8.2815 Transportation Impact Analysis. *It shall be the burden of the developer to evaluate transportation system impacts through studies prepared by a qualified registered professional engineer. When a transportation impact analysis is required it must demonstrate that the following standards are met:*

1. *The standard of measurement that will determine the acceptability of traffic flow on City streets will be a delay-based level of service as defined by the Highway Capacity Manual, Special Report 209, third Edition (2000 update or subsequent document*

updates) published by the Transportation Research Board. The determination of LOS shall be calculated by a methodology that is approved by the City Engineer. The acceptable standard of LOS for City streets shall be LOS E during the peak 15 minutes of the peak hours of the average weekday. A lesser standard shall be acceptable at unsignalized intersections with low volume minor street approaches if the volume-to-capacity ratio is less than 0.90 and the 95th percentile vehicle queue is less than four vehicles during the peak hour.

2. The Average Daily Traffic (ADT) volume of Local Street roadways within the City of Redmond shall be less than 1,200 vehicles per day (VPD). Developments which add vehicle trips to Local Streets with an ADT greater than 1,200 VPD may be asked to provide mitigation in the form of additional access to the site, when in the opinion of the City Engineer, the residential livability is degraded by excessive local street traffic volume.
3. New development that will cause degradation below those levels shall be required to provide mitigating transportation system improvements that will restore the LOS to the accepted standard, as is practical, as determined by the City Engineer and pursuant to the adopted City of Redmond Transportation System Plan. Where there are impacts to the State Highways, the City and ODOT shall work cooperatively to determine appropriate courses of action based on ODOT and City standards.
4. The following vehicle trip generation thresholds shall determine the level and scope of transportation analysis required for a new or expanded development. Trip ends shall be calculated as per the Institute of Transportation Engineers manual, Trip Generation, 8th edition (or subsequent document updates), or local trip generation studies prepared by a qualified registered professional engineer and approved by the City Engineer. The City Engineer shall determine when a TIA has satisfied the requirements of the developments impact analysis. The TIA shall bear the stamp and signature of a qualified registered professional Engineer with a license valid in the State of Oregon.
 - A. If a proposed development will generate 200 or more daily trip ends, or 20 or more p.m. peak hour trip ends, then a Transportation Impact Analysis (TIA) shall be required.
 - B. Projects that generate less than 200 daily or 20 p.m. peak hour trip ends may also be required to provide a Transportation Impact Analysis (TIA) when, in the opinion of the City Engineer or his/her designee, significant capacity and/or safety problem is caused, or adversely impacted by the development. The City Engineer or designee, shall determine the scope of this analysis.
 - C. A development may be required to provide a Trip Generation Report for developments which generate less than 200 daily or 20 p.m. peak hour vehicle trips.
5. The impact analysis area shall include at a minimum, the following intersections:
 - A. All site access intersections
 - B. Nearest intersecting collector or arterial street upstream and downstream of the development.
 - C. Any other collector or arterial street intersection that would experience an increase of 25 additional peak hour trips.
 - D. Additional intersections requested by staff in the basis of anticipated impacts resulting from the development.
6. The analysis shall include the following study time frames:
 - A. Existing conditions.
 - B. Completion year of each significant phase of development.
 - C. Five year forecast beyond final phase
7. The following Tables are required in the TIA:
 - A. Trip Generation (including phase breakdown if applicable)
 - B. LOS Table (LOS for every analysis scenario at every study area intersection. Report LOS, delay, V/C ratio, 95% vehicle queue, and any additional pertinent analysis results)
8. The following Figures are required in the TIA:

- A. **Vicinity Map**
 - B. **Site or Tentative Plan Map**
 - C. **Background Traffic Volumes (all study intersections, all analysis years)**
 - D. **Trip Distribution and Assignment**
 - E. **Background + Site Generated Traffic Volumes (all study intersections, all analysis years)**
9. **Other Analysis Standards (as required by the study)**
- A. **Signal Warrants shall be performed where applicable per the Manual on Uniform Traffic Control Devices, current edition.**
 - B. **Left Turn Lane Warrants shall be provided where applicable per ODOT criteria based on the Texas Transportation Institute (TTI) curves.**
 - C. **Right Turn Lane Warrants shall be provided where applicable per ODOT criteria.**
 - D. **The acceptability of sight distance at all study area intersections shall be determined per AASHTO (current edition) standards.**
 - E. **Traffic signal progression analysis may be required if a new signal is proposed. The City Engineer shall approve the method of traffic signal progression analysis.**
 - F. **Roadway improvements are to be based on the City of Redmond Standards and Specifications and ODOT design standards.**

FINDING: The application includes a Transportation Impact Analysis (TIA) prepared by Transight Consulting, LLC that addresses the traffic impacts of the proposal and suggests no off-site improvements are necessary to mitigate the traffic impacts associated with the proposed subdivision (the findings and designs included in the TIA are incorporated by reference herein). The TIA addresses OAR 660-012, the Transportation Planning Rule (TPR) which requires an assessment of the impacts of the development 20 years into the future – based on build out of the project and surrounding area. The analysis of impacts and suggested mitigation are referenced in proposed findings below and incorporated in entirety by reference herein. More specifically though, the findings addressing the specific elements of the TPR are incorporated by reference herein as evidence of compliance with the TPR rather than being copied over into this burden of proof statement.

8.2820 Access Management Standards. All land divisions shall be in compliance with the following standards.

1. Driveway spacing and corner clearance as follows:

<u>Roadway Classification</u>	<u>Minimum Access Driveway Spacing</u>	<u>Minimum Access Clearance to Corner</u>	<u>Intersection Spacing (Min.)</u>
Local Street	No restrictions	30 feet	165 feet
Minor Collector	50 feet	80 feet	330 feet
Major Collector	165 feet	165 feet	330 feet
Minor Arterial	330 feet	330 feet	¼ mile
Major Arterial	ODOT Stds	ODOT Stds	ODOT Stds

- 2. **In all instances, access near an intersection shall be located beyond the influence of standing queues and opposing left turns sharing a continuous two-way left turn lane. This requirement may result in greater corner clearance or access spacing than the minimum distance indicated.**
- 3. **Every lot or parcel shall be permitted an access. In the event that the access management standards cannot be achieved, shared access with adjacent property shall be explored and provided where available.**
- 4. **Access shall be taken from the lower order street or alley unless otherwise approved by Public Works and/or ODOT through the land use process.**
- 5. **Unless adequate demonstration of site necessity, intersection safety and functionality is provided, through the land use review process, new lots and/or parcels will be limited to a single vehicular access.**

6. *The access management standards apply to new development, redevelopment, subdivision and partitioning of land.*
7. *Corner clearance is measured from the edge of right-of-way to the nearest edge of access. Spacing is measured from centerline of access/intersection to centerline of access/intersection.*
8. *Adequate intersection sight distance and clear zone shall be maintained at all access/driveway locations per AASHTO standards (American Association of State Highway and Transportation Officials).*
9. *Public Works may require supporting information, including but not limited to traffic count data, trip generation, trip distribution, Transportation Impact Analysis study, etc., in order to make a proper determination of access/driveway location.*
10. *Access within the North Redmond US 97 Interchange Area Management Plan (IAMP) shall also conform to the "North Redmond US 97 Interchange Area Management Plan (IAMP)" provision of Chapter 9 Transportation Element of the Comprehensive Plan Addendum and Policy 12 n of Chapter 14 of the Comprehensive Plan.*

FINDING: No driveways are being proposed at this time. All future driveways will be reviewed for compliance with this criterion during the building permit review process for the future dwellings.

8.2825 Street Dedications. *Any person desiring to create a street not part of a subdivision or partition shall make written application to the Community Development Department.*

1. *Application. Said application shall be accompanied by the required information and appropriate filing fee. In cases where such dedication would have the effect of creating a land division, the dedication shall be treated as a new subdivision or partition as applicable.*
2. *Minimum Design Standards. The minimum standards of design and improvements for the dedication of a street shall be in compliance with the City of Redmond Public Works Standards and Specifications and all other applicable street standards and regulations as specified in Section 8.2710.*
3. *Procedure.*
 - A. *Upon receipt of written application and appropriate filing fee for street dedication, the Community Development Director shall refer the proposal to the City Engineer or designee for review and recommendation.*
 - B. *The City Engineer shall report his findings and recommendations regarding the proposed dedication to the Community Development Director*
 - C. *Upon receipt by the Community Development Director of written findings and recommendations from the City Engineer, the proposal shall be submitted to the City Council for a public hearing.*
 - D. *The only notice required for a hearing under this section shall be by publication.*
 - E. *Following the hearing, the Council may accept or reject the proposed dedication.*

FINDING: The proposed subdivision can meet these standards, subject to the perfection of the proposal and compliance with any conditions of approval.

CONCLUSIONS

In all land use proceedings, the "burden of proof" rests with the applicant to demonstrate compliance with the land use regulations. After reviewing all available evidence submitted by the applicant, staff concludes that conditions of approval (Exhibit A) are warranted for the development to comply fully with the RDC standards and criteria.



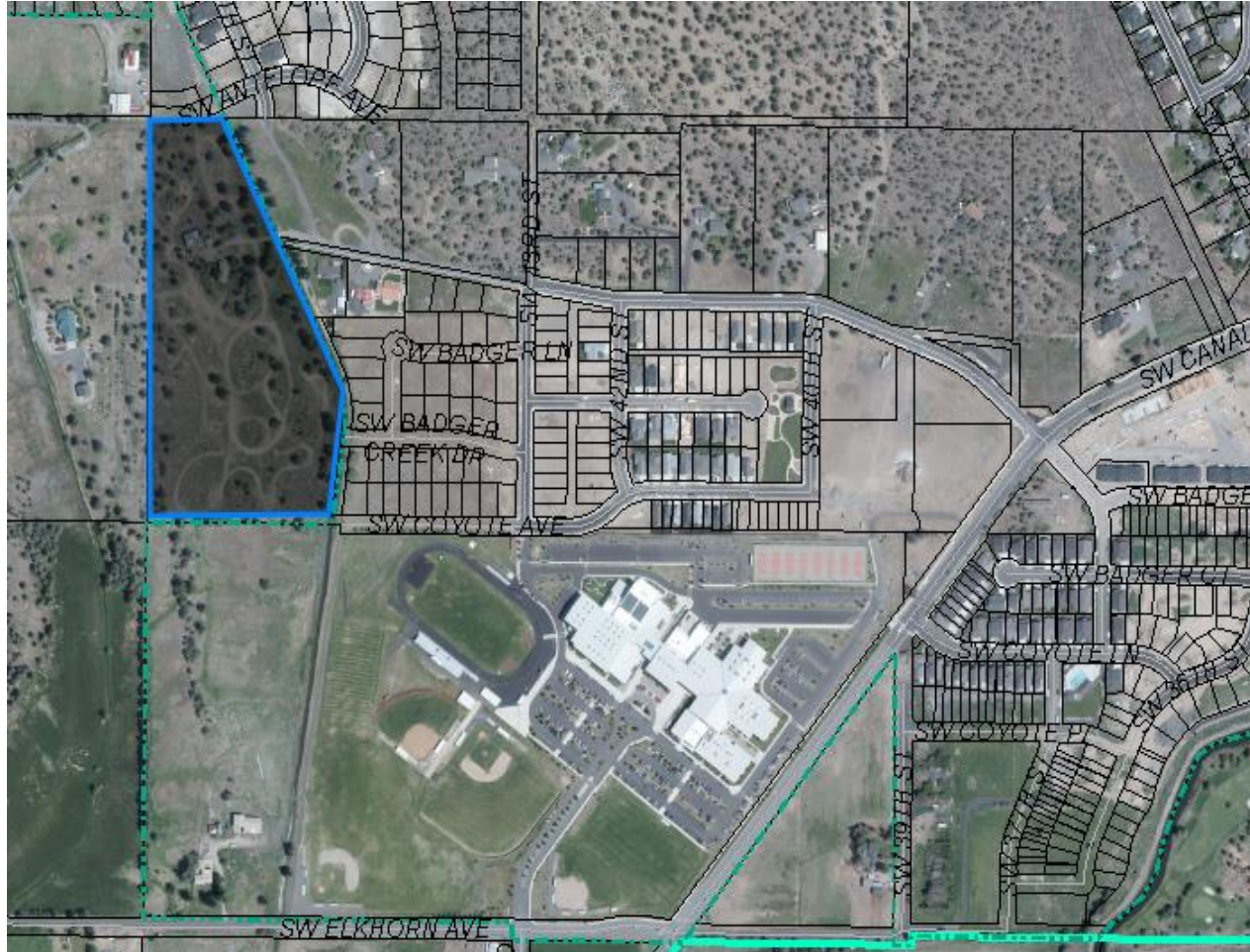
KINTON ESTATES MASTER DEVELOPMENT PLAN

REDMOND CITY COUNCIL
MARCH 23, 2021

SLIDE / 1



PROXIMITY: SW REDMOND NW BORDER OF RIDGEVIEW HIGH SCHOOL



SLIDE / 2





LAND USE APPROVAL REQUESTS

ANNEXATION AGREEMENT – JUNE 2020

ANNEXATION REQUIRES AN APPROVED MASTER PLAN & ZONING MAP AMENDMENT

01

MASTER DEVELOPMENT PLAN

16.25 ACRES

02

ZONING MAP AMENDMENT

FROM: **UH-10** (DESIGNATED R-2 BY SOUTHWEST AREA PLAN)
TO: **R-3** (11.22 ACRES) AND **R-4** (5.03 ACRES)

