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Application Requirements for Subdivision (Preliminary Plat)-FORMAL



Part 1: Application Instructions

Instructions

An appointment must be scheduled to submit your application to the Development Services Center. Please call 425.556.2494 or visit the [Form Center](#) to schedule your appointment.

Applicability

A preliminary subdivision application is required for a division of land into ten or more lots.

SPECIAL NOTES

The submittal requirements below may change periodically. These submittal requirements are dated **March 2019**.

I. ELECTRONIC PLAN REVIEW SUBMITTAL STANDARDS

Electronic plans that **do not meet the requirements below will fail** and will result in the application being rejected.

A. **File Naming Standards:** The submittal items noted in **“Bold”** or designated **“Section”** under Part 2: Submittal Checklist shall be named accordingly:

- **Report_ReportNAME**
- **Deviation_Subjectof Deviation**
- **SEPA_DocumentName**
- **Notice_DocumentName**
- **Form_DocumentName**
- **All others only by the name listed in the checklist**

B. Plan Sheet Standards:

All plans must be drawn to scale, as specifically identified in the checklist, and each sheet shall state the scale.

C. Acceptable File Types:

All Documents uploaded must be **flattened PDFs**.

D. Plan Orientation:

All plans must be uploaded in “Landscape” format in the horizontal

II. PROFESSIONAL

All components of the application shall be prepared by the appropriate professional(s) licensed in the State of Washington. A license stamp or registration number, whichever is applicable, as well as the signature, shall be provided on the face of the application materials

III. PLAN REQUIREMENTS

- All plans must be submitted in a **searchable PDF format (non-scanned)**. The plans shall be drawn to an **engineering scale of 1" = 20' or larger** and shall be uploaded in landscape format.
- Building elevations, floor plans, roof plans, screening plans, and lighting plans shall be drawn to **architectural scale of 1/8" or 1/4" = 1'**.
- For the subject property and surrounding properties within fifty (50) feet of the subject property unless otherwise noted, including adjacent rights-of-way, the following information shall be shown. These items shall be prepared by a registered Civil engineer in accordance with **City of Redmond Design Standards**, using NAVD 88 vertical datum and NAD 83-91 horizontal datum.

IV. FORMAT

- The coversheet, site plan, transportation plan, grading plan, fire plan, utility plan and landscape plan shall use the same base maps, unless prior arrangements have been made.
- All plans must make a distinction between **existing** and **proposed** features and/or improvements.
- A sheet index must be provided on the face of all plan sets.
- Applicable contact names, phone, address and e-mail shall be provided on each plan sheet.
- North arrow and scale bar must be shown in the same location on each page of the plan sets.
- Each page** of the plans set shall include a legend indicating the symbols used on the page.
- Provide the following plans sets as **three** individual PDF files. The individual plan pages shall be titled as bulleted pointed below under each of their respective **plan set** headings.

“Plan Set”

- Coversheet
- Site plan
- Transportation Plan
- Utility Plan
- Grading Plan
- Fire Plan
- Landscape Plan
- Tree Preservation Plan
- Drainage Plan

“Architectural Plan Set”

- Building Elevations
- Floor Plans
- Roof Plans
- Lighting Plans

“Composite Plan Set”

- Composite Site Plan
- Composite Landscape Plan
- Composite Utility Plan
- Civil Engineering Plan

Project Name: _____

Part 2: Submittal Checklist

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		REQ.	SIGN OFF
	SECTION I: GENERAL		
	Project Contact Form		
	General Application Form		
	SEPA Application Form		
	Greenhouse Gas Emission Worksheet		
	SEPA Checklist (RZC 21.70)		
	Special Design Requirements Applicant Memo – Outline special design requirement for specific districts, neighborhood or uses.		
	Tree Health Assessment Report - Must be prepared by a certified arborist and shall identify all trees on site that are six (6) inches or greater in diameter and verify that all trees designated as retained are healthy trees. (For more reporting requirements see the Guidelines for Demonstrating Conformance with Tree Protection Standards Part 3). (RZC 21.72)		
	Critical Areas Report – must contain all applicable information within RZC Appendix 1: Critical Area Reporting Requirements . (RZC 21.64-21.72)		
	Critical Areas Aquifer Recharge Report – must contain all applicable information within RZC Appendix 1F: Critical Aquifer Recharges Areas (Wellhead Protection) Reporting Requirements . (RZC 21.64-21.72)		
	Traffic Study (Phase One) Submit Phase One Traffic Study to show the trip generation for the proposed project. If the project will generate 20 or more net PM peak hour new trips, then the Phase I traffic study will also include trip distribution and identify intersections that are affected by 20 or more PM peak hour new trips. Upon approval of the Phase I traffic study, a decision will be made if a Phase Two Traffic Study is required and if the project is subject to transportation concurrency review in accordance with section 21.52 of the Redmond zoning Code. If applicable, the applicant shall submit a request for a certificate of concurrency. (See Part 4 – Requirements for Traffic Study). <i>For Short Plat application, only Phase One Traffic Study to show the trip generation for the proposed project is required.</i> Please note that additional traffic related analyse such as but not limited to Entering/Stopping Sight Distances, Loading and Unloading for Single-Unit Truck Turning Templates, and Queuing Analysis can be part of the Phase One Traffic Study.		
	Traffic Study (Phase Two) – If a Phase Two Traffic Study is required, submit the scope for review. The scoping will be primary based on the outline presented in Part 4 -Requirement for Traffic Study. Depending on the size and character of the proposed project, a formal scoping meeting with traffic consultants may be necessary to determine certain elements of the outline may be added to or reduced from to the scope. Once the scope of the traffic study is approved, traffic consultant will prepare and submit the Phase Two Traffic Study for review. (See Part 4 – Requirement for Traffic Study).		
	Transportation Certificate of Concurrency – This form must be filled out.		
	Geotechnical Report – This report may be required depending upon the scope of the project and characteristics of the site. Please contact the Development Engineering Division at 425.556.2876 to verify if the report is required.		

