



Teton County Planning
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FROM: Planning Administrator, Jason Boal
TO: Board of County Commissioners
RE: Teton Valley Scenic Parkway
DATE: October 28, 2014

We have comments back from an engineer regarding the Teton Scenic Parkway (see attached documents).

My concerns in addition to the engineer's comments include:

- The applicant has requested the road be allowed to be built to a "Recreational Road" standard. I do not think this road fits the recreation classification. It is currently part of the county road system and classified as a "Minor Neighborhood" or "Local". Recreational roads are intended for providing access to public lands. Although this road does this, it also provides access to a lot of private lands. If that private land was to ever develop (even moderate development) the recreational road standard would not be adequate. With two 6'8" travel lanes as opposed to two 9' lanes the function of the road would be severely limited.
- The capacity will be severely limit along this road. If future residential development is desired by the land owners we may want to reconsider the minimum design speed of 25 mph, and the problematic horizontal curves mentioned by the engineer.
- All existing accesses need to be maintained. Mr. Horton has assured this is the case, but I would like to see the proposed accesses included on the plans.
- In conversations with the Forest Service, they expressed concerns about the tight turns in several locations. This design may prohibit the use of farm equipment as well as recreational users.
- The road will need to be realigned across the BLM property. This will require a NEPA study. Mr. Horton has proposed that Teton County apply to the BLM and conduct (pay for the NEPA) study.

Questions for the Board of County Commissioners:

- **Is the County interested in adopting this road and abandoning the existing easements and/or right of ways?**
- **Is the county comfortable with the design of the proposed road?**
- **Is the County willing to pay for the NEPA study that is required by the BLM to realign the road, or are we going to ask the applicant to do that?**

Possible solutions:

- Have the applicant (Mr. Horton) pay for the NEPA study as part of the adoption/abandonment agreement.
- Have the corners designed for 35-45mph to accommodate larger equipment and/or future growth, or have them designed for 25 mph with the understanding that growth in the area would be limited.
- Have the applicant pay for the additional signage that will be required.
- Enter into a development agreement with Mr. Horton clarifying and solidifying the future uses and access off of this road.

The applicant would like to know where the Board stands on these issues. We may have time over the winter while construction is on hold to address some of these things as well.



October 23, 2014

Mr. Jason Boal, Teton County Planning Administrator
Teton County Planning
150 Courthouse Drive, Suite 107
Driggs, Idaho 83422

RE: Amended Scenic Parkway Road Design Review

Jorgensen Associates, PC (JA) has been retained by the Teton County Planning Department to review and comment on the proposed Scenic Parkway road design. This review is based on horizontal and vertical road design provided by Benchmark Land Surveying, correspondence between Jay Mazalewski and Jess Horton, various reports submitted to Teton County, and conversations with the Teton County Planning Department. Upon Review of the proposed Scenic Parkway Road Design, I have the following observations:

Design Parameters:

Local Road Classification
25 mph design speed
Structural Section = 4 inches of $\frac{3}{4}$ " crushed wearing coarse on 12 inches of Type A pit run

Design Observations:

Milk Creek road does not have an assigned designation on the Teton County Road Classification Map which means it is either currently classified as a Local Road or Recreational Access Road. **Currently the Scenic Parkway Road is being designed to meet the Local Road standard cross section.**

In a memorandum from Jay Mazalewski to Jess Horton dated June 12, 2014, Mr. Mazalewski provided 2 possible acceptable structural sections. **Design plans are compliant with Option 2 listed in the memorandum; 4 Inches of $\frac{3}{4}$ " crushed wearing surface on 12 inches of Type A pit run.**

Design speed for a Local Road classification is 25-35 mph. **The Scenic Parkway Road was designed using a 25 mph design speed.**

Design exceptions to the 25 mph design speed are as follows;

There are three locations that would be considered intersections where the change of direction occurs at 90°. Those instances occur at:

Station 86+65
Station 171+92
Station 242+69

Additional warning signage and possible stop signs would be necessary at these locations.