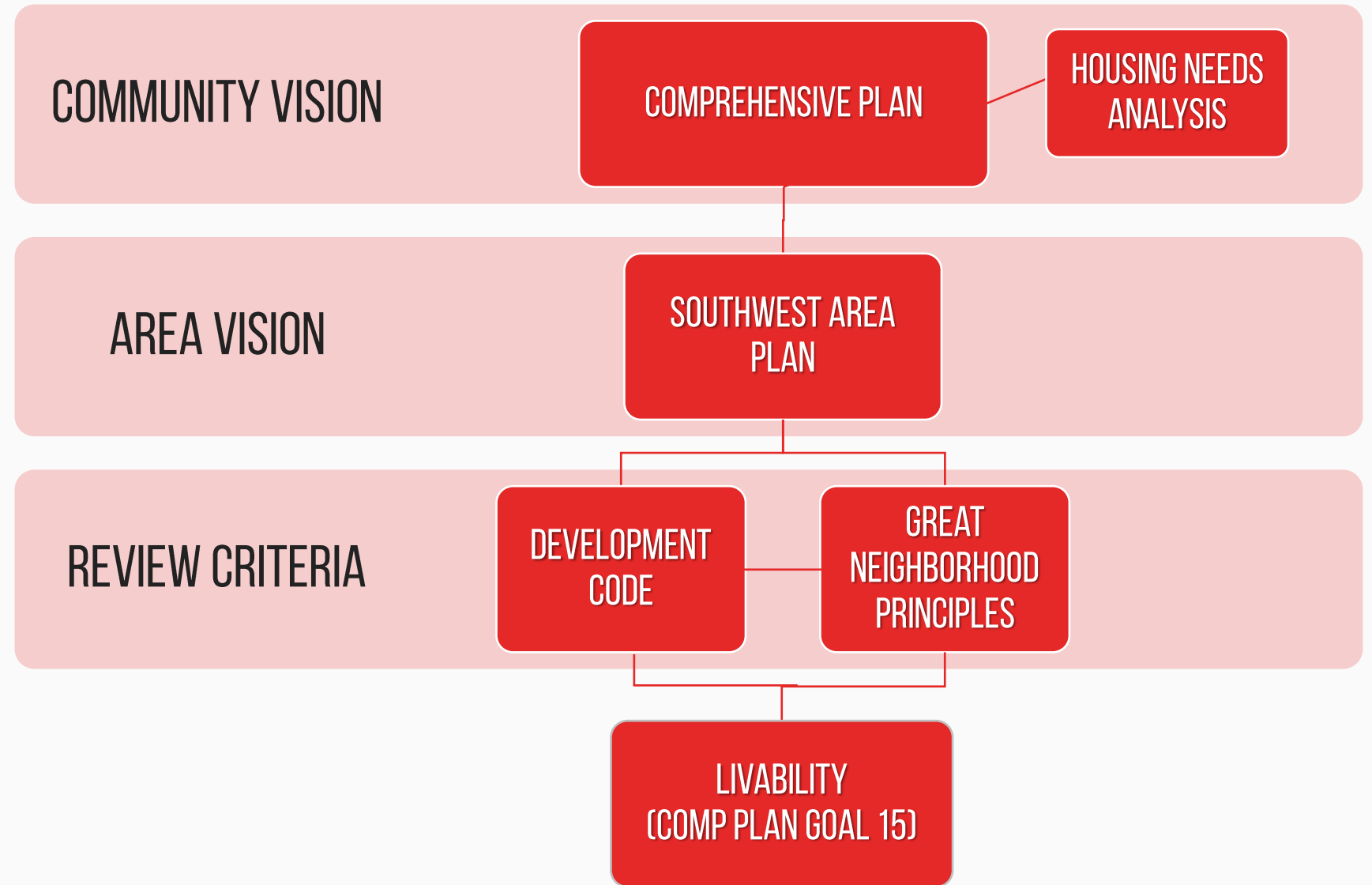
03

TENTATIVE 64-LOT RESIDENTIAL SUBDIVISION

FIVE PHASES: 6,000 – 8,445 SQ. FT. LOTS
PRIMARILY SINGLE-FAMILY – VARIED LOT SIZES – HB 2001



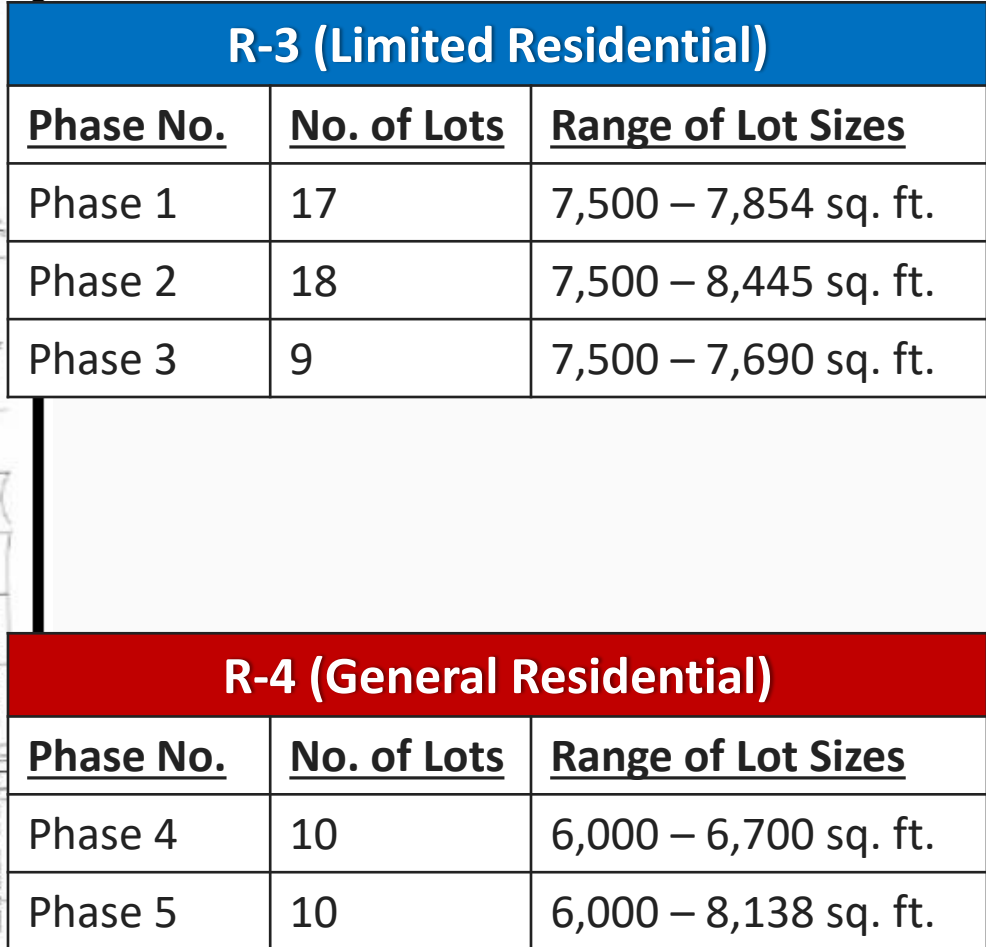
REALIZING THE COMMUNITY'S VISION





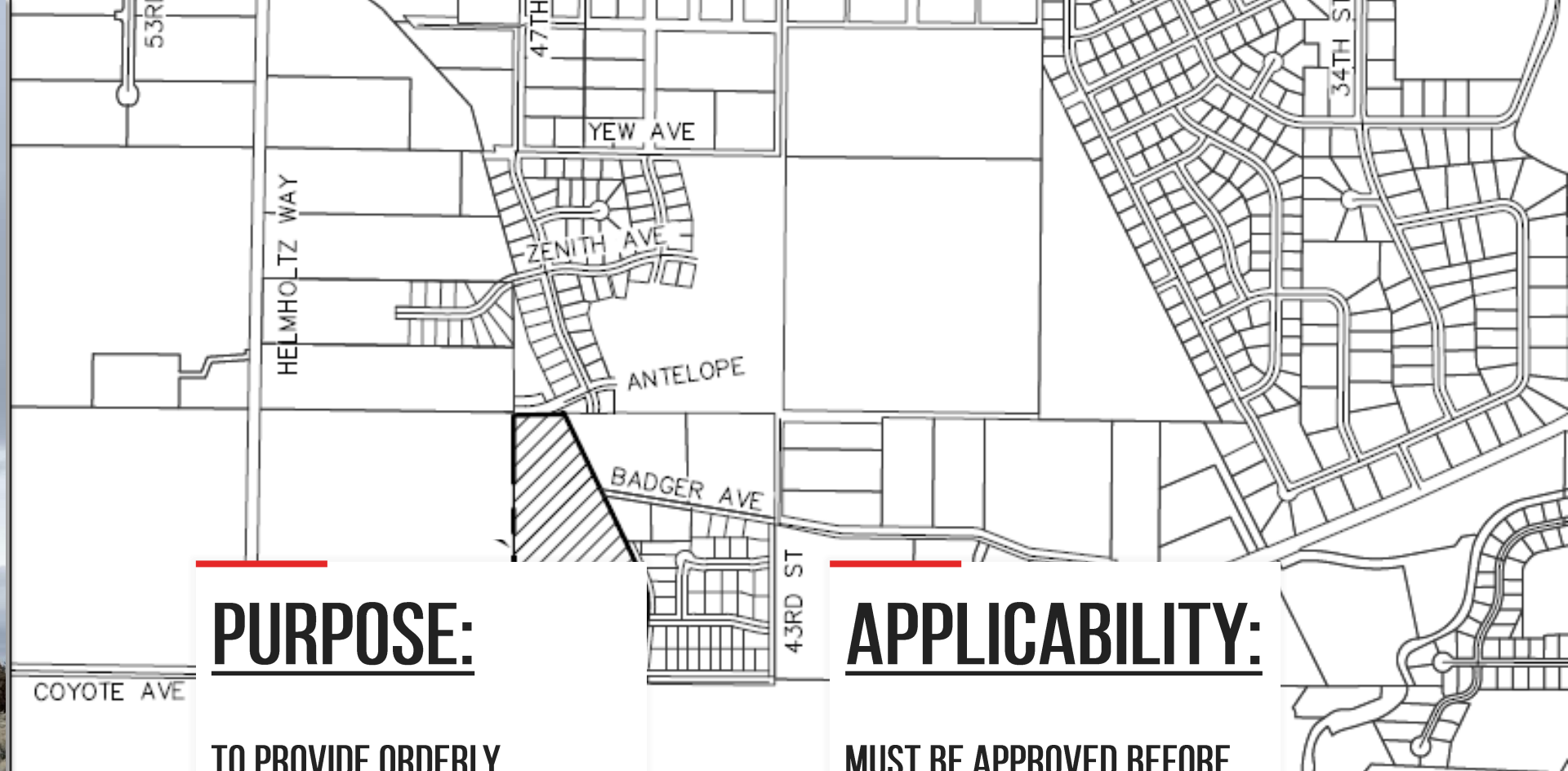
1.22-ACRE PARK

MULTI-USE TRAIL





MASTER DEVELOPMENT PLAN



PURPOSE:

TO PROVIDE ORDERLY
DEVELOPMENT CONSISTENT
WITH FRAMEWORK PLAN
AND AREA PLANS.

APPLICABILITY:

MUST BE APPROVED BEFORE
DEVELOPMENT AND
CONCURRENT WITH
REZONING FROM UH-10 AND
ANNEXATION.

dummy text ever since the
1500s, when an unknown

industry's standard
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MASTER DEVELOPMENT PLAN

REVIEW CRITERIA

01 CONSISTENCY WITH
FRAMEWORK PLAN &
COMPREHENSIVE PLAN &
ANNEXATION
REQUIREMENTS

02 SUITABILITY FOR THE AREA
PROPOSED

03 INTEGRATION WITH
DEVELOPED AREAS

04 MEETS THE GREAT
NEIGHBORHOOD
PRINCIPLES

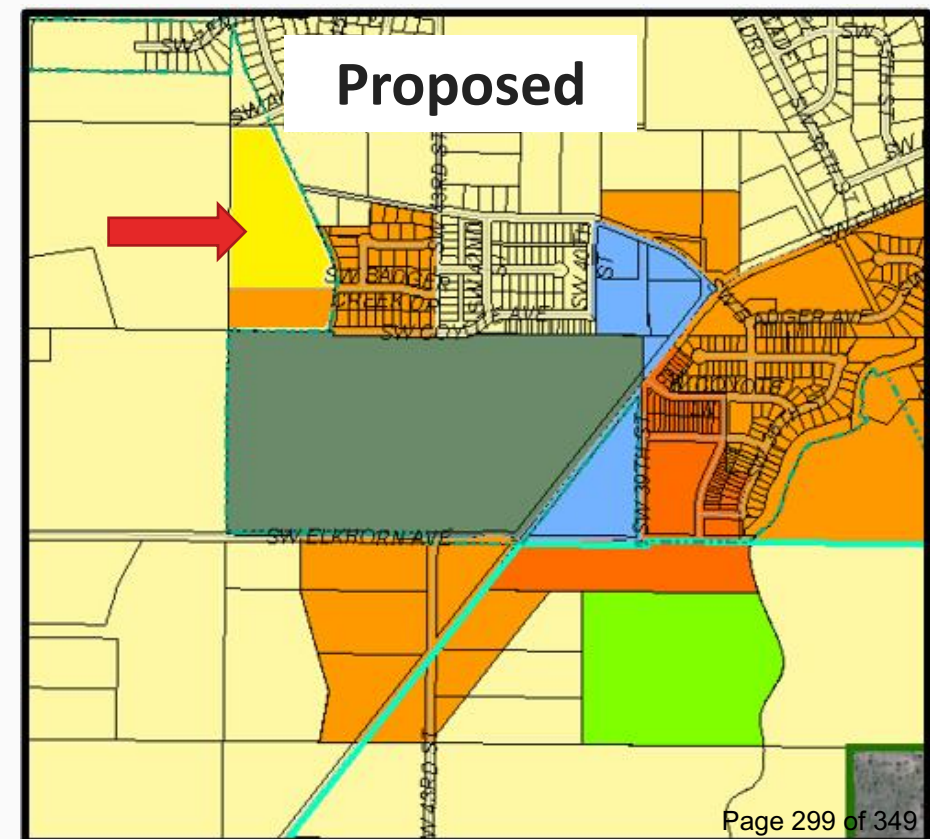
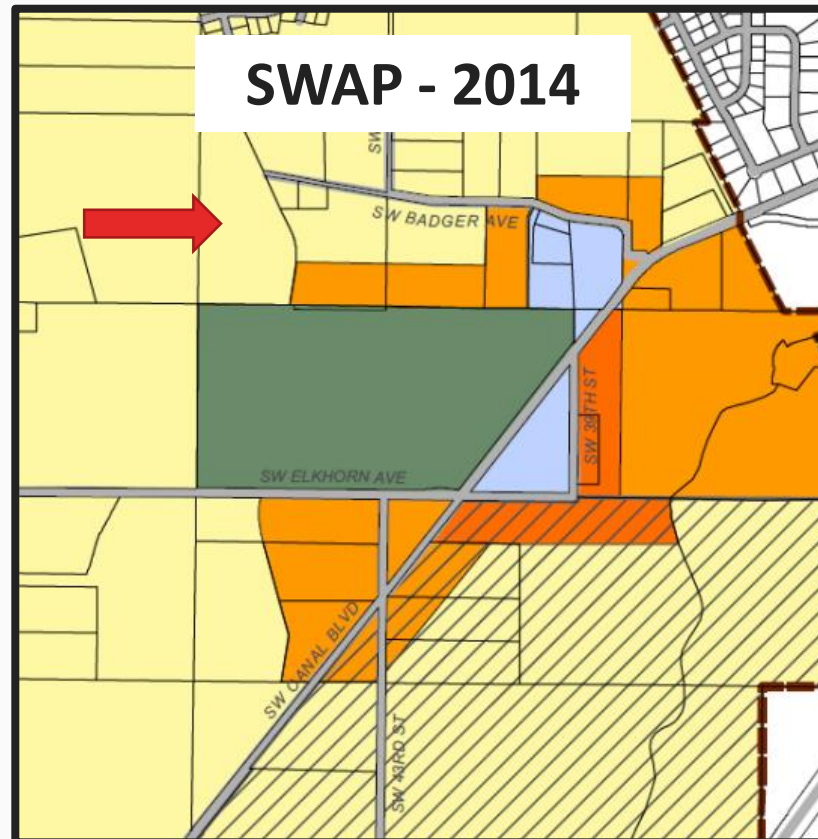


MASTER DEVELOPMENT PLAN

REVIEW CRITERIA

01 CONSISTENCY WITH FRAMEWORK PLAN & COMPREHENSIVE PLAN & ANNEXATION REQUIREMENTS

02 SUITABILITY FOR THE AREA PROPOSED





MASTER DEVELOPMENT PLAN

REVIEW CRITERIA

03

INTEGRATION WITH DEVELOPED AREAS





MASTER DEVELOPMENT PLAN

REVIEW CRITERIA

04 MEETS THE GREAT NEIGHBORHOOD PRINCIPLES

SEC. 8.0300 (C) (13), REDMOND DEV. CODE:

- | | |
|---------------------------------------|-------------------------------------|
| 1. TRANSPORTATION | ☒ |
| 2. HOUSING | ☒ |
| 3. OPEN SPACES, GREENWAYS, RECREATION | ☒ |
| 4. INTEGRATED DESIGN ELEMENTS | ☒ |
| 5. DIVERSE MIX OF ACTIVITIES | ☒ |
| 6. PUBLIC ART | ☒ |
| 7. SCENIC VIEWS | ☒ |
| 8. URBAN-RURAL INTERFACE | N/A |
| 9. 'MINI' PARKS IN NEIGHBORHOODS | ☒ |
| 10. CANAL TRAILS | ☒ |
| 11. GREEN DESIGN | ☒ |



