GUNNISON COUNTY BOARD OF COMMISSIONERS
MEETING AGENDA

DATE: **Tuesday, August 26, 2025**
PLACE: **Board of County Commissioners' Meeting Room at the Gunnison County Courthouse (REMOTE OPTION BELOW)**

GUNNISON COUNTY BOARD OF EQUALIZATION SPECIAL MEETING:

8:30 am

- Call to Order
- Appeal; Senior Property Tax Exemption; CBOE# SR01; R003777; H. Kahanek

8:45 am

- Appeal; Senior Property Tax Exemption; CBOE# SR02; R003882; C. Niesman
- Adjourn

GUNNISON COUNTY BOARD OF COUNTY COMMISSIONERS WORK SESSION:

9:00 am

- Quarterly Sheriff Update

9:30 am

- Wildlife Planning Support Tool Discussion

10:30 am

- Break

10:40 am

- Roads and Bridge Standards Discussion
- Adjourn

Please Note: Packet materials for the above discussions will be available on the Gunnison County website at http://www.gunnisoncounty.org/meetings prior to the meeting.

ZOOM MEETING DETAILS:
Join Zoom Meeting: https://gunnisoncounty-org.zoom.us/j/89798905619
One tap mobile
+12532158782,,82753657556#,,,,*471302# US (Tacoma)
+13462487799,,82753657556#,,,,*471302# US (Houston)

NOTE: This agenda is subject to change, including the addition of items up to 24 hours in advance or the deletion of items at any time. All times are approximate. The County Manager and Deputy County Manager's reports may include administrative items not listed. Regular Meetings, Public Hearings, and Special Meetings are recorded and ***ACTION MAY BE TAKEN ON ANY ITEM.*** *Work Sessions are not recorded and formal action cannot be taken. For further information, contact the County Administration office at 641-0248. If special accommodations are necessary per ADA, contact 641-0248 or TTY 641-3061 prior to the meeting.*

AGENDA ITEM or FINAL CONTRACT REVIEW SUBMITTAL FORM

Agenda Item: Appeal; Senior Property Tax Exemption; CBOE #SR01;

Action Requested: Motion

Parties to the Agreement:

Term Begins: **Term Ends:** **Grant Contract #:**

Summary:

CBOE# SR01; Kahanek; Senior Property Tax Appeal

Fiscal Impact:

Submitted by: Holly Perry **Submitter's Email Address:** hperry@gunnisoncounty.org

Finance Review: ○ Required ◉ Not Required

Comments:

Reviewed by: Discharge Date:

County Attorney Review: ◉ Required ○ Not Required

Comments:
Legally sufficient. SO 8/14/25

Reveiwed by: GUNCOUNTY1\sobaid Discharge Date: 8/14/2025 Certificate of Insurance Required

Yes ○ No ◉

County Manager Review:

Comments:

Reveiwed by: GUNCOUNTY1\Hperry Discharge Date: 8/15/2025

○ Consent Agenda ◉ Regular Agenda ○ Worksession Time Allotted: 15

Agenda Date: 8/26/2025

Revised April 2015

GUNNISON COUNTY

CBOE #SR01

Assessor's Office
221 N. Wisconsin St., Suite A
Gunnison, CO 81230
Phone: (970) 641-1085
assessor@gunnisoncounty.org

July 31st, 2025

HENRY KAHANEK JR
PO BOX 144
PITKIN, CO 81241

RE: Senior Property Tax Exemption
Account #: R003777
130 MAIN ST

Dear Henry,

Thank you for your application for the Senior Property Tax Exemption. While processing your application, we noticed that you previously had a Fredericksburg, TX mailing address in our records. We received your address change to your P.O. Box located in Pitkin on June 15th, 2016. As part of our confirmation process, we also review voter registration records to verify residency. According to these records, your Gunnison County voter registration date was October 5th, 2015.

To qualify for the Senior Property Tax Exemption, you must have owned and occupied your home in Gunnison County as your primary residence for 10 consecutive years as of January 1st in the year in which you apply. If there are no changes to ownership or residency between now and January 1st, 2026, your qualification year would be 2026. You may reapply when you meet the residency requirement.

Consequently, the Assessor's Office has denied your application for the Senior Property Tax Exemption for 2025. If you disagree with the Assessor's office decision, you may file an appeal and request a hearing before the County Board of Equalization (CBOE) no later than August 15, 2025. The CBOE can be contacted by phone at (970) 641-0248 or by mail at 200 E. Virginia St, Suite 104, Gunnison, CO 81230.

Sincerely,

Kyona Costello

Kyona Costello
Title Administrator
kcostello@gunnisoncounty.org
970-641-1085

CBOE #SR01

RE: Petition for Senior Property Tax Exemption

CBOE Hearing: #SR01
Account Number: R003777
Property Owner: Henry Kahanek Jr
130 Main St, Pitkin

Dear CBOE members:

Please accept this letter as explanation for my disagreement with the Assessor's Office decision to deny my application for the Senior Property Tax Exemption for 2025.

1. In late 2014, my wife (Sharry) and I sold our vacant property in Georgetown, TX, where we had anticipated building our primary residence. After this change in plans, we considered 130 Main Street, Pitkin, CO, as our primary residence. It is the only home that we have owned and occupied since January 1, 2015. We claimed 130 Main Street, PO Box 144, Pitkin, CO, as our residence on our 2015 Federal and State income tax returns. Documentation has been provided to you. We paid Colorado state income tax for the entire year.

2. We still own a commercial storage building in Fredericksburg, TX, have family in Fredericksburg, TX, visit Fredericksburg, TX, and STILL have a PO Box in Fredericksburg, TX. A family member forwards our mail to our address in Pitkin, as needed, so it didn't occur to me until later to make a change in the assessor's records to our Pitkin address.

Thank you for considering these facts in making your determination.

Sincerely,

Henry Kahanek, Jr.

Gunnison County Assessor's Office

To: Gunnison County Board of Equalization

From: Vicki Hildreth, Gunnison County Deputy Assessor - Administration

Date: August 13, 2025

Re: Kahanek – 2025 Senior Property Tax Exemption application, CBOE #SR01

- For reference, attached please find a blank 2025 Senior Property Tax Exemption Short Form application and instructions. A blank copy of the Colorado Voter Registration Form is also attached for reference.

- On February 25, 2025, the Assessor's Office received a short form application for Senior Property Tax Exemption from Henry Kahanek Jr. for the property address of 130 Main Street, Pitkin Colorado.

- On July 31, 2025, the Assessor's Office sent a letter to Henry Kahanek Jr. denying the application for the 130 Main Street, Pitkin address as the 10 consecutive year primary residence criteria was not met. In part, the following information was included in this letter.
    - Our records show we receive your mailing address change request from your Fredericksburg Texas mailing address to your Pitkin Colorado mailing address on June 15, 2016.
    - As part of the Assessor's Office confirmation process, we also review voter registration records to verify residency. According to these records, your Gunnison County voter registration date was October 5, 2015.
    - To qualify for the Senior Property Tax Exemption, you must have owned and occupied your home in Gunnison County as your primary residence for 10 consecutive years as of January 1st in the year in which you apply.
    - If there are no changes to ownership or residency between now and January 1, 2026, your qualification year would be 2026.

- The Assessor's Office review of the voter registration, driver's license and motor vehicle records confirmed that:
    - Henry Kahanek Jr. registered to vote in Gunnison County on October 5, 2015 and listed Texas as his prior place of residence on that voter registration application.
    - Henry Kahanek Jr.'s Driver's License was changed to a Colorado Driver's License in October 2015 also.
    - Sharry C. Kahanek, who is listed as an occupant and spouse on Henry Kahanek Jr.'s Senior Property Tax Exemption application, registered to vote in Gunnison County on November 5, 2015. She listed Fredericksburg Texas as her prior place of residence on that voter registration application and listed May 20, 2015 as the date moved to the Pitkin Colorado residence address.
    - Motor Vehicle records show that Henry Kahanek Jr. registered a vehicle in Gunnison County in August 2018 but did not show any registered vehicles in Gunnison County between 2014 and August 2018.

- The Assessor's Office also reviewed additional information provided by the Kahaneks':
    - A copy of Henry and Sharry Kahaneks' 2015 tax return was submitted which verified their mailing address was P. O. Box 144 Pitkin Colorado in year 2016.

- As an additional confirmation step, the Assessor's Office corresponds with the Colorado Division of Property Taxation (DPT) who reviews the senior property tax exemption information when it is submitted to the DPT from all Colorado counties in September each year.
    - The DPT confirmed that,
        - A person can have only one primary residence at a time.
        - If an applicant is registered to vote, the address used for voter registration is considered the primary residence.

SHORT FORM: PROPERTY TAX EXEMPTION FOR SENIORS

CONFIDENTIAL

Applications for the property tax exemption must be mailed or delivered to your county assessor's office. Applications should not be returned to the Division of Property Taxation. Applications sent to the incorrect address or agency may delay or cause problems with processing your application.

1. Identification of Applicant and Property

Applicant's First Name, Middle Initial, and Last Name		Social Security Number	Date of Birth
Property Address (number & street name)		Schedule or Parcel Number	
City or Town	State CO	Zip Code	Telephone Number
Mailing Address (if different from property address)			Check box if ownership is held in a life estate. ☐

2. Age, Occupancy, and Ownership Requirements

Each question must be answered "True" to qualify using this form.

As of January 1 of this year, I am at least 65 years old. ☐ **True** ☐ **False**

The owner of record for the property described above is either a) me, b) my spouse, or c) both of us. The property has been owned by one or both of us for at least **10 consecutive years** prior to January 1 of this year. During periods when the property was owned by my spouse and not by me, my spouse and I were married, and my spouse occupied the property as his or her primary residence. ☐ **True** ☐ **False**

I occupy the property described above as my primary residence, and I have done so for at least **10 consecutive years** prior to January 1 of this year. ☐ **True** ☐ **False**

3. Each additional person who occupies the property as his or her primary residence must be listed here.

(Attach an additional sheet if necessary.)

3A. Person who also occupies property as primary residence	Spouse ☐ *Yes* ☐ *No*	Social Security Number
3B.1 Person who also occupies property as primary residence		Social Security Number
3B.2 Person who also occupies property as primary residence		Social Security Number

4. Affidavit and Signature

I declare, under penalty of perjury in the second degree (§ 18-8-503, C.R.S.), that the information I provided on this form and on any attachments is correct.

Signature:_____ Date:_____

Signer is: ☐ Applicant ☐ Spouse ☐ Guardian* ☐ Conservator* ☐ Attorney-in-fact*

* Authorization in the form of a court order or power of attorney is required.

Other Contact:_____ Telephone Number:_____

(relative, personal representative, etc.)

The assessor must be informed of any change in ownership or occupancy of the property within 60 days of when the change occurs.

Mail or deliver this form to your county assessor by **July 15.** We recommend you **obtain a receipt** when delivering the form in person, or mail the form by **certified mail.** You may also call the assessor prior to July 15 to ensure that it was received.

SENIOR PROPERTY TAX HOMESTEAD EXEMPTION SHORT FORM

A property tax exemption is available to qualifying senior citizens and the surviving spouses of those who previously qualified. There are three basic requirements to qualify: 1) The qualifying senior must be at least 65 years old on January 1 of the year in which he or she applies; 2) The qualifying senior must be the property owner of record and must have been so for at least 10 consecutive years prior to January 1; and 3) The qualifying senior must occupy the property as his or her primary residence and must have done so for at least 10 consecutive years prior to January 1.

For those who qualify, 50 percent of the first $200,000 of actual value of the applicant's primary residence is exempted. The state will reimburse the county treasurer for the lost revenue.

An applicant or married couple can apply for the exemption on **only one property** and that property must be his or her primary residence. Married couples and individuals who apply for the exemption on multiple properties will be denied the exemption on each property.

For the purpose of the exemption, "**primary residence**" is the place at which a person's habitation is fixed. A person can have only one primary residence at a time. If the applicant is registered to vote, the address used for voter registration is considered the primary residence. If the applicant is not registered to vote, the address listed on automobile registrations, income tax returns, or other legal documents may be considered evidence of the place of primary residency.

The property must be classified by the county assessor as residential. If the applicant owns a multiple dwelling unit property, the exemption will only be granted to the unit occupied by the applicant as his or her primary residence.

The **social security numbers** of the applicant and each additional person who occupies the property as his or her primary residence are required by law, §§ 39-3-205(2)(a)(I) and (III), and 8-2-128(2), C.R.S. They are used to ensure that no individual or married couple receives the exemption on more than one property.

Two application forms have been created for the exemption. The attached Short Form is intended for qualifying seniors who meet each of the requirements stated above, including those who meet the ownership requirement through ownership by their spouse. The Long Form must be used by individuals applying under the surviving spouse option and for applicants who fall within certain exceptions to the occupancy and ownership requirements.

The **surviving spouse** of an individual who previously qualified is someone who was married to a senior who met each of the application requirements on January 1 of the year of application. Qualifications for the surviving spouse option are listed under "Long Form Qualifications."

Exceptions to the occupancy and ownership requirements are as follows: 1) Ownership has been transferred to or purchased by a trust, corporate partnership or other legal entity solely for estate planning purposes; 2) The qualifying senior or his or her spouse was or is confined to a nursing home, hospital or assisted living facility; 3) The prior residence was condemned in an eminent domain proceeding by a government entity; or 4) The prior residence was destroyed or otherwise rendered uninhabitable by a natural disaster.

The completed form must be submitted to the county assessor's office no later than **July 15.** If not filed by July 15, the assessor must accept late applications through August 15. However, applicants who file after July 15 will not have appeal rights. **You only need to apply for the exemption once and it remains in effect for subsequent years, as long as the property ownership and occupancy do not change.** Your county assessor has a brochure with additional information.

Short Form Qualifications

The application deadline for the attached Short Form is **July 15**. The form can be used by applicants who meet each of the following requirements.

- **Age Requirement:** You are 65 years old or older as of January 1 of the year for which you are seeking exemption.
- **Ownership Requirement:** You are the current owner of record and you have owned the property for at least 10 consecutive years prior to January 1 of the tax year for which you are seeking the exemption. You do not have to be the sole owner of the property. You can own it with your spouse or with someone else. You can also own a life estate in the property.

  If Your Spouse is/was the Owner of Record: For the purpose of the exemption, you are also considered an owner of the property for periods during which your spouse was the owner of record, if, during those periods, your spouse and you were married and your spouse also occupied the property as his or her primary residence.

- **Occupancy Requirement:** You occupy the property as your primary residence, and you have done so for at least 10 consecutive years prior to January 1 of this year.

Long Form Qualifications

If you qualify based on one or more of the following statements, you must use the long application form. The Long Form can be obtained from your county assessor. The deadline for applying is **July 15.**

Surviving Spouse Option: Did your spouse apply for and receive the exemption on your residence prior to passing away? Could your spouse have received the exemption on your residence had he or she applied? If so, you qualify as the surviving spouse if each of the following statements is true:

- On January 1 of this year, your husband or wife met the age, ownership, and occupancy requirements stated above under "Short Form Qualifications."
- You currently occupy the property as your primary residence, and you did so with your spouse.
- The property has been owned by you and/or your spouse for at least 10 consecutive years prior to January 1 of this year to present.
- If your husband or wife passed away prior to January 1, review the ***Surviving Spouse Option*** to see if you qualify.

Exceptions to Ownership & Occupancy Requirements:

- ***If Property is Owned by Trust, Corporate Partnership or Legal Entity:*** The ownership requirement may be satisfied if your property is owned by a trust, a corporate partnership, or other legal entity solely for estate planning purposes.

  You and/or your spouse must be the maker of the trust or a principal of the corporate partnership or legal entity. If the property was not owned by the trust, corporate partnership or other legal entity, it would be owned by you and/or your spouse.

  or

- ***If Confined to Healthcare Facility:*** The occupancy requirement may be satisfied even though occupancy has been interrupted by confinement of the applicant or spouse to a nursing home, hospital or assisted living facility. While confined to the health care facility, the property was/is unoccupied, or it was/is occupied only by the spouse of the person confined or by a financial dependent.

  or

- ***If Prior Residence was Condemned or Destroyed by a Natural Disaster:*** The ownership and occupancy requirements may be satisfied if the 10-year time frame was not met due to the condemnation of the prior residence by a governmental entity in an eminent domain proceeding, or if the prior residence was destroyed or otherwise rendered uninhabitable by a natural disaster. This exception applies if you would still live in the prior residence had the event not occurred, and you would meet the 10-year ownership and occupancy requirements for that property or you would qualify as a surviving spouse for that property, and you have not been the owner and occupier of any other residence since the time of the event.

  or

- ***Surviving Spouse Option, Spouse Passed Away Prior to January 1:*** If your spouse passed away prior to January 1, you can still qualify if your spouse met the requirements stated in "Short Form Qualifications" on January 1, 2002, or on any January 1 thereafter, and you otherwise meet the requirements for the surviving spouse option.

Veterans with a Disability Exemption

In 2006, voters amended Colorado's Constitution to extend the senior exemption to veterans with a disability. Qualifying veterans are those who have a 100 percent permanent disability rating or individual unemployability status from the United States Department of Veterans Affairs through disability retirement benefits from a service-connected disability. Applicants must have owned and occupied the property as their primary residence since January 1. In 2014, Colorado's Legislature extended this exemption to the surviving spouse of a disabled veteran who previously received the exemption. In 2022 voters added eligibility for "Gold Star Surviving Spouses" to the program.

Applications are available from the web site of the Colorado Division of Property Taxation at https://dpt.colorado.gov/property-tax-exemption-for-senior-citizens-and-veterans-with-a-disability or from your county assessor's office. **The filing deadline is July 1.**

SHORT FORM INSTRUCTIONS

Note: For 1 and 3 below, you must include the name and social security number of each person who occupies the property as his or her primary residence.

1. Identify the qualifying senior and the property in this section.

   - The applicant's Social Security number is required. For an explanation, please review 3 below.

   - Life estate – It is permissible for ownership to be held in a life estate. If ownership is held in a life estate, checking the life estate box will assist the assessor's office in processing your application.

2. Age, occupancy, and ownership - In order to use the Short Form, all three questions in this section must be answered "True". If any questions are "False", please review the Long Form Qualifications to see if you still qualify.

3. Pursuant to § 39-3-205(2)(a)(I) and (III), and 8-2-128(2), C.R.S., the name and Social Security number of each individual who occupies the property must be listed on the application form. Names and social security numbers are used to ensure that no individual or married couple applies for the exemption on more than one property. The statute requires that the information be kept confidential. If your husband or wife occupies the property, he or she must be listed on the first line and identified as your spouse. If more than three additional people occupy the property, you can attach an additional sheet with their names and social security numbers.

4. You must sign and date the form. If the form is signed on behalf of the applicant by a guardian, conservator, or attorney-in- fact, that person must provide documentation of his or her authority in the form of a court order or power of attorney. If there is a contact person other than the applicant, please provide the name and telephone number of that person.

If you have any questions, please contact your county assessor's office.

Assessor Name

Address

Telephone Numbers

E-mail Address

Web Site

Colorado Voter Registration Form

Fill out all fields marked with an asterisk (*)

Eligibility 1

* Are you a citizen of the United States? ☐ Yes ☐ No If you answered "No", do not complete this form.

Name 2

* Last Name | * First Name | Middle Name | Suffix

Identification 3

Provide your birth date and your identification information

Remember to write your birth date below

*MM - *DD - *YYYY

☐ I have a valid CO Driver's License or ID card
Write that number here: __ __ - __ __ __ - __ __ __ __

☐ I do not have a CO Driver's License or ID card
Write the last four digits of your SSN here: X X X - X X - __ __ __ __

☐ I do not have a Colorado Driver's License, ID card, or a Social Security Number.

The address where you live 4

* Address (no P.O. Boxes) | Unit Number | * City or Town

CO

State | * Zip Code | Colorado County

☐ I am homeless. This is a location I regularly return to. I have also provided a mailing address in Section 5.

The address where you receive mail 5

☐ Same as above

Address

City or Town | State | Zip Code

The address to mail your ballot 6

The County will mail your ballot here until you say otherwise.

☐ Same as above

Address

City or Town | State | Zip Code

Political affiliation 7a or 7b

Choose only 7a or 7b

I would like to be a member of the following political party:

☐ American Constitution ☐ Approval Voting ☐ Center ☐ Democratic ☐ Green ☐ Libertarian ☐ No Labels ☐ Republican ☐ Unity

☐ I would like to be Unaffiliated, but I want to receive the following party's ballot in the next primary election:

☐ All Major Parties' Ballots ☐ American Constitution ☐ Approval Voting ☐ Democratic ☐ Green ☐ Libertarian ☐ No Labels ☐ Republican ☐ Unity

Updating a current record? 8

If so, you must provide the applicable changes here.

☐ I am not updating a current record ☐ I am no longer overseas ☐ I am no longer absent from Colorado due to military service

Previous home address | Previous legal name

Previous mailing address | Previous party affiliation

Declaration 9

Warning: It is a Class 1 misdemeanor to swear or affirm falsely as to your qualifications to register to vote.

Self-Affirmation: I affirm that I am a **citizen of the United States,** I have been a **resident of Colorado for at least twenty-two days** immediately before an election I intend to vote in, I am at least sixteen years old, and I understand that I must be at least seventeen and turning eighteen on or before the date of the next general election to be eligible to vote in a primary election, and at least eighteen to be eligible to vote in any other election. I further affirm that the residence address I provided is **my sole legal place of residence.** I certify under penalty of perjury that the information I have provided on this application is true to the best of my knowledge and belief, and that I have not, nor will I, cast more than one ballot in any election.

* Signature or mark | * Date | Witness Signature | Date

If you are unable to sign, you must make a mark and have the mark witnessed by another person

Optional information 10

Phone number with area code | Gender identity | ☐ I would like to be an election judge

I want to receive election information by email (You will not receive a ballot by email) | Email address

AGENDA ITEM or FINAL CONTRACT REVIEW SUBMITTAL FORM

Agenda Item: Appeal; Senior Property Tax Exemption; CBOE #SR02;

Action Requested: Motion

Parties to the Agreement:

Term Begins: **Term Ends:** **Grant Contract #:**

Summary:

Senior Property Taxation Exemption Appeal for Niesman

Fiscal Impact:

Submitted by: Holly Perry **Submitter's Email Address:** hperry@gunnisoncounty.org

Finance Review: ○ Required ◉ Not Required

Comments:

Reviewed by: Discharge Date:

County Attorney Review: ◉ Required ○ Not Required

Comments:
Legally sufficient. SO 8/15/25

Reveiwed by: GUNCOUNTY1\sobaid Discharge Date: 8/15/2025 Certificate of Insurance Required

Yes ○ No ◉

County Manager Review:

Comments:

Reveiwed by: GUNCOUNTY1\Hperry Discharge Date: 8/15/2025

○ Consent Agenda ◉ Regular Agenda ○ Worksession Time Allotted: 15

Agenda Date: 8/26/2025

Revised April 2015

CBOE #SR02

Holly Perry

From: CBOE
Subject: FW: Request to appeal denied application for senior property tax exemption

From: Carolyn Niesman <[redacted]>
Sent: Wednesday, August 13, 2025 4:32 PM
To: CBOE <CBOE@gunnisoncounty.org>
Subject: Request to appeal denied application for senior property tax exemption

[EXTERNAL SENDER - USE CAUTION]

I am attaching copies of the sale of my property in Dallas on August 22,2014 and tax records for 2014 for residency beginning 8/14.
I would like to appeal as I did sell my home in Dallas and move here full time in August 2014 and have been here since then.

Thank you for your consideration.
Carolyn Niesman
20 St Andrews Circle
Crested Butte CO 81224
Acct # R033882
[redacted]

Gunnison County Assessor's Office

To: Gunnison County Board of Equalization

From: Vicki Hildreth, Gunnison County Deputy Assessor - Administration

Date: August 14, 2025

Re: Niesman – 2025 Senior Property Tax Exemption application, CBOE #SR02

- For reference, attached please find a blank 2025 Senior Property Tax Exemption Short Form application and instructions. A blank copy of the Colorado Voter Registration Form is also attached for reference.

- On April 22, 2025, the Assessor's Office received a short form application for Senior Property Tax Exemption from Carolyn S. Niesman for the property address of 20 St. Andrews Circle in the Golf Villas at Skyland.

- On August 1, 2025, the Assessor's Office sent a letter to Carolyn Niesman denying the application for the 20 St. Andrews Circle address as the 10 consecutive year primary residence criteria was not met. In part, the following information was included in this letter.
    - Our records show we receive your mailing address change request from your Dallas Texas mailing address to your Crested Butte mailing address in April 2015.
    - As part of the Assessor's Office confirmation process, we also review voter registration records to verify residency. According to these records, your Gunnison County voter registration date was May 26, 2015. Records show that you were registered to vote in Dallas County Texas up until that date.
    - To qualify for the Senior Property Tax Exemption, you must have owned and occupied your home in Gunnison County as your primary residence for 10 consecutive years as of January 1st in the year in which you apply.
    - If there are no changes to ownership or residency between now and January 1, 2026, your qualification year would be 2026.

- The Assessor's Office review of the voter registration records confirmed that:
    - Carolyn S. Niesman registered to vote in Gunnison County on May 26, 2015 and listed Texas as her prior place of residence on that voter registration application.
    - Dallas County Texas Elections Division verified that Carolyn S. Niesman was registered to vote in Dallas County Texas in years 2014 and 2015.

- As an additional confirmation step, the Assessor's Office corresponds with the Colorado Division of Property Taxation (DPT) who reviews the senior property tax exemption information when it is submitted to the DPT from all Colorado counties in September each year.
    - The DPT confirmed that,
        - A person can have only one primary residence at a time.
        - If an applicant <u>is</u> registered to vote, the address used for voter registration is considered the primary residence.
        - If an applicant <u>is not</u> registered to vote, the address listed on automobile registrations, income tax returns, or other legal documents may be considered evidence of the place of primary residency.

SHORT FORM: PROPERTY TAX EXEMPTION FOR SENIORS

CONFIDENTIAL

Applications for the property tax exemption must be mailed or delivered to your county assessor's office. Applications should not be returned to the Division of Property Taxation. Applications sent to the incorrect address or agency may delay or cause problems with processing your application.

1. Identification of Applicant and Property

Applicant's First Name, Middle Initial, and Last Name		Social Security Number	Date of Birth
Property Address (number & street name)		Schedule or Parcel Number	
City or Town	State CO	Zip Code	Telephone Number
Mailing Address (if different from property address)			Check box if ownership is held in a life estate. ☐

2. Age, Occupancy, and Ownership Requirements

Each question must be answered "True" to qualify using this form.

As of January 1 of this year, I am at least 65 years old. ☐ **True** ☐ **False**

The owner of record for the property described above is either a) me, b) my spouse, or c) both of us. The property has been owned by one or both of us for at least **10 consecutive years** prior to January 1 of this year. During periods when the property was owned by my spouse and not by me, my spouse and I were married, and my spouse occupied the property as his or her primary residence. ☐ **True** ☐ **False**

I occupy the property described above as my primary residence, and I have done so for at least **10 consecutive years** prior to January 1 of this year. ☐ **True** ☐ **False**

3. Each additional person who occupies the property as his or her primary residence must be listed here.

(Attach an additional sheet if necessary.)

3A. Person who also occupies property as primary residence	Spouse ☐ *Yes* ☐ *No*	Social Security Number
3B.1 Person who also occupies property as primary residence		Social Security Number
3B.2 Person who also occupies property as primary residence		Social Security Number

4. Affidavit and Signature

I declare, under penalty of perjury in the second degree (§ 18-8-503, C.R.S.), that the information I provided on this form and on any attachments is correct.

Signature:_____ Date:_____

Signer is: ☐ Applicant ☐ Spouse ☐ Guardian* ☐ Conservator* ☐ Attorney-in-fact*

* Authorization in the form of a court order or power of attorney is required.

Other Contact:_____ Telephone Number:_____

(relative, personal representative, etc.)

The assessor must be informed of any change in ownership or occupancy of the property within 60 days of when the change occurs.

Mail or deliver this form to your county assessor by **July 15.** We recommend you **obtain a receipt** when delivering the form in person, or mail the form by **certified mail.** You may also call the assessor prior to July 15 to ensure that it was received.

SENIOR PROPERTY TAX HOMESTEAD EXEMPTION SHORT FORM

A property tax exemption is available to qualifying senior citizens and the surviving spouses of those who previously qualified. There are three basic requirements to qualify: 1) The qualifying senior must be at least 65 years old on January 1 of the year in which he or she applies; 2) The qualifying senior must be the property owner of record and must have been so for at least 10 consecutive years prior to January 1; and 3) The qualifying senior must occupy the property as his or her primary residence and must have done so for at least 10 consecutive years prior to January 1.

For those who qualify, 50 percent of the first $200,000 of actual value of the applicant's primary residence is exempted. The state will reimburse the county treasurer for the lost revenue.

An applicant or married couple can apply for the exemption on **only one property** and that property must be his or her primary residence. Married couples and individuals who apply for the exemption on multiple properties will be denied the exemption on each property.

For the purpose of the exemption, "**primary residence**" is the place at which a person's habitation is fixed. A person can have only one primary residence at a time. If the applicant is registered to vote, the address used for voter registration is considered the primary residence. If the applicant is not registered to vote, the address listed on automobile registrations, income tax returns, or other legal documents may be considered evidence of the place of primary residency.

The property must be classified by the county assessor as residential. If the applicant owns a multiple dwelling unit property, the exemption will only be granted to the unit occupied by the applicant as his or her primary residence.

The **social security numbers** of the applicant and each additional person who occupies the property as his or her primary residence are required by law, §§ 39-3-205(2)(a)(I) and (III), and 8-2-128(2), C.R.S. They are used to ensure that no individual or married couple receives the exemption on more than one property.

Two application forms have been created for the exemption. The attached Short Form is intended for qualifying seniors who meet each of the requirements stated above, including those who meet the ownership requirement through ownership by their spouse. The Long Form must be used by individuals applying under the surviving spouse option and for applicants who fall within certain exceptions to the occupancy and ownership requirements.

The **surviving spouse** of an individual who previously qualified is someone who was married to a senior who met each of the application requirements on January 1 of the year of application. Qualifications for the surviving spouse option are listed under "Long Form Qualifications."

Exceptions to the occupancy and ownership requirements are as follows: 1) Ownership has been transferred to or purchased by a trust, corporate partnership or other legal entity solely for estate planning purposes; 2) The qualifying senior or his or her spouse was or is confined to a nursing home, hospital or assisted living facility; 3) The prior residence was condemned in an eminent domain proceeding by a government entity; or 4) The prior residence was destroyed or otherwise rendered uninhabitable by a natural disaster.

The completed form must be submitted to the county assessor's office no later than **July 15.** If not filed by July 15, the assessor must accept late applications through August 15. However, applicants who file after July 15 will not have appeal rights. **You only need to apply for the exemption once and it remains in effect for subsequent years, as long as the property ownership and occupancy do not change.** Your county assessor has a brochure with additional information.

Short Form Qualifications

The application deadline for the attached Short Form is **July 15**. The form can be used by applicants who meet each of the following requirements.

- **Age Requirement:** You are 65 years old or older as of January 1 of the year for which you are seeking exemption.
- **Ownership Requirement:** You are the current owner of record and you have owned the property for at least 10 consecutive years prior to January 1 of the tax year for which you are seeking the exemption. You do not have to be the sole owner of the property. You can own it with your spouse or with someone else. You can also own a life estate in the property.

  If Your Spouse is/was the Owner of Record: For the purpose of the exemption, you are also considered an owner of the property for periods during which your spouse was the owner of record, if, during those periods, your spouse and you were married and your spouse also occupied the property as his or her primary residence.

- **Occupancy Requirement:** You occupy the property as your primary residence, and you have done so for at least 10 consecutive years prior to January 1 of this year.

Long Form Qualifications

If you qualify based on one or more of the following statements, you must use the long application form. The Long Form can be obtained from your county assessor. The deadline for applying is **July 15.**

Surviving Spouse Option: Did your spouse apply for and receive the exemption on your residence prior to passing away? Could your spouse have received the exemption on your residence had he or she applied? If so, you qualify as the surviving spouse if each of the following statements is true:

- On January 1 of this year, your husband or wife met the age, ownership, and occupancy requirements stated above under "Short Form Qualifications."
- You currently occupy the property as your primary residence, and you did so with your spouse.
- The property has been owned by you and/or your spouse for at least 10 consecutive years prior to January 1 of this year to present.
- If your husband or wife passed away prior to January 1, review the ***Surviving Spouse Option*** to see if you qualify.

Exceptions to Ownership & Occupancy Requirements:

- ***If Property is Owned by Trust, Corporate Partnership or Legal Entity***: The ownership requirement may be satisfied if your property is owned by a trust, a corporate partnership, or other legal entity solely for estate planning purposes.

  You and/or your spouse must be the maker of the trust or a principal of the corporate partnership or legal entity. If the property was not owned by the trust, corporate partnership or other legal entity, it would be owned by you and/or your spouse.

  or

- ***If Confined to Healthcare Facility***: The occupancy requirement may be satisfied even though occupancy has been interrupted by confinement of the applicant or spouse to a nursing home, hospital or assisted living facility. While confined to the health care facility, the property was/is unoccupied, or it was/is occupied only by the spouse of the person confined or by a financial dependent.

  or

- ***If Prior Residence was Condemned or Destroyed by a Natural Disaster:*** The ownership and occupancy requirements may be satisfied if the 10-year time frame was not met due to the condemnation of the prior residence by a governmental entity in an eminent domain proceeding, or if the prior residence was destroyed or otherwise rendered uninhabitable by a natural disaster. This exception applies if you would still live in the prior residence had the event not occurred, and you would meet the 10-year ownership and occupancy requirements for that property or you would qualify as a surviving spouse for that property, and you have not been the owner and occupier of any other residence since the time of the event.

  or

- ***Surviving Spouse Option, Spouse Passed Away Prior to January 1:*** If your spouse passed away prior to January 1, you can still qualify if your spouse met the requirements stated in "Short Form Qualifications" on January 1, 2002, or on any January 1 thereafter, and you otherwise meet the requirements for the surviving spouse option.

Veterans with a Disability Exemption

In 2006, voters amended Colorado's Constitution to extend the senior exemption to veterans with a disability. Qualifying veterans are those who have a 100 percent permanent disability rating or individual unemployability status from the United States Department of Veterans Affairs through disability retirement benefits from a service-connected disability. Applicants must have owned and occupied the property as their primary residence since January 1. In 2014, Colorado's Legislature extended this exemption to the surviving spouse of a disabled veteran who previously received the exemption. In 2022 voters added eligibility for "Gold Star Surviving Spouses" to the program.

Applications are available from the web site of the Colorado Division of Property Taxation at https://dpt.colorado.gov/property-tax-exemption-for-senior-citizens-and-veterans-with-a-disability or from your county assessor's office. **The filing deadline is July 1.**

SHORT FORM INSTRUCTIONS

Note: For 1 and 3 below, you must include the name and social security number of each person who occupies the property as his or her primary residence.

1. Identify the qualifying senior and the property in this section.

   - The applicant's Social Security number is required. For an explanation, please review 3 below.
   - Life estate – It is permissible for ownership to be held in a life estate. If ownership is held in a life estate, checking the life estate box will assist the assessor's office in processing your application.

2. Age, occupancy, and ownership - In order to use the Short Form, all three questions in this section must be answered "True". If any questions are "False", please review the Long Form Qualifications to see if you still qualify.

3. Pursuant to § 39-3-205(2)(a)(I) and (III), and 8-2-128(2), C.R.S., the name and Social Security number of each individual who occupies the property must be listed on the application form. Names and social security numbers are used to ensure that no individual or married couple applies for the exemption on more than one property. The statute requires that the information be kept confidential. If your husband or wife occupies the property, he or she must be listed on the first line and identified as your spouse. If more than three additional people occupy the property, you can attach an additional sheet with their names and social security numbers.

4. You must sign and date the form. If the form is signed on behalf of the applicant by a guardian, conservator, or attorney-in- fact, that person must provide documentation of his or her authority in the form of a court order or power of attorney. If there is a contact person other than the applicant, please provide the name and telephone number of that person.

If you have any questions, please contact your county assessor's office.

Assessor Name

Address

Telephone Numbers

E-mail Address

Web Site

Colorado Voter Registration Form

Fill out all fields marked with an asterisk (*)

Eligibility 1

* Are you a citizen of the United States? ☐ Yes ☐ No If you answered "No", do not complete this form.

Name 2

* Last Name | * First Name | Middle Name | Suffix

Identification 3

Provide your birth date and your identification information

Remember to write your birth date below

*MM - *DD - *YYYY

☐ I have a valid CO Driver's License or ID card
Write that number here: __ __ - __ __ __ - __ __ __ __

☐ I do not have a CO Driver's License or ID card
Write the last four digits of your SSN here: X X X - X X - __ __ __ __

☐ I do not have a Colorado Driver's License, ID card, or a Social Security Number.

The address where you live 4

* Address (no P.O. Boxes) | Unit Number | * City or Town

CO

State | * Zip Code | Colorado County

☐ I am homeless. This is a location I regularly return to. I have also provided a mailing address in Section 5.

The address where you receive mail 5

☐ Same as above

Address

City or Town | State | Zip Code

The address to mail your ballot 6

The County will mail your ballot here until you say otherwise.

☐ Same as above

Address

City or Town | State | Zip Code

Political affiliation 7a or 7b

Choose only 7a or 7b

I would like to be a member of the following political party:

☐ American Constitution ☐ Approval Voting ☐ Center ☐ Democratic ☐ Green ☐ Libertarian ☐ No Labels ☐ Republican ☐ Unity

☐ I would like to be Unaffiliated, but I want to receive the following party's ballot in the next primary election:

☐ All Major Parties' Ballots ☐ American Constitution ☐ Approval Voting ☐ Democratic ☐ Green ☐ Libertarian ☐ No Labels ☐ Republican ☐ Unity

Updating a current record? 8

If so, you must provide the applicable changes here.

☐ I am not updating a current record ☐ I am no longer overseas ☐ I am no longer absent from Colorado due to military service

Previous home address | Previous legal name

Previous mailing address | Previous party affiliation

Declaration 9

Warning: It is a Class 1 misdemeanor to swear or affirm falsely as to your qualifications to register to vote.

Self-Affirmation: I affirm that I am a **citizen of the United States**, I have been a **resident of Colorado for at least twenty-two days** immediately before an election I intend to vote in, I am at least sixteen years old, and I understand that I must be at least seventeen and turning eighteen on or before the date of the next general election to be eligible to vote in a primary election, and at least eighteen to be eligible to vote in any other election. I further affirm that the residence address I provided is **my sole legal place of residence.** I certify under penalty of perjury that the information I have provided on this application is true to the best of my knowledge and belief, and that I have not, nor will I, cast more than one ballot in any election.

* Signature or mark | * Date | Witness Signature | Date

If you are unable to sign, you must make a mark and have the mark witnessed by another person.

Optional information 10

Phone number with area code | Gender identity | ☐ I would like to be an election judge

I want to receive election information by email (You will not receive a ballot by email) | Email address

AGENDA ITEM or FINAL CONTRACT REVIEW SUBMITTAL FORM

Agenda Item: Wildlife Planning Support Tool Discussion

Action Requested: Discussion

Parties to the Agreement:

Term Begins: **Term Ends:** **Grant Contract #:**

Summary:

Wildlife Planning Support Tool Discussion

Fiscal Impact:

Submitted by: Holly Perry for Brandon Diamond **Submitter's Email Address:** hperry@gunnisoncounty.org

Finance Review: ○ Required ◉ Not Required

Comments:

Reviewed by: Discharge Date:

County Attorney Review: ○ Required ◉ Not Required

Comments:

Reveiwed by: Discharge Date: Certificate of Insurance Required

Yes ○ No ○

County Manager Review:

Comments:

Reveiwed by: GUNCOUNTY1\jreynolds Discharge Date: 8/21/2025

○ Consent Agenda ○ Regular Agenda ○ Worksession Time Allotted: 60

Agenda Date: 8/26/2025

Revised April 2015

GUNNISON COUNTY
Wildlife Planning Support Tool

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Gunnison County Board of
Commissioners Meeting
August 26, 2025

Governor Jared Polis signs Executive Order creating the Colorado Outdoor Regional Partnerships Initiative.

October 2020 – B2020 008

The executive order tasks Colorado Parks and Wildlife (CPW) to identify, create and formalize local and regional collaboratives, as Colorado Outdoor Regional Partnerships.

The Regional Partnerships will identify projects and create local and regional priorities for balancing recreation and conservation to inform a Statewide Conservation and Recreation Plan.

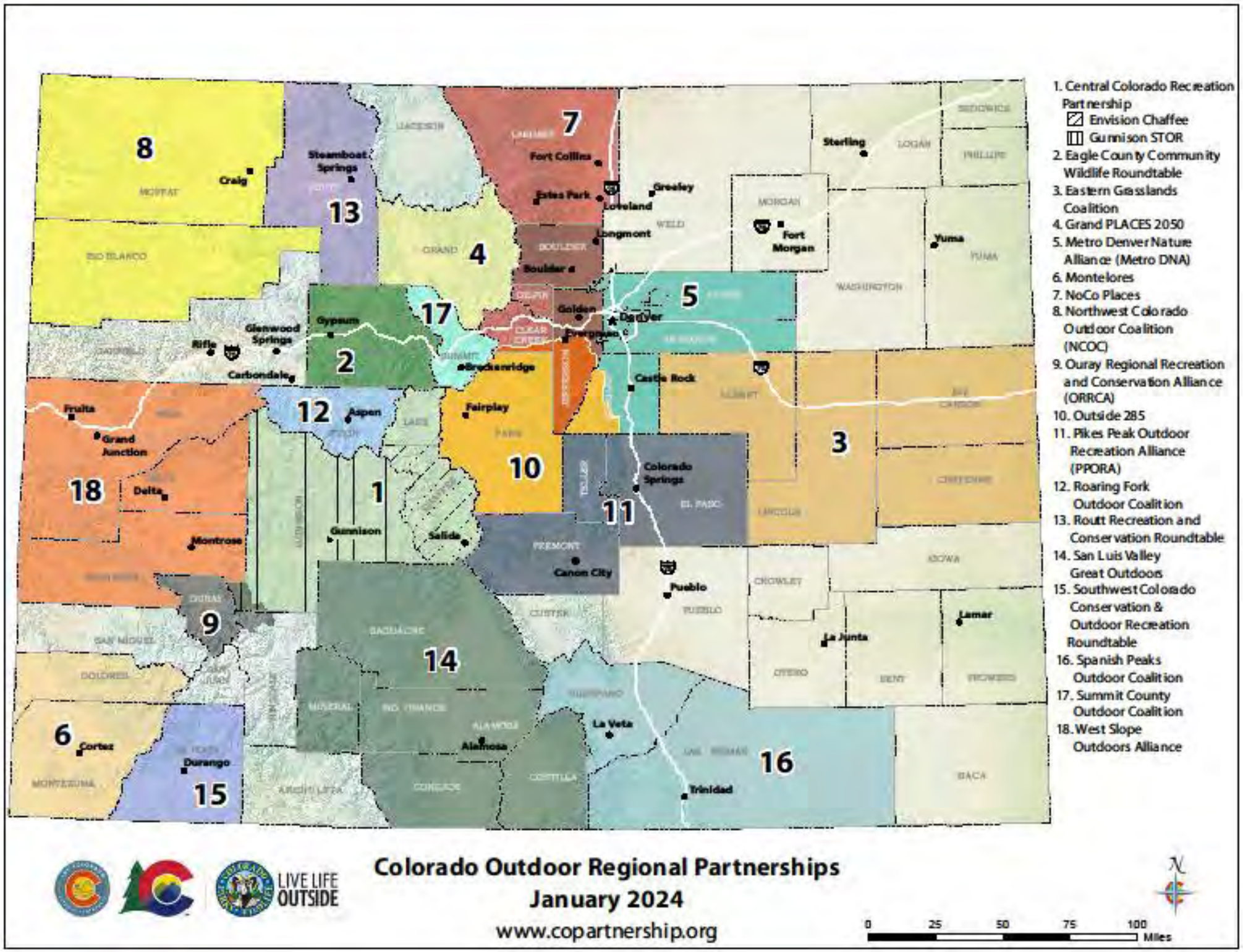
Gunnison County

STOR applied for an RPI Grant in the spring of 2022. The grant was awarded in July of 2022 and essentially did two things:

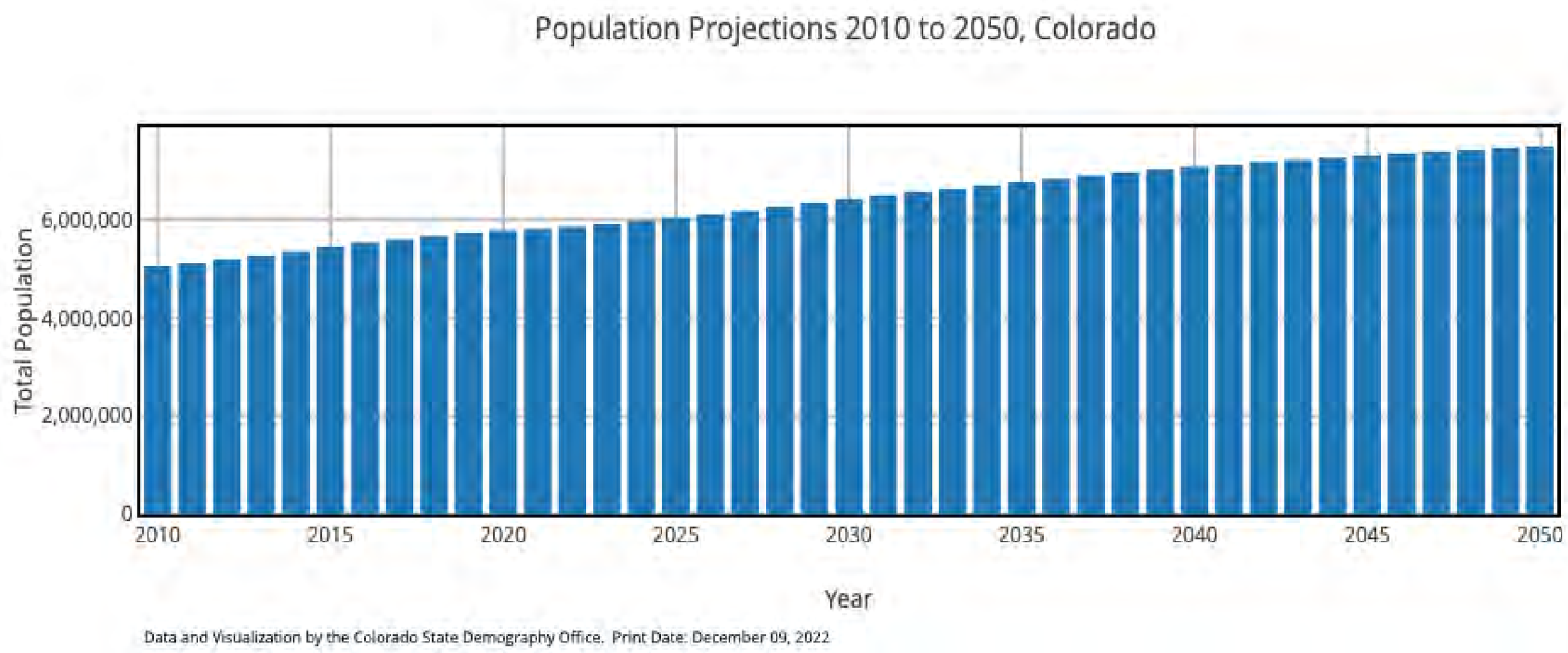
1. It created the 'Central Colorado Recreation Partnership," which includes Chaffee, Lake, and Gunnison Counties.

