



LARAMIE COUNTY PLANNING & DEVELOPMENT DEPARTMENT

Planning • Building

MEMORANDUM

TO: Laramie County Board of Commissioners

FROM: Sonny M. Pourchot, Associate Planner

DATE: August 4th, 2026

TITLE: Review and Final Action on a Site Plan for the Bit-O-Wyo Ranch and Events, located in a portion of land situated in the NE ¼ of Section 11, Township 14 North, Range 70 West, of the 6th P.M., Laramie County, WY.

EXECUTIVE SUMMARY

Riedel Ventures, LLC, dba Bit-O-Wyo Ranch and Events, on behalf of landowner, Tania Riedel, submitted a Site Plan application for the Bit-O-Wyo Ranch and Events project. The Class C Conditional Use Permit for this project was approved by the Board April 21st, 2026. The purpose of the project and subsequent Commercial Site Plan submittal as required is to continue the historic use of the business as a public event and recreational venue.

BACKGROUND

The subject property is located in the Land Use (LU) zone district and consists of 39.97 acres. The surrounding area is also zoned Land Use (LU) district. The property is currently accessed from Happy Jack Road; however, the applicant wishes to move access to Brush Creek Road which is currently in design phase for submittal along with requiring a Right-of-Way permit through the Bureau of Land Management, which is still being processed to date. The applicant and Laramie County have received conceptual approvals with no concern from BLM staff as to this ultimately being approved.

Pertinent Laramie County Land Use Regulations or Statutory Provisions include:

Section 1-3-100 governing public notice.
Section 2-4-104 governing the LU – Land Use Zone District.
Section 3-1-109 governing commercial projects.

DISCUSSION

The Laramie County Comprehensive Plan identifies the area as Ag and Range Land (AGR), which are outlying areas of Laramie County. These areas are far removed from the providers of public services and have relatively lower levels of road access. Some areas with existing development may be appropriate for expansion, identified as rural centers. Any new development in this area shall address water availability, public lands access, cultural resource preservation, and roads and connectivity. Ensuring minimal impacts to view sheds and wildlife are especially critical in the western portion of Laramie County.

This area is outside the PlanCheyenne future land use areas.

At the time of this report, agency review comments are still being addressed, mainly, access to the site. The applicant wishes to access the parcel from Brush Creek Road which will require it to be brought to LCLUR current standards of 24 feet wide. Private access through BLM land will be 20 feet wide. The applicant is working in good faith with the BLM to establish a private access road through this portion of land and will bring it to BLM standards, which are attached to this report, as well as an approved access easement. The applicant is working with Environmental Health to bring property up to their standards for commercial uses.

Public notice was provided, and one comment was received which is attached to this report.

As previously stated, the Board met on April 21st, 2026, regarding the Class C Conditional Use Permit and approved it with a vote of (5-0). Based on Section 3-1-109 of the LCLUR Commercial Site Plans, Staff finds this application is in conformance with the plans and policies of Laramie County.

RECOMMENDATION and FINDINGS

Based on evidence provided, staff recommends the Board find that:

- a. This application meets the criteria for commercial projects pursuant to section 3-1-109 of the 2025 Laramie County Land Use Regulations.
- b. This application is in conformance with section 2-4-104 of the 2025 Laramie County Land Use Regulations governing the LU – Land Use Zone District.

and that the Board approves the Site Plan for the Bit-O-Wyo Ranch and Events, located in a parcel of land situated in the NE ¼ of Section 11, Township 14 North, Range 70 West, of the 6th P.M., Laramie County, WY, with the following conditions:

- 1) **Brush Creek Road and the BLM easement (if approved for this commercial use) have been designed and built through a right-of-way permit with acceptance by Laramie County Public Works. They shall meet the requirements within the Laramie County Land Use Regulations for the roadway(s) and Floodplain crossings. The approved access easement from BLM shall be submitted with the right-of-way permit.**
- 2) **The applicant must show proof from Environmental Health that they have satisfied their standards for commercial use.**
- 3) **The applicant must show proof of an approved and recorded easement agreement between landowner and the Bureau of Land Management.**
- 4) **The applicant must resolve any outstanding agency comments prior to final approvals for commencement of operation.**

PROPOSED MOTION

I move to grant the approval of the Site Plan for the Bit-O-Wyo Ranch and Events, located in a parcel of land situated in the NE ¼ of Section 11, Township 14 North, Range 70 West, of the 6th P.M., Laramie County, WY, adopt the findings of facts a and b of the staff report with the following conditions:

- 1) **Brush Creek Road and the BLM easement (if approved for this commercial use) have been designed and built through a right-of-way permit with acceptance by Laramie County Public Works. They shall meet the requirements within the Laramie County Land Use Regulations for the roadway(s) and Floodplain crossings. The approved access easement from BLM shall be submitted with the right-of-way permit.**
- 2) **The applicant must show proof from Environmental Health that they have satisfied their standards for commercial use.**
- 3) **The applicant must show proof of an approved and recorded easement agreement between landowner and the Bureau of Land Management.**
- 4) **The applicant must resolve any outstanding agency comments prior to final approvals for commencement of operation.**

ATTACHMENTS

- Attachment 1: Location Map
- Attachment 2: Pre-Application Notes
- Attachment 3: Project Narrative
- Attachment 4: BLM Correspondence
- Attachment 5: BLM Road Design Manual
- Attachment 6: Agency Review Comments with Applicant Responses
- Attachment 7: Public Comment
- Attachment 8: Site Plan Resolution
- Attachment 9: Exhibit A – Site Plan
- Attachment 10: Exhibit B – Proposed parking area



**Laramie County
Wyoming MapServer**

PZ-26-00010

BIT-O-WYO RANCH AND EVENTS
CLASS C CONDITIONAL USE
PERMIT

LAND USE ZONE DISTRICT

LARAMIE COUNTY FIRE
AUTHORITY

LARAMIE COUNTY SCHOOL
DISTRICT 1



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printed 3/9/2026



Laramie County, WY
Laramie County Planning and Development Office

3966 Archer Pkwy
Cheyenne, WY 82009
(307) 633-4303
www.laramiecountywy.gov
planning@laramiecounty.com

PERMIT

PA-25-00103

PRE-APPLICATION MEETINGS

SITE ADDRESS: 470 HAPPY JACK RD CHEYENNE
PRIMARY PARCEL: 14701110000100
PROJECT NAME: BIT OF WYO

ISSUED: 10/29/2025
EXPIRES: 04/27/2026

APPLICANT: Tania Riedel
NOT KNOWN AT TIME OF ENTRY
UNKNOWN, UK 00000

OWNER: STEELE, DENNIS R
1407 GREEN MOUNTAIN RD
CHEYENNE, WY 82009-9398

Detail Name	Detail Value
Meeting Date	10/29/2025
MEETING AM OR PM	AM
Application Types	Site Plan
Attendees	In Person (3966 Archer Pkwy)
Property Interest	Owner
Detailed Project Narrative	Reopen facility
Staff Attending	JA, SP, CC, DP, MC, TG, JE
Application Fees	Yes
Copy of Pre-App Notes	REQUIRED FOR APPLICATION SUBMITTAL
Project Narrative Letter	Yes
Warranty Deed and/or Lease Agreement	Yes
Development Action	Conditional Use Class B
Drainage Plans	TBD
Drainage Study	Letter of Waiver
Traffic Study	Letter of Waiver
Public Safety Fees Acknowledgement Letter	No
Community Facility Fees Acknowledgement Letter	No
WY DEQ Chapter 23 Study/Submittal Letter	No
Development Agreement	No
Roadway Maintenance Plan	No
Road/Easement Use Agreement	No



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Right-of-Way Construction Permit	Upon Construction
Engineer Review - Paid by Applicant	Yes
Environmental Health Review/Approval	Yes
Environmental and Services Impact Report	No
GESC Permit	TBD
Floodplain Development Permit	Yes
Perimeter Fence Construction per W.S.S. 18-5-319	No
Public Notice, Paid by Applicant	Yes
Newspaper Legal Notice, Paid by Applicant	Yes
Adjacent Property Owner Letter, Paid by Applicant	Yes
Miscellaneous Notes	Prior use was for retreats, celebrations, camps and easement was from Happy Jack. Current owners are negotiating with the BLM for access from the North. Existing residential easements coming in from South will no longer work. There is an established public right of way for the two track and within public right of way and must be upgraded. Emergency access must be to all buildings and requires a minimum of 20'. Molly Cook suggested that further discussions be held regarding the right of way if this development does not go through. The well on an adjoining property is located within the right of way also. Refer to page 234 of the 2025 LCLUR. Approximately 1430 feet of Brush Creek road. Floodplain permit for road crossing will be needed.



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Miscellaneous Notes (2)

Environmental Health said applicant will need to upgrade septic and warming kitchen has requirements that will also need permitted. Events that are by invitation only are considered private by EH. If it is a ticketed event it is considered open to the public. Either way it is determined to be a public facility. Planning says it is not grandfathered so will now need a Conditional Use Class B Permit and Simple Site Plan showing what is listed on Page 368 of the 2025 LCLUR. Posting of property on Brush Creek Road, legal ad, neighbor letters, engineer and other agency review, Planning Commission public hearing for Conditional Use Permit approval. Cost is \$500 permit fee for conditional use, \$500 site plan fee, \$26 per sign, actual cost of mailing and legal and engineer review. Both permits can be submitted concurrently but site plan would be done at risk in the instance that the Conditional Use Permit was not approved. When site plan is approved a Certificate of Review will be issued.

Miscellaneous Notes (3)

Try to address concerns from neighbors and suggests ways to mitigate in your project narrative. Existing buildings will need to be brought up to code. Dan Peters said residential permits that have been pulled will need to be changed to commercial. Recommended working with design professional to do an analysis of the buildings. Needs a Certificate of Review before building permits can be pulled. The site plan only needs to show what will actually be used for the business.

CONDITIONS

* Disclaimer: These are intended as guidance only. Fee calculations are determined at the time of application, and issues that arise during review periods are not always anticipated at pre-application stage. Public Records Act: This document and any documents provided by the applicant to Planning may constitute a public record under W.S.S. 16-4-201 et seq. Applicants are advised not to divulge any information at a Pre-Application Meeting with Planning that they do not yet desire to be public information.



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* A traffic study may be required for any site plan, subdivision permit, or access request for any development and shall be required for any project or development that will generate 100 or more trips during any hour or over 200 trips per day. Traffic studies shall be prepared by a qualified civil engineer licensed by the Wyoming State Board of Registration for Professional Engineers and Professional Land Surveyors to practice engineering in Wyoming. The applicant and the engineer shall meet with the County prior to preparation of the traffic study to discuss specific issues or concerns. The Director of Planning and Development may waive a traffic study based on estimated ADT, and peak hour trips, or existing road or site conditions, including adequate pedestrian access.

* Requests for waivers for drainage impact studies shall be made in writing to the Laramie County Public Works Department. The County shall review the request and approve the grant for a waiver or identify the level of study required for the proposed development action. Laramie County Public Works may waive the requirement for drainage study based on the following: a. Information is provided to substantiate there are no potential drainage problems at the site or downstream of the site (including impacts to downstream floodplains). b. The development or redevelopment will not result in an increase in the historic impervious area. c. The development or redevelopment of an area is immediately adjacent to a major drainageway that is capable of conveying the fully developed basin 100-year flood without impact to the base flood elevation. d. The development or redevelopment is unlikely to create drainage problems.

* A waiver or alternative to the required landscaping may be presented to the Planning and Development Director for review. The Director shall approve the proposed alternative landscape plan based on the following criteria: A. the proposed alternative meets or exceeds the intent of this regulation, and B. the proposed alternative is well-integrated with the surrounding landscaping and land uses, and C. the proposed alternative meets the goals of Laramie County Comprehensive Plan and; D. the purpose of the required site plan is to legalize an existing use and the impact or benefits of the landscape plan on the property would be minimal; or E. the landscaping as required would prohibit reasonable use of the property.

Project Narrative

Bit-O-Wyo Ranch and Events Commercial Site Plan / Class C Conditional Use Permit

Project Purpose

The purpose of this project is to restore the historic Bit-O-Wyo Ranch as a seasonal event venue while preserving the property's historic character, natural landscape, and Wyoming heritage. The project will provide a destination for weddings, corporate retreats, family gatherings, community events, horseback riding, guided hiking, and other private events in a setting that celebrates the unique beauty of southeastern Wyoming.

Rather than constructing a new commercial development, this project represents the adaptive reuse of an existing ranch property that has historically operated as a destination for tourism, recreation, and hospitality for more than four decades. The proposed improvements are intended to modernize the property's infrastructure while preserving the natural character of the site and minimizing disturbance to the existing landscape.

The project will utilize the existing venue and supporting facilities, with improvements including upgrades to utilities, accessibility, life safety systems, parking, and site amenities necessary to support the proposed use. Site improvements have been designed to preserve the property's existing topography, native vegetation, and natural drainage patterns to the greatest extent practicable.

Project Timeline and Major Milestones

The project has progressed through extensive planning, engineering, permitting, and coordination with local, state, and federal agencies. The anticipated project timeline is as follows:

Upcoming Milestones

- Building plans submitted to Laramie County for review (by July 15, 2026)
- Brush Creek Rd is being engineered and permitted for road construction (Current)
- Commercial Site Plan hearing before Laramie County Commissioners (August 4, 2026)
- Building permit anticipated to be issued, allowing construction of building improvements to commence (anticipated by August 15, 2026)
- Bureau of Land Management (BLM) Right-of-Way (ROW) anticipated to be issued for road access and parking improvements (anticipated prior to January 2027)

- Construction of the approved BLM road access and parking improvements will begin (to commence immediately after issuance of ROW weather permitting)
- Completion of construction, final inspections, and opening of Bit-O-Wyo Ranch and Events for seasonal operations (anticipated May 1, 2027)

Construction activities will be phased to minimize impacts to the property's existing landscape while coordinating improvements with seasonal weather conditions and agency approvals. Certain project milestones are dependent upon the timely issuance of the Bureau of Land Management Right-of-Way authorization; however, the owners are committed to completing all required improvements promptly following receipt of applicable approvals.

Long-Term Land Use Management

Bit-O-Wyo Ranch and Events will operate as a professionally managed seasonal event venue with a maximum occupancy of **100 guests and all events/activities will end by 10pm**, consistent with the approved Conditional Use Permit and Commercial Site Plan.

Operations will comply with all applicable Laramie County Land Use Regulations, the conditions of the approved Conditional Use Permit, and all applicable local, state, and federal regulations. Any conditions established as part of the Conditional Use Permit approval will be incorporated into the long-term management and operation of the property.

The owners are committed to responsible stewardship of the land by preserving existing native vegetation where practical, minimizing ground disturbance, maintaining existing drainage characteristics, protecting wildlife habitat, and preserving the scenic quality and rural character of the surrounding foothills. Existing buildings and infrastructure will be maintained in good condition, and future improvements will be completed in a manner consistent with the property's historic character and the approved site plan. Brush Creed Rd and the BLM ROW for road access and parking will also be maintained in accordance with all applicable governing bodies.

The venue is intended to operate seasonally, primarily from **May through October**. Hours of operation have been intentionally designed with the same commitment to preserving the property's natural resources, minimizing impacts on surrounding properties, and maintaining compatibility with the rural character of the area. Operating hours will vary depending on the scheduled activity and will be managed to provide flexibility while maintaining responsible land stewardship.

The anticipated operational schedule includes but is not limited to:

- **Horseback Riding (includes but not limited to 6 riders and 2 staff):** Up to four (4) days per week, with guided rides offered in approximately two-hour increments.
- **Guided Nature Hikes (includes but not limited to 20 hikers and 1 staff):** Up to two (2) days per week, with guided hikes offered in approximately two-hour increments.

- **Family Nights and Date Nights (includes but not limited to 2 couples/4 people and 2 staff for date night, and 10 people and 2 staff for family night):** Up to three (3) times per week, generally lasting approximately two hours.
- **Weddings, Corporate Retreats, and Custom Events (up to 100 people):** Approximately one (1) to two (2) days per week, with operating hours varying based on the nature of the event.

All activities will end by 10pm and will be conducted in accordance with the approved occupancy limit, parking plan, traffic management measures, fire and life safety requirements, and any additional conditions established by Laramie County through the Conditional Use Permit process.

The long-term vision for Bit-O-Wyo Ranch and Events is to preserve and revitalize one of Wyoming's historic guest ranch properties while creating a sustainable destination for tourism, recreation, and private events. Through thoughtful stewardship of the land, responsible management, and continued investment in the property's historic resources, the project will honor the legacy of Bit-O-Wyo Ranch while providing an authentic western experience for future generations.



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Wyoming High Desert District
Rawlins Field Office
1300 North Third Street, P.O. Box 2407
Rawlins, Wyoming 82301-2407
www.blm.gov/wy



In Reply Refer To:
2800 (WYD03) (mr)
WYWY106749200 and WYWY106760510

JUN 09 2026

Your Reference

Riedel Ventures Access Road and Parking Area

Ms. Tania Riedel
Riedel Ventures, LLC
1407 Green Mountain Road
Cheyenne, Wyoming 82009

Dear Ms. Riedel

The Bureau of Land Management (BLM), Rawlins Field Office (RFO), received your right-of-way (ROW) application, on September 8, 2025, for an access road and parking area across public lands.