GREAT NEIGHBORHOOD PRINCIPLES

TRANSPORTATION

- GRID STREET NETWORK
- SIDEWALKS & BIKE LANES
- MULTI-USE CANAL TRAIL





GREAT NEIGHBORHOOD PRINCIPLES

HOUSING

- PREDOMINANTLY SINGLE-FAMILY – HB 2001
- LOT SIZES ARE VARIED & INTERMINGLED THROUGHOUT





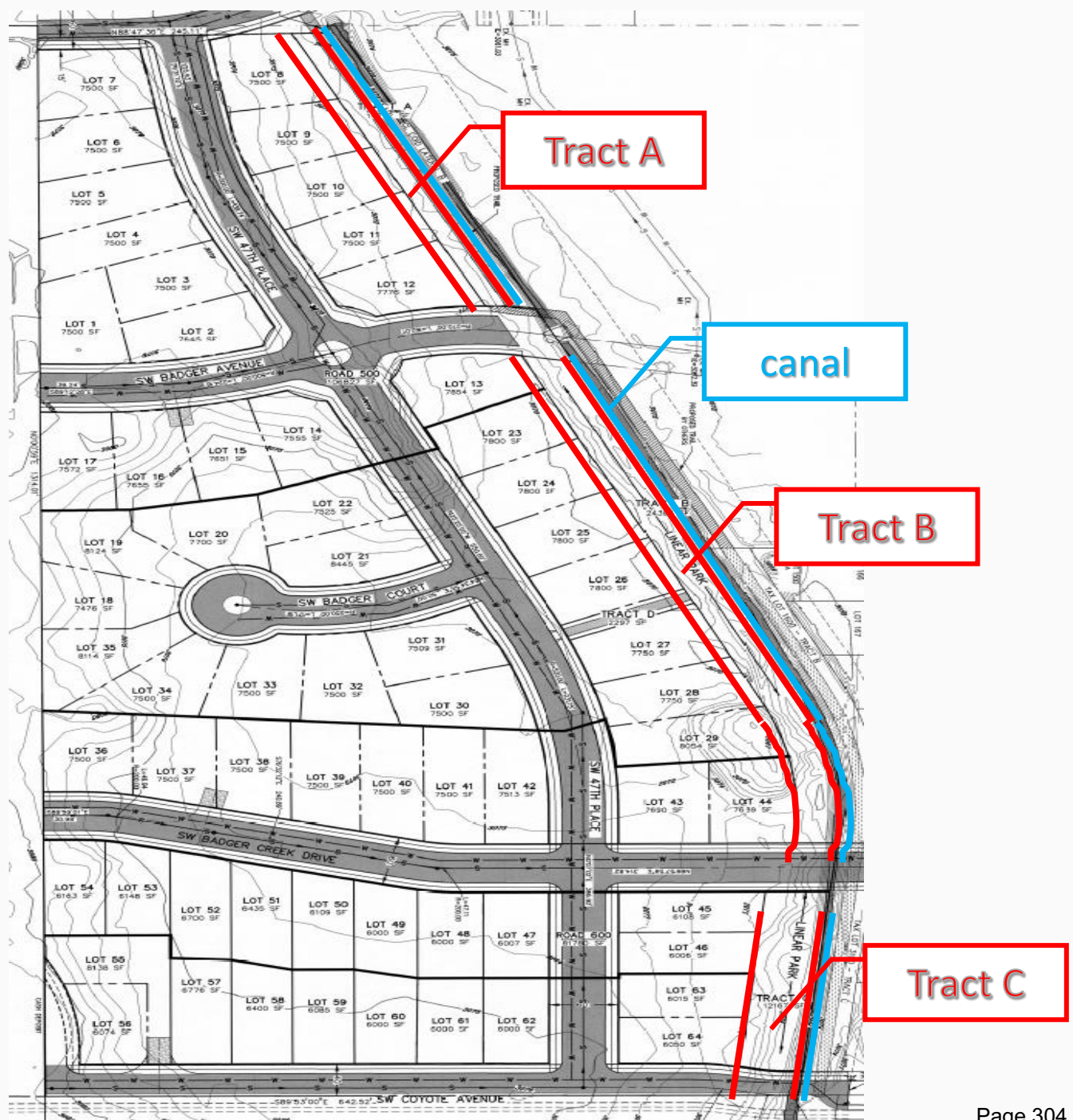
GREAT NEIGHBORHOOD PRINCIPLES

OPEN SPACES, GREENWAYS, REC.

-1.22- ACRE LINEAR PARK
(TRACTS A, B, AND C)

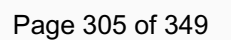
-TRACT C TO INCLUDE
RECREATIONAL AMENITIES

-MULTI-USE CANAL TRAIL





NEIGHBORHOODS SHALL
ESTABLISH A COHERENT &
DISTINCT CHARACTER

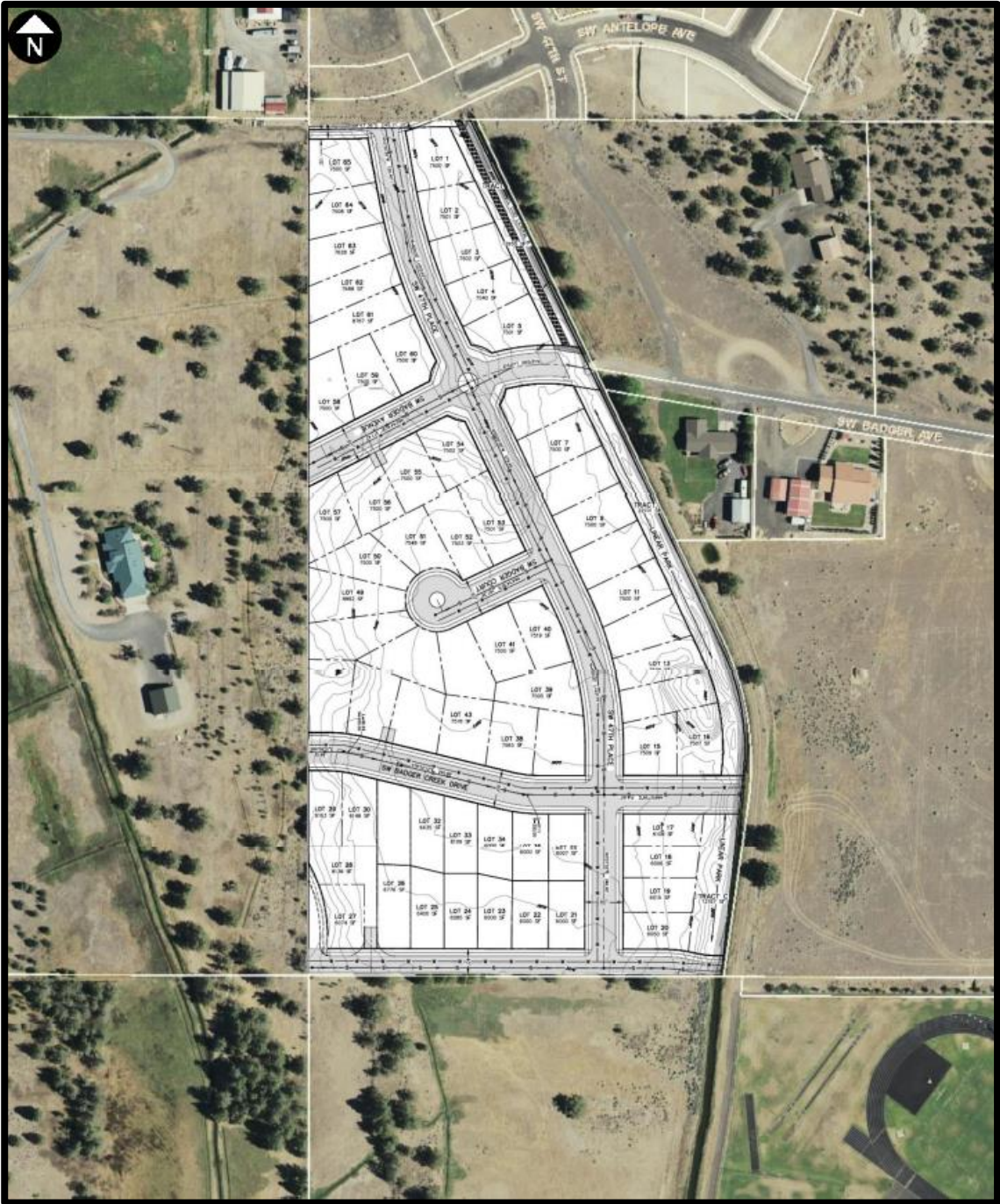




GREAT NEIGHBORHOOD PRINCIPLES

DIVERSE MIX OF ACTIVITIES

TO CREATE VITALITY AND BRING DAILY LIVING ACTIVITIES WITHIN WALKING AND BIKING DISTANCE OR A SHORT DRIVE OF HOMES

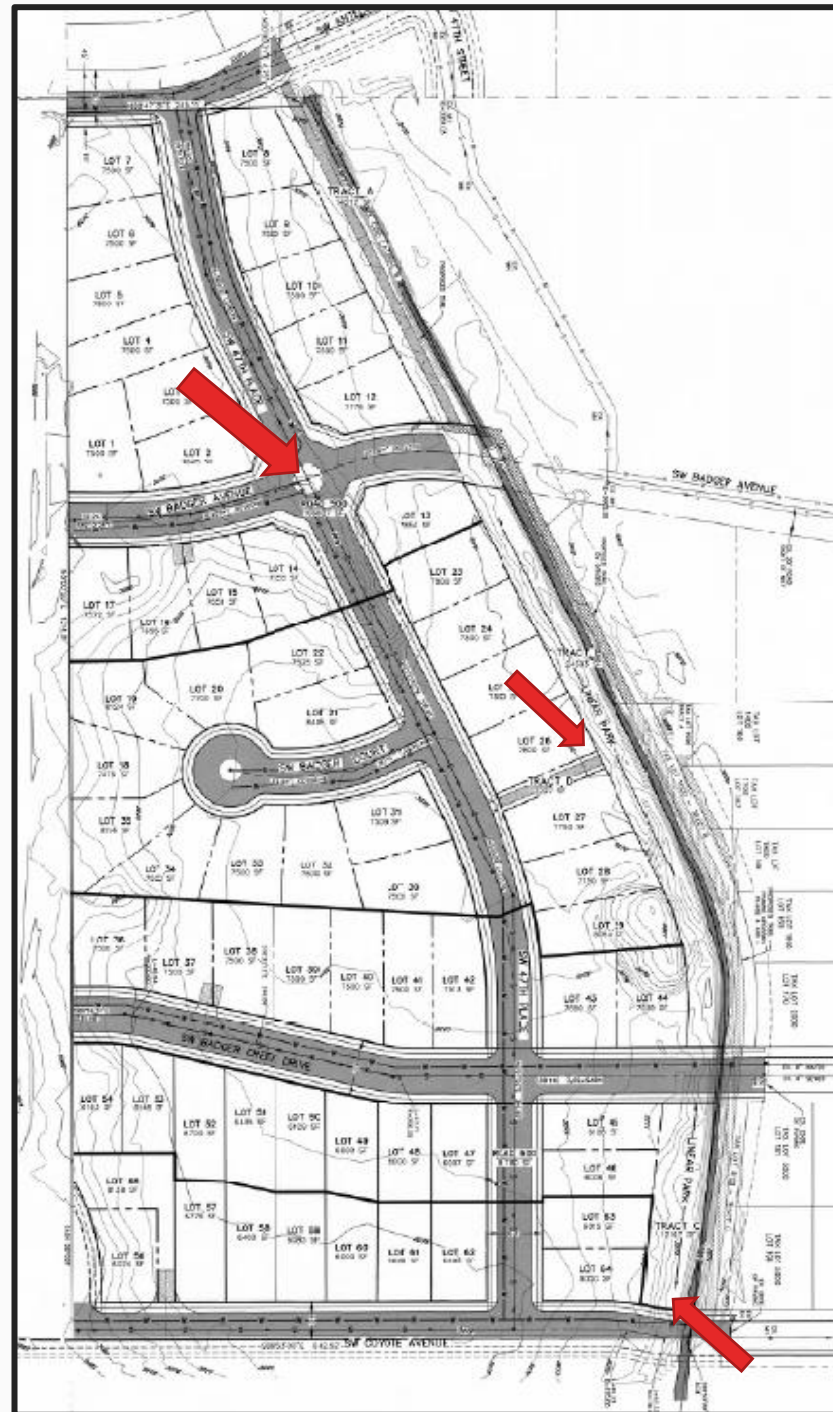




GREAT NEIGHBORHOOD PRINCIPLES

PUBLIC ART

TO PROVIDE FOCAL POINTS
AT GATEWAYS AND/OR
CENTER OF
NEIGHBORHOODS

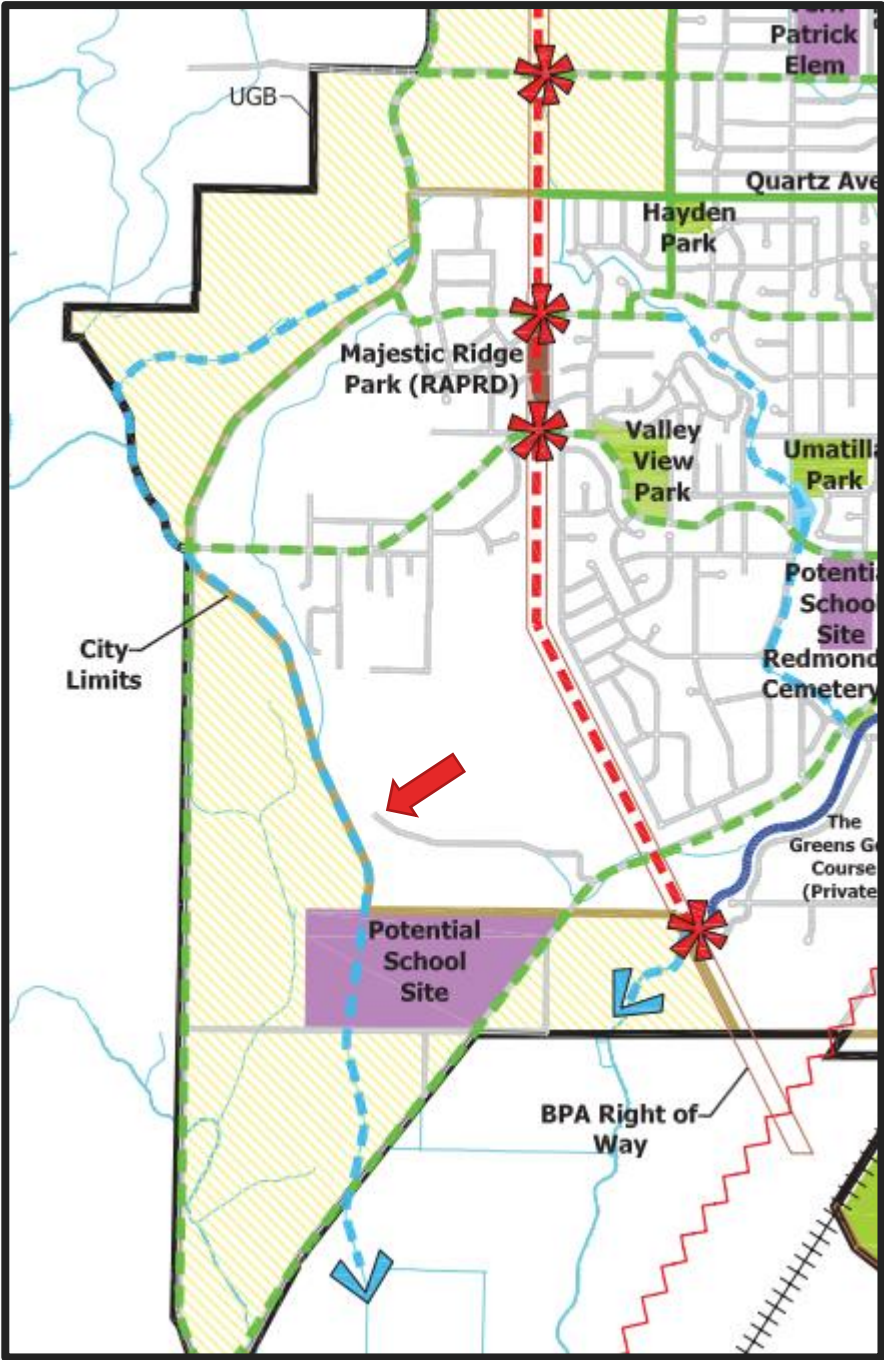




GREAT NEIGHBORHOOD
PRINCIPLES

CANAL TRAILS

IF CANALS OR LATERALS
ARE PRESENT, MULTI-USE
TRAILS AT LEAST 10 FEET
WIDE SHALL BE PROVIDED





GREAT NEIGHBORHOOD PRINCIPLES

GREEN DESIGN

ENERGY EFFICIENT DESIGN IS ENCOURAGED FOR PUBLIC AND PRIVATE INFRASTRUCTURE, ARCHITECTURE AND BUILDING ORIENTATION, OPEN SPACES AND TRANSPORTATION FACILITIES

NATIVE, DROUGHT-RESISTANT TREES ARE ENCOURAGED FOR SHADE AND TO MINIMIZE WATER USAGE





RECOMMENDATION

PLANNING COMMISSION RECOMMENDS: APPROVAL, SUBJECT TO 14 CONDITIONS

01

MASTER DEVELOPMENT PLAN 16.25 ACRES

02

ZONING MAP AMENDMENT

FROM: UH-10 (DESIGNATED R-2 BY SOUTHWEST AREA PLAN)
TO: R-3 (11.22 ACRES) AND R-4 (5.03 ACRES)

03

TENTATIVE 64-LOT RESIDENTIAL SUBDIVISION



NOTABLE CONDITIONS OF APPROVAL

#6 SW Badger Avenue will need to be a minor collector street with limited access, which will require access reconfiguration of four lots (Lots 1, 15, 16, and 17) on the northwest and southwest side of SW Badger Avenue. Any access points will need to be approved by the City Engineer.

