

BLAINE COUNTY BOARD OF COUNTY COMMISSIONERS
Hearing Date: Oct 20th, 2020

A discussion of Blaine County, Fire Protection Ordinance requirements for fire apparatus access roadways and driveways. And how these requirements pertain to replacement and upgrades to existing driveways and bridges: Ordinance No. 2019-08, 2015 International Fire Code

STAFF REPORT

By: Jeff Giese
Date: Oct. 20th, 2020
Time: 1:30 p.m.

Blaine County Code, 7-7-5: MODIFICATION TO THE INTERNATIONAL FIRE CODE:

G. Fire Apparatus Access Roads and Driveway.

Fire Apparatus Access Roads and Driveways: Approved fire apparatus access roads or driveways shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within Blaine County Fire Districts and areas of unincorporated Blaine County not within an established Fire District. Approved fire apparatus access roads and driveways shall comply with the requirements of Section 503 and Appendix D of the 2015 International Fire Code.

Private Residential Bridges:

Description:

1. A bridge structure with spans of 60 inches and greater shall be classified as a bridge.
2. A culvert structure with a span less than 60 inches shall be classified as a culvert.

Private Bridge Requirements:

1. Bridges and elevated surfaces to new construction shall be installed prior to any combustible construction on the site. The bridge shall be a minimum of twenty (20) feet in width and capable of supporting an imposed load of at least 75,000 pounds.
2. A private bridge or an elevated surface used as part of an fire apparatus access road, shall be constructed and maintained in accordance with the State of Idaho and the American Association of State Highway and Transportation Officials Standards (AASHTO) "Standard Specification for highway Bridges HB-17".

3. A building permit shall be obtained for construction of a bridge. Two sets of plans shall be submitted for approval by the fire code official.
4. The design engineer shall give in writing final approval of the bridge to the fire code official after construction is complete. The design engineer shall prepare a special inspection and structural observation program for the party or parties that use the bridge for access to their property.
5. Maintenance of the bridge shall be the responsibility of the party or parties that use the bridge for access to their property.
6. Blaine County recommends that every bridge be inspected or re-inspected by a qualified engineer once every five years.
7. Vehicle load limits shall be posted at both entrances to bridges used as fire access roads. The signs shall have a minimum dimension of 12 inches in width by 18 inches high and have red letters on a white reflective background.
8. Minimum overhead height requirements between the bridge deck surface and any overhead structure of the bridge shall be thirteen (13) feet six (6) inches.

Exceptions:

1. Existing bridges that need to be replaced due to age or safety reasons shall meet the following requirements.
 - a. Bridge widths may be reduced to 16 feet and capable of supporting an imposed load of at least 75,000 pounds provided that no building application for additional square footage is be added to the structure accessed by the bridge.
 - b. If a future request for adding additional square footage to the structure being accessed by a 16-foot bridge, the bridge shall be brought up current standards of 20 feet in width prior to any combustible construction on the site.
 - c. All bridges accessing more than two (2) residences shall meet the requirement of twenty (20) feet in width.
2. Agriculture buildings may have an access bridge of 12 feet in width, provided there is no living space in these structures.

Culvert Structures:

1. Culvert construction shall meet all applicable Idaho Standards for Public Works Construction (ISPWC).
2. Culverts may be treated the same as bridges and follow the width and load requirements set forth in the bridge code section.

2015 International Fire Code, SECTION 503, FIRE APPARATUS ACCESS ROADS

503.1 Where required. Fire apparatus access roads shall be provided and maintained in accordance with Sections 503.1.1 through 503.1.3.

503.1.1 Buildings and facilities. **Approved** fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet of all portions of the facility and all portions of the **exterior walls** of the first story of the building as measured by an **approved** route around the exterior of the building or facility.

Exceptions:

1. The **fire code official** is authorized to increase the dimension of 150 feet where any of the following conditions occur:

1.1. The building is equipped throughout with an **approved automatic sprinkler system** installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.

1.2. Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an **approved** alternative means of fire protection is provided.

1.3. There are not more than two Group R-3 or Group U occupancies.

2. Where approved by the **fire code official**, fire apparatus access roads shall be permitted to be exempted or modified for solar photovoltaic power generation facilities.

503.2 Specifications. Fire apparatus access roads shall be installed and arranged in accordance with Sections 503.2.1 through 503.2.8.

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet exclusive of shoulders, except for **approved** security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13 feet 6 inches.

503.2.2 Authority. The **fire code official** shall have the authority to require or permit modifications to the required access widths where they are inadequate for fire or rescue operations or where necessary to meet the public safety objectives of the jurisdiction.

503.2.6 Bridges and elevated surfaces. Where a bridge or an elevated surface is part of a fire apparatus access road, the bridge shall be constructed and maintained in accordance with AASHTO HB-17. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. Vehicle load limits shall be posted at both entrances to bridges where required by the **fire code official**. Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces that are not designed for such use, **approved** barriers, **approved** signs or both shall be installed and maintained where required by the **fire code official**.