The BLM's goal for your type of ROW application is to reach a decision within sixty (60) calendar days of receipt of a complete application. If an application cannot be processed within the sixty (60) calendar-day period, the BLM is required to inform you prior to the 30th calendar day and tell you when you may expect a final decision on your application.

Currently, your project is undergoing an assessment under the National Environmental Policy Act (NEPA). Currently, we are waiting for the review of the cultural survey and complete resource clearances. Once these tasks are completed, we will determine the appropriate level of NEPA analysis. This project will have a 15-day public comment period once the NEPA is complete. As of this time, the BLM is not aware of any significant concerns regarding the project or its anticipated impacts to public lands.

We anticipate a final decision on your application by January 1, 2027. If unforeseen circumstances arise that will extend that date, we will notify you in writing.

If you have any questions, or need additional information, please contact Mike Robinson, Realty Specialist, at the address shown above, e-mail mrobinson@blm.gov, or telephone (307) 328-4282.

Sincerely,

Acting for Andrew Kauppila,
Acting Field Manager

INTERIOR REGION 7 • UPPER COLORADO BASIN

COLORADO, NEW MEXICO, UTAH, WYOMING

Form 1221-2
(June 1969)



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Release:
9-388
Date:
10/21/11

MANUAL TRANSMITTAL SHEET

Subject

9113 – 1 – Roads Design Handbook

1. Explanation of Materials Transmitted:

This is an update of current manual and handbook on Roads; with the creation of Handbook 2 for Condition Assessment Protocols. Attached is the Manual Section Handbook 1 only, per Directives instructions. The Manual Section 9113 and Handbook 2 are under separate clearance sheets for each.

2. Reports Required: None.

3. Material Superseded: The material superseded by this Handbook Release is listed under "REMOVE" below.

4. Filing Instructions:

REMOVE

9113- 1 – Road Design
(Rel. 9-218)

(Total: 10 sheets)

INSERT

9113 – 1- Roads Design Electronic Version

(Total: 33 sheets)

/s/ Jeanine Velasco
Assistant Director, Business and Fiscal Resources

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- 14. Typical Roadway Section – Rigid Pavement (Concrete)

Attachment 1 – Curve Widening

.1 Design.

.11 Surveys and Investigations. The type, accuracy requirements, and intensity of surveys and materials investigations are determined by the functional classification of the proposed road, land ownership, and the type of construction. Surveys and investigations supply data to the designer; therefore, the designer must work closely with the survey crew and soils/materials (geotechnical) investigation crews to assure that the required data is obtained. The designer directs the centerline survey and the location of soils/materials investigations by flagging on-the-ground locations or by plotting the proposed design alignment on large-scale topographic maps or aerial photos.

A. Aerial Surveys. Road projects of larger scope should consider use of an aerial survey. Precision, as indicated by the industry standard, should be reviewed to assure appropriate level of detail.

B. Ground Surveys. Ground surveys for road design are governed by the following guidelines:

1. Permission to Survey. The Bureau is required to obtain permission to survey or to investigate materials on lands not owned by the United States Government or not controlled by the Bureau of Land Management. Notify permittees and lessees whose operations might be affected by, or which could affect, survey or investigation work. Contact the field specialist and furnish information as necessary to obtain timely required permission or easements, or to notify concerned parties. Entry to commence such work occurs after the field specialist has notified the designer that permission has been received and/or notices have been sent.

2. Precision of Surveys. The accuracy requirements of road surveys, as shown in Illustration 1—Precision Requirements for Road Surveys must meet the following precision classes:

- a. Collector Roads. Traverses, level circuits, and cross sections require precision class B.

- b. Local Roads. Traverses not requiring easements are done to precision class C; easements require precision class B. Level circuits require precision class C, and cross sections require precision class D.

- c. Resource Roads. Traverses not requiring easements are to precision class E; easements require precision class B. Level circuits require precision class E, and cross sections require precision class F.

3. Stationing. Stations are set continuously along centerline surveys at maximum 100-foot intervals, at all tangent and curve control points, at all fence or utility crossings, and at all breaks in ground profile where the centerline ground varies more than 1 foot vertically from a straight line connecting the above points, and at all other points defined by industry

standard. Stations should also be set along curves at a maximum of 100 feet.

4. Topographic Survey. Survey existing built features (buildings, fences, utilities, existing road, etc.) and natural features (rock outcrops, streams, swamps, lakes, trees, and cacti to be preserved, etc.) that require special design considerations or that may affect construction operations. Show these features on the construction drawings.

5. Section Corner and Boundary Ties. All road centerline traverse surveys must be tied to the Public Land survey system, using the same precision required for the traverse. Ties should be made each time the centerline traverse crosses a section line or boundary line (ownership, withdrawal, reservation, etc.). If the traverse is within one section, a tie should be made near each end of the centerline traverse.

6. Establishing Bearings. Show all bearings for roadway centerlines.

7. Bridges and Major Culverts. See Manual Section 9112 – Bridges and Major Culverts.

8. Survey Notes. Survey notes are to be kept in a bound book or as typical for industry standard.

C. Soil Surveys and Material Site Investigation. Soils surveys and material site investigations furnish necessary information on the types of soils and physical limits of the various soils or materials that will be encountered on a project. The extent of survey and sampling and testing work required depends on the type and size of the project and the character of the soils.

1. Soil Surveys. Roads being designed for heavy loads, high volumes, or paving require more thorough and accurate sampling and testing to determine structural values. Extensive testing is advisable for projects with large earthwork volumes. The soil type and classification is determined through a detailed geotechnical report provided by a licensed geotechnical engineering firm. A soil survey includes a soils profile made along the proposed centerline. Establish a trial profile grade line and conduct an investigation to determine the soil horizons and limits by examining exposed soils, and using auger borings or test holes at sufficiently close intervals and of sufficient depth to identify changes in soil types. Use American Association of State Highway and Transportation Officials (AASHTO) classification, sampling, and testing procedures for road soil surveys. Visual classification is sufficient for lower standard roads that will not carry heavy loadings. Visual soil investigations and classifications should be done through use of the Unified Soil Classification System and in Illustration 2– Characteristics of Unified Soil Classification System Pertinent to Roads.

2. Materials Site Investigations. Designated materials sites are sampled and tested to determine if the volume and character of the material is adequate and if the material can meet the required specifications. Use AASHTO sampling and testing procedures for material site investigations.

3. Commercial Material Sources. Manufactured aggregates, ready-mix concrete, and other materials may be available from commercial sources. Sampling and testing for design purposes is unnecessary if the supplier furnishes required information and certification.

.12 Design Guidelines. Bureau roads are designed and constructed primarily to support the protection, development, use, and administration of public lands and resources with minimum impact on the environment. Bureau roads must ensure the safety of the user, but should respect the natural setting of the area. Designers of Bureau roads must be sensitive to national policy emphasizing safety, esthetics, protection and preservation of historic and cultural values, visual resource management objectives, and accessibility for the physically challenged. Designers of Bureau roads must incorporate these considerations in their designs.

A. Design Speed. Design speed determines the maximum degree of road curvature and minimum safe stopping, meeting, passing, or intersection sight distances. The design speed selected should be consistent with the anticipated speed users will drive on the constructed road. For example, in flat, open terrain where relatively straight alignment may induce drivers to travel relatively fast, low design speeds are unsafe.

1. Maximum Degree of Curvature. The maximum degree of curvature is determined by design speed, surface type, and the maximum superelevation rate. Using the maximum superelevation rate chosen by the designer see .12D – Superelevation of Curves, and the surface type of the proposed road, the maximum allowable curvature for various design speeds is determined using the rates shown in Illustration 3– Maximum Curvature and Recommended Superelevation Rates.

2. Sight Distances. Sight distances are those lengths of road the driver must be able to see to execute safely various vehicle operations. Sight distance requirements affect vertical curvature and may affect horizontal alignment by requiring easier curves to avoid sight obstructions due to terrain, vegetation, or built features. The designer may be required to adjust the horizontal or vertical curvature, the typical cross section, or to remove vegetation or built features to attain the required sight distances. Sight distance calculations are based on an eye height of 3.75 feet, and object height of 0.5 feet, and an opposing vehicle height of 4.50 feet. Driver perception and reaction time of 2.5 seconds is used. Since braking distance is related to surface type and weather conditions, it would be difficult to cover all foreseeable combinations of situations. Refer to Illustrations 4 through 8 for design guidance.

B. Horizontal Alignment. Alignment for higher standard roads should be as direct as possible with few curves and more than minimum sight distances. Coordinate horizontal alignment with vertical alignment to ensure user safety and comfort. Lower standard road designs should maintain a high quality alignment, but cost consideration may require that values normally required for higher standard road designs be lessened for construction economy. Accepted practices for good alignment design include the following:

1. Terrain. Fit the terrain.

2. Curve Length. Avoid short curves that provide the illusion of an angle. In open areas with long sight distances, the minimum curve length should be 500 feet for a 5 degree central angle. Where sight distance is limited, choose curves that appear to flow rather than curves that appear abrupt.

3. Reverse Curves. Avoid reverse curves separated by a short tangent. Where terrain dictates reverse curves, a tangent between curves of sufficient length to provide superelevation runoff without overlap is required.

4. Broken Back Curves. Broken back curves (two curves in same direction separated by a short tangent) should not be used. Substitute a longer curve or a compound curve.

5. Compound Curves. Compound curves may be used to fit the alignment closer to the natural contour, or to avoid the use of broken back curves. Compound curves should be limited to three separate curves, with the center curve being the sharpest, but not over 50% sharper than adjacent curves.

6. Alignment. Consistent alignment is safer and is more esthetically pleasing. Sharp curves at the end of long tangents, or a sharp curve among easy curves is hazardous. Where a sharp curve must be used, it should be approached by transitional, successively sharper curves from both directions to eliminate a sudden, unexpected, change for the driver.

C. Vertical Alignment. Controls on vertical alignment include maximum grade requirements for the applicable road standard see Manual Section 9113 - .23 Geometric Standards and the vertical curve length requirements for minimum sight distances.

1. Vertical Curves. Vertical curves must be long enough to provide minimum stopping sight distance throughout the road length and to provide a road that is safe, comfortable, pleasing in appearance, and adequately drained. Vertical curves longer than required for minimum sight distance should be used to reduce earthwork volume or to provide a better visual appearance.

a. Stopping Sight Distance (SSD). Minimum stopping sight distance must be met for the entire length of all roads. Refer to Illustrations 5 – 7 for design guidance.

b. Passing Sight Distance (PSD). Minimum passing sight distance should be met at regular intervals on two-lane roads. Higher-volume roads require more frequent passing opportunities than lower-volume roads. Construction costs are a major factor in determining passing sight distance needs.

c. Meeting Sight Distance (MSD). Minimum meeting sight distance must be met over the entire length of all single-lane road sections. Meeting sight distance is calculated as the sum of the opposing stopping sight distances. Distance adjustment for grades may

be ignored since such adjustments tend to cancel one another. Vertical curves provide safe stopping sight distances. See Illustration 8 – Crest Vertical Curves Based on Minimum Meeting Sight Distance (Single Lane Roads Only) for determining crest vertical curve lengths. However, safe meeting sight distance may require that lateral clearance on the inside of horizontal curves be lengthened, or that a double-lane section be used and the lateral clearance provide minimum stopping sight distance.

2. Recommended Practices. Recommended practices for providing a desirable vertical alignment are as follows:

- a. Coordinate vertical alignment and horizontal alignment to ensure a smooth flowing, safe, comfortable, and esthetically pleasing road.
- b. Provide a grade requiring minimum earthwork. This limits costs, reduces erosion, and is more environmentally acceptable.
- c. Provide a smooth vertical alignment with gradual changes consistent with class of road and character of terrain. Avoid an alignment with abrupt transitions.
- d. Avoid grades less than 0.5 percent due to difficulty in providing drainage of side ditches.
- e. Reduce grades around sharp curves, at intersections, at turnouts, and at turnarounds.
- f. Avoid roller coaster and hidden-dip grades, even though they may reduce earthwork quantities (not applicable for very low cost roads). They will cause uncomfortable and possibly dangerous conditions for drivers.
- g. When possible, avoid locating a vertical curve within a horizontal curve.

D. Superelevation of Curves. The selection of a maximum superelevation rate should depend on several factors: frequency and amount of ice and snow; amount and type of roadside development; and number of slow-moving vehicles. Illustration 9 – Minimum Superelevation Runoff Lengths provides recommended maximum superelevation rates for various design speeds. The minimum superelevation rate for any curve is not less than the normal crown rate for adjacent tangent sections. Superelevation is required on all roads with a design speed of 20 mph or greater. See Illustration 9 – Minimum Superelevation Runoff Lengths for runoff lengths for various superelevation rates and design speeds. One-third of this runoff occurs on the curve and two-thirds on the tangent. Increase runoff lengths where necessary to provide for better drainage or esthetics.

E. Cross Section Elements. The designer must determine the typical cross section(s). Changes in terrain, materials, visual resources, and vegetation may justify changing the typical cross section. Elements of the cross section include subgrade width, roadway crown or cross slope, side ditches, cut and fill slopes, widenings, and turnouts.

1. Subgrade Width. The subgrade width normally is equal to the traveled way width plus twice the taper width of surfacing materials. For an earthen road, the traveled way width is equal to the subgrade width. Extra widening for shoulder area may be provided where estimated ADT is over 400, or where special considerations justify a shoulder area. The taper of the surfacing material on surfaced roads provides a "usable" shoulder area if the tapered slope is 4:1 or flatter. The taper slope ratio should be approximately the same as the slope ratio selected for the flattest fills or side ditch inslope, but should never be steeper than 3:1. A taper slope ratio flatter than 4:1 may be provided if justified, but it should not be common practice. Select the total subgrade width to the nearest even 2 feet.

Considerations for designing the subgrade width include the following:

- a. Changes in subgrade soil support values may require a change of the surfacing thickness, resulting in a change in taper and subgrade width.
- b. Using curbs may affect subgrade width.
- c. In areas with steep side slopes, the typical section may be narrowed by reducing the side ditch or by forming the side ditch in the surfacing course. This may be done only if the surfacing material can be protected from saturation and if the ditch shape and dimensions are such that user safety is not compromised.

2. Road Crown. The road should be crowned to ensure proper drainage. All double-lane roads except insloped or outsloped roads must have a centerline or shoulderline crown. See .12E3 – Insloped or Outsloped Roads. Place shoulderline crowns with the downstream shoulder highest in order to prevent erosion of fills. Recommended slopes are as follows:

Earth Surface .03-.05 ft./ft.

Aggregate Surface .02-.04 ft./ft.

Paved Surface .02-.03 ft./ft.

3. Insloped or Outsloped Roads. A local road with a design speed of 20 mph or less may be insloped or outsloped for sections where the grade does not exceed 6%. (An insloped or outsloped road is a road without side ditches and superelevated curves.) Insloping or outsloping roads are not recommended unless the subgrade materials are resistant to erosion and traffic volume is extremely low. The slope across the roadway is the same as for normal crowns See .12E2 – Road Crown.

4. Cut and Fill Slopes. Cut and fill slopes provide: a structurally stable road, a safe recovery area for errant vehicles, minimum erosion susceptibility, and maximum revegetation possibility. Slopes steeper than 2:1 in level and rolling terrain or 1 1/2:1 in mountainous terrain must not be used, except as stated below. If the steepest allowable slopes do not intersect with the natural terrain within a reasonable distance, make adjustments in the alignment and/or grade, or provide retaining walls. Fills with heights less than the depth of the side ditch are designed and staked as a cut section to ensure

continuity of the side ditch.

- a. The following slopes are suggested for use on Bureau roads. Where rock excavation is encountered, cut slopes may be steeper since weathered slopes should remain stable. Cut slopes may be steeper than recommended to reduce resource, environmental, or visual impacts; however, the angle of repose of the exposed material must not be exceeded.
- b. Fill widening must be a minimum of 2 feet where the slope is 2:1 or steeper. Fill widening must be integrated with the normal embankment. Widening for curves and/or guardrails is determined independently of fill widening, and does not supersede fill widening requirements. See .12E9 – Curve and Guardrail Widening. Fill widening does not require widening of surfacing courses.

