



OPERATING POLICY 6 FIRE DEPARTMENT ACCESS



Kirkland Fire/Building Department • 123 Fifth Avenue, Kirkland, WA 98033 • (425) 587-3650

A. SCOPE

Washington State Amendment to Section 503 of the International Fire Code, states "Fire apparatus access roads shall be provided and maintained in accordance with locally adopted street, road, and access standards."

The purpose of this policy, in conjunction with the Kirkland Municipal Code, is to provide general and certain specific information regarding Kirkland's requirements for Fire Department access to and around buildings.

B. FIRE DEPARTMENT ACCESS ROADS (See Tip Sheet #1)

A fire department access road is any paved surface of required width, designed and maintained to support imposed loads of fire apparatus for the specific purpose of providing access to a building. Fire department access roads:

1. Shall be provided for every building when any portion of an exterior wall of the first story is located more than 150 feet from fire apparatus access.
2. Shall have an unobstructed vertical clearance of not less than 13 feet, 6 inches.
3. Shall have a gradient not exceeding 10 percent.
4. Shall be designed to support a total vehicle weight of 68,000 pounds and a minimum single axle weight of 27,000 pounds.
5. Paved surfaces may be concrete (impervious or pervious), asphalt, or other approved surfaces. If grass concrete is proposed, the material must be approved for fire access and the grade of the area must be flat (less than 2% grade) and only used for fire truck access.

C. GATES INSTALLED ON ACCESS ROADS

In most cases, primary access roads may not be obstructed by gates. However, the installation of security gates may be approved when, in the opinion of the Fire Marshal, firefighting or medical and/or rescue operations would not be impaired.

1. General Requirements:

- a. A building permit is required from Kirkland Building Department prior to installing automated gates. The permit will be routed to Fire for approval and conditions. A final inspection by a Fire Department representative is required.
- b. The use of directional-limiting devices (tire spikes) is prohibited.
- c. Gates shall have an approved means of emergency operation. Examples include the following:
 - 1) The gate fails to the "open" position when the power is off. It shall remain open until power is restored.
 - 2) Battery or generator power backup providing normal use of the gate.
 - 3) Approved manual operation of the gate.

2. Acceptable means of gate access:

- a. Automatic switch controllers such as [Click2Enter](#) or another approved access system. Gates equipped with Click2Enter shall be identified by an approved sign
- b. When there are only one or two homes behind a security gate, a Knox switch or keypad may be used.
- c. A Knox padlock may be approved on a case by case basis, such as when the gate is for secondary access or service vehicle/fire department access only.
- d. Where a fence is provided on each side of a gate for a commercial property, a man door shall be provided at an approved location with a Knox key for access to the man door.
- e. The unobstructed width of gates shall be as follows:
 - 1) For commercial or multifamily applications, the gate shall open a full 20 feet.

Exception: For split gates on commercial or multifamily projects where there is a post in between the exit and entrance to a facility, the minimum unobstructed width of each lane shall be 12 feet.

- 2) For short plats or subdivisions, the gate shall open the width as dictated by the required width of the access road (i.e. 16 or 20 feet, see D.1.b)
- 3) For gates accessing one single family home via a driveway, the gate width shall be a full 10 feet.

D. GENERAL REQUIREMENTS BASED ON PROJECT TYPE

1. RESIDENTIAL SHORT PLATS (See Tip Sheet #2)

- a. For the purpose of determining if an access road is required, measure the distance from the public right-of-way to the side and/or rear setback lines of the furthest building lot. The distance shall be measured around the perimeter of the lot. If the distance exceeds 150 feet, an access road shall be required. An established building envelope may also be used to determine access requirements, but this determination is on a case-by-case basis.
- b. The width of such access roads shall be not less than 20 feet of paved surface.

Exception: If accessing not more than two lots on the access road, the width may be reduced to 16 feet of paved surface.