#7 All proposed lots abutting Tracts A, B, and C (i.e., the linear park) shall not permit rear property line sight-obscuring fencing over four feet in height until the canal is piped. Wrought iron, or other non-sight-obscuring fence may be used. Chain link or cyclone fencing is not allowed.

#9 The applicant shall supply information that addresses criteria #3, #5, and #8 of Section 8.2220 of the Redmond Development Code. The applicant should be prepared to discuss this at the City Council public hearing. If the responses are adequate, staff would support a recommendation of approval.



QUESTIONS





CITY OF REDMOND

CITY HALL
411 SW 9th STREET
REDMOND, OR 97756
541.923.7710
FAX: 541.548.0706
info@redmondoregon.gov
redmondoregon.gov

STAFF REPORT

DATE: March 23, 2021
TO: Redmond City Council
Keith Witcosky, City Manager
THROUGH: John Roberts, Deputy City Manager
Deborah McMahon, Planning Manager
FROM: Kyle Roberts, Senior Planner
SUBJECT: Res. #2021-04 - A resolution declaring certain territory as being annexed to and incorporated within the City of Redmond.

Addresses Council Goal:

7. COMPREHENSIVE PLANNING - Enhance the quality of life through adoption of programs, policies, and standards that balance growth while maintaining its unique character.
A. Promote quality development.
B. Support orderly annexation from Urban Growth Boundary.

Report in Brief:

This item requests City Council approve a resolution to annex property owned by Ed Bartholemy. The 16.25-acre property (Tax Lot 1513300001401; 4860 SW Badger Ave. Redmond, OR 97756) is located in south Redmond and within the Southwest Area Plan.

Locator Map attached.

Background:

An annexation agreement was approved by City Council in June 2020. The annexation agreement is the first step in the process to bring a property into City limits.

After the conditions of the annexation agreement are met, a resolution to establish final zoning is presented to City Council.

Discussion:

As required in the annexation agreement, the property owner and subject property proceeded through the land use review process for a master development plan, tentative subdivision, and comprehensive plan zone map amendment.

The land use review was approved through adoption of Ordinance No. 2021-02. The Ordinance ensures all annexation and development requirements have been met or addressed.

Fiscal Impact:

There is no immediate anticipated fiscal impact. System Development Charges will be paid as part of development review and approval to offset infrastructure and service delivery costs.

Alternative Courses of Action:

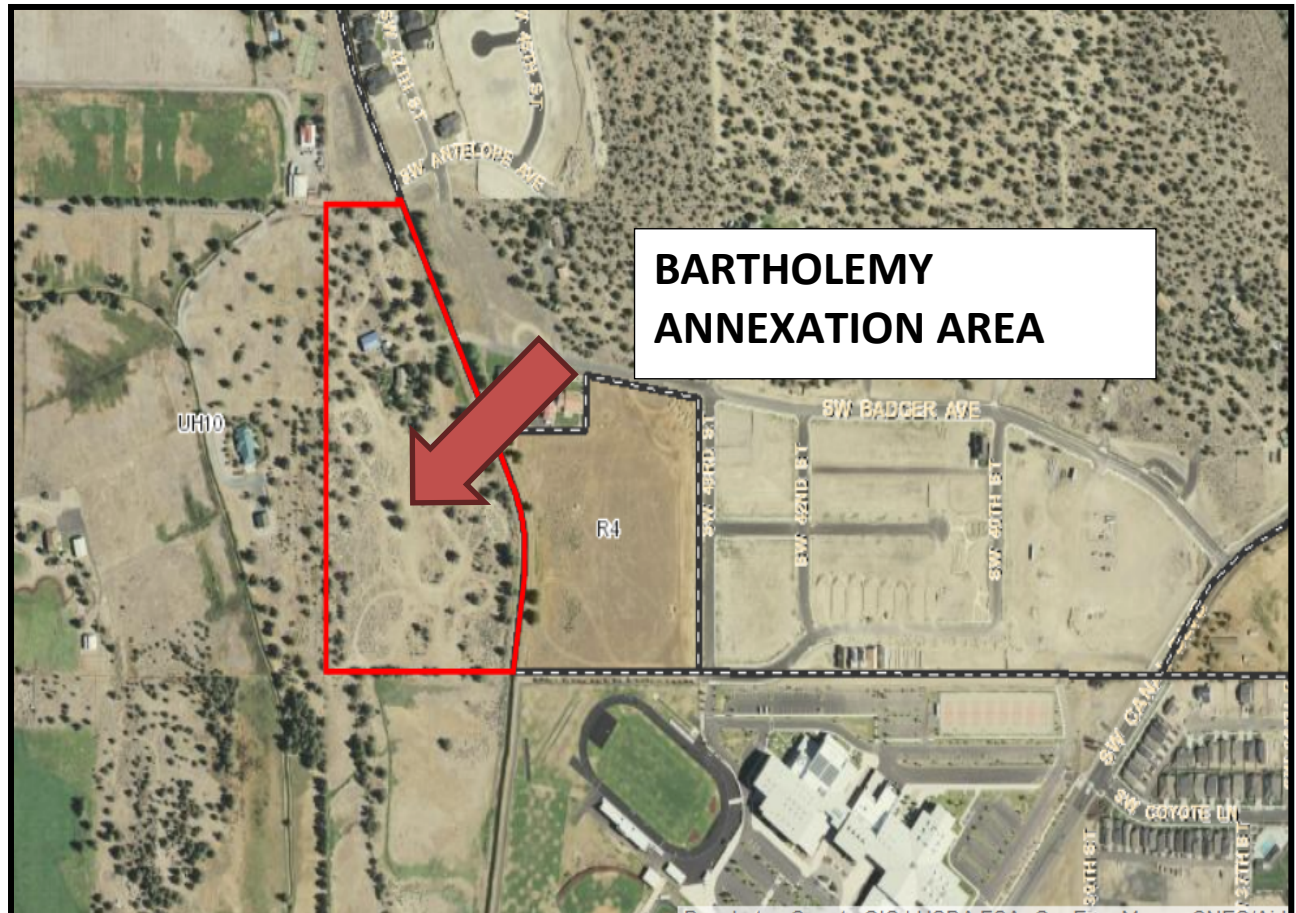
1. Approve the Resolution 2021-04.
2. Request more information.
3. Do not approve Resolution 2021-04.

Recommendation / Suggested Motion:

"I move to approve Res. #2021-04."

Locator Map

Bartholemy Annexation



AFTER RECORDING RETURN TO:
City Recorder's Office
City of Redmond
411 SW 9th St
Redmond, OR 97756

**REDMOND RESOLUTION
RESOLUTION NO. 2021-04**

**A RESOLUTION DECLARING CERTAIN TERRITORY AS BEING ANNEXED TO AND
INCORPORATED WITHIN THE CITY OF REDMOND.**

WHEREAS, an application has been submitted to the City of Redmond for the annexation of the property described in Exhibit "A", and

WHEREAS, the real property described in Exhibit "A" attached hereto and incorporated by reference is contiguous to the City of Redmond; and

WHEREAS, all owners of the territory described in Exhibit "A" have consented in writing to the annexation of the land described in Exhibit "A" into the City of Redmond; and

WHEREAS, the City Council finds that this annexation complies with the Redmond Urban Area Comprehensive Plan; and

WHEREAS, the City Council finds that this annexation is in the best interest of the City and of said territory described in Exhibit "A".

NOW, THEREFORE, IT IS HEREBY RESOLVED BY THE CITY OF REDMOND AS FOLLOWS:

SECTION 1: Annexation Area: The real property described in Exhibit "A" to this resolution is hereby proclaimed to be annexed to the City of Redmond, Oregon.

SECTION 2: Record: The City Recorder shall submit to the Secretary of State of the State of Oregon a copy of this Resolution together with a copy of the statement of consent of the landowners of the property described in Exhibit "A".

The City Recorder shall also send a description by metes and bounds or legal subdivision of the new boundaries of the City of Redmond to the Deschutes County Tax Assessor and the Deschutes County Clerk within 10 days of the date of this Resolution.

SECTION 3: Zoning: Upon annexation, the parcel described in Exhibit "A" will be rezoned per Exhibit B in Ordinance No. 2021-02, approving the Kinton Estates Master Development Plan and Comprehensive Plan Zone Map Amendment application.

ADOPTED by the City Council and **SIGNED** by the Mayor this 23rd day of March 2021.

George Endicott, Mayor

ATTEST:

Kelly Morse, City Recorder

EXHIBIT "A"

ANNEXATION PROPERTY
LEGAL DESCRIPTION

Description of a parcel of land situated in a portion of the Northeast Quarter of the Southwest Quarter (NE¼ SW¼) of Section 30, Township 15 South, Range 13, East of the Willamette Meridian, Deschutes County, Oregon, and now to be more particularly described as follows;

Commencing at a 3/4 inch pipe at the West Quarter corner of Section 30, Township 15 South, Range 13, East of the Willamette Meridian, Deschutes County, Oregon, the initial point; thence South 89° 48' 56" East along the North line of the South Half of said Section 30, 1322.80 feet to the

C.W. 1/16 corner and the point of beginning; thence South 89° 48' 56" East along the North line of the Northeast Quarter (NE¼) of said Section 30, 262.69 feet to a point on the centerline of Lateral B; thence South 25° 34' 38" East along the centerline of said Lateral B, 428.10 feet to a point on the centerline of a 30 foot access easement; thence South 80° 33' 01" East along the centerline of said access easement, 887.27 feet to a point on the East line of said Northeast Quarter of the Southwest Quarter (NE¼ SW¼); thence South 00° 00' 18" West along the East line of said Northeast Quarter of the Southwest Quarter (NE¼ SW¼), 797.77 feet to the c-s 1/16 corner; thence North 89° 55' 22" West along the South line of said Northeast Quarter of the Southwest Quarter (NE¼ SW¼), 1325.59 feet to the Southwest 1/16 corner; thence North 00° 07' 32" East along the West line of said Northeast Quarter of the Southwest Quarter (NE¼ SW¼), 1328.65 feet to the point of beginning.

EXCEPTING THEREFROM the following: Commencing at a 3/4" pipe at the West One-Quarter corner of Section 30, Township 15 South, Range 13, East of the Willamette Meridian, Deschutes County, Oregon, the initial point; thence South 89° 48' 56" East along the North line of the South ½ of said Section 30, 1322.80 feet to the C-W 1/16 corner; thence South 89° 48' 56" East along the North line of the Northeast Quarter of the Southwest Quarter (NE¼ SW¼) of said Section 30, 262.69 feet to a point on centerline of Lateral B; thence South 25° 34' 38" East along the centerline of said Lateral B, 428.10 feet to the true point of beginning; thence South 80° 33' 01" East, 887.27 feet to a point on the East line of the Northeast Quarter of the Southwest Quarter (NE¼ SW¼), Section 30, Township 15 South, Range 13, East of the Willamette Meridian, Deschutes County, Oregon; thence South 00° 00' 18" West along the East line of said Northeast Quarter of the Southwest Quarter (NE¼ SW¼), 797.77 feet to the c-s 1/16 corner; thence North 89° 55' 22" West along the South line of said Northeast Quarter of the Southwest Quarter (NE¼ SW¼) to the centerline of said Lateral B; thence Northerly along the said centerline of Lateral B, 997 feet M/L to the true point of beginning.

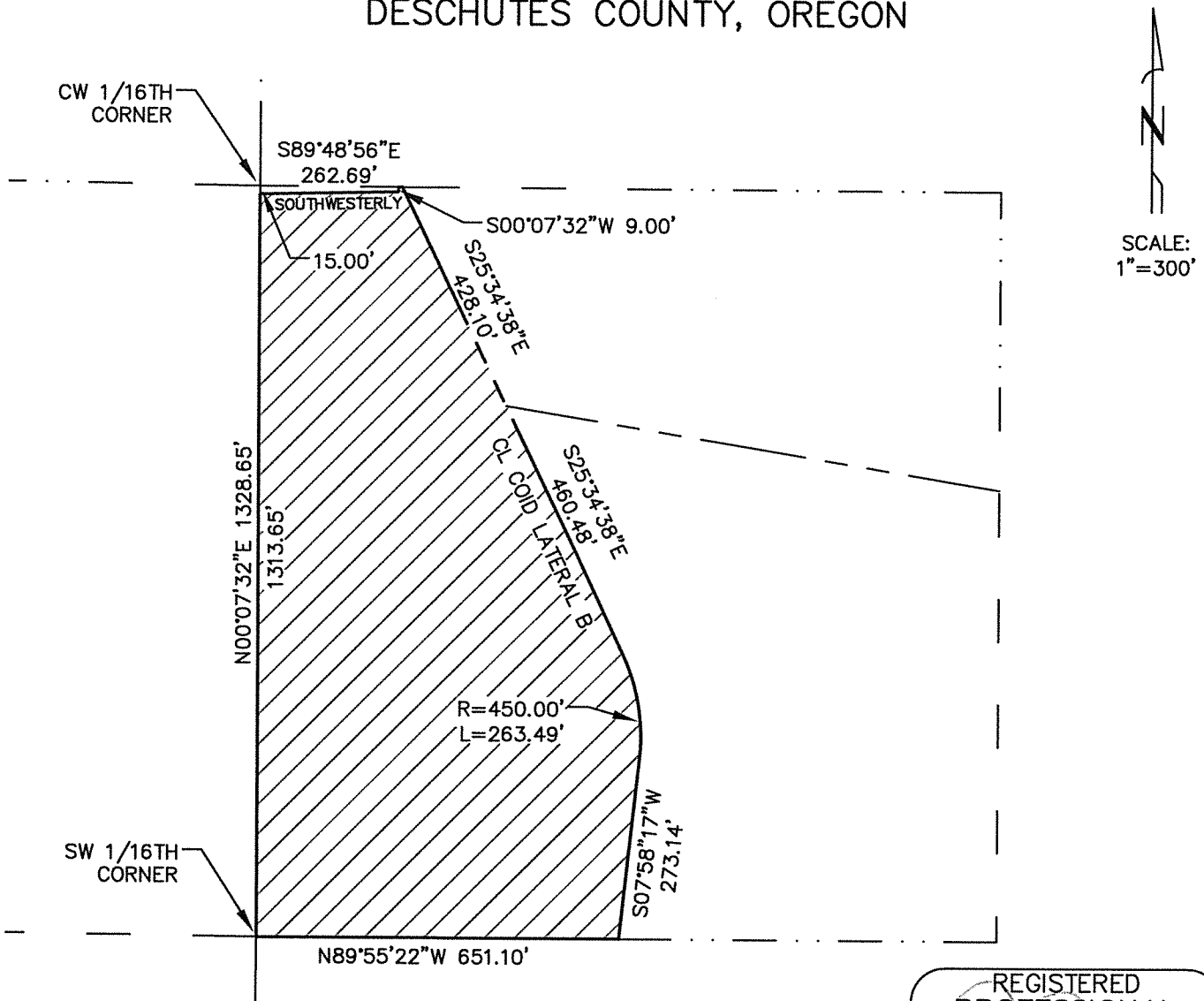
AND FURTHER EXCEPTING the following:

Beginning at the 5/8 inch pin marking the Northwest corner of Section 30, Township 15 South, Range 13, East of the Willamette Meridian, Deschutes County, Oregon; thence South 00° 15' 08" West, 2634.96 feet along the West line of said Section 30, Township 15 South, Range 13, East of the Willamette Meridian, Deschutes County, Oregon, to a 3/4 inch pipe marking the Northwest corner of the Southwest Quarter (SW¼) of said Section 30; thence South 89° 48' 56" East, 1322.80 feet to a 3/4 inch pipe and the true point of beginning of the herein described tract; thence continuing South 89° 48' 56" East, 245 feet; thence South 00° 07' 32" West 9.0 feet; thence in a Southwesterly direction to a point which bears South 00° 07' 32" West, 15.00 feet from the true point of beginning; thence North 00° 07' 32" East, 15.00 feet to the true point of beginning all in Section 30, Township 15 South, Range 13, East of the Willamette Meridian, Deschutes County, Oregon



ANNEXATION PROPERTY

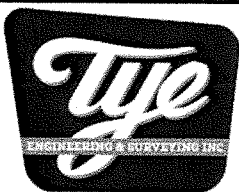
LOCATED IN THE NE 1/4 SW 1/4 SECTION 30,
TOWNSHIP 15 SOUTH, RANGE 13 EAST, W.M.,
DESCHUTES COUNTY, OREGON



NOTE: THIS MAP IS BASED ON A PARTITION
MAP, MJP-78-20 BY E.G. MANSFIELD, FILED
WITH THE DESCHUTES COUNTY SURVEYOR'S
OFFICE 3-9-1978, CS01401 AND THAT BARGAIN
AND SALE DEED, RECORDED 4-30-2020, IN
BOOK 2020, PAGE 19362, DESCHUTES COUNTY
OFFICIAL RECORDS.