RECOMMENDED EARTH SLOPES FOR BUREAU ROADS

Height of Cut or Fill (in Feet)	Level and Rolling Terrain	Mountainous Terrain
0-4	4:1	3:1
4-10	3:1	2:1
Over 10	2:1	1 ½:1 ¹

¹In clayey or silty soils subject to erosion, maximum slope should be limited to 2:1 or less, depending on stability of the soils.

c. Slopes can be sculptured to provide a more natural appearance. Sculpturing is recommended for major roads through areas of high visual quality. Consult with visual management specialist on the advisability of slope sculpturing. Sculpturing methods include:

- (1) Flattening slope at cut-to-fill transitions;
- (2) Laying back cutslopes where a cut intersects a natural drainage to provide a more natural appearance;
- (3) Accenting natural ridges intersected by cuts with a steeper cut slope and wider rounding of intersection;
- (4) Creating diversity in long cuts by flattening slopes to create false draws;
- (5) Providing benches in rock cuts to accent natural strata;
- (6) Leaving planting pockets in rock slopes;
- (7) Leaving non-hazardous rock outcroppings to add variety; and

(8) Varying slopes to save specimen trees, rock outcrops, or other items of visual interest, provided they do not constitute a roadside hazard.

d. The intersection of cut and fill slopes with natural ground should be rounded to improve integration with the natural topography. Slopes are normally rounded for approximately 5 feet on each side of the intersection between the construction slope and natural ground.

e. Slope treatments include revegetation and other landscaping techniques used to stabilize slopes and retard erosion. Use serrated slopes, topsoil, mulch, and jute matting if local conditions justify them. Revegetation with native grass and wildflower species is preferred. Other landscape treatments such as tree and shrub plantings or selected thinning of adjacent vegetation can mitigate the impact of the construction in areas of high visual quality. The degree of treatment is scaled to the location and purpose of the road. Landscape treatments should be coordinated with a landscape architect.

5. Daylight Sections. Daylighting of cuts is recommended if the disturbed slope area is not excessive. To daylight a slope, use a ratio of approximately 100:1 beginning at the bottom of the side ditch.

6. Side Ditches. Side Ditches (borrow ditches) are adjacent to and parallel with the roadway shoulder. They also collect the runoff from the roadway from adjacent upstream areas if no intercept ditch is provided above the cut slope. The shape and dimensions of the ditch are selected to carry adequately the anticipated runoff from a major storm without saturation of subgrade or surfacing material. As it must be safe for errant vehicles, the ditch is wider for higher design speeds and has an inslope (the slope between the subgrade shoulder and the ditch bottom) of the same ratio as the flattest fill slope. Flat bottom ditches are recommended for higher speed roads, and slope slightly away from the traveled way. A minimum longitudinal gradient of 0.5 percent ensures good drainage. Vary ditch sections as required to satisfy differing conditions.

7. Turnouts. Turnouts are provided on single-lane roads for passing opposing traffic. Turnouts normally are spaced at a maximum distance of 1,000 feet. For higher volume or higher speed roads, a maximum distance of 700 feet is recommended. Locate turnouts where needed and where most economical. On haul roads, try to locate turnouts on the right side of the "empty" direction. The most economical locations for turnouts are usually on the low side in cuts, high side in fills, or at the transition between cuts and fills. Recommended turnout dimensions are 100 feet long with 50 foot transitions, but these may be changed to fit terrain. Width should be 10 feet. Eight foot width may be sufficient for longer turnouts. As vehicles generally come to a stop or are traveling at low speed at turnouts, the slope of the turnout may be less than the superelevation of the adjacent traveled way on curve sections.

a. Turnouts can provide a second lane to satisfy safe meeting sight distance requirements around blind curves; however, the design must still provide for safe

stopping sight distance. The minimum width of turnouts should be at least 10 feet, with additional width recommended for roads serving oversized vehicles. The cross slope of the turnout is the same as the adjacent traveled way cross slope. Satisfying meeting sight distance requirements by providing lateral clearance or by flattening curves is preferable to using blind-curve turnouts. Widening of the traveled way with long turnouts encourages higher speeds and increases hazard.

b. Long turnouts are acceptable for double-lane roads with high traffic volumes and a mix of fast and slow-moving vehicles. They allow passing on uphill grades. Safe passing sight distance is not required if lane markings or signing prevent opposing traffic from entering the passing lane.

c. Turnarounds are provided as needed on single lane roads. Turnaround dimensions must be adequate to allow the average vehicle using the road to turn around with minimum maneuvering.

8. Vertical and Horizontal Clearance. A minimum vertical clearance of 16 feet must be provided. This applies to all obstructions within the 16 feet. Clearances on already existing roads of less than 14 feet must be properly signed. See Manual Section 9130 – Sign Manual. A minimum horizontal clearance of 4 feet from the edge of traveled way is recommended. A runoff distance that is safe, negotiable by errant vehicles, and free of hazards located adjacent to the edge of the traveled way is recommended. If safe runoff distances for roads with design speeds of 30 mph and above cannot be provided, seriously consider installing guardrails or other protective devices, particularly when the road is used by the general public.

9. Curve and Guardrail Widening. Curve, guardrail, and fill widening requirements are independent of one another, but widening for any cause is integrated with normal pavement structure construction operations. See .12E1 – Subgrade Width.

a. Guidelines for determining curve widening are given in AASHTO “A Policy on Geometric Design of Highways and Streets” and Attachment 1. Curve widening is generally placed on the inside of a curve, with the transition generally occurring at the same location as the superelevation transition.

b. A 2-foot widening of the pavement structure, in addition to any necessary fill or curve widening, is required wherever a guardrail is to be placed. Length of transition for guardrail widening is governed by visual acceptability and State requirements.

F. Earthwork Design. BLM encourages balanced earthwork design. Waste or borrow is discouraged unless material characteristics require it. Adjust alignment, gradient, or slopes to eliminate need for waste or borrow, or utilize retaining walls, cribs, typical section adjustments, etc., to provide a balanced design. Side-cast waste is environmentally unacceptable. Any waste and borrow areas must be located out of view of the constructed roadway and in environmentally acceptable locations. Embankments should be constructed with the addition of suitable moisture to obtain density. Compact the top foot of material

beneath the pavement surface to a minimum of 95 percent maximum density as determined by AASHTO T-99 – “Moisture-Density Relations of Soils Using a 5.5-lb Rammer and a 12-in. Drop.”

G. Pavement Structures, Sections, and Compaction. Selection of materials typically used and available for construction in each state is recommended. BLM encourages the use of Federal Highway Administration's “Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects.” In addition, individual state Highway and Bridge Manuals and Specifications, distributed by that specific State Department of Transportation and/or Highways can be used to select appropriate materials, gradation, and compaction. See Illustrations 11 through 14 for typical sections and templates.

H. Drainage Elements. Proper drainage is critical in road design. Protection of the road, adjacent upstream land, and downstream lands depend upon proper drainage design. This requires knowledge of both hydrology and hydraulics.

1. Bridges and Major Culverts. Design must conform to Manual Section 9112 – Bridges and Major Culverts.
2. Drainage Culverts. Culverts are used for all minor drainage crossings, unless debris problems or unusually low volume justify the use of a ford. The ford must be safe and environmentally compatible. Very low volume resource roads that are outsloped or insloped are usually the only type that may utilize fords.
 - a. Culverts are to be designed using the appropriate hydraulic design procedures. Refer to AASHTO “Highway Drainage Guidelines” and State highway agencies for guidance. In addition, other publications are available from FHWA. Use any of the standard hydrologic and hydraulic design methods, but use a second method as a check to ensure that the solution is adequate but not extravagant. Special consideration may be necessary for debris passage.
 - b. The type of culvert is specified in the design. If possible, specify alternate acceptable culvert materials.
 - c. An 18-inch diameter or equivalent size is the smallest culvert normally used. Smaller sizes are difficult to clean and maintain.
 - d. Minimum recommended cover over a culvert is 12 inches or one-half the diameter, whichever is greater. Compliance with manufacturer's recommendations for cover over various culvert materials is necessary.
 - e. Culverts carrying runoff from one side of the road to the other between natural drainages are spaced as shown in Illustration 10 – Spacing for Drainage Laterals, unless local experience dictates otherwise.
 - f. The inlet and outlet treatments of culverts include drop inlets, downspouts, energy

dissipaters, flared ends, headwalls, riprap, paving, and beveled ends. Choose an end treatment that ensures that the culvert is properly protected, erosion is retarded, and the protrusion of the culvert is not a hazard to errant vehicles.

g. Culverts in small drainages should generally be aligned with the natural channel and with a gradient that maintains the natural drainage velocity so sedimentation or erosion is not increased. Culverts used as laterals are skewed to form an entrance angle of 45 to 60 degrees with the side ditch, and have a gradient equal to or slightly greater than the approach ditch gradient.

h. Culverts may be protected from debris by deflectors, racks, cribs, raisers, basins, spillways, or other controls. Incorporate debris protection as necessary.

i. Culverts must be designed for minimum impact on aquatic life. Open bottom shapes should be used if it is necessary to maintain the character of the streambed. If a closed bottom shape is used, install the culvert so the gradient does not exceed one-half percent, placing the invert at least 6 inches below the natural streambed, and fill the bottom with rock and gravel to simulate natural streambed characteristics. Any construction in fish-bearing streams must be accomplished during the time of year when the least aquatic environmental impact will occur.

3. Ditches and Channels.

a. Intercept ditches are used to intercept and carry sheet runoff to natural drainages before it can reach the roadway. A gradient of about 0.5 percent is recommended. Design intercept ditches to intercept and concentrate sheet runoff so the ditch does not erode.

b. Natural channels must be avoided when possible. If channel changes must be made, maintain the natural stream depth, width, general flow conditions, and characteristics as closely as possible. Use appropriate protective devices, such as gabions, deflectors, and plantings. Vegetation near banks can provide natural sediment filters, shade, and shadows. Vegetation on slopes adjacent to channels reduces erosion and provides a natural sediment filter.

4. Fords and Dips. Fords and dips may be used if they are not a hazard to traffic. Design fords and dips to provide safe stopping sight distance. The roadway must be stable and self cleaning. Place signs and flow depth markers to protect users.

5. Subsurface Drainage. Subsurface drainage is required to prevent failures due to excess moisture in the pavement structure beneath the surface course. Selection of appropriate material to allow water to drain is necessary. Intercept or drain water with subdrains if necessary. Prevent runoff from saturating the material by providing proper drainage away from the pavement structure.

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I. Cattleguards. Cattleguards are placed normal to the roadway centerline on the finished roadway grade. If the road will be surfaced in the future, place the cattleguard at the final design elevation, with a 50-foot temporary ramp on each side to provide a smooth crossing. Use Bureau standard designs for all cattleguards. Cattleguard widths and design loads must meet requirements of Manual Section 9113-.25 – Structure Widths.

J. Signs and Markers. Each road design must include provisions for traffic control signing. Signs and markers must be in place prior to opening the road to traffic. These must meet the requirements of Manual Section 9130 – Sign Manual and the Federal Highway Administration's (FHWA) "Manual on Uniform Traffic Control Devices." Roads open to traffic during construction must be signed in accordance with the FHWA's "Manual on Uniform Traffic Control Devices."

.13 Specifications, Drawings and Cost Estimates. Specifications and construction drawings must describe the location, design, and work to be accomplished in sufficient detail to ensure the project is constructed according to the designer's intent and that materials and methods of construction meet or exceed the quality required by the design standards.

A. Specifications. BLM uses the current edition of the FHWA's "Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects" for construction of roads and bridges, with amendment by the designer as needed. Coordination with State standard specifications is also recommended. In addition, CSI specifications are also acceptable.

B. Drawings. Drawings are prepared according to Manual Section 9102 – Facility Design, regardless of type of funds used for project construction. See Manual Section 9112 – Bridges and Major Culverts for bridge and major culvert drawings.

C. Cost Estimates. Prepare cost estimates in accordance with Manual Section 9102 – Facility Design, regardless of type of funds used for project construction. Cost allowances for timber sale roads are prepared in accordance with appropriate cost schedules.

.14 Permits. Permits may be required whenever a Bureau road intersects with a Federal-Aid, county, or municipal highway. US Army Corps of Engineers Section 404 Clean Water Act permits may be required for stream crossings or construction in streambeds. Determine permit requirements and secure any needed permits in a timely manner in order to prevent construction delays. Permits that contain provisions affecting construction methods or schedules must be addressed in the plans and specifications.

.2 Construction. See Manual Section 9103 – Facility Construction. Construction stakes are placed as precisely as required for the design survey. See .11B2 – Precision of Surveys.

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ITEMS	A	B	C	D	E	F
TRAVERSES						
Minimum linear closure	1/5000	1/3000	1/1000	1/600	1/300	1/100
Distance accuracy	1/7500	1/4500	1/1500	1/900	1/450	1/150
Angular accuracy (use least value)	1/7500. 30 sec. x $\sqrt{N^1}$ or 8.0 sec. per station. 2 sets, direct and reverse. 20 sec. rejection limit.	1/4500. 1 min. x $\sqrt{N^1}$ or 15 sec. per station. 1 set, direct and reverse. 1 min. rejection limit.	1/500. 90 sec. x $\sqrt{N^1}$ or 20 sec. per station.	1/900. If forward and backward bearings of tangents differ by more than 30 min. bearings must be computed as deflection angle traverse.	1/450. If forward and backward bearings of tangents differ by more than 1 deg., bearings must be computed as deflection angle traverse.	1/150
LEVEL CIRCUITS						
Vertical error of closure on bench mark (use least value)	$0.05\sqrt{M^2}$ or 0.0015 foot per station in level circuit.	$0.1\sqrt{M^2}$ or 0.0025 foot per station in level circuit.	$0.25\sqrt{M^2}$ or 0.005 foot per station in level circuit.	$1.0\sqrt{M^2}$ or 0.02 foot per station in level circuit.	$2.0\sqrt{M^2}$ or 0.04 foot per station in level circuit.	$4.0\sqrt{M^2}$ or 0.1 foot per station in level circuit.
CROSS SECTIONS						
Allowable deviation of the line projection from a true perpendicular to tangents and a true bisector of angle points.	$\pm 2^\circ$	$\pm 2^\circ$	$\pm 3^\circ$	$\pm 3^\circ$	$\pm 4^\circ$	$\pm 4^\circ$
Topography measurements must be taken so that variations in ground from a straight line connecting the cross section points will not exceed:	1.5'	1.5'	2.0'	2.0'	2.5'	3.0'
Horizontal and vertical accuracy, in feet, or percentage of horizontal distance measured from traverse line, whichever is greater.	0.1' to 0.5%	0.1' to 0.5%	0.2' to 1.0%	0.2' to 1.5%	0.3' to 2.0%	0.4' to 3.0%
SLOPE STAKES, REFERENCES, AND CLEARING LIMIT STAKES						
Horizontal and vertical accuracy, in feet, or percentage of horizontal distance measured from centerline or reference stake, whichever is greater.						
a. Slope reference stakes and slope stakes.	0.1'	0.1' to 0.5%	0.2' to 1.0%	0.2' to 1.5%	0.2' to 1.5%	0.3' to 2.0%
b. Clearing limits.	1.0'	1.0'	1.0'	1.5'	1.5'	2.0'

Derived from information included in BLM "Manual of Surveying Instructions, 1973."