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	Stormwater Report – The Preliminary Stormwater Report must follow the format provided in the 2012 Department of Ecology Stormwater Manual for Western Washington as amended in 2014 (2014 SWMMWW), Volume I, 3.1.7. Project shall provide On-site Stormwater Management BMP's to meet Minimum Requirement #5 and demonstrate compliance with the LID Performance Standard.		
	LID Feasibility Analysis and Site Plan- Analysis for LID should be completed as part of the initial project design. The LID Feasibility study is required at the kickoff intake.		
	Project Summary Table & Net Buildable Area Calculation Table - Complete the tables demonstrating compliance with all applicable site requirements and density allowances. (See Part 6-Project Summary Table & Net Buildable Area Calculation Table)		
	For Shoreline Substantial Development Permit Only: Cross Section – Provide typical cross-section or sections showing the following: <ul style="list-style-type: none"> • Existing ground elevations • Proposed ground elevation • Height of existing and proposed structures • Ordinary High Water Mark • Areas of shorelines which are of statewide significance 		
	Culture Resources Report (if required by the Planning Department) – The applicant shall have a qualified archeologist, as approved by the Administrator, prepare a site study to determine the effect that any proposed action may have on the archeological site and recommend necessary treatment and mitigation measures. The investigation and written report by the approved archeologist shall include information about the probable significance of the site, the probable effect of the land use action or activity on the integrity of the site, and a set of recommendations for any necessary treatment or mitigation measures. This investigation and report shall include but not be limited to the following: The boundaries of the archeological site. If the boundaries of the archeological site are found to be outside the areas of the proposed project activities (e.g., in critical areas proposed for buffers), the investigation and report shall be deemed complete with this information together with information in below. <ul style="list-style-type: none"> • A description of the archeological features and of the depth and characteristics of any artifacts unearthed during the course of investigation. • The impacts that the proposed construction or use are likely to have on the site. • Recommendations for measures to interpret and protect the site as appropriate to standard archeological practice. • If based on the analysis construction is conditionally recommended, a description of any areas to be monitored during construction. 		
	Neighborhood Meeting Notice – Template completed and provided for projects required to conduct a Neighborhood Meeting		

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	<p>Public Notice Site Plan (8 ½" X 11" format) - Must show the following information on the site plan suitable for public notice:</p> <ul style="list-style-type: none"> • Show proposed project • North Arrow • Street numbers and/or names adjacent to the project boundary • Project Name • Identify the boundaries of an critical areas 		
	<p>Public Notice Tree Preservation Plan (8 ½" X 11" format) – Must show the following information on the tree preservation plan suitable for public notice:</p> <ul style="list-style-type: none"> • Show proposed project • Highlight, in the shade of green, trees on the site designated to remain (trees that are NOT being removed) • North Arrow • Street numbers and/or names adjacent to the project boundary • Project Name • Show an "X" over each tree proposed to be removed • Include a key stating that the "X" represents trees proposed to be removed 		
	<p>Title Report or Plat Certificate – Provide the full title report that is dated within 90 days of the submittal date for all parcels involved.</p>		
SECTION II: COVER SHEET & SITE PLAN			
	Applicant's name, address, phone number and e-mail address.		
	Name, address, phone number and e-mail address of the owner, developer, builder, surveyor, engineer(s), architect, land use planner, arborist, and other professionals involved shown on each page.		
	North arrow, date, and scale bar..		
	Existing and proposed property lines and lots.		
	Location(s), size(s) in square feet and use(s) of any existing building(s) on site.		
	Project Name, Section, Township, Range, Tax Parcel Number(s) and notation of existing zoning classification – consistently show on every page.		
	Legal description		
	Sheet Index		
	Small scale vicinity map relating the proposed development to existing streets, other developments and significant land features within ¼ mile of the subject property.		
	Notation of existing zoning classification and any applicable subarea or overlays		
	Horizontal scale shall be at 1" = 20'		
	Vertical scale shall be at 1"=5'		
	Site area shown in square feet and acres		