2. It provided funding to expand the Envision Chaffee County Planning for Wildlife Tool to Lake and Gunnison Counties, providing a shared regional planning platform and a transferable Tool for our part of the state.

Central Colorado Regional Partnership



Colorado Population Projection?



2024 = 95.4 million visitors to Colorado

Increased Desire for Outdoor Recreation



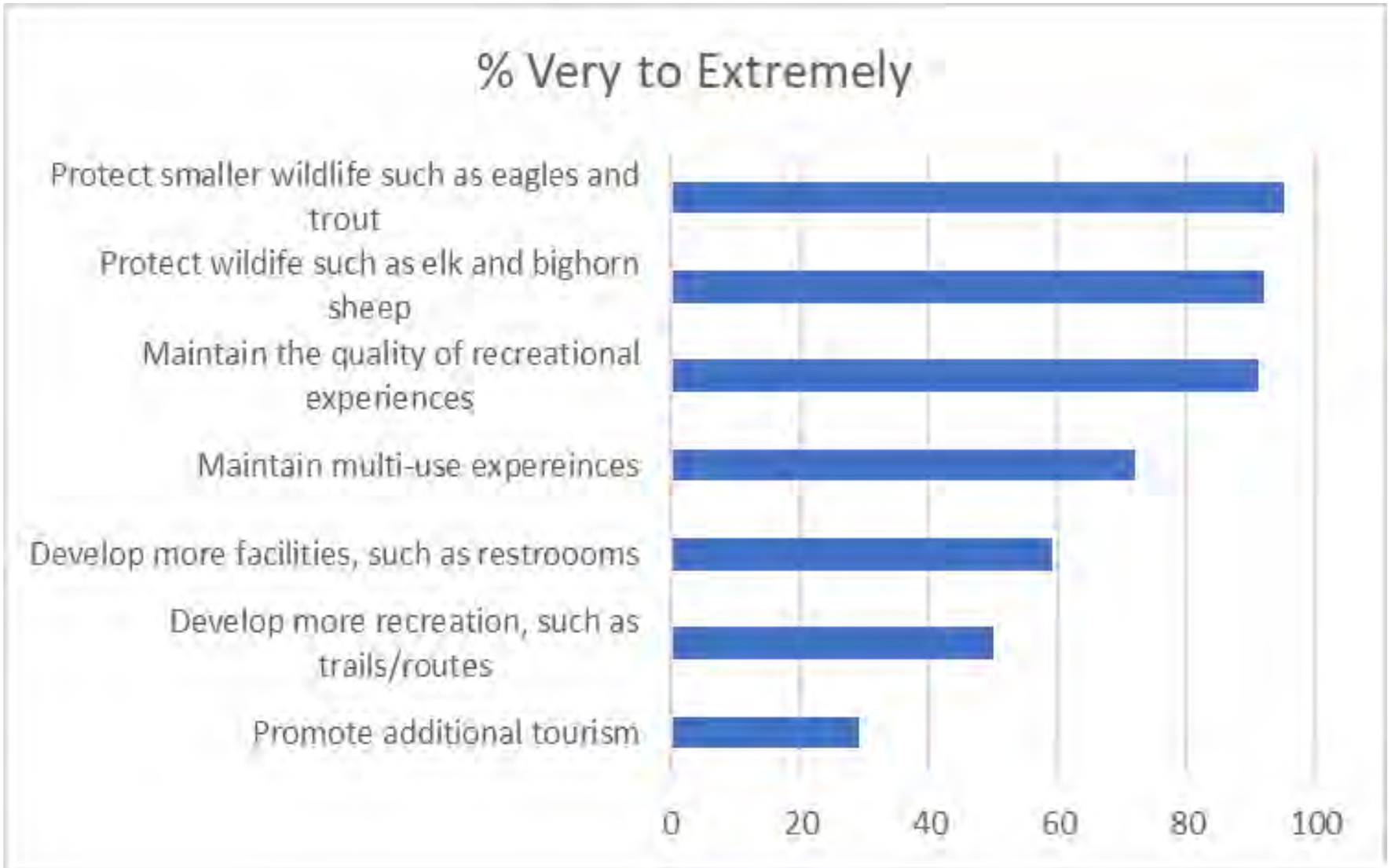
Public land issues & impacts are increasing…

- 2021 Lake County Community Wildfire and Recreation Survey identified “recreation impacts” as a top 3 challenge
- Trash, human waste, expanding campsites, poor behaviors, resource damage
- Agency funding decreasing



95% of respondents said managing recreation to support wildlife is important

As recreation expands, how important are the following?



Private land development & impacts are increasing…

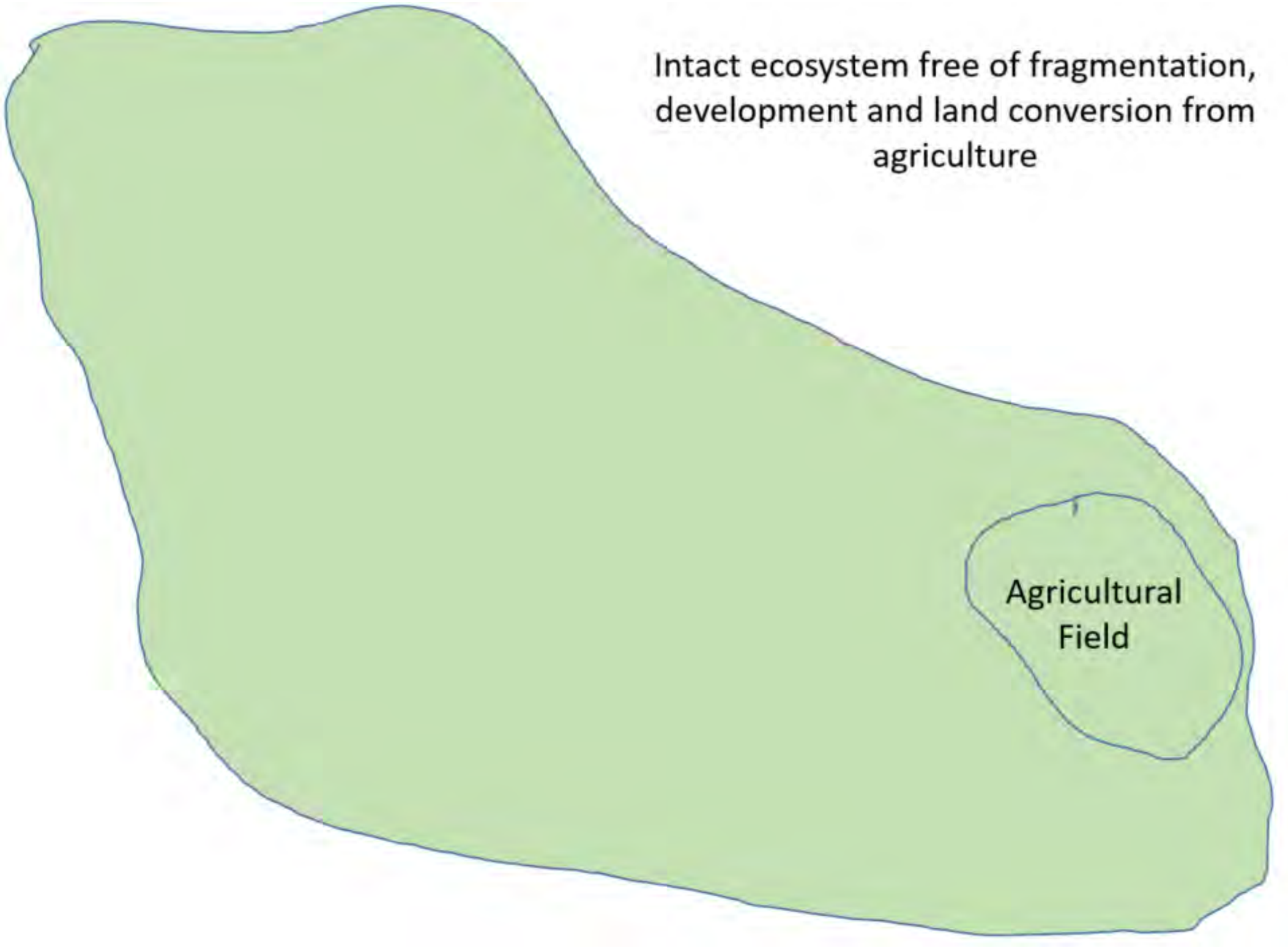


Impacts on Wildlife

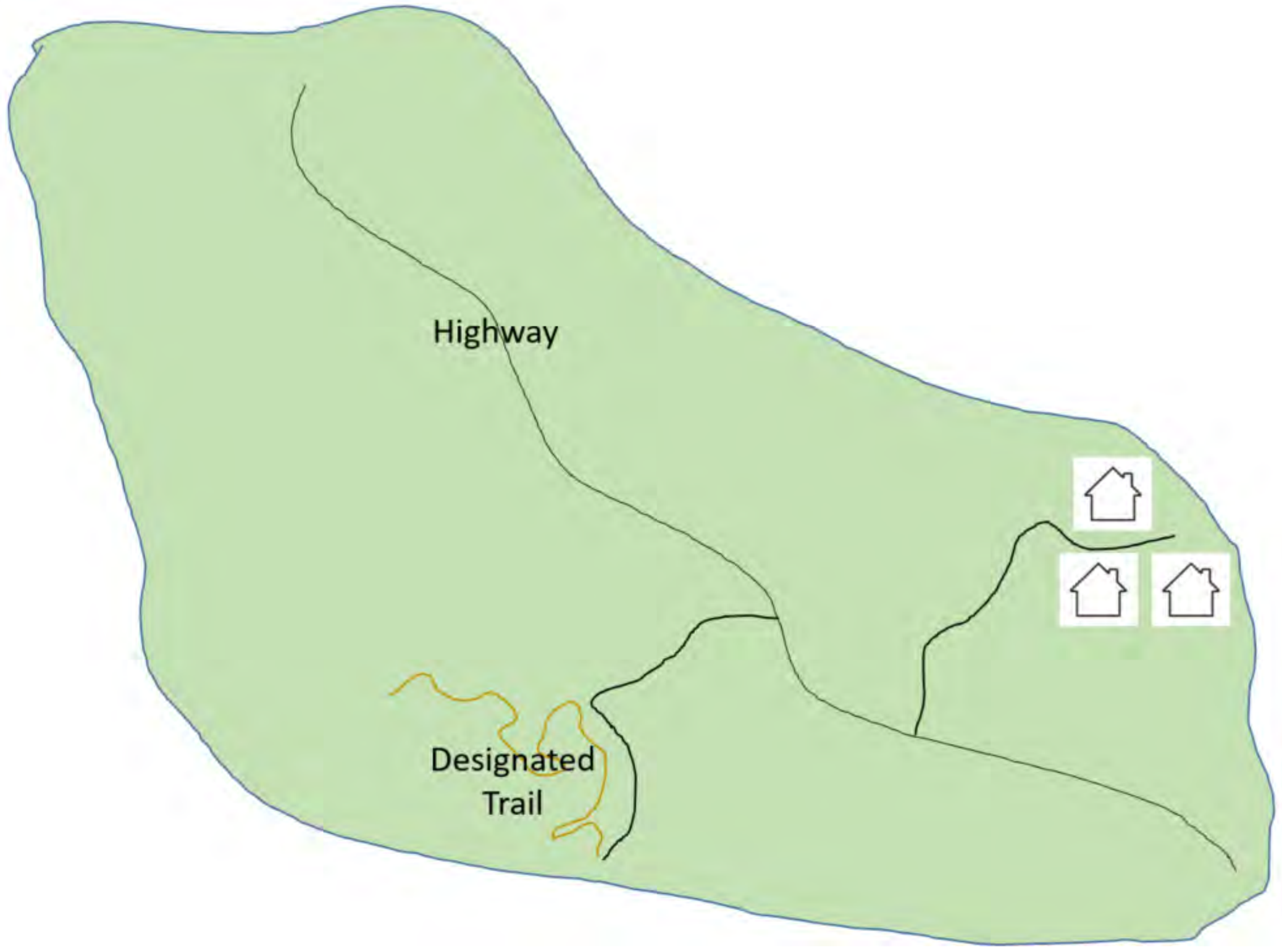


Wildlife depend on both Public & Private Lands

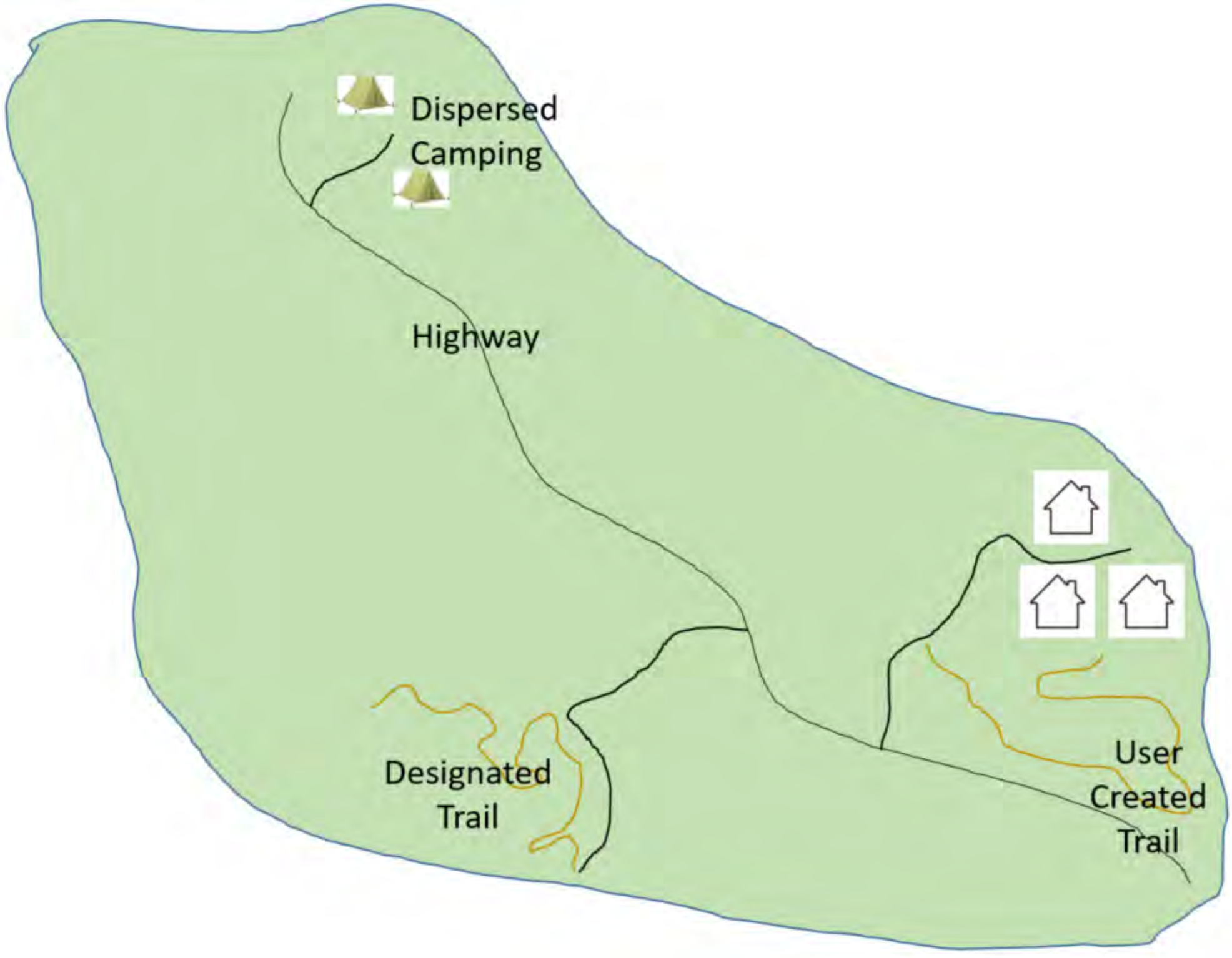
STOR Wildlife Planning Support Tool



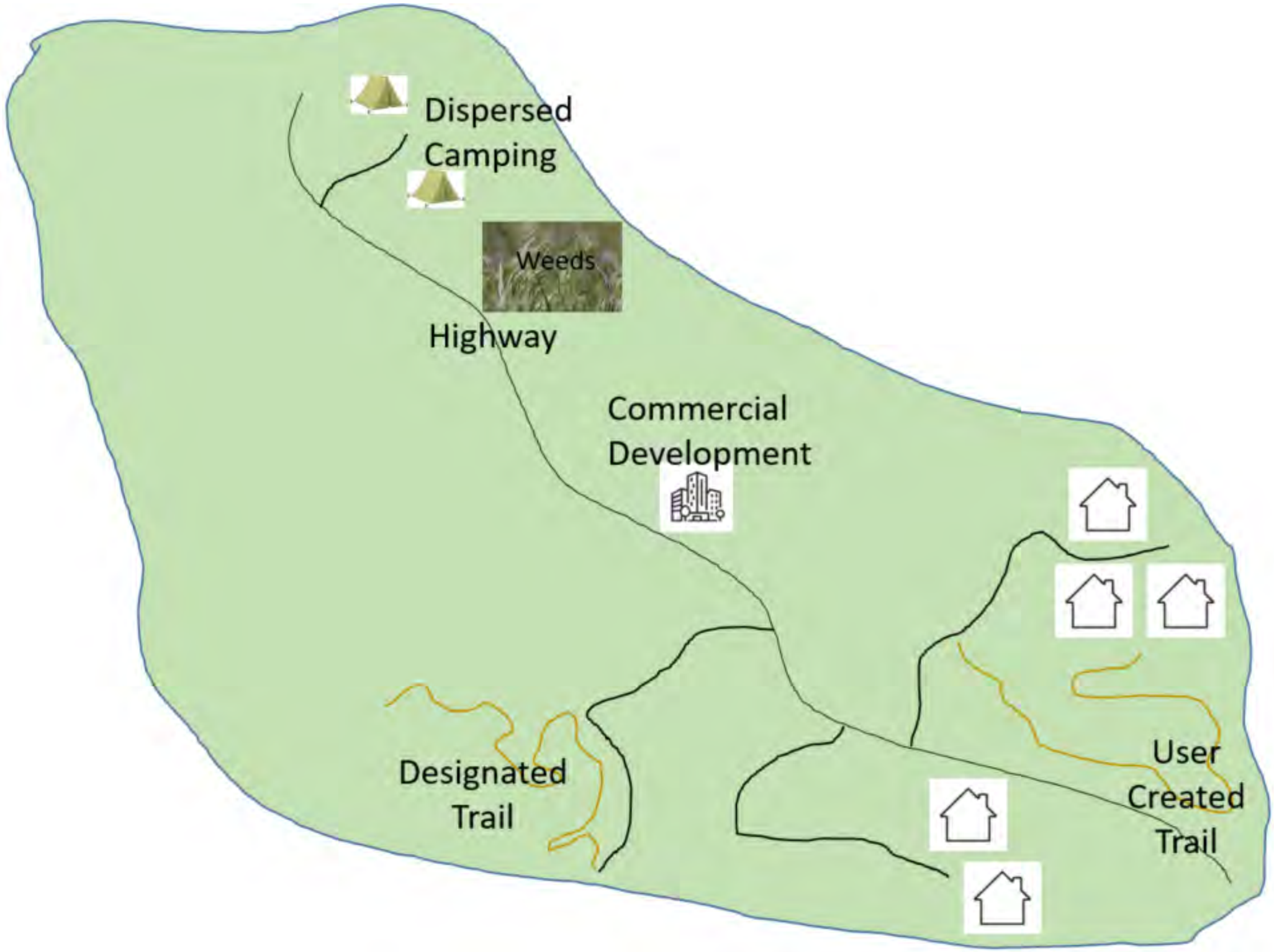
STOR Wildlife Planning Support Tool



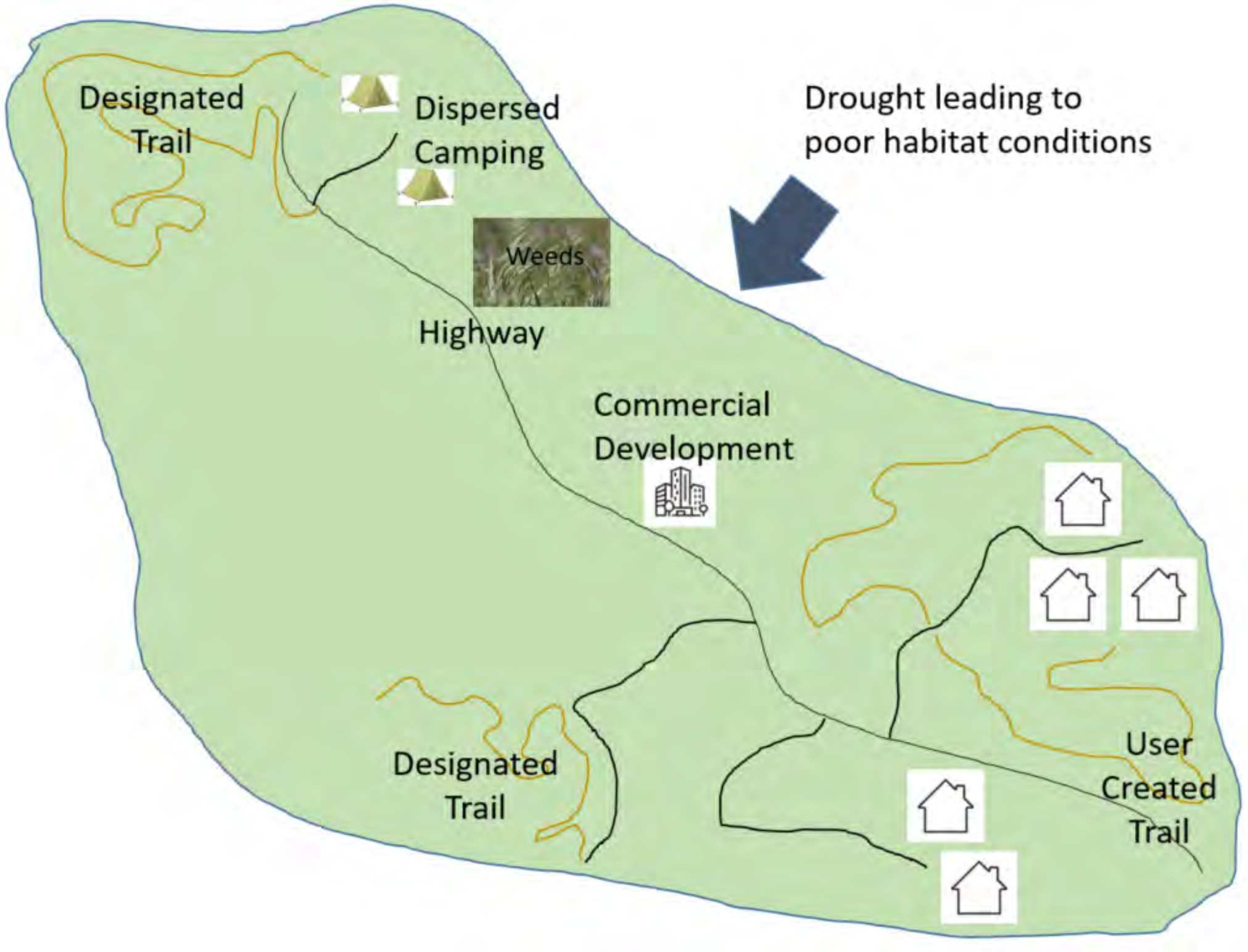
STOR Wildlife Planning Support Tool



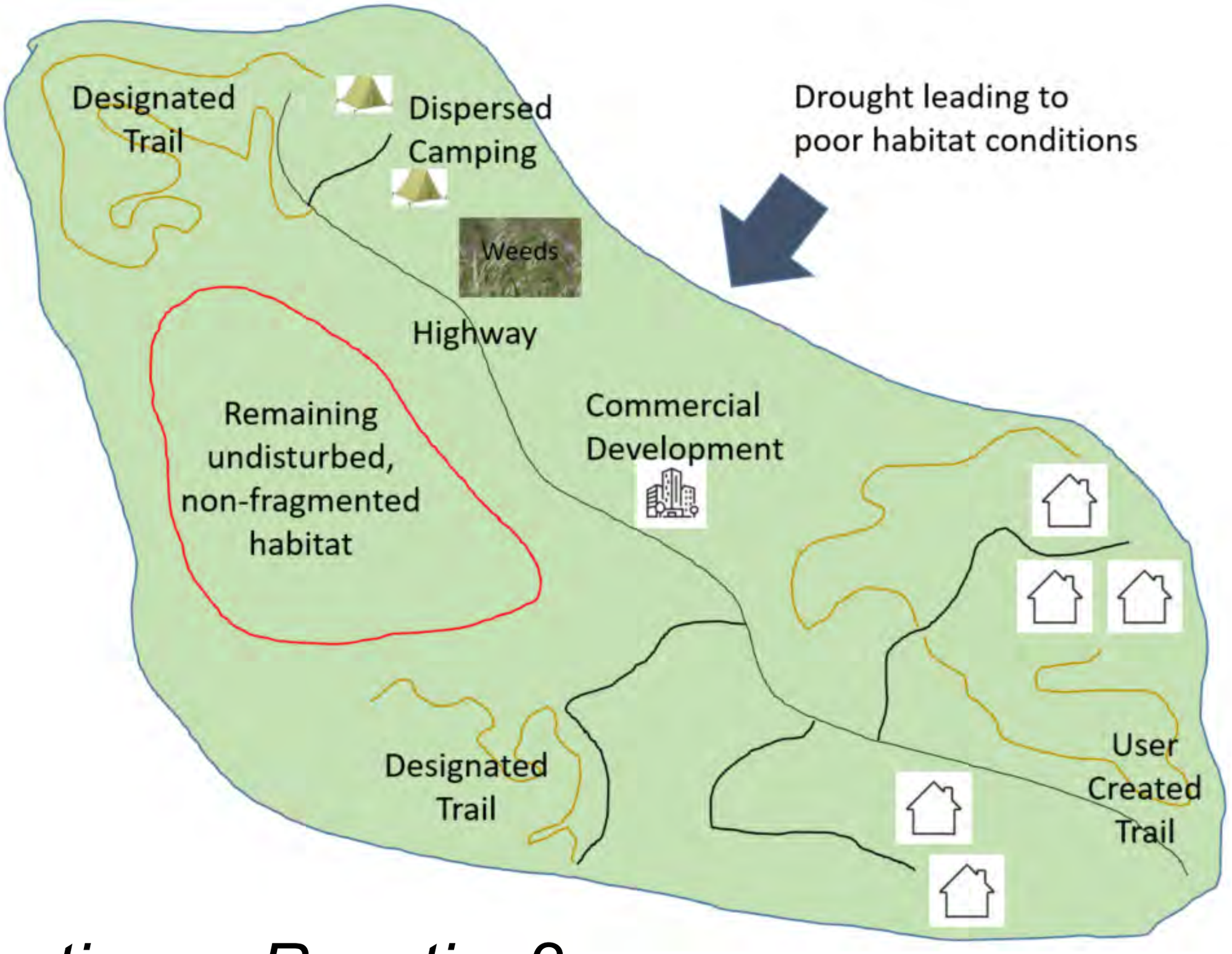
STOR Wildlife Planning Support Tool



STOR Wildlife Planning Support Tool



STOR Wildlife Planning Support Tool



Proactive or Reactive?:

STOR Wildlife Planning Support Tool

- *Wildlife is impacted by everything we do across the landscape; impacts are cumulative*

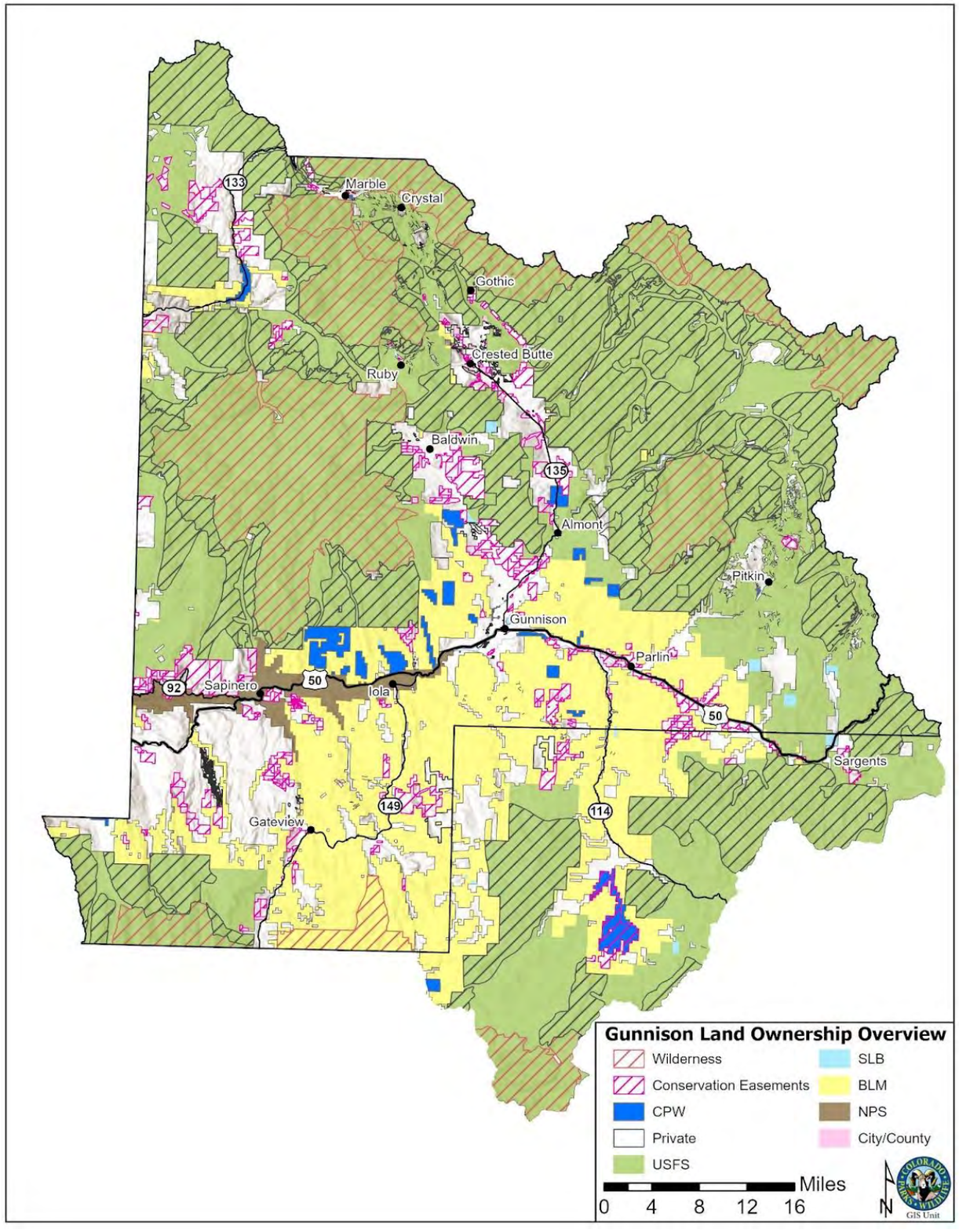
- *This Tool helps identify the most important habitats to guide land use decisions*

- *Tool does not supersede any jurisdictions or guiding documents; just a tool in our toolbox*

Final Product & Summary Report

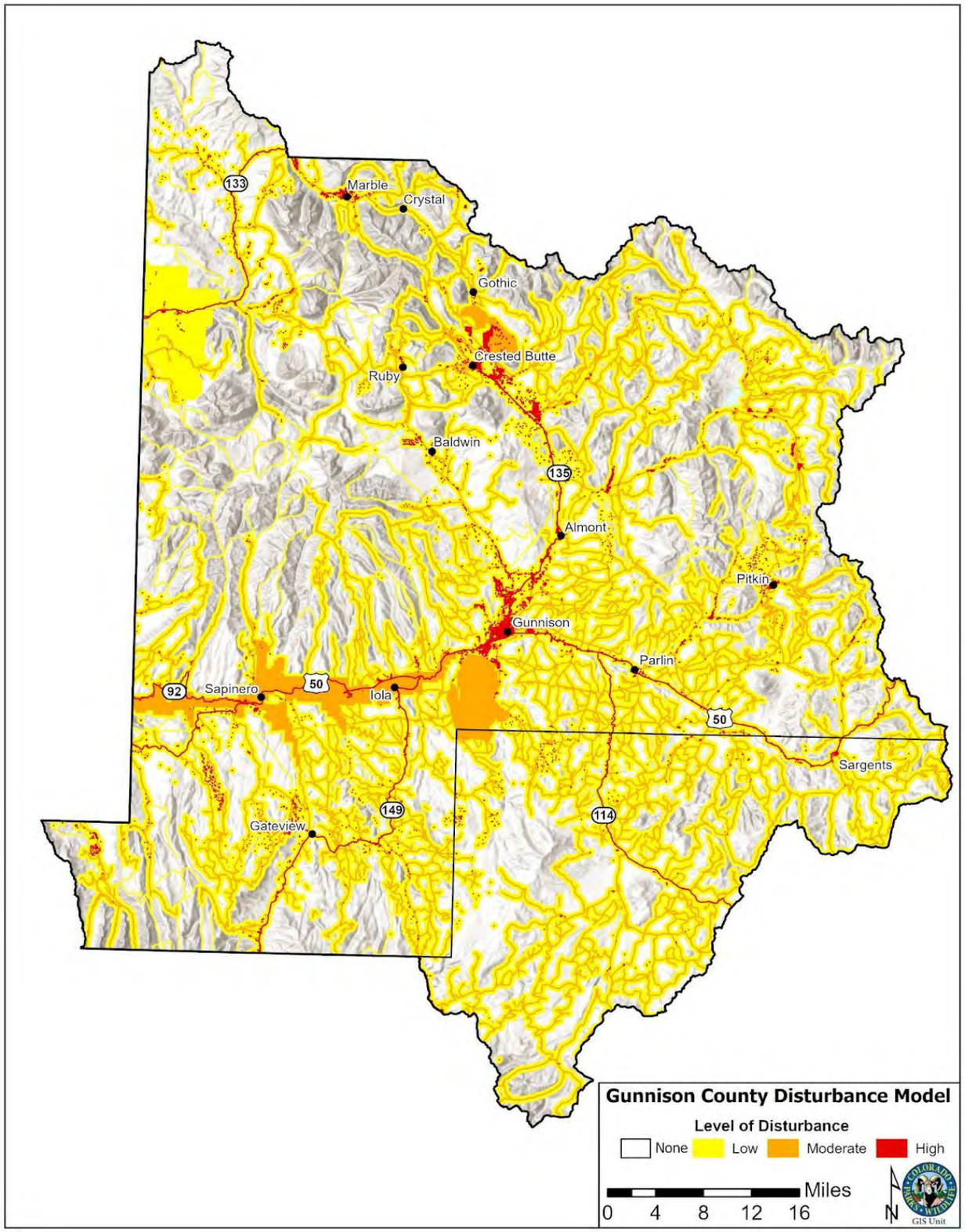
STOR Wildlife Planning Support Tool

LANDOWNERSHIP MAP



STOR Wildlife Planning Support Tool

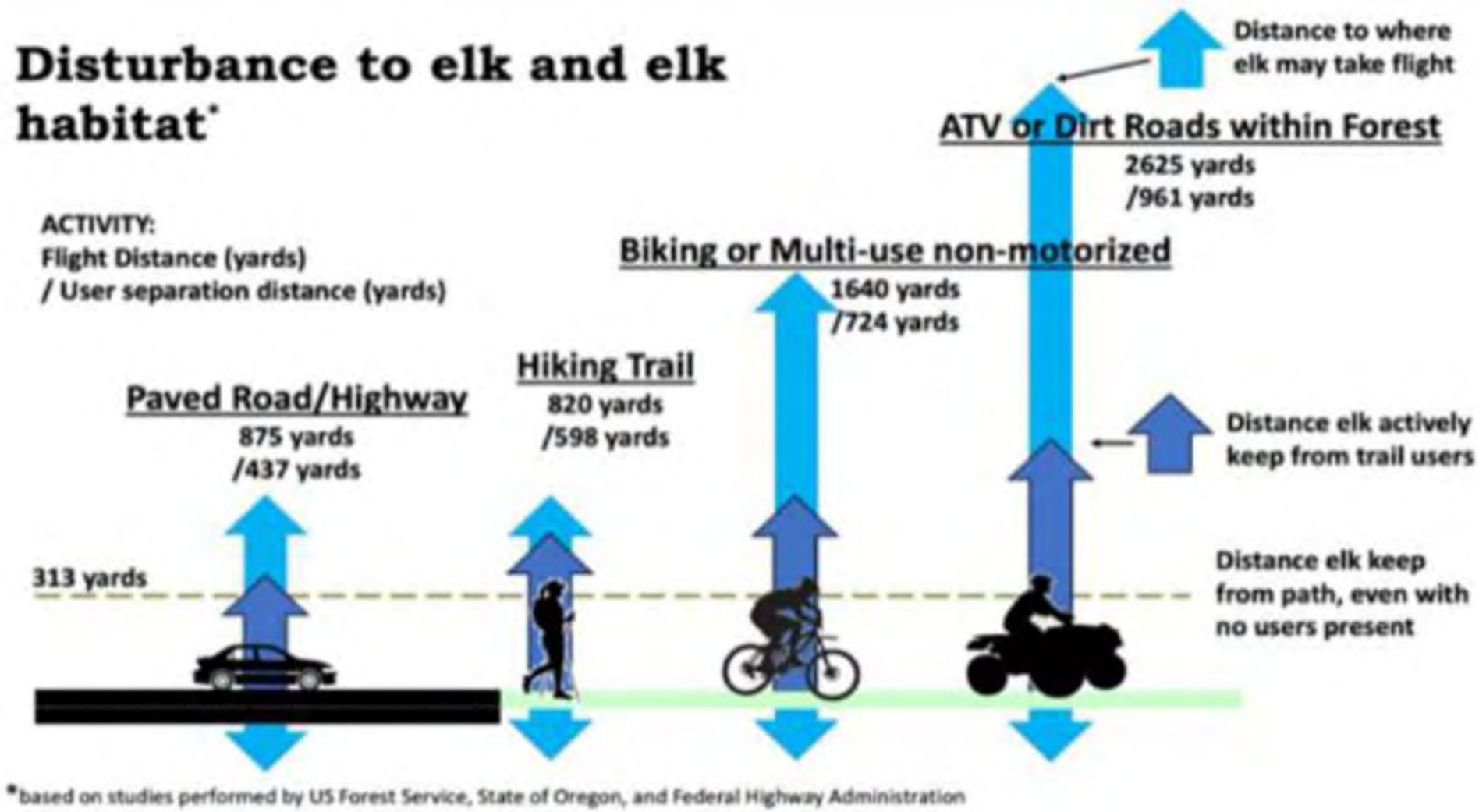
HUMAN DISTURBANCE MAP





STOR Wildlife Planning Support Tool

Ongoing research shows human use and recreation of all types impact large and small wildlife…



Wisdom et al. 2018

WILDLIFE HABITAT & SENSITIVITY MAP

Data Collection & Spatial Assessment

- Strong & Specific Spatial Data
- 60 animal, insect, plant species; 80 habitat layers

Rated Impact from Disturbance: Low, Medium, High

Species and Habitat Importance Scoring:

1. Population Trend
2. Economic Contribution
3. Security Status
4. Specificity of Spatial Data
5. Evidence-Based Sensitivity to Disturbance

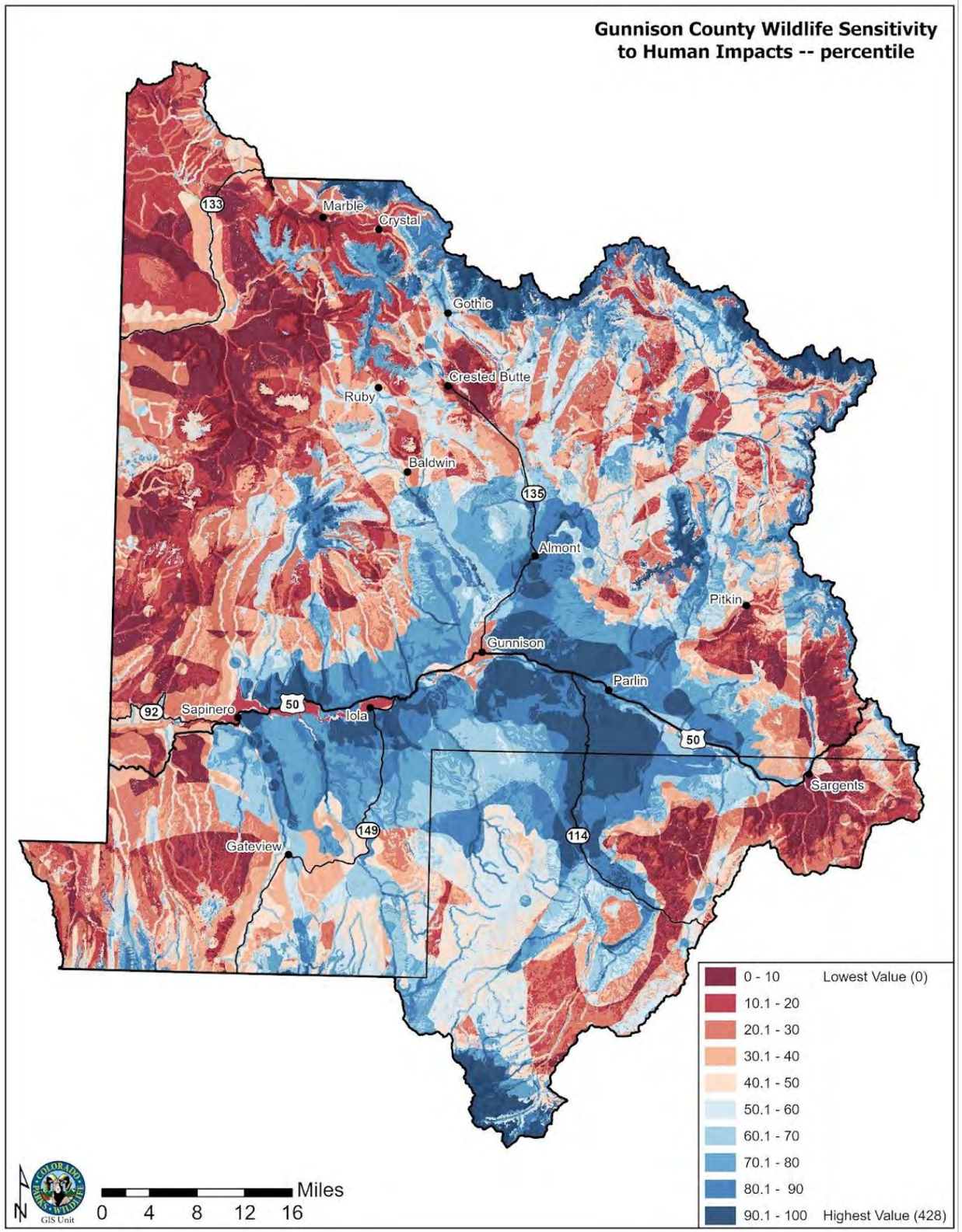
STOR Wildlife Planning Support Tool

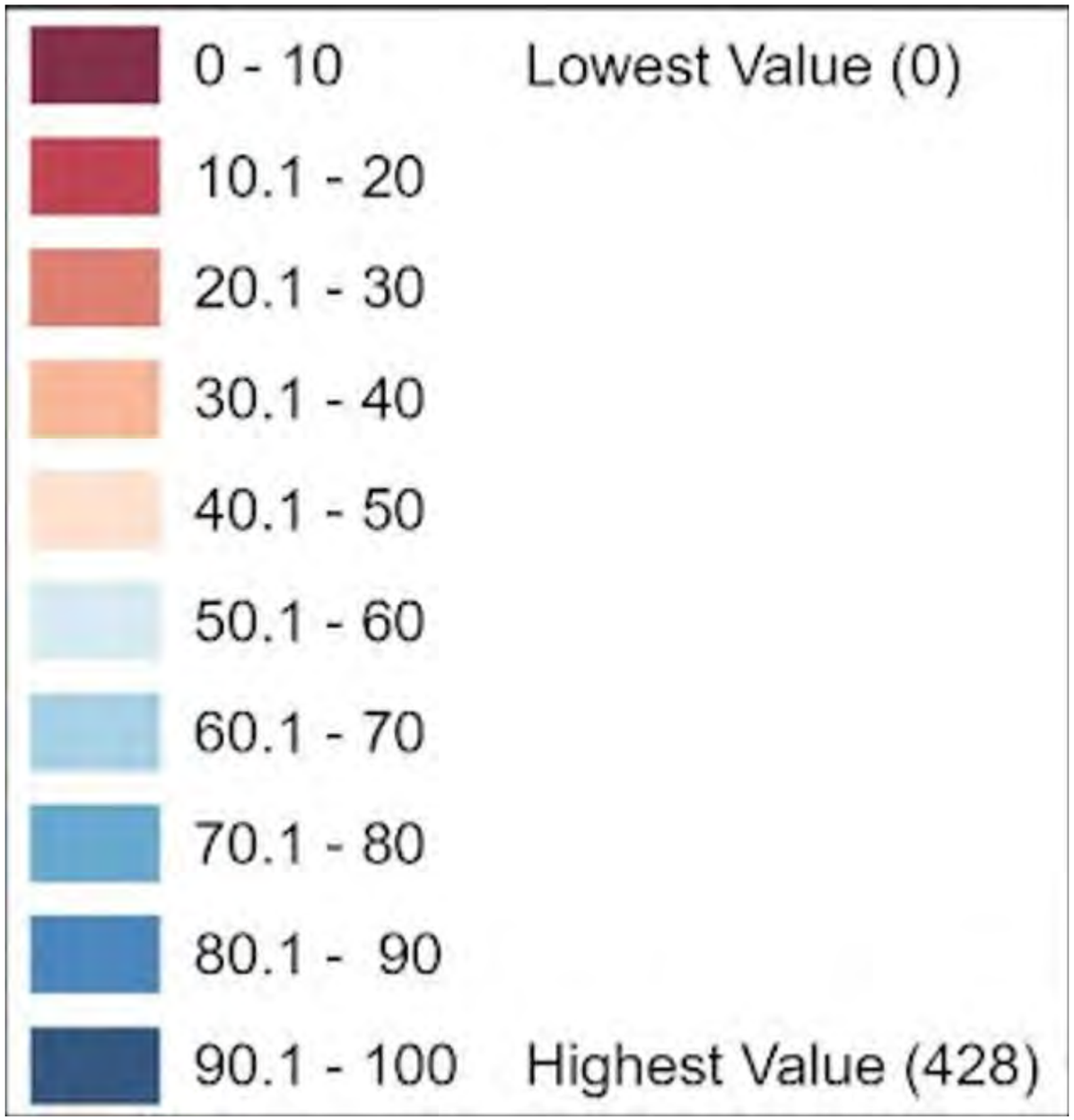
Species	Habitat Layer	Impact Rating by Human Disturbance Level			Evidence
		Low	Medium	High	
Boreal toad	*Boreal toad breeding sites*	*100*	*100*	*100*	*Low*
Fish	*Cutthroat Trout designated crucial*	*20*	*50*	*70*	*Moderate*
Fish	*Native fish and other native aquatic species conservation waters*	*20*	*50*	*70*	*Moderate*
Fish	*Sport fish Mgmt waters*	*20*	*50*	*70*	*Moderate*
Big Game	*Big Game migration pinch point*	*75*	*100*	*100*	*High*
Bighorn sheep	*Bighorn production areas*	*50*	*100*	*100*	*High*