ILLUSTRATION 1 – PRECISION REQUIREMENTS FOR ROAD SURVEYS

Major Divisions (1)	Letter (2)	Symbol (3)	Color (4)	Name (5)	Value as Base Material (6)	Value as Base Material (7)	Value as Base Material (8)	Potential Frost Action (9)	Compaction Ability and Reproduction (10)	Damage Characteristics (11)	Compaction Equipment (12)	Unit Dry Weight (lb per cu ft) (13)	Field CBR (14)	Relative Moisture, % (15)
Gravel and Coarse-grained Soils	GW		Red	Well-graded gravel or gravel-sand mixtures, little or no fines	Excellent	Good to Excellent	Good	None to Very Slight	Almost None	Excellent	Crawler-type Tractor, Rubber-tired Equipment, Steel-wheel Roller	125-140	60-80	300 or More
	GP		Yellow	Poorly-graded sands or gravel-sand mixtures, little or no fines	Good to Excellent	Good to Excellent	Poor to Fair	None to Very Slight	Almost None	Excellent	Crawler-type Tractor, Rubber-tired Equipment, Steel-wheel Roller	110-130	25-40	300 or More
	GM			Silty gravel, gravel-sand-silt mixtures	Good to Excellent	Good	Poor	Slight to Medium	Very Slight	Fair to Poor	Rubber-tired Equipment, Sheepfoot Roller, Close Contact of Moisture	130-145	40-80	300 or More
	GC			Clayey gravel, gravel-sand-clay mixtures	Good	Good	Poor	Slight to Medium	Slight	Poor to Fairly Impervious	Rubber-tired Equipment, Sheepfoot Roller	120-140	20-40	200-300
	SW		Red	Well-graded sands or gravelly sands, little or no fines	Good	Good	Poor	None to very Slight	Almost None	Excellent	Crawler-type Tractor, Rubber-tired Equipment	110-130	20-40	300-500
	SP		Yellow	Poorly-graded sands or gravelly sands, little or no fines	Fair to Poor	Fair to Poor	Poor to Not Suitable	None to very Slight	Almost None	Excellent	Rubber-tired Equipment, Sheepfoot Roller	120-135	10-25	200-300
	SM			Silty sands, sand-silt mixtures	Good	Good	Poor	Slight to High	Very Slight	Fair to Poor	Crawler-type Tractor, Rubber-tired Equipment	105-130	20-40	200-300
	SC		Green	Clayey sands, sand-silt mixtures	Fair to Poor	Fair to Poor	Not Suitable	Slight to High	Slight to Medium	Poor to Fairly Impervious	Rubber-tired Equipment, Sheepfoot Roller, Close Contact of Moisture	105-130	10-20	200-300
	ML			Inorganic Silts and Very Fine Sands, Rock Free Silty or Clayey Fine Sands, or Clayey Silts with Slight Plasticity	Fair to Poor	Fair to Poor	Not Suitable	Medium to Very High	Slight to Medium	Fair to Poor	Rubber-tired Equipment, Sheepfoot Roller, Close Contact of Moisture	100-125	5-15	100-200
	CL			Inorganic Clays of Low to Medium Plasticity, Gravels, Clays, Silty Clays, Silty Clayey Clays, Lean Clays	Poor	Poor	Not Suitable	Medium to Very High	Medium	Fairly Impervious	Rubber-tired Equipment, Sheepfoot Roller	90-105	4-8	100-200
Fine-grained Soils	OL		Blue	Organic Silts and Organic Silty Clays of Low Plasticity	Poor	Poor	Not Suitable	Medium to Very High	High	Fair to Poor	Sheepfoot Roller	80-100	4-8	100-200
	MH			Inorganic Silts, Medium to High Plasticity, or Organic Silts, Silty Clays, Silty Clayey Clays, Fat Clays	Poor	Poor to Very Poor	Not Suitable	Medium to Very High	High	Fairly Impervious	Sheepfoot Roller	90-110	2-5	50-100
	CH			Organic Clays or High Plasticity, Fat Clays	Poor to Very Poor	Poor to Very Poor	Not Suitable	Medium	High	Fairly Impervious	Sheepfoot Roller	80-105	3-5	50-100
	OH		Orange	Organic Clays of Medium to High Plasticity, Organic Silts	Poor to Very Poor	Poor to Very Poor	Not Suitable	Medium	High	Fairly Impervious	Sheepfoot Roller	80-105	3-5	50-100
Highly Organic Soils	Pt			Peat and Other Highly Organic Soils	Not Suitable	Not Suitable	Not Suitable	Slight	Very High	Fair to Poor	Compaction Not Practical			

Notes:

- Column 3: Division of GM and SM groups into sub-divisions of "d" and "u" are for roads only; sub-division is on basis of Atterberg Limits: suffix "d" (e.g. GM(d)) will be used when the liquid limit is greater than 25 and the plasticity index is greater than 4; suffix "u" will be used when the liquid limit is greater than 25 and the plasticity index is less than 4.
- Column 7: Values are for subgrade and base courses except for base course directly under bituminous pavement.
- Column 8: The term "excellent" has been reserved for base materials consisting of high-quality processed crushed stone.
- Column 13: The equipment listed will usually produce the required densities with a reasonable number of passes when moisture conditions and thickness of lift are properly controlled. In some instances, several types of equipment are listed because "variable soil characteristics within a given soil group may require different equipment. In some instances, a combination of two types may be necessary."
- Column 15: Unit dry weights are for compacted soils at optimum moisture content for modified AASHTO compactive effort.
- Finishing: Rubber-tired equipment is recommended for finishing operations for most soils and processed materials.

The Unified Soil Classification System, Appendix B, Army Engineer Waterways Experiment Station, Vicksburg, MS, May 1967.

ILLUSTRATION 2 — CHARACTERISTICS OF UNIFIED SOIL CLASSIFICATION SYSTEM PERTINENT TO ROADS

MAXIMUM DEGREE OF CURVE (MINIMUM RADIUS) FOR
VARIOUS SURFACE TYPES, DESIGN SPEEDS, AND
MAXIMUM SUPERELEVATION RATES

SURFACE TYPE	DESIGN SPEED (MPH)	SIDE-FRICTION FACTOR	MAXIMUM SUPERELEVATION RATE (%)				
			2	4	6	8	10
PAVED	10	.16	115°(50')	115°(50')	115°(50')		
	15	.16	73°(79')	77°(74')	81°(71')		
	20	.16	38°(150')	44°(130')	48°(120')		
	30	.16		18°(320')	21°(270')	23°(250')	
	40	.15		10°(500')	11°(510')	12°(480')	13°(430')
	50	.14		6°(930')	7°(830')	8°(760')	8°(690')
UNPAVED	10	.12	115°(50')	115°(50')	115°(50')		
	15	.12	52°(110')	61°(94')	70°(82')		
	20	.10	26°(220')	30°(190')	34°(165')		
	30	.09		12°(460')	14°(385')	15°(350')	
	40	.09		7°(820')	8°(720')	9°(630')	10°(560')
	50	.10		4°(1400')	5°(1200')	6°(1000')	6°(930')

Notes:

1. Values have been rounded to nearest even degrees and to two significant figures for radii.
2. Derived from AASHTO "A Policy on Geometric Design of Highways and Streets, 2004."

ILLUSTRATION 3 – MAXIMUM CURVATURE AND
RECOMMENDED SUPERELEVATION RATES

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WET PAVEMENT – MINIMUM STOPPING SIGHT DISTANCES					
DESIGN SPEED (MPH)	ROAD GRADE (%)				
	+16 TO +10	+10 TO +3	+3 TO -3	-3 TO -10	-10 TO -16
10	45	50	50	50	55
15	75	75	80	85	90
20	115	120	125	135	150
30	180	190	200	225	240
40	235	260	275	325	375
50		320	350	450	

WET PAVEMENT – MINIMUM INTERSECTION SIGHT DISTANCE						
DESIGN SPEED (MPH) OF MAJOR ROAD	10	15	20	30	40	50
MINIMUM INTERSECTION SITE DISTANCE (FT)	100	150	200	300	400	500

MINIMUM PASSING SIGHT DISTANCE						
DESIGN SPEED (MPH)	10	15	20	30	40	50
MINIMUM PASSING SITE DISTANCE (FT)	500	700	850	1100	1500	1800

MINIMUM MEETING SIGHT DISTANCE				
DESIGN SPEED (MPH)	10	15	20	30
MINIMUM MEETING SITE DISTANCE (FT)	100	160	250	400

Derived from AASHTO “A Policy on Geometric Design of Highways and Streets, 2004.”

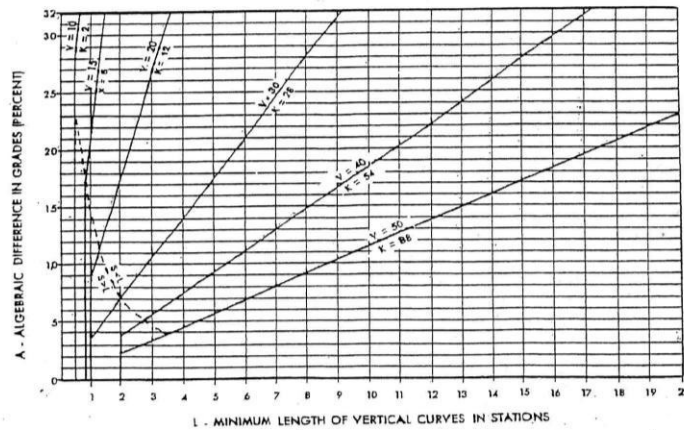
ILLUSTRATION 4 – MINIMUM SIGHT DISTANCE

H-9113-1 ROAD DESIGN HANDBOOK



Height of Eye, $[H_1]$, is 3.75' Above Roadway
Height of Object, $[H_2]$, is 0.50' Above Roadway

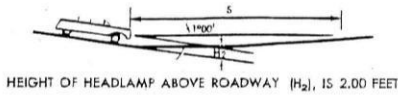
L=LENGTH OF VERTICAL CURVE IN FEET	DESIGN SPEED, M.P.H.	MINIMUM SIGHT DISTANCE, [S] REQUIRED, IN FEET	E=RATE OF VERTICAL CURVATURE, LENGTH PER PERCENT OF A CURVE WHEN S=L	MINIMUM LENGTH OF VERTICAL CURVE WHEN S=L
$L = \frac{A S^2}{200 H_1 + H_2}$ WHEN $S \leq L$	10	30	2	50
$S = 37.4 \sqrt{L/A}$	15	80	3	80
	20	100	12	100
	30	200	28	100
	40	275	34	200
	50	350	88	200
$K = \frac{L}{A}$ or $L = KA$ Rounded for Design				



Derived from AASHTO "A Policy on Geometric Design of Highways and Streets, 2004."

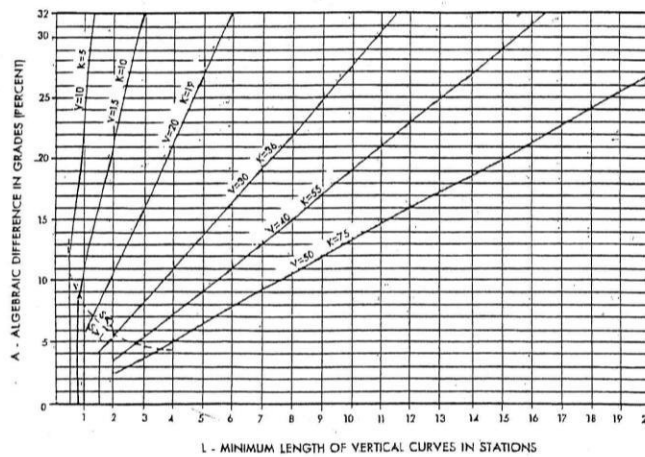
ILLUSTRATION 5 – CREST VERTICAL CURVES BASED ON MINIMUM STOPPING SIGHT DISTANCE

H-9113-1 ROAD DESIGN HANDBOOK



HEIGHT OF HEADLAMP ABOVE ROADWAY $[H_2]$, IS 2.00 FEET

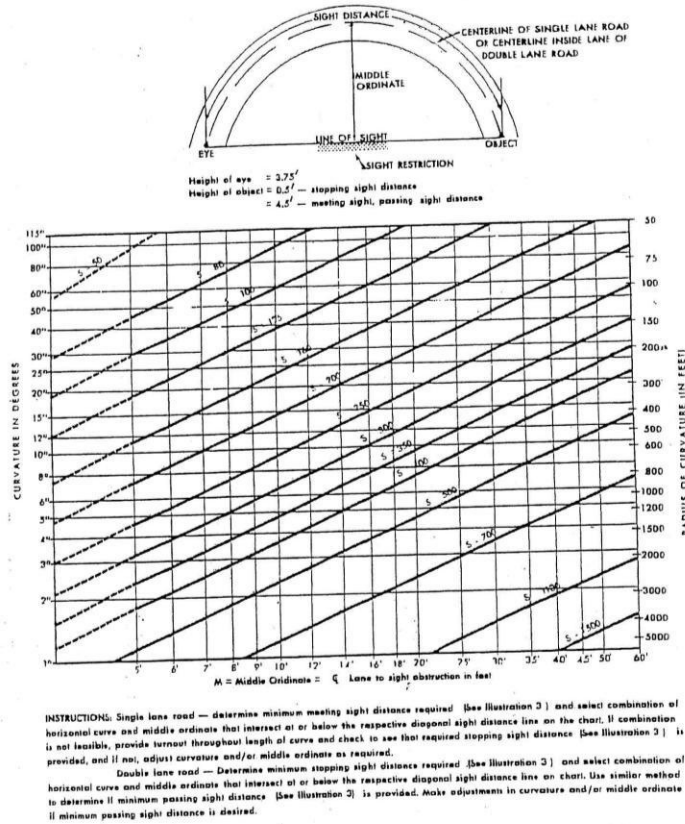
L=LENGTH OF VERTICAL CURVE IN FEET	DESIGN SPEED A.M.P.H. (V)	MINIMUM SIGHT DISTANCE (S) REQUIRED, IN FEET	K=RATE OF VERTICAL CURVATURE LENGTH PER PERCENT OF A	MINIMUM LENGTH OF VERTICAL CURVE WHEN S=L
$L = \frac{AS^2}{200H_2 + 3.55}$ When $S \leq L$	10	50	5	50
	15	80	10	80
	20	125	15	100
	30	200	36	150
	40	275	55	200
	50	350	75	200
$K = \frac{L}{A}$ OR $L = KA$ Rounded for Design				



Derived from AASHTO "A Policy on Geometric Design of Highways and Streets, 2004."

ILLUSTRATION 6 — SAG VERTICAL CURVES BASED ON MINIMUM STOPPING SIGHT DISTANCE

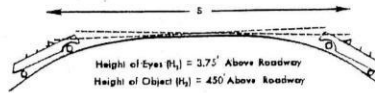
H-9113-1 ROAD DESIGN HANDBOOK



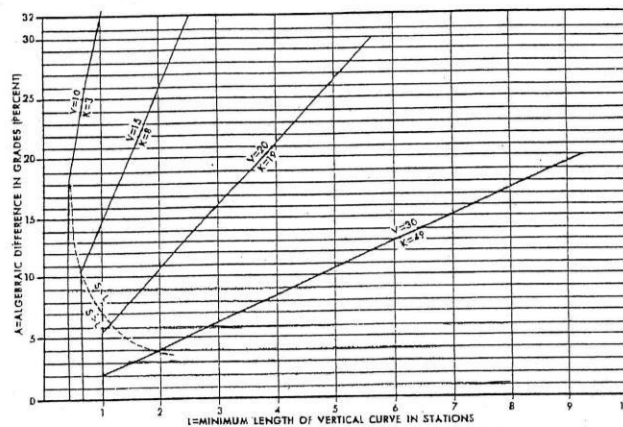
Derived from AASHTO "A Policy on Geometric Design of Highways and Streets, 2004."

ILLUSTRATION 7 — SIGHT DISTANCES PROVIDED BY
 VARIABLE LATERAL CLEARANCE AND
 CURVE COMBINATIONS

H-9113-1 ROAD DESIGN HANDBOOK



L = LENGTH OF VERTICAL CURVE IN FEET	DESIGN SPEED (M.P.H.)	MINIMUM SIGHT DISTANCE (S) REQUIRED IN FEET	K = RATE OF VERTICAL CURVE LENGTH PER PERCENT OF A	MINIMUM LENGTH CURVE WHEN $S > L$
$L = \frac{AS^2}{200(\sqrt{H_1} + \sqrt{H_2})^2}$ WHEN $S < L$	10	100	3	50
	15	160	8	80
$K = \frac{L}{A}$ or $L = KA$ Rounded for Design	20	250	19	100
	30	400	49	100



Derived from AASHTO "A Policy on Geometric Design of Highways and Streets, 2004."

ILLUSTRATION 8 — CREST VERTICAL CURVES BASED ON MINIMUM MEETING SIGHT DISTANCE (Single Lane Roads Only)

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SUPERELEVATION RATE (%)	DESIGN SPEED (MPH)					
	10	15	20	30	40	50
2	24	27	30	36	42	48
3	36	41	45	54	63	72
4	48	54	60	72	84	96
5	60	68	70	90	105	120
6	72	82	95	108	126	144
7				126	147	168
8				144	168	192
9				162	189	216
10				180	210	240

NOTES:

1. Use 0.75 of values shown for single lane roads with centerline crowns.
2. Use values shown for double lane roads and shoulder crowned single lane roads.
3. Derived from AASHTO "A Policy on Geometric Design for Highways and Streets, 2004."

ILLUSTRATION 9 – MINIMUM SUPERELEVATION RUNOFF LENGTHS

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Recommended Spacing for Lateral Drainage Culverts in Various Soil Types*										
Soil Types	Erosion Index									
	10	20	30	40	50	60	70	80	90	100
Silty sands, sand-silt mixtures, inorganic silts and very fine sands, silty or clayey fine sands	→	→								
Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts, organic silts or organic silty clays or low plasticity, inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays			→	→						
Organic clays of medium to high plasticity, organic silts, inorganic clays of high plasticity, fat clays, clayey sands, sand-clay mixtures, silty-gravels, gravel-sand-silt mixtures					→	→				
Clayey gravels, gravel-sand-clay mixtures							*			
Clean sands or clean gravelly sands								→	→	
Clean gravels or sand-gravel mixtures										*

* Unified Soil Classification

Recommended Spacing (ft)										
Gradient (%)	Erosion Index									
	10	20	30	40	50	60	70	80	90	100
2	900	1225								
3	600	815	1070	1205						
4	450	610	800	905	1015					
5	360	490	640	725	810	865	1000			
6	300	410	535	605	675	720	835	1010		
7	255	350	455	515	580	620	715	865	1030	1210
8	225	305	400	450	505	540	625	755	900	1055
9	200	270	355	400	450	480	555	670	800	940
10	180	245	320	360	405	435	500	605	720	845
11	165	220	290	330	370	395	455	550	655	770
12	150	205	265	305	340	360	415	505	600	705
13	140	190	245	280	310	335	385	465	555	650
14	130	175	230	260	290	310	355	430	515	605
15	120	165	215	240	270	300	335	405	480	565
16	115	150	200	225	255	280	310	380	450	530

Note: This table is based on rainfall intensities of 1 to 2 inches per hour following a 15 minute period with an expected interval recurrence of 25 years. For areas having intensities other than 1 to 2 inches per hour, divide values in the table as follows:

Rainfall Intensity	Divisor
2-3 inches per hour	1.50
3-4 inches per hour	1.75
4-5 inches per hour	2.00
Less than 1 inch per hour	Whatever the intensity (.75, .85, etc.)

