



Big Sky Fire Department  
650 Rainbow Trout Run  
Big Sky, MT 59716  
(406)995-2100  
www.bigskyfire.org

## **Design Requirements for Residential Driveways**

**Effective March 1, 2021**

In order to construct or retrofit a residential driveway and developments within the Big Sky Fire Department (BSFD) district, an overall site plan for the driveway must be submitted to the BSFD as part of the land use permit form & property development process. Outlined below are the general design requirements for residential driveways as per the Big Sky Fire Department, Big Sky Fire Property Annexation Policy, Gallatin & Madison County Subdivision Regulations, and the International Fire Code. The following requirements are meant to be in addition to the above standards/regulations, with the most stringent controlling any design.

### **Location**

For each lot/parcel, only one driveway is allowed unless otherwise approved by the BSFD. Within the right-of-way, the driveway, where appropriate, it is recommended to connect to the main road at a 90° angle, with no less than a 70° angle allowed. Driveways will not be allowed to be located within 75 feet of an intersection or within 10 feet of a side property line, unless a shared driveway is approved by the BSFD.

### **Dimensions**

Each driveway that is less than 300 total feet in length, it is recommended to have a minimum unobstructed width of 12 feet or a 16 foot minimum width for any driveway over 300 feet in length. A minimum vertical clearance of 15 feet is required for all driveways, as well as a 4 foot zone of reduced vegetation on each side of the driving surface. If a driveway is over 300 feet in length, see turnarounds & turnouts section below. Each driveway it is recommended to have a minimum radius of 3 feet and a maximum of 6 feet where it meets/joins into the existing roadway.

### **Alignments**

The minimum horizontal centerline radius of the driveway is recommended to be 60 feet, with an exception down to 40 feet for a maximum of 60 feet in length (measured along the centerline of the driveway).

### **Turnarounds & Turnouts**

All driveways/residences, regardless of driveway length, it is recommended to provide an adequate turnaround space within 50 feet of the residence, as per the attached driveway turnaround diagram. For driveways less than 300 feet in length, no turnout is required. For driveways over 300 feet in length, an adequate turnout space is required at 300' intervals. Turnouts are recommended to match the width of the approved driveway, but not less than 12 feet, and will be a minimum length of 40 feet. See the included diagram for layouts & dimensions.

**Big Sky Fire Department**  
Design Requirements for Residential Driveways

**Turning Radius**

The minimum turning radius for new driveways shall be determined from the attached turning radius figure, based on a Residential or Commercial use, unless otherwise approved by the BSFD. The driveway is required to still meet all other applicable standards included herein.

**Grades**

Residential driveway grades are recommended to be a maximum of 12%, with an average of no more than 10% overall, unless otherwise approved by the BSFD. The driveway is recommended to have a cross slope of 2% (typical), unless proven otherwise for storm water conveyance, see the attached typical cross sections.

**Landings**

Landings are required on all private drive approaches onto the main roadway. A maximum landing grade of 4% will be used for the first 35 feet minimum, measured from the edge of the main roadway. See the included approach detail for clarity.

**Side Slopes**

Driveway fill side slopes are recommended to not exceed a 2:1 slope within 10 feet of the edge of asphalt, while cut slopes will be allowed up to a 1:1 if rock faced, but a 2:1 if only earth faced, both within 10 feet of the edge of asphalt. Retaining walls may also be provided, per the recommendation of the design engineer and at the discretion of the BSFD.

**Materials**

All driveways are required to have a 30-ton minimum rating for two-axle trucks including all roadways, bridges, culverts, cattle guards and all other structural aspects of the driveway.

**Site plan Submittal**

A site plan must be submitted for review by the Fire Department prior to the start of construction. The site plan should include all of the previous information, i.e. demonstrating grades, turnout locations, turnaround dimensions, etc., as applicable, or justification from a Professional Engineer licensed in the State of Montana. A site plan is not required for overlays, seal coats, or any other modification that does not include changes to the existing horizontal or vertical grades of the driveway.

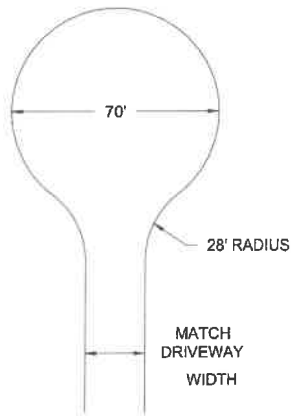
If there are any questions or comments regarding the driveway layout and design, or if there are extenuating circumstances that don't allow for these design conditions to be met, please contact the Big Sky Fire Department at (406) 995-2100 or email [inspections@bigskyfire.org](mailto:inspections@bigskyfire.org) . They can also be reached at Fire Station #1 located at 650 Rainbow Trout Run in the Westfork Meadows neighborhood within the town center.