Note: The requirement for adequate access width also applies to single family homes which are being built on existing lots. (See B.1 and D.1.a)

- c. The access road shall extend the full width from the public right-of-way to the point at which the distance to the rear setback line of the furthest lot is within 150 feet. At that point, the width may be reduced to the width allowed for non-fire access (i.e. a driveway).
- d. Access to Lots on Alleys
 - 1) If the main access to a house is via an alley, pedestrian pathways shall be provided from the house to the right of way off which the house is addressed.
 - 2) If the house is sprinklered, the pedestrian path width shall be 42".
 - 3) If the house is not sprinklered, the pedestrian path width shall be 6 feet. The extra width is required as the main fire department approach during a fire incident would be via this pathway.

- 4) The path shall be of an enduring, smooth material such as pervious concrete. A paver system of poured concrete pavers with a 6-inch gap between may also be used. Gravel is not allowed.
 - 5) There shall be an address sign on the right of way indicating that the pathway leads to the house.
2. BUILDINGS OTHER THAN SINGLE FAMILY (See Tip Sheet #3)

For commercial or multifamily development, the requirements of Section 503.1 and 503.2 of the International Fire Code shall apply.

E. TURNAROUNDS (See Tip Sheet #4)

All fire department access roads in excess of 150 feet shall be provided with an approved turnaround. This requirement applies to both residential short plats and commercial developments.

Exception (Residential Short Plats only): If the length of the access road does not exceed 200 feet, the turnaround may be eliminated if the access road width is 20 feet of paved surface

F. ACCESS TO BUILDINGS WITH ENCLOSED INTERIOR COURTYARDS

1. New buildings with enclosed interior courtyards shall have a straight/direct access corridor and/or stairway from the exterior to the courtyard at a location acceptable to the fire code official.
2. If a stairway is used, it shall comply with International Fire Code Section 1011. A corridor shall comply with International Fire Code Section 1020.
3. The access shall have a minimum width of 4 feet and be large enough to carry a 35-foot long sectional ladder (minimum folded length 20 feet) directly from the exterior to the courtyard without obstructions. The access door shall be marked at the street as "Direct Access to Courtyard".

G. REQUESTS FOR MODIFICATION

1. These requirements may be modified, provided that firefighting or medical and/or rescue operations would not be impaired.
2. Where fire apparatus roads cannot be installed because of location on property, topography, waters, nonnegotiable grades or other similar conditions, alternative

means of fire protection shall be provided. Alternative means may include installation of stairs that extend to the roof, fire sprinkler systems, fire alarm systems, standpipes, ready access to fire service elevators, etc. Sometimes a combination of these alternate means may be required.

3. For single family homes on access roads which do not meet fire department standards, fire sprinklers are the accepted alternate means of protection per Kirkland Fire Department Operating Policy 2.
4. In all cases, the Fire Marshal is the final authority regarding the adequacy of proposed modifications and/or alternative means.

