



Residential Fire Access & Water Supply Checklist

The Department of Local Services, Permitting Division requires most permit applications for residential construction to be evaluated to ensure minimum Fire Access and Water Supply standards are being met. Minimum standards are reviewed for compliance with King County Code (KCC) Title 17 §17.04.370 through §17.04.410 (fire apparatus access) and §17.04.520 through §17.04.572 (automatic sprinkler systems). **This checklist only applies to single-family lots.**

Complete **SECTIONS 1-4 and 5** (if needed) to determine if the project requires the installation of an automatic fire sprinkler system.

SECTION 1 – Project Info			
Project Name:			
Project Address:			
Parcel Number:		Zoning Designation:	
Lot Size (SF):		Total SF of Structure:	
Is the proposed work for an agricultural building?			
Are there portions of the structure which will have heating included?			
Is there an existing or proposed limited-access gate across the fire apparatus access road?			
Does the residence currently have an approved fire sprinkler system?			
Has the single-family residence had a 500 square foot (gross calculation) or larger addition and/or remodel for habitable space permitted after the year 2000? <i>Do not include the square footage of this submittal.</i>			
Will the remodel (alteration, addition, or repair) increase the county assessed value by more than 50% within a five-year time period due to the added value of the alteration or repairs?			

Residential Fire Access & Water Supply Checklist *(continued)*

SECTION 2 – Off-Site Fire Access Questions	
Are all roads between the closest fire station and the parcel at least 20 feet wide? This includes private roads and driveways needed to meet the travel distance outlined within Appendix A, see page 6 of this document.	
Is overhead clearance on all roads between the closest fire station and the parcel at least 13 feet – 6 inches above the roadway?	
Are all portions of the roads between the closest fire station and the parcel at grades of 15% or less?	
Are all portions of the roads and driveways from the closest fire station capable of supporting 75,000 pounds in all weather conditions?	

If an answer to any of the SECTION 2 is “No”, then an automatic fire sprinkler system for the residence will be required.

SECTION 3 – On-Site Fire Access Questions	
Does the driveway from the road to the structure extend more than 150 feet?	
<p>If you answered yes to the above question, is a fire apparatus access turnaround provided?</p> <p><i>Note: A dead-end fire apparatus access roadway may not be longer than 150 feet in length unless it has an approved means of turning the fire department equipment around. An approved turnaround must either be a cul-de-sac at least 80 feet in diameter with minimum turning radii of 20 feet inside and 40 feet outside, or an approved “hammerhead” turnaround. Parking is <u>not allowed</u> within fire apparatus access lanes and approved turnarounds. See page 7 of this document for hammerhead specifications.</i></p>	
<p>Are all parts of the exterior walls of the structure (at grade) within 150 feet to approved fire apparatus access roads?</p> <p><i>Note: The distance must be measured 30 feet from structure, along a direct walking path around the building, considering obstructions such as parking areas, retaining walls, patios, vegetation, and other obstructions. See Appendix A.</i></p>	
Section 3 continued on next page	

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Section 3 continued

The following questions are for areas of the driveway **outside** of parking areas:

All portions have a width at least 20 feet wide?	
All portions have at least 13 feet – 6 inches overhead clearance?	
All portions of drive at a grade of 15% or less?	
Surface of driveway capable of withholding a 75,000 pounds in all weather conditions?	

If an answer to any of the SECTION 3 is “No”, then an automatic fire sprinkler system for the residence may be required unless the minimum fire access criteria is revised and resubmitted.

For example, a driveway may need to be widened to 20 feet to meet the fire apparatus access roadway requirements.

Note: Any changes to a site plan, such as widening a driveway, may trigger additional reviews for drainage, clearing and grading, and/or critical areas.

SECTION 4 - Water Supply Exemptions

In RURAL zones, is the residence on a lot larger than 35,000 sq. ft. in area AND have a residential use as the primary land use?

If the answer to any of the SECTION 4 questions above is “Yes”, you do not need to complete the SECTION 5 below. Automatic fire sprinklers will only be required if you cannot provide adequate access in SECTIONS 2 AND 3.