Layer	Habitat	Component importance scores					
		Population Trend	Economic	Security	Specificity	Sensitivity Evidence	TOTAL
Boreal toad	*Boreal toad breeding sites*	*5*	*1*	*5*	*5*	*4*	***20***
Fish	*Cutthroat Trout designated crucial*	*2*	*4*	*3*	*5*	*1*	***15***
Fish	*Native fish and other native aquatic species conservation waters*	*2*	*3*	*2*	*5*	*1*	***13***
Fish	*Sport fish Mgmt waters*	*2*	*5*	*1*	*5*	*1*	***14***
Big Game	*Big Game migration pinch point*	*2*	*5*	*1*	*5*	*5*	***18***
Bighorn sheep	*Bighorn production areas*	*3*	*3*	*3*	*5*	*5*	***19***

STOR Wildlife Planning Support Tool

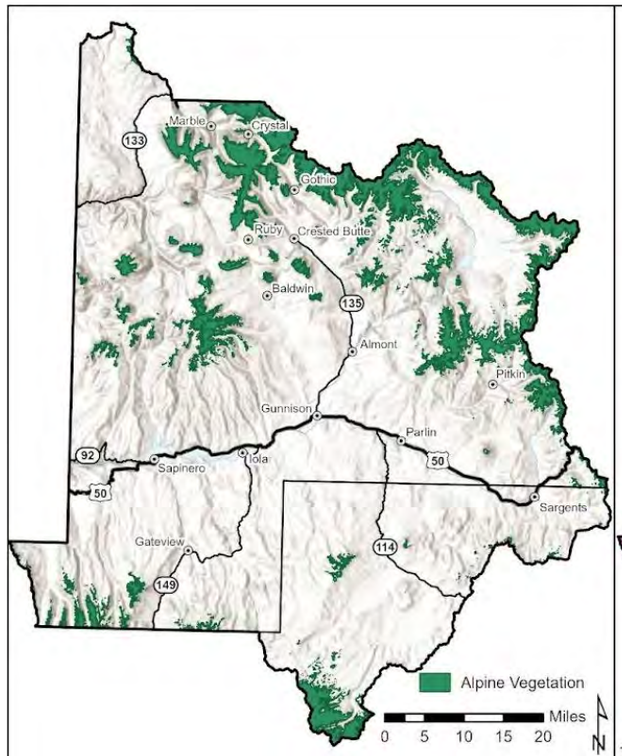
WILDLIFE HABITAT & SENSITIVITY MAP



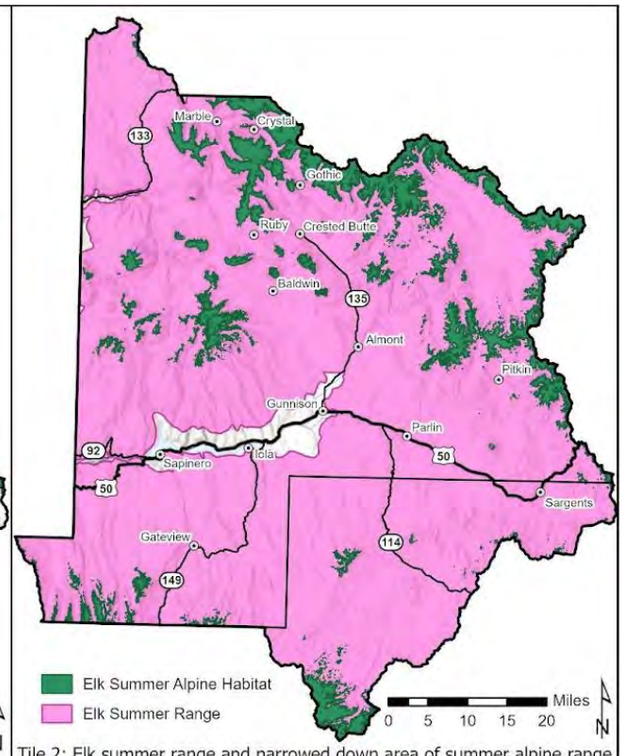


STOR Wildlife Planning Support Tool

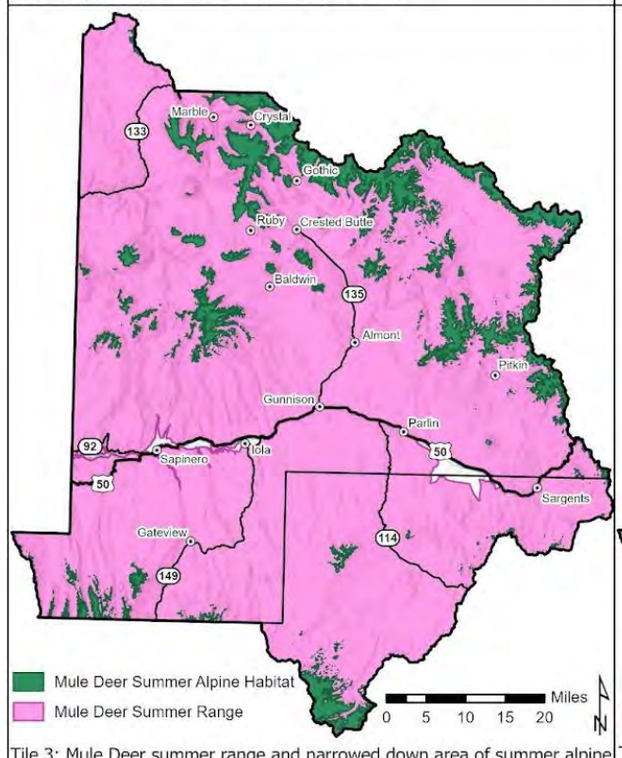
ALPINE HABITAT



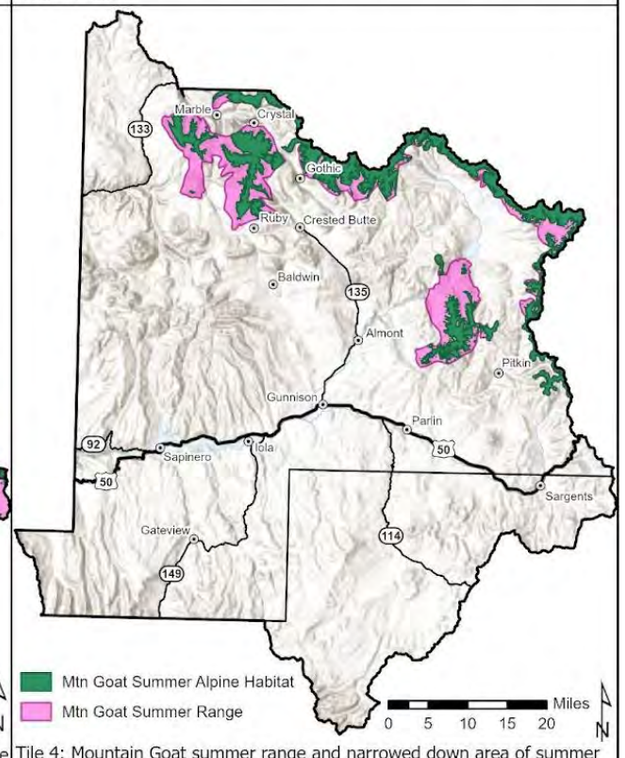
Tile 1: Alpine vegetation layer above 11,000 feet.



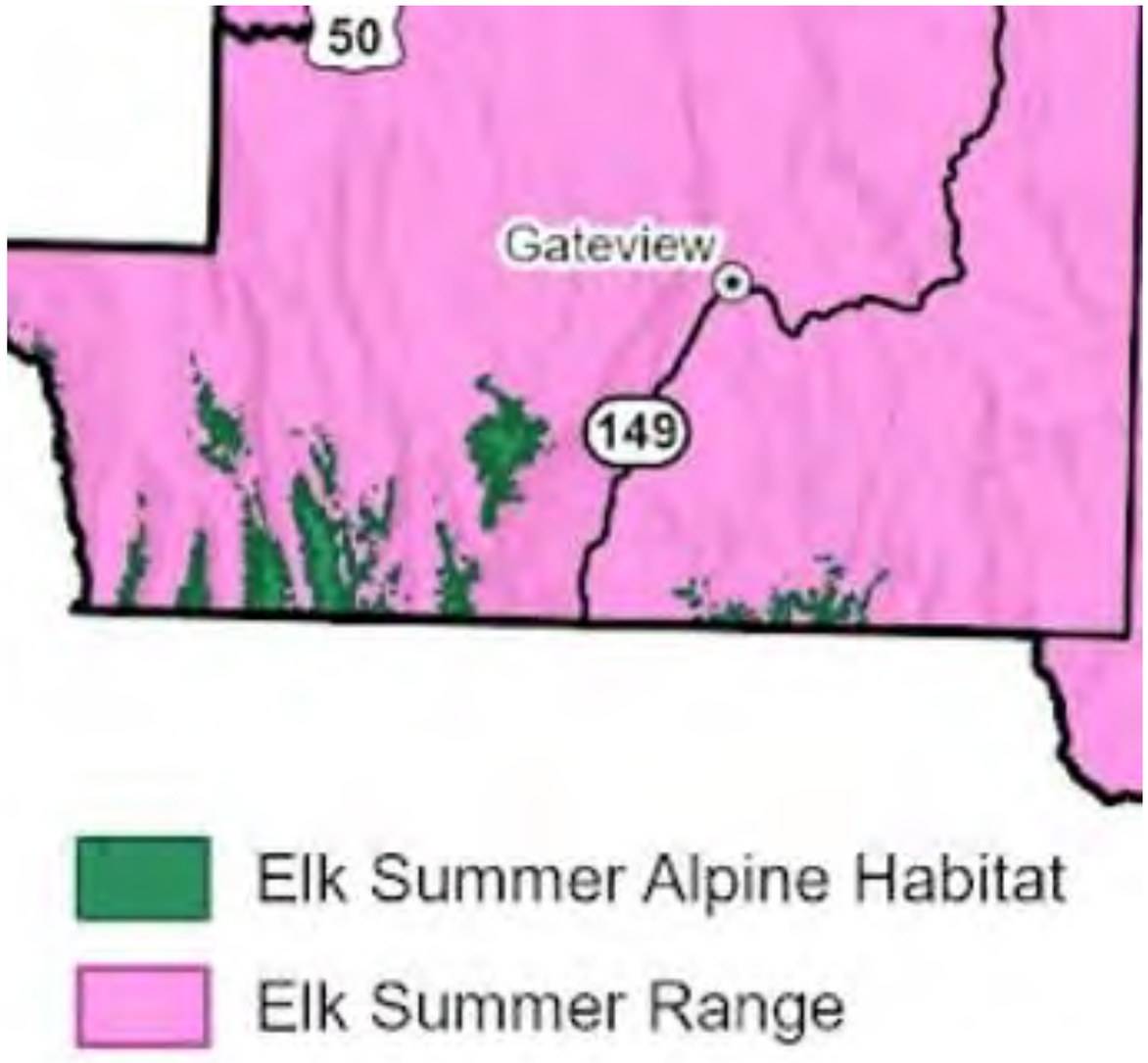
Tile 2: Elk summer range and narrowed down area of summer alpine range used in model.



Tile 3: Mule Deer summer range and narrowed down area of summer alpine range used in model.



Tile 4: Mountain Goat summer range and narrowed down area of summer alpine range used in model.



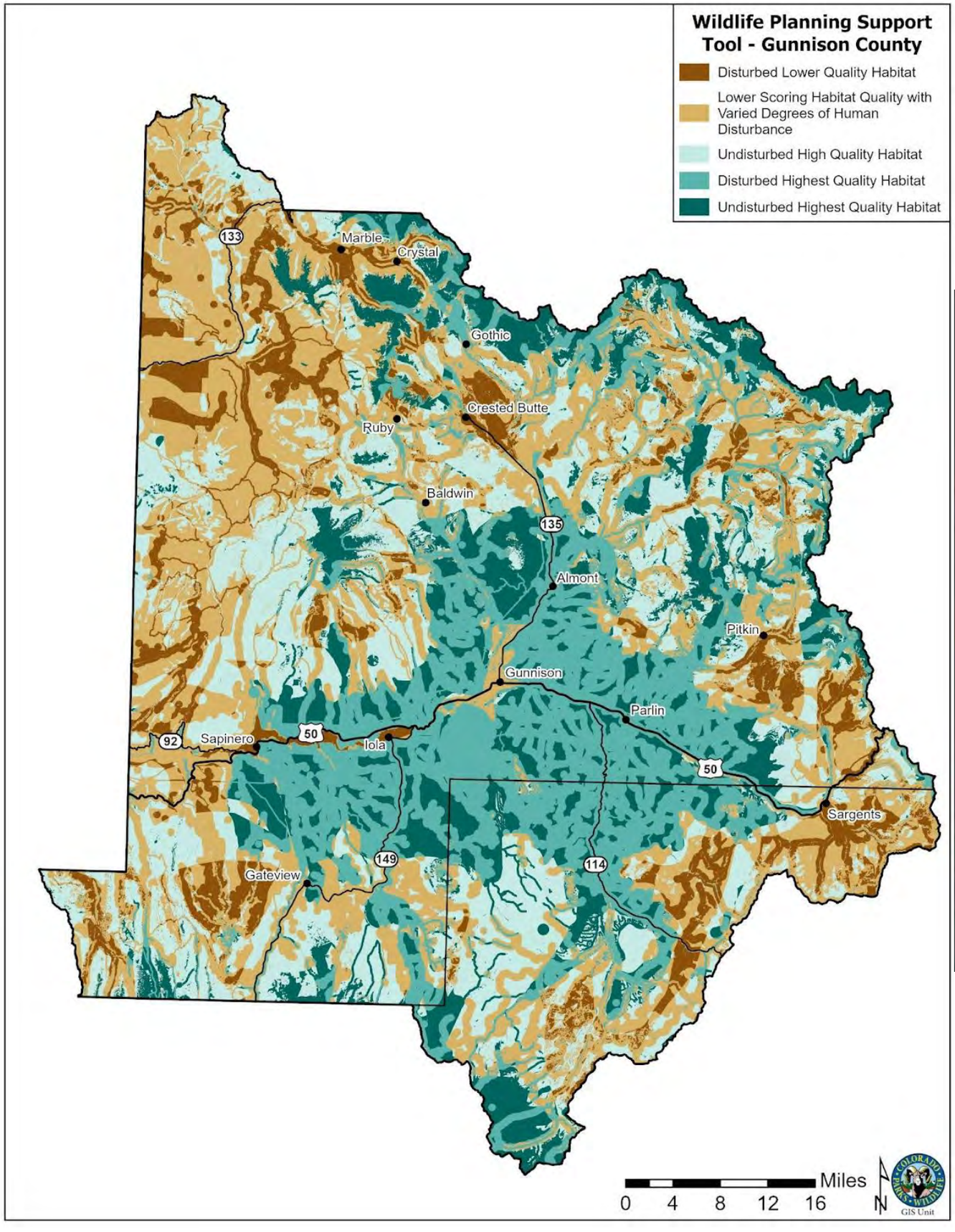
STOR Wildlife Planning Support Tool

The ultimate product of this Gunnison County mapping and modeling effort is the *Gunnison County Wildlife Planning Support Tool*

Combines the Current Human Impacts Map and the Habitat Sensitivity Map

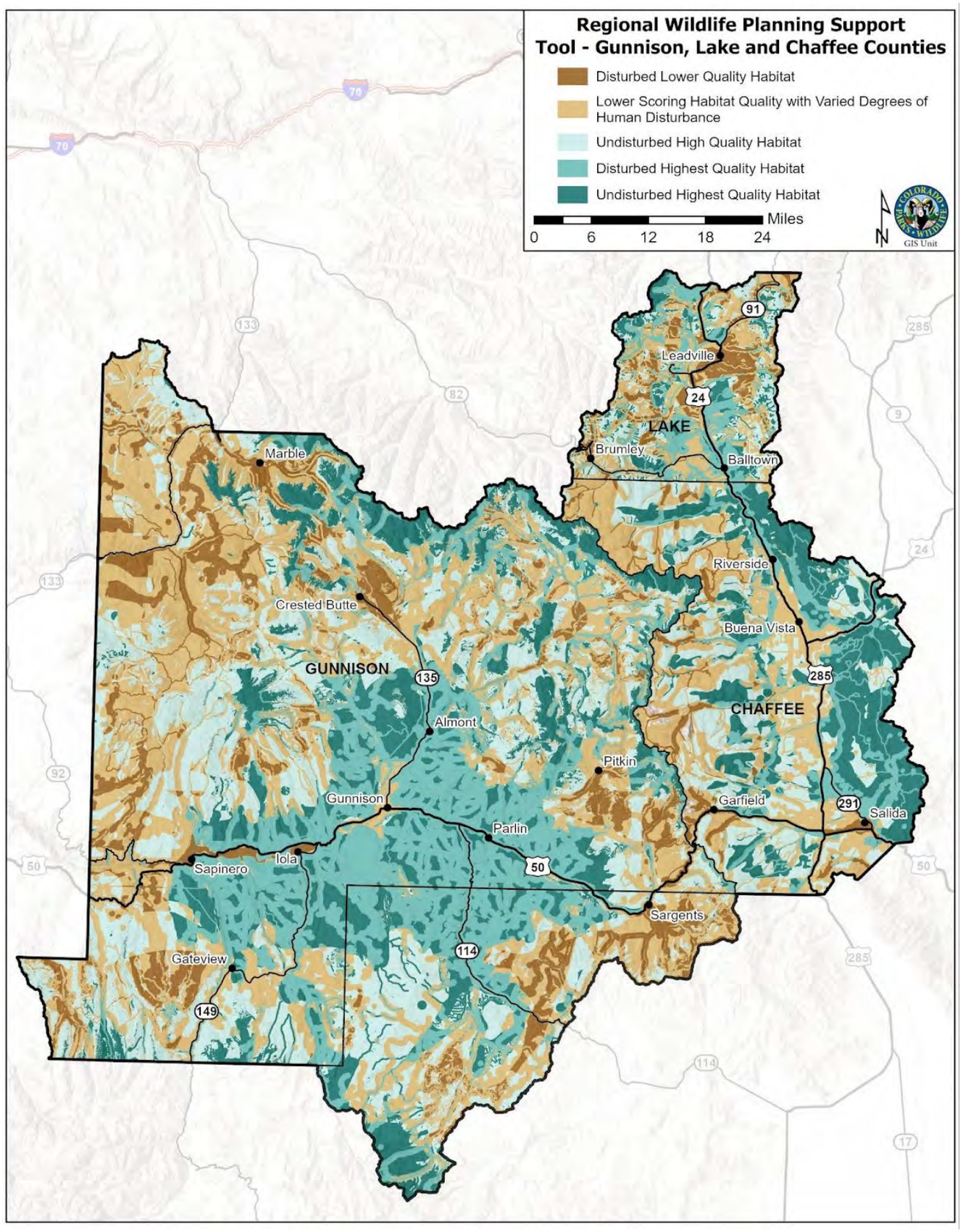
The result is a map that depicts important habitats for wildlife within Gunnison County and a portion of northwest Saguache County within the Gunnison Basin

STOR Wildlife Planning Support Tool



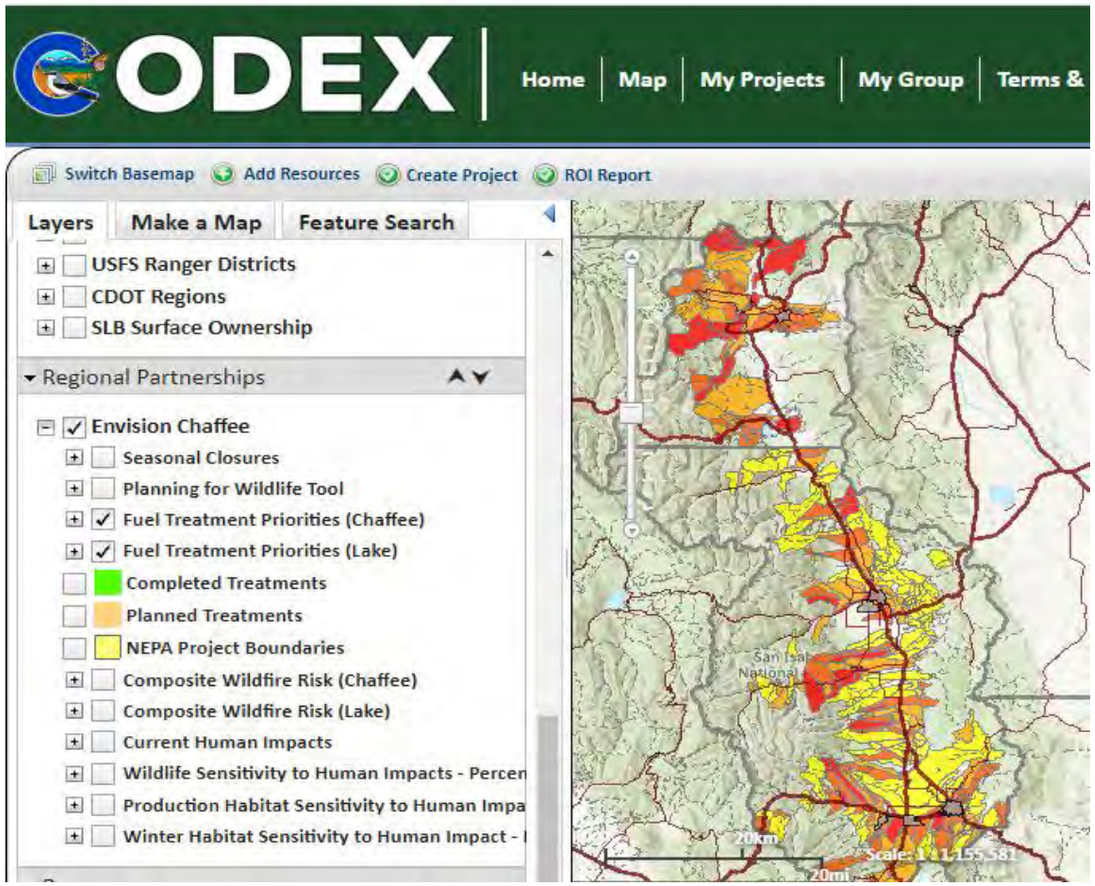
Wildlife Planning Support Tool - Gunnison County
Disturbed Lower Quality Habitat
Lower Scoring Habitat Quality with Varied Degrees of Human Disturbance
Undisturbed High Quality Habitat
Disturbed Highest Quality Habitat
Undisturbed Highest Quality Habitat

STOR Wildlife Planning Support Tool



WHAT'S NEXT?

- Colorado Conservation Data Explorer (CODEX)
- Road Show?
- Ongoing Collaboration & On the Ground Application



POTENTIAL APPLICATIONS…



- *County and municipalities adopt the tool to inform and guide land use policy and planning*

- *County integrates the tool into corridor planning process; aids in designating areas appropriate for development*

- *Economic development initiatives use the Tool to consider impacts to wildlife habitat; can our promotion and marketing direct activities away from high quality habitats? (e.g., Local Marketing District, City of Gunnison Economic Development Strategic Planning)*

- *The Land Preservation Board, CB Land Trust, Gunnison Ranchland Legacy, and other conservation entities use the Tool as a resource for potentially prioritizing and conserving high quality habitats*

- *Stewardship Fund and Land Preservation Board prioritize projects that support wildlife habitat improvements in high quality areas; or mitigation/restoration work in disturbed areas*

- *Informing agency land management planning; bolstering consideration for high quality habitats or directing mitigation/restoration work in disturbed areas*

Preserving WILDNESS





Legacy?

STOR Wildlife Planning Support Tool



AGENDA ITEM or FINAL CONTRACT REVIEW SUBMITTAL FORM

Agenda Item: ADDED IN MTG - WILDLIFE SUPPORT TOOL SUMMARY

Action Requested:

Parties to the Agreement:

Term Begins: **Term Ends:** **Grant Contract #:**

Summary:

Fiscal Impact:

Submitted by: **Submitter's Email Address:**

Finance Review: ◯ Required ◯ Not Required

Comments:

Reviewed by: Discharge Date:

County Attorney Review: ◯ Required ◯ Not Required

Comments:

Reveiwed by: Discharge Date: Certificate of Insurance Required

Yes ◯ No ◯

County Manager Review:

Comments:

Reveiwed by: Discharge Date:

◯ Consent Agenda ◯ Regular Agenda ◯ Worksession Time Allotted:

Agenda Date:

Revised April 2015

Gunnison County

Wildlife Planning Support Tool

Final Summary Report

July 2025



Developed collaboratively by Gunnison County's Sustainable Tourism and Outdoor Recreation (STOR) Committee

Summary

As Colorado's resident and visitor populations increase, the impacts to our landscapes continue to compound. Urban, exurban, and rural development, increased traffic volumes, and demand for outdoor recreation are several ongoing factors that have resulted in the cumulative fragmentation and loss of habitat for the state's diverse wildlife. Within Colorado, some estimates indicate that over half a million acres of habitat have been lost to human development over the last several decades- habitat that is crucial to the long-term survival and perpetuation of our native species. Wildlife relies on expanses of functional habitat for food, water, shelter, reproduction, rearing of their young, and winter survival. Intact habitats provide connections between seasonal ranges, which is particularly important across the Rocky Mountain West, where snow accumulation dictates animal movements and distribution. Habitat is vital to the survival of the species that depend on it, while also providing a myriad of ancillary ecosystem services that include clean water and clean air, sustainable grazing opportunities, and local economic stimulus through tourism and outdoor recreation.

Gunnison County's Sustainable Tourism and Outdoor Recreation (STOR) Committee, representing, and in collaboration with our local communities, is committed to helping preserve and conserve our remaining wildlife habitat. There is a long-standing relationship with wildlife and wild places across our County, which is ingrained in local culture and values. Maintaining our diverse wildlife and the habitat they rely on will ensure that future generations may enjoy the inherent quality of life benefits and ecosystem services that they provide.

As a result of ongoing discussions surrounding habitat loss in Gunnison County and increasing dialogue with leaders of Envision Chaffee County and Lake County, the STOR Committee applied for and received a Regional Partnership Initiative (RPI) grant that helped formalize the "Central Colorado Recreation Partnership," which includes Gunnison, Chaffee, and Lake Counties. The grant provided funding to replicate Chaffee County's Wildlife Decision Support Tool, which had been developed and adopted in Chaffee and Lake Counties. In close collaboration with Colorado Parks and Wildlife (CPW) and STOR membership, we have developed a similar mapping product- the ***Wildlife Planning Support Tool***- which aggregates and depicts Gunnison County land ownership, human disturbance, and wildlife sensitivity to human impacts.

Our Tool is a compilation of several maps; however, each map may be viewed independently as well. Within the human disturbance map, disturbance buffers are assigned around development to depict the cumulative area of direct and indirect disturbance to wildlife. The wildlife sensitivity map considers a variety of factors, including the species' population trend, economic contribution, security status, spatial data specificity, and scientific evidence of sensitivity, which is described in more detail later in this report. To a great extent, the STOR Tool relied upon the existing framework and categorizations done by Chaffee and Lake Counties. However, we did differentiate or add to our product where we felt it was appropriate based on current conditions and issues within Gunnison County. Because the southeast portion of the "Gunnison Basin" includes a large region of Saguache County, we opted to add that geographic area into our Tool to more comprehensively assess important habitats located south of Highway 50 between

Gunnison and Monarch Pass. CPW has extensively documented the relationships between Gunnison and Saguache Counties for local wildlife populations; however, inclusion within the Gunnison County Tool in no way commits Saguache County to any future land use decisions. The development of the Gunnison County Tool will now allow communities to assess sensitive wildlife habitats and human disturbance at a local or regional scale among the three Counties included in the Central Colorado Recreation Partnership, bolstering a collaborative approach to regional land use planning.

The Wildlife Planning Support Tool is intended to aid Gunnison County, state and federal managers, municipalities, local nonprofits, and citizens in land use planning on both public and private lands. The Tool provides a holistic view of how people and wildlife intersect across the landscape and is intended to augment or support project-level planning. The Tool may also be used to inform more comprehensive planning efforts by identifying sensitive wildlife habitats to avoid, conserve, or restore. Colorado Parks and Wildlife provided technical and logistical support for the development of the Tool, which foundationally relies upon data provided by CPW, Bureau of Land Management (BLM), United States Forest Service (USFS), and the Colorado Natural Heritage Program (CNHP). With the support of STOR, Gunnison County, and our communities, we hope that this Tool may be used to help guide anthropogenic influences across our landscapes- with an overarching goal of avoiding, minimizing, and mitigating impacts to sensitive wildlife habitats.

Stakeholder Engagement

The Gunnison County Tool was developed with input from regional professionals and stakeholders over the course of many months, beginning in January of 2024. The core development team consisted of diverse STOR members and was supported and augmented by state and federal agencies, local municipalities, and nonprofit organizations and associations where appropriate. The team met regularly from February through June of 2024, with follow-up meetings occurring on an ad hoc basis to collect and share data and discuss and develop draft maps for review by the larger STOR Committee. Draft products were presented to the STOR committee several times for review and discussion. The STOR Tool relied upon previous work and categorizations done by Chaffee and Lake Counties, in consultation with a CPW GIS specialist.

STOR consists of 21 leaders from local governments, CPW, USFS, BLM, Stockgrowers, Crested Butte Mountain Bike Association, Gunnison Trails, Crested Butte Land Trust, Crested Butte Nordic, Gunnison County Met Rec, Gunnison Wildlife Association, Backcountry Hunters and Anglers, Upper Gunnison River Water Conservancy District, Western Colorado University, Crested Butte Mountain Resort and several at-large community members. All STOR meetings are open to the general public. Because of its diverse representation, the STOR Committee provides a public engagement conduit across the broader Gunnison County community. During the development of the Wildlife Planning Support Tool, our group benefited from the engagement and participation of the collective STOR Committee. These types of planning tools are increasingly being developed and utilized across Colorado, particularly within communities and Counties where Regional Partnerships have been established.

The Maps

Land Ownership Map

Land ownership is summarized in ***Figure 1*** – *Gunnison County Land Ownership Map*. Land ownership was assessed using the spatial layers listed in ***Table 1***.

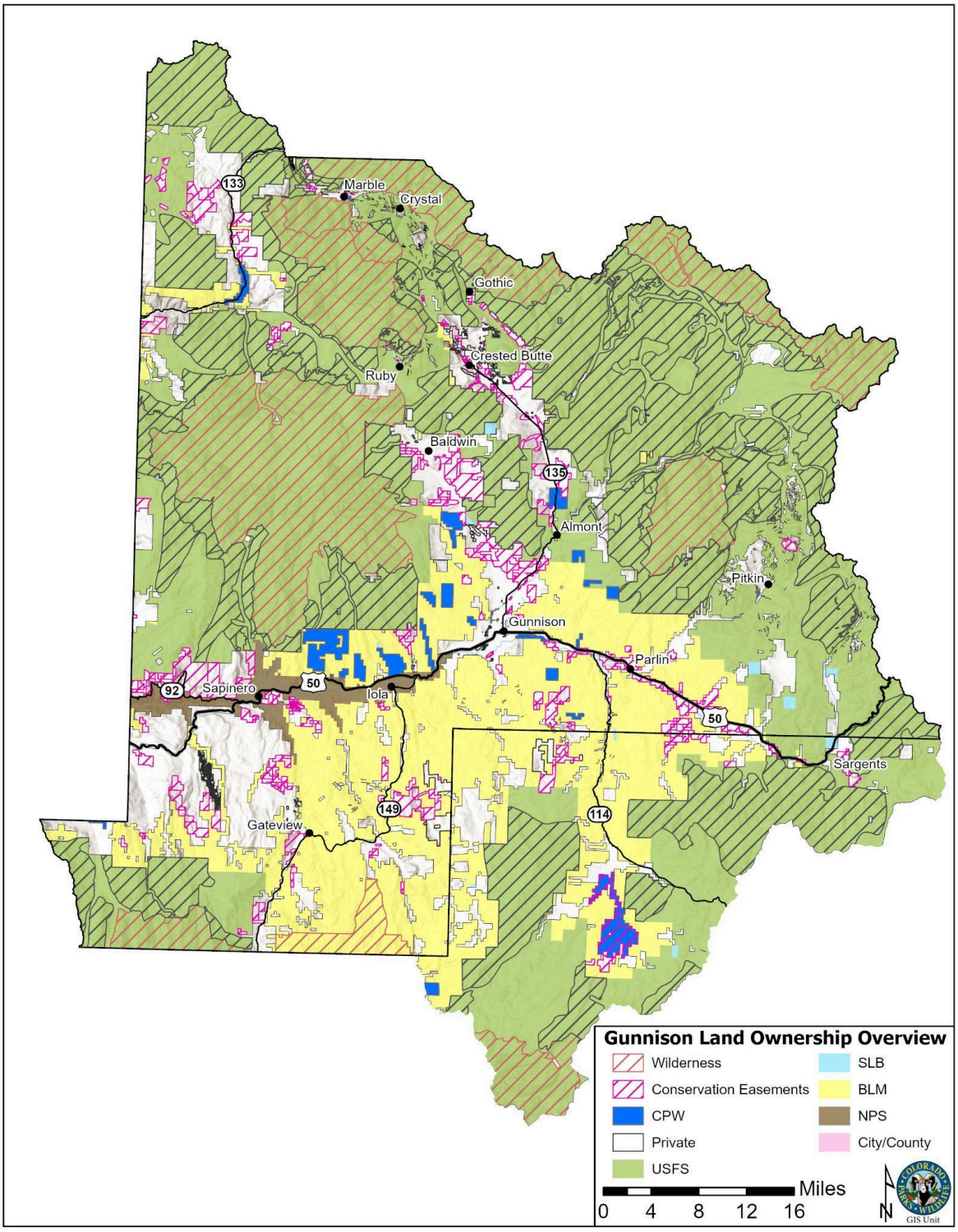


Figure 1. *Gunnison County Land Ownership Map*

Layer	Source
USFS	COMAP
National Park Service	COMAP
BLM	COMAP
State Land Board	COMAP
CPW Lands	COMAP
USFS Roadless	USFS
USFS Wilderness	USFS
BLM Wilderness / Wilderness Study	COMAP
Private	COMAP
Conservation Easements	COMAP
Local City/County	COMAP

***Table 1**. Land Ownership Layers.*

Current Human Disturbance Map

Current human impact is summarized in ***Figure 2*** – *Gunnison County Human Disturbance Model*. The human disturbance model depicts current anthropogenic impacts, including cities, towns, trails, roads, structures, active mining areas, recreation areas, and destinations such as Crested Butte Mountain Resort. The layers included are shown in ***Table 2*** – *Human Disturbance Layers*.

For each impact, the human disturbance level was rated as high, moderate, or low. These ratings determined the indirect disturbance buffer associated with each feature (***Table 3*** *Criteria for Defining Human Disturbance Intensity and Spatial Buffers).* From a wildlife conservation perspective, the impacts of human development and activity often extend beyond the physical footprint of the development or activity. The science surrounding this is continuously growing, therefore, buffers used for the Gunnison County Tool should be considered an approximation of what may actually be occurring on the landscape. Wildlife disturbance distances are influenced by many factors, including but not limited to species, habitat type, season of use, and type of human impact. The STOR committee discussed these ratings at length, ultimately determining that general consistency with Chaffee and Lake Counties was pragmatic and appropriate. We explored using locally derived cellular phone geospatial data to refine ratings, however, those data were deemed insufficient for more precise ratings across the entire County. The STOR Committee recognizes that there is nuance, complexity, and specificity for each impact feature in the County. The three-category rating system introduces some bias into the Tool, in that some impacts may receive a higher or lower disturbance level rating than what may be occurring on the ground. However, for the purpose of this Tool, and lacking more comprehensive local data sets, we believe the assigned disturbance levels are reasonable for depicting human impact. The Tool does not consider unsanctioned social or non-system trails.

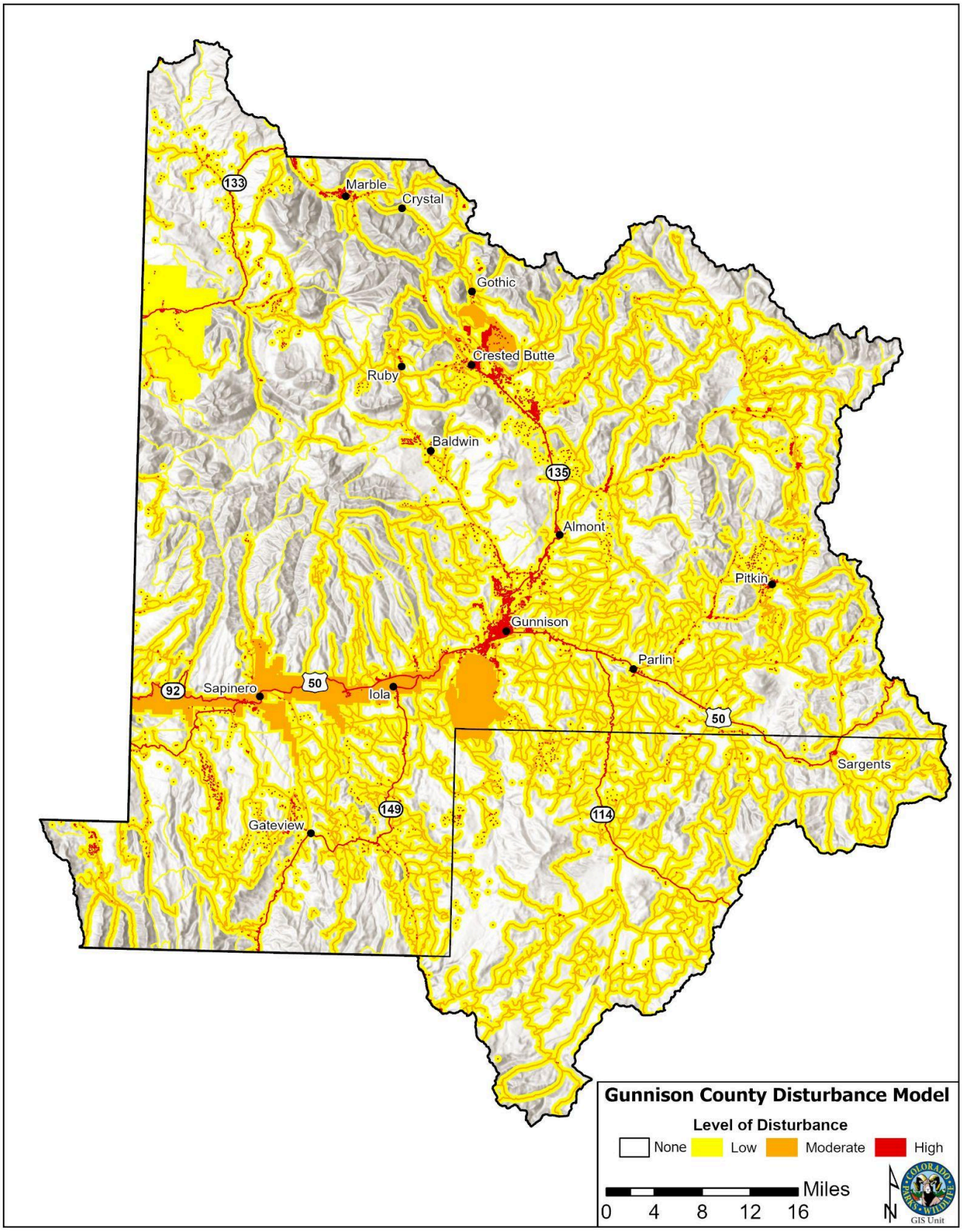


***Figure 2**. Gunnison County Human Disturbance Model*

General Development	Layer	Source
Infrastructure	All Structures	Bing Building Data
	All Roads	CDOT & Gunnison County
	Highways	CDOT
	Telecommunication Towers	USFS
	Transmission lines, utility, and substations	GCEA
Industry	Active Coal and Hard Rock Mining Permits	Division of Reclamation, Mining and Safety
	Oil and Gas Active Wells	ECMC
Recreation Development	**Layer**	**Source**
Trails / Routes	City	COTREX
	County	COTREX
	USFS Road and Trails	USFS
	BLM Roads and Trails	BLM
	Curecanti NRA	COTREX
Campsites & Recreation Destinations	USFS Campgrounds	USFS
	BLM Campgrounds and dispersed camping	BLM
	County and other dispersed campsites	Open Street Map
	Curecanti NRA Boundary and Campsites	NPS
	Hartman Rocks Boundary and Campsites	BLM
	Crested Butte Mountain Resort	Open Street Map

***Table 2**. Human Disturbance Layers*

Disturbance Level	General Criteria
Low	**Within 100m of infrequent human occupation:**
	Buffer around trails with ≤ 1,000 users per year
	Secondary roads with ≤ 1,000 users per year
	Radio towers and radio tower roads
	A 400 m Low buffer area was placed around moderate and high disturbance areas
Moderate	**Within 100m of frequent but not permanent human occupation:**
	Trails with > 1,000 users per year

Disturbance Level	General Criteria
Moderate	Secondary roads with > 1,000 users per year
	Designated and dispersed campsites
	Crested Butte Mountain Resort
	Hartman Rocks Recreation Area
	Curecanti National Recreation Area
High	**Within 100m of frequent or permanent human occupation:**
	Buildings (from Caggiano et al. 2016 and Microsoft 2018)
	Highways (from GOC routes and trails)
	Mining areas
NOTES:	*The Tool does not include unsanctioned social or non-system trails*
	Intensity of human use may fluctuate by season

Table 3*. Criteria for Defining Human Disturbance Intensity and Spatial Buffers*

Wildlife Habitat and Sensitivity Map

The wildlife sensitivity to human impacts map (***Figure 3***) was produced through a collaborative process involving data collection, spatial assessment, and ranking/scoring. Draft products were reviewed with the STOR Committee on several occasions, with feedback incorporated into final products where appropriate.

Data collection

These maps relied on the most current spatial data available for species and habitats found throughout Gunnison County. The timing for this work was ideal, as Colorado Parks and Wildlife had recently completed updates to their Species Activity Maps (SAM), which occur every five years. Spatial data was also provided by other resource management agencies including the BLM, USFS, NPS, CNHP, Gunnison County, and the USFWS. Depending on the species and what data were available, the maps may incorporate multiple layers that span different seasonal habitats or life history stages. For example, moose layers included priority habitat, concentration areas, and winter range.