Derived from AASHTO "A Policy on Geometric Design of Highways and Streets, 2004."

ILLUSTRATION 10 — SPACING FOR DRAINAGE LATERALS

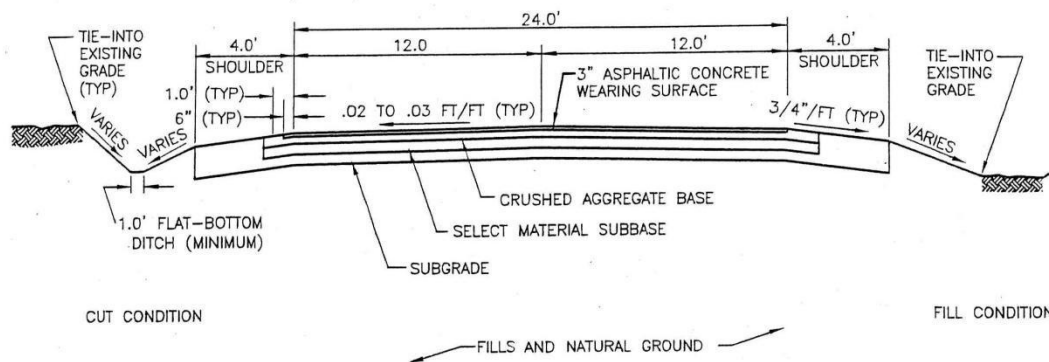


Notes:

1. The tack coat would be placed between the surface course and intermediate course(s). The prime coat would be place between the intermediate course(s) and the base course.
2. The flexible pavement structure, aggregate pavement structure, and rigid pavement structure consist of the layers from the surface course through the compacted subgrade, inclusive.
3. The word “structure” is often deleted from the phrases “flexible pavement structure,” “aggregate pavement structure,” and “rigid pavement structure.”
4. Developed by M. A. Nelson, PE, BLM, 2009.

ILLUSTRATION 11 – TYPICAL SECTION ILLUSTRATING
TYPICAL PAVEMENT STRUCTURE TERMINOLOGY

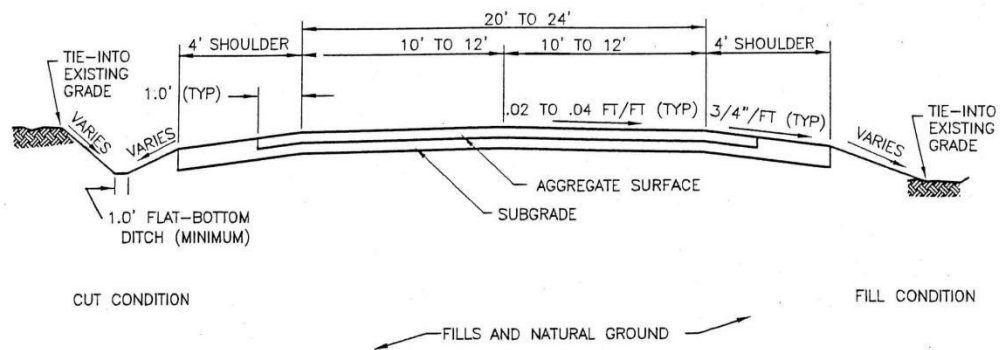
H-9113-1 ROAD DESIGN HANDBOOK



Developed by M. A. Nelson, PE, BLM, 2009.

ILLUSTRATION 12
TYPICAL ROADWAY SECTION — FLEXIBLE PAVEMENT
(ASPHALTIC CONCRETE)
NOT TO SCALE

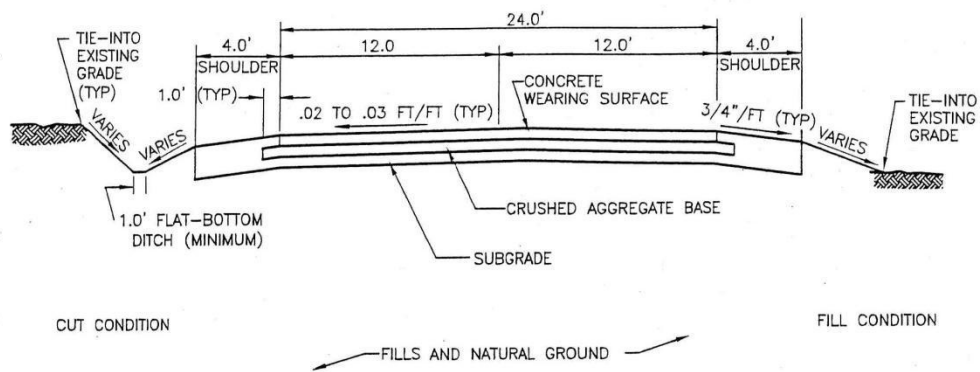
H-9113-1 ROAD DESIGN HANDBOOK



Developed by M. A. Nelson, PE, BLM, 2009.

ILLUSTRATION 13
TYPICAL ROADWAY SECTION — AGGREGATE PAVEMENT
NOT TO SCALE

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Developed by M. A. Nelson, PE, BLM, 2009.

ILLUSTRATION 14
TYPICAL ROADWAY SECTION
RIGID PAVEMENT (CONCRETE)
NOT TO SCALE

ATTACHMENT 1
CURVE WIDENING

An outline of considerations and minimum lane width (MLW) equations for the determination of widening roads required on some curves to provide for off-tracking of tractor-trailer vehicles and for some light vehicle-trailer combinations are shown below. This widening is referred to as curve widening. Exhibits A and B are graphs developed from the minimum lane width equation and the vehicle configuration described.

I. CONSIDERATIONS.

A. DESIGN VEHICLE

1. GENERAL DESCRIPTION. Curve widening is considered part of the traveled way. As such, the determination of the amount of widening should consider several types of vehicles.
2. VEHICLES MOST COMMONLY CONSIDERED.
 - a. Tractor-trailer combinations where the fifth wheel is located directly over the drive wheels, such as a lowboy or gravel truck.
 - b. Tractor-trailer combinations with the towing pivot point offset to the rear of the drive wheels, such as logging trucks with “stingers” to facilitate short radius turns.
 - c. Tractor-trailer combinations which have two fifth wheels and accessory axles.
 - d. Yards arranged in an operational mode or travel configuration.

B. TRAFFIC SERVICE LEVEL

1. GENERAL DESCRIPTION. A factor to be considered in determining the type of vehicles to design for is the traffic service level of the road to be designed. The determination of the traffic service level should be based on present and future needs of the area the road is going to service.
2. TRAFFIC SERVICE LEVEL CONSIDERATION.
 - a. TRAFFIC SERVICE LEVEL A. Usually Collector Roads.

CONSIDERATION – Design curve widening to accommodate the design vehicles (normally lowboy) at the design speed for each curve. Curve widening for critical vehicles should be provided if the needed width is not available. The critical vehicle should be accommodated in its normal travel

configuration. Curve widening should be provided in each lane of double-lane roads.

- b. TRAFFIC SERVICE LEVEL B. Usually Local Roads.

CONSIDERATION – Same as Traffic Service Level A except that curve widening for critical vehicles should be provided by use of other road elements, if planned, such as turnouts or shoulders. The critical vehicle configuration may have to be altered.

- c. TRAFFIC SERVICE LEVEL C. – Usually Resource Roads.

CONSIDERATION – Curve widening should be provided only for the design vehicle. Loads carried by the critical vehicle should be off-loaded and walked to the project or transferred to vehicles capable of traversing the road. Temporary widening to permit the passage of larger vehicles may be accomplished by methods such as temporary filling of the ditch at narrow sections.

II. DETERMINATION.

A. MINIMUM LANE WIDTH

1. GENERAL DESCRIPTION – Curve widening is affected by the type of vehicle, radius of curvature, and the delta or central angle. Generally, the need for curve widening increases as the radius decreases; shorter curves require less curve widening than longer curves. It is not necessary to add curve widening to all curves; if the minimum lane width is equal to or less than the basic traveled way width no curve widening is required.
2. EQUATION. The minimum lane width, which includes two feet for tracking corrections, is given by the following equations which was developed by combining the delta or central-angle variation characteristics of trailer tractrix equations with the off-tracking equations commonly used. The equation is accurate for a radius of 50 feet or greater and has been field checked.

$$MLW = 10 + \left\{ \left[R - \sqrt{R^2 - L^2} \right] \left[1 - e^{(-.015\Delta R / L) + .216} \right] \right\}$$

Where:

R = Centerline radius (in feet)

E = Base for natural logarithms

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Δ = Central angle (in degrees)

- a. For a lowboy or standard tractor-trailer:

$$L = \sqrt{L1^2 + L2^2 + L3^2}$$

Where:

L1 = Wheel base of tractor (in feet)

L2 = Distance from the fifth wheel to the middle of the rear duals for the first trailer (in feet)

L3 = Distance from the fifth wheel to the middle of the rear duals for the second trailer (in feet)

- b. For a “stinger” type log truck:

$$L = \sqrt{L1^2 + L3^2 - L2^2}$$

Where:

L1 = Wheel base of the tractor (in feet)

L2 = Length of the “stinger” measured from the middle of the tractor rear Duals to the end of the “stinger” (in feet)

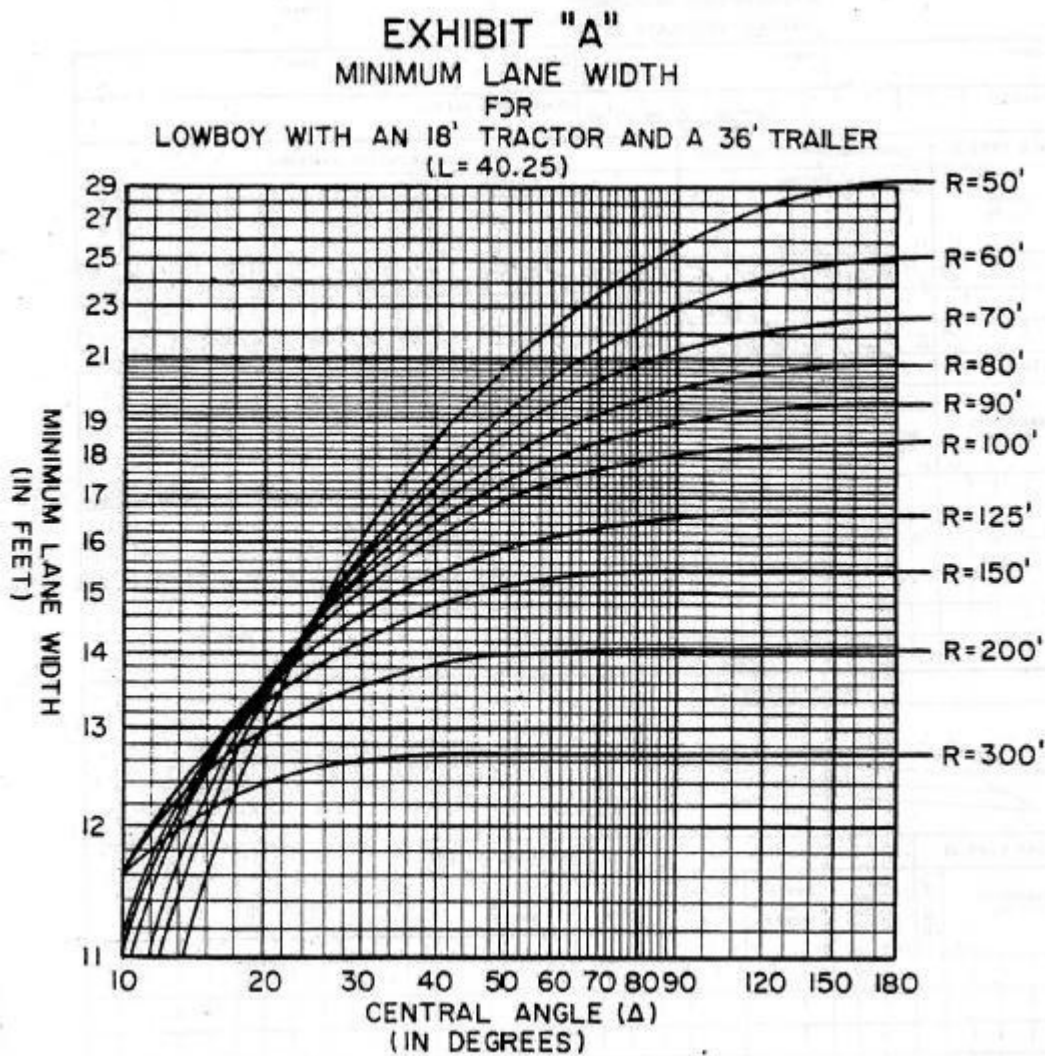
L3 = Bunk to bunk distance minus the length of the “stinger” (in feet)

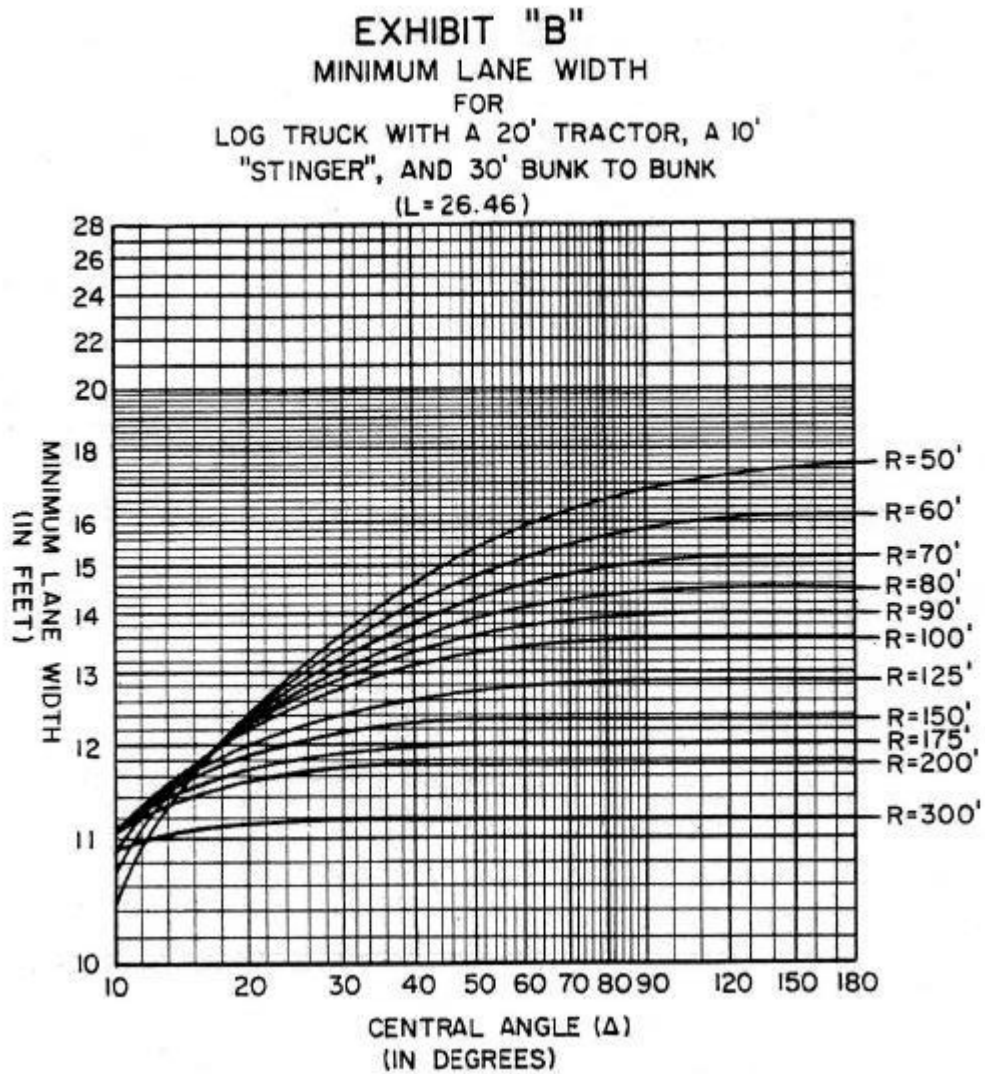
Exhibit A and Exhibit B were developed from these equations and can be used for common lowboy and logging truck configuration described.

B. TAPER LENGTHS

1. GENERAL DESCRIPTION – Curve widening tapers should be straight lined before the point of curvature (PC) and after the point of tangency (PT) for the following lengths:

RADIUS (R) (in feet)	TAPER LENGTH (T) (in feet)
Less than 70	60
70-85	50
86-100	40
Greater than 100	30





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Permit Notes

Permit Number: PZ-26-00059

Applicant: Riedel, Tania

Owner: RIEDEL, TANIA J

Parcel Number: 14701110000100

Site Address: 470 HAPPY JACK RD

Cheyenne, WY 82009

Submitted: 06/30/2026

Technically Complete: 06/30/2026

Approved: Issued:

Project Description:

The purpose of this project is to restore the historic Bit-O-Wyo Ranch as a seasonal event venue while preserving the property's historic character, natural landscape, and Wyoming heritage. The project will provide a destination for weddings, corporate retreats, family gatherings, community events, horseback riding, guided hiking, and other private events in a setting that celebrates the unique beauty of southeastern Wyoming.