RENEWS: 12/31/21



TYE ENGINEERING, INC.

725 NW HILL, BEND, OREGON 97703 (541) 389-6959

DATE: MARCH 16, 2021

SCALE: 1"=300'

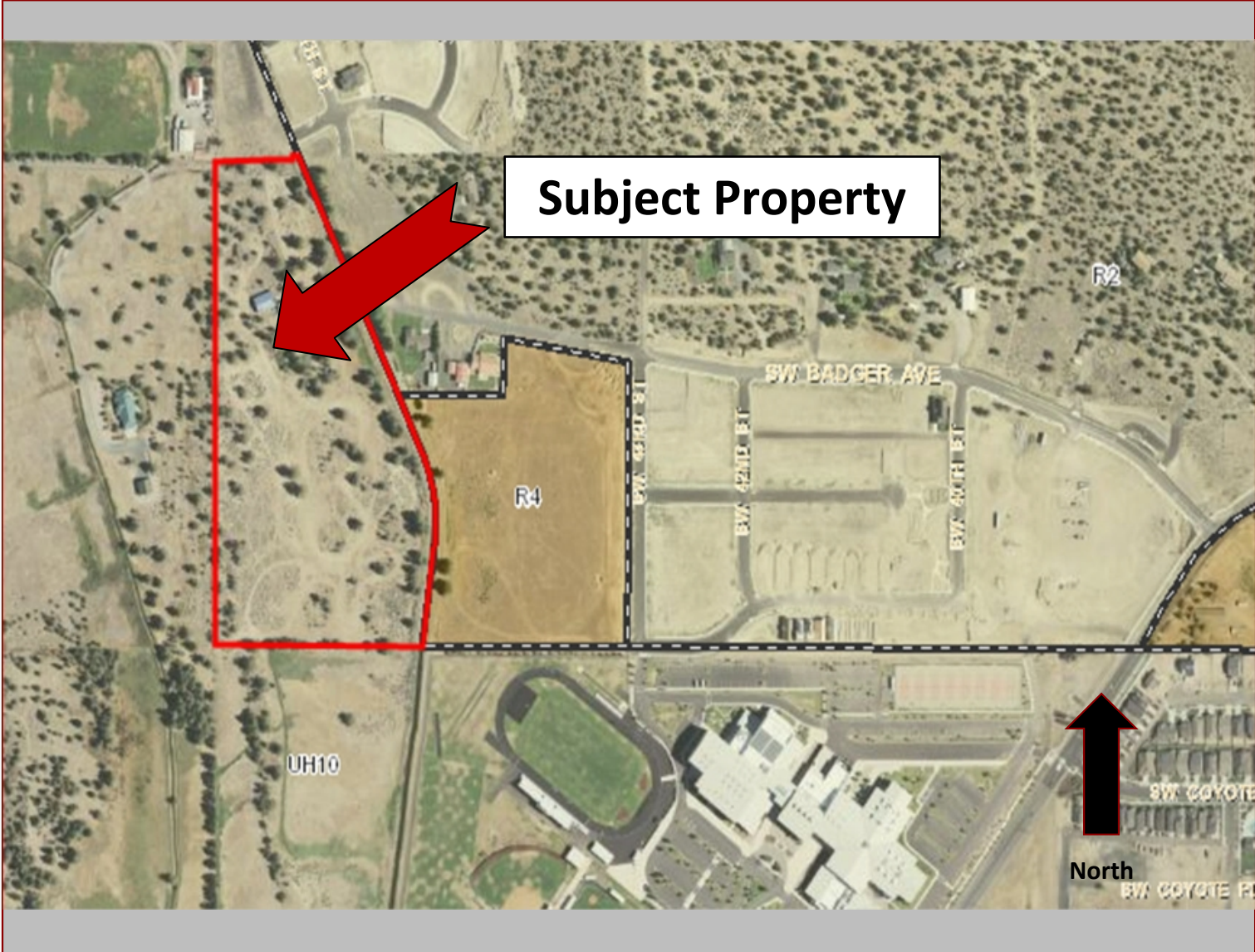
DRAWN BY: P.A.T.

JOB: 2226 KINTON ESTATES



Bartholemey annexation request

16.25-Acres
4869 SW Badger Ave





CITY OF REDMOND

CITY HALL
411 SW 9th STREET
REDMOND, OR 97756
541.923.7710
FAX: 541.548.0706
info@redmondoregon.gov
redmondoregon.gov

STAFF REPORT

DATE: March 23, 2021
TO: Redmond City Council
THROUGH: Keith Witcosky, City Manager
John Roberts, Deputy City Manager
FROM: Deborah McMahon, Planning Manager
SUBJECT: Annexation Agreements with Nicko Properties, LLC (Tax Lot 141333C000300), Arron Curtis (Tax Lot 151330BC00900), Arch Holding Company, LLC (Tax Lot 151330BC00700), and Michael Malone (Tax Lot 1513290001200)

Addresses Council Goal:

7. COMPREHENSIVE PLANNING - Enhance the quality of life through adoption of programs, policies, and standards that balance growth while maintaining its unique character.
- A. Promote quality development.
 - B. Support orderly annexation from Urban Growth Boundary.

Report in Brief:

This item requests City Council approve four annexation agreements. A locator map is attached identifying the locations of the proposed annexations.

The four specific annexations agreements include:

1. 711-21-000003; 19.23 acres (R-4 zone):
Tax ID - T14-R13-S33C0 TL 00300 Canyon Trails Nicko Properties.

Generally located near Pershall Way and NW 10th street on the northern edge of the City west of Hwy 97. This parcel is proposed for residential development pursuant to the Northwest Are Framework Plan and the R-4 Medium Density Zone.

2. 711-20-000224; 9.81 acres (R-1 zone):
Tax ID - T15-R13-S30BC TL00900 Arron Curtis.

Generally located east of Helmholtz Way near SW Badger Avenue; NW of Ridgeview High School. This parcel is proposed for residential development pursuant to the R-1 Low Density Zone.

3. 711-20-000177; 9.47 acres (R-1 zone):
Tax ID - T15-R13-S30BC TL00700 Josie Meadows North/Talbott.

Generally located east of Helmholtz Way new SW Badger Avenue; NW of Ridgeview High School. Similar to the one above, this parcel is proposed for residential development pursuant to the R-1 Low Density Zone.

4. 711-21-000012; 4.11 acres (M-1 zone):
Tax ID - T15-R13-S2900 -TL01200 Michael Malone.

Generally located east of Hwy 97 and west of the Juniper Golf Course. This parcel is proposed for industrial development pursuant to the M-1 Light Industrial Zone.

Background:

The City continues to grow at an accelerated rate. The grow creates pressure on developing land within City limits as well as outside of City limits. For those lands immediately contiguous to City limits there are opportunities to be annexed when there is alignment with the Redmond Comprehensive Plan 2040, framework plans and infrastructure. The number of

recent annexation requests has created an opportunities to consolidate them into one request.

Developing an annexation agreement is the first step in the process to bring a property into the City limits. Once inside the City limits it can be rezoned, developed to City standards and at an urban density.

As part of the this first step in the annexation agreement process, signatures and needed information are collected from property owner(s). After staff receives and reviews all the required annexation information and materials an annexation agreement is then is forwarded to City Council for consideration and approval.

After the conditions of the annexation agreement are met, a Resolution to establish final zoning will brought back to City Council for consideration and approval.

Discussion:

The terms of the four annexation agreements were reviewed by staff to establish the requirements to be met by the property owners. Key elements of these terms include compliance with all applicable rules and regulations including master plan approval.

A complete Annexation Application and necessary supplemental information has been submitted to the City, including:

1. Consent to Annex
2. Waiver Agreement
3. Confidential Census form
4. Legal description of area to be annexed (including streets and easement to be annexed)
5. Copy of assessors map depicting exact area to be annexed
6. Vicinity map
7. Deed of Dedication with signatures
8. Easement with signatures
9. Consent in writing of 100% of people residing on the property

All of the above requirements were met by the property owners and were found to be complete.

After Council approves the annexation agreement, both the City Recorder and Planning Division will follow through with perfecting the specific terms of the agreement.

Next Steps - City Recorder

1. Arrange for Legal Description, map, etc. to be reviewed by City and County
2. Forward the legal description to Department of Revenue
3. Initiate process to annex in County roads that may be affected
4. Prepare Property Owner Roll (i.e., verify property owners if different than Consent to Annex)
5. Obtain copy of Deed or other documents showing new owner information

Next Steps - Planning Division

The property owners and subject properties will proceed through the land use review process (i.e., development review, master planning and evaluation of great neighborhood principles, and eventual rezoning). Future development will be guided by both the 2040 Redmond Comprehensive Plan and respective framework and support plans.

Ultimately a Resolution for formal Annexation will be prepared for and brought to Council for each subject property.

Fiscal Impact:

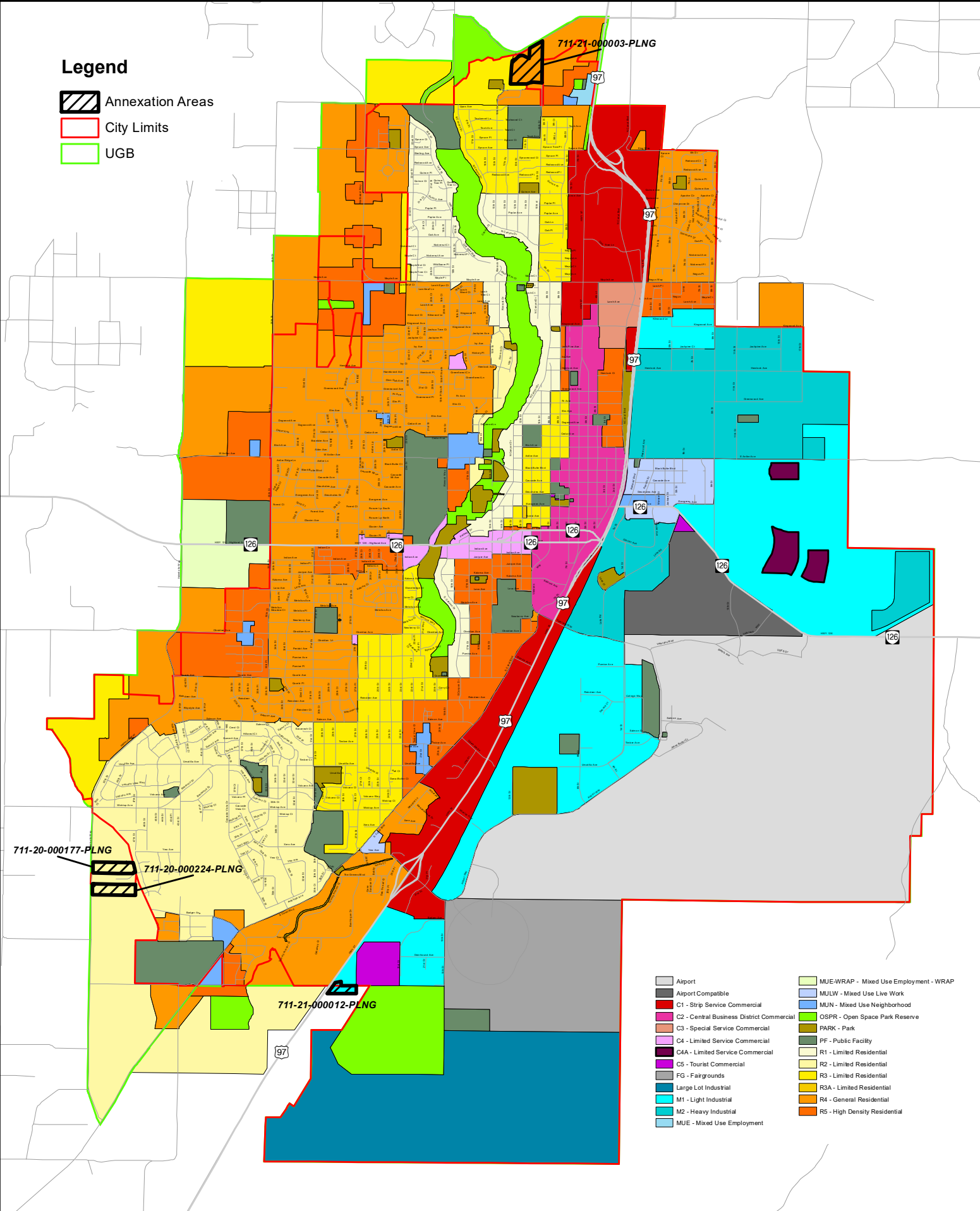
There is no immediate or anticipated fiscal impact as part of this first step in the annexation process.

Alternative Courses of Action:

1. Approve the annexation agreements and authorize the City Manager to sign.
2. Request more information.
3. Do not approve the agreements.

Recommendation / Suggested Motion:

"I move to authorize the City Manager to sign the annexation agreements with Nicko Properties, LLC (Tax Lot 141333C000300), Arron Curtis (Tax Lot 151330BC00900), Arch Holding Company, LLC (Tax Lot 151330BC00700), and Michael Malone (Tax Lot 1513290001200)."



Legend

-  Annexation Areas
-  City Limits
-  UGB

-  Airport
-  Airport Compatible
-  C1 - Strip Service Commercial
-  C2 - Central Business District Commercial
-  C3 - Special Service Commercial
-  C4 - Limited Service Commercial
-  C4A - Limited Service Commercial
-  C5 - Tourist Commercial
-  FG - Fairgrounds
-  Large Lot Industrial
-  M1 - Light Industrial
-  M2 - Heavy Industrial
-  MUE - Mixed Use Employment
-  MUE-WRAP - Mixed Use Employment - WRAP
-  MULW - Mixed Use Live Work
-  MUN - Mixed Use Neighborhood
-  OSPR - Open Space Park Reserve
-  PARK - Park
-  PF - Public Facility
-  R1 - Limited Residential
-  R2 - Limited Residential
-  R3 - Limited Residential
-  R3A - Limited Residential
-  R4 - General Residential
-  R5 - High Density Residential

Annexation Areas



**After Recording Return To:
City of Redmond
411 SW 9th Street
Redmond, OR 97756**

ANNEXATION AGREEMENT

This Annexation Agreement is made and entered into this ____ day of March ____, 2021, by and between the City of Redmond, Oregon, an Oregon municipal corporation (hereinafter “City”) and Nicko Properties, LLC (hereinafter “Owner”).