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	Right of Way including bearings and distances		
	Include a legend indicating the symbols used on that page		
	Existing and proposed property lines and lots. Including bearings and distances shown.		
	Abutting property (with parcel numbers) shown by dash lines.		
	Location and width of existing and proposed easements for access, drainage, utilities, etc.; existing and proposed driveways, road easements and right-of-way on the site and on adjacent properties, including those across the street.		
	Show and label all existing utilities (dry and wet) onsite and along the project frontage(s).		
	Proposed street right-of-way dedication with dimension and label (if applicable)		
	Any watercourse (stream, drainage, etc.) on or adjacent to the site.		
	Location of any State Shorelines and their associate wetlands.		
	Existing critical areas including wetlands, streams, 100 year floodplain, geologic hazard areas (40% slope) and critical wildlife areas together with their associated buffers.		
	Location of all existing and proposed utility poles, streetlights, etc., in the public right-of-way adjacent to the site.		
	All proposed and existing lots, tracts and easements showing layout and dimensions of lots identified all lots using sequential numbers (Lot 1, Lot 2 etc.). Identify each tract using letters in alphabetical order (Tract A, Tract B etc.). In addition, provide the square footage contained within each lot, tract and easement.		
	Location of any land to be reserved for use in common or dedicated for public facilities, such as recreation areas, open space, critical areas and associated buffer areas, streets, etc. together with a notation of the use and square footage.		
	The required minimum lot width circle and building setback lines, dotted in, per the applicable Site Requirements Chart.		
	Show use and surveyed location of existing building(s), rockeries and fences on and within 150 feet of the boundaries of the proposed division and indicate their height, and if they are to remain or be removed.		
	Dwelling units allowed and proposed (residential)		
	Open space/landscape required and proposed		
	Notation of water and sewer source		
	Show proposed fences and other development features		
	Existing topography at 2-foot contour based upon an actual field survey. Larger contour intervals may be allowed on steep sites. Spot elevation of existing and proposed conditions may be shown for flat sites with no more than 5 feet of total elevation change.		

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	Proposed topography including heights of proposed retaining structures and rockeries.		
	Existing and/or proposed public or common use areas		
	If project is within floodplain, the base flood elevation must be shown using NAD 93-91. If the property contains FEMA Floodway, it must be shown as well.		
	<p>Depict the following information on the Cover Sheet & Site Plan submittal:</p> <ul style="list-style-type: none"> • All applications for projects located in open water areas away from land shall provide a longitude and latitude location • Shoreline delineation/limits • Shoreline designation according to Master Program • A surveyed Ordinary High Water Mark (OHWM) of all water bodies located adjacent to or within the boundary of the project shall be shown. Where the ordinary high water mark is neither adjacent to or within the boundary of the project, the plan shall indicate the distance and direction to the nearest ordinary high water mark of a shoreline. • A delineation of all wetlands that will be altered or used as part of the development • A general indication of the character of the vegetation found on the site. • Existing and proposed stormwater runoff system and peak flow rates. • Volume, source and composite of any fill material that is placed on the site whether temporary or permanent • Volume, composition and volume of excavated or dredged materials and proposed disposal area 		
SECTION III: TRANSPORTATION PLAN			
	<p>Right-of-Way and Easement with 50-feet of subject property (existing and proposed):</p> <ul style="list-style-type: none"> • Show existing and proposed right-of-way, including bearings and distance. • Show existing and proposed easements. 		
	<p>Frontage Improvements for Public/Private Streets include:</p> <ul style="list-style-type: none"> • Existing and proposed roadway improvements, including travel lane, parking lane, bike lane, curb and gutter, taper, planter, sidewalk, within 150-feet of the subject property. • Horizontal alignment with curve data including curve radius required/provided, tangent distances required and provided. • Provide cross sections for existing and proposed road sections with dimensions including pavement thickness, property line, proposed ROW dedication line (if any), and public easement line. 		

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	<ul style="list-style-type: none"> Vertical Curve Data including design and required stopping site distance for grade, algebraic difference in slope and minimum VC length required/provided. <p>Profile: Scale, VC Data, elevations labeled every 50-feet, center of cul-de-sac, existing and proposed grade.</p>		
	<p>Site Access and Intersection Spacing:</p> <ul style="list-style-type: none"> All existing and proposed driveways, intersections and lane channelization within 150-feet of the subject property. Diveways, including: maximum/minimum width allowed, width provided, all driveways shown within 150-feet of the proposed driveway, driveway to driveway/intersection spacing at 150-foot minimum, angle at intersections of street, and emergency access turning radius requirements. <p>Intersections, including: sight distance triangle, horizontal alignment, minimum 150-foot offset from near edge of adjacent intersections, approach landings, and minimum curb radius provided.</p>		
	<p>Onsite Traffic Circulation (including consideration for the following):</p> <ul style="list-style-type: none"> Backing zones (away from heavy use areas) Stacking/queuing of vehicles Pick up/drop off zones Parking areas, including stall delineation and dimensions. Moving truck loading/unloading areas with dimensions and turning radii Emergency access requirements <p>Cul-de-sacs/dead ends lengths and dimension</p>		
	<p>Street Lighting-Photometric analysis for full width of street (from curb to curb) is required and shall be prepared by experienced ROW lighting designers to determine if existing conditions meet the lighting requirements.</p>		
	<p>A separate street light plan showing streetlights incorporated with landscape design based on photometric analysis report is required. Street Light Plan for ROW lighting shall be differentiated from onsite lighting plan.</p>		
	<p>Streetlight Requirement Worksheet is required</p>		
	<p>The streetlights need to be identified if they will be in a City-owned system or a PSE-owned system.</p>		
	<p>Service cabinet location is shown and availability of the 120/240v single phase service power location is verified if the street light system will be City-owned.</p>		
	<p>A Letter or Memo of Understanding from PSE with scope and cost agreement is required if the street light system will be PSE-owned.</p>		
	<p>Provide street lighting calculations</p>		
SECTION IV: GRADING PLAN			
	<p>General Information</p>		