*THIS POLICY APPROVED
BY KIRKLAND FIRE MARSHAL
EFFECTIVE 12/1/2019*



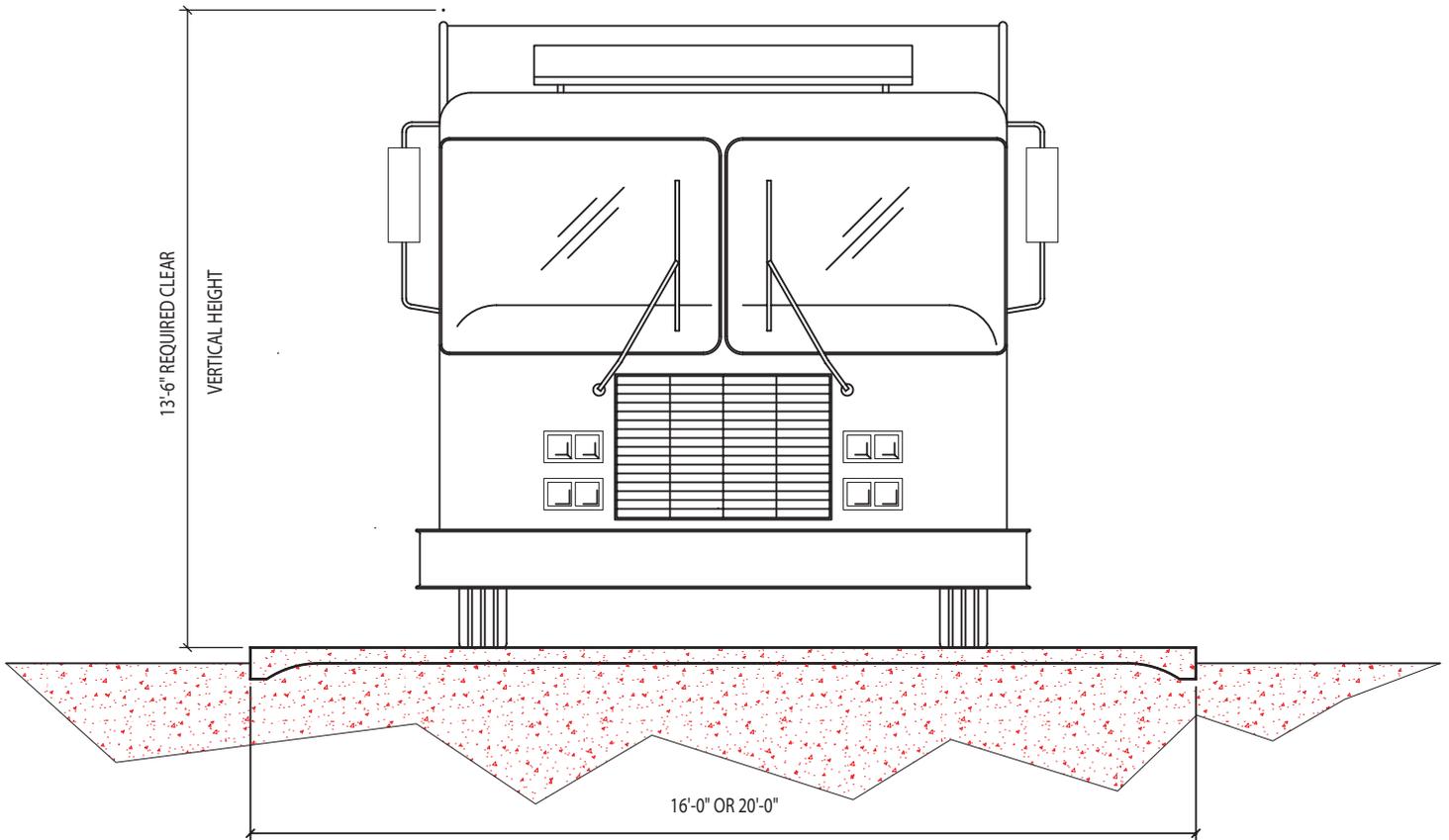
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FIRE DEPARTMENT ACCESS ROADS

TIP SHEET

1

"BLUEPRINTS FOR SUCCESS"



16'-0" OR 20'-0" (SEE TIPSHEETS 2 & 3 FOR WIDTH REQUIREMENTS) WIDE ASPHALT, CONCRETE, OR OTHER FIRE DEPARTMENT APPROVED DRIVING SURFACE CAPABLE OF SUPPORTING A MAXIMUM VEHICLE WEIGHT OF 68,000 POUNDS & A MAXIMUM SINGLE AXLE WEIGHT OF 27,000 POUNDS