Rather than constructing a new commercial development, this project represents the adaptive reuse of an existing ranch property that has historically operated as a destination for tourism, recreation, and hospitality for more than four decades. The proposed improvements are intended to modernize the property's infrastructure while preserving the natural character of the site and minimizing disturbance to the existing landscape.

The project will utilize the existing venue and supporting facilities, with improvements including upgrades to utilities, accessibility, life safety systems, parking, and site amenities necessary to support the proposed use. Site improvements have been designed to preserve the property's existing topography, native vegetation, and natural drainage patterns to the greatest extent practicable.

See attached narrative for further information.

Begin Date	End Date	Permit Area	Subject	Note Type	Note Text	Created By
07/01/2026		Fees	SITE PLAN: NEW, ADJUST AMOUNT REVISED, AND SIMPLE		Adjusted Amount - 0.00 charge per Justin Arnold due to Class C not required and will adjust amount for final fees.	SONNY.HOOPS@LARAMIECOUNTYWY.GOV
07/01/2026		Workflow	GIS REVIEW	GENERAL	It appear primary access is intended to be off Brush Creek RD. It will be prudent to make sure this site had an address that reflects it location and primary access accurately. It might be prudent to consider changing the address for the residence as well as assigning a unique address to the commercial endeavor.	CAMBIA.MCCOLLOM@LARAMIECOUNTYWY.GOV
07/06/2026	07/06/2026	Application	PZ-26-00059	CORRESPONDENCE	No concerns noted.	CONSERVATIONDISTRICT@LARAMIECOUNTYWY.GOV
07/06/2026	07/06/2026	Workflow	COUNTY ASSESSOR REVIEW	GENERAL	No comments.	CINDY.KEMIVES@LARAMIECOUNTYWY.GOV
07/06/2026	07/06/2026	Workflow	COUNTY REAL ESTATE OFFICE REVIEW	GENERAL	no comments	TERESA.LEMASTER@LARAMIECOUNTYWY.GOV
07/10/2026		Workflow	BUILDING FIRE CODE REVIEW	GENERAL	Fire Apparatus Roads required per 2024 IFC section 503 20' minimum lane width shall be maintained with turning radius determined by LCFA for the type of vehicle most likely to respond. Current site plan shows no areas for fire apparatus turn around and must be included on site plan.	JEFFREY.COOPER@LARAMIECOUNTYWY.GOV
07/13/2026		Application	PZ-26-00059	GENERAL	Please note the Department's review letter for this project. Thank you again for the opportunity to comment.	WYGAMEFISHDEPT@LARAMIECOUNTYWY.GOV

Permit Notes

07/13/2026	07/13/2026	Application	PZ-26-00059	GENERAL	Ensure that emergency services has proper access and egress. Looks like the aisle width of the parking lot is only 14ft - ensure that this aisle width is at the proper width according to the LCLUR.	MATTHEW.BUTLER@LARAMIECOUNTY.WY.GOV
07/14/2026		Workflow	ENGINEERS REVIEW	GENERAL	1st Review 1.All access roadways, drive lanes, etc. are required to be a minimum of 20' wide to accommodate emergency vehicles. 2.The radii on the access roadway/lane needs to be called out. May need to provide/show turning movements for emergency vehicles to show they can make it around/through the one way lane if the radii are too small. 3.I believe ADA requires there to be ADA parking spaces provided and an ADA path (concrete or asphalt) from the parking spaces to the entrance of the building. Where will the ADA parking be located? 4.The parking layout drawing indicates the parking area is to be 227 feet long with 25 spaces that are 9.5 feet wide. 25 spaces at 9.5 feet wide would be 237.5 feet long at least and that would be just for perpendicular parking, it would end up being longer for angled parking. 5.The drawings for the site and the parking need to indicate that all access roads, drive lanes, and parking area, etc. are to have a minimum of 6" of road base material placed. 6.How will the parking spaces be delineated? With concrete parking blocks or what method will be used? This needs to be indicated on the site/parking plan drawings. 7.Will there be trash dumpsters, if so, where, how many, and will there be screening for them? 8.Based on the area of the parking lot and the drive lane, it appears there will be less than 20,000 sq.ft. of impervious and semi-impervious area. Therefore, it does not meet the requirements for a Drainage Report, per the regulations, and a request for a waiver is not necessary.	SCOTT.LARSON@LARAMIECOUNTY.WY.GOV
07/15/2026		Workflow	ENVIRONMENTAL HEALTH REVIEW	GENERAL	Plan review for kitchen/bar has not yet been submitted, submit at least 30 days prior to construction. Septic permit has been issued for septic system with grease trap but has not been installed yet, call for inspection once septic system is installed.	JENNIFER.ESCOBEDO@LARAMIECOUNTY.WY.GOV
07/15/2026		Workflow	PUBLIC WORKS REVIEW	DEFICIENCY	1. This site plan will NOT be approved by Public Works until such time that Brush Creek Road and the BLM easement (if approved for this commercial use) have been designed and built through a right-of-way permit with acceptance by Laramie County Public Works. They shall meet the requirements within the Laramie County Land Use Regulations for the roadway(s) and Floodplain crossings. Neither access will accommodate the needs of emergency services for ingress and egress at this time. 2. The approved access easement from BLM shall be submitted with the right-of-way permit.	MOLLY.BENNETT@LARAMIECOUNTY.WY.GOV

Permit Notes

07/15/2026	Workflow	PUBLIC WORKS REVIEW	DEFICIENCY	1. This site plan will NOT be approved by Public Works until such time that Brush Creek Road and the BLM easement (if approved for this commercial use) have been designed and built through a right-of-way permit with acceptance by Laramie County Public Works. They shall meet the requirements within the Laramie County Land Use Regulations for the roadway(s) and Floodplain crossings. Neither access will accommodate the needs of emergency services for ingress and egress at this time. 2. The approved access easement from BLM shall be submitted with the right-of-way permit.	MOLLY.BENNETT @LARAMIECOUNT WY.GOV
07/16/2026	Application	PZ-26-00059	GENERAL	A floodplain development permit shall be required for crossing of the SFHA on the BLM property.	JUSTIN.ARNOLD@ LARAMIECOUNTY WY.GOV



Wyoming Game and Fish Department

Conserving Wildlife, Serving People

Governor Mark Gordon • Director Angi Bruce

Commissioners

Mark Jolovich, President
Rusty Bell, Vice President
Ashlee Lundvall
Bill Mai
Carlisle "Fonzy" Haskell
John Masterson
Kenneth D. Roberts

July 13, 2026

WER 4502.212

Laramie County Planning & Development Department

Bit-O-Wyo Site Planning

PZ-26-00059

Laramie County

Sonny Pourchot

Associate Planner

Laramie County Planning & Development Department

3966 Archer Pkwy

Cheyenne, WY 82009

Sonny.Pourchot@laramiecounty.gov

Dear Ms. Pourchot,

The staff of the Wyoming Game and Fish Department (Department) has reviewed the proposed Bit-o-Wyo Ranch Renovation at T14N R70W in Section 2 and 11. The Department is statutorily charged with managing and protecting all Wyoming wildlife (W.S. 23-1-103). Pursuant to our mission, we offer the following comments for your consideration.

The proposed project entails renovating a historic guest ranch for contemporary commercial guest use. This would include an access road right-of-way and new parking area constructed on lands managed by the Bureau of Land Management (BLM), as well as work on a historic ranch venue located on private lands.

The site is located in foothill shrubland and xeric forest habitat, in an area delineated as yearlong crucial winter range for the Laramie Mountains Mule Deer Herd. The Laramie Mountains Mule Deer Herd is currently substantially below its population objective due to population threats including habitat conversion and other anthropogenic impacts, as well as habitat impacts from drought and invasive species. The site is also located as close as approximately 200 feet from Brush Creek, a Yellow Ribbon trout stream of regional importance that supports 50-299 pounds of trout per mile, as well as provides habitat to native fish and amphibian species.

Terrestrial Recommendations:

Avoid impacts to wintering mule deer – The site is located in mule deer crucial winter range for the Laramie Mountains Mule Deer Herd Unit. Crucial winter range habitat is defined as habitat that is a determining factor in a population's ability to maintain itself at the desired level over the long term. This deer herd is currently substantially below its population objective due to habitat

fragmentation and conversion, as well as many other factors. Construction activity and human presence associated with project development will reduce the functionality of mule deer crucial winter range habitat in this area. As such, Department recommends Laramie County consider a condition of the permit:

- Timing all ground-disturbing construction activities outside the winter stipulation period of November 15 – April 30.

Avoid negative impacts to big game from fencing – Traditional 5-strand barbed wire presents a significant hazard to big game via entanglement and movement barriers. We recommend avoiding construction of new fencing, and if fencing is required, utilizing wildlife-friendly fencing. The lowest wire should be high enough for wildlife to crawl under, and should minimize the chance of tangling. We recommend that Laramie County consider a condition of the permit:

- Avoiding the construction of new fencing, if possible.
- If new or replaced fencing is required, utilizing wildlife-friendly fencing with the following specifications:
 - The fence should be constructed of either three or four wire strands.
 - The bottom wire should be smooth and at least 16”, preferably 18” or more, high.
 - There should be at least 12” between the top two wires.
 - The top wire or rail should be smooth wire or rail and be a maximum of 42”, and preferably no more than 40”, above the ground.
 - Alternatively, buck and rail or split rail fencing may be used.
- More information about wildlife-friendly fencing may be found at: <https://wgfd.wyo.gov/sites/default/files/2025-04/Wyoming%20Fences%20&%20Wildlife%20Handbook-031725.pdf>

Prevent the spread of invasive annual grasses and noxious weeds – Noxious weeds and invasive annual grasses (IAGs) can cause significant harm to the ecosystem when introduced. Ground-disturbing activities can create an environment that facilitates establishment by unwanted plants. They significantly reduce the quality of wildlife habitat and their presence increases the probability of catastrophic wildfire. The potential economic impacts to the State of Wyoming are severe, and once these species become established, eradication is difficult and costly. Prevention of establishment remains the best way to keep Wyoming's habitats free of noxious weeds and IAGs.

The most significant known threat to Wyoming is from cheatgrass, medusahead, and ventenata. To prevent the spread of noxious weeds and IAGs, we recommend the following measures be made conditions of the permit:

- Prevent introduction and establishment by cleaning vehicles and equipment prior to movement to a new location in order to minimize the potential for transporting seeds.
- Develop and implement a plan to assess, treat, and monitor for noxious weeds and invasive plants at the project scale and in the adjacent landscape where they are present.

- Work with the local [Laramie County Weed and Pest](#) to implement and fund long-term plans for successful restoration of disturbed sites. Additional information on prevention and treatment options for these grasses can be found at <https://www.invasivegrasses.com/>.

Aquatic Recommendations:

Maintain aquatic habitat quality – The project area is located adjacent to Brush Creek, within approximately 200 feet. Brush Creek is a Yellow Ribbon trout stream and also provides important habitat for sensitive wildlife including amphibian Wyoming Species of Greatest Conservation Need like northern leopard frog, as well as numerous bird and mammal species that heavily utilize aquatic and wetland habitat in arid shrubland/montane habitat. Sediment, untreated water, and various pollutants can negatively impact water quality and habitat for aquatic wildlife. The Department recommends that best management practices be used to control erosion and sedimentation during construction activities, in order to minimize impacts to aquatic resources, including:

- Properly containing stockpiles of materials and locating them away from aquatic or wetland habitat or areas of potential storm water concentrated flow.
- Cleaning, fueling, and maintaining vehicles and equipment at designated off-site areas located at least 500 feet from aquatic or wetland habitat.
- Keeping all chemicals, solvents and fuels at least 150 feet away from aquatic or wetland habitat.
- Preserving existing vegetation wherever possible.
- Stabilizing all exposed surfaces with vegetation, mulch, and/or soil binders.
- Utilizing rolled erosion control products, temporary slope drains, fiber rolls, compost socks, and/or silt fences where appropriate.

Thank you for the opportunity to comment. If you have any questions or concerns, please contact Lauren Throop, Habitat Protection Biologist, at (307) 721-1396.

Sincerely,



Will Schultz
Habitat Protection Supervisor

WS/lr/tt

cc: U.S. Fish and Wildlife Service
Chris Wichmann, Wyoming Department of Agriculture
John Martin, Bureau of Land Management, Rawlins Field Office
Mary Read, Bureau of Land Management, Rawlins Field Office

Permit Notes

Permit Number: PZ-26-00059

Applicant: Riedel, Tania

Owner: RIEDEL, TANIA J

Parcel Number: 14701110000100

Site Address: 470 HAPPY JACK RD

Cheyenne, WY 82009

Submitted: 06/30/2026

Technically Complete: 06/30/2026

Approved: Issued:

Project Description:

The purpose of this project is to restore the historic Bit-O-Wyo Ranch as a seasonal event venue while preserving the property's historic character, natural landscape, and Wyoming heritage. The project will provide a destination for weddings, corporate retreats, family gatherings, community events, horseback riding, guided hiking, and other private events in a setting that celebrates the unique beauty of southeastern Wyoming.

Rather than constructing a new commercial development, this project represents the adaptive reuse of an existing ranch property that has historically operated as a destination for tourism, recreation, and hospitality for more than four decades. The proposed improvements are intended to modernize the property's infrastructure while preserving the natural character of the site and minimizing disturbance to the existing landscape.

The project will utilize the existing venue and supporting facilities, with improvements including upgrades to utilities, accessibility, life safety systems, parking, and site amenities necessary to support the proposed use. Site improvements have been designed to preserve the property's existing topography, native vegetation, and natural drainage patterns to the greatest extent practicable.

See attached narrative for further information.

Begin Date	End Date	Permit Area	Subject	Note Type	Note Text	Created By
07/01/2026		Fees	SITE PLAN: NEW, ADJUST AMOUNT REVISED, AND SIMPLE		Adjusted Amount - 0.00 charge per Justin Arnold due to Class C not required and will adjust amount for final fees.	SONNY.HOOPS@LARAMIECOUNTYWY.GOV
07/01/2026		Workflow	GIS REVIEW	GENERAL	It appear primary access is intended to be off Brush Creek RD. It will be prudent to make sure this site had an address that reflects it location and primary access accurately. It might be prudent to consider changing the address for the residence as well as assigning a unique address to the commercial endeavor.	CAMBIA.MCCOLLOM@LARAMIECOUNTYWY.GOV
07/06/2026	07/06/2026	Application	PZ-26-00059	CORRESPONDENCE	No concerns noted.	CONSERVATIONDISTRICT@LARAMIECOUNTYWY.GOV
07/06/2026	07/06/2026	Workflow	COUNTY ASSESSOR REVIEW	GENERAL	No comments.	CINDY.KEMIVES@LARAMIECOUNTYWY.GOV
07/06/2026	07/06/2026	Workflow	COUNTY REAL ESTATE OFFICE REVIEW	GENERAL	no comments	TERESA.LEMASTER@LARAMIECOUNTYWY.GOV
07/10/2026		Workflow	BUILDING FIRE CODE REVIEW	GENERAL	Fire Apparatus Roads required per 2024 IFC section 503 20' minimum lane width shall be maintained with turning radius determined by LCFA for the type of vehicle most likely to respond. Current site plan shows no areas for fire apparatus turn around and must be included on site plan.	JEFFREY.COOPER@LARAMIECOUNTYWY.GOV
07/13/2026		Application	PZ-26-00059	GENERAL	Please note the Department's review letter for this project. Thank you again for the opportunity to comment.	WYGAMEFISHDEPT@LARAMIECOUNTYWY.GOV

Permit Notes

07/13/2026	07/13/2026	Application	PZ-26-00059	GENERAL	Ensure that emergency services has proper access and egress. Looks like the aisle width of the parking lot is only 14ft - ensure that this aisle width is at the proper width according to the LCLUR.	MATTHEW.BUTLER@LARAMIECOUNTY.WY.GOV
07/14/2026		Workflow	ENGINEERS REVIEW	GENERAL	1st Review 1.All access roadways, drive lanes, etc. are required to be a minimum of 20' wide to accommodate emergency vehicles. 2.The radii on the access roadway/lane needs to be called out. May need to provide/show turning movements for emergency vehicles to show they can make it around/through the one way lane if the radii are too small. 3.I believe ADA requires there to be ADA parking spaces provided and an ADA path (concrete or asphalt) from the parking spaces to the entrance of the building. Where will the ADA parking be located? 4.The parking layout drawing indicates the parking area is to be 227 feet long with 25 spaces that are 9.5 feet wide. 25 spaces at 9.5 feet wide would be 237.5 feet long at least and that would be just for perpendicular parking, it would end up being longer for angled parking. 5.The drawings for the site and the parking need to indicate that all access roads, drive lanes, and parking area, etc. are to have a minimum of 6" of road base material placed. 6.How will the parking spaces be delineated? With concrete parking blocks or what method will be used? This needs to be indicated on the site/parking plan drawings. 7.Will there be trash dumpsters, if so, where, how many, and will there be screening for them? 8.Based on the area of the parking lot and the drive lane, it appears there will be less than 20,000 sq.ft. of impervious and semi-impervious area. Therefore, it does not meet the requirements for a Drainage Report, per the regulations, and a request for a waiver is not necessary.	SCOTT.LARSON@LARAMIECOUNTY.WY.GOV
07/15/2026		Workflow	ENVIRONMENTAL HEALTH REVIEW	GENERAL	Plan review for kitchen/bar has not yet been submitted, submit at least 30 days prior to construction. Septic permit has been issued for septic system with grease trap but has not been installed yet, call for inspection once septic system is installed.	JENNIFER.ESCOBEDO@LARAMIECOUNTY.WY.GOV
07/15/2026		Workflow	PUBLIC WORKS REVIEW	DEFICIENCY	1. This site plan will NOT be approved by Public Works until such time that Brush Creek Road and the BLM easement (if approved for this commercial use) have been designed and built through a right-of-way permit with acceptance by Laramie County Public Works. They shall meet the requirements within the Laramie County Land Use Regulations for the roadway(s) and Floodplain crossings. Neither access will accommodate the needs of emergency services for ingress and egress at this time. 2. The approved access easement from BLM shall be submitted with the right-of-way permit.	MOLLY.BENNETT@LARAMIECOUNTY.WY.GOV