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	<ul style="list-style-type: none"> Plan view information – present the existing and proposed features, utilities, retaining walls (including height), street improvements/paving, and other features that will affect the design and construction of the site grading and the drainage system Legend – identify linetypes and symbols used Property lines and site area shown in SF and AC Provide a grading plan with existing and proposed contours – based on field survey (dashed lines for existing, solid lines for proposed) 1 or 2 foot interval (slopes 40% or greater may use 5-foot contours) Designate steep slope areas (40% or steeper and 10-ft vertical relief or more) with associated setback Designate areas with greater than 8 feet of cut and/or fill, adjustment from the Technical Committee required. Designate retaining walls and rockeries over 8 feet, adjustment from the Technical Committee required. Set all buried utilities back from the reinforcing geotextiles used to support retaining walls and embankments. Proposed grading no steeper than 3H:1V Horizontal scale shall be at 1"=20' North arrow and scale bar Onsite features – easements, buffers, +40% slopes etc. Offsite information – features within offsite areas that drain onsite and topography within 50 feet of all property lines. USGS, GIS, or City contour maps may be used. Setbacks including building and steep slope setbacks (in accordance with geotechnical recommendations). <p>Location of retained trees.</p>		
SECTION V: DRAINAGE PLAN			
	<p>General Information</p> <ul style="list-style-type: none"> Easement – public and/or private easements shown on the plans with dimensions labeled Offsite areas draining on site-generally do not need to be controlled but, must be safely conveyed. <p>For additional design assistance, see the Stormwater Technical Notebook.</p>		
	<p>Drainage Plan</p> <ul style="list-style-type: none"> Design pipe slope - .25% minimum and 20% maximum Minimum pipe size 12" minimum for public storm drain system and 6" minimum for private systems. Pipe data-pipe length, slope labeled Show water and sewer facilities (screened back) Horizontal clearance – 5 feet from all other utilities and structures and 8 feet from trees (street trees may be closer than 8' with root barrier) 		

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	<ul style="list-style-type: none"> • Rockeries/retaining walls – shall not cross or be near storm drain pipes, except where no alternatives exist. Any crossing of a wall shall be perpendicular to the wall and special construction techniques including steel casings may be required. No rockeries allowed over roof or footing drains. • Structure spacing-350' preferred (400' may be allowed) • Public easements have 20-foot min width. No obstructions allowed in easements. • Footing/foundation drains – shall be connected to the storm drain system (shown as stubbed to lots only for plats) <p>Roof drains – shall be connected to the storm drain system (shown as stubbed to lots for plats)</p>		
	<p>Profiles</p> <ul style="list-style-type: none"> • Horizontal scale shall be at 1"=20' • Vertical scale shall be at 1"=5' • Other utilities – labeled and designated size and type • Profile grades – show and label existing and proposed grades • Pipe profile information – show invert and top of pipe, pipe size, and design slope • Drop structures only allowed per approval of Stormwater Engineer <p>Utilities crossings – all crossings must be shown, label utility type, line size, invert of utility and storm lines and clearance between pipes (1 foot minimum vertical clearance and perpendicular crossings).</p>		
	<p>Underground Detention</p> <ul style="list-style-type: none"> • Detention volume – show volume required and volume provided. (Calculations must match proposed facility). • Inverts – show for all pipes entering and leaving control structure and vault <p>Maintenance vehicle access- required to both ends of detention pipes and two accesses to vaults (one near control structure)</p>		
	<p>Infiltration</p> <ul style="list-style-type: none"> • Soil permeability tests or gradation per the 2014 SWMMWW. At least two tests must be conducted or one test for every 5,000 square feet of infiltration system bottom area. • Soil test must be taken at the proposed bottom of infiltrations system • Excavation or boring is required in the trench area to a minimum depth of 4-feet below the bottom of the trench. Infiltration is not feasible if there is evidence of groundwater or bedrock/heard pan. • Infiltration facilities design based on infiltration rates provided in Geotechnical Report • Setbacks <ul style="list-style-type: none"> ○ Minimum 500-feet from drinking water wells and springs, septic tanks and drain fields ○ Minimum 10-feet from NGPE and property line. ○ Minimum 10-feet from rockeries and retaining walls. <p>Infiltration systems may not be located in an area previously used as sediment trap</p>		