FIRE DEPARTMENT ACCESS ROAD REQUIREMENTS



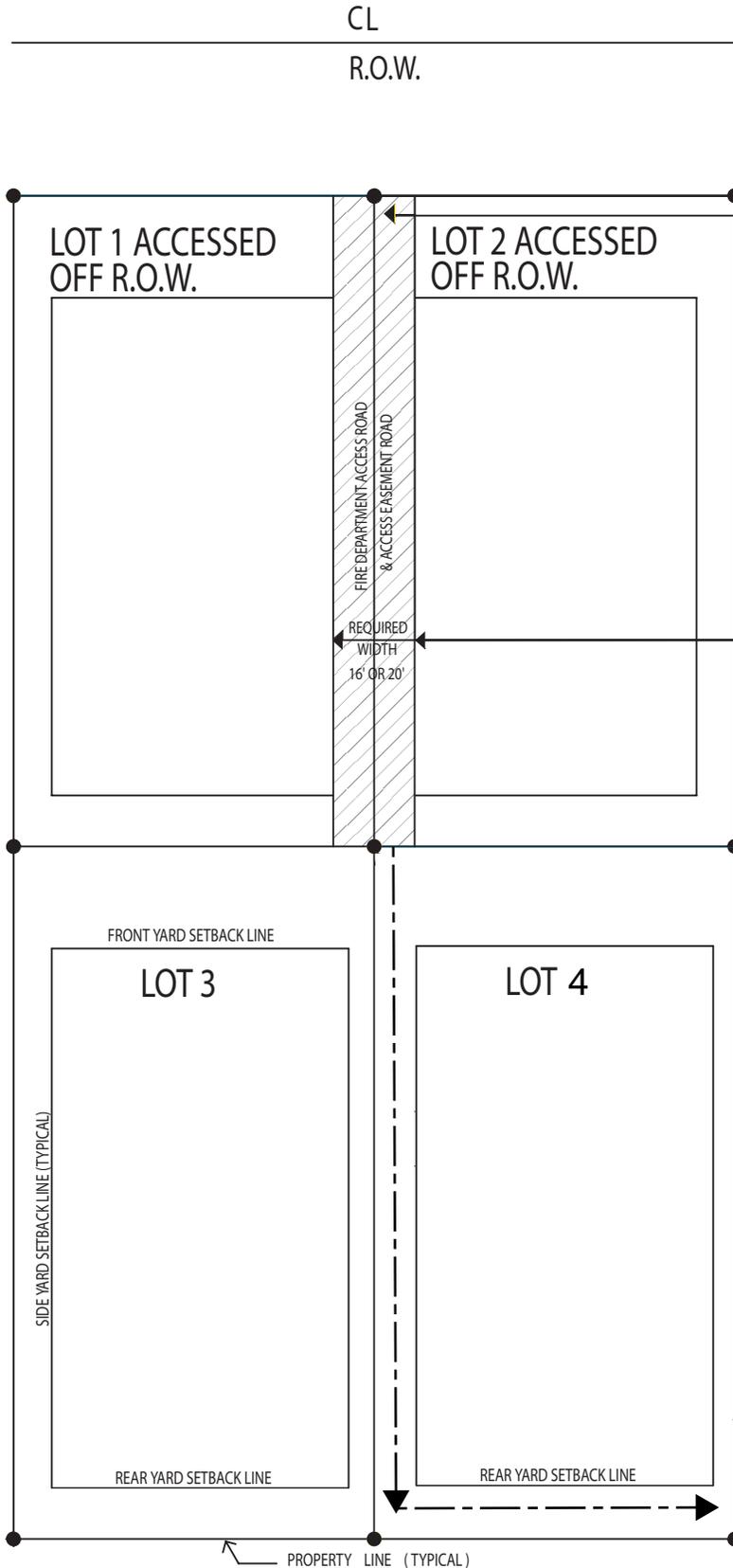
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FIRE DEPARTMENT ACCESS ROADS FOR RESIDENTIAL SHORT PLATS

"BLUEPRINTS FOR SUCCESS"

TIP SHEET

2



ACCESS ROAD REQUIRED

A FIRE DEPARTMENT ACCESS ROAD SHALL BE REQUIRED WITHIN ANY SHORT PLAT WHEN THE FURTHEST SETBACK LINE ON A PROPERTY BEING SERVED BY AN ACCESS EASEMENT IS GREATER THAN 150' FROM THE RIGHT OF WAY (R.O.W.).



REQUIRED LOAD CAPACITY OF ALL ACCESS ROADS

THE PAVEMENT SECTION OF ALL FIRE DEPARTMENT ACCESS ROADS MUST BE DESIGNED TO SUPPORT A TOTAL VEHICLE WEIGHT OF 68,000 POUNDS, AND A MINIMUM SINGLE AXLE WEIGHT OF 27,000 POUNDS. (SEE TIPSHEET 1 FOR ADDITIONAL ROADWAY REQUIREMENTS.)