There are eight locations where design horizontal curves are non-compliant with the 25 mph design speed, 3 of which were deemed insignificant due to the short curve length. Those instances occur at;

Station 87+23, Radius = 50' (length = 50', insignificant)
Station 127+38, Radius = 200' (length = 104', insignificant)
Station 134+44, Radius = 100' (length = 73', insignificant)
Station 158+50, **Radius = 65'**
Station 226+79, Radius = 200'
Station 231+10, Radius = 137'
Station 238+85, Radius = 100'
Station 241+23, Radius = 100'

Minimum horizontal curve for a 25 mph design speed is 250'. Based on the ASSHTO Design manual, 2011 Edition, JA is recommending widening the inside lane by the following:

Station 158+50, Widen inside travel lane 6'
Station 226+79, Widen inside travel lane 2'
Station 231+10, Widen inside travel lane 2'
Station 238+85, Widen inside travel lane 4'
Station 241+23, Widen inside travel lane 4'

Recommended lane widening does not include the 2' shoulder design. Widening the lanes as recommended will allow for farm equipment and recreational vehicles to navigate the curves traveling at low speeds but not in both directions at the same time.

All vertical grades are all under 8%. Teton County Standard maximum grade is 10%. However, K-values are not listed on the road design. Engineer should calculate K-values to confirm compliance with the design standards. Minimum K-values for 25 mph design are 12 for crest curves and 26 for sag curves.

Culvert sizes are not called out on the design plans. Minimum size required must accommodate a 10 year flood event.

Recommended Action Items:

Consider widening non-compliant vertical curves as recommended.

Require engineer to revise plans to include K-value on plans and confirm compliance to Teton County Design Standards.

Require revised plans to include design criteria and be stamped by engineer.

The memorandum from Jay Mazalewski to Jess Horton dated June 12, 2014 includes the statement "*Areas of poor subgrade, pumping or wet materials may need additional base or geotextile fabric*". Teton County should conduct periodic site visits to inspect native material and existing conditions to determine where additional base and/or fabric is necessary.

The contractor should submit material test results to ensure the ¾" wearing course meets County standards.

Teton County should conduct random compaction tests on all materials to ensure material is compacted to 95% AASHTO T-99 Proctor Density per County design standards.

Driveway access points are not shown. It is recommended that the applicant identify any access points to ensure all County requirements are met.

Advisory signs will be required for non-compliant curves and intersections. The County should consider requiring a sign plan be submitted by the applicant and also consider having all signage installed by applicant prior to acceptance.

This review was conducted based on Teton County development standards, the Scenic Parkway ROW Permit Application, the Scenic Parkway stormwater flow calculations, the Scenic Parkway road design plans, various correspondence and conversations with the Teton County Planning Department.

Sincerely;

A handwritten signature in black ink, appearing to read 'Darryl Johnson', with a stylized flourish at the end.

Jorgensen Associates
Darryl Johnson, P.E., P.L.S.

Local Roads

(See Figure 2 for local routes in Teton County)

According to the American Association of State Highway and Transportation Officials (AASHTO): "The rural local road system, in comparison to collectors and arterial systems, primarily provides access to land adjacent to the collector network and serves travel over relatively short distances. The local road system constitutes all rural roads not classified as principal arterials, minor arterials, or collector roads." Local roads typically serve 65-75% of the total rural road length in a given county.

Local roads as defined in Figure 2 generally have an ADT of less than 150 vehicles per day, although many exceed this value. The design standard for local roads in Teton County, Idaho is outlined in Table 7 below, while the cross-section may be viewed in Figure 7.

Table 7. Local Road Standard

| Lane Width (ft) | Shoulder Width (ft) | Road Width (ft) | ADT (veh/day) | Speed Limit (mph) |
|-----------------|---------------------|-----------------|---------------|-------------------|
| 9 | 2 | 22 | <150 | 25-35 |