CPW SAM definitions may be found at:
https://geodata-cpw.hub.arcgis.com/documents/357fb049a40a4f9bb939dcd7d66b9512/about

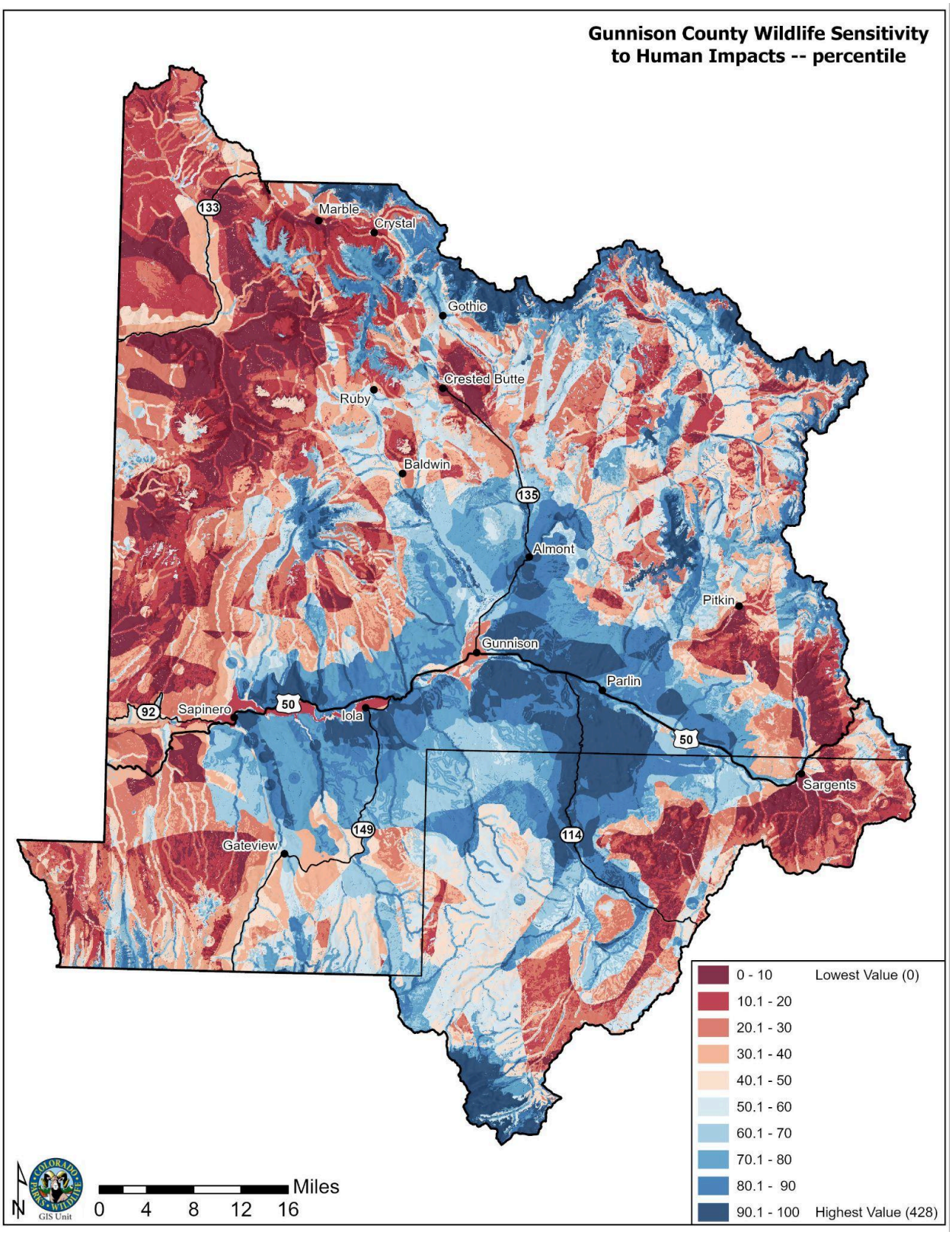


***Figure 3**. Gunnison County Wildlife Sensitivity to Human Impacts - Percentile Value*

Only species with relatively strong and specific spatial data were included. Therefore, a variety of species found in Gunnison County could not be included in the development of the Tool because spatial data was not available or was insufficient. Our collective decisions not to include certain species in the Tool should not discount their conservation value or preclude discussion of conservation actions specific to those species. Some of the species not included in the Gunnison County Tool are listed in ***Table 5***; however, this list is not all-inclusive for species occurring within the County.

This planning tool incorporated more than 60 animal, insect, and plant species and 80 habitat layers (***Table 4***).

Category	Species	Habitat Layer	Source
Aquatic & Riparian	Boreal toad	Boreal toad breeding sites	CPW
	Fish	Cutthroat trout designated crucial	CPW Aquatic HPH
	Fish	Native fish and other native aquatic species conservation waters	CPW Aquatic HPH
	Fish	Sport fish mgmt waters	CPW Aquatic HPH
Mammals	Bighorn sheep	Production areas	CPW - SAM Data
	Bighorn sheep	Winter range	CPW - SAM Data
	Bighorn sheep	Migration corridors	CPW - SAM Data
	Bighorn sheep	Summer Range	CPW - SAM Data
	Elk	Production areas	CPW - SAM Data
	Elk	Severe winter range	CPW - SAM Data
	Elk	Winter concentration areas	CPW - SAM Data
	Elk	Migration corridors	CPW - SAM Data
	Elk	Winter range	CPW - SAM Data
	Elk	Summer alpine habitat	CPW - SAM Data
	Lynx	Linkage areas	USFS
	Lynx	Modeled Habitat	Squires, J.R., Olson, L.E., Ivan, J.S. *et al.* Anthropogenically protected but naturally disturbed: a specialist carnivore at its southern range periphery. *Biodivers Conserv* 34, 401–427 (2025). https://doi.org/10.1007/s10531-024-02978-8
	Mountain goat	Production areas	CPW - SAM Data

Category	Species	Habitat Layer	Source
Mammals	Mountain goat	Summer alpine habitat	CPW - SAM Data
	Mule deer	Severe winter range	CPW - SAM Data
	Mule deer	Winter concentration areas	CPW - SAM Data
	Mule deer	Migration corridors	CPW - SAM Data
	Mule deer	Winter range	CPW - SAM Data
	Mule deer	Summer alpine habitat	CPW - SAM Data
	Pronghorn	Severe winter range	CPW - SAM Data
	Pronghorn	Winter concentration	CPW - SAM Data
	Pronghorn	Winter range	CPW - SAM Data
	Wolverine	Potential Habitat	Inman Model
	Moose	Priority habitat	CPW - SAM Data
	Moose	Concentration area	CPW - SAM Data
	Moose	Winter range	CPW - SAM Data
	Big Game	Migration pinch points	CPW - SAM Data
	Pika	Predicted range (modeled)	CPW
	Gunnison Prairie dog	Existing Colonies	CPW
Avian	Ptarmigan	Winter range	CPW - SAM Data
	Ptarmigan	Summer range	CPW - SAM Data
	Gunnison Sage Grouse	Habitat Prioritization Tool Tier 1	Gunnison County
	Gunnison Sage Grouse	Habitat Prioritization Tool Tier 2	Gunnison County
	Great Blue Heron	Nesting area	CPW
	Black Swift	Nesting habitat	CPW
Raptors	Burrowing Owl	Burrow locations	BLM / CPW
	Bald eagle	Nests	BLM / CPW
	Golden eagle	Nests	BLM / CPW
	Northern Goshawk	Nests	USFS / CPW
	Osprey	Nests	BLM / CPW
Insects and Plants	Uncompahgre Fritillary Butterfly	Critical Habitat	USFWS
	Altai Cotton-grass	Occupied occurrence	CNHP
	Avery Peak Twinpod	Occupied occurrence	CNHP
	Black Canyon Gilia	Occupied occurrence	CNHP / NPS
	Colorado Divide Whitlow-grass	Occupied occurrence	CNHP
	Colorado Tansy-aster	Occupied occurrence	CNHP

Category	Species	Habitat Layer	Source
Insects and Plants	Colorado Wild Buckwheat	Occupied occurrence	CNHP
	Colorado Wood-rush	Occupied occurrence	CNHP
	Crandall's Rockcress	Occupied occurrence	CNHP
	Few-seed Whitlow-grass	Occupied occurrence	CNHP
	Fragile Rockbrake	Occupied occurrence	CNHP
	Glenwood Springs Rockcress	Occupied occurrence	CNHP
	Gunnison's Milkvetch	Occupied occurrence	CNHP / NPS
	Juniper Tumble-mustard	Occupied occurrence	CNHP
	Little Green Sedge	Occupied occurrence	CNHP
	Low Fleabane	Occupied occurrence	CNHP
	Molybdenum Milkvetch	Occupied occurrence	CNHP
	Northern Twayblade	Occupied occurrence	CNHP
	Purpus' Sullivantia	Occupied occurrence	CNHP
	Rocky Mountain Thistle	Occupied occurrence	CNHP
	Rolland's Leafless-bulrush	Occupied occurrence	CNHP
	Rollins' Twinpod	Occupied occurrence	CNHP
	Rothrock's Townsend-daisy	Occupied occurrence	CNHP
	Roundleaf Sundew	Occupied occurrence	CNHP
	Skiff Milkvetch	Occupied occurrence	CNHP
	Slender Cotton-grass	Occupied occurrence	CNHP
	Small-winged Sedge	Occupied occurrence	CNHP
	Smooth Rockcress	Occupied occurrence	CNHP
	Tiger Beardtongue	Occupied occurrence	CNHP
	Variegated Horsetail	Occupied occurrence	CNHP
	Violet Milkvetch	Occupied occurrence	CNHP
	Woolly Fleabane	Occupied occurrence	CNHP
Wetland	Various	Natural wetland inventory	USFWS

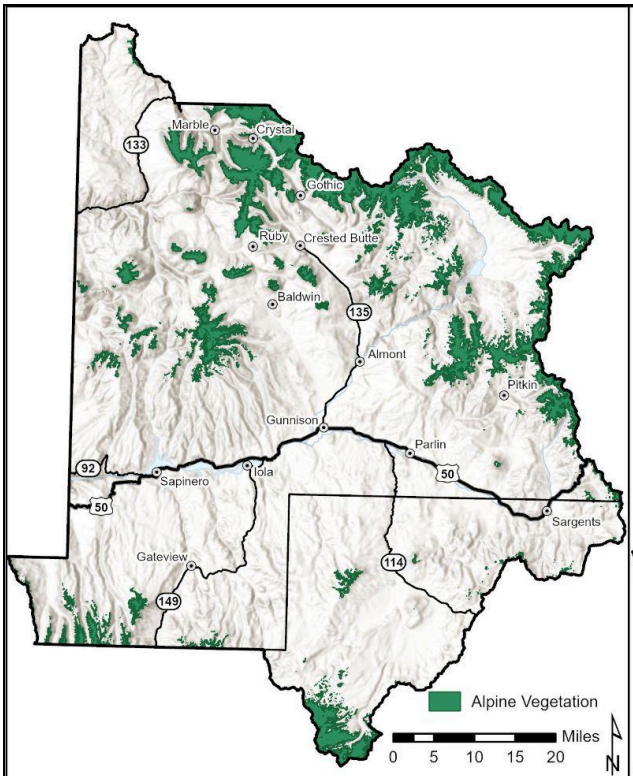
***Table 4**. Gunnison County Species and Habitat Layers*

Each habitat is described by a GIS feature class, which can consist of point, line, or polygon data types. Those features may include a buffer that extends the spatial extent of high-precision data to account for the sensitivity of those features to potential human impacts. For example, CPW recommends no surface occupancy or ground disturbance within a quarter mile of an active golden eagle nest site and no permitted or authorized human activities within a half mile of a nest from December 15 to July 15 annually.

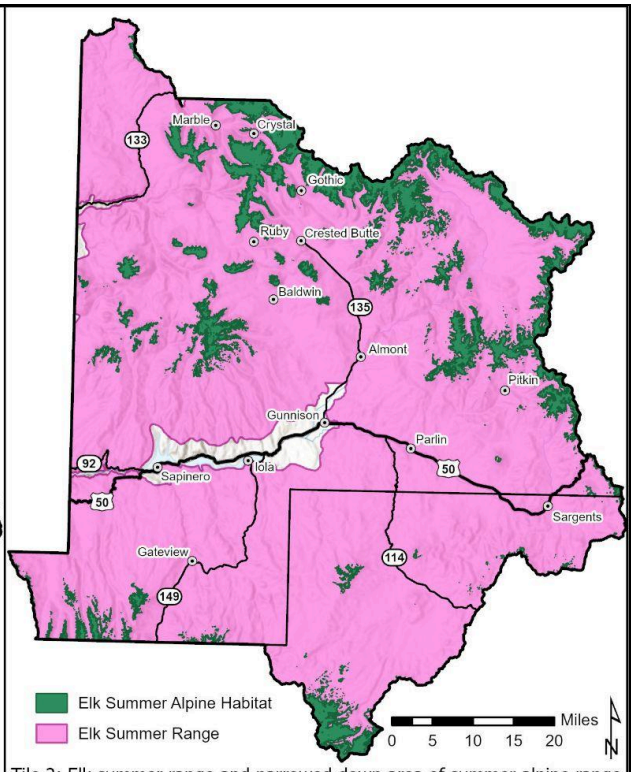
Alpine Habitat

After reviewing the draft map products for Gunnison County and the maps produced by Chaffee and Lake Counties, there was concern that alpine habitats were underemphasized and depicted unrealistically low wildlife sensitivity. Alpine ecosystems provide critical habitat for many Gunnison County wildlife species, including ptarmigan, pika, songbirds, and raptors. Big game species rely on the rich forage of alpine ecosystems during the short growing season for lactation and rearing of young. Some species, such as bighorn sheep and mountain goats, spend their entire lives in alpine habitats, which may be highly constrained depending on the season and level of human use. Additionally, due to the open terrain and lack of hiding cover, wildlife inhabiting alpine habitats are inherently vulnerable to human disturbance throughout the year. Over time, continuous human disturbance may result in the displacement or abandonment of prime alpine habitat for wildlife.

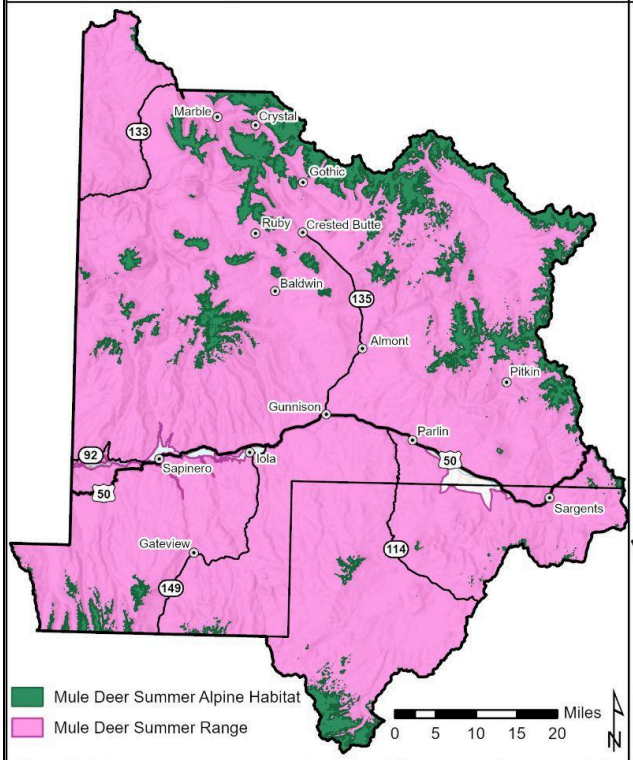
Thus, to more realistically portray the sensitivity of this habitat type, we started with the CPW Basinwide vegetation layer and the USGS 10 meter DEM layer to define the areas in Gunnison County that were above 11,000 ft and had alpine vegetation present. The vegetation classifications used from the Basinwide were: talus slopes and outcrops, alpine meadow, alpine forb dominated, alpine grass dominated, alpine grass/forb mix, subalpine shrub community, subalpine meadow, subalpine grass/forb mix, and snow. This established our alpine vegetation layer (***Tile 1***). That layer was then combined with the CPW Species Activity Mapping layers- elk summer range, mule deer summer range, and mountain goat summer range (***Tiles 2-4***). The overlapping areas for each species and the alpine layer were then used to create three new layers- elk summer alpine habitat, mule deer summer alpine habitat, and mountain goat summer alpine habitat. The geographic area included within these new layers is presumed to encompass important habitats for other alpine species, including but not limited to ptarmigan, brown-capped rosy finch, pika, and bighorn sheep.



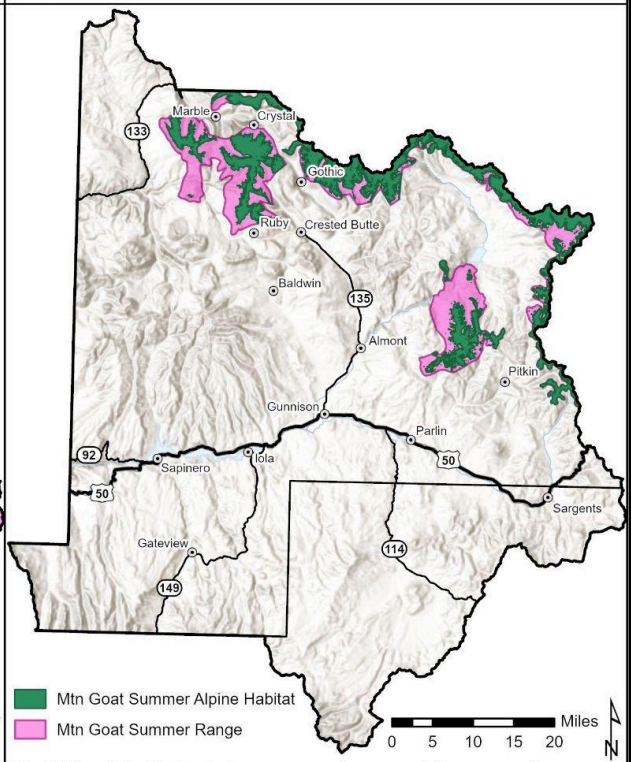
Tile 1: Alpine vegetation layer above 11,000 feet.



Tile 2: Elk summer range and narrowed down area of summer alpine range used in model.



Tile 3: Mule Deer summer range and narrowed down area of summer alpine range used in model.



Tile 4: Mountain Goat summer range and narrowed down area of summer alpine range used in model.

Species	Reason Excluded
American marten	Lack of accurate GIS data; habitat similar to Canada lynx
American white pelican	Limited occurrence in Gunnison County
Brewers sparrow	Lack of accurate GIS data
Brown-capped rosy finch	Lack of accurate GIS data, habitat similar to White-tailed ptarmigan
Ferruginous hawk	Lack of accurate GIS data
Various bat species	Lack of accurate GIS data
Lewis' woodpecker	Lack of accurate GIS data
Northern harrier	Lack of accurate GIS data
Northern leopard frog	Lack of accurate GIS data
Olive-sided flycatcher	Lack of accurate GIS data
Pinon Jay	Lack of accurate GIS data
Turkey	Only overall range is available and is too general
Beaver	Lack of accurate GIS data - stream corridors may serve as surrogate
Black bear	Overall range is ubiquitous and lacks precision
Mountain lion	Overall range is ubiquitous and lacks precision
Peregrine falcon	Lack of comprehensive GIS data
Abert's Squirrel	Lack of accurate GIS data

***Table 5**. Species and habitat layers not included in the Gunnison County Tool*

Impact by Human Disturbance Level

For each species and habitat layer, we rated the impact from low, medium, and high human disturbance. We attempted to maintain consistency with Chaffee and Lake Counties but also adapted where it was deemed appropriate based on local considerations in Gunnison County. These ratings include a continuous numeric scale from 0 for no impact to 100 for maximum impact (***Table 6***). To put this into context and provide a specific local example, Boreal toads are very sensitive to even low levels of human disturbance at their breeding sites. A single dog or human disturbing a breeding site could cause the mortality of many eggs or tadpoles, therefore, that habitat layer received a rating of 100 across all levels of disturbance. Conversely, sport fish in a large river system may be more resilient to human disturbance impacts (e.g., low to moderate angling pressure, catch and release regulations), therefore, the impact ratings are less than 100 in all three disturbance categories.

For this exercise, the “Evidence” ratings of low, moderate, or high are generally consistent with Chaffee and Lake Counties, and are based on the best available science and professional subject matter expertise and opinion.

Species	Habitat Layer	Impact Rating by Human Disturbance Level			Evidence
		Low	Medium	High	
Boreal toad	*Boreal toad breeding sites*	*100*	*100*	*100*	*Low*
Fish	*Cutthroat Trout designated crucial*	*20*	*50*	*70*	*Moderate*
Fish	*Native fish and other native aquatic species conservation waters*	*20*	*50*	*70*	*Moderate*
Fish	*Sport fish Mgmt waters*	*20*	*50*	*70*	*Moderate*
Big Game	*Big Game migration pinch point*	*75*	*100*	*100*	*High*
Bighorn sheep	*Bighorn production areas*	*50*	*100*	*100*	*High*
Bighorn sheep	*Bighorn winter range*	*30*	*50*	*100*	*High*
Bighorn sheep	*Bighorn migration corridors*	*25*	*50*	*100*	*High*
Bighorn sheep	*Summer Range*	*30*	*50*	*100*	*High*
Elk	*Elk production areas*	*30*	*50*	*100*	*High*
Elk	*Elk severe winter range*	*50*	*75*	*100*	*High*
Elk	*Elk winter concentration areas*	*40*	*70*	*100*	*High*
Elk	*Elk migration corridors*	*30*	*65*	*100*	*High*
Elk	*Elk winter range*	*30*	*60*	*100*	*High*
Elk	*Summer alpine habitat*	*30*	*60*	*100*	*High*
Lynx	*Lynx linkage areas*	*25*	*75*	*75*	*High*
Lynx	*Lynx modeled habitat*	*25*	*25*	*50*	*High*
Mountain goat	*Mountain goat production areas*	*50*	*100*	*100*	*Moderate*
Mountain goat	*Summer alpine habitat*	*25*	*50*	*100*	*Moderate*
Mule deer	*Mule deer severe winter range*	*50*	*75*	*100*	*High*
Mule deer	*Mule deer winter concentration areas*	*40*	*70*	*100*	*High*
Mule deer	*Mule deer migration corridors*	*30*	*65*	*100*	*High*
Mule deer	*Mule deer winter range*	*30*	*60*	*100*	*High*
Mule deer	*Summer alpine habitat*	*30*	*60*	*100*	*High*
Pronghorn	*Pronghorn severe winter range*	*75*	*100*	*100*	*Moderate*
Pronghorn	*Pronghorn winter concentration*	*50*	*75*	*100*	*Moderate*
Pronghorn	*Pronghorn winter range*	*40*	*75*	*100*	*Moderate*
Wolverine	*Potential Habitat*	*25*	*75*	*75*	*Moderate*
Moose	*Moose priority habitat*	*25*	*50*	*90*	*Moderate*
Moose	*Moose concentration area*	*25*	*50*	*90*	*Moderate*
Moose	*Moose winter range*	*30*	*70*	*100*	*Moderate*
Ptarmigan	*Ptarmigan Winter Range*	*25*	*50*	*100*	*High*
Ptarmigan	*Ptarmigan Summer Range*	*25*	*50*	*100*	*High*
Pika	*Predicted range (modeled)*	*25*	*25*	*75*	*Low*

Species	Habitat Layer	Impact Rating by Human Disturbance Level			Evidence
		Low	Medium	High	
Gunnison Sage Grouse	*HPT Tier 2*	*30*	*80*	*100*	*High*
Gunnison Prairie dog	*Colonies*	*20*	*40*	*70*	*Moderate*
Burrowing Owl	*Burrow Locations*	*50*	*75*	*100*	*Moderate*
Great Blue Heron	*Nesting Area*	*50*	*75*	*100*	*Moderate*
Black Swift	*Nesting Habitat*	*60*	*80*	*100*	*Low*
Bald eagle	*Bald eagle nests*	*50*	*75*	*100*	*High*
Golden eagle	*Golden eagle nests*	*50*	*75*	*100*	*High*
Northern goshawk	*Northern goshawk nests*	*50*	*75*	*100*	*high*
Osprey	*Osprey nests*	*75*	*75*	*75*	*Moderate*
Wetland/Aquatic Species	*Natural wetland inventory*	*50*	*75*	*100*	*Moderate*
Uncompahgre Fritillary	*FWS critical habitat*	*25*	*50*	*75*	*low*
Altai Cotton-grass	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Avery Peak Twinpod	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Black Canyon Gilia	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Colorado Divide Whitlow-grass	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Colorado Tansy-aster	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Colorado Wild Buckwheat	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Colorado Wood-rush	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Crandall's Rockcress	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Few-seed Whitlow-grass	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Fragile Rockbrake	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Glenwood Springs Rockcress	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Gunnison's Milkvetch	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Juniper Tumble-mustard	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Little Green Sedge	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Low Fleabane	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Molybdenum Milkvetch	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Northern Twayblade	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Purpus' Sullivantia	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Rocky Mountain Thistle	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Rolland's Leafless-bulrush	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Rollins' Twinpod	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Rothrock's Townsend-daisy	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Roundleaf Sundew	*occupied occurrence*	*25*	*50*	*100*	*Moderate*

Species	Habitat Layer	Impact Rating by Human Disturbance Level			Evidence
		Low	Medium	High	
Slender Cotton-grass	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Small-winged Sedge	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Smooth Rockcress	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Tiger Beardtongue	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Variegated Horsetail	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Violet Milkvetch	*occupied occurrence*	*25*	*50*	*100*	*Moderate*
Woolly Fleabane	*occupied occurrence*	*25*	*50*	*100*	*Moderate*

***Table 6**. Wildlife Impact by Human Disturbance Level*

Species and Habitat Layer Importance Scoring

After rating the human disturbance impact levels, species' habitat layers were then scored across five bulk categories: Population Trend, Economic Contribution, Security Status, Specificity, and Sensitivity and Evidence. These categories are described and defined in ***Table 7***. Scores were derived based on current science and research as well as subject matter expertise and opinion; however, some species and habitats are more broadly and comprehensively studied than others. Confidence in these scores is reflected in the sensitivity and evidence column. The Sensitivity and Evidence category is in part determined by the human impact ratings shown in Table 6. Low, medium, and high impact ratings are summed and then assigned a rating of 1-5, where 5 is the highest sensitivity to disturbance with the highest professional evidence. We attempted to maintain consistency with Chaffee and Lake Counties but also adapted where it was deemed appropriate based on local considerations in Gunnison County. Scores are shown in ***Table 8***.

Category	Scoring criteria
Population Trend	This component captures the local population trend of the associated species: 1 = increasing, 2 = stable or unknown/no data, 3 = slightly declining (<0.5%/yr), 4 = clear decline (0.5-1%/yr), and 5 = strong decline (>1%/yr). Note: Maximum score is for species with declining population.
Economic Contribution	This component captures the local direct economic impact of the species: 5 = species that have more than $5M/yr impact (Elk, fishing), 4 = $1 to $5M, 3 = $100k to $1M, 2 =$50k to $100k, and 1 <$100k, = no known/documented economic impact. To the extent possible, species economic contributions were based on a 2008 report that showed wildlife contributed $35M annually to the local economy. It was assumed that these figures have roughly doubled since then. Note: Maximum score is for species with high economic impact.

Category	Scoring criteria
Security Status	This component captures species security and need for conservation using the NatureServe conservation status ranking system at the State level. 5 = critically imperiled at very high risk for extinction, 4 = imperiled at high risk for extinction, 3 = vulnerable at moderate risk for extinction, 2 = apparently secure, and 1 = secure. Note: Maximum score is for species that are critically imperiled.
Specificity	The component captures how well the spatial data reflects the occupied habitat: 5 = point occurrence locations and CPW polygons of discrete habitat elements developed from surveys, 3-4 = increasingly broad representations of general habitat, and 1-2 = occurrence points from sparse surveys and broad habitat models. Note: Maximum score if for species that have habitat defined by strong and specific data.
Sensitivity & evidence	This component captures technical professional confidence that the species use of the habitat is sensitive to recreation. Sensitivity was defined as the sum of the response function impacts for the low, moderate, and high disturbance intensity levels. This component was scored as: 5 = sensitivity >225 and high evidence, 4 = sensitivity >225 and low-moderate evidence, 3 = sensitivity >175 and high evidence, 2 = sensitivity >175 and moderate evidence, and 1 = others. Migration corridors were assigned a score of two. Note: Maximum score is for species that research strongly shows are highly sensitive to human impact.

***Table 7**. Habitat Importance Rank Components and Scoring Criteria.*

Layer	Habitat	Component importance scores					
		Population Trend	Economic	Security	Specificity	Sensitivity Evidence	TOTAL
Boreal toad	*Boreal toad breeding sites*	*5*	*1*	*5*	*5*	*4*	***20***
Fish	*Cutthroat Trout designated crucial*	*2*	*4*	*3*	*5*	*1*	***15***
Fish	*Native fish and other native aquatic species conservation waters*	*2*	*3*	*2*	*5*	*1*	***13***
Fish	*Sport fish Mgmt waters*	*2*	*5*	*1*	*5*	*1*	***14***
Big Game	*Big Game migration pinch point*	*2*	*5*	*1*	*5*	*5*	***18***
Bighorn sheep	*Bighorn production areas*	*3*	*3*	*3*	*5*	*5*	***19***
Bighorn sheep	*Bighorn winter range*	*3*	*3*	*3*	*4*	*3*	***16***
Bighorn sheep	*Bighorn migration corridors*	*3*	*3*	*3*	*4*	*2*	***15***
Bighorn sheep	*Summer Range*	*3*	*3*	*3*	*4*	*3*	***16***
Elk	*Elk production areas*	*2*	*5*	*1*	*3*	*5*	***16***
Elk	*Elk severe winter range*	*2*	*5*	*1*	*5*	*4*	***17***
Elk	*Elk migration corridors*	*2*	*5*	*1*	*4*	*2*	***14***
Elk	*Elk winter range*	*2*	*5*	*1*	*3*	*2*	***13***
Elk	*Summer Alpine Habitat*	*2*	*5*	*1*	*4*	*3*	***15***
Lynx	*Lynx linkage areas*	*2*	*1*	*5*	*3*	*3*	***14***
Lynx	*Lynx modeled habitat*	*2*	*1*	*5*	*3*	*1*	***12***

Layer	Habitat	Component importance scores					
		Population Trend	Economic	Security	Specificity	Sensitivity Evidence	TOTAL
Mountain goat	*Summer Alpine Habitat*	*2*	*2*	*1*	*3*	*3*	***11***
Mule deer	*Mule deer severe winter range*	*3*	*4*	*2*	*5*	*5*	***19***
Mule deer	*Mule deer winter concentration areas*	*3*	*4*	*2*	*4*	*5*	***18***
Mule deer	*Mule deer migration corridors*	*3*	*4*	*2*	*3*	*3*	***15***
Mule deer	*Mule deer winter range*	*3*	*4*	*1*	*4*	*3*	***15***
Mule deer	*Summer Alpine Habitat*	*3*	*4*	*2*	*4*	*3*	***16***
Pronghorn	*Pronghorn severe winter range*	*4*	*2*	*2*	*5*	*4*	***17***
Pronghorn	*Pronghorn winter concentration*	*4*	*2*	*2*	*5*	*4*	***17***
Pronghorn	*Pronghorn winter range*	*4*	*2*	*2*	*4*	*3*	***15***
Wolverine	*Potential Habitat*	*5*	*1*	*5*	*1*	*1*	***13***
Moose	*Moose priority habitat*	*1*	*3*	*2*	*3*	*2*	***11***
Moose	*Moose concentration area*	*1*	*3*	*2*	*3*	*2*	***11***
Moose	*Moose winter range*	*1*	*3*	*2*	*3*	*2*	***11***
Ptarmigan	*Ptarmigan Winter Range*	*3*	*2*	*2*	*4*	*3*	***14***
Ptarmigan	*Ptarmigan Summer Range*	*3*	*2*	*2*	*4*	*3*	***14***
Pika	*Predicted range (modeled)*	*2*	*2*	*2*	*3*	*2*	***11***
Gunnison Sage Grouse	*Gunnison County HPT tier 1*	*2*	*2*	*5*	*5*	*5*	***19***
Gunnison Sage Grouse	*Gunnison County HPT tier 2*	*2*	*2*	*5*	*5*	*5*	***19***
Gunnison Prairie Dog	*Colonies*	*2*	*2*	*2*	*4*	*2*	***12***
Burrowing Owl	*Burrow locations*	*3*	*1*	*3*	*2*	*3*	***12***
Great Blue Heron	*Nesting Area*	*2*	*1*	*2*	*5*	*3*	***13***
Black Swift	*Nesting Habitat*	*2*	*1*	*4*	*5*	*3*	***15***
Bald eagle	*Bald eagle nests*	*2*	*1*	*3*	*5*	*5*	***16***
Golden eagle	*Golden eagle nests*	*2*	*1*	*3*	*5*	*5*	***16***
Northern goshawk	*Model Nesting Habitat*	*2*	*1*	*2*	*3*	*3*	***11***
Osprey	*Osprey Nests*	*1*	*1*	*3*	*5*	*3*	***13***
Wetland/Aquatic Species	*National wetland inventory*	*3*	*1*	*5*	*5*	*4*	***18***
Uncompahgre Fritillary	*FWS critical habitat*	*2*	*1*	*3*	*1*	*1*	***8***
Avery Peak Twinpod	*occupied occurrence*	*2*	*1*	*4*	*5*	*2*	***14***
Black Canyon Gilia	*occupied occurrence*	*2*	*1*	*3*	*5*	*2*	***13***
Colorado Divide Whitlow-grass	*occupied occurrence*	*2*	*1*	*3*	*5*	*2*	***13***
Colorado Tansy-aster	*occupied occurrence*	*2*	*1*	*3*	*5*	*2*	***13***
Colorado Wild Buckwheat	*occupied occurrence*	*2*	*1*	*3*	*5*	*2*	***13***

Layer	Habitat	Component importance scores					
		Population Trend	Economic	Security	Specificity	Sensitivity Evidence	TOTAL
Crandall's Rockcress	*occupied occurrence*	*2*	*1*	*3*	*5*	*2*	***13***
Few-seed Whitlow-grass	*occupied occurrence*	*2*	*1*	*1*	*5*	*2*	***11***
Fragile Rockbrake	*occupied occurrence*	*2*	*1*	*4*	*5*	*2*	***14***
Glenwood Springs Rockcress	*occupied occurrence*	*2*	*1*	*3*	*5*	*2*	***13***
Gunnison's Milkvetch	*occupied occurrence*	*2*	*1*	*3*	*5*	*2*	***13***
Juniper Tumble-mustard	*occupied occurrence*	*2*	*1*	*4*	*5*	*2*	***14***
Little Green Sedge	*occupied occurrence*	*2*	*1*	*5*	*5*	*2*	***15***
Low Fleabane	*occupied occurrence*	*2*	*1*	*5*	*5*	*2*	***15***
Molybdenum Milkvetch	*occupied occurrence*	*2*	*1*	*2*	*5*	*2*	***12***
Northern Twayblade	*occupied occurrence*	*2*	*1*	*4*	*5*	*2*	***14***
Purpus' Sullivantia	*occupied occurrence*	*2*	*1*	*3*	*5*	*2*	***13***
Rocky Mountain Thistle	*occupied occurrence*	*2*	*1*	*3*	*5*	*2*	***13***
Rolland's Leafless-bulrush	*occupied occurrence*	*2*	*1*	*4*	*5*	*2*	***14***
Rollins' Twinpod	*occupied occurrence*	*2*	*1*	*4*	*5*	*2*	***14***
Rothrock's Townsend-daisy	*occupied occurrence*	*2*	*1*	*3*	*5*	*2*	***13***
Roundleaf Sundew	*occupied occurrence*	*2*	*1*	*4*	*5*	*2*	***14***
Skiff Milkvetch	*occupied occurrence*	*4*	*1*	*5*	*5*	*2*	***17***
Slender Cotton-grass	*occupied occurrence*	*3*	*1*	*5*	*5*	*2*	***16***
Small-winged Sedge	*occupied occurrence*	*2*	*1*	*2*	*5*	*2*	***12***
Smooth Rockcress	*occupied occurrence*	*4*	*1*	*5*	*5*	*2*	***17***
Tiger Beardtongue	*occupied occurrence*	*2*	*1*	*3*	*5*	*2*	***13***
Variegated Horsetail	*occupied occurrence*	*2*	*1*	*3*	*5*	*2*	***13***
Violet Milkvetch	*occupied occurrence*	*2*	*1*	*3*	*1*	*2*	***9***
Woolly Fleabane	*occupied occurrence*	*2*	*1*	*4*	*5*	*2*	***14***

Table 8*. Gunnison County Habitat Importance Scores.*

Spatial Assessment and Tool Production

The habitat layers and scores shown in Table 8 were incorporated into a spatial model by CPW GIS Staff. The model followed the same format developed by Chaffee County and used by Lake County. The wildlife habitat layers, impact assessment, and importance scores are combined spatially to calculate wildlife habitat sensitivity to human disturbance. The response functions are applied individually to each spatial representation of disturbance intensity and habitat extent. This raster surface is then multiplied by the total importance score divided by the maximum

allowable score of 25. During this process, the species group field is used to group related habitat elements to control for layer quantity in the analysis. If there are multiple habitats in a species group, each pixel is assigned the maximum impact of any overlapping habitats. This favors the most sensitive and important habitat of the species. The weighted impact measured by species group is then summed to create a composite raster of human disturbance impact sensitivity for wildlife.

In math terms, this is expressed as:

$$Composite\ impact\ = \sum_{i=0}^{N}\left(\bigcup_{j=1}^{0} Presence\ Raster\ x\ (ImpScore/25)\right)$$

Where *i* is the index for the *N* species groups, *j* is the index for the *O* habitats in the species group, PresenceRaster depicts the habitat extent (1 = presence, 0 = absence), ImpactLevel is the level of habitat degradation from the quantitative response function, and ImpScore is the importance score.

For some of the habitat layers a buffer was applied to the data before it was converted to a raster layer. The layers and buffer sizes are listed in ***Table 9*** below.

Species Layer	Buffer Size
Bald Eagle Nesting	800 meters
Golden Eagle Nesting	800 meters
Northern Goshawk Nesting	800 meters
Osprey Nesting	800 meters
Boreal Toad Breeding Sites	300 meters

Table 9. *Buffer Sizes by Species Layer*

Wildlife Planning Support Tool

The ultimate product of this Gunnison County mapping and modeling effort is shown in ***Figure 6****- Gunnison County Wildlife Planning Support Tool.* This powerful map combines the Current Human Impacts Map *(Figure 2)* and the Habitat Percentile Map *(Figure 3).* The result is a map that depicts the most important remaining habitat for wildlife within Gunnison County and a portion of northwest Saguache County falling within the Gunnison Basin. The Gunnison County Tool was developed using a process similar to that administered in Chaffee and Lake Counties. However, each County is unique in its species assemblages, habitats, and local social and political issues. Two noteworthy attributes of the Gunnison County Tool include the occupation of the largest remaining subpopulation of Gunnison sage-grouse, which are Federally Threatened under the Endangered Species Act (ESA), and the exceptional ecological value of the sagebrush ecosystems found throughout the low and mid-elevations of the

Gunnison Basin. The highest quality habitats depicted in the Gunnison County Tool are significantly driven by these two attributes within the model.

Interpreting the Support Tool

In Figure 6, areas depicted in ***shades of darker green*** are the ***highest quality habitats*****.** These areas are subdivided into disturbed and undisturbed categories based on current anthropogenic influence. Through a wildlife conservation lens, these areas should be viewed as a top priority for protection from human development or impact. These areas might also be considered for habitat restoration or enhancement, or for providing potential mitigation for land use elsewhere. For example, a hypothetical section of road or trail within a highest quality, disturbed habitat might be closed and restored as mitigation for a newly authorized stretch of road or trail in a less impactful area elsewhere. Protecting our highest quality habitat should promote thriving wildlife and plant populations and overall ecosystem health. Healthy ecosystems will help foster and perpetuate quality outdoor experiences for County residents and visitors, maintain local cultural values and ecosystem services, and maintain essential drivers of our local economies.

In Figure 6, areas shown in the ***lightest shade of green*** are categorized as ***undisturbed high quality habitat***. These areas are of high conservation value and are geographies to avoid, minimize, and mitigate impacts to wildlife and their habitat. High quality, undisturbed habitats may provide connection between seasonal ranges and provide unfragmented habitat refugia for species throughout the year. Maintaining undisturbed habitats will be key to local conservation in the face of an increasing human population, development, and demand for outdoor access and activities.

In Figure 6, areas shown in ***shades of brown*** are ***disturbed or represent lower quality habitats*****.** Some of these may be intuitive, such as the developed areas surrounding municipalities or high-use recreation areas. These areas may still include wildlife habitat values and should be evaluated at a fine-scale during project level planning.

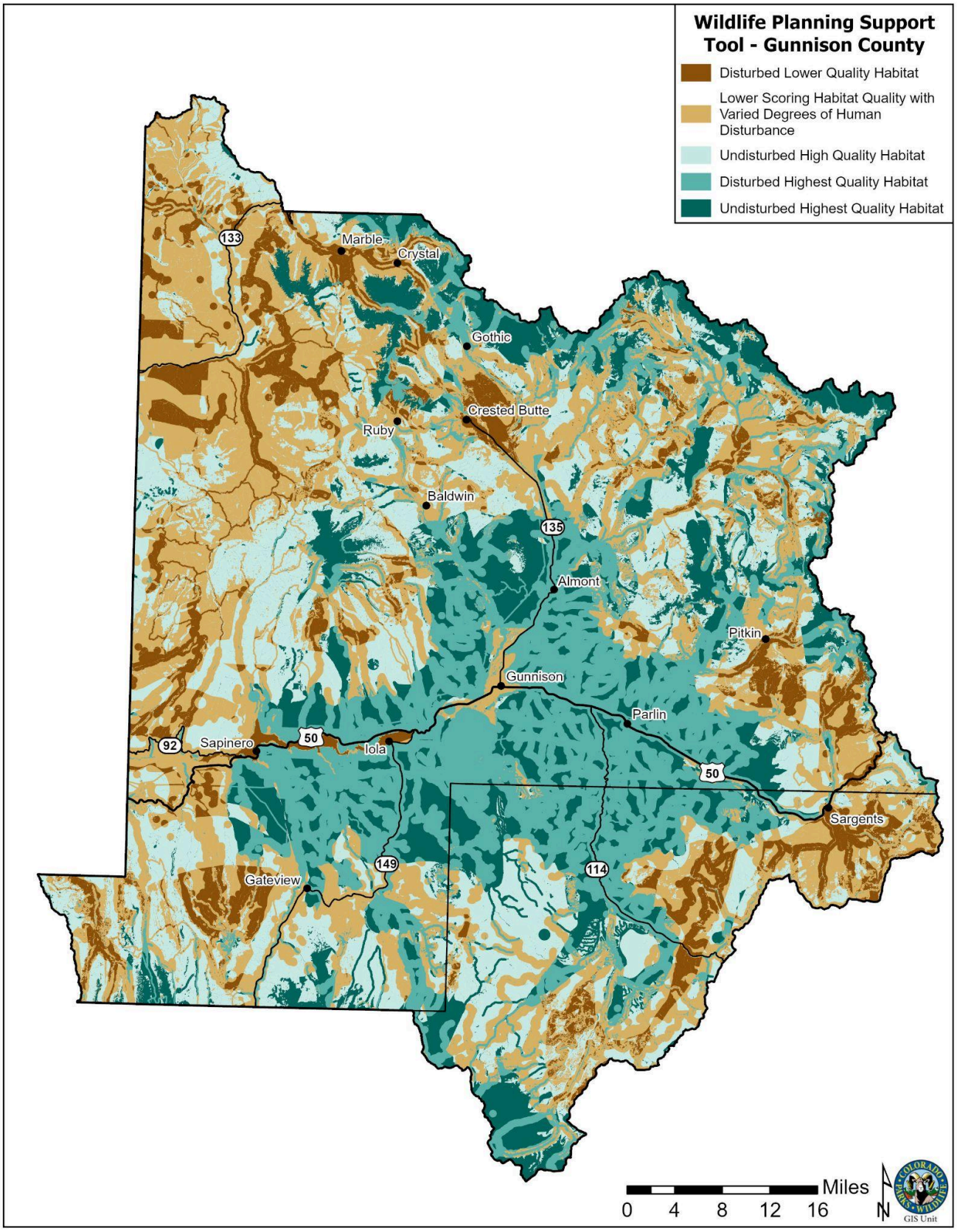


***Figure 6**. Gunnison County Wildlife Planning Support Tool*

Future Use of the Wildlife Planning Support Tool

These Tools provide communities with a resource to help guide local management across jurisdictions and promote wildlife conservation during land use planning. Finalizing the Tool in Gunnison County completes our analysis across the Central Colorado Recreation Partnership, which will accommodate conservation planning between Lake, Chaffee, and Gunnison Counties (***Figure 8***). Moving forward, Gunnison County's Tool will be warehoused within Colorado's Conservation Data Explorer (CODEX) alongside Chafee and Lake Counties. Making our Tool widely available and promoting its use, coupled with ongoing education and collaboration, will hopefully help realize its full potential as we forge through ongoing and unprecedented change across our wild places.