REQUIRED WIDTH OF ACCESS ROAD

- A. FIRE ACCESS ROADS LESS THAN 150' IN LENGTH:

IF THE TOTAL LENGTH OF THE FIRE DEPARTMENT ACCESS ROAD, FROM THE RIGHT OF WAY (R.O.W.) TO A POINT WITHIN 150' OF THE FURTHEST SETBACK LINE ON THE PROPERTY TO BE SERVED, IS LESS THAN 150 FEET IN LENGTH THE ACCESS ROAD NEEDS TO BE A MINIMUM OF 16' IN WIDTH, AND NO FIRE DEPARTMENT VEHICLE TURN-AROUND IS REQUIRED.
- B. FIRE ACCESS ROADS LESS THAN 200 BUT GREATER THAN 150 FEET IN LENGTH:

IF THE TOTAL LENGTH OF THE FIRE DEPARTMENT ACCESS ROAD, FROM THE RIGHT OF WAY (R.O.W.) TO A POINT WITHIN 150' OF THE FURTHEST SETBACK LINE ON THE PROPERTY TO BE SERVED, IS LESS THAN 200 FEET BUT GREATER THAN 150 FEET IN LENGTH THE ACCESS ROAD NEEDS TO BE A MINIMUM OF 16' IN WIDTH WITH AN APPROPRIATE FIRE VEHICLE TURN - AROUND. (SEE TIPSHEET 4 FOR CONFIGURATION AND DIMENSIONS OF REQUIRED TURN-AROUND.)

- OR -

YOU MAY PROVIDE A FIRE DEPARTMENT ACCESS ROAD OF 20' FEET IN WIDTH WITHOUT A FIRE VEHICLE TURN-AROUND.
- C. FIRE ACCESS ROADS GREATER THAN 200 FEET IN LENGTH:

IF THE TOTAL LENGTH OF THE FIRE DEPARTMENT ACCESS ROAD, FROM THE RIGHT OF WAY (R.O.W.) TO A POINT WITHIN 150' OF THE FURTHEST SETBACK LINE ON THE PROPERTY TO BE SERVED, IS GREATER THAN 200 FEET IN LENGTH THE ACCESS ROAD NEEDS TO BE A MINIMUM OF 20' IN WIDTH WITH AN APPROPRIATE FIRE VEHICLE TURN-AROUND. (SEE TIPSHEET 4 FOR CONFIGURATION AND DIMENSIONS OF REQUIRED TURN-AROUND.)



REQUIRED LENGTH OF ACCESS ROAD

THE FIRE DEPARTMENT ACCESS ROAD SHALL EXTEND FROM THE RIGHT OF WAY (R.O.W.) TO A POINT WITHIN 150' OF THE FURTHEST SETBACK LINE ON THE PROPERTY TO BE SERVED. THE MEASUREMENT ON THE LOT SHALL BE MADE AROUND THE PERIMETER OF THE PROPERTY.