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	<p>Biofiltration Treatment Facilities(see 2014 SWMMWW, Volume V, Chapter 9)</p> <ul style="list-style-type: none"> • Required length of 200-feet minimum (may be reduced to 150-feet for redevelopment projects only) • Vehicle access is required to provide maintenance. • Provisions are required for the 100-year overflow path. <p>Setbacks must be provided from buildings or trees within 8 feet of the biofiltration swale banks</p>		
	<p>Wetpond and detention facilities</p> <ul style="list-style-type: none"> • Must be setback a minimum of 10 feet away from structures and right-of-way as well as 50 feet away from steep slopes (15% or greater). • The pond interior slope must be a maximum of 3H:1V (preferred), 2H:1V below surface is acceptable. • The permanent pool must be designed to a minimum of the 6-month 24-hour release. • Multi-celled with a minimum of two cells, (preferred). • 5-foot wide safety bench set at 1-foot depth around the pond perimeter. • The length-to-width ratio is a minimum of 3.0, (preferred). <p>Emergency overflow for an open pond shall be separated from pond outlet.</p>		
SECTION VI: UTILITY PLAN			
	<p>Existing and Proposed Utilities</p> <ul style="list-style-type: none"> • Show proposed connection to existing water and sewer mains • Location, size, and material of water facilities, including water meters, fire hydrants, air release, blowoff, PRV valve, etc. • Location, size, invert and rim elevations, and material of sanitary sewer facilities, including side sewers, manholes, cleanouts, etc. • Power, power poles, gas, telephone and cable. • Location and size of above ground electrical transformers and emergency generators • Utility vaults • Electrical J-boxes • Underground duct banks • Location and disposition of any wells, septic tanks, drain fields and related easement in or within 150 feet of the proposed subdivision • Utility easements, rights of way and other easements that bear a direct relationship to the project • Off site easements for utilities 		
	<p>General Requirements</p> <ul style="list-style-type: none"> • Utility plans should comply with City's General Sewer Plan and Water System Plan. • Water and sewer mains in easement areas must show 10-foot easement on either side of the main. • Show the proposed finished floor elevations on all buildings. • PRV stations shown where required to create water system pressure zones consistent with the Water System Plan 		

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	<ul style="list-style-type: none"> • New water and sewer mains located within paved areas where reasonably feasible. • Paved or all weather drivable access road to all sanitary sewer manholes is provided with a maximum grade of 10%. Curve radii shall be a minimum of 40-feet inside, 52-feet outside. • Retaining walls, rockeries, and other structures are excluded from utility easement areas. • The PRV stations and large water meter vaults (3" and greater) shall be shown to scale and include adequate area for construction and maintenance as well as vehicular access to a soft-surface area consistent with City's design and construction standards. • Any required sewage pump stations to service the project must be patterned after the existing City pump stations with preliminary sizing calculations. • Indicate the source of domestic water for all properties within 150-feet of the proposed project and all associated construction. • If applicable, submit a hydrogeologist's report of likely impacts to wells serving properties for which the water source has been identified. The report must also include proposed monitoring and mitigation in the event of demonstrated impacts. • Existing trees within 8 feet of new or existing water and sewer mains shall be shown as "removed" on the Tree Preservation Plan. • For utilities proposed to cross critical areas, indicate the proposed means of construction for the crossing and whether a critical areas exemption will be required to be obtained for construction. • For additional design requirements refer to Water and Wastewater System Extensions <p>For additional code requirements see RZC 21.17.</p>		
SECTION VII: LANDSCAPE PLAN			
	Existing vegetation to be retained		
	General location of proposed trees, shrubs and groundcover.		
	<p>A plant schedule providing the scientific name, common name, quantity, size and spacing of each plant as well as specie alternatives for trees, shrubs and groundcover.</p> <ul style="list-style-type: none"> • Identify whether native or adaptive <p>Identify if drought tolerant.</p>		
	Proposed location and species of required replacement trees. Replacement trees shall be shown on the plan and be distinguished from other landscape trees.		
	<p>Ecological Score Table:</p> <ul style="list-style-type: none"> • Score techniques chosen <p>Show and demonstrate how techniques are met.</p>		
SECTION VIII: TREE PRESERVATION PLAN (RZC 21.72)			
	Show the surveyed location and dripline of all trees six (6) inches or greater in diameter at breast height (4-1/2' above grade) within the site and for fifty (50) feet off-site. Individual trees shall be identified by size and		

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	species. Significant trees shall be shaded, marked or have a separate symbol. See Tree Conformance Handout		
	Where stands of more than twenty-five (25) trees will not be disturbed, the applicant must depict the size and species name of each significant tree, within the dripline of the stand together with a note indicating the total number of significant trees within the stand.		
	Each tree shown must be designated as removed, retained (no construction within five (5) feet of the dripline,) or impacted (tree proposed to remain, but have construction within the dripline or 5 foot dripline setback). Only retained trees may be counted toward the 35% tree retention requirement. See Tree Conformance Handout		
	The five (5) dripline setback shall also be shown for all trees proposed to be retained and impacted.		
	<ul style="list-style-type: none"> • Show the complete Tree Retention Summary Table. See Tree Conformance Handout 	•	•
	Location of all proposed water, sewer and storm lines must be shown.		
	<ul style="list-style-type: none"> • Clearing limits for any improvements within 20 feet of retained or impacted trees must be shown. 	•	•
SECTION XI: FIRE PLAN			
	<p>General Requirements</p> <ul style="list-style-type: none"> • Property lines • Adjacent right-of-way • Buildings or structures to remain • Labeled location of entry and egress points to site • Access roadways • The exterior walls of buildings • Surface parking areas • The location of the fire lane signs and markings • Gate systems (if applicable) <p>Finished topography at 2-foot intervals</p>		
	<p>Emergency Vehicle Access Requirements</p> <ul style="list-style-type: none"> • Required access shall comply with current Redmond Fire Department standards and shall be depicted on the plan. • All portions of the building shall be within 150 feet of approved access roads. • Minimum unobstructed surface width shall be 20-feet. • Minimum unobstructed height shall be 13'6" • Minimum interior turning radii shall be 25-feet, and exterior radii shall be 45-feet. • Roadways shall be within 150-feet of all portions of the exterior walls of a structure or a facility. • New roadways shall have their designations shown on the plans, as assigned by the Fire Code Official, in accordance with Fire Department Standards. 		