Potential applications for the Wildlife Planning Support Tool include:

- Gunnison County and municipalities adopt the Tool to inform and guide land use policy and planning
    - Example: Gunnison County Corridor Planning; designating areas appropriate for future development

- Local economic development initiatives (e.g., Local Marketing District, City of Gunnison Economic Development Strategic Planning, etc.) use the Tool to consider impacts to wildlife habitat; promotion and marketing may direct activities away from high quality habitats

- Land Preservation Board, CB Land Trust, Gunnison Ranchland Conservation Legacy, and other conservation entities use the Tool as a resource for potentially prioritizing and conserving high quality habitats

- Grant funders, such as STOR or the Land Preservation Board may prioritize projects that support wildlife habitat improvements in high quality areas; or mitigation/restoration work in disturbed areas

- Informing Federal and State agency land management planning: bolstering consideration for high quality habitats; or directing mitigation/restoration work in disturbed areas

- Informing Community Wildfire Protection Plan (CWPP) treatments, where reducing wildfire risk in high priority habitats also strives to enhance wildlife habitat

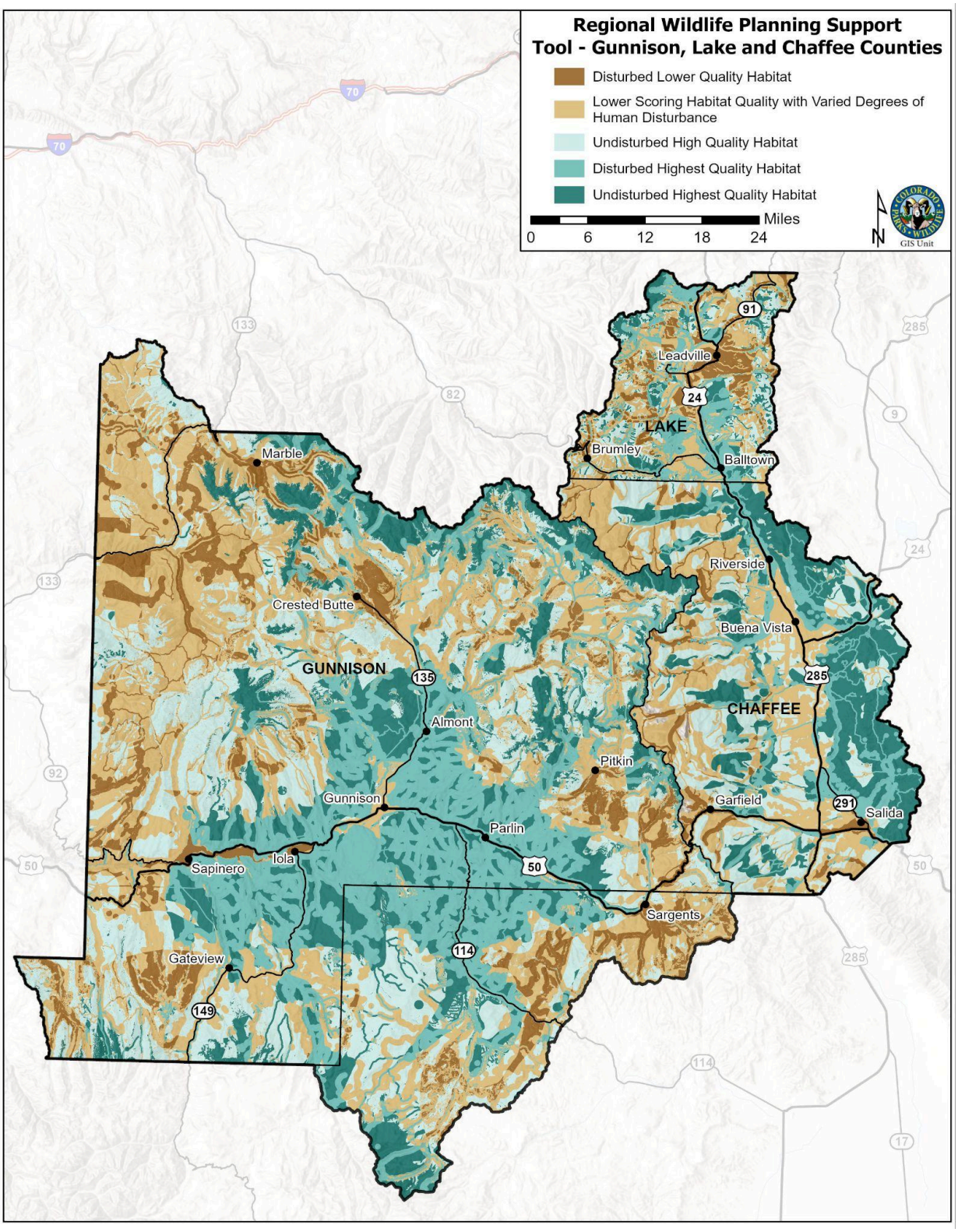


***Figure 8**: Gunnison, Chaffee, and Lake County Planning for Wildlife Map - Central Colorado Recreation Partnership*

References

Chaffee County Wildlife Decision Support Tools for Recreation Link https://envisionchaffeecounty.org/wp-content/uploads/2021/04/ChaffeeRecPlanforWildlifeTools_2021F.pdf

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CPW (undated) Colorado Parks and Wildlife's (CPW) recommendations to avoid and minimize impacts to wildlife from land use development in Colorado. Colorado Parks and Wildlife. https://cpw.state.co.us/Documents/Conservation-Resources/Energy-Mining/CPW_HPH-Map-Layers.pdf (Accessed in June 2020)

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US Census (2019) Urban areas – polygon shapefile. Available at https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.2020.html (Accessed in March 2020)

Summary Report Lake County. Habitat Importance Maps, May 2023.

AGENDA ITEM or FINAL CONTRACT REVIEW SUBMITTAL FORM

Agenda Item: Roads and Bridge Standards Discussion

Action Requested: Discussion

Parties to the Agreement:

Term Begins: **Term Ends:** **Grant Contract #:**

Summary:

This is a discussion of the proposed edits to the Gunnison County Standards and Specifications for New Construction of Roads and Bridges.

Fiscal Impact:

Submitted by: Martin Schmidt **Submitter's Email Address:** mschmidt@gunnisoncounty.org

Finance Review: ○ Required ◉ Not Required

Comments:

Reviewed by: Discharge Date:

County Attorney Review: ◉ Required ○ Not Required

Comments:
Legally sufficient. SO 8/20/25

Reveiwed by: GUNCOUNTY1\sobaid Discharge Date: 8/20/2025 Certificate of Insurance Required

Yes ○ No ◉

County Manager Review:

Comments:

Reveiwed by: GUNCOUNTY1\jreynolds Discharge Date: 8/21/2025

○ Consent Agenda ○ Regular Agenda ○ Worksession Time Allotted: 90

Agenda Date: 8/26/2025

Revised April 2015

GUNNISON COUNTY STANDARDS AND SPECIFICATIONS FOR ROADS AND BRIDGES

This memo will serve as an overview of the attached Current, Redline, and Proposed Gunnison County Standards and Specifications for Roads and Bridges ("Standards").

This revision effort is massive and attempts to improve the written standards to match the intent and execution of policy.

In order to cover the edits in a reasonable timeframe and ensure each area of concern is covered, staff would like to go section by section and cover the major or critical changes. The summary does not cover every edit, especially formatting, grammatical, or Scrivner's updates, but staff is prepared to cover anything additional not included below. Formatting of the clean document is not complete and will be addressed before a final version is presented to the board for consideration.

OVERALL

The standards have been tied more closely to the Gunnison County Land Use Resolution (LUR). This has been done to both remove inconsistencies and streamline the processing of applications and permits. It is expected that both documents will be in force moving forward, so there are edits that rely on the authority of the LUR instead of creating a new and parallel policy.

The term "driveway" has been removed throughout and replaced with "access". This has been done because the term "driveway" does not describe all of the ways that different applicants intend to access the rights of way (ROW).

Staff focused on clarifying, simplifying where possible, adding explanation where needed, and removing vague language that makes enforcement difficult. Summaries below are broken up by sections.

SECTION 1 – GENERAL PROVISIONS

Sections	Edited (2025)
1.xx	– Clarifies that any activity involving construction, snow management, parking, trenching, or other work in County ROW requires a permit. – Director discretion explicitly stated instead of being vague. - Staff removed the language "new construction of" because these regulations also apply to more than just "new" construction. It applies to any LUC and to upgrades of existing roads and utility cuts, etc. This change is reflected throughout the document.
1.3 Permit Required	– Requires written application, justification, and may involve engineering or legal review. – Director must determine if waiver meets safety and policy intent. – BOCC appeal process clarified. – Staff has combined several similar permits into one "Right of Way Permit". This allows for one permit to address any work in, on, or over the public (ROW). This simplifies permit applications and reduces the chances of needing multiple permits. – Requires access permits for ag residential access. – Adds examples and exceptions to guide interpretation.
1.4 to 1.8	– All activities must comply with federal, state, and County regulations. – Permittees are responsible for identifying applicable laws and removes County liability. -Added accesses and trails to the scope because only listing roads constrained the authority of the document. Accesses is the term used for the remainder of the document instead of driveways and applies to multi-modal access to private lots from the public ROW.

1.9 Permit Fees	– Fees must be paid prior to permit issuance. – Set by BOCC via resolution and listed in Exhibit A. -Language was added to clarify the long applied agricultural exemption to match the LUR and standards application of the exemption. This does not change the way the exemption has been applied. – No refunds for withdrawn applications.
	Definitions in a separate section but cross-references and terminology were made more consistent.

Key Enhancements in Section 1:

- Stronger, clearer rules about when a permit is required.
- Clarifies agricultural exemptions.
- Clarifies the formal waiver application and appeal process.
- Compliance and fee subsections to increase enforceability and consistency.

SECTION 2 – ADMINISTRATION

Sections	Edited (2025)
2.xx	– The sections about the deletions from the road network needed additional language to be legally compliant and align with state regulations. - The vacation section includes substantial work on clarifying the process for a vacation application and creates clear criteria that will allow the public to better prepare to answer the BOCC's questions. It also sets a clear requirement that if the vacation is approved, new physical survey markers will be placed for future reference.
2.1 Road Systems Defined system types: arterial, collector, local.	Clarifies that Gunnison County has no obligation to assume responsibility for construction or maintenance of any road. Emphasizes jurisdictional clarity for state, city, and private roads.
2.2 County System Regulations	Stronger and more specific reference to MUTCD compliance. Clarifies that traffic studies are at developer's cost unless the County initiates. Developers responsible for installation and maintenance during review.
2.3 Enforcement Brief	Expanded information about: – Stop Work Orders for noncompliance – Suspension or Revocation Hearings – Permit Processing Restrictions for unresolved violations – Violation Abatement includes County authority to correct work and assess costs – Reclamation requirements outlined for unauthorized or abandoned work
2.4 Inspections	Inspection Authority: Grants Director the right to enter and inspect any premises involving permitted activity, with limitations to prevent unreasonable intrusion.
2.5 Road System Additions	– Planning Stage: Applicant funds transportation plans – Right-of-Way: Dedication and easement standards – Inspection: Must conform to County requirements –Renamed "Acceptance and Deletion of Roads." Includes formal resolution by BOCC to accept or remove roads. Subdivisions must provide as-builts, agreements, and warranty securities.
2.11 Snowplowing	-Strengthened to reinforce that no implied right to plowing exists, and non-maintained roads are not eligible unless adopted. -This section has been amended to allow the public works director to renew plow permits for applicants in good standing. This maintains the current process for the first issuance of a plow permit, but simplifies and expedites the issuance of renewals since the policy and political questions will have already been addressed. The remainder of the edits clarify or outline the process and expected approach.
2.12 to 2.15 Liability and Immunity	Clearly states that County assumes no liability for roads not accepted into system, and states governmental immunity protections.

Key Enhancements in Section 2:

- Clearer legal authority for enforcement, inspection, and non-assumption of roads.
- Adds step-by-step administrative procedures for road acceptance.

- Introduces a structure for reclamation, violation response, and inspections.
- Better defines developer responsibilities and conditions for County participation.

SECTION 3 – TRANSPORTATION PLANNING AND DEVELOPMENT POLICIES

Sections	Edited (2025)
3.1 Functional Classification of Roads	– Terminology updated to align with CDOT/FHWA standards. – Improved formatting and readability.
3.2 Land Use Changes – Compliance with Road Standards	Clarified: – Land use approvals do not exempt applicants from road/access compliance. – Public Works reserves authority to deny access if standards aren't met. – Coordination required between Community Development and Public Works. -Specifically calls out when the standards apply. The language is tied to the LUR and state regulation that allows for the public to understand when the standards apply and plan accordingly.
3.3 Planning Principles	Rewritten and expanded: – Add focus on connectivity, emergency access, efficiency, and minimizing dead-ends. – Includes guidance to avoid isolated road segments. – Promotes multimodal design, sustainability, and logical integration with County's existing road network. – References compliance with Gunnison County's Master Plan.

Key Enhancements in Section 3:

- Stronger linkage between land use approvals and R&B standards.
- Emphasizes interdepartmental coordination (Planning & Public Works).
- Introduces specific design principles to ensure road networks are:
    - Connected
    - Accessible to emergency vehicles
    - Avoiding excessive cul-de-sacs
    - Aligned with County policy goals
- Encourages long-term planning aligned with the County's Master Plan.

SECTION 4 – DESIGN STANDARDS

Sections	Edited (2025)
4.1 Application of Design Standards	Language updated for consistency. Clarified to state: "These standards represent the minimum allowable..."
4.2 Design Factors	Language and clarity updates to: - Road Classification - Traffic Volumes - Terrain - Design Speed
4.3 Geometric Standards	Updated to reference latest AASHTO and CDOT standards; improved readability and precision in slopes and curve transitions.
4.4 Cross Section Standards Includes: **– Typical Sections** **– Right-of-Way Width** **– Crown Slope** **– Ditches** **– Curbs** **– Trails** **– Side Slopes** **– Handicap Ramps**	Expanded technical guidance: – ADA ramp specs now follow PROWAG guidelines – Clarifies when curbs/gutters are required based on use – Includes clear diagram cross-references
4.5 Access Control Standards	– More detailed sub-categories - Heavy edits throughout that simplify or clarify – Strengthened access requirements and traffic safety language - Added consistency with the LUR -Fully numbered subsections
4.6 Intersections	Clarified sight triangle requirements; now explicitly refers to CDOT Access Code and AASHTO Green Book. Standard turning radii for buses, emergency vehicles emphasized.
4.7 Pavement Structure Design	Clarifies geotech reports for flexible pavement design; regional and subgrade factors included. Design diagrams (Figures 4-2 and 4-3) referenced more clearly.
4.8 Drainage	Hydrology section: – Requires 2-, 10-, and 100-year event analysis – All culverts must meet CDOT and FHWA standards – Clarifies bridge requirements
4.9 Road Appurtenances	Enhanced MUTCD references; cattle guard specs (appendix H); guardrail now includes modern W-beam and terminal design standards (Appendix I).
4.10 Utilities	- Clarified underground utility coordination and restoration obligations. - Specific trench cut standards referenced in Figure 4-4. - Added language for micro trenching

4.11 Procedures for Encroachments in Rights-of-Way	Renamed; includes language on pre-construction notification, as-builts, and utility locates.

Key Enhancements in Section 4:

- More frequent references to external engineering standards (AASHTO, CDOT, MUTCD).
- Emphasis on safety, accessibility (ADA/PROWAG), and environmental considerations.
- Clear requirements for technical documentation (e.g., geotechnical reports, sight distance analysis).
- Figures and Appendices referenced more clearly.

SECTION 5 – CONSTRUCTION SPECIFICATIONS

Sections	Edited (2025)
5.1 General	– States all construction must meet these standards and County-approved construction plans. – Corrected names and versions of supporting documents. -Traffic Study information will rely on LUR standards. Article VI removed.
5.B Engineers	Slightly updated language for clarity.
5.C Inspection and Testing	– Adds requirement that work be done in accordance with manufacturer specs and industry standards. – Director given authority to halt substandard work. -requires testing conformance with "CDOT or County approved materials specifications."
5.D Plans and Specs	– Drawings must be County-approved and kept on site. – Adds requirement that "as-builts" be submitted after project completion.
5.E Acceptance of Work	– Lists stages requiring inspection (e.g., subgrade, compaction, final grade). – Testing to be performed by independent lab at applicant's expense, unless County agrees otherwise. – Final acceptance conditioned on passing all inspections.
5.F Utilities	– Requires utility coordination prior to construction.

Key Enhancements in Section 5:

- Stronger oversight and inspection process.
- Clearer expectations for drawings, as-builts, and testing.
- Introduction of Reclamation obligations for non-compliant or abandoned work.
- More defined responsibilities for utility coordination and erosion control.

SECTION 6 – PERMITS

Sections	Edited (2025)
6.1 Issuance	Language simplified to: Fees to be set by the board.
6.2 Right-of-Way Permit	- Permit covers all work in the ROW, removing surface alteration and utility construction permits. - Timelines and expectations are clarified and simplified.
6.3 Access	- Clarifications about what requires permits - Sets clear timelines for permits - Sets expectations for legal access
6.4 Oversize/Overweight	- Emergency situations language added
6.5 Snow Removal or Grooming	- Permit name edited to include grooming - Binds the permit to the LUR - Defines board discretion - Limits transferability
6.6 Right-of-Way Encroachment	- Renames the permit for clarity - clarifies the permit intent - Clarifies transferability
6.7 Parking	- Allows the BOCC to issue parking permits - Sets signage and enforcement expectations - Clarifies that overnight parking without a permit is not allowed in the ROW. - Limits transfer of parking permits
6.8 Reclamation	- Clearly defines the terms of a reclamation permit

---

Key Enhancements in Section 6:

- Expanded list of permit types and subcategories.
- Adds specific application, insurance, and bonding requirements.
- Establishes revocation procedures and appeal rights.
- Strengthens enforcement, inspection, and renewal provisions.
- Better integrates with broader administrative and enforcement framework.

Overall Appendices Improvements:

- Better legal clarity and consistency.
- Alignment with updated sections (especially enforcement, inspection, and permitting).
- Improved templates.

Appendix A –Legal Responsibilities

- **2020**: Basic overview of legal duties regarding compliance, liability, and restoration.
- **2025**: Unchanged

Appendix B – Arterial Road Cross sections

- **2020**: Lists basic elements for new road design.
- **2025**: New diagrams that comply with Table 3-1.

Appendix C – Rural Collector Local and Lane Road Cross Sections

- **2020**: Incorrect values for road widths
- **2025**: Adjusted to create consistency with table 3-1 values.

Appendix D – Local Intermittent and Turnout Road Cross Sections

- **2020**: Incorrect values for road widths
- **2025**: Adjusted to create consistency with table 3-1 values.

Appendix E – Standard Turnaround Diagrams

- **2020**: hand Drawn diagram.
- **2025**: Updated compliance with fire code and digitized the drawings. These have been reviewed by CB Fire for compliance.

Appendix F – Mailbox Detail for ROW installation

- **2020**: Old CDOT Detail.
- **2025**: Utilized the new CDOT details for installation in the ROW.

Appendix G – Reclamation For Exposed Earthwork

- **2020**: Information was outdated and not for our area.
- **2025**: Ties all seeding to the location of the land and the best practices for reclamation.

Appendix H – Cattle Guard Design Standards

- **2020**: General design criteria.
- **2025**: Remains the same.

Appendix I – Guardrail Design Standards

- **2020**: Old, incomplete standards for rail.
- **2025**: Expanded to include W-beam requirements, end treatment standards, and crashworthiness references per CDOT's M-606 standard.

Appendix J – Development Improvement Agreement Template

- **2020**: Template agreement between a developer and the County.
- **2025**: Substantially revised with CAO assistance.
    - Adds warranty provisions, security language, as-built obligations, and termination clauses.
    - Greater legal structure and consistency with updated enforcement tools.

Appendix K – Definitions

- **2020**: Definitions of terms.
- **2025**: Many terms updated or expanded.
    - Added new definitions such as **"Multimodal Access"**, **"Revocable Permit"**, and **"Reclamation"**.
    - Clarified technical terms like **ROW**, **traffic impact study**, and **access control**.

GUNNISON COUNTY
STANDARDS AND SPECIFICATIONS
FOR

~~NEW CONSTRUCTION OF~~ ROADS AND BRIDGES

Adopted October 22, 1991
Amended March 2, 1993
Amended May 28, 1996
Amended June 3, 1997
Amended June 20, 1997
Amended May 7, 2002
Amended May 20, 2008
Amended June 9, 2020
Amended ~~FebruaryApril~~ _____ __, 2025

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~~GUNNISON COUNTY STANDARD SPECIFICATIONS FOR NEW CONSTRUCTION OF ROADS AND BRIDGES~~

~~ARTICLE~~ SECTION 1~~I~~

GENERAL ~~P~~PROVISIONS

1.1 Title

This document (as it may be amended by the Board of County Commissioners) shall be known as the "Gunnison County Standards and Specifications for ~~New Construction of~~ Roads and Bridges~~", and~~" and will be referred to herein as "these Standards and Specifications."

1.2 Purpose

The purpose of these Standards and Specifications is to provide for the uniform planning, design, construction, maintenance, and permitting of ~~new~~ roads and related facilities and/or improvements to ~~existing~~ roads and related facilities in Gunnison County, and further, to provide for the administration of the Gunnison County Road System and ~~public~~ other roads under the jurisdiction of Gunnison County in a manner consistent with applicable federal, state and local statutes, ordinances and regulations. These Standards and Specifications identify the minimum standard or specification necessary to achieve public safety, functional effectiveness, ease of maintenance, pleasing appearance, and to address environmental concerns.

1.3 Permit Required

Unless otherwise expressly excepted by these Standards and Specifications, no person shall engage in, cause or allow any construction of, or work on, ~~or~~ in, or over any road under the jurisdiction of Gunnison County or approved by Gunnison County unless that person has first obtained each appropriate permit required by ~~these Standards and Specifications~~Gunnison County. If such activity has begun before issuance of such permit(s), no permit shall be issued until the applicant ceases the activity, remedies any damage caused, and complies with all enforcement actions taken by Gunnison County. The following permits are required as appropriate according to the anticipated work:

~~1.~~ **A.** ~~Underground Utility Construction Permit (see Section 7.2)~~

~~2.~~ ~~Surface Alteration Permit/Road Cut~~Right of Way Rights-of-way Work Permit (see Section 7.3)

~~3.~~**B.** Access Permit (see Section 7.4)

~~4.~~**C.** Oversize/Overweight Permits (see Section 7.5)

~~5.~~**D.** Snow ~~Removal~~ Management Permit (see Section 7.6)

E. ~~Revocable Right-of-Way~~Rights-of-way ~~Installation~~Encroachment Permit (see Section 7.7)

F. Parking Permit

G. Reclamation Permit for Revegetation and Noxious Weed Control

H. Any permit required by any governmental or other agency that applies to the work in question.

~~6.~~ In order to compensate the County for the cost of reviewing and processing permits, each applicant shall pay the fees, as shown in a schedule of fees charged for permits issued by the Public Works Department, adopted and amended from time to time by the Board. The fee schedule (Exhibit A) is designed to make the amount of the fee proportional to the amount of expense likely to be incurred by the County in reviewing and processing the application.

1.4 Scope and Application

These Standards and Specifications apply to County, public, and private roads, accesses and trails ~~under~~ within the jurisdiction of Gunnison County.

1.5 Partial Exemptions

The following are partially exempt from the requirements of these Standards and Specifications:

~~1.~~**A.** Agricultural (as defined by the Gunnison County Land Use Resolution in Section 2-102) roads are exempt from these Standards and Specifications except that they require access permits as set forth herein. (see Section 4.5 and Section 7.4) Residential accesses ~~tied~~ to agricultural operations ~~-~~are not exempt from these Standards and Specifications.

1.6 Authority

It is the intent of the Board in adopting and enforcing these Standards and Specifications to fully exercise all authority and power conferred on it by, and to rely on, Colorado law including but not limited to C.R.S. 43-1-101 et. seq., 43-2- 101 et. seq. and 30-11-107 (1~~i~~)(h); 30-15-401.

C.R.S. Title 42, Article 4 authorizes the Board to regulate traffic on County roads and public roads under County jurisdiction. C.R.S. Title 42, Article, 4, and Title 43, Article 2 also authorizes local governments to regulate vehicular access to or from any public highway under their respective jurisdiction to or from property adjoining such highway in order to protect the public health, safety and welfare, to maintain smooth traffic flow, to maintain highway ~~right-of-way~~rights-of-way ~~drainage~~ and to protect the functional levels of public highways. Colorado law, including but not limited to C.R.S. Sections 43-5-301 et. seq. ~~prohibit~~prohibits anyone from obstructing a highway. The Board ~~may delegate authority to~~, the Public Works Director, or the Public Work's Director's designee, is authorized to interpret ~~who can, in turn, delegate authority to a designee to inform, direct,~~ and enforce these standards.

1.7 Amendments

These Standards and Specifications, may be amended, or repealed, in whole or in part, by the Board ~~only after a public hearing on the proposed amendment, or repeal. Notice of such public hearing, setting forth the date, time, place and general purpose of such public hearing, shall be published in a newspaper of general circulation~~made ~~within Gunnison County at least once a week for two consecutive weeks immediately before the hearing; such notice need not include the specific language of the proposed amendment or repeal~~.

1.8 Severability

If any section, clause, provision, or portion of these Standards and Specifications should be found to be unconstitutional or otherwise invalid by a court of competent jurisdiction, such determination shall not affect the validity of these Standards and Specifications as a whole or any part of these Standards and Specifications other than the part determined to be unconstitutional or invalid. Nor will such a finding affect the validity of any permit previously issued, financial security previously accepted, or action previously taken by the County, except as specifically adjudicated by ~~the~~ a court of competent jurisdiction.

1.9 Waiver

A. No waiver of these Standards and Specifications shall be valid unless approved ~~by the Board in writing~~ as set forth in this section.

B. Only the Board may approve a waiver of these Standards and Specifications, except that the Director of Public Works has ~~the limited~~ authority to waive these Standards and Specifications ~~only~~ for ~~an~~a ~~driveway~~access or for a~~n~~ ~~insignificant~~ minor extension of an existing road; though the Director may refer any such waivers to the Board. The Board~~,~~ ~~or~~or ~~if applicable,~~ the Director of Public Works~~,~~ may place special conditions on the approval of a waiver. Such conditions may ~~relate to the following~~ include but are not necessarily limited to:

~~1.~~ 1. ~~Seasonality~~Seasonality of use;

~~2.~~ 2. Number of structures;

~~3.~~ 3. Size of structures;

4. Type of use;

~~4.~~ 5. Geography;

~~5.~~ ~~5~~6. Existence or installation of public utilities; and

~~1.1.1.1~~ ~~6~~7. ~~No increased risk~~ Risk to emergency services personnel~~, without limitation~~.

~~Any other conditions determined by the Board~~

C. All waivers shall be project specific and shall not establish a precedent for any other proposed waiver.

D. No waiver shall be granted:

1. ~~U~~unless and until all related fees and costs ~~set forth on Exhibit A~~ have been paid to Gunnison County.

~~1.~~ 2. If the applicant is in violation of any Gunnison County rule or regulation, including but not limited to the Gunnison County Building Code, the Gunnison County Onsite Wastewater Treatment System regulations, and the Gunnison County Land Use Resolution.

~~D.~~**E.** A request for a waiver must be ~~made~~ applied for in writing and identify~~iesy~~ the following:

1. The name, address and telephone number of the applicant;

~~1.~~ 2. Identification of the subject property, proposed site improvements, expected use, and public road access point;

~~2.~~ 3. A specific description of the requested waiver (including relevant information and~~,~~ proposed access construction plans);

~~3.~~ 4. A detailed explanation of why the proposed waiver is warranted by site specific conditions which create an unusual aspect or feature not shared by property in general; and

5. A detailed explanation of why the proposed waiver:

~~4.~~

a.

~~a.~~ Would not adversely affect the safe, efficient and orderly movement of motorized and non-motorized traffic;

~~b.~~ b. Would not adversely affect health or safety;

~~c.~~ c. Would not cause substantial injury to the owner or occupant of adjacent land(s);

~~d.~~ d. Would not cause substantial injury to the environment; and

~~e.~~ e. Would provide the functional intent~~equivalent~~ of these Standards and Specifications.

6. Any other information required by the Board or Director of Public Works (e.g. physical survey, engineered plans).

~~5.~~**F.** The determination of whether an application is complete lies within the sole discretion of the Director of Public Works.

~~E.~~**G.** No public ~~hearing~~ meeting is required for a determination of a waiver by the Director of Public Works, except that the applicant for such waiver may appeal the Director's determination to the Board by submitting a written appeal to the Director within fourteen (14) days of the Director's decision. The Board may accept or decline to hear such appeal at its discretion. Should it accept such appeal, the Board will decide the application for waiver *de novo* under the procedures set forth in Paragraphs _____ through _____.

~~F.~~**H.** ~~Within 30 days fourteen days of~~After receipt by the Board of a complete ~~petition~~ application for waiver or an appeal set forth in Paragraph 1.9 ~~_____~~F, ~~to be determined by the Board,~~ the Board shall set a date, time and place for a public ~~hearing~~ meeting on that petition. The ~~Public Works Department~~applicant shall publish, at a minimum, notice of such ~~hearing~~ meeting once a week, for the two consecutive weeks immediately before the ~~hearing~~meeting. The applicant for the waiver must notify all property owners adjacent to the ~~road~~ property on which the waiver applies~~,~~ no later than fourteen days before the ~~hearing~~meeting, by mailing to each of them, by certified mail, return receipt requested, a complete copy of the request for a waiver and a copy of the notice of the public ~~hearing~~meeting; the applicant must provide proof of such notification to the Director of Public Works at least seven days prior to the public ~~hearing~~meeting.

~~G.~~**I.** ~~No waiver shall be granted unless t~~The Board, or if applicable, the Director of Public Works, may grant a waiver in its discretion pursuant to this Section. ~~determines in writing the applicant has established by clear and convincing evidence that~~ In deciding whether to grant a waiver, the Board or the Director of Public Works should consider the following factors:

~~1.~~ 1. The waiver is warranted by site specific conditions which create an unusual aspect or feature not a shared by property in general; ~~and~~

2. The waiver will not adversely affect the safe, efficient and orderly movement of motorized and non-motorized traffic; ~~and~~

~~2.~~ 3. The waiver will not adversely affect public, health, ~~or~~ safety or welfare; ~~and~~

~~3.~~ 4. The waiver will not cause substantial injury to the owner or occupant of adjacent land(s); ~~and~~

5. The waiver will not cause substantial injury to the ~~environment;~~environment;

~~4.~~ 6. The waiver is not otherwise prohibited by or inconsistent with any other Gunnison County rule or regulation, including but not limited to the Gunnison County building code, the Gunnison County Onsite Wastewater Treatment System regulations, and the Gunnison County Land Use Resolution; and

~~5.~~ 7. ~~The proposal will provide the functional~~Granting the waiver would be consistent with the ~~intent~~equivalent purpose and spirit of these Standards and Specifications.

J. The Board may deny a waiver ~~orally, but~~orally but shall state on the record its findings under Paragraph ___I above. The Board may grant a waiver only through ~~adoption of a Gunnison County Resolution~~written instrument, which shall be duly recorded with the Gunnison County Clerk and Recorder ~~as both an official act of the County~~ and in the chain of title for the property(ies) on which the waiver applies. Any costs of recording shall be borne solely by the applicant. Such ~~Resolution~~approval shall include the findings of the Board under Paragraph ___I ~~-~~above and any conditions imposed pursuant to Paragraph ___I above.

K. The Public Works Director shall grant or deny a waiver application in writing, setting forth the Director's finding for grant or denial of a waiver under Paragraph G above and, if granted, any condition imposed ~~pursuant to Paragraph ___ above~~. The written statement of the Public Works Director granting a waiver shall be provided to the applicant, who shall record such statement in the chain of title for the property(ies) on which the waiver applies.

~~H.~~ **L.** An application for a waiver may be considered concurrently with ~~an~~ other applications ~~for a land use change~~ under the Gunnison County Land Use Resolution unless the Public Works Director concludes in ~~his or her~~their discretion that there is or will be ~~staff believes there will be~~ significant ~~neighbor or~~ public concern~~n~~, in which case the waiver ~~will~~ shall be considered first.

M. The applicant must prepay the ~~estimated~~ cost of ~~administrative fees, publication, and certified mailings~~processing the waiver application as identified in the Schedule of Fees

(Exhibit A).

~~ARTICLE~~ SECTION 2~~I~~

ADMINISTRATION

2.1 Road Systems

The road system in Gunnison County consists of federal highways, state highways, county roads, city streets and alleys, town streets and alleys, other public roads and private roads, lanes, ~~driveways~~accesses, and trails over 50 inches wide or trails that intersect with other roads lanes ~~driveways~~accesses or trails covered by this document. ~~.~~The ~~identified~~ defined road system does not indicate acceptance of any road by the County. Acceptance of a road for County maintenance requires affirmative action by resolution by the Board.

A.~~2.1.1~~ The Colorado State Highway System

1. The Colorado State Highway System in Gunnison County is administered by the Colorado Department of Transportation under the direction of the Executive Director and the State Highway Commission. The Colorado Department of Transportation has full responsibility for the construction and maintenance of all Colorado state highways within the unincorporated areas of Gunnison County. Within incorporated areas, maintenance responsibilities may be assumed by a municipality under a maintenance agreement. The placement of traffic control signs on all County roads at an intersection with a state highway is under the jurisdiction of the Colorado Department of Transportation.

2. Access to the Colorado State Highway System in Gunnison County is administered by the Colorado Department of Transportation through the State Highway Access Code, any access control plan adopted by the Board, and/or other applicable regulations.

3. **NOTE:** The portion of the access from the edge of ~~the~~ CDOT ~~right-of-way~~rights-of-way to the building footprint must comply with the access requirements in Section 4.5 and Section 7.4.

4. Planning for state highways is conducted by the Colorado Department of Transportation in cooperation with the county, local municipalities, and other agencies.

B.~~2.1.2~~ The County Road System

The State of Colorado, by statute, authorizes the Board to administer the County Road System, including but not limited to planning, design, construction, maintenance, and traffic regulation of County, public, and private roads under County jurisdiction.

1. The Gunnison County Road Map~~.~~

~~A.~~ Pursuant to C.R.S. Section 43-2-110(1)(a), ~~A~~a Gunnison County Road

Maintenance Map has been adopted by the Board of County Commissioners. This mMap shall be updated periodically to reflect additions, deletions, and alterations to the primary ~~County~~ rRoad sSystem in the County. Copies of the County Road Map shall be available ~~from the County Public Works Department for a nominal fee~~online. (See Exhibit A). Nothing in these Standards shall be construed as the Board of County Commissioners assuming responsibility for any road not expressly and unambiguously displayed on the County Road Map as a numbered primary County road.

2. Road Administration~~.~~

~~B.~~ The Board shall determine the ~~general~~ standards, policies, practices and priorities of the County as to County roads~~,~~ and public and private roads under County jurisdiction. The Board shall develop planning, design and construction standards, and regulate, inspect and enforce activity conducted pursuant to such standards.

~~1.~~ a. At the Board's discretion and subject to available manpower and resources, ~~T~~the County Public Works Department is responsible for the maintenance, repair, and improvement of certain designated County roads and bridges, and the inspection and regulation of utilit~~y installation~~ies and access points in County rights-of-way.

~~2.~~ b. County Maintenance. Consistent with applicable law, Gunnison County shall maintain or contract for maintenance ~~for~~ of all roads ~~under its jurisdiction~~ for which the County receives gas tax monies pursuant to Highway User Tax Fund reporting. Nothing in these Standards and Specifications creates or shall be construed to create any specific obligation of Gunnison County to maintain, or to allow private maintenance~~,~~ of, any road or portion of a road; the location, quantity, quality, and frequency of such maintenance shall be in the sole discretion of the Board.

c. County Snowplowing. Nothing in these Standards and Specifications or any prior policy or practice of Gunnison County creates or shall be construed to create any obligation of Gunnison County to snowplow, or to allow private snowplowing, of any road or portion of a road; the location, quantity, quality, and frequency of such snowplowing shall be in the sole discretion of the Board.

~~3.~~

~~4.~~ 3. Nothing in these Standards and Specifications shall be construed to apply to the County Road System except 1) to the extent required by other law or regulation, and 2) as expressly provided in these Standards and ~~Specficiations~~Specifications.

C.~~2.1.3~~ ~~City~~ Municipal Streets

Each ~~city and town~~municipality in the County should have a street system that consists of ~~all~~ streets open to and used by the public.

~~Those streets will be designated as required by the federal aid to urban systems.~~

D.~~2.1.4~~ Mixed Jurisdiction

Situations arise in which both the County and a municipality or other government ~~agency~~ entity have ownership and/or jurisdiction over portions of the same road (e.g., a municipality annexes to the centerline of a County road.) The standards applicable in each such situation shall be determined on a case-by-case basis by the governing authorities and shall be reduced to a binding written instrument. To reduce jurisdictional problems, municipalities ~~are encouraged to~~shall annex full width roads when annexing ~~new~~ areas. Absent express direction from the Board or pursuant to a duly executed intergovernmental agreement, Gunnison County will not normally assume the financial or operational responsibility of winter or summer maintenance of any road or portion of road within the jurisdiction or service area of any other federal, state or local government entity, including but not limited to special districts, municipalities, the United States Forest Service, the Bureau of Land Management, the National Park Service, the Colorado Department of Transportation, the Colorado State Lands Board, and counties adjacent to Gunnison County.

E.~~2.1.5~~ Other Public Roads

Colorado Revised Statues, C.R.S., Section 43-2-24~~0~~1, as amended, ~~declares the following to be~~determines what are public ~~highways~~roads or highways in Colorado. Public roads are not County roads except as provided by Section 2.1.2(A) of these Standards. ~~:~~ Public roads shall comply with these standards and specifications in order to provide predictable, consistent, and safe roads for users. In order to provide predictable, consistent and safe roads, public roads must comply with the Manual for Uniform Traffic Control Devices for all road signage.

~~All roads over private lands dedicated to the public use by deed, to that effect, filed with the County Clerk and Recorder of the county in which such roads are situated, when such dedication has been accepted by the Board of County Commissioners. A certificate of the County Clerk and Recorder with whom such deed is filed, showing the date of the dedication and the lands so dedicated, shall be filed with the County Assessor of the county in which such roads are situated;~~

~~A. All roads previously platted as public roads within previously incorporated territory of the County.~~

~~B. All roads over private or other lands dedicated to public uses by due process of law and not~~

heretofore vacated by an order of the Board of County Commissioners duly entered of record in the proceedings of said Board;

C. All roads over private lands that have been used adversely without interruption or objection on the part of the owners of such lands for twenty (20) consecutive years;

D. All toll roads or portions thereof, which may be purchased by the Board of County Commissioners of any county from the incorporators or charter holders thereof and thrown open to the public;

All roads over the public domain, whether agricultural or mineral.

E. A public road is not a de facto County road. Acceptance of a plat by the Board does not accept the road as a County road.

F.2.1.6 Private Roads

Gunnison County assumes no maintenance responsibility on private roads, and does not regulate utilities on private roads. The use of the private roads for emergency services, postal delivery, or school pickups transport must shall be arranged by the owner with the appropriate agencygovernmental entityyentity. Private roads mustshall comply with these standards and specifications in order to provide predictable, consistent, and safe roads for users. In order to provide predictable and, consistent and safe roads, private roads must comply with the Manual for Uniform Traffic Control Devices for all road signage.

2.2 Road County System Regulations

2.2 A.2.2.1 Traffic Control Devices

No person shall install a traffic control device on a County road or public road under County jurisdiction without prior written permission from Gunnison County; all traffic control devices installed on County roads or public roads under County jurisdiction shall conform to the latest edition of the Manual on Uniform Traffic Control Devices, published by U.S. Department of Transportation, Federal Highway Administration, as edited and accepted by the State of Colorado, and as amended. Said manuals will be available for review at the County Public Works Department. The County Public Works Department may conduct accident studies, traffic analysis, traffic control studies, or any other engineering studies required by state law or by the Manual on Uniform Traffic Control Devices which are prerequisite for the installation of traffic control devices on County roads. The cost of obtaining such information shall be borne in whole or in part by the project proponent as reasonably determined by the Director of Public Works.

If the need for such device is caused by additional traffic resulting from a new development as demonstrated by a traffic study, the cost shall of such device and such study be borne in whole or in part by the project proponent, except where the project proponent is the County, in which

case such study and such device are not required by these Standards and Specifications (though such device may be required by state or federal law or regulation). ~~shall be required to pay all or a pro-rata share of the necessary installation.~~

B.~~2.2.2~~ Cooperation with Other Entities

~~Insofar as possible~~To the extent reasonably practicable, the County Public Works Department, and other officials of Gunnison County, should seek the cooperation of ~~all~~ law enforcement officials and federal, state and local governments in administering the provisions ~~contained herein~~of these Standards and Specifications, and in developing ways and means to improve traffic conditions.

2.3 Enforcement

~~A.~~ These Standards and Specifications shall be enforced in accordance with the requirements of Federal and Colorado law and as provided herein. Each enforcement remedy can be invoked by Gunnison County independently or in conjunction with any or all of the other enforcement remedies.

~~B.~~ The ~~Board, County Manager and his ortheir her designees, the~~ Director of Public Works and ~~his or~~their ~~her~~ designees~~,~~ ~~the County Attorney and his or hertheir designees, and such other persons as the Board may specifically designate by formal motion or resolution~~ are each individually and collectively charged with and authorized to enforce all the requirements of these Standards and Specifications.

A. Notification To Correct Violation~~.~~

~~C.~~ When a ~~person~~ County official, employee, agent or attorney charged with enforcement of these Standards and Specifications has reasonable cause to believe that any activity is being conducted or any condition exists which is contrary to or in violation of these Standards and Specifications, or any permit issued pursuant to them, the Director shall give written notice to the responsible person~~, by certified mail, return receipt requested, at that person's last known address~~. The notification shall state which requirements are being violated, shall state the conditions that are to be satisfied for compliance, and shall state that the violator shall correct the violation within ~~seven (7)~~ thirty (30) days, or sooner, of receipt of the notification, unless otherwise determined by the Director. Such written notification is cumulative to, and not a prerequisite to, any other enforcement remedies available to Gunnison County. The Director shall issue a written compliance letter only if the activity or condition that is the basis for the notice has been remedied and any required reclamation work completed.

B. Stop Order~~.~~

~~D.~~ When a person charged with enforcement of these Standards and Specifications has reasonable cause to believe that any activity is being conducted or any condition exists which is contrary to or in violation of these Standards and Specifications or any permit issued pursuant to them, the Director may, by written notice ("Stop Order") order the activity stopped, and/or condition remedied immediately or by a time certain. The stop order shall be served by delivering it or mailing it certified mail, return receipt requested, to any person engaged in the activity or responsible for the condition. The stop order shall be complied with by all persons, departments, agencies, or others. The stop order applies to all work, permits, reviews, or other situations covered by these Standards and Specifications or County Land Use resolution for all properties under the ownership or control of the person, persons, or group covered by the stop order. The stop order shall remain in effect until the Director determines that the activity or condition that is the basis for the stop order has been remedied, and the Director issues a written compliance letter only if the activity or condition that is the basis for the notice has been remedied and any reclamation work completed. The issuance of a stop order is cumulative to, and not a prerequisite to, any other enforcement remedies available to Gunnison County.

C. Suspension or Revocation of Permit~~.~~

~~E.~~ When a person charged with enforcement of these Standards and Specifications has reasonable cause to believe that any activity is being conducted or any condition exists which is contrary to or in violation of these Standards and Specifications or any permit issued pursuant to them, such person may request, and upon such request the Board ~~may~~ shall schedule~~,~~ a hearing to determine whether any relevant permit shall be suspended or revoked. The Board shall give written notice of the hearing to the holder of the permit by mailing notice by electronic mail, if available, and certified mail, return receipt requested at the last known address, postmarked at least fourteen (14) days before the hearing. The notice shall contain a summary of the grounds for the potential suspension or revocation. The permit holder shall provide to the Board, to the County Attorney and to the Director at least seven (7) days before the hearing a written response to the foregoing summary. At the hearing, the ~~Director~~ person(s) charged with enforcement of these Standards and ~~Specifications shall~~Specifications shall ~~have the burden to~~ demonstrate~~, by credible evidence~~, ~~that~~ why the permit should be suspended or revoked. The permit holder or applicant shall be given an opportunity to be heard at such hearing and present evidence and testimony, but the Board may place reasonable limitations on the presentation of evidence or testimony by any party to the hearing. The Board shall suspend or revoke the permit if, after the close of the hearing, and based on credible evidence~~,~~ obtained at the hearing, either of the following findings is made by the Board:

~~1.~~ 1. The permit was issued in reliance on materially erroneous or misleading information from the applicant or his/her representative; or

~~——~~2. Activity is being conducted or a condition exists that is a violation of these Standards and Specifications or a permit issued pursuant to them.

~~2.~~ Notification of the Board's decision shall be provided by the Director to the holder of the permit by certified mail, return receipt requested, within 7 days of the Board's decision. The suspension or revocation shall remain in effect until the Board determines that the activity or condition that is the basis of the suspension or revocation has been remedied and any required reclamation work completed, and the Board issues a written compliance order. The remedy of suspension or revocation is cumulative to, and not a prerequisite to, any other enforcement remedies available to the Board.

D. No Processing of Applications.

No permit application shall be processed or approved pursuant to these Standards and Specifications, and no Building permit or other permits shall be issued by Gunnison County, for any persons ~~or~~ and any ~~property~~ properties that ~~is~~ are the subject of an ~~existing~~ active Notice of Violation, ~~s~~Stop O~~o~~rder, or ~~s~~Suspension O~~o~~rder issued by any County department. This enforcement remedy is cumulative to, and not a prerequisite to, any other enforcement remedies available to the Board.

~~F.~~

E.

Other Remedies.

~~G.~~ The Board may seek all civil, criminal and /or other legal or equitable remedies available to it for any violation of these Standards and Specifications, including but not limited to any fees associated with the investigation and prosecution of such violation as set forth in Appendix ___ to these Standards~~.~~. Such remedies are cumulative to, and not a prerequisite to, any other enforcement remedies available to the Board.

F. Abatement and Reclamation.

~~H.~~ No compliance order shall be issued unless and until the activity or condition is abated and reclaimed to the satisfaction of the Director of Public Works at the cost of the violator; Gunnison County shall have the right to abate and reclaim the violation at the cost of the violator.