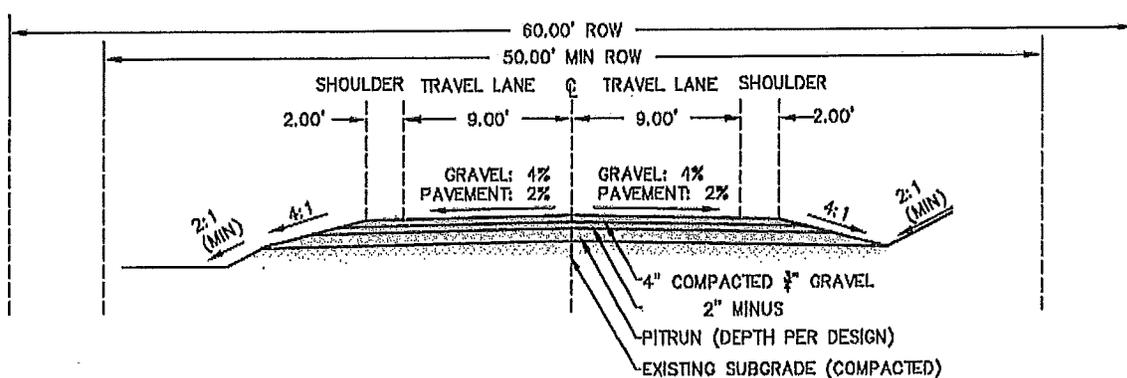


Figure 7. Local Road Cross-Section

Local roads are typically constructed with a gravel wearing surface, although a paved surface is also applicable.

Recreational Access Roads

Recreational accesses are generally Forest Service roads and are not listed on the functional classification map for Teton County, Idaho. According to AASHTO: "Recreational and scenic roads serve specialized land uses, including parks, tourist attractions, and recreation facilities, such as campsite or boat-launch ramps. Traffic is open to the general public, and their users are more likely than users of other functional sub-classes of local roads to consist of unfamiliar drivers. Recreational and scenic roads do not generally carry significant volumes of truck traffic, but do serve recreational vehicles including motor homes, campers, and passenger cars pulling boats and other

trailers. In many cases, these roads carry high seasonal traffic volumes. Recreational and scenic roads may accommodate a wide range in speeds and trip lengths may be fairly long.” The design standard for recreational access roads in Teton County, Idaho is shown in Table 8 below, while the cross-section may be seen in Figure 8.

Table 8. Recreational Access Standard

| Lane Width (ft) | Shoulder Width (ft) | Road Width (ft) | ADT (veh/day) | Speed Limit (mph) |
|-----------------|---------------------|-----------------|---------------|-------------------|
| 6-8 | 1 | 14-18 | <150 | 15-25 |

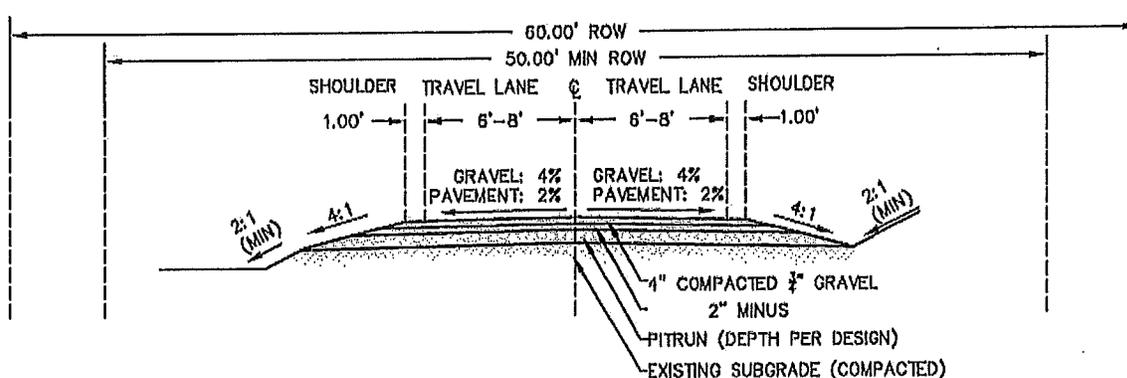


Figure 8. Recreational Access Road Cross-Section

It should be noted that AASHTO recommends the use of an 8 foot travel lane for recreational roads while the forest service standard ranges from 6-7 feet for a travel lane. Access roads usually incorporate a gravel wearing surface but can be paved.

Driveways

A driveway is an access from a public road to two parcels of land or less. A roadway that serves as an access to three or more parcels shall be deemed a local road, and adheres to local road standards. Driveway requirements for Teton County, Idaho are summarized in the following sections.

The design standard for a driveway in Teton County, Idaho is outlined in Table 9 below, while the cross section can be seen in Figure 9.

Table 9. Driveway Standard

| Lane Width (ft) | Shoulder Width (ft) | Total Width (ft) |
|-----------------|---------------------|------------------|
| 6 | 2 | 16 |