W I T N E S S E T H

WHEREAS, Owner is the record owner of the property legally described on Exhibit A attached hereto and incorporated herein (hereinafter referred to as the “Property”); and

WHEREAS, the Property is within the City’s urban growth boundary and is proposed to be annexed to the City; and

WHEREAS, Owner desires to have the Property annexed to the City; and

WHEREAS, Owner has submitted a petition for annexation and provided the City with all required consents for annexation; and

WHEREAS, the City is willing to annex the Property on the terms and conditions, and subject to the provisions, of this Agreement; and

WHEREAS, the City will initiate ultimate urban zoning upon the successful annexation of this property by resolution to the City of Redmond, and

NOW, THEREFORE, in consideration of the representations, promises and mutual covenants contained herein, the City and Owner agree as follows:

1. **RECITALS**: The foregoing recitals are incorporated herein as is fully set forth in this Section.
2. **ANNEXATION**:
 - a. City agrees that it will initiate a resolution annexing the Property into the City once all required consents and a signed Annexation Agreement have been received by the City. This agreement is void if the Property is not annexed to the City of Redmond within 12 months after the effective date of this Agreement.
 - b. Owner may terminate this Agreement by serving written notice to the City. The notice must be received by the City at least 60 days prior to the public hearings for council consideration of the annexation. If the City receives such notice, this Agreement terminates as of the effective date of the notice. After the annexation resolution is adopted by the City, this Agreement may only be terminated or amended by written consent of Owner and City.
3. **COMPREHENSIVE PLAN/ZONING**: Prior to development and annexation of the property, the Owner is required to receive master plan approval for the property in compliance with the

Redmond Comprehensive Plan and Redmond Development Code. The master plan will identify Comprehensive Plan and Zoning designations, subject to City Council review and approval. Upon adoption of the master plan, successful annexation, and a Comprehensive Plan Map/Zone Map adoption, the City will apply the Comprehensive Plan and Zoning designations identified in the Master Plan.

4. DEVELOPMENT: Owner agrees as follows:

- a. Owner shall waive and shall not assert any claim against the City that may now exist or that may accrue through the date of annexation of the Property that it may claim due to its ownership of the Property. This includes any claim arising out of any land use regulation or under Measure 37 (ORS 197.352), Measure 49, and Measure 56 (ORS 227.186).
- b. Owner agrees that any development of the property will comply with the applicable approved Area Plan and master plan for the property, except as modified consistent with City requirements.
- c. Owner agrees to incorporate and follow the City's Great Neighborhood Principles as found in the Redmond Comprehensive Plan, City Engineering Requirements, and Redmond Development Code as applicable. The Community Development Director or Hearings Body shall determine the applicability of the Great Neighborhood Principles to the subject property. All development must comply with federal, state and city regulations.
- d. Owner agrees that it will, without any cost to the City, dedicate the necessary rights-of-way or easements for all Planned Improvements identified in the City's Public Facilities Plan.
- e. Owner shall remove all additional Central Oregon Irrigation District (COID) irrigation water rights from Property, unless use is otherwise approved by the Redmond City Council and COID.
- f. Owner shall remove all ground water rights from Property unless partial use is otherwise approved by the Redmond City Council. If required, Owner is directed to remove water rights via sale or transfer to the City. Removal shall occur prior to the platting of the first phase of development.
- g. Owner agrees to not remonstrate against the formation of a local improvement district or reimbursement district created for funding public improvements that will serve the Property. This waiver applies to the Property until all utility service and all required infrastructure that will service or benefit the Property is completed and accepted by City. If the property is developed in phases, the waiver may be removed on a phase-by-phase basis if all utility service and all required infrastructure that will service or benefit the Property is completed and accepted by City.
- h. Owner agrees to donate funds to the Redmond Committee for Art in Public Places for public art to be purchased and installed in the development. \$100 will be charged per housing unit and paid in lump sum at the time of plat approval for the property. These funds will be set aside for a future public art installation within the property. The future Homeowners Association/Owner will be invited to participate in the art selection.

5. AMENDMENT: This Agreement and any exhibits attached hereto may be amended only by the mutual written consent of both parties.

6. SEVERABILITY: If any provision, covenant or portion of this Agreement or its application to any person, entity, property or portion of property is held invalid, or if any ordinance or resolution adopted pursuant to this Agreement or its application to any person, entity, property or portion

of property is held invalid, such invalidity shall not affect the application or validity of any other provisions, covenants or portions of this Agreement or other ordinances or resolutions passed pursuant hereto, and to that end, all provisions, covenants, and portions of this Agreement and of the ordinances and resolutions adopted pursuant hereto are declared to be severable.

7. **NO WAIVER OF RIGHT TO ENFORCE AGREEMENT:** Failure of any party to this Agreement to insist upon the strict and prompt performance of the terms, covenants, agreements, and conditions herein contained, or any of them, upon any other party imposed, shall not constitute or be construed as a waiver or relinquishment of any party's right thereafter to enforce any such term, covenant, agreement or condition, but the same shall continue in full force and effect.
8. **ENTIRE AGREEMENT:** This Agreement supersedes all prior agreements, negotiations and exhibits and is a full integration of the entire agreement of the parties relating to the subject matter hereof. The parties shall have no obligations other than specifically stated in this Agreement except those of general applicability.
9. **SURVIVAL:** The provisions contained in this Agreement shall survive the annexation of the property and shall not be merged or expunged by the annexation of the property or any part thereof to the City.
10. **SUCCESSORS AND ASSIGNS:** This Agreement shall run with the land described on Exhibit A and inure to the benefit of, and be binding upon, the successors in title of the Owners and their respective successors, grantees, lessees, and assigns, and upon successor corporate authorities of the City and successor municipalities.
11. **TERM OF AGREEMENT:** This Agreement shall be binding upon the parties and their respective successors and assigns for twenty (20) years, commencing as of the date of this Agreement.
12. **ENFORCEMENT:** Owner agrees that if it fails to perform as required under this Agreement, the City Council may, at the Council's option, de-annex and that Owner will not object or oppose such de-annexation in any manner or any forum.
13. **ATTORNEY FEES:** In any proceeding to enforce, apply or interpret this Agreement, each party shall bear its own attorneys' fees and costs.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date first above written.

CITY

OWNER

Keith Witcosky, City Manager

Nicko Properties, LLC Owner

ATTEST:

Kelly Morse, City Recorder

STATE OF OREGON)
) ss.
County of Deschutes)

Keith Witcosky, City Manager, on behalf of the City of Redmond, who acknowledged that he had authority to sign on behalf of the City of Redmond and this instrument to be the City's voluntary act and deed, acknowledged this instrument before me this _____ day of _____ 2021.

Notary Public for Oregon

STATE OF OREGON)
) ss.
County of Deschutes)

This instrument was acknowledged before me this _____ day of _____ 2021, by _____, who acknowledged this instrument to be his/her voluntary act and deed.

Notary Public for Oregon

Exhibit "A"

Description of a parcel of land situated in a portion of the Northeast Quarter of the Southwest Quarter (NE-1/4 SW-1/4) of Section Thirty (30), Township Fifteen (15) South, Range Thirteen (13), East of the Willamette Meridian, Deschutes County, Oregon, and now to be more particularly described as follows:

Commencing at a 3/4 inch pipe at the West quarter corner of Section 30, T. 15 S., R. 13, E.W.M., the initial point; thence South 89°48'56" East along the North line of the South Half of said Section 30, 1322.80 feet to the C-W 1/16 corner and the point of beginning; thence South 89°48'56" East along the North line of the Northeast Quarter of the Southwest Quarter of said Section 30, 262.69 feet to a point on the centerline of Lateral B; thence South 25°34'38" East along the centerline of said Lateral B, 428.10 feet to a point on the centerline of a 30 foot access easement; thence South 80°33'01" East along the centerline of said access easement, 887.27 feet to a point on the East line of said Northeast Quarter of the Southwest Quarter; thence South 0°00'18" West along the East line of said Northeast Quarter of the Southwest Quarter, 797.77 feet to the C-S 1/16 corner; thence North 89°55'22" West along the South line of said Northeast Quarter of the Southwest Quarter, 1325.59 feet to the Southwest 1/16 corner; thence North 0°07'32" East along the West line of said Northeast Quarter of the Southwest Quarter, 1328.65 feet to the point of beginning.

EXCEPTING THEREFROM the following: Commencing at a 3/4" pipe at the West One-Quarter corner of Section 30, T. 15 S., R. 13, E.W.M., the initial point; thence South 89°48'56" East along the North line of the South 1/2 of said Section 30, 1322.80 feet to the C-W 1/16 corner; thence South 89°48'56" East along the North line of the Northeast Quarter of the Southwest Quarter of said Section 30, 262.69 feet to a point on centerline of Lateral B; thence South 25°34'38" East along the centerline of said Lateral B, 428.10 feet to the true point of beginning; thence South 80°33'01" East, 887.27 feet to a point on the East line of the Northeast Quarter of the Southwest Quarter, Section 30, T. 15 S., R. 13., E.W.M.; thence South 0°00'18" West along the East line of said Northeast Quarter of the Southwest Quarter, 797.77 feet to the C-S 1/16 corner; thence North 89°55'22" West along the South line of said Northeast Quarter of the Southwest Quarter to the centerline of said Lateral B; thence Northerly along the said centerline of Lateral B, 997 feet M/L to the true point of beginning.

AND FURTHER EXCEPTING the following:

Beginning at the 5/8 inch pin marking the Northwest corner of Section Thirty (30), Township Fifteen (15) South, Range Thirteen (13) East of the Willamette Meridian, in Deschutes County, Oregon; thence South 0°15'08" West, 2634.95 feet along the West line of said Section 30, Township 15 South, Range 13, E.W.M., to a 3/4 inch pipe marking the Northwest corner of the Southwest Quarter (SW-1/4) of said Section 30; thence South 89°48'56" East, 1322.80 feet to a 3/4 inch pipe, and the true point of beginning of the herein described tract; thence continuing South 89°48'56" East, 245 feet; thence South 0°07'32" West, 9.0 feet; thence in a Southwesterly direction to a point which bears South 0°07'32" West, 15.00 feet from the true point of beginning; thence North 0°07'32" East, 15.00 feet to the true point of beginning, all in Section 30, Township 15 South, Range 13 East of the Willamette Meridian, Deschutes County, Oregon.

**After Recording Return To:
City of Redmond
411 SW 9th Street
Redmond, OR 97756**

ANNEXATION AGREEMENT

This Annexation Agreement is made and entered into this ____ day of March ____, 2021, by and between the City of Redmond, Oregon, an Oregon municipal corporation (hereinafter “City”) and Arron Curtis (hereinafter “Owner”).

W I T N E S S E T H

WHEREAS, Owner is the record owner of the property legally described on Exhibit A attached hereto and incorporated herein (hereinafter referred to as the “Property”); and

WHEREAS, the Property is within the City’s urban growth boundary and is proposed to be annexed to the City; and

WHEREAS, Owner desires to have the Property annexed to the City; and

WHEREAS, Owner has submitted a petition for annexation and provided the City with all required consents for annexation; and

WHEREAS, the City is willing to annex the Property on the terms and conditions, and subject to the provisions, of this Agreement; and

WHEREAS, the City will initiate ultimate urban zoning upon the successful annexation of this property by resolution to the City of Redmond, and

NOW, THEREFORE, in consideration of the representations, promises and mutual covenants contained herein, the City and Owner agree as follows:

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 - b. Owner may terminate this Agreement by serving written notice to the City. The notice must be received by the City at least 60 days prior to the public hearings for council consideration of the annexation. If the City receives such notice, this Agreement terminates as of the effective date of the notice. After the annexation resolution is adopted by the City, this Agreement may only be terminated or amended by written consent of Owner and City.
3. **COMPREHENSIVE PLAN/ZONING**: Prior to development and annexation of the property, the Owner is required to receive master plan approval for the property in compliance with the

Redmond Comprehensive Plan and Redmond Development Code. The master plan will identify Comprehensive Plan and Zoning designations, subject to City Council review and approval. Upon adoption of the master plan, successful annexation, and a Comprehensive Plan Map/Zone Map adoption, the City will apply the Comprehensive Plan and Zoning designations identified in the Master Plan.

4. **DEVELOPMENT:** Owner agrees as follows:

- a. Owner shall waive and shall not assert any claim against the City that may now exist or that may accrue through the date of annexation of the Property that it may claim due to its ownership of the Property. This includes any claim arising out of any land use regulation or under Measure 37 (ORS 197.352), Measure 49, and Measure 56 (ORS 227.186).
- b. Owner agrees that any development of the property will comply with the applicable approved Area Plan and master plan for the property, except as modified consistent with City requirements.
- c. Owner agrees to incorporate and follow the City's Great Neighborhood Principles as found in the Redmond Comprehensive Plan, City Engineering Requirements, and Redmond Development Code as applicable. The Community Development Director or Hearings Body shall determine the applicability of the Great Neighborhood Principles to the subject property. All development must comply with federal, state and city regulations.
- d. Owner agrees that it will, without any cost to the City, dedicate the necessary rights-of-way or easements for all Planned Improvements identified in the City's Public Facilities Plan.
- e. Owner shall remove all additional Central Oregon Irrigation District (COID) irrigation water rights from Property, unless use is otherwise approved by the Redmond City Council and COID.
- f. Owner shall remove all ground water rights from Property unless partial use is otherwise approved by the Redmond City Council. If required, Owner is directed to remove water rights via sale or transfer to the City. Removal shall occur prior to the platting of the first phase of development.
- g. Owner agrees to not remonstrate against the formation of a local improvement district or reimbursement district created for funding public improvements that will serve the Property. This waiver applies to the Property until all utility service and all required infrastructure that will service or benefit the Property is completed and accepted by City. If the property is developed in phases, the waiver may be removed on a phase-by-phase basis if all utility service and all required infrastructure that will service or benefit the Property is completed and accepted by City.
- h. Owner agrees to donate funds to the Redmond Committee for Art in Public Places for public art to be purchased and installed in the development. \$100 will be charged per housing unit and paid in lump sum at the time of plat approval for the property. These funds will be set aside for a future public art installation within the property. The future Homeowners Association/Owner will be invited to participate in the art selection.

5. **AMENDMENT:** This Agreement and any exhibits attached hereto may be amended only by the mutual written consent of both parties.

6. **SEVERABILITY:** If any provision, covenant or portion of this Agreement or its application to any person, entity, property or portion of property is held invalid, or if any ordinance or resolution adopted pursuant to this Agreement or its application to any person, entity, property or portion

of property is held invalid, such invalidity shall not affect the application or validity of any other provisions, covenants or portions of this Agreement or other ordinances or resolutions passed pursuant hereto, and to that end, all provisions, covenants, and portions of this Agreement and of the ordinances and resolutions adopted pursuant hereto are declared to be severable.

7. **NO WAIVER OF RIGHT TO ENFORCE AGREEMENT:** Failure of any party to this Agreement to insist upon the strict and prompt performance of the terms, covenants, agreements and conditions herein contained, or any of them, upon any other party imposed, shall not constitute or be construed as a waiver or relinquishment of any party's right thereafter to enforce any such term, covenant, agreement or condition, but the same shall continue in full force and effect.
8. **ENTIRE AGREEMENT:** This Agreement supersedes all prior agreements, negotiations and exhibits and is a full integration of the entire agreement of the parties relating to the subject matter hereof. The parties shall have no obligations other than specifically stated in this Agreement except those of general applicability.
9. **SURVIVAL:** The provisions contained in this Agreement shall survive the annexation of the property and shall not be merged or expunged by the annexation of the property or any part thereof to the City.
10. **SUCCESSORS AND ASSIGNS:** This Agreement shall run with the land described on Exhibit A and inure to the benefit of, and be binding upon, the successors in title of the Owners and their respective successors, grantees, lessees, and assigns, and upon successor corporate authorities of the City and successor municipalities.
11. **TERM OF AGREEMENT:** This Agreement shall be binding upon the parties and their respective successors and assigns for twenty (20) years, commencing as of the date of this Agreement.
12. **ENFORCEMENT:** Owner agrees that if it fails to perform as required under this Agreement, the City Council may, at the Council's option, de-annex and that Owner will not object or oppose such de-annexation in any manner or any forum.
13. **ATTORNEY FEES:** In any proceeding to enforce, apply or interpret this Agreement, each party shall bear its own attorneys' fees and costs.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date first above written.

CITY

OWNER

Keith Witcosky, City Manager

Arron Curtis, Owner

ATTEST:

Kelly Morse, City Recorder

STATE OF OREGON)
) ss.
County of Deschutes)

Keith Witcosky, City Manager, on behalf of the City of Redmond, who acknowledged that he had authority to sign on behalf of the City of Redmond and this instrument to be the City's voluntary act and deed, acknowledged this instrument before me this _____ day of _____ 2021.

Notary Public for Oregon

STATE OF OREGON)
) ss.
County of Deschutes)

This instrument was acknowledged before me this _____ day of _____ 2021, by _____, who acknowledged this instrument to be his/her voluntary act and deed.