2.4 Inspection

~~A.~~ The Director, or the Director's designee, ~~is hereby empowered and directed to~~to the fullest extent permitted by law, may inspect and examine the use, occupation, or development of, or activity in, each and every area or activity subject to these Standards and Specifications for the purpose of determining from time to time whether any use, occupation, development or activity is in violation of any of the provisions of these Standards and Specifications or of any permit issued or required pursuant to these Standards and Specifications. This includes, but is not necessarily limited to, any land use change as that term is defined in Section 3.2 of these Standards and Specifications. ~~Application for other required permits is sufficient cause for inspection and review. Right of entry language here?A duly authorized and identified agent of the County Ccan enter with 48 hours' notice to investigate valid concerns associated with any issued permit.?~~

The Director may refuse to accept or process any application for a permit under these Standards and Specifications if an applicant fails or refuses to allow the Director or Director's designee to inspect those portions of property or structures implicated by the permit application.

2.5 County Road System Additions and Improvements

A. By the County.

~~A.~~ To the fullest extent permitted by law, the Board may lay out, alter, restrict use of, close, or change any road in the County Road system under its jurisdiction, and acquire lands for County roads. The County Public Works Department has the primary ~~staff~~ responsibility for the planning, design, ~~right-of-way~~rights-of-way acquisition, construction, and ~~inspectio~~inspection ~~n~~ of all additions and improvements to the existing County Road System. Such activities will comply with these Standards and Specifications.

B. By Others.

~~B.~~ Any road proposed by other than the County to be added to the existing County Road System will ordinarily pass through ~~six seven~~multiple review steps (in writing): planning, acceptance of design, permitting, acceptance of ~~right-of-way~~rights-of-way dedication, construction, and inspection. As a final step, the Board may accept maintenance and/or plowing responsibilities for the road by duly adopted resolution. Such activities will comply with these Standards and Specifications.

C. ~~2.5.1~~ Planning

The planning or layout of any ~~new~~ road subject to these Standards and Specifications and any improvements to any existing roads subject to these Standards and Specifications shall be in accordance with Article III as it may be amended. If a road is created through the land use change process, all provisions of these Standards and Specifications~~,~~ and the Gunnison County Land Use Resolution shall be met.

D. ~~2.5.2~~ Design

The design of any ~~new~~ road subject to these Standards and Specifications and any improvements to any existing roads subject to these Standards and Specifications shall be in accordance with Article IV as it may be amended. Road and bridge plans and specifications shall be prepared by a Professional Engineer in accordance with these Standards and Specifications and ~~must~~ shall be approved in writing by the Director of Public Works before any construction activity whatsoever commences. Any such written approval shall expire without further notice one year from the date it is issued. Any amendment or revision to a plan or specification, and any resubmission of a plan or specification must conform to the Standards and Specifications, as they exist at the time of the amendments, revision or resubmission.

E. ~~2.5.3 Right-of-Way~~Rights-of-way Dedication/Acceptance

~~Affirmative written action~~Resolution ~~by the Board is required for County acceptance of any dedication to the public or the County of a road or road right-of-way~~rights-of-way. ~~. The road, however, shall not be maintained or snowplowed by the County without affirmative written action by the Board specifically accepting the road and until the requirements set forth in Section 2.8 are met.~~Dedications of ~~Right-of-Way~~Rights-of-~~w~~Way shall comply with ~~LUR~~ standards in section 12-103 of the LUR.

2.6 Development Improvement Agreement Required

Development ~~Improvemetn~~Improvement Agreements shall comply, to the fullest extent practicable, with Section 16-118 of the ~~the~~ LUR, as amended ~~standards~~, but the Director may depart from such standards in their discretion so long as such departure is consistent with these Standards and Specifications. ~~as written.~~

A. Vacant Land Access ~~p~~Permits ~~shall~~may require a Development Improvement Agreement as a condition of issuance ~~in instances when the length of the access approaches 600 feet or the grades of the access are 10% or greater~~at the discretion of the

Director . The Vacant Land Access Permit shall include the purpose and intended use of the access and parcel as part of the application.

~~A.~~ 2.7 ~~Improvement Agreement Shall Be Required. This agreement is not intended to duplicate any other agreement, permit, or financial security required by the County. Public utilities or Special Districts may post financial security such as bond or letter of credit acceptable to Gunnison County. When public or private improvements are a required component of a permit issued pursuant to these Standards and Specifications, the Board shall require as a condition of permit approval, that the applicant execute and fund with Gunnison County a Development Improvement Agreement acceptable to Gunnison County in form and substance, and amount and type of security. The~~

Improvement Agreement shall constitute the applicant's agreement to construct the public improvements and private improvements identified as requirements of project approval. The Development Improvement Agreement shall specifically identify such requirements including plans, drawings and schedules for completion and shall be substantially in the form referenced in Section E below.

B. Financial Security. The Development Improvement Agreement shall require the applicant to provide to the County a guarantee of financial security, acceptable to the County, in an amount established by the Board based on no less that 125 percent of the Colorado engineer's estimated cost of the project, and payable on demand to the County. The purpose of the guarantee of financial security is to assure that the public improvements and private improvements identified as requirements of project approval are timely and fully completed, that all mitigation requirements and permit conditions are timely and fully performed, and that the development area is timely and fully reclaimed.

C. Ensure Completion Ofof Improvements. The Development Improvement Agreement shall provide that if the Board or designee determines that any of the required improvements are not timely and fully constructed or if any of the requirements of approval are not performed as provided in the Agreement, including reasonable requirements for the correction of deficiencies upon notice thereof, the Board may draw upon the financial security as may be necessary to complete the improvements in accordance with the specifications included in the Agreement and the Board may exercise any or all of the other remedies available to it pursuant to the Agreement and these Standards and Specifications.

D. Certification Ofof Completion Andand Release Of Security. The Development Improvement Agreement may include requirements for certification of completion, milestones for partial releases of the security, and holdover of security to ensure repairs or replacement, demonstrated performance of required facilities, substitution of security, and other requirements deemed appropriate by the Board. % of project as a threshold? Developments vs. single property owners.

E. Form Of Agreement. A general form of the Development Improvement Agreement is incorporated in these Standards and Specifications as Appendix J. This form of agreement may be modified from time to time by the County in its discretion without formal amendment to these Standards and Specifications.

F. Access Permits. The Director of Public Works may waive the requirements for a Development Improvement Agreement, for an access permit only, if she they determines in writing, that the permitted improvement and disturbance are minimal.

Vacant Access required to post financial security?

2.7 Construction

Construction of new County, public, and private roads under County jurisdiction and reconstruction of same shall conform to the provisions of Section 5Article V of these Standards and Specifications. Surface Alteration Permits shall be obtained as per Section 7.3.

A.~~2.7.1~~ Inspection

Inspections and testing shall be performed to ensure compliance with these Standards and Specifications and any other requirements and conditions before any County Public Works Department recommendation is made to the Board ~~for maintenance acceptance~~for acceptance and/or release of a guarantee or financial security. Requirements for inspections and testing are found in Section5~~Article V~~ - Construction Specifications; compliance is the sole responsibility of the developer or permittee.

2.8 Acceptance of Roads for Dedication to the County and for County Maintenance.

A. Dedication can be statutory~~, by common law, express or implied,~~ or by written instrument at the sole discretion of the Board.

~~A.~~

B. Conditions for new dedications are by written instrument. ~~Required Language – a~~Any instrument of dedication must be on a County form and include language approved by the Gunnison County Attorney.

C. ~~Requirements for~~Requirements for acceptance include but are not limited to the following:~~.~~

1. The road shall have been constructed in accordance with these Standards and Specifications.

2. Roads located within a 3-mile radius of an incorporated municipality ~~within a 3-mile planning area will~~should be paved before acceptance into the County Road System.

~~1.~~

3. The Director of Public Works or their designee shall have completed final inspection and shall have approved the roads in accordance with Section 5~~Article V~~ of these Standards and Specifications and shall have ~~recommended acceptance~~provided a recommendation for or against to the Board.

4. T~~T~~he road and all associated appurtenances shall be in good repair, requiring no maintenance (except plowing for snow), improvements, or additions by the County at the time of acceptance. ~~.~~

~~2.~~

5.

~~3.~~ The road must connect to another maintained County road, state highway, or municipal street of the same or higher functional classification.

~~4.~~ 6. A written request for acceptance of the road shall have been submitted to the County Public Works Department. The application shall have been submitted at least ~~two~~ four (4) weeks before performance of the final inspection is requested. An application for acceptance will not be accepted by the Director of Public Works, nor will any inspection be performed when, in the sole discretion of the Director, weather conditions prohibit a complete inspection.

~~5.~~7. All required road signs and traffic control devices shall have been installed in accordance with the most current version of the Manual of Uniform Traffic Control Devices. Reflective signs showing road numbers or street names shall be installed to facilitate emergency services response prior to acceptance.

~~6.~~8. A guarantee of financial security shall have been submitted to the County in an amount determined by the Board to warrant the integrity of the road construction for ~~one~~ two (~~1~~2) years after the date of the acceptance by the County. In the sole discretion of the Board, such time period may be enlarged. An inspection by the County shall be conducted at the end of the time period. The obligations of the developer or permittee shall terminate only upon correction or repair by the developer or permittee of all deficiencies identified by such inspection.

~~7.~~9. All required subsurface utilities shall have been installed in the roadway prior to finishing subgrade. A Subsurface Utility Engineering Survey that meets state requirements shall be complete for all buried infrastructure. All subsurface utilities ~~laterals crossing~~ within the roadway profile shall have been installed prior to the road inspection.

~~8.~~10. All survey monuments that were in a roadway or a road ~~right-of-way~~rights-of-way shall have been reset by a surveyor licensed in the State of Colorado.

~~9.~~11. Trench compaction tests and results, as required in Article V of these Standards and Specifications and as required by any permit shall have been submitted to and approved by the Director of Public Works for all trenches within the road ~~right-of-way~~rights-of-way. Such tests and results shall have been submitted and approved prior to placement of any road base material whatsoever.

~~10.~~12. A reproducible 11" x 17~~½ size~~" copy and/or digital copy of~~of~~ as-built drawings shall have been submitted to the Director of Public Works. The drawings shall accurately show all road construction details, utility, and lateral locations and depths, property boundaries and corners, and other pertinent information as required. Upon its submission to the Director, the copy shall become and remain the property of the County. ~~An Ascii DXF file in any AutoCad Format (or other files as required by the County) shall be submitted (no proprietary information is necessary).~~The County reserves the right to require the submission of plans in any ~~reasonable~~ digital format.

~~11.~~13. Such other conditions as the Board deems necessary for public health, safety, or budget constraints shall have been satisfied. The Director of Public Works, in ~~his/her~~their sole discretion, shall assign the road a Level of Service rating.

D. Roadways through State and Federally Owned Lands. It may be to the benefit of the general public for the County to accept roads through state and federally owned land whether or not such roads meet these Standards and Specifications. Upon the receipt of a petition for acceptance of such roads into the County Road System, roads which fall into these classifications may be accepted into the County Road System by the Board pursuant to the waiver process set forth in Section 1.9.

2.~~98.1~~ Private Road Construction and Inspection

The construction, substantial -improvement, or extension of a ~~new~~ private road that is subject to the Gunnison County Land Use Resolution shall comply with the processes and procedures set forth herein ~~for a County road~~County Road. ~~except that:~~

~~A. Section 2.4 b, shall not apply;~~

~~B. The guarantee required by Section 2.4 b, shall warrant the integrity of the road construction for no less than one year after such construction is completed and is accepted by Gunnison County.~~

2.10

~~2.9~~ Deletions from the Road System

~~2.9.1~~ A. Abandonment

1. Abandoned State Highway~~.~~

~~A.~~ When a portion of a state highway is relocated and, because of such relocation, a portion of the route as it existed before such relocation is, in the opinion of the State Transportation Commission, no longer necessary as a State Highway, such portion shall be considered as abandoned. An abandoned state highway or portion thereof shall become a county highway, upon the adoption of a resolution to that effect by the board of county commissioners of an affected county, or a city street, upon the adoption of an ordinance to that effect by the governing body of any affected municipality, within ninety days after the official notification of abandonment by the transportation commission. ~~If it appears that the abandoned portion is necessary for use as a public highway, street or road, or other public purpose the abandoned portion shall become a County road, upon adoption of a resolution to that effect by the Board. Such resolution shall be adopted within ninety days after such abandonment. I~~f in the written and recorded opinion of the Board, the portion of the road is not needed for a public purpose, the Board shall approve the title to it ~~shall~~ revert~~ing~~ to the owners of the land through which such abandoned portion may lie subject to the provisions of state law.

2. Abandoned County Roads~~.~~

A County road shall be abandoned only when a portion of the County Road System is relocated and because of such relocation a portion of the route as it existed before such relocation is, in the written and recorded opinion of the Board, or no longer needed for a public purpose; in such a case, such portion shall be considered as abandoned, and title to it shall revert to the owners of the land through which such abandoned portion may lie, subject to the provisions of state law.

~~Abandoned Municipal Roads. If it appears that the abandoned portion is necessary for use as a public highway, street or road, or other public purpose, the abandoned portion shall become a public road under the jurisdiction of the County. If in the written and recorded opinion of the Board, If the portion of the road is not needed for a public purpose, the Board shall approve the title to it reverting to the owners of the land through which such abandoned portion may lie subject to the provisions of state law.~~

3. Removal from the County Road System~~. the portion of the road is not needed for a public purpose,~~

~~t~~Consistent with CRS § 43-2-120, ~~with~~ the Board ~~shall~~may approve the removal of a road from the County Road system ~~and become a Public Highway that does not receive the benefits of County Maintenace, subject to the provisions of state law. Revocation to private land will be handled through the procedures in Section 2.9.2.~~

~~B.~~

B. ~~2.9.2~~ Policy and Procedures Regarding Vacation of County Road or Public Road Under County Jurisdiction

~~**A. Purpose.**~~

The purpose of this section is to establish standards and a uniform process by which the Board may~~will~~ act on request to vacate a ~~county~~ County ~~road~~ Road or public road or ~~row~~rights-of-way under county ~~-~~jurisdiction.

It is the intent of the Board in adopting this section to exercise the Board's authority pursuant to, among other statutes, C.R.S. 43-2-301 et. seq. No person shall be deemed to have a right to vacation of a public road. The vacation of any particular road by the Board shall not be deemed precedent with regard to any future request for vacation of a road; nor shall this Section be deemed to create any rights, including property rights, in any person or individual.

~~On occasion, vacation of all or a portion of a county road or public road under county jurisdiction may be warranted due to specific circumstances circumstances,or changes in traffic, or development patterns. In those limited circumstances, t~~The Board has discretion, but no obligation, to vacate all or a portion of a ~~county County road~~County Road or public road or ~~row~~rights-of-way under C~~c~~ounty jurisdiction. No such road shall be vacated so as to leave any parcel adjoining such road without any established public road connecting said parcel with another established public road or create impracticable ~~unreasonable~~ barriers to access a parcel or ~~RO~~right of way~~W~~ section.~~.~~

1. The applicant for a vacation shall bear the burden to prove to the Board that the request meets the criteria of C.R.S. 43-2-301 et. seq., as amended, and these Standards and Specifications.

2. This wisdom of granting a vacation is a matter committed to the discretion of the Board and is not controlled by any one factor. In determining whether to grant a request to vacate all or a portion of a county road or public road under County jurisdiction, the Board of ~~shall~~ may consider one or more of the following criteria:

   a. ~~Creates~~The vacation would create ~~demonstratable~~demonstrable ~~public~~ benefit to public health, safety or welfare ~~s~~ and would not solely or exclusively benefit a single or small group of private landowners; ~~and~~

   b. The vacation meets any r~~R~~equirements of C.R.S. 43-2-301 et. seq., as amended;

~~1.~~

   c. The Vacation is consistent ~~Provides C~~consistency with any comprehensive land use, corridor or master plan adopted by Gunnison County;

~~2.~~

   ~~Vacation shall not~~The vacation would Does not ~~prevent~~ restrict access ~~from a public road to any public or private parcel or so that access is unreasonably difficult~~

or costly;

d. The vacation would not unreasonably or unduly limit access from a public road to any public or private parcel.

3.

e. Is Not not disruptive to The vacation would not disrupt existing or anticipated travel modes;

4.

f. ConsidersThe proposed vacation accounts for any Cchanged or anticipated conditions related toin traffic or development patterns;

5.

6. Anticipated conditions in traffic or development patterns;

g. CausesThe vacation would cause No no adverse , or a positive impact to natural environment the local ecosystem, wildlife, water or air quality, climate, soils, riparian areas, or noxious weed and invasive species management ;

7.

8. Provides benefits related to Community needs;

9. Provides benefits to Public health, safety and welfare;

h. Has NnoThe vacation would not interfere conflict with the existence, operation, control or maintenance of other established other County roads, or other public roads under County jurisdiction, utilities, or access to public lands, water, or other public resources; and

10.

11. Causes Nno increased risk to emergency services personnelTthe vacation would not unduly or unreasonably interfere with access to persons or property for emergency response, law enforcement or first responder services.;

i. Does not functionally remove right-of-way by reducing its width to a size that does not allow for reasonable use by the Public.

12. 3. Gennerally, the Bbenefits outweigh detriments;

13. Creates demonstratable Public public benefits; and

No Negative Eeffect on maintenance of infrastructures deemed necessary by the County. or utility owner.

14. Any other considerations deemed germane by the Board

It is the applicants' responsibility and burden to address all 12above listed conditions in their application for vacation.

~~B.~~ Application Process.

The applicant shall complete and file with the Director of Public Works ~~three copies of~~ an application in the form required by the Director ~~with ten copies of all attachments~~.

a. At a minimum the request ~~must~~ shall contain:

1. Applicant's name, address, email, and phone number.

~~1.~~

2. Legal description ~~i~~from a licensed surveyor, f not a platted street or alley.

3. A narrative explaining the need for the vacation and its effects, covering ~~all~~the criteria listed in section 2.9.2.~~.A.~~

~~2.~~

4. Name, address, phone number for person or firm authorized to represent the applicant.

~~3.~~

5. Map showing location of section to be vacated which also shows names and addresses of all owners of property adjacent to the section or street or alley to be vacated.

~~4.~~

6. If any portion of the street or alley is within a subdivision, whether an active common interest community or not, or is adjacent to a subdivision lot, the applicant must provide the names and addresses of all property owners within the subdivision.

~~5.~~

~~6.~~7. A ~~pPhysical~~ Property Improvement Survey Plat by a Colorado licensed surveyor of ~~adjacent~~ affected properties and street ~~right-of-way~~rights-of-way prior to Board consideration. Applicant shall commit to a licensed surveyor placing monuments at the new property corner~~s~~ locations, should the vacation be approved. The County reserves the right to have this survey performed and bill the successful applicant the full cost of the work if not completed by the applicant.

b. The Director of Public Works will forward copies of all information to the ~~County Attorney and the County Planning Director and other~~pertinent County Departments and other agencies that ~~might~~ may have an interest.

c. The applicant for the vacation ~~must~~ shall notify all property owners adjacent to the road~~-~~, and if the road is within a subdivision, all property owners within that subdivision~~-~~, in writing on a form approved by the Director of Public Works, postmarked no later than ~~fourteen~~ thirty (30) days before the hearing, by mailing to each of them, by certified mail, return receipt requested, a complete copy of the request for a vacation and a copy of the notice of the public hearing; the applicant ~~must~~ shall provide proof of such notification to the Director of Public Works at least seven (7) days prior to the public hearing.

d. As applicable, letters of consent to the vacation from utility providers and special districts ~~companies~~ whose facilities are located in legal easements in or adjacent to

the proposed vacation, and a copy of the easement agreements, if such agreements exist, ~~must~~ shall be provided to the Director of Public works at least ~~seven~~ fourteen days prior to the public hearing. A precondition to granting any vacation shall be the granting and recording of perpetual easements for all existing and proposed utilities on the ~~right-of-way~~rights-of-way being vacated, should they not already exist.

e. A staff ~~recommendation~~ report based on information available will be prepared for the Board and included in the agenda documentation before ~~a~~ the public hearing is held. ~~(the recommendation may change based on public input).~~

f. The ~~County Attorney's office~~applicant, at its sole expense, will prepare all proposed ~~will finalize the necessary~~ documentation if the street vacation is approved by the Board; ~~shall~~such documentation shall be subject to review and approval by the County Attorney or ~~his or her~~their designee.

g. Any condition required by the Board ~~must~~ shall be completed before the vacation ~~shall be~~is made effective.

~~A precondition to granting any vacation shall be the granting and recording of perpetual easements for all existing and proposed utilities on the right-of-way~~rights-of-way ~~being vacated.~~

h. The applicant for a vacation shall ~~will~~ be required to prepay all estimated costs, including but not limited to administrative costs, costs of publication of legal notice of public hearing, travel time and cost of certified and regular mailings, pertinent to application ~~,~~ whether or not the application is granted. The prepayment is not refundable. (See Exhibit A).

2~~.~~-1~~0~~ Road Name and/or Number Changes

A. Neither the name nor number of any road dedicated to public use or to the County may be changed except upon written application to and written approval by the Director of Public Works.

B. The applicant shall be responsible for ~~the cost of any required costs~~all costs and expenses associated with establishing the new road number or name.

C. The name or number of a road within a recorded subdivision may be changed only after such application and approval by amending the final plat in compliance with the Gunnison County Land Use Resolution.

D. No road names or numbers shall be used which are generally deemed offensive, or will duplicate, or be readily confused with, the names of any existing street or road in Gunnison County. Emergency response agencies will have the opportunity to comment on all road name changes.

E. The County will be responsible for changing the applicable physical road number signs of any road accepted by the County ~~for maintenance~~as a County road. If the road name or number change is for a road that has not been accepted by the County ~~for maintenance~~as a County road, the applicant, homeowner's association, or the developer ~~of the affected subdivision~~ is responsible for changing the physical road name or number signs.

2-.-1-1 Snowplowing

Gunnison County shall not snowplow any road unless and until such road has been dedicated to the public use and accepted ~~for~~ by the County ~~maintenance~~ as a County road, in writing, by the Board. ~~except that i~~It shall be in the sole discretion of the Board to determine ~~from time to time~~ which such roads so ~~dedicated and~~ accepted will be plowed by the County. The plowing of ~~non-~~ County ~~maintained public~~ roads, not maintained in the winter by the County, shall be arranged through a written permit agreement and approved by the Board~~OCC~~, except that the Director in their discretion may renew an existing snowplow permit without express approval of the Board as set forth in these Standards and Specifications.

A.

~~A.~~ **Policy and Procedures for Requests for Gunnison County to Provide Snow Removal Services on County Roads.**

1. ~~It is the policy of t~~The County shall not ~~to~~ provide snow removal services on private, non-public roads. With regard to public roads, the decision on whether to provide snow removal services rests with the discretion of the County, as exercised by the ~~Director and the~~ Board. In deciding whether to cease snow removal on a public road, the Board ~~or Director~~ should consider the public benefit of continued winter maintenance.

2. In addition to the requirements of the Gunnison County Land Use Resolution, Section 5-210, a request for the County to provide snow removal services on a County road**,** or public road under County jurisdiction, to an area not currently being served shall be submitted in written form to the Director of Public Works. The written request shall include at a minimum:

   a. The applicant(s)' name, address and telephone number.

   ~~1.~~

   b. The name and number (if applicable) of the road requested to be plowed.

~~2.~~

   c. ~~If necessary, a~~A map designating the portion of the road to be plowed.

~~3.~~

   d. The distance to be plowed.

   e. Description of the ~~termination of plowing~~location where plowing is anticipated to terminate and the resulting turnaround for plowing equipment.

~~4.~~

   f. E~~If required, e~~vidence that the road is a public road.

   g. Confirmation of any land use change associated with plowing request.

   ~~2.11.1.1.1~~ Evidence of no ~~negative~~significant adverse impact on ~~flora or fauna~~wildlife, water and air quality, or the local ecosystem~~.~~.

   h.

   ~~5.~~ ~~Other i~~Any ~~information that may be required by the Director of Public Works.~~

   i. A list of property owners benefiting ~~from or~~from or affected ~~from~~ by the proposed service.

   ~~6.~~

   ~~7.~~j. The reason the plowing is being requested.

3. All requests shall be submitted to the Director of Public Works before ~~September~~ August 1 of the year when plowing is requested to begin. Requests received after ~~September~~ August 1 will be considered as requests for the following winter season.

   a. Upon receipt of the request, the Director of Public Works may require the applicant to provide information in addition to the subject matters contained in the written request. After receipt of the written request and any additional information, the

Director or ~~his or herthier~~their ~~desgnieedesignee~~ shall conduct a site visit and prepare ~~evaluation~~ a report for the Board. The report shall address the following:

~~1.~~i. An assessment of the condition of the road including width, base drainage, fencing, etc.

~~2.~~ii. An evaluation and estimate of cost to bring the road up to a standard suitable for winter maintenance and plowing.

~~3.~~iii. A recommendation of the type of equipment that would be required to remove snow; the frequency, duration and extent of snowplowing, the amount of manpower and time involved and an estimate of cost.

~~4.~~iv. An assessment of safety considerations involved with the request.

~~5.~~v. A statement as to whether the road is a natural extension of an existing snowplow route.

~~6.~~vi. A statement of any general public benefit served by providing snow removal service.

vii. An assessment of any negative impact that might result from providing snow removal service.

~~7.~~viii. Any other criteria set by the board.

The written request to provide snow removal service together with the evaluation prepared by the Director of Public Works shall be submitted to the Board. ~~All r~~Requests shall be considered in a public meeting of the Board. At its discretion, the Board may approve or deny the request for the County to plow the road. The Board may conditionally approve the request based on~~, but not limited to, the following conditions:~~

~~1. The frequency, duration and extent of snow plowing services to be provided.~~
~~2. Property owners' financial participation in preparing the road for snow removal.~~
~~3.~~4. ~~A time limit~~ frame ~~with periodic review for continuation of the service.~~ specific, written conditions.

5. The County shall exercise its appropriate, lawful authority to ensure compliance with this section. Should either the Director or the Board fail or refuse to comply with this section A, such failure or refusal shall not be deemed to create any right or interest in any person, including any right to appeal such failure or refusal. Nor shall any person be deemed to have a right to appeal any decision made under this section A.

B.

~~B.~~ **County Policy and Procedures for Requests by Private Individuals to Plow a County Road or Public Road under County Jurisdiction**

The purpose of this section is to outline the procedures and criteria by which the Board will consider requests presented to perform private snow removal on ~~a~~ County ~~road,~~ and public roads under County jurisdiction.

1. In order to facilitate the plowing of a road that might not otherwise be plowed, the Board may allow a private individual or company to remove snow from all or part of a County or public road under County jurisdiction.

   ~~a.~~ Private Plow Permits do not run with the land, and the issuance or denial of a private plow permit shall not be deemed to create any entitlement, property interest or right in the permittee or any other person.

   a. ~~No person shall remove snow from a County road, or public road under County jurisdiction without first receiving permission from the Board and a Snow Removal Permit issued by the Director of Public Works.~~

   b. No person shall remove snow from a County road, or public road under County jurisdiction without first receiving permission from the Board and a Snow Removal Permit issued by the Director of Public Works.

2. If an applicant is requesting permission to plow ~~all~~ a public road or a section of road ~~that has not been previously plowed~~beyond current snowplowed access, ~~they~~ such applicant must ~~first~~ obtain a Land Use Change Permit per section ~~5-210~~11-110 of the Gunnison County Land Use Resolution. The first issuance of ~~the~~a permit is reviewed and approved by the Board. After ~~that~~ the initial permit is obtained, the applicant will only need apply for the renewal of the ~~yearly~~ permit from the Director of Public Works. If issued, the first permit issuance will be for a single season. The applicant shall be responsible to apply for renewal of a permit(s).

3. In addition to the requirements and process set forth in the Gunnison County Land Use ~~Resultion~~Resolution, a permit for private snow removal on a County or public road shall comply with the ~~The~~ requirements and procedures set forth ~~herein and in the permit shall be considered the minimum and additional information or criteria may be applied;. Additional criteria will be in writing. It is preferred that the entire section of the road being plowed is covered by one permit~~in this section. The Public Works Director~~,~~ or the Board, in their discretion, may impose additional conditions on any permit issued under this section, and such additional conditions shall appear~~l~~ on the face of the permit issued by the Public Works Director.

~~In order to facilitate the plowing of a road that might not otherwise be plowed, the Director of Public Works may allow a private individual or company to remove snow from all or part of a County, or public road under County jurisdiction. If issued, the first permit issuance will be for a single season. The applicant must shall apply yearlyfor renewal of a~~

~~permit(s).~~

4. A request to plow a County road, or public road under County jurisdiction, shall be made in writing to the Director of Public Works. The written request shall include at a minimum:

~~1.~~a. The name and/or number of the road to be plowed.

~~2.~~b. If ~~necessary~~less than the entire road, a map designating the portion of the road to be plowed.

~~3.~~c. The distance in miles to be plowed privately.

~~4.~~d. The type of equipment to be used to remove the snow.

~~5.~~e. The name, address, and telephone number of the person(s) responsible for snow removal.

~~6.~~f. The names and mailing addresse~~s~~~~d~~ of property owners located along the proposed snow removal route.

~~7.~~g. The reason the plowing is being requested.

~~8.~~h. The time period for which the permit is being requested.

5. Requests to provide snow removal must be submitted to the Director of Public Works no later than ~~September~~ August 1 of the year when plowing is requested.

6. Upon receipt of the request, the Director of Public Works or designee shall conduct a site visit and prepare a ~~n evaluation~~ report for the Board. The report shall address the following:

~~1.~~a. An assessment of the condition of the road including width, base drainage, fencing, etc.

~~2.~~b. An evaluation and estimate of cost to bring the road up to a standard suitable for winter maintenance and plowing.

~~3.~~c. A recommendation of the type of equipment that would be required to remove snow; the frequency of plowing; and the duration of plowing.

~~4.~~d. An assessment of safety considerations involved with the request.

e. A statement of any general public benefit served by providing snow removal service.

~~5.~~

~~6.~~f. An assessment of any negative impact that might result from allowing snow removal service.

7. If the plowing is authorized by the Board, the Director of Public Works or designee and

the person requesting permission to remove snow shall meet on-site to evaluate the condition of the road before plowing begins.

8. The County may require that reasonable improvements and repairs be made to the road that are necessary for public safety and to protect and preserve the road. Such improvements or repairs shall be made at the expense of the applicant unless otherwise agreed to by the County.

9. For the purposes of this section, snow removal work shall include:

a. R~~(1) r~~emoval of snow from all the traveled way, including sufficient turnouts for safe and efficient use of all emergency and other users.
~~, and (2) l~~Leaving culvert ~~t~~

b. inlets in a natural condition without snow or other material excessively plowed into them so that the drainage system will function normally.

10. Upon review of the plow request, the Board may request a bond, ~~or a~~ cash deposit, or other form of security acceptable to the County to secure performance according to this section. The amount of security required will be relative to the distance being plowed, and the surface of the road.

11. As a condition of any permit issued under this section, a permittee shall:

a. O~~o~~btain and maintain insurance coverage in amount(s) the County deems necessary to protect the County from any and all claims related to the permittee's snow removal operations.~~; and~~

b. I~~i~~ndemnify and hold harmless the County with regard to any and all claims related to the permittee's snow removal operations.

12. The foregoing may be waived by the Board in its discretion, but only after conferral with the County Attorney and for reasons stated on the record at a public meeting of the Board.

13. The applicant shall acknowledge in writing that ~~he/she~~they ha~~ve~~s read, understand~~s~~ and agrees to comply with the conditions set forth in this section and with the conditions of a permit if one is issued.

14. The County shall exercise its' appropriate, lawful authority to ensure compliance with this Snow Removal section.

15. Nothing in this section is, or shall be construed to be, an obligation of the ~~Board~~ County to ~~permit~~ allow the private snowplowing of all or part of any particular road.

16. ~~Removal of Plow Services.~~ The Board may reduce or remove plow services at its discretion with rationale provided in writing in a public meeting.

2.12 No Personal Liability

Any County official, employee or agent charged with enforcement of these Standards and Specifications who acts in good faith in the discharge of the duties required herein or by any permit, other pertinent law, ordinance or regulation shall not thereby be rendered personally liable for any damages that may accrue to any person or property as a result of an act or by any permit, omission to act in the discharge of these duties.

2.13 No County Liability

These Standards and Specifications do not make, and shall not be construed to make, Gunnison County or any of its officials, employees or agents responsible for or liable for

any injury to person or property resulting from any action taken pursuant to these Standards and Specifications.

2.14 Responsibility Not Lessened

These Standards and Specifications do not, and shall not be construed to, relieve from or lessen or eliminate the responsibility of any person acting pursuant to a permit issued hereunder for any damages to person or property.

No Waiver of Governmental Immunity

~~2.15~~

Nothing in these Standards and Specifications is, or shall be construed to be, a waiver by Gunnison County, or any of its officials, employees or agents, of governmental immunity under the Colorado Governmental Immunity Act or otherwise.

~~ARTICLE~~ SECTION 3~~III~~

TRANSPORTATION PLANNING AND DEVELOPMENT POLICIES

~~4.1~~3.1 Functional Classification of Roads

All roads in the Gunnison County Road System shall receive a functional classification from the Director. The functional classifications used in Gunnison County are: (Also See Table 3-1)

A. Major Arterial (Paved)
3,000+ ADT Residential, commercial, and recreational traffic - significant economic importance to County (example: Gothic Road)

B. Commercial/Industrial Collector (Paved or Gravel)
~~13~~ 10 to 500 ADT Heavy duty traffic - significant economic importance to County (example: Landfill Road/Industrial Park Roads)

C. Suburban Lane (Paved or Gravel)
~~13~~ 30 to 500 ADT Primarily residential traffic -- width needed for parking and other density factors (example: ~~Lower Crested Butte South~~Panaview, Castle Mountain, Meridian Lake)

D. Rural Arterial (Paved)
1,000 to 2,999 ADT Residential, commercial and recreational traffic - significant economic importance to County (example: Gold Basin, Marble, Brush Creek, Cement Creek, and Taylor River)

E. Rural Collector (Paved)
500 to 999 ADT Primarily residential or recreational traffic, but some commercial (examples: Cottonwood~~, Gold Basin after KOA~~, Washington Gulch, Slate River, Antelope, Kebler, and Lower Quartz Creek)

F. Rural Local (Paved or Gravel)
200 to 499 ADT Primarily residential, recreational, and ranching uses (examples: Powderhorn, Upper Quartz Creek, Kebler over the top, Brush Creek after Avion, and Gothic Road after Mt. Crested Butte)

G. Rural Lane (Gravel Road)
30~~91~~ TO 199 ADT Primarily residential or agricultural use (examples: Little Cimarron, Pine Creek, Sap Mesa, and Steuben Creek)

H. Local Intermittent (Native surface/Gravel)
13 TO 90 ADT Primarily recreational, residential or commercial traffic (logging). May be joint jurisdiction, such as forest service and county and maintained by county under agreement. Can be access to National Forest and Bureau of Land Management lands. (Examples: Rainbow lake, Alpine Tunnel, Red Creek and Upper Taylor River above

reservoir.)

I. Primitive Recreation (Native Surface)

No ADT Available - Limited and/-or recreational use only

4.23.2 Land Use Changes – – Compliance When These Standards and Specifications May apply Applicability

4.3 FLand use changes may include subdivisions, building permits, uses by special review, and other developments, which change or intensify the use of the land. All such changes must be in compliance with the Gunnison County Land Use Resolution and, if applicable, the Gunnison County Regulations for Special Development Projectsany and all other applicable regulations. . Right-of-wayRights-of-way dedications pursuant to a land use change shall require written acceptance by the Board and shall be made in conformity with the functional classification assigned to such road by the Director of Public Works and shall align with the centerline of existing rights-of-way.

In the case of proposed new alignments, detailed site planning and alignment studies may be required. The planning principles for roads in Section 3.3 shall be followed for land use change permit applications.

A land use change may require application of these Standards and Specifications. For purposes of these Standards and Specifications, "land use change" shall mean:

A. A land use change, as defined by the *Gunnison County Land Use Resolution*, that requires a permit under the *Gunnison County Land Use Resolution* and for which compliance with Section 12-103 of the *Gunnison County Land Use Resolution* is required; or

B. An activity or system that requires a permit under the applicable Gunnison County Building Code(s) or Gunnison County Onsite Wastewater Treatment System Regulations and:

1. Such permit(s) are for activities or systems on vacant land;
2. The activity or system requiring such permit(s) would encroach upon or substantively interfere with the use of any existing road, bridge or access to the property on which such activity or system is contemplated by such permit(s); or
3. Such activity or system presents a potential hazard to public health, safety, or welfare in relation to a road, bridge or access governed by these Standards or Specifications, as determined by the Director or his or hertheir designee in his or hertheir discretion.

~~4.4~~3.3 Planning Principles

A. Basic factors in the design of a ~~-~~road system include:

1. Safety ~~–~~for both vehicular and pedestrian traffic.

2. Efficiency of Service ~~–~~for all users.

3. Livability, ~~—~~especially as affected by traffic elements in the circulation system.

4. Economy ~~– of~~ in both construction and use of land.~~,~~ D~~d~~esign should minimize maintenance costs and maximize ease of snow removal.

5. Environment ~~—~~design should minimize the impact of road construction ~~in sensitive areas~~on ~~the environment~~wildlife, plant species, water and air quality, erosion, soils, invasive plan species promulgation, and forest health to the exten~~d~~t feasible.

B. Each of the following principles is an elaboration on one or more of these four factors. The principles are not intended as absolute criteria, since instances may appear where certain principles conflict. Therefore, the principles should be used as guides to proper system layout.

~~A.~~1. Insure Vehicular and Pedestrian Access. Road widths, placement of sidewalks or pathways, patterns of roads, crosswalk installations, and number of intersections shall be related to safe and efficient use of the road and access to abutting lands.

~~B.~~2. Control Access to Arterials. Local road systems and land development patterns should not detract from the efficiency of peripheral arterial facilities. Ideally, land development should occur so that no parcels require direct access to arterial routes. The local flow of traffic should be managed with an internal traffic management plan. The number of access points between the local road system and the arterial system should be minimized. Intersections along arterial routes should be properly spaced for efficient and safe traffic flow. The roads that do intersect the arterial system will tend to have high traffic volumes since they are the only access points. The number of residential lots directly accessing collector roads should be minimized.

~~C.~~3. Discourage Speeding. Residential roads should be designed to discourage excessive vehicle speed through generally accepted traffic engineering ~~means~~methods.

~~D.~~4. Courts and Cul-de-Sacs. A road ending with a cul-de-sac should normally not be longer than six hundred (600) feet. All cul-de-sacs shall have a minimum radius of forty five (45) feet of maintained and plowed area as measured to the outside edge of the traveled surface and have defined and permanent snow storage locations with

demonstrable drainage solutions.

C. Roads which do not connect or intersect with other roads shall have a ~~cul-de-sac, loop design, or a "Y" or a "T"~~ turn around at the end of the road segment that meets the requirements of the local emergency ~~responders~~agencies. A cul-de-sac ~~which may be vacated in the future~~that is being vacated shall be improved to the functional classification standard of the road which it serves if access is provided to dwellings or other structures. T~~"T" t~~urnarounds shall ~~be a minimum of twenty (20) feet from any~~comply with any fire proception district requirements related to setbacks from flammable structures. (See Appendix E for Turnaround Standards.)

SECTIONARTICLE 4IV

DESIGN STANDARDSesign Standards

4.1 Application of Design Standards

4.1 A. 4.1.1 Minimum Standards

The standards set forth in this Article provide uniform minimum acceptable values. If and only if it can be shown that an alternate design standard will provide an outcome equal to or better than the required minimum, then such alternate may be approved in the sole discretion of the Director Department and upon review and approval by the Director of plans submitted and signed by a professional engineer. Life cycle cost shall be considered in meeting minimum acceptable values.

4.2 Design Factors

A. 4.2.1 Road Classification

Each road or trail or access as defined by the County proposed for construction or improvement shall receive, from the Director, a functional classification as defined in Section 3.1. If such a classification is not specified on the County Road Map, a functional classification shall be assigned and based primarily on volume and traffic per Table 3-1.

B. 4.2.2 Projected Traffic Volumes

A traffic analysis is normally required to project future traffic volumes for roads. A key element in any traffic analysis is trip generation by land use type. The report entitled Trip Generation, published by the Institute of Transportation Engineersmost recent edition of the Institute of Transportation Engineers "Trip Generation Manual", shall be the County guideline where no detailed trip generation data is available. Traffic studies shall comply with the requirements of Section 12-103 of the LUR standard. This report is available for review in the Gunnison County Planning Department.

A twenty (20) year design period or full development shall generally be used to project traffic volumes. Factors provided by the Colorado Department of Transportation and/or the Gunnison County Planning Director shall be used to adjust average daily traffic volumes to design hourly volumes.

The Director of Public Works shall consult with the County Planning Director to determine whether a traffic analysis will be required. The traffic analysis will be done during the initial application phase of the development, and at the sole cost of the road developer.

C. 4.2.3 Terrain Classification

For the purpose of these Standards and Specifications, the terrain in Gunnison County shall be classified in two categories:

1. Flat or Rolling Terrain. Average cross slope less than fifteen (15) percent and the ridges and draws are not well defined.

2. Mountainous Terrain. Average cross slope greater than fifteen (15) percent and the ridges and draws are steep and well defined.

D. ~~4.2.4~~ Design Speed

The choice of a design speed is influenced primarily by the terrain classification, functional classification of the road, and land use. ~~The design speed is generally slightly higher than the posted speed. Acceptable ranges of minimum design~~ Design speeds ~~are as follows~~will utilize the AASHTO Green Book and CDOT's Roadway Design Guide to justify said design speed.

All speed limits shall comply with C.R.S. § 42-4-1101 and consider the following factors, if applicable:

A. Roadway environment (such as roadside development, number and frequency of driveways and access points, and land use), functional classification, public transit volume and location or frequency of stops, parking practices, and pedestrian and bicycle facilities and activity;

B. Roadway characteristics (such as lane widths, shoulder condition, grade, alignment, median type, and sight distance);

C. Geographic context (such as an urban district, rural town center, non-urbanized rural area, or suburban area), and multi-modal trip generation;

D. Reported crash experience for at least a 12-month period;

E. Speed distribution of free-flowing vehicles, including the pace, median (50th-percentile), and 85th Percentile speeds; and/or

F. A review of past engineering speed studies to identify any trends in operating speeds.~~:~~

	Flat or Rolling		Mountainous	
Functional Classification	Design Speed	Posted Design Speed	Design Speed	Posted Design Speed
Arterial	45	40	35	30
Collector	45	30-40	40	30
Local Road	25	20-25	25	20
Lane or Place	20	20	15	15

	Flat or Rolling		Mountainous	
Functional Classification	Design Speed	Posted Design Speed	Design Speed	Posted Design Speed
Arterial	6045	45-5540	50 35	30-4030

	Collector	45	30-40	40	30
	Local Road	25	20-25	25	20
Lane or Place		20	20	15	15

4.3 Geometric Standards

A. A.4.3.1 Horizontal A

1.

A. General Considerations. The major considerations in horizontal alignment are topography, road classification, design speed, grade profile, subsurface conditions, safety, and sight distance. All of these must be balanced to produce an alignment that is safe and adequate for the functional classification of the road.

B. 2. Sight Distance. Horizontal alignment must provide at least minimum stopping sight distance for the design speed at all points. This includes visibility at intersections, as well as around curves and roadside obstruction.

a. The minimum stopping sight distance is the distance required by the driver of a vehicle traveling at a given speed to bring the vehicle to a stop after an object on the road becomes visible. Stopping sight distance is measured from the driver's eye, which is assumed to be three and one-half (3.5) feet above the roadway surface, to an object 6 inches high on the road.

b. The required stopping distance for a given design shall comply with the AASHTO Green Book and CDOT's Roadway Design Guide. Criteria for measuring stopping sight distance include an eye height of 3.5 feet and an object height of 2.0 feet. Passing sight distance criteria include an eye height of 3.5 feet and the object height of 3.5 feet.is as follows:

Design Speed (MPH)	Stopping Sight Distance (ft.)
15	100
20	150
25	175
30	200
35	250
40	300
50	450
60	650

Design Speed (MPH)	Stopping Sight Distance (ft.)
15	100
20	150
25	175
30	200

35	250
40	300
50	450
60	650

c. In some cases, passing sight distance may be required on collectors or arterials. The Colorado Division of Highways' Road Design ManualCDOT Roadway Design Guide should be used in determining passing sight distance.

Standards for Curvature. TTables 4-1 through 4-4 set the permissible minimum curve radii and the permissible maximum allowable rate of superelevation for the various functional classifications are below and areshall comlycomply with the AASHTO Green Book and CDOT's Roadway Design Guide. The tables are based on design speed, friction factors, and superelevation, and do not consider sight distance.

Minimum Curve Radius for Design Speed on Local Road and Lanes (without superelevation):

e + f = 0.0'67v' R				**R**
e – superelevation				8
f – side friction factor				1
v – design speed				2
R – curve radius				3

C. –

~~Minimum Surve Radius for Design Speed on Collectors, Minor Arterials and Principal Arterials:~~

d. Sudden reductions in speed introduce the element of surprise to the driver and should be avoided. Where physical restrictions cannot be overcome and it becomes necessary to design curvature which is lower than the design speed for the project, the design speed between successive curves shall not change by more than 10 mile-per-hour increments. ~~Under no conditions shall~~Normally a curve for a design speed lower than the design speed of the project shall not be introduced at the end of a long tangent or at other locations where high approach speeds may be anticipated. Use of lower standard curve radii is subject to approval by the County.

e. Angle points less than one degree require no curve radius. A compound curve is two curves of different radii joining with no tangent between them. A compound curve will not be permitted. A broken-back curve is two curves in the same direction joined by a short tangent. Broken-back curves are not permitted.

3. Superelevation. ~~One of the most important factors to consider in highway safety is the centrifugal force generated when a vehicle traverses a curve~~. ~~Centrifugal force increases as the velocity of the vehicle and/or degree of curvature increases.~~ The standard superelevation rates ~~shown below on Table 4-1 through Table 4-4~~ shall comply with the

AASHTO Green Book and CDOT's Roadway Design Guide and shall be ~~are~~ designed to hold the side friction factor within tolerable limits for those operating speeds expected for the range of curve radii given.