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	<ul style="list-style-type: none"> • Required access roads shall have a maximum grade of 10%. If off-site access grades or on-site grades are 10% or more, a design (plan and profile) of the proposed roadways must be submitted for review showing the extent and degree of overage in order to determine if mitigation is required. • Where more than 100 units are designed in a residential, multifamily, retirement or similar, there shall be a minimum of two access points to the street system. Such access points shall be located so as to provide for general circulation, alternate emergency vehicle access routes, through access and general area transportation design considerations. • Angles of approach, break over and departure shall conform with the requirements of the Redmond Fire Code • Where a gate is desired for an emergency vehicle access roadway, they shall meet the requirements of the International Fire Code and have the approval of the Fire Code Official. • All portions of required emergency vehicle access roadways not in a public Right Of Way shall be maintained in an approved and recorded Emergency Vehicle Access Easement (EVAE). Show the proposed location of the EVAE on the plans. • All required access road ways shall meet the compaction and load bearing requirements for a 77,000 pound vehicle and adequate point loading characteristics (45,000lbs over 24" x 24" pad) for both wheel systems and outrigger systems. • The surface shall be an approved all weather driving surface, typically asphalt or concrete (see City Standard Specifications). Alternate surfaces must have the approval of the Development Engineering Department and the Fire Department. • Dead ends longer than 150-feet shall provide a turnaround per City of Redmond Standards 		
	<p>Water Supply and hydrants</p> <ul style="list-style-type: none"> • Minimum water supply in residential areas in 1500 gpm. • Maximum hydrant spacing for multi-family is 600 feet on center. • Any one hydrant shall be capable of providing a minimum of 1500 gpm and any two or three hydrants (depending on the demand) flowing simultaneously shall be capable of providing the required flow. • A space of four feet is to be maintained between face of curbs and fire protection equipment (hydrants, FDC's, and PIV's). If four feet cannot be provided, approved protective posts are required <p>Five (5) inch locking Storz adapters are required for steamer ports on all new hydrants and all existing hydrants considered important by Redmond Fire Department in relation to this proposal.</p>		
	<p>Fire Protection System (applicable to multi-family projects)</p> <ul style="list-style-type: none"> • An approved automatic fire sprinkler system shall be required in all new one and two family structures. 		

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	<ul style="list-style-type: none"> An approved automatic fire sprinkler system shall be required in all new commercial and multifamily structures 3,000 square feet or larger. 		
SECTION X: IRRIGATION PLAN			
	<ul style="list-style-type: none"> Show proposed locations and size of irrigation backflow preventers, water meters, and sprinklers If drought tolerant landscaping is proposed a temporary irrigation plan shall be submitted 		

Part 3: Requirements for Traffic Study

Phase One: Trip Generation Study/Traffic Modeling

In Phase One of the traffic analysis process, the traffic consultant is required to submit a technical memorandum summarizing the forecasted trip generation for the proposed project, along with justification for the methodology used in the forecast. This memorandum is then reviewed by the City and possibly by other affected public agencies. Upon approval of the trip generation estimate a determination will be made if the project is subject to transportation concurrency review in accordance with section 21.52 of the Redmond Zoning Code. If applicable, the applicant shall submit a request for a certificate of concurrency. The project applicant will be required to pay for the traffic modeling that is part of the concurrency evaluation.

Phase Two: Formal Scoping/Preparation of Traffic Impact Analysis

Phase Two of the transportation impact analysis process entails scoping of the analysis and preparation of the report by the transportation consultant. Once the traffic modeling is complete, the applicant's consultant should contact the City to set up a meeting to formally scope the transportation impact analysis. The analysis will be based primarily on the outline presented on the following pages. The specific list of intersections that will need to be reviewed in the transportation impact analysis will be developed from the trip assignment for the project. Depending upon the size and character of the proposed project, certain elements of this outline may be reduced in scope or eliminated. However, other items may also be added if special issues relating to transportation exist on the project.

Information Provided by the City

Information which is part of the City of Redmond's traffic data base can be found on the City's web site at: <https://www.redmond.gov/863/Traffic-Counts>. Additional information required for the study will need to be acquired at the applicant's expense. The City will provide the following information if it is available:

- Current AWDT information (current shall mean within one year of the study date).
- Current PM peak hour counts (current shall mean within one year of the study date).

I. Introduction

Location of Project Site

- On local vicinity map.
- In relation to other major uses or landmarks.
- In relation to the adjacent street system.

Description of Proposed Project or Action

- Proposed land use and/or character of project.
- Size of project (square feet, number of units, number of employees, etc.)
- Number of parking spaces provided.
- Number and location of accesses to street system.
- Anticipated project phasing, if applicable.

Scope of Analysis/Organization of Report

- Specific issues analyzed.
- General layout of transportation report.

Additional Information Required

II. Existing Conditions

Definition of Study Area for Analysis

- a. All signalized intersections impacted by 20 or more project-generated trips in the PM peak hour (total one-way trips through the intersection).
- b. Intersection of site accesses with street system.
- c. Non-signalized intersections as directed by the City.