Permit Notes

07/15/2026	Workflow	PUBLIC WORKS REVIEW	DEFICIENCY	1. This site plan will NOT be approved by Public Works until such time that Brush Creek Road and the BLM easement (if approved for this commercial use) have been designed and built through a right-of-way permit with acceptance by Laramie County Public Works. They shall meet the requirements within the Laramie County Land Use Regulations for the roadway(s) and Floodplain crossings. Neither access will accommodate the needs of emergency services for ingress and egress at this time. 2. The approved access easement from BLM shall be submitted with the right-of-way permit.	MOLLY.BENNETT @LARAMIECOUNT WY.GOV
07/16/2026	Application	PZ-26-00059	GENERAL	A floodplain development permit shall be required for crossing of the SFHA on the BLM property.	JUSTIN.ARNOLD@ LARAMIECOUNTY WY.GOV

AGENCY REVIEW COMMENTS #1 - RESPONSES

Permit Notes

Permit Number: PZ-26-00059

Parcel Number: 14701110000100

Submitted: 06/30/2026

Site Address: 470 HAPPY JACK RD

Technically Complete: 06/30/2026

Applicant: Riedel, Tania
Owner: RIEDEL, TANIA J

Cheyenne, WY 82009

Approved:
Issued:

Project Description: The purpose of this project is to restore the historic Bit-O-Wyo Ranch as a seasonal event venue while preserving the property's historic character, natural landscape, and Wyoming heritage. The project will provide a destination for weddings, corporate retreats, family gatherings, community events, horseback riding, guided hiking, and other private events in a setting that celebrates the unique beauty of southeastern Wyoming. Rather than constructing a new commercial development, this project represents the adaptive reuse of an existing ranch property that has historically operated as a destination for tourism, recreation, and hospitality for more than four decades. The proposed improvements are intended to modernize the property's infrastructure while preserving the natural character of the site and minimizing disturbance to the existing landscape. The project will utilize the existing venue and supporting facilities, with improvements including upgrades to utilities, accessibility, life safety systems, parking, and site amenities necessary to support the proposed use. Site improvements have been designed to preserve the property's existing topography, native vegetation, and natural drainage patterns to the greatest extent practicable. See attached narrative for further information.

Begin Date	End Date	Permit Area	Subject	Note Type	Note Text	Created By
07/01/2026		Fees	SITE PLAN; NEW, ADJUST AMOUNT REVISED, AND SIMPLE		Adjusted Amount - 0.00 charge per Justin Arnold due to Class C not required and will adjust amount for final fees.	SONNY.HOOPS@LARAMIECOUNTY.WY.GOV <i>acknowledged</i>
07/01/2026		Workflow	GIS REVIEW	GENERAL	It appear primary access is intended to be off Brush Creek RD. It will be prudent to make sure this site had an address that reflects it location and primary access accurately. It might be prudent to consider changing the address for the residence as well as assigning a unique address to the commercial endeavor.	CAMBIA.MCCOLLOM@LARAMIECOUNTY.WY.GOV <i>Justin Arnold to assign + recommendation acknowledged</i>
07/06/2026	07/06/2026	Application	PZ-26-00059	CORRESPONDENCE	No concerns noted.	CONSERVATIONDISTRICT@LARAMIECOUNTY.WY.GOV <i>acknowledged</i>
07/06/2026	07/06/2026	Workflow	COUNTY ASSESSOR REVIEW	GENERAL	No comments.	CINDY.KEMIVES@LARAMIECOUNTY.WY.GOV <i>acknowledged</i>
07/06/2026	07/06/2026	Workflow	COUNTY REAL ESTATE OFFICE REVIEW	GENERAL	no comments	TERESA.LEMASTER@LARAMIECOUNTY.WY.GOV <i>acknowledged</i>
07/10/2026		Workflow	BUILDING FIRE CODE REVIEW	GENERAL	Fire Apparatus Roads required per 2024 IFC section 503 20' minimum lane width shall be maintained with turning radius determined by LCFA for the type of vehicle most likely to respond. Current site plan shows no areas for fire apparatus turn around and must be included on site plan.	JEFFREY.COOPER@LARAMIECOUNTY.WY.GOV <i>acknowledged see notes & exhibit</i>
07/13/2026		Application	PZ-26-00059	GENERAL	Please note the Department's review letter for this project. Thank you again for the opportunity to comment.	WYGAMEFISHDEPT@LARAMIECOUNTY.WY.GOV <i>acknowledged and reviewed.</i>

Permit Notes

07/13/2026	07/13/2026	Application	PZ-26-00059	GENERAL	Ensure that emergency services has proper access and egress. Looks like the aisle width of the parking lot is only 14ft - ensure that this aisle width is at the proper width according to the LCLUR.	MATTHEW.BUTLER@LARAMIECOUNTY.WY.GOV <i>acknowledged see exhibit.</i>
07/14/2026		Workflow	ENGINEERS REVIEW	GENERAL	1st Review 1.All access roadways, drive lanes, etc. are required to be a minimum of 20' wide to accommodate emergency vehicles. 2.The radii on the access roadway/lane needs to be called out. May need to provide/show turning movements for emergency vehicles to show they can make it around/through the one way lane if the radii are too small. 3.I believe ADA requires there to be ADA parking spaces provided and an ADA path (concrete or asphalt) from the parking spaces to the entrance of the building. Where will the ADA parking be located? 4.The parking layout drawing indicates the parking area is to be 227 feet long with 25 spaces that are 9.5 feet wide. 25 spaces at 9.5 feet wide would be 237.5 feet long at least and that would be just for perpendicular parking, it would end up being longer for angled parking. 5.The drawings for the site and the parking need to indicate that all access roads, drive lanes, and parking area, etc. are to have a minimum of 6" of road base material placed. 6.How will the parking spaces be delineated? With concrete parking blocks or what method will be used? This needs to be indicated on the site/parking plan drawings. 7.Will there be trash dumpsters, if so, where, how many, and will there be screening for them? 8.Based on the area of the parking lot and the drive lane, it appears there will be less than 20,000 sq.ft. of impervious and semi-impervious area. Therefore, it does not meet the requirements for a Drainage Report, per the regulations, and a request for a waiver is not necessary.	SCOTT.LARSON@LARAMIECOUNTY.WY.GOV <i>acknowledged and see review notes</i>
07/15/2026		Workflow	ENVIRONMENTAL HEALTH REVIEW	GENERAL	Plan review for kitchen/bar has not yet been submitted, submit at least 30 days prior to construction. Septic permit has been issued for septic system with grease trap but has not been installed yet, call for inspection once septic system is installed.	JENNIFER.ESCOBEDO@LARAMIECOUNTY.WY.GOV <i>See notes plans & review submitted.</i>
07/15/2026		Workflow	PUBLIC WORKS REVIEW	DEFICIENCY	1. This site plan will NOT be approved by Public Works until such time that Brush Creek Road and the BLM easement (if approved for this commercial use) have been designed and built through a right-of-way permit with acceptance by Laramie County Public Works. They shall meet the requirements within the Laramie County Land Use Regulations for the roadway(s) and Floodplain crossings. Neither access will accommodate the needs of emergency services for ingress and egress at this time. 2. The approved access easement from BLM shall be submitted with the right-of-way permit.	MOLLY.BENNETT@LARAMIECOUNTY.WY.GOV <i>acknowledged see notes.</i>

Permit Notes

07/15/2026	Workflow	PUBLIC WORKS REVIEW	DEFICIENCY	1. This site plan will NOT be approved by Public Works until such time that Brush Creek Road and the BLM easement (if approved for this commercial use) have been designed and built through a right-of-way permit with acceptance by Laramie County Public Works. They shall meet the requirements within the Laramie County Land Use Regulations for the roadway(s) and Floodplain crossings. Neither access will accommodate the needs of emergency services for ingress and egress at this time. 2. The approved access easement from BLM shall be submitted with the right-of-way permit.	MOLLY.BENNETT @LARAMIECOUNTY WY.GOV <i>acknowledged see notes</i>
07/16/2026	Application	PZ-26-00059	GENERAL	A floodplain development permit shall be required for crossing of the SFHA on the BLM property.	JUSTIN.ARNOLD@ LARAMIECOUNTY WY.GOV <i>acknowledged.</i>

Permit Notes Response by Applicant

1. 07/01/2026 Fees SITE PLAN: NEW, REVISED, AND SIMPLE
SONNY.HOOPS@LARAMIECOUNTYWY.GOV
ADJUST AMOUNT Adjusted Amount - 0.00 charge per Justin Arnold due to
Class C not required and will adjust amount for final fees.

Applicant Response: Acknowledged, thank you.

2. 07/01/2026 Workflow GIS REVIEW GENERAL
CAMBIA.MCCOLLOM@LARAMIECOUNTYWY.GOV
It appears primary access is intended to be off Brush Creek
RD. It will be prudent to make sure this site had an address
that reflects its location and primary access accurately. It
might be prudent to consider changing the address for the
residence as well as assigning a unique address to the
commercial endeavor.

**Applicant Response: Justin Arnold to assign a new address for the commercial site.
Concern is acknowledged on the residential address and will be considered.**

3. 07/06/2026 07/06/2026 Application PZ-26-00059 CORRESPONDENCE
CONSERVATIONDISTRICT@LARAMIECOUNTYWY.GOV

No concerns noted.

Applicant Response: Acknowledged, thank you.

4. 07/06/2026 07/06/2026 Workflow COUNTY ASSESSOR REVIEW GENERAL
CINDY.KEMIVES@LARAMIECOUNTYWY.GOV

No comments.

Applicant Response: Acknowledged, thank you.

5. 07/06/2026 07/06/2026 Workflow COUNTY REAL ESTATE OFFICE REVIEW GENERAL
TERESA.LEMASTER@LARAMIECOUNTYWY.GOV

No comments

Applicant Response: Acknowledged, thank you.

6. 07/10/2026 Workflow BUILDING FIRE CODE REVIEW GENERAL
JEFFREY.COOPER@LARAMIECOUNTYWY.GOV
Fire Apparatus Roads required per 2024 IFC section 503
20' minimum lane width shall be maintained with turning
radius determined by LCFA for the type of vehicle most likely
to respond. Current site plan shows no areas for fire
apparatus turn around and must be included on site plan.

**Applicant Response: Emergency vehicle turnaround is at the north end of the property.
Site plan to be adjusted to reflect a 20 foot road width for proper emergency turnaround.**

7. 07/13/2026 Application PZ-26-00059 GENERAL
WYGAMEFISHDEPT@LARAMIECOUNTYWY.GOV

Please note the Department's review letter for this project.
Thank you again for the opportunity to comment.

Applicant Response: Acknowledged, thank you.

8. 07/13/2026 07/13/2026 Application PZ-26-00059 GENERAL
MATTHEW.BUTLER@LARAMIECOUNTYWY.GOV

Ensure that emergency services has proper access and
egress. Looks like the aisle width of the parking lot is only 14ft
- ensure that this aisle width is at the proper width according
to the LCLUR.

**Applicant Response: See changes to the site plan to adjust for 20 foot width emergency
vehicle turnaround. We have a 75 foot width allotted for all BLM ROW improvements.**

9. 07/14/2026 Workflow ENGINEERS REVIEW GENERAL 1st Review
SCOTT.LARSON@LARAMIECOUNTYWY.GOV

1. All access roadways, drive lanes, etc. are required to be a
minimum of 20' wide to accommodate emergency vehicles.

Applicant Response: Acknowledged and corrected on site plan.

2. The radii on the access roadway/lane needs to be called out. May need to provide/show turning movements for emergency vehicles to show they can make it around/through the one way lane if the radii are too small.

Applicant Response: We will adjust, if needed. We have a 75 foot width allotment on our BLM ROW. Will refer to Matt Butler for which emergency vehicles could be used.

3. I believe ADA requires there to be ADA parking spaces provided and an ADA path (concrete or asphalt) from the parking spaces to the entrance of the building. Where will the ADA parking be located?

Applicant Response: The ADA entrance is located on the northwest corner of the building and noted on the site plan. We will need to discuss alternatives for surface area as BLM does not allow permanent improvements on BLM land for ROW's. All weather products will be explored to allow for wheelchairs to traverse the terrain.

4. The parking layout drawing indicates the parking area is to be 227 feet long with 25 spaces that are 9.5 feet wide. 25 spaces at 9.5 feet wide would be 237.5 feet long at least and that would be just for perpendicular parking, it would end up being longer for angled parking.

Applicant Response: Parking will be perpendicular and we will adjust the site plan to show 237.5 feet.

5. The drawings for the site and the parking need to indicate that all access roads, drive lanes, and parking area, etc. are to have a minimum of 6" of road base material placed.

Applicant Response: Natural resources to be used for road base per the BLM.

6. How will the parking spaces be delineated? With concrete parking blocks or what method will be used? This needs to be indicated on the site/parking plan drawings.

Applicant Response: BLM requires temporary signage on the ROW for parking. We will use temporary traffic cones, drums and tubular markers to delineate parking spaces.

7. Will there be trash dumpsters, if so, where, how many, and will there be screening for them?

Applicant Response: There will be no dumpsters located on the commercial as caterers and patrons will be required to remove their own trash.

8. Based on the area of the parking lot and the drive lane, it appears there will be less than 20,000 sq.ft. of impervious and semi-impervious area. Therefore, it does not meet the requirements for a Drainage Report, per the regulations, and a request for a waiver is not necessary.

Applicant Response: Acknowledged, thank you.

10. 07/15/2026 Workflow ENVIRONMENTAL HEALTH REVIEW GENERAL
JENNIFER.ESCOBEDO@LARAMIECOUNTYWY.GOV

Plan review for kitchen/bar has not yet been submitted, submit at least 30 days prior to construction. Septic permit has been issued for septic system with grease trap but has not been installed yet, call for inspection once septic system is installed.

Applicant Response: Engineered plans have been submitted. Plan review form and fee will be submitted by July 31, 2026.

11. 07/15/2026 Workflow PUBLIC WORKS REVIEW DEFICIENCY
MOLLY.BENNETT@LARAMIECOUNTYWY.GOV

1. This site plan will NOT be approved by Public Works until such time that Brush Creek Road and the BLM easement (if approved for this commercial use) have been designed and built through a right-of-way permit with acceptance by Laramie County Public Works. They shall meet the requirements within the Laramie County Land Use Regulations for the roadway(s) and Floodplain crossings. Neither access will accommodate the needs of emergency services for ingress and egress at this time.
2. The approved access easement from BLM shall be submitted with the right-of-way permit.

Applicant Response: On Brush Creek Rd, design plans are underway with Taran Triplett with RESPEC. He will schedule a meeting with Justin Arnold and Molly Bennett to discuss road details since it is unlikely that the road will completely meet county standards, as it will not be feasible. He will survey the road this week and have a

preliminary design plan in the next two weeks, which we then can submit for review for the ROW permit. All requirements for Brush Creek will be completed prior to issuance of certificate of review.

In regards to the BLM easement, we would request that we work with BLM, our contractor and county planning for any improvements on the BLM ROW on their own road requirements for federal lands. We are deferred from full engineering plans and will complete what is required by the BLM. We would request the county planning road contractor and the BLM to meet on site prior to construction to ensure all requirements are met.

12. 07/16/2026 Application PZ-26-00059 GENERAL
JUSTIN.ARNOLD@LARAMIECOUNTYWY.GOV

A floodplain development permit shall be required for crossing of the SFHA on the BLM property.

Applicant Response: Acknowledged, thank you.