APPENDIX D

FIRE APPARATUS ACCESS ROADS

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

SECTION D101

GENERAL

D101.1 Scope. Fire apparatus access roads shall be in accordance with this appendix and all other applicable requirements of the *International Fire Code*.

D103.2 Grade. Fire apparatus access roads shall not exceed 10 percent in grade.

Exception: Grades steeper than 10 percent as *approved* by the fire chief.

D103.3 Turning radius. The minimum turning radius shall be determined by the *fire code official*.

D 103.4 Dead ends. Dead-end fire

SECTION D102

REQUIRED ACCESS

D102.1 Access and loading. Facilities, buildings or portions of buildings hereafter constructed shall be accessible to fire department apparatus by way of an *approved* fire apparatus access road with an asphalt, concrete or other *approved* driving surface capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds (34 050 kg).

TABLE D103.4
REQUIREMENTS FOR DEAD-END FIRE APPARATUS ACCESS ROADS

LENGTH (feet)	WIDTH (foot)	TURNAROUNDS REQUIRED
0-150	20	<i>None required</i>
151-500	20	<i>100 foot Hammerhead, 60 foot "V" or 06 foot diameter oval as per in accordance with Figure D103.4</i>
501-750	26	<i>60 foot "V" or 06 foot diameter oval as per in accordance with Figure D103.4</i>
Over 750	26	<i>Special approval required</i>

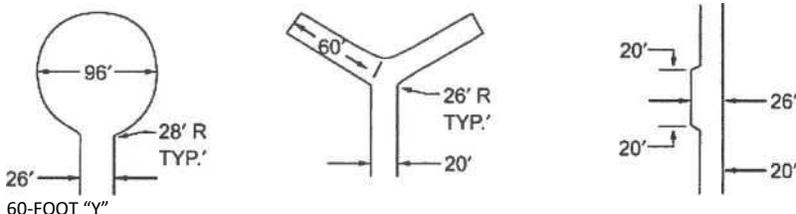
For SI: 1 foot = 304.8 mm.

apparatus access roads in excess of 150 feet (45 720 mm) shall be provided with width and turnaround provisions in accordance with Table D 103.4.

SECTION D103

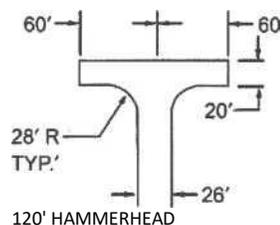
MINIMUM SPECIFICATIONS

D103.1 Access road width with a hydrant. Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet (7925 mm), exclusive of shoulders (see Figure D 103.1).

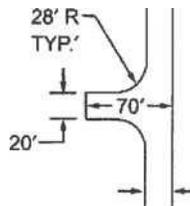


96' DIAMETER
CUL-DE-SAC

HYDRAN



MINIMUM
CLEARANCE
AROUND A FIRE



IDAPA 18.08.01 Adoption of the International Fire Code SECTION 202,

INTERNATIONAL FIRE CODE.

1. Driveway. Add "DRIVEWAY" A vehicular ingress and egress route that serves no more than five (5) single family dwellings, not including accessory structures."

18. CHAPTER 5 FIRE SERVICE FEATURES.

Make the following changes within Chapter 5 of the International Fire Code;

3. Section 503.
 - a. To section 503 add the words, "AND DRIVEWAYS" to the section heading.
 - b. To section 503.1.1 add the following sentence. "Driveways need to be provided and maintained in accordance with Sections 503.1.1 through 503.13."
 - c. To section 503.6 delete the sentence, "The installation of security gates across a fire apparatus access road shall be approved by the fire chief."
 - d. Add the following section, "503.7 Driveways. Need be provided when any portion of an exterior wall of the first story of a building is located more than 150 feet (45720mm) from a fire apparatus access road. Driveways will provide a minimum unobstructed width of 12 feet (3658mm) and a minimum unobstructed height of 13 feet 6 inches (4115mm). Driveways in excess of 150 feet (45720mm) in length need to be provided with turnarounds. Driveways in excess of 200 feet (60960mm) in length and less than 20 feet (6096mm) in width may require turnouts in addition to turnarounds."
 - e. Add the following section, "503.7.1 Limits. A driveway cannot serve in excess of five single family dwellings."
 - f. Add the following section, "503.7.2 Turnarounds. Driveway turnarounds need to

have an inside turning radius of not less than 30 feet (9144mm) and an outside turning radius of not less than 45 feet (13716mm). Driveways that connect with an access road or roads at more than one point may be considered as having a turnaround if all changes of direction meet the radius requirements for driveway turnarounds."

g. Add the following section, "503.7.3 Turnouts. Where line of sight along a driveway is obstructed by a man-made or natural feature, turnouts need to be located as may be needed by the fire code official to provide for safe passage of vehicles. Driveway turnouts will be of an all-weather road surface at least 10 feet (3048mm) wide and 30 feet (9144mm) long."

h. Add the following section, "503.7.4 Bridge Load Limits. Vehicle load limits will be posted at both entrances to bridges on driveways and private roads. Design loads for bridges will be established by the fire code official."