Physical Characteristics of Study Area Street System

- a. Streets within study area.
 - i. Number of lanes (typical and at intersection).
 - ii. Street and shoulder widths.
 - iii. Posted speed limit.
 - iv. Approximate street grades.
 - v. Other geometric features.
- b. Non-motorized & transit facilities.
 - i. Location of sidewalks and trails within the area.
 - ii. Residential projects should identify walk routes to schools within 1 mile radius.
 - iii. Location of bike lanes within the area.
 - iv. Location of transit facilities within the area.
- c. Key intersections in study area.
 - i. Traffic Control (signals, signs, etc.).
 - ii. Turn restrictions.
 - iii. Lane alignment.
 - iv. Sight distance restrictions.
 - v.

Operational Characteristics of Study Area Street System

- a. Traffic Volumes.
 - i. Average weekday traffic volumes (AWDT) on streets.
 - ii. PM peak hour turning movement volumes at key intersections.
 - iii. Schematic of street system showing AWDT and PM turning movements.
- b. Traffic Operations.
 - i. Level of service at all signalized intersections using Circular 212 Critical Volume Sum methodology. Summary table should include level of service ranking from A to F, and critical volume sum for intersection.
 - ii. Level of service at all non-signalized intersections using Highway Capacity Manual (Special Report 209). Summary table should include level of service ranking from A to F, and reserve capacity for each critical movement.
 - iii. Warrant analysis of non-signalized intersections as determined by the City.
 - iv. 85th percentile speed on streets.

Traffic Accident History within Study Area

- a. Three-year accident summary at all key intersections. Include accident diagrams.
 - i. Intersection accident rates shall be stated in million entering vehicles (MEV) = $(\text{annual \# of accidents} \times 106) / (\text{annual traffic entering})$
 - ii. Accident rates for street sections shall be stated in million vehicle miles travels (MVM) = $(\text{annual \# of accidents} \times 106) / (\text{annual vehicle-miles of traveled})$
 - iii. Vehicle-miles = AADT x 365 days/year x section length
- b. Identification of problem areas and accident trends.

Parking Demand/Supply

- a. Existing location and supply.
- b. Existing use characteristics (demand, turnover, etc.).

Additional Information Required

A. Forecast of Non-Project Traffic Volumes

- a. Forecast year.
 - Year of project build out.
- b. General traffic volume growth.
 - Annual percentage growth in traffic volumes (typically 2%).
- c. Specific traffic volume growth.
 - Trip generation from other planned developments.
 - Diversion of traffic due to planned street improvements.

B. Forecast of Project Generated Traffic Volumes

- a. Trip Generation
 - i. ITE Trip Generation (7th Edition) or City approved methodology.
 - ii. Breakdown of new, pass-by and diverted trips.
- b. Mode Split
 - i. Proportion of trips via SOV, HOV, walking, bicycle, or other modes.
- c. Trip Assignment
 - i. Assignment of project trips to specific travel routes as per the short-term trip assignment provided by the City of Redmond traffic model (if used for concurrency testing).
 - ii. Show all streets and intersections impacted by 20 or more trips in the PM Peak Hour. Show other intersections as directed by the City.

C. Analysis of Forecast Year Traffic Operations With and Without Project

- a. Level of Service
 - i. All signalized intersections using Circular 212 Critical Volume Sum methodology. Summary table should include level of service ranking from A to F, and critical volume sum for intersection.
 - ii. All non-signalized intersections using Highway Capacity Manual (Special Report 209). Summary table should include level of service ranking from A to F, and reserve capacity for each critical movement.
 - iii. All project accesses to street system using applicable methodology outlined above.
 - iv. Schematic of street system showing AWDT and PM turning movements.
- b. Project Specific Mitigation: Use the following guidelines in determining whether mitigation is required at specific intersections:
 - i. If the intersection will operate at LOS-D or better in the forecasted year with the proposed project, no mitigation is required.
 - ii. If the intersection will operate at LOS-E/F in the forecasted year with the proposed project, and the addition of the project traffic decreases the LOS, mitigation may be required to alleviate project impacts. For signalized intersections, the consultant should then use the HCM 209 methodology to assess potential physical improvements to improve the operation of the impacted intersection. The City will review these potential improvements and may require their construction to mitigate project impacts.

III. Forecasted Conditions continued.....

Safety Condition within Study Area

- a. Analysis of safety problems identified in Existing Conditions section.
- b. Residential projects should coordinate with the City and Lake Washington School District to identify gaps or hazards for school walk routes.
- c. Options available to reduce or eliminate safety problems.
- d. Analysis of entering and stopping sight distance at project accesses and along street frontage(s).

Note: The design speed is used in any analysis shall be 10 mph over the posted speed limit unless otherwise approved by the City.

Parking Demand/Supply

- a. Proposed parking supply.
- b. Analysis of expected parking demand.
 - i. ITE Parking Generation (2nd Edition) or City approved methodology.
- c. Comparison of supply/demand to City Code Requirements.

Additional Information Required

IV. Summary of Analysis and Mitigation

Executive Summary of Transportation Impact Analysis

Summary of Impacts and Project Specific Mitigation

Part 4: Requirements for Preliminary Stormwater Report

The Preliminary Stormwater Report must follow the format provided in the 2014 Department of Ecology Stormwater Manual for Western Washington.