Notary Public for Oregon

Exhibit "A"

Description of a parcel of land situated in a portion of the Northeast Quarter of the Southwest Quarter (NE-1/4 SW-1/4) of Section Thirty (30), Township Fifteen (15) South, Range Thirteen (13), East of the Willamette Meridian, Deschutes County, Oregon, and now to be more particularly described as follows:

Commencing at a 3/4 inch pipe at the West quarter corner of Section 30, T. 15 S., R. 13, E.W.M., the initial point; thence South 89°48'56" East along the North line of the South Half of said Section 30, 1322.80 feet to the C-W 1/16 corner and the point of beginning; thence South 89°48'56" East along the North line of the Northeast Quarter of the Southwest Quarter of said Section 30, 262.69 feet to a point on the centerline of Lateral B; thence South 25°34'38" East along the centerline of said Lateral B, 428.10 feet to a point on the centerline of a 30 foot access easement; thence South 80°33'01" East along the centerline of said access easement, 887.27 feet to a point on the East line of said Northeast Quarter of the Southwest Quarter; thence South 0°00'18" West along the East line of said Northeast Quarter of the Southwest Quarter, 797.77 feet to the C-S 1/16 corner; thence North 89°55'22" West along the South line of said Northeast Quarter of the Southwest Quarter, 1325.59 feet to the Southwest 1/16 corner; thence North 0°07'32" East along the West line of said Northeast Quarter of the Southwest Quarter, 1328.65 feet to the point of beginning.

EXCEPTING THEREFROM the following: Commencing at a 3/4" pipe at the West One-Quarter corner of Section 30, T. 15 S., R. 13, E.W.M., the initial point; thence South 89°48'56" East along the North line of the South 1/2 of said Section 30, 1322.80 feet to the C-W 1/16 corner; thence South 89°48'56" East along the North line of the Northeast Quarter of the Southwest Quarter of said Section 30, 262.69 feet to a point on centerline of Lateral B; thence South 25°34'38" East along the centerline of said Lateral B, 428.10 feet to the true point of beginning; thence South 80°33'01" East, 887.27 feet to a point on the East line of the Northeast Quarter of the Southwest Quarter, Section 30, T. 15 S., R. 13., E.W.M.; thence South 0°00'18" West along the East line of said Northeast Quarter of the Southwest Quarter, 797.77 feet to the C-S 1/16 corner; thence North 89°55'22" West along the South line of said Northeast Quarter of the Southwest Quarter to the centerline of said Lateral B; thence Northerly along the said centerline of Lateral B, 997 feet M/L to the true point of beginning.

AND FURTHER EXCEPTING the following:

Beginning at the 5/8 inch pin marking the Northwest corner of Section Thirty (30), Township Fifteen (15) South, Range Thirteen (13) East of the Willamette Meridian, in Deschutes County, Oregon; thence South 0°15'08" West, 2634.95 feet along the West line of said Section 30, Township 15 South, Range 13, E.W.M., to a 3/4 inch pipe marking the Northwest corner of the Southwest Quarter (SW-1/4) of said Section 30; thence South 89°48'56" East, 1322.80 feet to a 3/4 inch pipe, and the true point of beginning of the herein described tract; thence continuing South 89°48'56" East, 245 feet; thence South 0°07'32" West, 9.0 feet; thence in a Southwesterly direction to a point which bears South 0°07'32" West, 15.00 feet from the true point of beginning; thence North 0°07'32" East, 15.00 feet to the true point of beginning, all in Section 30, Township 15 South, Range 13 East of the Willamette Meridian, Deschutes County, Oregon.

After Recording Return To:
City of Redmond
411 SW 9th Street
Redmond, OR 97756

ANNEXATION AGREEMENT

This Annexation Agreement is made and entered into this ____ day of March 5, 2021, by and between the City of Redmond, Oregon, an Oregon municipal corporation (hereinafter "City") and Arch Holding Company, LLC (hereinafter "Owner").

WITNESSETH

WHEREAS, Owner is the record owner of the property legally described on Exhibit A attached hereto and incorporated herein (hereinafter referred to as the "Property"); and

WHEREAS, the Property is within the City's urban growth boundary and is proposed to be annexed to the City; and

WHEREAS, Owner desires to have the Property annexed to the City; and

WHEREAS, Owner has submitted a petition for annexation and provided the City with all required consents for annexation; and

WHEREAS, the City is willing to annex the Property on the terms and conditions, and subject to the provisions, of this Agreement; and

WHEREAS, the City will initiate ultimate urban zoning upon the successful annexation of this property by resolution to the City of Redmond, and

NOW, THEREFORE, in consideration of the representations, promises and mutual covenants contained herein, the City and Owner agree as follows:

1. **RECITALS**: The foregoing recitals are incorporated herein as is fully set forth in this Section.
2. **ANNEXATION**:
 - a. City agrees that it will initiate a resolution annexing the Property into the City once all required consents and a signed Annexation Agreement have been received by the City. This agreement is void if the Property is not annexed to the City of Redmond within 12 months after the effective date of this Agreement.
 - b. Owner may terminate this Agreement by serving written notice to the City. The notice must be received by the City at least 60 days prior to the public hearings for council consideration of the annexation. If the City receives such notice, this Agreement terminates as of the effective date of the notice. After the annexation resolution is adopted by the City, this Agreement may only be terminated or amended by written consent of Owner and City.
3. **COMPREHENSIVE PLAN/ZONING**: Prior to development and annexation of the property, the Owner is required to receive master plan approval for the property in compliance with the Redmond Comprehensive Plan and Redmond Development Code. The master plan will identify Comprehensive Plan and Zoning designations, subject to City Council review and approval.

Upon adoption of the master plan, successful annexation, and a Comprehensive Plan Map/Zone Map adoption, the City will apply the Comprehensive Plan and Zoning designations identified in the Master Plan.

4. **DEVELOPMENT**: Owner agrees as follows:

- a. Owner shall waive and shall not assert any claim against the City that may now exist or that may accrue through the date of annexation of the Property that it may claim due to its ownership of the Property. This includes any claim arising out of any land use regulation or under Measure 37 (ORS 197.352), Measure 49, and Measure 56 (ORS 227.186).
- b. Owner agrees that any development of the property will comply with the applicable approved Area Plan and master plan for the property, except as modified consistent with City requirements.
- c. Owner agrees to incorporate and follow the City's Great Neighborhood Principles as found in the Redmond Comprehensive Plan, City Engineering Requirements, and Redmond Development Code as applicable. The Community Development Director or Hearings Body shall determine the applicability of the Great Neighborhood Principles to the subject property. All development must comply with federal, state and city regulations.
- d. Owner agrees that it will, without any cost to the City, dedicate the necessary rights-of-way or easements for all Planned Improvements identified in the City's Public Facilities Plan.
- e. Owner shall remove all additional Central Oregon Irrigation District (COID) irrigation water rights from Property, unless use is otherwise approved by the Redmond City Council and COID.
- f. Owner shall remove all ground water rights from Property unless partial use is otherwise approved by the Redmond City Council. If required, Owner is directed to remove water rights via sale or transfer to the City. Removal shall occur prior to the platting of the first phase of development.
- g. Owner agrees to not remonstrate against the formation of a local improvement district or reimbursement district created for funding public improvements that will serve the Property. This waiver applies to the Property until all utility service and all required infrastructure that will service or benefit the Property is completed and accepted by City. If the property is developed in phases, the waiver may be removed on a phase-by-phase basis if all utility service and all required infrastructure that will service or benefit the Property is completed and accepted by City.
- h. Owner agrees to donate funds to the Redmond Committee for Art in Public Places for public art to be purchased and installed in the development. \$100 will be charged per housing unit and paid in lump sum at the time of plat approval for the property. These funds will be set aside for a future public art installation within the property. The future Homeowners Association/Owner will be invited to participate in the art selection.

5. **AMENDMENT**: This Agreement and any exhibits attached hereto may be amended only by the mutual written consent of both parties.

6. **SEVERABILITY**: If any provision, covenant or portion of this Agreement or its application to any person, entity, property or portion of property is held invalid, or if any ordinance or resolution adopted pursuant to this Agreement or its application to any person, entity, property or portion of property is held invalid, such invalidity shall not affect the application or validity of any other provisions, covenants or portions of this Agreement or other ordinances or resolutions passed

pursuant hereto, and to that end, all provisions, covenants, and portions of this Agreement and of the ordinances and resolutions adopted pursuant hereto are declared to be severable.

7. **NO WAIVER OF RIGHT TO ENFORCE AGREEMENT:** Failure of any party to this Agreement to insist upon the strict and prompt performance of the terms, covenants, agreements, and conditions herein contained, or any of them, upon any other party imposed, shall not constitute or be construed as a waiver or relinquishment of any party's right thereafter to enforce any such term, covenant, agreement or condition, but the same shall continue in full force and effect.
8. **ENTIRE AGREEMENT:** This Agreement supersedes all prior agreements, negotiations and exhibits and is a full integration of the entire agreement of the parties relating to the subject matter hereof. The parties shall have no obligations other than specifically stated in this Agreement except those of general applicability.
9. **SURVIVAL:** The provisions contained in this Agreement shall survive the annexation of the property and shall not be merged or expunged by the annexation of the property or any part thereof to the City.
10. **SUCCESSORS AND ASSIGNS:** This Agreement shall run with the land described on Exhibit A and inure to the benefit of, and be binding upon, the successors in title of the Owners and their respective successors, grantees, lessees, and assigns, and upon successor corporate authorities of the City and successor municipalities.
11. **TERM OF AGREEMENT:** This Agreement shall be binding upon the parties and their respective successors and assigns for twenty (20) years, commencing as of the date of this Agreement.
12. **ENFORCEMENT:** Owner agrees that if it fails to perform as required under this Agreement, the City Council may, at the Council's option, de-annex and that Owner will not object or oppose such de-annexation in any manner or any forum.
13. **ATTORNEY FEES:** In any proceeding to enforce, apply or interpret this Agreement, each party shall bear its own attorneys' fees and costs.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date first above written.

CITY

Keith Witcosky, City Manager

ATTEST:

Kelly Morse, City Recorder

OWNER


Arch Holding Company, LLC, Owner

STATE OF OREGON)
) ss.
County of Deschutes)

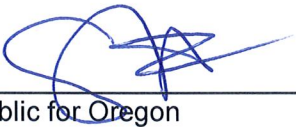
Keith Witcosky, City Manager, on behalf of the City of Redmond, who acknowledged that he had authority to sign on behalf of the City of Redmond and this instrument to be the City's voluntary act and deed, acknowledged this instrument before me this _____ day of _____ 2021.

Notary Public for Oregon

STATE OF OREGON)
) ss.
County of Deschutes)

This instrument was acknowledged before me this 5 day of March 2021,
by Bruce Lanlap, who acknowledged this instrument to be his/her
voluntary act and deed.





Notary Public for Oregon

Exhibit "A"

Description of a parcel of land situated in a portion of the Northeast Quarter of the Southwest Quarter (NE-1/4 SW-1/4) of Section Thirty (30), Township Fifteen (15) South, Range Thirteen (13), East of the Willamette Meridian, Deschutes County, Oregon, and now to be more particularly described as follows:

Commencing at a 3/4 inch pipe at the West quarter corner of Section 30, T. 15 S., R. 13, E.W.M., the initial point; thence South 89°48'56" East along the North line of the South Half of said Section 30, 1322.80 feet to the C-W 1/16 corner and the point of beginning; thence South 89°48'56" East along the North line of the Northeast Quarter of the Southwest Quarter of said Section 30, 262.69 feet to a point on the centerline of Lateral B; thence South 25°34'38" East along the centerline of said Lateral B, 428.10 feet to a point on the centerline of a 30 foot access easement; thence South 80°33'01" East along the centerline of said access easement, 887.27 feet to a point on the East line of said Northeast Quarter of the Southwest Quarter; thence South 0°00'18" West along the East line of said Northeast Quarter of the Southwest Quarter, 797.77 feet to the C-S 1/16 corner; thence North 89°55'22" West along the South line of said Northeast Quarter of the Southwest Quarter, 1325.59 feet to the Southwest 1/16 corner; thence North 0°07'32" East along the West line of said Northeast Quarter of the Southwest Quarter, 1328.65 feet to the point of beginning.

EXCEPTING THEREFROM the following: Commencing at a 3/4" pipe at the West One-Quarter corner of Section 30, T. 15 S., R. 13, E.W.M., the initial point; thence South 89°48'56" East along the North line of the South 1/2 of said Section 30, 1322.80 feet to the C-W 1/16 corner; thence South 89°48'56" East along the North line of the Northeast Quarter of the Southwest Quarter of said Section 30, 262.69 feet to a point on centerline of Lateral B; thence South 25°34'38" East along the centerline of said Lateral B, 428.10 feet to the true point of beginning; thence South 80°33'01" East, 887.27 feet to a point on the East line of the Northeast Quarter of the Southwest Quarter, Section 30, T. 15 S., R. 13., E.W.M.; thence South 0°00'18" West along the East line of said Northeast Quarter of the Southwest Quarter, 797.77 feet to the C-S 1/16 corner; thence North 89°55'22" West along the South line of said Northeast Quarter of the Southwest Quarter to the centerline of said Lateral B; thence Northerly along the said centerline of Lateral B, 997 feet M/L to the true point of beginning.

AND FURTHER EXCEPTING the following:

Beginning at the 5/8 inch pin marking the Northwest corner of Section Thirty (30), Township Fifteen (15) South, Range Thirteen (13) East of the Willamette Meridian, in Deschutes County, Oregon; thence South 0°15'08" West, 2634.96 feet along the West line of said Section 30, Township 15 South, Range 13, E.W.M., to a 3/4 inch pipe marking the Northwest corner of the Southwest Quarter (SW-1/4) of said Section 30; thence South 89°48'56" East, 1322.80 feet to a 3/4 inch pipe, and the true point of beginning of the herein described tract; thence continuing South 89°48'56" East, 245 feet; thence South 0°07'32" West, 9.0 feet; thence in a Southwesterly direction to a point which bears South 0°07'32" West, 15.00 feet from the true point of beginning; thence North 0°07'32" East, 15.00 feet to the true point of beginning, all in Section 30, Township 15 South, Range 13 East of the Willamette Meridian, Deschutes County, Oregon.

After Recording Return To:
City of Redmond
411 SW 9th Street
Redmond, OR 97756

ANNEXATION AGREEMENT

This Annexation Agreement is made and entered into this 5 day of March _____, 2021, by and between the City of Redmond, Oregon, an Oregon municipal corporation (hereinafter "City") and Michael Malone (hereinafter "Owner").

W I T N E S S E T H

WHEREAS, Owner is the record owner of the property legally described on Exhibit A attached hereto and incorporated herein (hereinafter referred to as the "Property"); and

WHEREAS, the Property is within the City's urban growth boundary and is proposed to be annexed to the City; and

WHEREAS, Owner desires to have the Property annexed to the City; and

WHEREAS, Owner has submitted a petition for annexation and provided the City with all required consents for annexation; and

WHEREAS, the City is willing to annex the Property on the terms and conditions, and subject to the provisions, of this Agreement; and

WHEREAS, the City will initiate ultimate urban zoning upon the successful annexation of this property by resolution to the City of Redmond, and

NOW, THEREFORE, in consideration of the representations, promises and mutual covenants contained herein, the City and Owner agree as follows:

1. **RECITALS**: The foregoing recitals are incorporated herein as is fully set forth in this Section.
2. **ANNEXATION**:
 - a. City agrees that it will initiate a resolution annexing the Property into the City once all required consents and a signed Annexation Agreement have been received by the City. This agreement is void if the Property is not annexed to the City of Redmond within 12 months after the effective date of this Agreement.
 - b. Owner may terminate this Agreement by serving written notice to the City. The notice must be received by the City at least 60 days prior to the public hearings for council consideration of the annexation. If the City receives such notice, this Agreement terminates as of the effective date of the notice. After the annexation resolution is adopted by the City, this Agreement may only be terminated or amended by written consent of Owner and City.
3. **DEVELOPMENT**: Owner agrees as follows:
 - a. Owner shall waive and shall not assert any claim against the City that may now exist or that may accrue through the date of annexation of the Property that it may claim due to its ownership

of the Property. This includes any claim arising out of any land use regulation or under Measure 37 (ORS 197.352), Measure 49, and Measure 56 (ORS 227.186).