~~Maximum Superelevation Rates:~~

~~Road Type~~	~~Rural~~	~~Urban~~
~~Principal Arterial~~	~~.08~~	~~.06~~
~~Minor Arterial~~	~~.08~~	~~.06~~
~~Collector~~	~~.06~~	~~.06~~
~~Residential Sub-Collector~~	~~.06~~	~~.04~~

~~D.~~

~~Side Friction Factors for Design Speed:~~

~~v~~	~~f~~
~~15~~	~~.19~~
~~20~~	~~.18~~
~~25~~	~~.17~~
~~30~~	~~.16~~
~~40~~	~~.15~~
~~60~~	~~.13~~

a. For undivided roads, the axis of rotation of superelevation is usually the centerline. Where curves are preceded by long relatively level tangents, the plane of superelevation may be rotated to about the edges of the pavement to improve the perception of the curve.

b. A superelevation transition is variable in length depending upon the amount of superelevation. Two-thirds of the transition is in the tangent approach at the beginning and the end of the curve, and one-third of the full superelevation is at the beginning and at the end of the curve. Where spiral curves are permitted, the transitions are to be designed using the latest edition of the Colorado Department of Transportation Roadway Design Manual.

E.4. Coordination with Vertical Alignment. To avoid the possibility of introducing serious traffic hazards, coordination is required between horizontal and vertical alignment. Particular care must be exercised to maintain proper sight distance at all times. Sharp horizontal curves introduced at or near the top of a pronounced crest, or at the bottom of sag vertical curves should be avoided.

B. 4.3.2

Design Speed - MPH							
Terrain Classification	15	20	25	30	40	50	60
Flat and Rolling	6	6	6	6	6	5	4
Mountainous	11	10	9	9	8	6	N/A

Vertical Alignment

A. 1. General Considerations. The centerline profile is a reference line by which the elevation or grades of the pavement and other features of the roadway are established. It is controlled mainly by topography, structure clearances, horizontal alignment, safety, sight distance, design speed, and the performance of heavy vehicles on a grade.

B. 2. Minimum and Maximum Grades. To provide for adequate drainage, the minimum sustained grades shall be no less than 0.51 percent (1%) on roadway sections with curb and gutter and two percent one (12%) percent on all other roads.

a. Maximum permissible sustained grades (expressed in percents) for new roads are related to design speed and shall be as follows:

Design Speed - MPH							
Terrain Classification	15	20	25	30	40	50	60
Flat and Rolling	67	6	6	6	6	5	4
Mountainous	11	101	910	9	8	6	N/A

(Design Speed - MPH)

Terrain Classification	15	20	25	30	40	50	60
Flat and Rolling	6	6	6	6	6	5	4
Mountainous	11	10	9	9	8	6	NA

The maximum design grade should be used infrequently rather than as a value to be used in most cases. For short grades less than three hundred (300) feet, the maximum gradient may be increased by one percent.

b. A~~In flat or rolling terrain, a~~ll grades shall flatten to at most four (4) percent for at least one hundred (100) feet approaching intersections, and for at least fifty (50) feet entering and leaving turn-arounds or cul-de-sacs. In mountainous terrain, all grades shall flatten to ~~six~~ four (4) percent or less for at least fifty (50) feet approaching intersections ~~intersections~~ and entering switchbacks or cul-de-sacs.

3. Vertical Curves. All vertical curves shall be designed to provide adequate stopping and passing sight distance, headlight sight distance, comfortable driving, good drainage, and a pleasing appearance.

~~C.~~a. Vertical curves shall be parabolic.

b. Vertical curves are not required where the algebraic difference of grades is less than 0.40%. The preferred minimum length of vertical curves, both crest and sag, is four hundred (400) feet.

c. The minimum length of a vertical curve shall be three hundred (300) feet for design speeds above thirty (30) miles per hour, and two hundred (200) feet for design speeds of thirty (30) miles per hour and lower. Unequal tangent vertical curves are ~~p~~permitted only in special circumstances as approved by the County.

a. Vertical curves that are long and flat may develop poor drainage at the level section. This must be overcome by adjusting the flow line of the ditch section.

4. Sight Distance. Minimum lengths of crest vertical curves are controlled by stopping sight distance requirements as shown in ~~Figure 4-1~~as determined by the ASHTO green book.

~~D.~~

4.4

	Design Speed - MPH						
Terrain Classification	15	20	25	30	40		
Rolling	7	6	6	6	6		
Mountainous	11	11	10	9	8		

Cross Section ~~Section~~ Standards

A . ~~4.4.1~~ Typical Sections

~~4.4~~

Typical sections for each functional classification are given in Appendix B - D. Table 3-1 also provides a summary of design elements. Variations from these sections may be approved by the County when there is sufficient evidence that certain design elements can be reduced or eliminated.

B . ~~4.4.2 Right-of-Way~~Rights-of-W~~way~~ Width

The basic minimum ~~right-of-way~~rights-of-way width for each typical section is shown in Table 3-1. This width is sufficient only to accommodate the specific geometric cross-sectional elements that are required. Additional ~~right-of-way~~rights-of-way may be required for snow removal and storage, pedestrian infrastructure, or other uses. Cut and fill slopes beyond the hinge point and ~~right-of-way~~rights-of-way may require ~~slope~~ additional easements.

C . ~~4.4.3 Crown~~ Cross Slope

Cross slope is provided to provide a drainage gradient so that water will run off the surface to a drainage system such as a street gutter or ditch. Inadequate cross slope will contribute to aquaplaning.

1. On straight sections of normal two-lane roads, the pavement cross section is usually highest in the center (crown of road) and drains to both sides.

2. In horizontal curves, the cross slope is banked into superelevation to reduce steering effort and lateral force required to go around the curve.

3. Cross slope criteria apply to typical tangent alignments.

4. On high-speed roadways, normal cross slope is 1.5–2.0 percent, with the cross-slope break (the algebraic difference in slopes between the lanes) at the centerline not exceeding 4 percent.

5. In areas of intense rainfall and where there are three or more lanes in each direction, additional cross slope may be necessary for adequate drainage.

Accomplishing other design features (superelevation transitions, pavement warping at intersections, etc.) will inevitably require removal of cross slope in spot locations. These cases are routine and necessary in design and a design exception is not required. In addition to the cross slope of the lanes, the cross-slope break on the high side of superelevated curves should not exceed 8 percent (Figure 23). A formal design exception is required when this condition is not met. ~~On roads in tangent alignment, the high point of the crown shall be at the centerline of the pavement and the pavements sloped toward the edges of a uniform grade. In mountainous terrain, local roads may be insloped or outsloped on a constant two percent (2%) slope to alleviate surface erosion~~

~~due to runoff, provided safe speed requirements are met.~~ At intersections, or in unusual situations, the crown position may vary depending upon drainage or other factors.

6.

7. ~~S~~Standard ~~crown~~ cross slopes minimums to be used on the traveled way for different pavement and surface types are as follows:

Type of Surface	Crow~~n~~ss Slope (Percent)
Portland Cement	1.5
Bituminous Mix Pavements	2.0
Penetration Treated Earth or Gravel	3.0
Unsurfaced Graded Section	4.0

~~Type of Surface Crown Slope (Percent)~~

~~Portland Cement 1.5~~
~~Bituminous Mix Pavements 2.0~~
~~Penetration Treated Earth or Gravel 23.0~~
~~Unsurfaced Graded Section 24.0~~

D. ~~4.4.4 Side~~ Barrow or Bar Ditches

~~Side d~~Ditches may be required in cut sections without curbs and gutters. The slope from the edge of the shoulder to the bottom of the ditch shall not be steeper than 3:1.

E. ~~4.4.5~~ Curbs and Gutters

1. Curbs and gutters may be required as follows:
   a. On urban roads.
   b. When drainage, traffic, or public safety necessitates.
   c. As determined by the department.

~~1.~~ 2. ~~On urban roads~~
~~When drainage, traffic, or public safety necessitates~~
~~2. As determined by the department~~

All curbs and gutters ~~are to be constructed with Class B Concrete and~~ shall conform to standards detailed in the latest edition of Colorado Department of Transportation Standard Specifications for ~~two feet curb and gutter~~ Type 2 curb and gutter, unless otherwise ~~approved~~ specified by the County Public Works Department.

F. ~~4.4.6~~ Side Slopes

1. Cut and Fill Slopes: – ~~**NEEDS UDPATED**~~

~~Height~~	~~Cut Slopes~~	~~Fill Slopes~~

~~0-5 feet~~	~~3:1~~	~~2:1~~
~~5-10 feet~~	~~2:1~~	~~1½:1~~
~~10-15 feet~~	~~1½:1~~	~~1½:1~~
~~Above 15 feet~~	~~1:1~~	~~1½:1~~

Shall comply with LUR standards.

2. ~~Cut and fill slopes shall be as shown in Table 4-5.~~ Flatter slopes shall be required in unstable soils. Cut slopes that are steeper than the standard may be considered in special situations, such as in solid material, but require prior approval by the County. Some side slopes may require additional measures to stabilize or revegetate the slope.

3. The tops of all cut slopes shall be rounded with a minimum of a four (4) foot radius where the material is other than solid rock, and shall be reseeded with vegetation native to the area or as recommended by the ~~United States Soil Conservation Service~~ local Natural Resources Conservation Service~~NRCS~~. The backslopes at the ends of all cuts, except rock, shall be flattened. The ditch at the lower end of the cut shall be widened gradually to discharge side ditch drainage away from base of adjacent fill slopes in order to avoid erosion and improve appearance.

G. ~~4.4.7~~ Ramps for Physically Handicapped

All newly constructed, repaired, or replaced sidewalks and curbs shall provide adequate and reasonable access for the safe and convenient movement ~~of physically handicapped persons~~of persons and in compliance with the most current and adopted Americans with Disabilities Act Guidelines and amendments and Architectural Barriers Act~~ABA~~ Accessibility Guidelines for the Public Rights-of-~~w~~Way.~~, including those in wheelchairs.~~ .

H. ~~4.4.8~~ Trails

Recreation path standard specifications may be developed or promulgated by Gunnison County. All submittals for trails ~~will~~ may be referred to~~be reviewed by~~ the ~~Trails Commission~~Sustainable Tourism and Outdoor Recreation Committee for recommendations and should conform to LUR section 12-104 and the Gunnison County Trails Master Plan, as amended.

I. ~~4.4.9~~ Horizontal and Vertical Clearance

The following are minimum clearances for structures or other roadside obstructions, including but not limited to ~~mailboxes~~, shrubs, trees, signs, gates, and fences. Additional clearances may be ~~provided~~ required for sight distance and/or other requirements. Accesses will be assessed on a case-by-case basis.

1. In all areas without curbs, or with mountable curbs, and with design speeds of 40 MPH or less, a minimum clear zone of fifteen (15) feet shall be provided. ~~When roads or highways under the jurisdiction of other agencies are involved, the clearance as required by said agency, if more restrictive than these Standards and Specifications, shall apply.~~

The minimum horizontal clearance shall be ~~four (4') feet from~~provided from the outside edge of the traveled way of a public or private road. ~~In all areas without curbs, or with mountable curbs, and with design speeds of 40 MPH or less, a minimum clear zone of fifteen (15) feet shall be provided,~~

2. Mailboxes may be placed 4 feet from the edge of the traveled way and must comply with CDOT's Roadway Design Manual. ~~Accesses will be assessed on a case-by-case basis.~~

~~2~~3. The minimum vertical clearance for all overhead structures including signs, cables, etc. shall be in accordance with those specified in the applicable provisions of the latest edition of ~~Colorado Department of Transportation Roadway Design Manual~~CDOT's Roadway Design Manual and/or the Manual on Uniform Traffic Control Devices~~.~~ In no case shall the overhead clearance be less than 13 feet 6 inches.

~~3~~4. When roads or highways under the jurisdiction of other agencies are involved, the clearance as required by said agency, if more restrictive than these Standards and Specifications, shall apply.

4.5 Access Control Standards

A. The County shall apply these access control standards to all connections made within the ~~right-of-way~~rights-of-way by any highway, road, drive, trail (>50 inches), path (~~>~~50 inches), or access otherwise determined by the County. Accesses shall be constructed to meet all Standards and Specifications.

1. All residential ~~driveways~~ accesses that ~~access~~ connect to a County road or public or private ~~ROW~~ ~~right-of-way~~rights-of-way shall have a minimum surface width of ~~eighteen (18~~twenty (20)~~)~~ feet at the edge of the pavement or road surface, and taper to a minimum surface width of sixteen (16) feet at a distance of ~~six~~ two feet from the edge of the road, and maintain this surface width to the end of the ~~driveway~~access. No residential ~~driveway~~access shall be in excess of 24 feet wide in the ~~ROW~~Rights-Of-Way, excluding corner Radii.

2. All such ~~driveways~~accesses shall be constructed with the following ~~minimum sections~~surface treatment section dimensions or combination thereof:

Access Material	Minimum Section Depth
Concrete	6 inches
HBP (asphalt)	~~2~~3 inches with ~~6~~4 inches Class 6 aggregate base course
Gravel (compacted)	6 inches Class 6 aggregate base course
Native Material	Permissible only if access road is native material and native material provides structural stability and an all-weather driving surface

~~DrivewayAccess Material Minimum Section Depths~~

~~Concrete 6 inches;~~

~~halt) 2 inches with 6 inches Class 6 aggregate base course;~~

~~Gravel 6 inches Class 6 aggregate base course (compacted);~~

~~Native Material Permissible only if access road is native material or and native material provides structural stability and an all-weather driving surface.~~

and shall be installed in accordance with both an approved ~~driveway~~ access permit and all applicable sections of these Standards and Specifications. Access to a County road or ~~right-of-way~~rights-of-way must be obtained as described in Section 7.4. "Uniform ~~S~~screened aggregate" shall not be used in the ROW or on grades in excess of 4%.

3. The maximum grade~~s~~ for accesses~~driveways~~ shall be 11%. This will be measured in the center of the ~~travelway~~travel way and as an average over ~~a 25~~30 ~~foot long~~30-foot-long sections. The grade of the entrance ~~and~~ /exit shall slope ~~downward and~~ away from the road surface at the same rate as the ~~normal~~ cross slope and for a distance at least equal to the width of the shoulder or to the centerline of the drainage ditch, in order to allow water to effectively drain from the roadway and enter the designed drainage.~~, but in no case less than ten feet from the traveled way~~.

4. All ~~driveways~~accesses and approaches ~~shall be constructed so that they~~ shall not interfere with the drainage system of the roadway ~~or cause~~. The Director may require a stormwater management plan for the access as a condition of approval. The applicant ~~will~~ shall be required to pay for and install, at ~~his~~ their own expense, drainage structures at entrances and exits which will become an integral part of the existing drainage system. The dimensions of all drainage structures must be approved by the Gunnison County Public Works Department ~~representative~~ prior to installation and may require an engineered plan. The minimum size of culvert installed parallel to the road will be a 12" diameter. Installation, ~~M~~maintenance, and replacement of the culvert shall be the responsibility of the property owner and shall maintain the original efficiency of the installation. ~~.~~

The horizontal axis of an approach to the roadway shall ~~normally~~ be at right angle to the centerline of the roadway and extend a minimum of ~~forty~~ thirty (~~40~~30) feet beyond the traveled way. An angle between 90 and ~~60~~ 70 degrees may~~shall~~ be permitted if it can be shown that physical ~~constraints exist~~constraints exist that require ~~an~~ a different approach ~~new~~ angle ~~of less than 90 degrees~~. An angle less than 60 degrees ~~is~~ shall not be permitted.

5. No more than one ~~approach~~ access shall be allowed regardless of ownership~~,~~ or subdivision, ~~etc.….o~~on any parcel of property when there is less than one hundred (100) feet of property frontage. No more than one access approach shall be provided to an individual parcel or to contiguous parcels under the same ownership, except adjacent platted subdivision lots, unless it can be shown that, they are necessary for the safe use of the property. In such cases, ~~A~~any ~~A~~additional accesses, measured from the center line tangent, ~~s~~ must be separated by more than one hundred (100) feet or more. Additional accesses may be considered only when the site geography inhibits internal connections and the public right-of-way is the only way to achieve the ~~necessary~~proposed land use. Additional accesses must comply with ~~the following sub sections~~these regulations.

6. ~~In the case of~~ The extension of the access into the right-or-way or the radius-taper portion ~~of an flared drivewaysaccesses, the flared portion adjacent to the traveled way~~ shall not encroach upon adjoining property. Property lines shall be extended on the existing tangent to the middle of the ~~row~~right-of-way to assess encroachment.

7. An access approach that is gated shall be designed so that the longest vehicle commonly using it can completely clear the traveled way when the gate is closed. In no event shall such distance be less than thirty-five (35) feet. Public rights-of-way shall not be gated unless approved by BOCC resolution. ~~In no event shall such distance be less than thirty fivethirty-five (35) feet.~~

8. Intersecting public and private roads shall be located opposite each other where possible or be offset by a minimum of one hundred ~~twenty five~~twenty-five (125) feet.

9. ~~Driveways~~Accesses shall have an ~~all weather~~all-weather driving surface. In most cases a manufactured product will be required. ~~In the case of a~~A native material road must be requested in writing and~~,~~ the ~~driveway~~access shall ~~match the existing surface~~achieve the characteristics that provide an all-weather driving surface.

~~Driveways~~Accesses ~~shall have a minimum surface width of 18 feet at the edge of pavement or road surface and taper to 16 feet at a distance 6 feet from the edge of the road and maintain this surface width to the end of the driveway~~access~~.~~

~~Driveways which are in excess of 600 feet in length and are single lane shall be required to have standard inter- visible turnouts. (See Appendix D).~~

10. Accesses shall be measured from the edge of the traveled way, along the centerline of the access, to the structure or proposed building envelope if no structure is constructed.

11. ~~Driveways at the End of the Road – Driveways~~Accesses 150’ or longer ~~- in length that end at a private residence, a business or structure larger than 600 square feet,~~ shall have a cul-de-sac, ~~loop design~~ or a “Y” or “T” turn around adequate to accommodate emergency service vehicles. ~~“T” turnarounds shall be a minimum of 20’ from any flammable structure.~~ All turn around areas shall be kept open and clear, and shall have

sufficient area for snow storage outside of the road prism, and shall be plowed by the owner in the winter. All turnarounds shall be reviewed by the fire district responsible for fire suppression in the area and subject to additional requirements. (See Appendix E).

12. ~~Driveways~~Accesses which are in excess of 600 feet in length and are single lane shall have standard inter-visible turnouts. The minimum number of intervisible turnouts is one per ~~600 foot~~600-foot section. The location of the intervisible turnout will be determined in cooperation with Public Works and the fire district responsible for fire suppression in the area and may be impacted by multiple variables. (See Appendix D).

13. ~~Driveway~~Access designs that allow for backing onto or off of a county road are discouraged and shall be evaluated on a case-by-case basis. Lot size, proposed house location, ~~and~~ traffic volume, and speed can be used as determining factors but are not exhaustive. The Director of Public Works ~~will~~ shall make the final determination.

14. Any ~~driveway~~ access permit application that ~~is over 250 feet in length and~~ has the potential to be used for a road for future development may be referred to the ~~planning~~ Community Development office for proper review.

~~Driveways Accesses shall be constructed to meet all Standards and Specifications. from the edge of the County road, or public road, or private road under County jurisdiction, to the building footprint.~~

15. ~~Driveways~~Accesses ~~on steep~~ that exceed ~~5~~4% grade, uphill or downhill, will require an approach ~~flat landing~~ area with slopes below 4% grade in all directions for a minimum of 30 feet ~~before~~ measured from the ~~the intersection with the~~ edge of the ~~road~~waytraveled way.

16. A temporary access road as defined herein shall be required to meet all Standards and Specifications only ~~from the edge of the road to the property line~~within the right-of-way. The temporary access or road shall be removed and reclaimed within ~~a~~one (1) year of the temporary access permit issuance if an access permit is not submitted to convert the temporary access or road permit to a permanent access.

17. Adequate vehicle parking must be provided on the private parcel based on the proposed land use. ~~No~~ Constructed or designated parking along the road, in the emergency turnaround, or protruding into the right-of way ~~will~~ shall not be permitted.

18. Any overhead ~~entry~~ structures designed for vehicles to travel under, such as a Porte-cochère, passageway, screen wall, archway, or other shall be at least 13’ 6” high for the width of the travel way, measured from the road surface.

19. ~~Red on white~~ Rreflective address signs as required by the local fire district shall be installed at the access approach if the structure is in excess of 100 feet from the public

right-of-way.

20. Snow storage shall be identified on site plan. Snow ~~shall not be~~ removed from accesses shall not be ~~and~~or stored on Road ~~Right of Way~~rights-of-way.

21. Storing of construction materials in the Road ~~Right Of Way~~Rights-of-way is not allowed.

22. Summary of ~~Driveway~~Access ~~Design~~ Width Elements:

Type of Access	# of Lanes	Lane Width
Residential	1	16 feet
Agricultural	1	16 feet
Commercial	2	11 feet
Industrial	2	11 feet

23. Commercial Accesses shall be assessed based on the commercial use of the land and the necessary use of the parcel. Safety of the public is paramount to the assessment of commercial use. Each commercial access permit will be addressed on a case-by-case basis and does not create precedent.
24. Site Plan shall be in compliance with LUR standards and Requirements and these standards and specifications. -

~~Length of access to structure~~
~~Width of access~~
~~Dimensions of emergency access turn arounds and intervisible pullouts~~
~~Access grade and points of grade changes~~
~~Radius of tight curves or switch backs~~
~~Snow Storage~~
~~Location and size of culverts~~
~~Drawn to scale on 11"x17" print or digital format with adequate resolution~~
~~Cross sections may be required depending on Terrain~~
~~Sight distance for access approach may be required~~
~~Property Lines~~
~~Elevations of access approach, and proposed elevation of home~~
~~Angle of access approach to roadway~~A site plan, which at a minimum, ~~includes the following:~~

a. **Maps and Site Plans~~APS AND SITE PLANS~~.** Maps and site plans submitted with any application shall be engineer quality and at a scale and sheet size that can be easily viewed or digital format with adequate resolution. A minimum scale of 1" = 100' is preferred. Sheet size shall not exceed 24 inches by 36 inches.

b. **All Property Served by the Access~~LL PROPERTY SERVED BY THE ACCESS~~.** Include all land served by proposed access. This can be a simple, hand-drawn layout, but it must be legible, clearly marked, drawn to scale, and signed and dated by the person who drew it.

c. **Phasing~~HASING~~.** Any proposed phases of the construction, and their timing.

Total Acreage of Contiguous Property Owned by the Applicant~~OTAL ACREAGE OF CONTIGUOUS PROPERTY OWNED BY THE APPLICANT~~. Total acreage and

d. location of all contiguous property owned by the applicant.

e. **Total Acreage Impacted by Access Permit~~OTAL ACREAGE IMACTED BY ACCESS PERMIT~~.** Total acreage of the site on which the applicant wants to obtain approval for the Access Permit.

f. **Adjacent Landowners~~DJACENT LANDOWNERS~~.** Names and actual land uses of adjacent landowners (including federal, State of Colorado and other publicly owned lands), to the site (in addition to the separate narrative listing). This includes properties that may be across a road, stream or river from the applicant's property.

g. **Utility Locations in Area~~TILITY LOCATIONS IN AREA.~~.** Location of all existing utilities on the property (septic tanks, wells, electric, gas, telephone or cable lines) that will serve the property.

h. **Topographic Features~~OPOGRAPHIC FEATURES~~.** Streams, lakes, ponds, wetlands, contour lines and elevations, any prominent ridgelines, and any other significant visual resource areas on the property.

i. **Livestock Drives and Fencelines~~IVESTOCK DRIVES AND FENCELINES~~.** Historic or recorded stock drive easements crossing or adjoining the development property, including the location of any existing fences along property lines, and the location of new fences or other obstacles proposed to be built across any such stock drive.

j. **Irrigation Ditches~~RRIGATION DITCHES~~.** The location(s), and name(s), of any irrigation ditch crossing or adjoining the development property, as available from the Colorado Division of Water Resources, or ditch commissioner's records.

k. **Drainage~~RAINAGE~~.** Drainage patterns and structures proposed or existing, on and adjacent to the Project property. Snow Storage and drainage impacts from snow storage location.

l. **~~Accesses and~~ Parking~~CCESSES AND PARKING~~.** Design and location of ~~Accesses/~~parking areas, both existing and proposed, This information should ~~include length~~include length, width, Dimensions of emergency access turn arounds and intervisible pullouts, Access grade and points of grade changes, Radii of tight curves or switch backs, Sight distances, Elevations of access approach, and proposed elevation of home, Angle of access approach to roadway, and/or other items.

m. **Existing Structures~~XISTING STRUCTURES~~.** Locations and sizes of existing structures.

n. **Proposed Structures~~ROPOSED STRUCTURES~~.** Locations and sizes of proposed structures.

o. **Boundaries~~OUNDARIES~~.** Boundaries and related measurements.

B. ~~4.5.1~~ Access to Arterial Roads

~~A.~~ 1. Private Direct Access. Private direct access to ~~major and rural~~any arterial roads shall be permitted only when the property in question has no other ~~reasonable~~ feasible access to the ~~County~~ public road system. When direct access must be provided, the following shall be considered:

~~1.~~a. Access shall continue until such time that some other reasonable access to a lower functional classification road or highway is available and permitted. The access permit shall specify the future reasonable access location and, if known, the date the change will be made. Subdivisions shall be designed, if possible, to provide for alternative access at a future date.

~~2.~~ No more than one access approach shall be provided to an individual parcel or to contiguous parcels under the same ownership except adjacent platted subdivision lots unless it can be shown that, they are ~~necessary~~ required for the safe use of the property.~~No more than one access approach shall be provided to an individual parcel or to contiguous parcels under the same ownership unless it can be shown that additional accesses would be significantly y~~

beneficial to the safety and operation of the road or the local circulation system. Subdivision of a parcel shall not result in additional access unless shown as necessary for safety or operational reasons. Agricultural roads shall be exempt from this requirement.

B. 2. Spacing and Signing.

1.a. For rural road sections where significant development is not expected in the foreseeable future, minimum spacing of all intersecting public roads, roads and highways shall be on one-half (1/2) mile intervals for paved arterials and one-quarter (1/4) mile intervals for gravel arterials, plus or minus approximately 200 feet. Where topography makes such spacing inappropriate, location of public approaches shall be determined by topography, property ownerships, property lines and physical design constraints. The final location should serve as many properties and interests as possible to minimize the need for direct private access to the road system.

In areas where development accesses an arterial road, a traffic engineering study shall be completed to properly locate all proposed approaches. These studies shall be submitted to the Director of Public Works for review prior to the issuance of a Driveway Access Permit and shall be paid for solely

2.b. by the applicant.

C. 4.5.2 Access to Collector Roads

A. Private Direct Access. No more than one access approach shall be provided to an individual parcel or to contiguous parcels under the same ownership except adjacent platted subdivision lots unless it can be shown that, they are necessary for the safe use of the property. No more than one access approach shall be provided to an individual parcel or to contiguous parcels under the same ownership except adjacent platted subdivision lots unless it can be shown that additional access approaches would not be detrimental to the safety and operation of the road, and they are necessary for the safe and efficient use of the property.

1.

2. Subdivision of a parcel shall not result in additional access unless shown to be necessary for safe use of the property. safety or operational reasons.

3. Driveways Accesses located near an intersection shall be constructed so that the side nearest the intersection is no less than one hundred (100) feet from the centerline of the intersecting road for commercial drivewaysaccesses and fifty (50) feet for residential drivewaysaccesses.

4. Access onto collector roads shall be spaced at a minimum on-quarter (1/4) mile intervals plus or minus two hundred (200) feet.

B. Access onto collector roads shall be spaced at a minimum one-quarter (1/4) mile intervals plus or minus two hundred (200) feet.

D . ~~4.5.3~~ Local Roads/Lanes

~~A.~~ 1. Private Direct Access. No more than one access approach shall be provided to an individual parcel or to contiguous parcels under the same ownership except adjacent platted subdivision lots unless it can be shown that additional access approaches are required due to geography, and would not be detrimental to the safety and operation of the road.~~, and are necessary for the safety and efficient use of the property. Subdivision of the property is preferred if multiple accesses are requested.~~ Multiple accesses are at the discretion of the director and require waivers~~ and are granted at the discretion of the Board.~~.

2. ~~Driveways~~Accesses located near an intersection shall be constructed so that the side nearest the intersection is no less than one hundred (100) feet from the centerline of the intersecting road~~ for commercial drivewaysaccesses and fifty (50) feet for residential drivewaysaccesses.~~

4.6 Intersections

A . ~~4.6.1~~ General Requirements

To minimize conflicts and to provide for the anticipated crossing and turning movements, geometric design of each intersection must be given careful consideration.

Intersections occurring on horizontal curves or crest vertical curves are undesirable. When latitude exists in the selection of intersection locations, vertical or horizontal curvature should be avoided. A line or grade change may be warranted when major intersections are involved.

B . ~~4.6.2~~ Intersection or Access ~~Approach~~ Corner Radii

~~A.~~ 1. Intersections and Access A~~a~~pproaches shall not have a~~n equivalent turning~~corner radius of less than ~~twenty~~ two (2))~~(20)~~ feet.

2.

Accesses designed for use by ~~single or multi use~~ vehicles exceeding thirty (30) feet in overall length shall have a minimum effective ~~fifty (50) foot turning~~corner ~~radii~~radius of ~~twenty eight~~twenty-eight (28) feet.

3. The access approach corner radii shall not be less than that necessary to accommodate the turning radius of the largest vehicle for which the access approach is intended for use on a regular basis.

~~The access approach equivalent turning~~corner ~~radii shall not be less than that necessary to accommodate the turning radius of the largest vehicle for which the access approach is intended for use on a daily~~ regular ~~basis.~~

~~B.~~ 4. Road Intersection corner radii shall be determined on a case-by-case basis.

~~5.~~ C. ~~6.3~~ Sight Distance

~~A.~~ 1. The required stopping sight distance necessary, as measured from the traveling vehicle to the intersection or access approach, shall be determined according to Section 4.3.A.2~~1 (B)~~.

~~B.~~ 2. T~~Table 4-7 shall be used to establish t~~he minimum sight distance necessary for the entering vehicle will be ~~,~~ based on the following criteria:

a. Intersection Sight Distance: ~~**NEEDS EDITED**~~

Design speed (mph)	AASHTO design sight distance criteria (feet)
15	80
20	115
25	155
30	200
35	250
40	305
45	360

~~*Vehicle expected to enter or cross highway~~	~~Sight distance is given in feet per 10 mph of posted speed limit~~	
	~~2 Lane~~	~~4 Lane~~
~~Passenger Car~~	~~100~~	~~120~~
~~Single Unit Truck~~	~~130~~	~~150~~
~~Multi-Unit Trucks~~	~~170~~	~~200~~

~~1.~~ b. Sight distance shall be measured at a height of 3.5 feet between the entering driver and the oncoming vehicle.

~~2.~~c. The entering driver's eyes shall be considered to be fifteen (15) feet back from the edge of the traveled way.

~~3.~~d. The vehicle shall be the largest vehicle normally intended to use the access approach. Normally means in excess of an average of one per day.

~~4.~~e. After sight distance requirements are met and an access permit issued, a sign structure or parked vehicle shall not be permitted where it will obstruct the required sight distance.

4.7 Pavement Structure Design

A. ~~4.7.1~~ General Design Procedure and Requirements

The requirements for the design of pavement structure sections shall be based on the most applicable section of the current edition of the Colorado Department of Transportation Roadway Design Manual.

B. ~~4.7.2~~ Pavement Structure Design Report

A pavement structure design report shall be prepared by a professional engineer, as a requirement of road plan approval.

The pavement structure design report shall include at minimum the following information:

~~1.~~ 1. Soil logs along the proposed roadway alignment at a maximum of five hundred (500) intervals.

2. Each log shall have a soil profile of a least four (4) feet below proposed subgrade elevation.

3. Representative samples for pavement design from each log shall be within two (2) feet below proposed subgrade elevation.

4. Each representative sample shall be classified according to the AASHTO Unified ~~Soil Classification~~Soil Classification Table, along with an Atterberg Limits Test and sieve analysis.

5. The pavement design procedure is based on the Hveem Stabilimeter Test or the Expansion Pressure Test, which is used to compute a Resistance Value (R) of the subgrade. The California Bearing Ratio test may also be used to determine design parameters.

~~5.~~

6. Proposed average daily traffic volumes (ADT) for each road shall be based on 100% of full development build-out including an adjustment for construction traffic. Traffic analysis for the purpose of pavement design shall be part of submittal requirements as defined in Section 4.2.2.

7. Recommended structural sections, based on the design considerations, proposed typical sections, and sections of roadway which may require additional stabilization or treatment.

C. ~~4.7.3~~ Flexible Pavement Design Considerations

The following elements are to be used in the design procedure:

~~1.~~ 1. The design procedure is based on the number of 18,000 -pound single axle equivalent daily load applications (18k EDLA) per traveled lane.

The 18k EDLA shall be equivalent to 100% of fully developed ADT adjusted for construction traffic (110%). In no case will the 18k EDLA be less than 5 on private roads, lane and place roads, and local roads and 25 on collectors.

2. The serviceability index (SI) for private roads, collector roads, local roads, and lanes will be 2.0. ~~(See Figure 4-2).~~ The SI for arterial, will be 2.5. ~~The SI will be determined using the CDOT Pavement Design Manual.~~ ~~(See Figure 4-3)~~.

3. The regional factor shall be summarized as per Table 4-8. In no case will regional factor be less than 2.00.

4. Evaluation of subgrade soils and pavement structure materials shall follow the procedure in the Colorado Department of Transportation Roadway Design Manual and Table 4-9 of these Standards and Specifications. ~~Evaluation of subgrade soils shall be revised as per Section 4.7.2 (E). Does not exist~~

5. An economic evaluation of alternate structure sections is encouraged. In making adjustments to the various layers of the pavement structure, a more economical design may result. For example, by increasing the asphalt thickness, a decrease in gravel and earthwork may result. By stabilizing a poor subgrade with lime or cement, a thinner structure section may result. ~~Al~~

~~5.~~6. Also, the use of asphalt treated base or cement treated subbase or ridged concrete pavement may be a more economical use of materials. Life cycle cost analysis will help determine most economic materials to use.

D. ~~4.7.4~~ Minimum Structural Sections

The minimum compacted depths of Hot Bituminous Pavement (HBP) and Aggregate Base Course (ABC) Class 6 (3/4") per road type which will be allowed are as follows:

	HBP	ABC
Gravel Roads	0”	6”
Local Road	3”	6”
Collectors	Dictated by project design	
Arterial	Dictated by project design	

~~HBP ABC~~

~~Gravel Roads~~	~~0"~~	~~6"~~
~~Paved Local Roads~~	~~23"~~	~~6"~~
~~Collectors~~	~~dictated by project design~~	
~~Arterial~~	~~dictated by project design~~	

Evaluation of the pavement design as per Section 4.7.3 (e) may result in an increase in HBP or substituting ABC with Plant Mix Bituminous Base (PMBB) or Portland Cement Treated Base. In no case will substitute sections be any less than three inches in depth.

Minimum compacted depths of HBP and ABC shall only be used when all of the design consideration requirements and the pavement structure design report requirements have been fulfilled and show a section less than this minimum needed to support the design loads.

E. ~~4.7.5~~ Rigid Pavement Design

The design of Rigid Pavements or portland cement concrete overlay for roadway surfaces shall conform to the applicable section of the latest edition of the Colorado Department of Transportation Roadway Design Manual. Thickness shall be dictated by the project design, and in no case shall the pavement thickness be less than ~~six~~ 3 inches, overlays shall have a thickness of at least ~~3~~ 2 ~~1/2~~ inches.

4.8 Drainage

~~4.8~~

A. ~~4.8.1~~ Applications

This section presents minimum required standards for the design of road and access drainage systems. Design of ditches, storm sewers, drainage courses and drainage crossings shall be performed by an engineer. Proper and adequate accommodation of drainage shall be provided for the protection of the roadway improvements and safety of the public.

B. ~~4.8.2~~ Design Criteria

Design criteria for the collection of and movement of water through public roads are based on the size of the drainage basin.

~~1.~~ 1. Minor Drainage Basin. A minor drainage basin will consist of a surface area less than one hundred (100) acres. All water courses and structures in a minor drainage basin shall be designed for ten year storms.

2. Major Drainage Basin. Drainage basins with surface areas greater than one hundred (100) acres shall be classified major drainage basins, in which one hundred (100) year storms shall be used as design criteria.

C. ~~4.8.3~~ Hydrology

One of the following four computational techniques must be used in the planning and engineering of a drainage system. In addition, a written explanation must be given by the applicant why the particular technique was used.

~~A.~~ 1. Rational Method. The rational method is recommended for storm sewer, culvert design, and overland flow of minor drainage basin. It is simple, and when used with adequate input parameters it provides reasonable results for use in project design.

The basic equation is Q=CIA Where:

Q - Peak discharge in cubic feet ~~p~~per second (cfs)
C - Coefficient of runoff (dimensionless)
I - Average rainfall intensity for a duration equal to the time of concentration of the watershed (inches/hour)

A - Drainage area of the watershed (acres)

~~B.~~ 2. Soil Conservation Service (SCS) Unit Hydrograph Method and SCS Tabular Hydrograph Method. In most drainage basins, rainfall runoff data from which unit hydrographs can be derived is unavailable, thus a synthetic unit hydrograph must be developed. The USDA Soil Conservation Service has developed a method of hydrograph syntheses which is now being widely used. The Tabular Hydrograph

Method provides a tabular approach to estimating peak discharges from urban areas using the time of concentration and travel time. This method can readily predict the increase in peak flow when all or a portion of the watershed is to be developed.

~~C.~~ 3. Soil Conservation Service (SCS) Method. The SCS method was developed particularly for agricultural watersheds. This widely used method is applicable to the mountainous regions on areas from two hundred (200) acres up to ten square miles, and above 6,000 feet in elevation. The method is presented in Procedures for Determining Peak Flows in Colorado - 1980 Edition (U.S. Department of Agriculture, Soil Conservation Service, 1980), or the most recent update.

4. Regional Analysis - A statistical or regional approach appears to be most appropriate for those areas in Gunnison County where peak flows occur from seasonal snow melt. Also, where large watersheds are expected to undergo significant urbanization, computer simulation techniques should be utilized, such as the HEC I and HEC II Programs.

~~D.~~

D. ~~4.8.4~~ Drainage and Irrigation Structures within County Road ~~Right-of-Way~~Rights-of-way

~~A.~~ 1. Materials. Culverts shall be constructed from ~~reinforced concrete, corrugated aluminum, corrugated steel, or~~ acceptable polymers. ~~In certain situations~~ The Public Works Department may allow reinforced concrete, corrugated aluminum, corrugated galvanized steel, or other material ~~may be considered~~. The minimum pipe size installed perpendicular to the road shall be a fifteen ~~n~~ (15) inch diameter round pipe or shall have an equivalent 15 inch diameter round cross sectional area for other shapes.

~~B.~~ 2. Inlets and Outlets. Culverts may need to be designed either with headwalls and wingwalls, or flared-end sections at the inlet and outlet. Additional protection may also be required at the inlet and outlet due to the potential scouring velocities.

~~C.~~ 3. Velocity. A minimum velocity during a minor storm event of three feet (3) per second is required to assure a self- cleansing condition of the culvert. ~~A minimum culvert velocity of three feet per second is recommended in order to assure a self-cleaning condition.~~

~~D.~~

The maximum culvert velocity is dictated by the channel conditions at the outlet. If the outlet velocities area less than seven fps for grassed channels, then only a minimal amount of protection is required. Higher outlet velocities will require substantially more protection. The maximum outlet velocity shall be twelve (12) fps along with the proper erosion protection.

~~E.~~ 4. Structures. All culverts, as a minimum, shall be designed in accordance with the procedures of AASHTO Standard Specifications for Highway Bridges and with the pipe manufacturer's recommendations.

~~F.~~ 5. Irrigation Ditches. ~~All d~~Ditches may cross roads, but shall not parallel a road within the road right-of way. The County is only responsible for conveying the water through the ~~right-of-way~~rights-of-way in a manner that maintains the efficient use of the irrigation water. The type, alignment, and size of the pipe will be determined by the County in consultation with the water right owner. Metering, diverting, measuring, or otherwise managing the water shall occur outside the ~~right of way~~rights-of-way and is not the County's responsibility.

E. ~~4.8.5 Roadside~~ Barrow or Bar or Roadside Ditches

1. In areas ~~w~~here no curb and gutter is required, the maximum allowable capacity for the roadside ditch shall be no more than that calculated through the use of Manning's formula with an appropriate roughness coefficient. If the natural channel slope would cause erosion velocity, suitable channel protection, as approved by the ~~Director of~~ Public Works Department shall be installed. (See Table 4-10).

2. ~~The most desirable roadside drainage ditches are those lined with grass. The grass will~~

~~stabilize the body of the ditch, consolidate the soil mass of the bed, and check the erosion on the ditch surface and the movement of soil particles along the ditch bottom. The presence of grass in ditches can result in turbulence which means loss of energy and increased retardation of flows. Therefore, T~~the design must give full consideration to sediment disposition and to scour, as well as hydraulics.

3. For anticipated drainage velocities in excess of twelve (12) Feet Per Second erosion protection shall be provided for the channel. Erosion protection design must be approved by the County Public Works Department.

F. ~~4.8.6~~ Bridges and Low Water Crossings.

All private or public bridges over waterways ~~will~~ shall meet or exceed legal load limit requirements, have an Army Corp 404 permit, and obtain a ~~Flood Development~~ Permit from the Gunnison County ~~Planning~~ Community Development Department before construction may begin. All private or public bridges not over waterways will also meet or exceed legal load limit requirements and obtain all necessary permits before construction may begin.

~~A.~~ 1. Standards for Bridges. The design and supporting calculations for bridges ~~must~~ shall be prepared and certified by an engineer. The following minimum standards shall apply to all bridges:

~~1.~~ a. A minimum clear ~~roadway~~ width of no less than 16 feet or equal to the width of the approved approach road, sufficient to provide service for proposed use. In no case shall a bridge be designed in a way that excludes emergency personnel and their vehicles.

~~2.~~ b. Grade Criteria: Minimum of 0.5 percent / Maximum of 4.0 percent

f. ~~An~~ Highway Semitrailer ~~15 ton~~15-ton (HS-15) load rating. In all cases the bridge load limit and bridge ownership shall be conspicuously posted by the permit applicant. Posting shall be in accordance with the latest edition of the Manual of Uniform Traffic Control Devices and the signs shall be owned, posted, and maintained by the applicant or property owner in perpetuity. An alternative loading may be allowed by the County where it can be demonstrated that anticipated loads will not exceed ~~eight~~ an HS-10 rating~~tons~~. The design may need to be altered to restrict loads in excess of HS-10. ~~In all cases the bridge load limit and bridge ownership shall be conspicuously posted by the permit applicant. Posting shall be in accordance with the latest edition of the Manual of Uniform Traffic Control Devices and the signs shall be owned, posted, and maintained by the applicant or property owner.~~

~~3.~~g. Non-County Bridges in public rights-of-way and open to public travel may be required to provide inspections at the sole cost of the responsible party in accordance with CDOT standards.

~~4.~~ d. Hydraulic criteria:

i. A single clear span bridge.

ii. All bridges shall include a minimum one (1) foot clearance, between the lowest horizontal member and the base flood elevation.~~Low steel or other spanning material shall be a minimum of one foot above the one hundred (100) year water surface elevation for that stream.~~

iii. Where bridge abutments and foundations are located below the base flood elevation~~one hundred (100) year water surface elevation~~, concrete wingwalls shall be required at forty (40) degree to sixty (60) degree angles tied to the existing side slopes to prevent erosion behind the abutments.

iv. At no time shall the waterway section at the bridge ~~cause a significant rise (one foot) in the intermediate regional flood surface elevation or cause flow to~~ accelerate to velocities sufficient to scour and undermine the ~~bridge's abutments~~bridge's abutments and wingwalls.

~~5.~~h. Utilities attached to bridges shall not obstruct flows within the stream channel; or waterway users (i.e. boats, rafts); or sight distance to drivers using the structure. Attached utilities ~~should~~ shall not interfere or encumber the maintenance of the bridge.

~~6.~~i. All bridges on roads proposed for acceptance into the County Road System shall meet AASHTO Standards for the use being served. Acceptance will be made in accordance with the following policies:

~~a.~~ i. New Structures. All structures shall be designed by a professional engineer in accordance with AASHTO specifications for highway bridges. Designs for said structures shall be reviewed for approval by the Gunnison County Public Works Department. Upon approval of the plans, any person, partnership, association, or corporation desiring to have such a bridge constructed shall bear all costs associated with the construction and final inspection. All new bridges shall have a sufficiency rating greater than ~~eighty (80~~ninety (90) when evaluated by FHWA/~~CDOH~~ CDOT procedures.

~~b.~~ii. Existing Structures. All structures being reviewed for acceptance shall meet current AASHTO specifications and receive a sufficiency rating of greater than seventy (70) when evaluated by FHWA/~~CDOH~~ CDOT procedures. The petitioner shall present plans and specifications for review to the County Public Works Department. Upon approval of said plans and specifications, the subject bridge may be considered for acceptance subject to a final field inspection by the County. After it has been determined that the subject structure meets all requirements, the County Public Works Director shall submit the petition to the Board for consideration of acceptance into the County Road System.

~~7.~~j. All bridge abutments shall be located to avoid adversely affecting the natural hydraulics and inundation characteristics of wetland areas.

~~B.~~ 2. ~~Standards for~~ Low Water Crossings. To protect water quality, ~~W~~wet low water crossings ~~shall not be constructed in order to protect the waters of the state~~are prohibited. A dry low-water crossing (also known as an Irish bridge, causeway, low-level crossing or low-water bridge) is a low-elevation roadway traversing over a waterbody that stays dry above the water when the flow is low, but is designed to get submerged under high-flow conditions ~~such as floods~~. The design and supporting calculations for all low water crossings must be prepared and signed by an engineer. The following are minimum standards for private low water crossings.