I. Report Components

- a. Project overview
- b. Describe the existing conditions.
- c. Describe the proposed development.
- d. State how the site currently drains.
- e. Provide a brief description of the downstream conveyance system.
- f. Include exhibits of the existing and proposed pervious and impervious areas with the following:
 - i. North arrow.
 - ii. Scale (larger engineering scale may be used where appropriate).
 - iii. Title block.
 - iv. Property lines.
 - v. Existing impervious, Proposed impervious (PG15 & NPG15)
 - vi. Drainage area to SWM Facility.
 - vii. Off-site areas draining on-site.
 - viii. Tables showing impervious and pervious area (SF & AC)
 - ix. Legend of symbols.
 - x. Road and stream names.
- g. Drainage calculations:
 - i. Pre-developed conditions:
 - Pre-developed land use (typically forested)
 - Drainage calculation results.
 - ii. Post-developed conditions:
 - Pervious area.
 - Impervious area.
 - Drainage calculation results.
- h. Drainage calculations:
 - i. Pre-developed conditions:
 - Pervious area.
 - Pervious area land use.
 - Impervious area.
 - Impervious area land use.
 - Drainage calculation results.
 - ii. Post-developed conditions:
 - Pervious area.
 - Pervious area land use.
 - Impervious area.
 - Impervious area land use.
 - Drainage calculation results.
- i. Quantity control:
 - i. Release rate(s) as identified in 2014 SWMMWW, Volume I, Chapter 2, Minimum Requirement #7.
 - ii. Storage volume required.
 - iii. Storage volume provided.

Part 5: City Approved Water Supply and Hydrant

City approved water supply and hydrants

- i. Water System improvements shall be consistent with the City of Redmond Water Plan
- ii. Residential areas shall be master planned to provide a minimum of 1500 gpm
- iii. Most commercial areas shall be master planned to provide a minimum 3500 gpm
- iv. Hydrants must be capable of providing sufficient fire flow to meet the required flow of the project as calculated by the Fire Marshal.
- v. Any one hydrant shall be capable of providing a minimum of 1500 gpm and any two or three hydrants (depending upon demand) flowing simultaneously shall be capable of providing the demand flow.
- vi. A fire flow report may be required. This report may consist of:
 - Results of a functional flow test performed by a fire protection consultant.
 - The test shall record pitot gauge readings for all ports opened, flow calculations for each port flowed, static and residual pressure readings, location of the test (identify specific hydrants used and what each was used for), calculated flow at 20 psi residual, and a flow graph.
 - A hydraulically modeled fire flow estimate from the City of Redmond Water Utility. This flow estimate shall be the gallons per minute available at 20 psi residual for the maximum instantaneous peak.
 - The water pressure zone(s) shall be identified. Any peculiarities of the water supply system at the location should also be noted.
- vii. Hydrants shall be located in relation to the building or area they serve.
- viii. The Fire Marshal may consider existing hydrants within 300 feet of a single family residential project as providing some portion of coverage.
- ix. Maximum hydrant spacing is 300 feet on center for commercial, multi-family, or single family residential 6,000 square feet or more.
- x. Maximum hydrant spacing is 600 feet on center for surface parking lots, and single-family residential 6000 square feet or more.
- xi. Where structures on a dead end street access are over 150 feet from a hydrant, an additional hydrant may be required within 150 feet and placed in relation to the overall development and existing hydrant layout.
- xii. Proposed hydrant and FDC locations and existing hydrant locations shall be shown. Hydrant locations must be coordinated with and approved by both the water supplier and the Redmond Fire Department.
- xiii. Hydrants shall be no closer than 12' to a carport, garage, building or dumpster. Planter islands or peninsulas for hydrants require a minimum diameter of 8 feet. Four feet is to be maintained between face of curbs and fire protection equipment and if applicable between hydrants, FDCs and PIVs. If closer to the curb, approved protective posts are required.
- xiv. Hydrants, FDCs and PIVs should be a minimum of 40 feet from other structures and on the opposite side of the access from the building they serve, unless approved otherwise.
- xv. FDCs and PIVs shall be located adjacent to a hydrant, unless approved otherwise.
- xvi. Bollards are required around natural gas meters if the driving surface is within 20 feet. Placement shall be per Redmond Fire Department Standards.

Part 6: Project Summary Table & Net Buildable Area Calculation Table

INCLUDE THESE TABLES ON COVERSHEET/ SITE PLAN

Project Summary Table	___ Zone	___ Zone	___ Zone	___ Zone
Gross Site Area in square feet				
Net Buildable Area (See Net Buildable Area Calculation Table, Row G)				
Minimum density (See Net Buildable Area Calculation Table, Row H)				
Maximum density				
Average Lot Size				
Largest Proposed Lot size				
Smallest Proposed Lot size				
Area of public right-of-way, private streets, and access corridors				
Total Open Space, in square feet				
Total active recreation open space, if applicable				

Net Buildable Area Calculation Table		___ Zone	___ Zone	___ Zone	___ Zone
A	Gross Site Area in square feet				
B	Sensitive area(s) and buffer, in square feet				
C	Surface Water areas dedicated or held in common				
D	Area of public right-of-way, private streets, and access corridors				
E	Parks and opens space dedicated or held in common				
F	Above ground public facilities				
G	Total for each zone (A - {B+C+D+E+F})= Net Buildable Area				
H	Minimum Density (G x Minimum Density Percentage) = Minimum Density				