- b. Owner agrees that any development of the property will comply with the applicable approved Area Plan for the property, except as modified consistent with City requirements.
 - c. Owner agrees to incorporate and follow the City's Great Neighborhood Principles as found in the Redmond Comprehensive Plan, City Engineering Requirements, and Redmond Development Code as applicable. The Community Development Director or Hearings Body shall determine the applicability of the Great Neighborhood Principles to the subject property. All development must comply with federal, state and city regulations.
 - d. Owner agrees that it will, without any cost to the City, dedicate the necessary rights-of-way or easements for all Planned Improvements identified in the City's Public Facilities Plan.
 - e. Owner shall remove all Central Oregon Irrigation District (COID) irrigation water rights from Property, unless use is otherwise approved by the Redmond City Council and COID.
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4. **AMENDMENT:** This Agreement and any exhibits attached hereto may be amended only by the mutual written consent of both parties.
5. **SEVERABILITY:** If any provision, covenant or portion of this Agreement or its application to any person, entity, property or portion of property is held invalid, or if any ordinance or resolution adopted pursuant to this Agreement or its application to any person, entity, property or portion of property is held invalid, such invalidity shall not affect the application or validity of any other provisions, covenants or portions of this Agreement or other ordinances or resolutions passed pursuant hereto, and to that end, all provisions, covenants, and portions of this Agreement and of the ordinances and resolutions adopted pursuant hereto are declared to be severable.
6. **NO WAIVER OF RIGHT TO ENFORCE AGREEMENT:** Failure of any party to this Agreement to insist upon the strict and prompt performance of the terms, covenants, agreements, and conditions herein contained, or any of them, upon any other party imposed, shall not constitute or be construed as a waiver or relinquishment of any party's right thereafter to enforce any such term, covenant, agreement or condition, but the same shall continue in full force and effect.
7. **ENTIRE AGREEMENT:** This Agreement supersedes all prior agreements, negotiations and exhibits and is a full integration of the entire agreement of the parties relating to the subject matter hereof. The parties shall have no obligations other than specifically stated in this Agreement except those of general applicability.

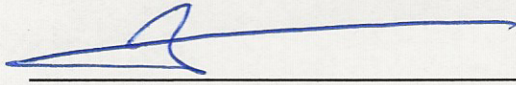
8. **SURVIVAL**: The provisions contained in this Agreement shall survive the annexation of the property and shall not be merged or expunged by the annexation of the property or any part thereof to the City.
9. **SUCCESSORS AND ASSIGNS**: This Agreement shall run with the land described on Exhibit A and inure to the benefit of, and be binding upon, the successors in title of the Owners and their respective successors, grantees, lessees, and assigns, and upon successor corporate authorities of the City and successor municipalities.
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13. **ATTORNEY FEES**: In any proceeding to enforce, apply or interpret this Agreement, each party shall bear its own attorneys' fees and costs.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date first above written.

CITY

OWNER

Keith Witcosky, City Manager



Michael Malone, Owner

ATTEST:

Kelly Morse, City Recorder

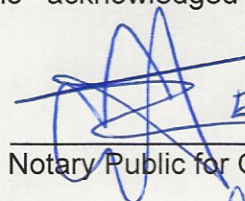
STATE OF OREGON)
) ss.
County of Deschutes)

Keith Witcosky, City Manager, on behalf of the City of Redmond, who acknowledged that he had authority to sign on behalf of the City of Redmond and this instrument to be the City's voluntary act and deed, acknowledged this instrument before me this _____ day of _____ 2021.

Notary Public for Oregon

California
STATE OF ~~OREGON~~)
Los Angeles) ss.
County of ~~Deschutes~~)

This instrument was acknowledged before me this 5th day of March 2021, by Michael Malone, who acknowledged this instrument to be his/her voluntary act and deed.


Eric Martinez Navarro

Notary Public for ~~Oregon~~
California

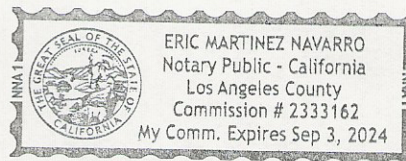


Exhibit "A"

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AND FURTHER EXCEPTING the following:

Beginning at the 5/8 inch pin marking the Northwest corner of Section Thirty (30), Township Fifteen (15) South, Range Thirteen (13) East of the Willamette Meridian, in Deschutes County, Oregon; thence South 0°15'08" West, 2634.96 feet along the West line of said Section 30, Township 15 South, Range 13, E.W.M., to a 3/4 inch pipe marking the Northwest corner of the Southwest Quarter (SW-1/4) of said Section 30; thence South 89°48'56" East, 1322.80 feet to a 3/4 inch pipe, and the true point of beginning of the herein described tract; thence continuing South 89°48'56" East, 245 feet; thence South 0°07'32" West, 9.0 feet; thence in a Southwesterly direction to a point which bears South 0°07'32" West, 15.00 feet from the true point of beginning; thence North 0°07'32" East, 15.00 feet to the true point of beginning, all in Section 30, Township 15 South, Range 13 East of the Willamette Meridian, Deschutes County, Oregon.



ANNEXATION REQUESTS

MULTIPLE PROPERTY OWNERS

REDMOND CITY COUNCIL
MARCH 23, 2021

SLIDE / 1



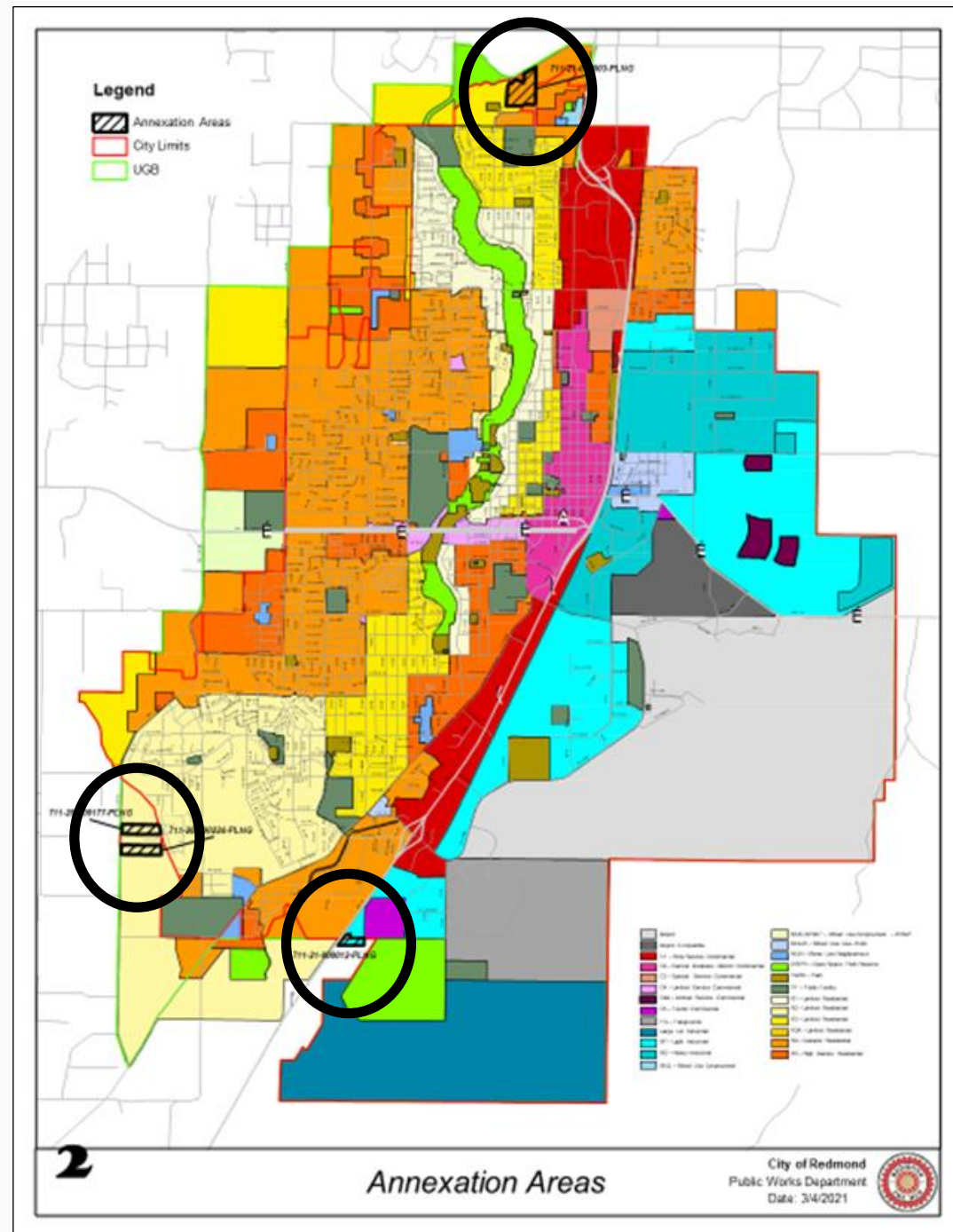
FOUR REQUESTS

REDMOND
COMPREHENSIVE PLAN
2040

FRAMEWORK PLANS

PRESCRIPTIVE PROCESS

SLIDE / 2



Dear Council Members,

In the last several weeks we have experienced some bumpy attempts to get on course and move forward with an agenda that is beneficial to Redmond. We, the council members are professionals, who have been leaders in our areas of expertise. If we work together, our unique skills will prove to be beneficial to the success of Redmond, Oregon. We cannot just focus on the easy things and avoid those things that are difficult. Redmond is growing fast and although infrastructure is important, it is not and should not be our only focus. We also need to focus on managing the growth of the city to avoid it getting out of control and overwhelming. We must also keep in mind we are “public servants.”

I have attended about a half of dozen city council meetings, excluding orientations, and the discussion is dominated by building infrastructure. There are discussions and presentations about improving and building parks, building “affordable housing” but nothing about addressing the vacant buildings in downtown Redmond that have been sitting vacant for many years. When I asked about this eye sore, the response was we can’t do anything about it. I disagree with that response and it is our responsibility to do something about it or find someone that can. Sixth street is the primary artery for business and to allow to remain in the condition it is disgraceful. It is impacting those who own businesses on sixth and discouraging anyone who may be interested in investing there. We have reviewed and authorized hundreds of thousands of dollars in request for purchasing equipment and upgrading existing structures for various city departments, but we can’t address the eye sore two blocks from City Hall, the police station and the SCP hotel? We need answers and resolutions to this asap. I am suggesting an action plan to do just that.

There was a letter written by three of the council members which was sent to the Governor’s office in an attempt to persuade her to lift restrictions on the businesses in Redmond. That resulted in a non-response and then there was another discussion about writing another letter to the Governor’s office, but this time collectively as City Council. Some council members agreed to approve doing so and I did not agree and declined to participate for obvious reasons. The Governor’s office responded with acknowledgement of the letter, but no changes were implemented which I knew would be the case. Since that time, discussions on this matter diminished even though many businesses were still struggling. Just recently, vaccines are being given, restrictions are being somewhat lifted and some normality is beginning to be restored. What City Council should continue to address is the increasing homelessness issue. This is the hard discussion and an issue we cannot continue to ignore. Homelessness will eventually impact our City financially if we do not get a handle on it now. You only need to use Portland and Seattle as an example of how quickly homelessness can overcome a city.

As you are well aware, I am an advocate for dispensaries in Redmond. When this topic is mentioned, it immediately turns into a full-blown debate with the opposition making it clear they have no intentions of really having a meaningful discussion on the topic. This is in spite of the fact many of the citizens in Redmond want it. We don’t seem to have concerns with establishments that serve liquor and those indulging leaving these establishments in plain view

impaired, intoxicated and driving away. From a law enforcement perspective, it doesn't matter whether it's one drink or two drinks, a person's judgement is impaired even if it doesn't register a .08 alcohol level on a breathalyzer. This is why the slogan/warning is "don't drink and drive". Are you aware that alcohol abuse is a major factor in child abuse, domestic violence, and fatal vehicle accidents, but it doesn't attract the same level of concern or opposition. I know some will respond by saying that alcohol is legal. Marijuana is also legal. There are no proven facts to show that marijuana use results in any of the detrimental criminal behavior associated with the use of alcohol abuse. For the record the major concern here in Redmond, Oregon is Opiate abuse which is supplied by pharmaceutical companies and distributed by primary care physicians. I know this because I attended a discussion at City Club on the topic of Opiates and it's impact on Deschutes County which are devastating.

In regard to the discussion on possibly amending or even changing policies and rules, I concur that change is good and we should welcome change. I am an advocate for reviewing Rules, Policies, and Procedures and updating / amending them if necessary. Regularly reviewing policies and procedures keeps organizations up to date with regulations and best practices. It also ensures they are consistent and effective. As a Naval Officer and a Law Enforcement Supervisor / Manager, policies were reviewed regularly to ensure we are functioning and performing at the highest level of efficiency and you can only meet that criteria by ensuring we stay in touch with changing times. We as City Council should mirror this practice and not be confined to what may have been effective ten or twenty years ago.

It is time for us, Redmond Oregon City Council, to work together and focus on the future of Redmond. We shouldn't be looking at what we personally want to support and not support, but instead what will be beneficial and in the best interest of the citizens of Redmond now and into the future. Redmond Citizens are disappointed with the lack of transparency and "rubber stamping" in regard to decisions being made in the past by City Council. Elections reflect the voice of the people. There was little attention given to serving the needs of families and they want change. We have parks with some climbing and sliding apparatus, but that's not enough. We then place a potty in them which is not a good idea for a number of health reasons. I believe spending the additional money for a flushing bathroom is worth the investment.

Families have expressed their desire for indoor activities such as roller skating and / or ice-skating rinks, bowling alleys, trampoline zones, indoor rock climbing, and a new Athletic Center with an up to date swimming pool. They also would like to have a Water Park like the one in Madras. This is what we need to energize, revitalize and make Redmond, Oregon a "Welcoming City". This will create jobs and revenue and draw visitors here to enjoy our city. They also suggested having parks with water pads like the one in Centennial park. This is what many of our citizens want and this is what we should focus on. Stop giving our hard earned money to Bend. Everyone goes to Bend to shop at the name stores such as Macy's, TJ Maxx, Kohls, Costco and all the little neat shops on Wall & Bond. They also spend lots of money in dispensaries. So my question is Redmond here building housing and homes just so they can all go to Bend and do their shopping? That is the case now and that is unacceptable as well.

I would urge the Council to take risk. We need to know what we know and what we don't know. It's about being open to people and to their ideas. The chances we take, the people we meet, the people we love, and the faith that you have is what's going to define you. We should never be discouraged and we should never hold back. I urge us, Redmond City Council to give everything we have and if we fall, we fall forward. Ease, is a greater threat to progress than hardship. Dreams without goals are nothing more than dreams. For this City Council to achieve its goals we must have discipline and consistency. I've always learned the most selfish thing a person can do is help someone else. Seeing them succeed is the joy of knowing you helped that someone. In closing I want to say let's not be a City Council that just aspires to make a living, let's be that City Council that aspires to make a positive difference for everyone.

Respectfully,

Councilman Clifford B. Evelyn Sr.

To: Redmond City Council
From: Ed Fitch
Re : Workshop on March 16th
CC : Keith Witcoski

A couple of weeks ago the council discussed the method by which councilors could bring forward action or agenda items. The consensus was to do that by motion during council comments. That commitment was compromised at the March 9th meeting. Instead of arguing about that procedural point late in a long meeting I agreed to defer the motions to the workshop of March 16th.

Here they are:

1. A motion to direct staff to look at a potential corridor east of the current highway 97 for the extension of the reroute to a Quarry Ave interchange for discussion at a council workshop 4 or so months out.
2. A motion to schedule a joint workshop with the airport commission regarding leasing strategies and policies at the airport as well as the patent lands outside the airport fence. This could occur late spring or early summer.
3. A motion to have a joint workshop with the Parks Commission regarding Quartz Park, budgetary priorities and strategies re right to "rest" legislation in Salem. The schedule on this would be coordinated between Keith and the Mayor.

The resistance to discussing these and other issues is troubling. From what I have heard not only from other councilors but quite a few members of the public, more communication is necessary instead of less. Our workshops should be flexible enough to have discussions regarding these matters as well as others: homelessness, senior issues, neighborhood quality etc. While the budget and capital programs are very important and need our attention and oversight there needs to be more balance in the time council has together to discuss these and other issues outside of council comments.

Finally, I do apologize for swearing.