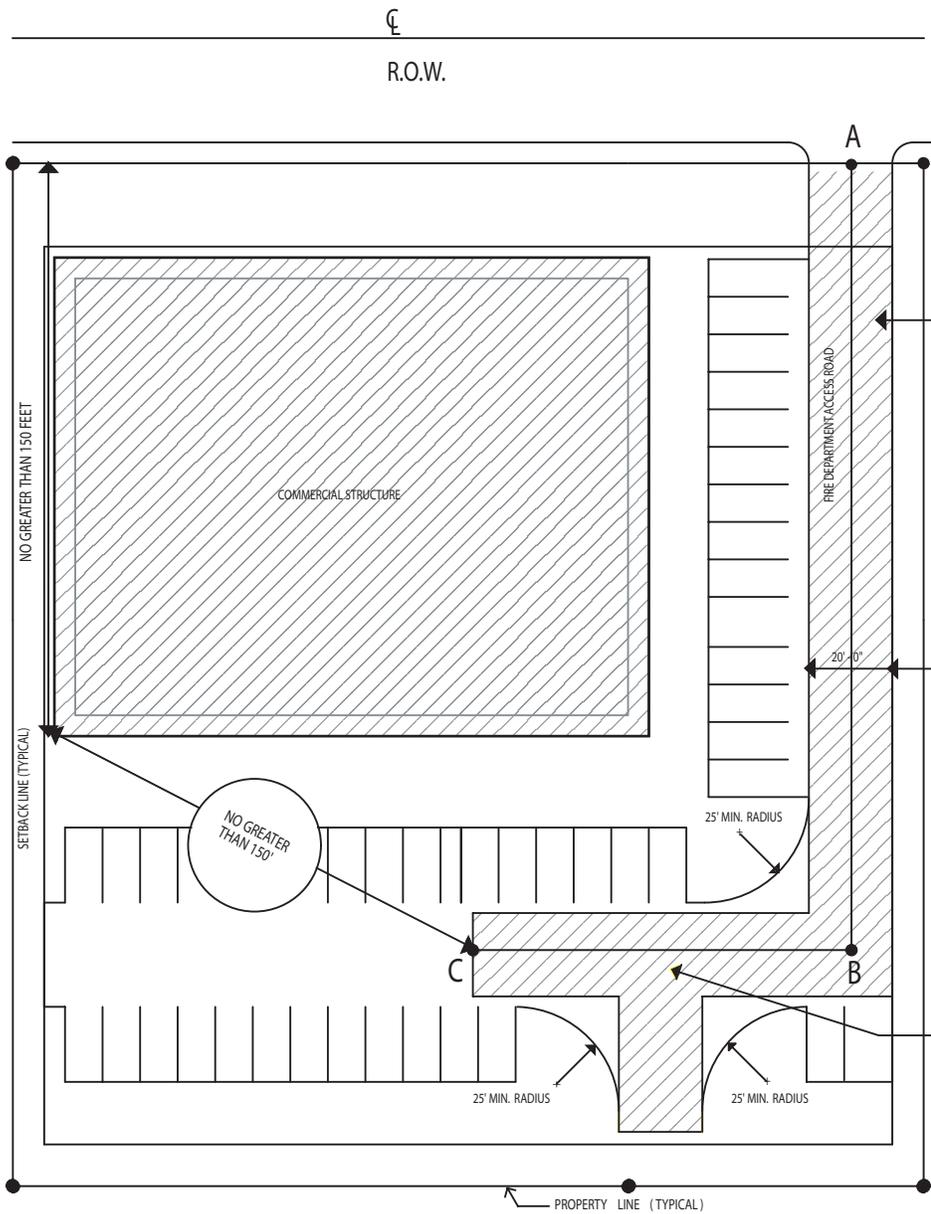
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FIRE DEPARTMENT ACCESS ROADS FOR COMMERCIAL AND MULTI-FAMILY DEVELOPMENTS

"BLUEPRINTS FOR SUCCESS"

TIP SHEET

3



ACCESS ROAD REQUIRED

A FIRE DEPARTMENT ACCESS ROAD SHALL BE REQUIRED WITHIN ANY COMMERCIAL DEVELOPMENT WHEN THE FURTHEST POINT OF THE BUILDING IS GREATER THAN 150' FROM THE RIGHT OF WAY (R.O.W.).

REQUIRED LOAD CAPACITY OF ALL ACCESS ROADS

THE PAVEMENT SECTION OF ALL FIRE DEPARTMENT ACCESS ROADS MUST BE DESIGNED TO SUPPORT A TOTAL VEHICLE WEIGHT OF 68,000 POUNDS, AND A MINIMUM SINGLE AXLE WEIGHT OF 27,000 POUNDS. (SEE TIPSHEET 1 FOR ADDITIONAL ROADWAY REQUIREMENTS.)

REQUIRED WIDTH OF ACCESS ROAD

THE REQUIRED CLEAR WIDTH OF ALL FIRE DEPARTMENT ACCESS ROADS SHALL BE A MINIMUM OF 20' .SEE TIPSHEET 1 FOR MINIMUM HEIGHT REQUIREMENTS.

REQUIRED LENGTH OF ACCESS ROAD

THE FIRE DEPARTMENT ACCESS ROAD SHALL EXTEND FROM THE RIGHT OF WAY (R.O.W) TO A POINT WITHIN 150' OF THE FURTHEST POINT OF THE BUILDING (AS THE TRUCK DRIVES, NOT AS THE CROW FLIES).

WHEN IS A FIRE VEHICLE TURN-AROUND REQUIRED

A FIRE VEHICLE TURN-AROUND SHALL BE REQUIRED WHEN THE TOTAL LENGTH OF THE ACCESS ROAD FROM THE RIGHT OF WAY TO A POINT WITHIN 150 FEET OF THE FURTHEST POINT OF A BUILDING (ROAD SEGMENT A/B + B/C) EXCEEDS 150 FEET. (SEE TIPSHEET 4 FOR REQUIRED CONFIGURATION AND DIMENSIONS OF TURN-AROUND.)