## Driveway Gates

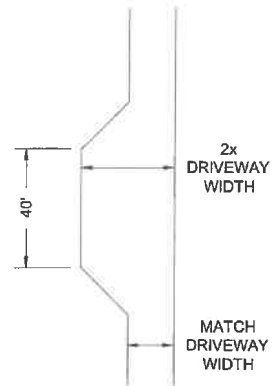
Gates securing driveways or subdivisions within Big Sky Fire District shall comply with all of the following criteria:

1. Where a single gate is provided, the gate width shall be not less than 2 feet wider than the driveway surface.
2. Gates shall be of the swinging or sliding type.
3. Construction of gates shall be of materials that allow manual operation by one person.
4. Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.
5. Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices / codes shall be provided and *approved* by the *fire code official*.
6. Methods of locking shall be submitted for approval by the *fire code official*.
7. Electric gate operators, where provided, shall be *listed* in accordance with [UL 325](#).
8. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of [ASTM F2200](#).

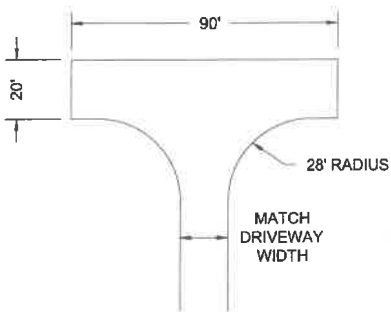
## Residential Turnaround Design



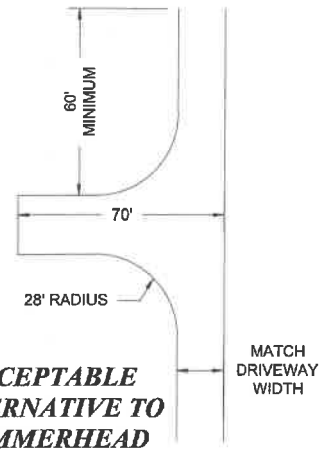
**70' Ø CUL-DE-SAC**



**TURNOUT**



**90' HAMMERHEAD**



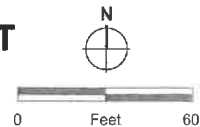
**ACCEPTABLE  
ALTERNATIVE TO  
HAMMERHEAD**

M:\172592\Drawings\Driveway Specs.dwg

**HYALITE**

2304 NORTH 7TH AVENUE STE. L BOZEMAN, MT 59718  
PHONE: (406) 567-2781 FAX: (406) 522-9225  
WEB: [www.hyaliteeng.com](http://www.hyaliteeng.com)

**BIG SKY FIRE DEPARTMENT**  
**RESIDENTIAL DRIVEWAY**  
**TURNAROUND DIAGRAM**

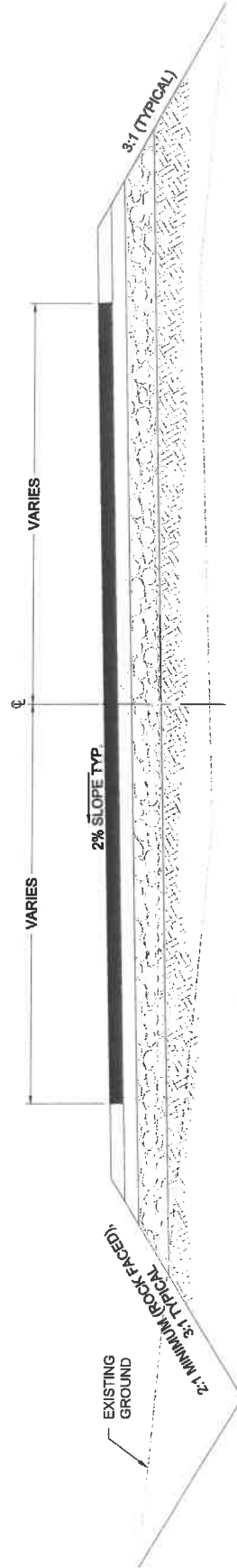
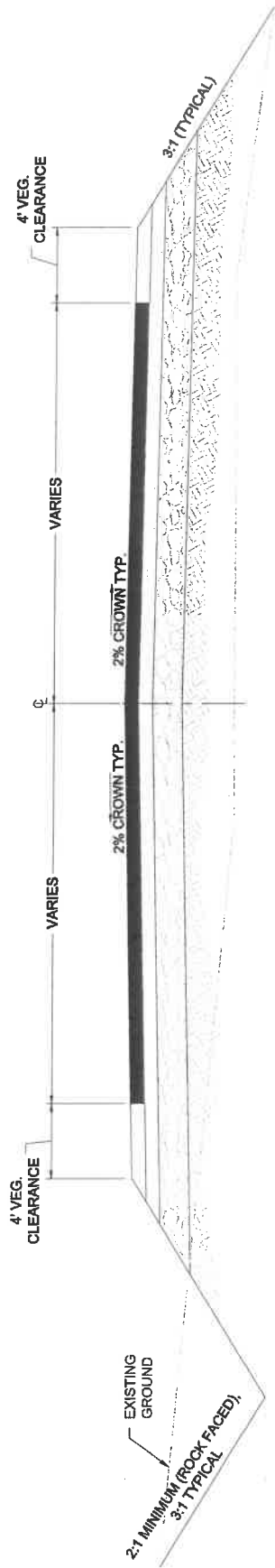