July 13, 2026

Sent via Email (planning@laramiecountywy.gov)

Laramie County Planning and Development Office
3966 Archer Pkwy
Cheyenne, WY 82009

Re: Public Comment Regarding the Bit-O-Wyo Ranch and Events Site
Plan and Related Waiver Requests (Permit No. PZ-26-00059)

Dear Laramie County Planning Commission and Board of County
Commissioners,

Please accept these comments in opposition to Riedel Ventures, LLC's application for the Bit-O-Wyo Site Plan and the related waiver requests for Permit Number PZ-26-00059. I am a third-generation Cheyenne resident who lives in the Table Mountain Ranches community. I walk Valley View Road nearly every day and experience firsthand the area's quiet character, scenic views, wildlife, and the lack of traffic. Because of my proximity to the proposed development, I will be directly affected by any changes to traffic, roadway safety, noise levels, and the surrounding environment. My comments are therefore offered not only as a nearby landowner, but as someone who regularly uses the area that will be affected by this proposal.

I am concerned that important information regarding access, traffic, and environmental impacts remains unresolved, and I respectfully request that the County fully evaluate those issues before approving the Site Plan. The current application should not be approved until several significant issues, including

access to the property, are resolved and the County has a complete record upon which to base its decision.

Although applying the name “Bit-O-Wyo”, the current project shares no other resemblance to the traditional ranch that went by that name. The “historical” Bit-O-Wyo was approximately 400 acres and never served as a 100 person event center. Everything about this project creates new conditions for the land. 100+ people trampling the ground on a regular basis, compacting the soil and changing water run-off patterns. Daily foot and vehicle traffic from guests, staff and laborers. Riedel Ventures has asked the BLM to authorize recreational use of multiple BLM sections extending to over three miles to the west of the base property, apparently to develop a trail system that would generate regular daily traffic. Riedel Ventures states it will offer horseback riding. Where are the commercial horses to be housed? The current Site Plan submissions include a sketch for a parking lot for 25 formal parking spaces. Yet this is a rural property. Finding space for “overflow” parking would not be difficult. It is currently unknown what they have requested from the BLM for parking or whether the BLM will approve any such request. The parking situation is simply too ambiguous. There are too many unanswered questions for a Site Plan to be approved at this time.

I. CONSIDERATION OF THE SITE PLAN IS PREMATURE.

The proposed Site Plan relies upon a future access route that has not yet been approved by the United States Department of the Interior, Bureau of Land

Management (BLM). To date, the right-of-way application for an access road and parking area has not been granted and is still undergoing assessments to determine the level of review required under the National Environmental Policy Act. The BLM does not anticipate issuing a decision on the right-of-way application until January 2027. As a result, the County is being asked to evaluate the Site Plan without knowing the final access that will serve the development. This unresolved access issue affects numerous aspects of the proposal, including:

- Traffic generation;
- Emergency access;
- Roadway safety;
- Parking access; and
- Impacts associated with floodplain crossings.

Access is a fundamental component of the Site Plan. Until the BLM process is further advanced and the final access route is known, the County lacks essential information necessary to fully evaluate the proposal. Accordingly, consideration of the Site Plan should be deferred until the required federal approvals have been obtained and the final road and parking lot design is available for review.

II. THE COUNTY SHOULD REQUIRE A TRAFFIC IMPACT STUDY.

“A [Traffic Impact Study] may be required for any site plan.” See Laramie County Land Use Regulations [hereinafter LCLURs] § 5-6-113(a). The County should exercise its discretion to require a Traffic Impact Study here. Although

the applicant seeks to avoid a traffic study based on projected vehicle counts and parking assumptions, several factors warrant further analysis.

First, the primary access route remains unresolved. Until the BLM process is complete, it is difficult to determine how traffic will enter and exit the site, how roadway improvements will function, or whether existing intersections and roadways will safely accommodate project traffic. A Traffic Impact Study would provide the County with objective information rather than speculation.

Second, the assumptions underlying the traffic-study waiver do not capture the full range of vehicle activity associated with an event venue. In addition to guest vehicles, the project is likely to generate traffic from rideshare services, taxis, limousines, event vendors, catering services, deliveries, and drop-off and pick-up activity. These vehicle trips may not be adequately reflected by a parking-based analysis because many vehicles will arrive, unload passengers, and depart without occupying a parking space. A Traffic Impact Study would provide a more accurate assessment of the actual traffic demands generated by the project.

Third, roadway safety concerns extend beyond vehicle counts. Cellular service in the area is nonexistent. Visitors unfamiliar with the area will therefore have limited access to navigation applications or real-time routing assistance. Additional roadway signage should be required to safely direct

traffic to and from the site and to minimize driver confusion, unnecessary turning movements, and erratic driving behavior on local roads.

Fourth, the County should evaluate existing roadway speeds and conditions along Valley View Road. These roads currently service only the Table Mountain residents. They dead end at wilderness. There is no thru traffic. The roads were not designed and are not maintained for commercial traffic. Near the west end of Valley View Road, the roadway becomes narrower and contains curves, blind areas, and limited sight distances. As traffic associated with the project increases, the County should consider whether reduced speed limits and additional traffic-control measures are necessary to protect motorists, pedestrians, and residents who regularly use the roadway. In particular, the speed limit at the western section of Valley View Road should be reduced to 25 miles per hour due to the sharp twists and turns.

Finally, local residents regularly walk, bicycle, exercise, ride horses and recreate along Valley View Road and surrounding roadways. I personally walk Valley View Road on a daily basis. A Traffic Impact Study would allow the County to evaluate whether pedestrian, horse and bicycle safety improvements should be considered as part of the project and whether the existing transportation network can safely accommodate increased commercial traffic.

Given the significant public concern regarding traffic and roadway safety, the County should exercise its discretion to require a Traffic Impact Study before any Site Plan approval.

III. THE REQUEST FOR A DRAINAGE STUDY WAIVER IS PREMATURE.

The applicant's Request for Drainage Study Waiver relies primarily on historical conditions at the property and asserts that no known drainage problems have occurred during approximately forty years of operation. See Request for Drainage Study Waiver – Bit-O-Wyo Ranch and Events, Permit Number PZ-26-00059 (dated June 30, 2026). The problem is that a critical component of the project remains unresolved and the historical use of the property is not congruent with the use proposed today. Because the final access route has not been approved, neither the County nor the public knows:

- The final alignment of the roadway;
- The extent of grading required;
- Whether culverts or other drainage structures will be necessary;
- How runoff will be managed at the crossing;
- How the parking lot will be constructed;
- What impacts may occur within the floodplain; or
- Whether changes to drainage patterns may occur downstream.

The County's waiver criteria contemplate information demonstrating that there are no potential drainage problems at the site or downstream, including impacts to downstream floodplains. See Pre-Application Meeting Minutes (PA-25-00103). The access road will cross a floodplain, yet the waiver request does not make a single mention to the floodplain. Rather, it references the absence of drainage problems in the past without any consideration for the new access.

At present, that determination cannot be made because a significant project component remains under federal review.

Finally, the waiver request repeatedly relies on the fact that the property has allegedly operated for approximately forty years without known drainage issues. However, the conditions proposed today are not the same conditions that existed during those forty years. Historically, the property did not utilize the proposed northern access route across BLM land, the northern floodplain crossings, or the parking facilities now contemplated as part of this Site Plan. The waiver therefore relies on historical drainage performance under a substantially different site configuration than the one presently proposed. Because the location and design of the proposed access road remain under review, the County cannot yet evaluate drainage patterns or downstream floodplain conditions. Until those details are known, any conclusion that the proposed development will have no drainage impacts is necessarily speculative.

For that reason, the County should deny the current waiver request. At a minimum, consideration of the waiver should be deferred until the BLM process progresses sufficiently for drainage impacts associated with the proposed access road and parking improvements to be meaningfully evaluated.

IV. CONCLUSION

Before approving the Site Plan, the County should ensure that the full scope of anticipated uses has been evaluated. Future recreational activities, trails, staging areas, or related facilities will affect traffic, parking demand,

emergency access, and infrastructure needs. The decision on the Site Plan should be based upon a complete understanding of the project components.

For the foregoing reasons, I respectfully request that the County:

1. Defer consideration of the Site Plan until access across BLM property has been approved and the final access design is known;
2. Require a Traffic Impact Study; and
3. Deny or defer the request for a drainage-study waiver until sufficient information exists to evaluate the impacts of the proposed access improvements and floodplain crossing.

Thank you for your consideration of these comments.

Respectfully submitted,

Kristen Blume

RESOLUTION # _____

**A RESOLUTION FOR A SITE PLAN FOR “BIT-O-WYO RANCH AND EVENTS”, SITUATED
IN A PORTION OF LAND IN THE NE ¼ OF SECTION 11, TOWNSHIP 14 NORTH, RANGE
70 WEST, OF THE 6TH P.M., LARAMIE COUNTY, WY.**

WHEREAS, Wyoming State Statutes §18-5-201 to 18-5-208; §18-5-301 to 18-5-315 authorize Laramie County, in promoting the public health, safety, morals and general welfare of the county, to regulate the use of land through zoning in unincorporated Laramie County; and

WHEREAS, the Laramie County Board of Commissioners have adopted the 2025 Laramie County Land Use Regulations; and

WHEREAS, the Laramie County Board of Commissioners approved a Class C Conditional Use Permit for Bit-O-Wyo Ranch and Events on April 21, 2026; and

WHEREAS, this application meets the criteria for commercial projects pursuant to section 3-1-109 of the 2025 Laramie County Land Use Regulations; and

WHEREAS, this application is in conformance with section 2-4-104 of the 2025 Laramie County Land Use Regulations governing the LU – Land Use Zone District.

WHEREAS, this resolution is the approval of the Site Plan for Bit-O-Wyo Ranch and Events upon completion of the conditions listed below.

NOW THEREFORE BE IT RESOLVED BY THE LARAMIE COUNTY BOARD OF COUNTY COMMISSIONERS, as follows:

The Laramie County Board of County Commissioners finds that:

- a. This application meets the criteria for commercial projects pursuant to section 3-1-109 of the 2025 Laramie County Land Use Regulations.
- b. This application is in conformance with section 2-4-104 of the 2025 Laramie County Land Use Regulations governing the LU – Land Use Zone District.

and the Board approves a Site Plan for the “Bit-O-Wyo Ranch and Events,” situated in a portion of land in the NE ¼ of Section 11, Township 14 North, Range 70 West, of the 6th P.M., Laramie County, WY, with the following conditions:

- 1) **Brush Creek Road and the BLM easement (if approved for this commercial use) have been designed and built through a right-of-way permit with acceptance by Laramie County Public Works. They shall meet the requirements within the Laramie County Land Use Regulations for the roadway(s) and Floodplain crossings. The approved access easement from BLM shall be submitted with the right-of-way permit.**
- 2) **The applicant must show proof from Environmental Health that they have satisfied their standards for commercial use.**
- 3) **The applicant must show proof of an approved and recorded easement agreement between landowner and the Bureau of Land Management.**
- 4) **The applicant must resolve any outstanding agency comments prior to final approvals for commencement of operation.**

PRESENTED, READ, AND ADOPTED, this _____ day of _____, 2026.

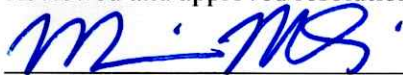
LARAMIE COUNTY BOARD OF COMMISSIONERS

Gunnar Malm, Chairman

ATTEST:

Debra Lee, County Clerk

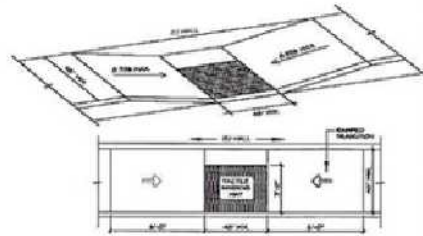
Reviewed and approved resolution only as to form:



Laramie County Attorney's Office

EXHIBIT A

Emergency Vehicle Turnaround



A Accessible Curb Ramp
DETAILS

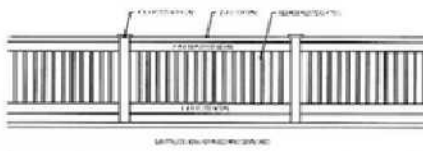


B CURB
REQUIREMENTS (N.T.S.)



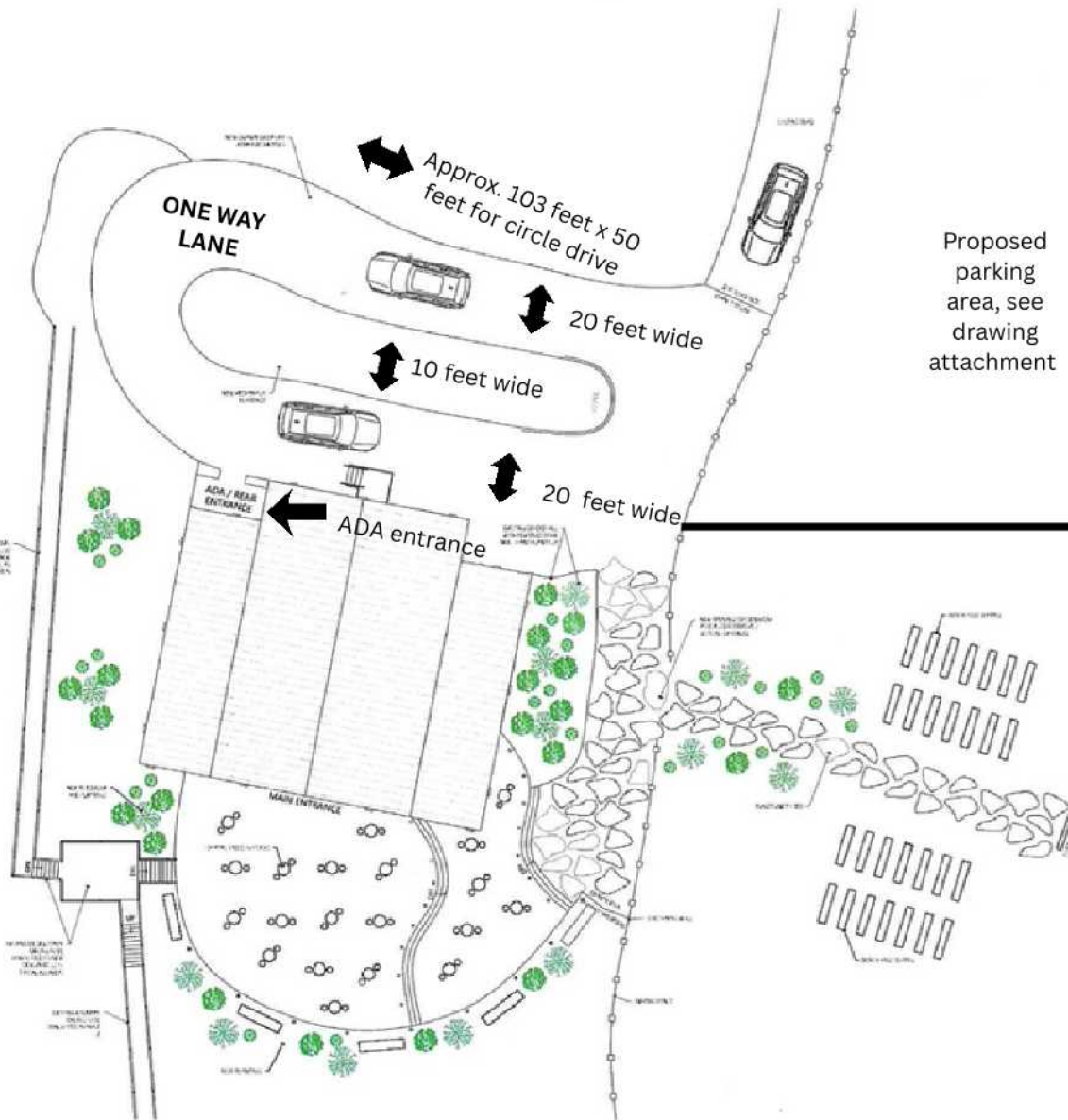
C RAMP
REQUIREMENTS

B Accessible Curb & Ramps
DETAILS



C Typical Railing Design
DETAILS

NOTE: SITE PLAN IS CONCEPTUAL IN
NATURE AND NOT INTENDED TO
REPRESENT TECHNICAL INFORMATION
AND INFORMATION



1 Bit-O-Wyo
CONCEPTUAL SITE PLAN



HUBER INTERIORS

1411 Raggy Brook Drive
Fort Collins, CO 80526
(970) 591-1212
www.huberinteriors.com

NOT FOR
CONSTRUCTION

Bit-O-Wyo Events
470 Happy Jack Road Cheyenne, WY 82009

FOR REVIEW

NO.	REVISION	DATE
1	REVISION	DATE
2	REVISION	DATE
3	REVISION	DATE
4	REVISION	DATE
5	REVISION	DATE
6	REVISION	DATE
7	REVISION	DATE
8	REVISION	DATE
9	REVISION	DATE
10	REVISION	DATE

SITE PLAN

DATE: 04-14-2014
DRAWN: 04-14-2014

A0.3

EXHIBIT B



Laramie County Wyoming MapServer

Parking area 237.5 feet x 20 feet, houses 25 parking spaces that are 9.5 feet wide x 20 feet long.

Parking will be perpendicular, and delineated by traffic cones, drums or tubular markers

-  Interstate
-  Major Road
-  Imps only
-  State Land
-  Curt Gowdy State Park
-  BLM Land



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printed 5/12/2026