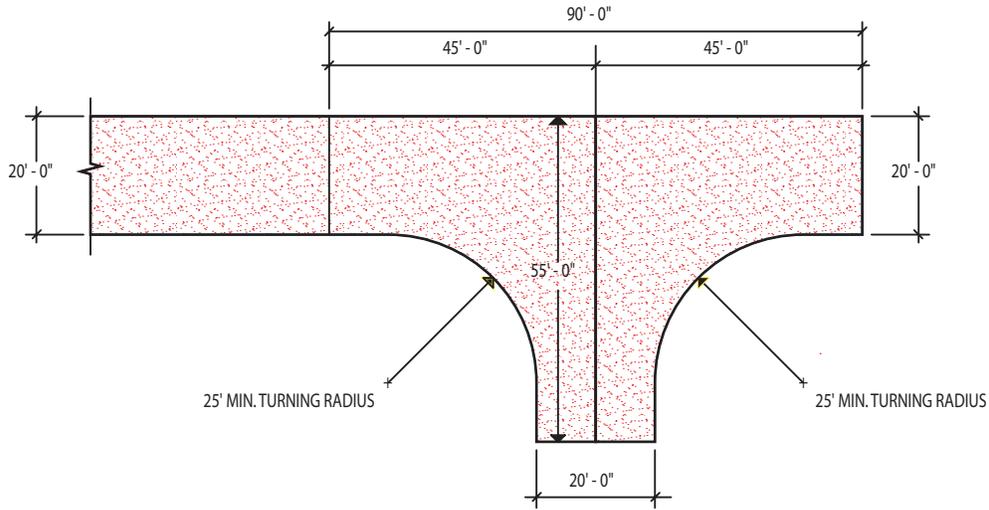
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FIRE DEPARTMENT ACCESS ROADS

TIP SHEET

4

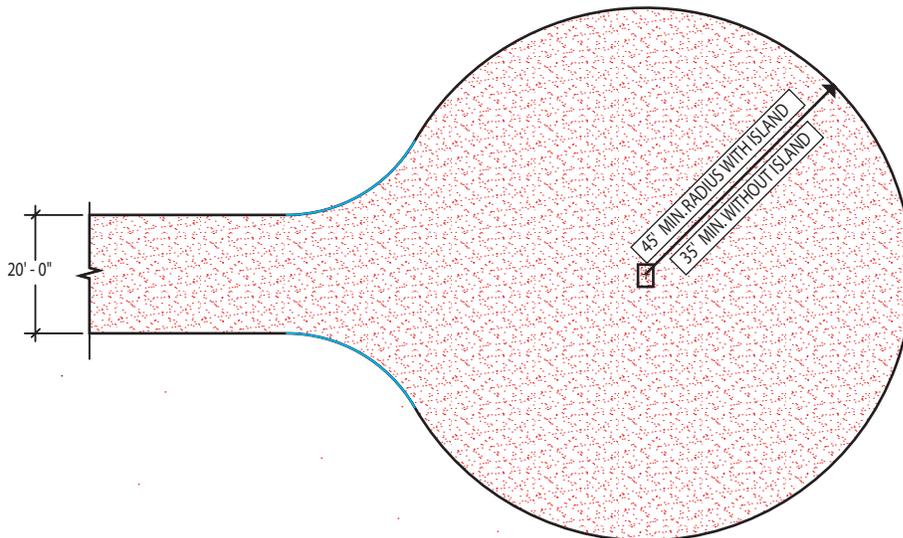
"BLUEPRINTS FOR SUCCESS"



HAMMERHEAD TURN-AROUND

- OR -

CUL - DE - SAC



NOTE: DIMENSIONS SHOWN ARE THE MINIMUMS REQUIRED TO MEET FIRE DEPARTMENT ACCESS REQUIREMENTS ONLY, AND MAY NOT CORRELATE WITH THE MINIMUM REQUIREMENTS AND STANDARDS OF THE PUBLIC WORKS DEPARTMENT.