To determine if you are in an urban or rural zone, use [iMap](#) to obtain zoning classification on the property. Below is snippet of the zoning classifications from [KCC Title 21 §21A.04.010](#):

ZONING CLASSIFICATIONS	MAP SYMBOL
Agricultural	A (10 -or 35 acre minimum lot size)
Forest	F
Mineral	M
Rural Area	RA (2.5-acre, 5-acre, 10-acre or 20-acre minimum lot size)
Urban Reserve	UR
Urban Residential	R (base density in dwellings per acre)
Neighborhood Business	NB

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SECTION 5 - Water Supply Questions	
Is there a fire hydrant within 600 feet (vehicular travel distance) of the residence? <i>Note: Vehicular travel distance is measured from the hydrant to the property fire access point¹.</i>	
A Water Availability Certificate is required to confirm minimum fire flow, at the hydrant. Availability is based on IFC Appendix B, Table B1051(1) and B105.1(2).	
Based on the square footage of the structure or fire area, does the water availability certificate show a minimum of: <i>Example: If your structure is 3,745 square feet, a minimum of 1,750 gallons per minute is required at a minimum duration of 2 hours or more.</i>	
0 – 3,600 square feet	Minimum 1,000 gpm for a duration of minimum 1 hour
3,601 – 4,800 square feet	Minimum 1,750 gpm for a duration of minimum 2 hours
4,801 – 6,200 square feet	Minimum 2,000 gpm for a duration of minimum 2 hours
6,201 – 7,770 square feet	Minimum 2,250 gpm for a duration of minimum 2 hours
7,701 – 9,400 square feet	Minimum 2,500 gpm for a duration of minimum 2 hours
9,401 – 11,300 square feet	Minimum 2,750 gpm for a duration of minimum 2 hours

If the answer to either of the SECTION 5 questions is “No”, then the installation of an automatic fire sprinkler system will be required.

Site Plan

All information provided on this form must be reflected on the submitted site plan. If driveways, easements, or other access outside of the county road is being improved to remove the fire sprinkler requirement, then this information must be accounted for within Drainage and Critical Areas plans and reviews.

Any changes to a site plan, such as widening a driveway, may trigger additional reviews for drainage, clearing and grading, and/or critical areas.

Reviews

Adding a fire sprinkler system to your project will not delay the review and/or issuance of your building permit. Fire sprinkler permits are separate permits and can be listed as a deferred submittal on your project.

¹ Fire access point is the closest location to the structure designated for access by fire equipment.

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Questions?

If you have further questions regarding your project, please submit a site plan along with your questions to askfiremarshal@kingcounty.gov.

Additional Resources

King County [Department of Local Services, Permitting Division](#)

[Fire Permit: Sprinkler, Residential Information](#)

[Residential Site Plan Requirements](#)

[Water Availability Certificate](#)

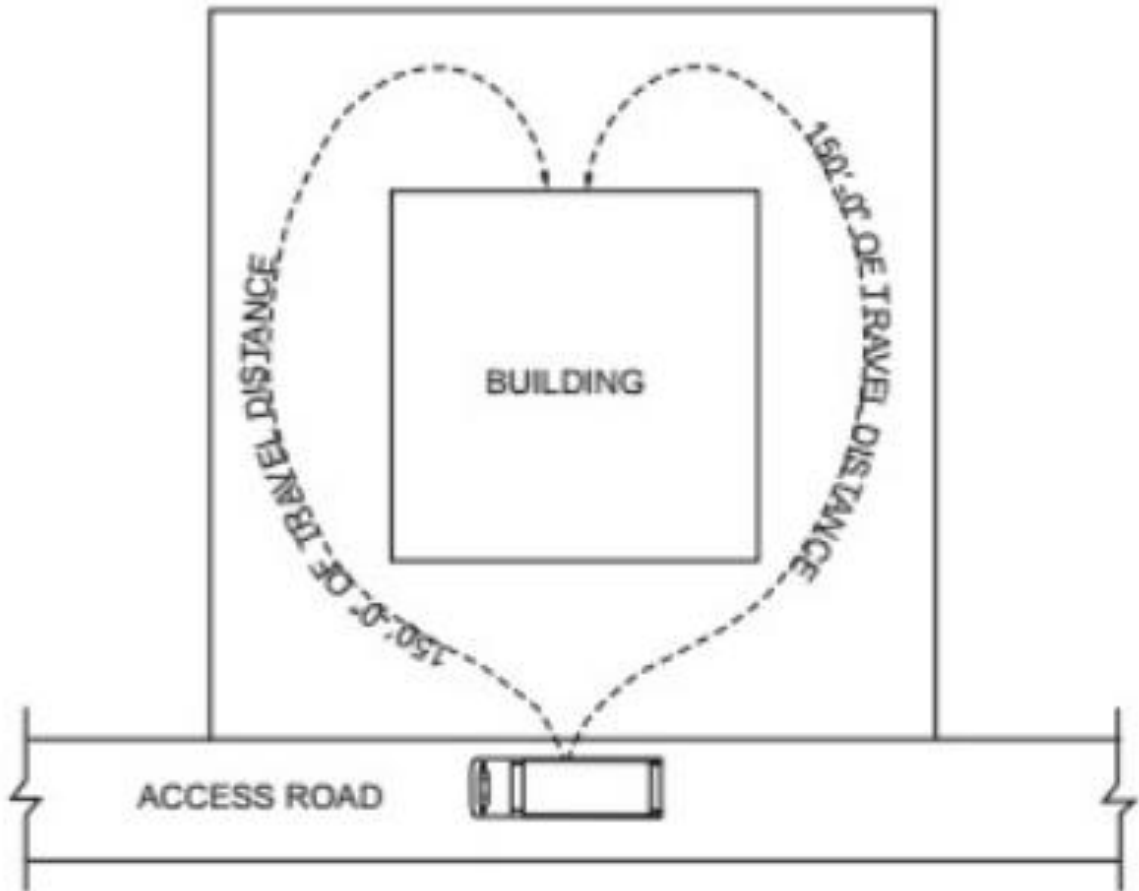
[King County iMap](#) (for zoning information) and [Property Research Video](#)