DATE: 04/01/2016

SCALE: AS NOTED

JOB NUMBER: 172592

SHEET: 1 OF 1



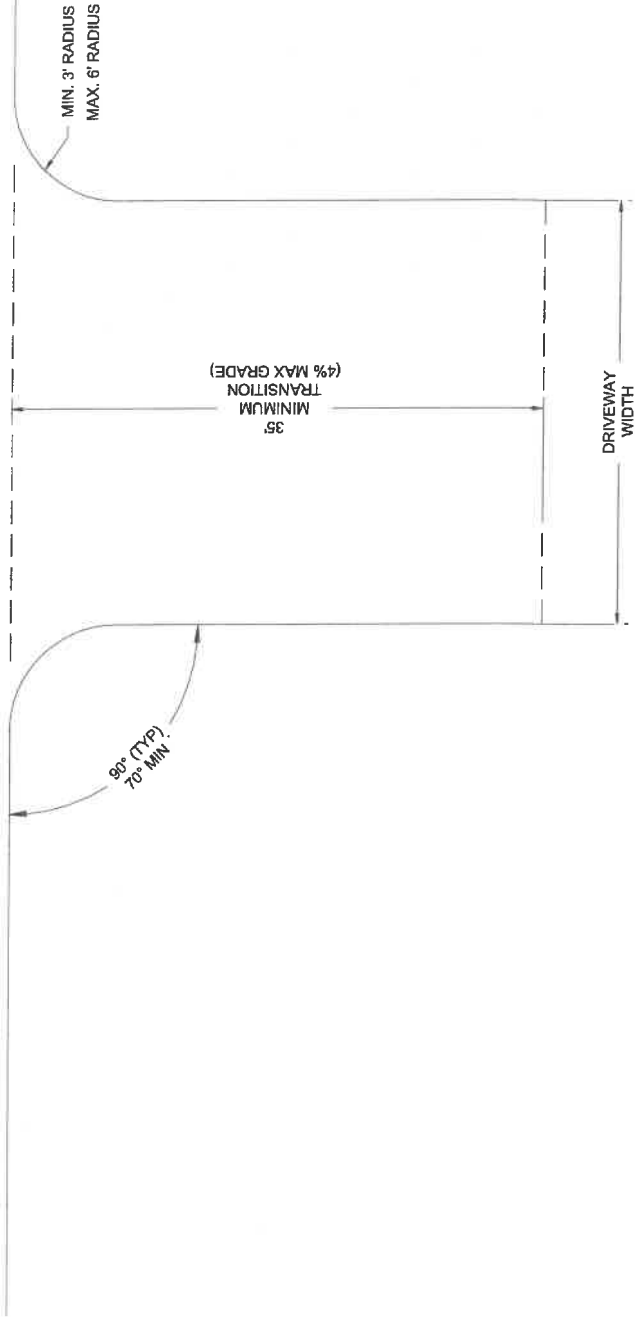
**HYALITE**  
 2304 NORTH ZIYAN AVENUE STE L  
 BOZEMAN, MT 59718  
 PHONE: (406) 587-2781 FAX: (406) 582-9225  
 WEB: [www.hyaliteeng.com](http://www.hyaliteeng.com)

**BIG SKY FIRE DEPARTMENT**  
 RESIDENTIAL DRIVEWAY  
 TYPICAL CROSS SECTIONS



DATE: 04/01/2016  
 SCALE: NTS  
 JOB NUMBER: 172592  
 SHEET: 1 OF 1

**MAIN ROADWAY**



**HYALITE**

234 NORTHVALE DRIVE  
BOZEMAN, MT 59718  
PHONE: (406) 587-2781  
FAX: (406) 592-9225  
WEB: [www.hyaliteeng.com](http://www.hyaliteeng.com)

**BIG SKY FIRE DEPARTMENT**  
**RESIDENTIAL DRIVEWAY**  
**TYPICAL CROSS SECTIONS**



DATE: 04/01/2016

SCALE: AS NOTED

JOB NUMBER: 172592

SHEET: 1 OF 1

**Residential and Commercial Developments**

**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 up to 75,000 pounds (34 050 kg). Refer to Appendix A (Apparatus Inventory)

Table D103.4 Requirements For Dead-End Fire Apparatus Access Roads

Length	Width	Turnarounds Required
0-150	County Standard	Not Required
151-500	County Standard	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac in accordance with <a href="#">Figure D103.1</a>
501-750	County Standard	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac in accordance with <a href="#">Figure D103.1</a>
Over 750		Special approval required

**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.

Approved Commercial Turnarounds