[Permit Fees](#)

Residential Fire Access & Water Supply Checklist *(continued)*

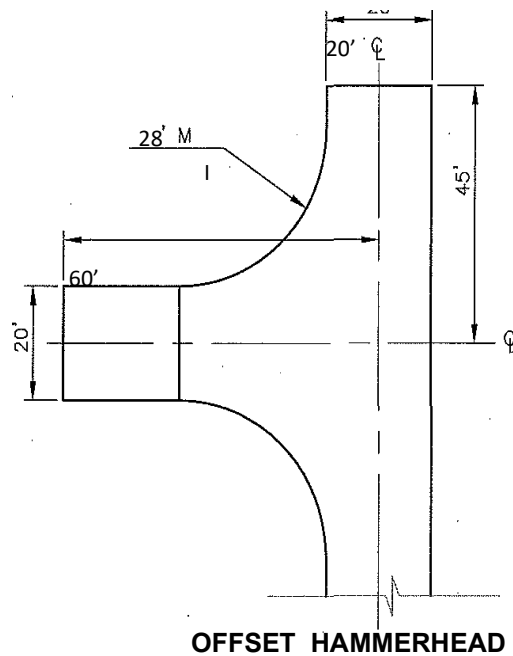
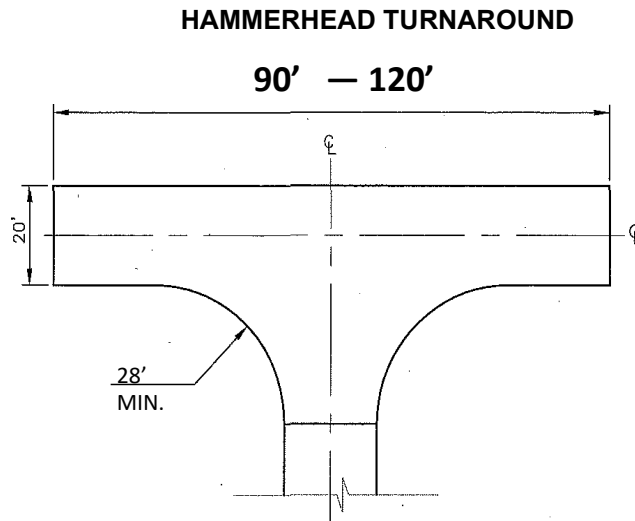
Appendix A – Access Requirements

To measure the access requirements, start at the closest road that is at least 20 feet wide. Measure along the outside of the footprint of the residence, excluding obstructions such as air conditioning units, retaining walls, fences, patios, or other obstructions that may hinder access around the structure for a firefighter in the middle of the night during an incident.



Residential Fire Access & Water Supply Checklist (continued)

KC Hammerhead Turnaround Standard Detail Fig 2-012



NOTES:

1. HAMMERHEAD WIDTH RANGES BETWEEN 90' TO 120', DEPENDENT UPON ROADWAY LENGTH. SIDEWALKS AND UTILITIES MAY BE LOCATED WITHIN PUBLIC EASEMENTS.
2. ALTERNATIVE DESIGNS BY APPROVAL OF THE COUNTY ROAD ENGINEER AND FIRE MARSHAL.
3. TURNAROUND FACILITIES CANNOT BE LOCATED ON DRIVEWAYS.
4. ALL STREET ENDS SHALL BE SIGNED PER THE MUTCD.