~~1.~~ a. A minimum clear roadway width sufficient to provide service for proposed use.

~~2.~~b. Grade criteria: Minimum of 0.5 percent / Maximum of 10.0 percent

~~3.~~c. Side slopes shall not be steeper than 3:1 and shall be protected by a six-inch concrete facing or by eighteen (18) inch rip-rap.

~~4.~~d. The culverts used must be a minimum of fifteen (15) inches in diameter.

~~5.~~e. Minimum cover over the culverts will be as follows:

Round pipe – twelve (12) inches or as recommended by the manufacturer

Arch pipe – twelve (12) inches or as recommended by the manufacturer.

~~6.~~ Hydraulic criteria: Culverts shall have the capacity to carry the ten-year peak discharge from ~~m~~

f. that stream, with a HW/D ratio not to exceed 1.5.

g. At no time shall the waterway section at the crossing cause a significant rise (one foot) in the intermediate regional flood elevation or cause flows to accelerate to velocities greater than those expected during the intermediate regional flood.

4.9 Road Appurtenances

A. ~~4.9.1~~ Road Signs and Traffic Control Devices

All road signs, striping, delineators, barricades, signals, and other traffic control devices shall conform to the ~~Millennium~~ most recent Edition of the Manual on Uniform Traffic Control Devices (MUTCD) published by U.S. Department of Transportation, Federal Highway Administration, and any applicable Colorado supplement.

The permittee shall bear all expenses for the fabrication and installation of road name signs, permanent barricades, and/or signs for implementing the approved project design (i.e. one way, no parking, dead end, private drive.) Road name signs ~~shall be green in color. These signs~~ shall be lettered and erected in accordance with the latest edition of the Manual on Uniform Traffic Control Devices. ~~The selection of materials shall be consistent with the County Public Works Department's ability to maintain the signs after acceptance~~Non-typical signs shall not be the responsibility of the County to repair or replace ~~in kind~~ after acceptance of the road. Materials shall require the review and approval of the Gunnison County Public Works Department. All Signs and ~~barricades~~ traffic control devices shall be in place prior to road acceptance.

B. ~~4.9.2~~ Guardrail

Guardrail may be required by the Public Works Department based on to the following criteria:

~~A.~~ 1. To protect a fixed object.

~~B.~~ 2. At a location with a high accident rate (vehicles accidentally leaving the traveled roadway).

~~C.~~ 3. In areas of steep terrain or high embankments.

~~D.~~ 4. On an isolated sharp curve on a road otherwise built to higher standards.

~~E.~~ 5. On curves requiring a reduction in approach speeds where one of the following conditions exist:

a. The height of embankment is more than ten feet.
~~1.~~
b. The side slope is steeper than 4:1.
~~2.~~
c. Substandard pavement and shoulder widths.
~~3.~~

4. d. Other roadside hazards.

6. Bridge Approaches. Approach guardrail for bridges on roads classified as Major Arterial, Suburban Collector, Suburban Lane, Rural Arterial or Rural Collector shall conform to current Colorado Department of Transportation M-Standards for Guardrail. Approach guardrail for bridges on roads classified as Rural Local, Rural Lane, Local Intermittent or Primitive Recreation shall conform to these Standards and Specifications. (See Appendix I).Engineeredconform to Engineered plans.

4.C.4.9.3 Cattle Guards

Cattle guards shall may be installed where they are necessary for the control of livestock to improve the safety of the travelling public. New applications for cattleguards shall be made in writing. Unless the County agrees otherwise expressly and in writing, Tthe cost of construction, installation, and replacement shall be the applicant's sole responsibility including any fence attachments or posts. The clear opening of the cattle guard shall extend from the edge of the shoulder to edge of shoulder for the standard roadway section approved. Each cattle guard location shall also have a bypass gate installed to allow livestock passage. Cattle guard and gate location and design shall be approved by the Director of Public Works prior to installation.

Appendix H is a drawing of the standard 24 foot24-foot cattle guard built and used by the Gunnison County Public Works Department. Any proposed non-standard design or width must beapply for granted a waiver of these standards byfrom the Director.

4.10 Utilities

Any utility within a road right-of-wayright-of-way must shall be designed and located to primarily to maximize public safety and secondarily to minimize road impact and maintenance and snowplowing costs. All utilities requiring above-ground risers or boxes at intersections shall locate them at least twenty eight feet (280') from the centerline of all existingthe roads. All new underground facilities must be electronically locatable when installed, including laterals up to the structure or the building being served.
All plowed or trenched installations must include appropriate color-coded warning tape placed not less than 12 inches vertically above the top of the line. The warning tape shall be surface-detectable if needed to facilitate detection of the line.

When a utility company must make an emergency repair on a County road to restore service, they may do so. The company should notify the Director of Public Works within 48 ~~hours, and~~hours to coordinate the repair of the site as soon as possible.

~~4.~~ **A. ~~10.1~~ Underground Utilities**

1. ~~1.~~ Where the installation crosses a paved roadway, it shall be made by mechanical boring or jacking beneath the road surface. Open cutting shall be allowed to the edge of the shouldered portion of the road. ~~No water shall be used in boring and n~~No tunneling shall be permitted. In no circumstance shall an existing culvert be used for an installation of an ~~new underground~~ utility. The Director of Public Works may, in ~~her~~ their sole discretion, authorize pavement cuts with associated requirements based on the condition of the asphalt and known soil conditions in the area.

~~A.~~ 2. If micro-trenching installation is requested, it will be evaluated based on several factors, including but not limited to: roadway classification (e.g., arterial, collector, or local), traffic volumes, signalized intersections, condition and age of the existing pavement, existing utility infrastructure, and other site specific circumstances. Requests for micro-trench installations are required to include detailed drawings of the proposed route(s), location of micro-trench along route (including laterals), justification for the nonstandard trench installation, and if approved, an electronic as-built file.

~~B.~~ 2. Pavement cuts are permitted when: two unsuccessful attempts have been made to bore or jack the installation; conflicting utilities place constraints as to elevation or alignment on the proposed installation; connecting to an existing utility located beneath the paved portion of the roadway; and approved in advance by the Director of Public Works.

Cutting existing asphalt shall be accomplished so as to provide a neat even line perpendicular to the centerline of the roadway, ~~unless otherwise approved by the Director of Public Works in advance~~the cut and resulting repair will be done in accordance with the "T patching" best practice.

~~C.~~ 3. When an open cut is allowed, the permittee is responsible for restoring the disturbed portion of the roadway to its original condition. The disturbed area shall be repaired within forty-eight (48) hours from the time of excavation, or twenty-four (24) hours from completion of the project within the roadway. ~~When weather conditions prohibi~~Prior to ~~t complete~~ completing the repair the cut must be left in an acceptable condition for public use. ~~The final repair must be done as soon as weather permits.~~ Any repairs not completed within 48 hours must be ~~pre-~~approved by the Director of Public Works. (See Figure 4-14).

Backfilling within the roadway prism shall be made in six-inch lifts and mechanically

compacted and ~~densified~~ to 90% density around the utility, and 95% density for the remaining portion of the trench between the base course and the utility. Backfill outside the roadway prism shall be compacted to a density consistent with the adjoining area. Relative densities shall be determined by AASHTO T-99, with the material within one percent of optimum moisture. Backfill material shall be of clean, random (non-granular) material. Bedding material may be granular. Imported backfill meeting standards defined by the Department of Transportation, Division of Highways, State of Colorado, Standard Specifications for New Road and Bridge Construction, latest edition~~)~~ may be ~~used or~~ required when existing material is unsuitable.

Permittee may be required to perform compaction control testing. The compaction testing schedule is as follows:

~~1.~~ 1. One test at 1/2 trench depth from zero to five feet deep, and one test at finish grade.

2. Two tests, one at each third point for trenches five to ten feet deep, and one test at finish grade.

3. Three tests, one at each quarter point for trenches ten feet deep and over, and one test at finish grade.

Tests shall be performed at thirty (30) foot intervals for trenches one to one hundred twenty (120) feet in length, fifty (50) foot intervals for trenches one hundred twenty (120) to three hundred (300) feet, and one hundred (100) foot intervals for trenches over three hundred (300) feet in length. Permittee shall bear all expense for testing fees and repair costs. The County reserves the right to conduct in-place density tests to confirm the permittee's density test results, and require retesting of areas where conflicting test results are obtained.

~~Compaction control testing and documentation of results may be waived by the Director of Public Works upon submittal of A~~an acceptable surety guaranteeing repair or replacement of failures within a ~~one year~~one-year period after completion of the last repair shall be required for road cuts.

Structural backfill (flow-fill) meeting an approved design containing portland cement water, coarse aggregate and fine aggregate and, resulting in a maximum of 60 psi in 28-days may be used ~~at the approval of the Director of Public Works~~in lieu of compaction testing. ~~Compaction of this type of structural backfill will not be required if material meeting the approved design is used~~

~~.~~

Hot Bituminous Pavement Mix Grading C, CX, G, OR F as defined by the Department of Highways, Division of Transportation, State of Colorado, Standard Specifications for New Road and Bridge Construction, latest edition, shall be used for patching material, except when unavailable, during which time a temporary cold mix patch shall be allowed. Temporary patches shall be replaced with hot mix patches within five working days after material becomes available. ~~All disturbed areas to be patched shall be prime-coated with MC-70, or the equivalent, applied at a rate of 0.15 to 0.30 gallon per square yard~~. The layer of patching shall be at least as thick as the original road surface, and in no case less than two inches. Asphalt cuts shall be ~~twenty four~~twenty-four (24) inches wider (twelve inches per side) than the width of the excavation.

Permittee shall be responsible for patch failure and subsequent surface settlement for a period of twelve months after completion of ~~patching~~the last repair.

Repairs to failed patches may be made by the county and billed directly to the permittee.

~~D.~~ 4. No underground utility may be installed within a road ~~right-of-way~~rights-of-way if such installation would interfere in any fashion whatsoever with any existing utility installation or water course, including a corral, ditch or culvert, except with the prior written authorization of the owner of the existing utility installation or water course. Damage to any existing utility or in-ground infrastructure shall be the responsibility of the permittee, given that the existing utility complied with Colorado subsurface utility regulations.

~~E.~~ 5. The traveling public ~~must~~ shall be protected during the repair or installation of utilities with proper warning signs or signals. Warning signs and signals shall be installed and maintained by and at the expense of the permittee, in accordance with latest edition of The Manual on Uniform Traffic Control Devices. The County Public Works Department may require a construction signing plan prior to the granting of this permit. If proper signs are not in place during the work or a critical safety deficiency is observed, the Director of Public Works or authorized representative shall immediately stop all work until proper ~~signs are in place~~corrective actions are taken.

~~F.~~ 6. Utility placement by plowing may be allowed in certain locations. Plowing shall not occur across paved roads. Where plowing operations occur across the roadway prism and result in an open cut, backfilling shall be done in accordance with Section 4.10.1.C. Longitudinal plowing on a gravel road within the travelway shall require aggregate replacement.

~~G.~~ 7. When a road closure due to utility installation becomes necessary, the permittee shall notify the Gunnison County Sheriff's Office and/or State Patrol, transit authority, ambulance, fire department, and school district stating duration of all road closures. All road closures must be approved by the Director of Public Works in writing in advance of road closure.

~~H.~~ 8. No cleated or tracked equipment shall work on or move over asphalt surfaces without

mats.

~~I.~~ 9. Any materials excavated as the result of utility installation shall be removed from road surface each day unless the material pile is signed per the MUTCD and ~~is~~ may serv~~e~~~~ing~~ as a barrier to an open excavation. The Director of Public Works may require that road surfaces be washed. (C.R.S. Section 42-4-1207)

~~J.~~ 10. Requests for ~~utility~~ permits should allow **48 HOURS** for a field review by the County Public Works Department prior to the issuance of any permit.

~~K.~~ 11. Construction of underground installations will generally require the services of an inspector approved by the County Public Works Department. All extraordinary costs related to such inspection will be borne by the permittee.

~~L.~~ 12. ~~A copy of the fee schedule for Underground Utility Permits is available from the County Public Works Department.~~ Failure to obtain a permit when working within the County road ~~right-of-way~~rights-of-way will result in a fee five (5) times the regularly scheduled fee.

~~M.~~ 13. Road cuts for utility installation or repair made parallel to the centerline of the road, and which cause damage to, or require the removal of asphalt in any traffic lane, require the replacement of asphalt to the full lane width throughout the disturbed section ~~unless a waiver is obtained from the Director of Public Works~~.

~~N.~~ 14. When utilities are to be located behind the curb, the trench or excavation shall be located at a distance away from the back of curb or edge or asphalt equal to the depth of the trench or excavation.

~~O.~~ 15. No placement of underground utilities will be allowed when there is more than four inches (4") of frost present.

16.

~~P.~~ Utility Locate Markers. All flagging feathers used for utility locates shall be removed by the applicant before release of financial security.

~~Q.~~ 17. As-Built Plans. All applicants for surface alteration or road cut permits will be required to submit a complete set of ~~as built~~as-built plans before the final release of financial security.

~~R.~~ 18. Reclamation of Disturbed Areas. The permittee shall be responsible for the complete reclamation of areas disturbed within the ~~right-of-way~~rights-of-way to prevent the introduction and/or spread of noxious weeds and soil erosion. Soil disturbance of 500 square feet or greater ~~must~~ shall be revegetated. Revegetation requirements for soil disturbance less than 500 square feet will be at the discretion of Gunnison County. ~~(See Appendix G).~~

~~S.~~ 19. Noxious Weed Control. The permittee shall be responsible for noxious weed control in disturbed areas utilizing Integrated Weed Management (IWM) practices. Colorado Revised Statutes 35-5.5-101, *et seq*: the *Colorado Noxious Weed Act*, Gunnison Basin Integrated Weed Management Plan; Board Resolution 95-74, as amended, and Gunnison County Land Use Resolution ~~State Law, C.R.S. 35-5.5 et seq., and the Gunnison Basin Integrated Weed Management Plan; Board Resolution 95-74,~~ require that ~~certain~~ noxious weeds be controlled. Noxious weed infestations ~~to be controlled~~ should be properly identified to determine proper control measures. Noxious weeds can be controlled by utilizing one or more of the following IWM practices: 1) biological control, 2) cultural control, 3) herbicide control, or 4) physical control. Contact ~~the~~ Gunnison County ~~Weed Specialist~~ for the current list of noxious weeds mandated by law to be controlled and for assistance in weed identification and control methods.

4.11 Procedures for ~~Improvements~~ Encroachments ~~in~~ to ~~Right-of-Way~~Rights-of-way

~~A.~~ A. Purpose and Procedure.

The purpose of this section is to establish public works, engineering, inspection, permitting and other requirements that must be met before a structure, repair or other improvement (including but not limited to or temporary construction parking) can be placed by a public or private property owner within the ~~right-of-way~~rights-of-way of a County road, or public road under County jurisdiction, or private road under County jurisdiction ~~while a Development Improvement Agreement for such road is in effect~~.

1. No person or persons shall begin work on a proposed structure, repair or improvement, or make substantial renovation to an existing structure, repair or improvement, within ~~a~~ County ~~Right-of-Way~~Rights-of-way, a County road, or public road under County jurisdiction, or private road under County jurisdiction ~~while a Development Improvement Agreement for such road is in effect,~~ except as specifically permitted herein, without first obtaining a ~~Revocable Right of Way~~Right-of-way Encroachment Permit to erect or maintain a structure, repair or improvement on ~~a right-of-way~~rights-

of-way from the County. A separate permit will be required for each structure, repair or improvement proposed, unless a group or series of structures are proposed at one time.

2. ~~Note:~~ **Installation, maintenance, or improvements of a utility in, on or below a County Road or public road under the jurisdiction of Gunnison County shall require:**

   a. **A ~~revocable~~ permit for improvement in the ~~right-of-way~~rights-of-way**

   ~~1.~~

   ~~2.~~b. **A ~~road cut or surface alteration~~Right-of-way permit.**

3. A permit will not be required, and the structure, repair or improvement considered exempt, for the following:

   ~~1.~~ a. Minor or insubstantial maintenance to an existing specific structure. Such work includes, but may not be limited to, cleaning, painting or other minor resurfacing to an existing structure or structures; repairing or mending an existing structure or structures.

   ~~2.~~ b. Any work within the ~~right-of-way~~rights-of-way to repair or maintain existing irrigation ditches or impoundments.

   ~~3.~~ c. The~~-~~ Director of Public Works ~~only person who can determine~~can determine ~~that~~ if a proposed structure, or improvement or maintenance is exempt, ~~shall be the Director of Public Works~~.

4. Whenever Gunnison County determines that an existing structure or structures, improvement or improvements, approved or not approved, becomes a hazard to public safety or interferes with the County's maintenance or structure plans for the ~~right-of-way~~rights-of-way on which it is placed, the owner of the property which the structure benefits, upon receipt of written notice from the Director of Public Works or ~~his~~ their representative shall, within the period specified therein, repair, move, or eliminate said structure(s) or improvement (s), so as to eliminate the hazard or impedance and be in conformance with the requirements contained herein.

Requirements contained herein may be enforced as set forth in Section 2.3.2**.**

5. To receive a permit to erect or maintain a structure or improvement in a public ~~right-of-way~~rights-of-way, each applicant is required to submit a ~~Revocable Right-of-Way~~Right-of-way Encroachment permit application form and any associated plans or specifications required by the County. The applicant is advised to meet with the County Public Works staff ~~members~~ prior to application submission to ~~insure~~ensure that all necessary information is provided.

   a. Two (2) sets of plans and specifications shall be submitted for review by the Director of Public Works or her representative. If required by the County, these plans and specifications shall be prepared and signed by a Colorado Registered Professional Engineer. In all cases when they are requested, the plans and specifications shall show the following:

      ~~1.~~ i. Structure(s) plan and profile;

      ii. If the structures(s), repair(s), or improvement(s) impact existing roadside drainage, a plan showing how such impacts shall be mitigated by the applicant;

      ~~2.~~

      iii. Map or letters from utility companies detailing utility placement in the area of the proposed structure(s);

      ~~3.~~

      ~~4.~~ iv. Any relevant current land use approvals;

      v. Map showing property ownership and easements**.** Director of Public Works may require a survey.

      ~~5.~~

      vi. Proposed structure(s), repair(s), or improvement(s) design and site plan, showing reclamation/revegetation plan if hillsides are to be disturbed of if fill or cut is to take place as part of the plan;

      ~~6.~~

      ~~7.~~ vii. Signage plans, if any; ~~and~~

      viii. Maintenance requirements and plan; and~~.~~

      ~~8.~~ ix. Any other requirements as determined by the Director in ~~his or her~~thier discretion.

   b. Supplemental reports and data (i.e., geology, soils, water, drainage, wildlife, etc.) may be required. Supplemental reports are to be prepared by qualified professionals as required by the Director of Public Works or her representative.

   c. Gunnison County shall have the reasonable right to have all plans, specifications and supplemental reports reviewed by qualified professionals identified by Gunnison County at the cost of the applicant.

d. ~~As a condition of approval~~If required, the applicant shall execute and fully fund a security agreement in the form and amount determined by the Director of Public Works ~~and~~ in consultation with the County Attorney.

6. Neither the issuance of a permit nor compliance with the provisions hereof or with any conditions imposed in the permit issued hereunder shall relieve the applicant from the full responsibility for any damage whatsoever caused to persons or property, nor impose any liability upon any official, appointee, or employee of Gunnison County for damage to person or property. Nothing herein is or shall be construed to be a waiver by Gunnison County of governmental immunity.

7. The application shall be denied if the Director of Public Works determines that it is not in the public interest or that it will adversely affect public health, safety, or welfare.

8. Whenever a permit is required by this section and the permit is denied by the Director of Public Works, or his/her designee, the applicant for the permit may, within fifteen (15) days from the date of such denial, request in writing to the Director of Public Works, an appeal of the denial to the Board. The Director of Public Works shall, within fifteen (15) days of receiving the request, submit to the Board the written request for the appeal, and any administrative record consisting of documents considered by the Director of Public Works in her denial, including the application for the permit and all relevant documents. The Board will then decide, based upon a review of the record, whether to accept or reject the decision of the officer, within thirty (30) working days of receiving the permit application and all relevant documents. The Board may, in its discretion, request additional or other information from the applicant, the county officer who issued the denial, or other county staff. The decision rendered by the Board is the final decision of the County. For Gunnison County "~~Revocable Right-of-Way~~Right-of-way Encroachment Permit" application information please refer to Section 7.7.

9. For fee information see Exhibit A.

SECTION 5

~~ARTICLE V~~ CONSTRUCTION SPECIFICATIONS

5.1 General Policies

~~5~~ A. ~~.1.1~~ Gunnison County Construction Specifications

During the execution of road and bridge construction and related work, all materials, performance, and quality of work shall conform to the requirements of these Standards and Specifications, the applicable sections for the most current edition of the Department of Transportation, State of Colorado Standard Specifications for ~~New~~ Road and Bridge Construction, Colorado Standards Plans, Division of Highways M & S Standards, American Association of State Highway and Transportation Officials, and the Standard Specification for Highway Bridges.

If these Standards and Specifications or the Department of Transportation Standard Specifications do not cover a specific situation during the course of work, applicable specifications must be approved by and permission obtained from the County. In the event that there is conflict between the various reference specifications, they shall govern in the following order:

~~1.~~ 1. Gunnison County Standards and Specifications for ~~New~~ Road and Bridge Construction

2. Most recent, adopted, and applicable State of Colorado Department of Transportation, ~~State of Colorado~~, Standard Specifications for ~~New~~ Road and Bridge Construction; and ~~Standard Plans;~~ M & S Standards and specifications

3. Most recent, adopted, and applicable AASHTO Standard Specifications ~~for Highway Bridges~~

The County shall be the final authority on the meaning or interpretation of all specifications.

B. ~~5.1.2~~ The Project Engineer

Each road developer shall designate to the County Public Works Department a person who shall be responsible for general compliance with these Standards and Specifications, approved permits, and development improvement agreements, and the following:

~~A.~~ 1. To provide to the County any engineering details, documentation, or any other information regarding the prosecution of the work;

~~B.~~2. To apply to the County for written approval by the County any proposed alternations to the approved plans and specifications prior to construction;

~~C.~~3. To provide reproducible "as-built" plans, and specifications to the County Public Works Department upon completion of all work to be performed on the project as a condition of final approval of the work;

~~D.~~4. To furnish and set construction stakes and marks establishing all lines, grades, and measurements necessary to the proper prosecution of the work in its final location as shown on the approved plans and specifications;

~~E.~~5. To make sure all survey monuments disturbed or removed are replaced in kind at their original locations; and

~~F.~~6. To provide all materials testing necessary to establish parameters required to inspect work for compliance with approved plans and specifications.

~~G.~~7. To stop dirt work when frost levels reach four inches (4").

C. ~~5.1.3~~ Inspection and Testing

1. All work done on County roads and those roads required to be in compliance with approved land use change permits may be inspected by the County Public Works Department to ensure compliance with these Standards and Specifications, and the applicable provisions of the land use change conditions, approved plans, or subdivision agreement.

2.

The County shall suspend the work wholly, or in part, due to the failure of the contractor to carry out provisions of these Standards and Specifications, approved permits and development improvement agreements.

3. To ensure compliance with these Standards and Specifications and approved plans, adequate in-process inspection and testing is required. The Project Engineer shall be responsible for certifying all work is completed in accordance with the approved plans and specifications.

4. The County shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Project Engineer and contractor as required to make a complete and detailed inspection. The County may require that any work done or materials used without inspection must be ordered, removed, or replaced. The County may, at any time before acceptance of the work, direct the Contractor to remove or uncover any such portion of the finished work. After examination, and approval of the work by the County, the Contractor shall restore the disturbed portions of the work to the standard required by the specifications. Inspection by the County shall not relieve the developer and/or contractor, or their designated representatives of the responsibility to control the work and insure compliance with the approved plans and specifications. The County shall not be responsible for insuring project compliance with the approved plans and specifications.

5. When the Construction Specifications of other jurisdictions are involved in the work, written approval shall be provided by the other jurisdictions and made available to the County prior to final acceptance of the work. Regular in-progress materials testing shall be provided to the County in a timely manner during the course of the work, and should be a requirement of final acceptance.

6. All materials testing shall be performed by an independent laboratory, under the supervision of a professional engineer. All testing shall be at the expense of the developer, the Project Engineer, or the contractor.

7. Prior to acceptance by the County, all work not in compliance with these Standards and Specifications, approved permits, and/or development improvement agreements shall be brought into compliance at the Contractor's or owner's sole expense.

8. For the minimum requirements for compaction of embankments, sub-grades, and utility trenches, see Table 5-1. For required quality tests, see Table 5-2.

9. ~~Roads constructed to a Local Intermittent standard~~Embankment shall be exempt from controlled compaction testing and the following shall apply:~~.~~ Embankment shall be by layer placement. Surfaces steeper than a ratio of 3 horizontal to 1 vertical (3:1) upon which embankment is to be placed, shall be roughened or stepped to provide permanent bonding of new and old materials.

10. Embankment shall be layer placed, except over rock surfaces, in which case material may be placed by end dumping to the minimum depth needed for operation of spreading equipment. Each embankment layer shall be leveled and smoothed before placement of subsequent layers. Hauling and spreading equipment shall be operated uniformly over the full width of each layer.

Suitable material shall be placed in layers no more than 12 inches thick, except when the material contains rock more than 9 inches in diameter, in which case layers may be of sufficient thickness to accommodate the material involved. No layer shall exceed 24 inches before compaction.

11. Placing individual rocks or boulders greater than 24 inches will be permitted provided the embankment will accommodate them. Such rocks and boulders shall be at least 6 inches below sub-grade. They shall be carefully distributed and the voids filled with finer material to form a dense and compacted mass.

12. At a minimum, Material shall be a moisture content suitable to obtain a mass that will not ~~visible~~visibly deflect under the load of hauling and spreading equipment.

D. ~~5.1.4~~ The Use of Approved Plans and Specifications

1. Any work performed without approved plans and specifications shall be considered unauthorized and may be ordered removed and the pre-existing conditions restored.

2. Standard drawings for proposed road and bridges submitted to Gunnison County for approval shall be drawn on standard plan and profile sheet 24~~3~~" x 36" or submitted in an acceptable digital format~~.~~.
   a.

Plan drawings shall be on a scale of not less than one inch (1") equals one hundred feet (100'). Bearings and distances shall be shown in plan view.

b. Profile drawing shall be on a scale of not less than one inch (1") equals ten feet (10') vertically and one inch (1") equals one hundred feet (100') horizontally. Length of vertical curves and percent of grade shall be shown on profile. Size, length and station location of pipe shall be shown on profile.

3. A typical roadway cross section of a scale not less than one inch (1") equals ten feet (10') shall be furnished with all road plans. Cross section shall show road width, surfacing type, width and depth, cut and fill slopes and other special treatments such as top soiling or rip rap. A cross section shall be drawn for each culvert installation showing size and length of pipe, height of cover over pipe and grade of pipe.

4. All standard drawings shall be drawn on reproducible quality paper or in digital format with adequate resolution. ~~.~~

5. The approved plans, specifications, supplementary specifications, standards, supplementary standards and any special provisions required or approved by the County shall be considered consistent, to describe and provide for the complete work.

6. The contractor shall not take advantage of any error or omission in the approved plans, standards, and specifications. In the event and apparent error or omission is discovered, the Project Engineer and the County shall be notified. The developer and/or contractor, acting through the Project Engineer, shall make any corrections required, subject to approval by the County.

E. ~~5.1.5~~ Acceptance of Work

~~A.~~ 1. Partial Acceptance. Immediately after a section of the work is completed such as a section of the subgrade, structures, trench backfill, etc., acceptance of that element is required prior to proceeding with the next element. An example would be acceptance of subgrade prior to the placement of subbase. If, after partial acceptance of an element of work, conditions change and the next element is not constructed for a period of time, the County may require a re-inspection and acceptance as per Section 5.1.3.

~~B.~~ 2. Final Acceptance. Immediately upon completion of the project the road developer shall notify the County Public Works Department and schedule a final inspection.

3. If the County Public Works Department determines that construction is in compliance with these Standards and Specifications, approved permits and/or development improvement agreements it ~~shall~~ may initiate the procedure for acceptance by the Board for maintenance or release of the performance guarantee securing the completion of the work within 364 days.

4. If the County Public Works Department determines that construction is not in compliance with these Standards and Specifications, the County ~~will shalll~~shall provide written notification of the deficient items to the road developer and to the Gunnison County ~~Planning~~ Community Development Department. In the event the work is not done, the developer or owner is responsible for maintenance of the work until such time as all such items are completed or corrected and a satisfactory re-inspection is made, and the work approved in writing by the Director of Public Works.

F. ~~5.1.6~~ Cooperation with Utilities

1. The developer ~~, acting through the Project Engineer,~~ shall be responsible for coordinating the location, relocation, installation or removal of all utilities involved with the construction of the project.

2. The construction plans for the proposed project shall be submitted to the affected utilities as soon as possible. Adequate notice shall be given to utilities for utility locations required for the work to avoid damage to existing utilities and conflicts in the work.

G. Guidelines for Traffic Studies

Traffic Studies shall be required as determined by the Director. Traffic studies shall follow the guidelines in the LUR SECTION 12-103: ROAD SYSTEM or as determined by the Director in their discretion

~~ARTICLE VI~~

~~TRAFFIC STUDIES~~

~~61 Guidelines for Traffic Studies~~

~~Traffic Studies shall be required as determined by the Director. Traffic studies shall follow the guidelines in the LUR SECTION 12-103: ROAD SYSTEM or as determined by the Director in his or her discretion.~~ ~~Traffic consultants are invited to discuss projects with the Public Works Department and/or Planning Department prior to initiation of the study. This should provide a firm base of cooperation and communication between the County, the Owner/Developer and the consultant in creating traffic characteristics that are in the best interest of the total community.~~

~~All traffic studies shall contain, as a minimum, the following information:~~

~~A. A summary table listing each type of land use by development within each development, and on surrounding public lands; the number of units involved, generation rates used, and the resultant trip generation. Trip generation should be calculated from the latest data utilized by the Colorado Department of Transportation and approved by the Gunnison County Planning Department.~~

~~B. Site location map(s) showing location of each land use and a network map that shows all existing and proposed road facilities.~~

~~C. Proposed improvements (including roadway widenings, channelization, signalized intersections) should be identified, and preliminary design schematics submitted.~~

~~D. Traffic graphics should show:~~

~~1. Peak hours site traffic (in and out and on adjacent facilities).~~

~~2. Peak hour total traffic (current traffic plus site traffic in and out and on adjacent facilities).~~

~~3. Peak hour total traffic (twenty (20) year projection) in and out and on adjacent facilities.~~

~~4. Total daily traffic (with site traffic shown in parenthesis) both existing and twenty (20) year projected.~~

~~5. Turning movements before and after project at major intersections. In the absence of any meaningful peak hour data, peak hour trips shall be assumed to be twenty (20) percent of total daily trips.~~

SECTION 6~~ARTICLE VII~~

PERMITS

~~7.1~~ 6.1 Issuance of Permits

Permit fees and bonds for any permit named in these Standards and Specifications shall be set by the Board. ~~No fees or bonds may be imposed on special districts; however such districts shall be required to obtain all necessary permits.~~

~~7.2 Underground Utility Construction Permit (Road Cuts)~~

~~No individual, company, corporation, or public agency shall modify, install, repair, or otherwise change any utility located in, on, or over and within thirty (30) feet of the centerline of any County Road, or public road under County jurisdiction, or private road under County jurisdiction while a Development Improvement Agreement for such road is in effect without first obtaining an Underground Utility Construction Permit from the Director of Public Works Department. Financial security will may be required to insure conformance with these Standards and Specifications.~~

~~Underground Utility Construction permits Permits shall be obtained and approved at least forty-eight (48) hoursthreefive (35) business days prior to commencement of thethe scheduled time of road cutwork unless the work is officially deemed an emergency by the utility owner. In such a case the utility owner must notify the Public Works Department as soon as is reasonable to obtain a permit. The applicant must notify the Public Works Department at least twenty-four (24) hoursone (1) business day in advance of scheduled commencing work. The applicant shall submit a written schedule of the work, including materials and length of disturbance, the total time area will be disturbed, and a MUTCD compliant signing and traffic management plan. This Permit shall not be transferable.~~

~~Gunnison County may hold the financial security for one year from the completion and inspection of the work by Gunnison County staff. It may be refunded earlier, if in the sole discretion of the Director of Public Works., it is determined that the cut is stable and no further work will be needed.~~

~~7.3~~ 6.2 ~~Surface AlterationRIght-of-WayRight-of-way~~ Permit (Work Within ~~Right-of-Way~~Rights-of-way)

A. No individual, company or corporation, or public agency shall construct or alter any road, drainage, or other ~~improvements~~ infrastructure within a County road ~~right-of-way~~rights-of-way, County road, or public road under County jurisdiction, or private road under County jurisdiction ~~while a Development Improvement Agreement for such road is in effect~~ without a Surface Alteration Permit from the Director of Public Works. Road construction shall be in

accordance with engineering plans prepared by a professional engineer, in conformance with these Standards and Specifications, with said plans to be approved by Gunnison County.

B. No individual, company, corporation, or public agency shall modify, install, repair, or otherwise change any utility located in, on, or over and within thirty (30) feet of the centerline of any County Road, or public road under County jurisdiction, or private road under County jurisdiction without first obtaining a Permit from the Public Works Department. Financial security may be required to insure conformance with these Standards and Specifications. Gunnison County may hold the financial security for one (1) year from the completion and inspection of the work by Gunnison County staff. It may be refunded earlier, in the sole discretion of the Director of Public Works.

C. Permits shall ~~submitted~~be submitted for approval at least five (5) business days prior to commencement of the scheduled time of road cutwork unless the work is officially deemed an emergency by the utility owner. An approved permit must be issued forty-eight (48) hours or more in advance of commencing the work. The applicant shall submit a written schedule of the work, including materials and length of disturbance, the total time area will be disturbed, and a Manual for Uniform Traffic Control Devices compliant signing and traffic management plan. In the case of an emergency repair, the utility owner must notify the Public Works Department as soon as is reasonable to obtain a permit. The applicant must notify the Public Works Department at least twenty-four (24) hours (1 business day) of performing and emergency repair.

Such Permit is not transferable to any successor, assignee, designee, heir, parent or subsidiary, or person other than the named permit holder.

~~This Permit shall not be transferable.~~~~Surface Alteration Permits shall be obtained at least~~ shall ~~be obtained and approved at least threefive (35) business days prior to the scheduled time of work~~forty-eight (**48**) ~~hours prior to commencement of the road cut. The applicant must notify the Public Works Department at least one (1) business day in advance of commencing work. The applicant must notify the Public Works Department at least twenty-four (24) hours in advance of scheduled work. A list of required field tests and inspections will be attached to the permit. The applicant shall submit a written schedule of the work, including quantities of materials and length in feet of surface disturbance, and total time area will be disturbed, and a MUTCD compliant signing and traffic management plan.~~

~~Approved permits shall not be changed without the written consent of Gunnison County. Gunnison County may hold the financial security for one year from the completion and inspection of the work by Gunnison County staffafter completion of the work. It may be refunded earlier, if in the sole discretion of the Director of Public Works, it is determined that the cut is stable and no further work will be needed. This Permit shall not be transferable.~~

~~7.4~~ 6.3 Access Permits

No person shall construct, substantially improve, change, and/or extend any access providing vehicular and/-or off highway vehicle (OHV) and/or mechanized access to or from any public highway or ~~right-of-way~~ rights-of-way, or County road or public road, or private road from or to property ~~adjoining~~ requiring or utilizing access to such road without a County Access Permit

issued by the ~~Director of~~ Public Works Department. Internal circulation roads, trails or accesses are subject to the access permit process. No access permit shall be issued without there having been a site inspection by the Director of Public Works or ~~her~~ their representative. The Director, or ~~her~~ their representative~~,~~ may~~,~~ specify certain conditions and/or requirements~~,~~ in addition to those set forth in these Standards and Specifications~~,~~ for issuance of an access permit. Work associated with Access Permits shall be complete within ~~one~~two years of issuance or shall be considered withdrawn and not refunded unless an extension is granted per the permit language.~~.~~ Access permits are assigned to the specific parcel being accessed. Easements shall be provided for every parcel the access crosses regardless of ownership. Access Permits shall not expire once a final inspection is approved and the permit is completed. This Permit shall be transferable through transfer of deed.

~~7.5~~ 6.4 Oversize/Overweight Permits

The Director of Public Works may, upon application in writing and good cause being shown, issue an Oversize/Overweight Permit to operate or move a vehicle or combination of vehicles of a size or weight of vehicle or load exceeding the maximum legal load permitted by the State of Colorado. The County Public Works Department may limit the number of trips and/or the hours of operation, or otherwise prescribe conditions of operation of such vehicles to ensure against undue damage to road foundations, surfaces, or structures, and to ensure the safety of the

motoring public. Further, the County Public Works Department may require such fee, undertaking, bonding, or other security as may be deemed necessary to compensate for any damage to any roadway or structure. In the case of a declared emergency permitting may be expanded to cover all traffic on a County road even if the vehicle is typically exempted from permit regulations. Such Permit is not transferable to any successor, assignee, designee, heir, parent or subsidiary, or person other than the named permit holder.

~~This Permit shall not be transferable.~~

~~7.6~~ 6.5 Snow Removal or Grooming Permit

The Director of Public Works may, after an application has been submitted, an evaluation has been prepared, and the ~~plowing~~ permit has been approved by the Board of County Commissioners, issue a Snow Removal and/or Grooming Permit. ~~The Permit will be valid for only one plowing season.~~ Renewals may be issued for up to three (3) consecutive winter seasons at the Director's discretion and until either party has cause to terminate or not renew the permit. The Snow Removal or Grooming Permit may contain such conditions as necessary to preserve the integrity of the road, comply with the LUR and/or a land use change, ~~and~~ provide for the safety of the road users, protect the County from ~~liabiliuty~~liability, or other ~~providions~~conditions as determined by the Board in its sole discretion. ~~Further t~~The County Public Works Department may require financial security as may be deemed necessary to repair any damage to the roadway or structures. ~~This~~Such Permit ~~shall~~ is not ~~be~~ transferable to any successor, assignee, designee, heir, parent or subsidiary, or person other than the named permit holder.

~~7.7~~ 6.6 ~~Revocable~~ Right-of-Way Encroachment Permit

The Director of Public Works may, after an application has been submitted and evaluated, issue a ~~Revocable Right- of-Way~~ permit for the construction, installation and/or maintenance of any artificially constructed ~~placement of a~~ semi-permanent or permanent structure, repair, or improvement in the road ~~right-of-way~~right-of-way of a County road, public road under the jurisdiction of Gunnison County, or private road under the jurisdiction of Gunnison County ~~while a Development Improvement Agreement for such road is in effect~~. The ~~Revocable Right-of-Way~~Right-of-way ~~Encroachment Permit~~Encroachment Permit may contain such conditions as necessary to preserve the integrity of the road and the ~~right-of-way~~rights-of-way, and provide for the safety of the road users. The ~~right-of-way~~rights-of-way encroachment permit is fully and freely revocable at any time by the County for any reason, or no~~t~~ reason at all, and shall not be construed to grant any right or privilege to any permit holder other than the revocable and limited rights afforded by the permit. Further, the County Public Works Department ~~and/or County Attorney~~ may require financial security as may be deemed necessary to repair any damage to the road, structure, or ~~right-of-way~~rights-of-way. Such Permit is ~~not~~ transferable to a~~ny~~ successor, assignee, designee, heir, parent or subsidiary, or person other than the named permit holder through legal instrument.~~This Permit shall be transferable through transfer of deed.~~

6.7 ~~7.9~~ Parking Permits

The ~~Board~~Director of Public Works ~~of County Commissioners County~~ may issue parking permits at its discretion on land that ~~it~~the County ~~wholly~~ controls, owns, or has agreement to administer. These permits apply only to the ~~specific~~designated location ~~of~~offset forth on the permit, will ~~carry~~set forth specific criteria or conditions with which the permit holder must comply, and may also ~~or may not comply with the rest of the standards herein~~require compliance with other provisions of these Standards. ~~One permit does not set precedent for other permits~~Issuance of such permit shall not be deemed to create any right or privilege in any permit holder other than the limited and temporary rights afforded by the terms of the permit and these Standards, and are fully and freely revocable by the Director of Public Works for any reason, or no reason at all. Vertical, on-site signage describing the parking restrictions ~~shall constitute variance and~~may provide notice of parking policies for that area, but such signage is not required for the County to enforce such policies, these Standards, or any other law or rule. There shall be no overnight parking in the ~~P~~public ~~R~~rights of ~~W~~way without a ~~BOCC~~parking permit. ~~This Permit shall not be transferable.~~ Parking Permits are not transferable to any successor, assignee, designee, heir, parent or subsidiary, or person other than the named permit holder.

6.8 ~~7.10~~ Reclamation Permits for the Control of ~~the n~~Noxious Weeds

Except as otherwise exempted, construction or development as defined ~~and~~/or regulated by the County by any individual, company or corporation, or public agency which results in any site disturbance of 10,000 or more ~~sq. ft.~~square feet of disturbance, shall be required to obtain a Reclamation Permit for Revegetation and Noxious Weed Control from the Gunnison County Public Works Department Weed Management Program Coordinator. ~~—~~The permittee shall be responsible for the complete reclamation of all disturbed areas to prevent the introduction and/or spread of noxious weeds and soil erosion in accordance with Colorado Revised Statutes 35-5.5-101, *et seq*: the *Colorado Noxious Weed Act*, Gunnison Basin Integrated Weed Management Plan; Board Resolution 95-74, and Gunnison County Land Use Resolution. Termination of Reclamation Permit coverage occurs when vegetation required pursuant to *Section 13-115: Reclamation and Noxious Weed Control* is established and growing within two full growing seasons of the date of the issuance of a Certificate of Occupancy or Closing of the Building Permit associated the applicable Gunnison County Reclamation Permit. ~~This~~Such Permit is not transferable to any successor, assignee, designee, heir, parent or subsidiary, or person other than the named permit holder.

~~shall not be transferable.~~

~~7.8~~ 6.9 ~~Transfer of Permits~~

~~A permit may be transferred only with the written consent of the Director which consent shall be in the Director's sole discretion. The Director, before consenting to any transfer, may condition or restrict such transfer to ensure that the health, welfare and safety of the public are protected. Each prospective transferee must ensure, before approval of any transfer, that the proposed transferee can and will comply with all of the applicable requirements, regulations, standards, and conditions.~~shall not be ~~transferrable.~~

~~7.9~~ Financial Security

As a condition of the issuance of any permit, the Director, at the Director's sole discretion, may require ~~the~~ a permittee to file a guarantee of financial security in an amount established by the Director and payable to the County. The guarantee may be in the form of cash~~, federally-insured certificates of deposit~~, irrevocable letters of credit issued by a bank acceptable to the Board, surety bonds issued by a company authorized to do business in Colorado~~, written guarantees backed by collateral acceptable by the Board~~, or any other form, or combination of forms, established by the Board.

~~7.10 Parking Permits~~

~~The Board of County Commissioners County can issue parking permits at its discretion on land that it wholly controls, owns, or has agreement to administer. These permits apply only to the specific location of the permit, will carry specific criteria, and may or may not comply with the rest of the standards herein. One permit does not set precedent for other permits. There shall be no overnight parking in the Public Right of Way without a BOCC permit.~~

REFERENCED REPORTS

1.

~~1.~~ Gunnison County, Colorado Land Use Resolution, as amended, Gunnison County Planning Department.

~~2.~~ 2.State Highway Access Code, State of Colorado, Department of Transportation.

~~3.~~ 3.Manual on Uniform Traffic Control Devices, U.S. Department of Transportation, Federal Highway Administration.

~~4.~~ 4.Colorado Vehicle Code, Colorado State Patrol Troop Office, Grand Junction, Colorado.

~~5.~~ 5.Geometric Design of Highways and Roads, The American Association of State Highway and Transportation Officials.

~~6.~~ 6.Roadway Design Manual, State of Colorado, Department of Transportation~~Colorado Department of Transportation~~.

~~7.~~ 7.Trip Generation, The Institute of Transportation Engineers.

~~8.~~ 8.Standard Specifications for ~~New~~ Road and Bridge Construction, State of Colorado, Department of Transportation~~State of Colorado, Division of Highways~~.

~~9.~~ 9. Gunnison County Flood Damage Prevention Resolution, Gunnison County, Colorado. Gunnison County Planning Department.

~~10.~~ 10. Procedures for Determining Peak Flows in Colorado, U.S. Department of Agriculture, Soil Conservation Service, 1980.

~~11.~~ 11. Concrete Pipe Design Manual, ACPA Arlington, Virginia, February, 1974.

~~12.~~ 12. Handbook of Steel Drainage and Highway Construction Products, A151, Washington, D.C. 1971.

~~13.~~ 13. Standard Specifications for Highway Bridges, The American Association of State Highway and Transportation Officials.

~~14.~~ 14. Colorado Standard Plans, State of Colorado, Department of Transportation ~~Division of Highways M and S Standards~~.

~~15.~~ 15. Standard Plans for Highway Bridges, U.S. Department of Transportation, Federal Highway Administration.

~~16.~~ 16. Uniform Construction Standards for Colorado Public Works, Colorado Contractors Association, Inc.

APPENDIX A

LEGAL RESPONSIBILITIES

The latest edition of the Division of Highways, State of Colorado, Standard Specifications for ~~New~~ Road and Bridge Construction; Section 107 - Legal Relations and Responsibilities to the Public, shall be considered Supplemental Specifications to these Standards with the additions, deletions, or revisions noted in Sections one and two as supplied annually by the Division of Highways, State of Colorado.

Section ~~1 Definitions~~1 Definitions

State - shall be redefined as Gunnison County, Colorado.

Division - shall be redefined as the Gunnison County Public Works Department.

Engineer - shall be the Project Engineer as defined in Section 5.1.2 when acting as the authorized agent of the developer or contractor or the County as defined in Section 5.1.3 when acting in behalf of the Public Works Department.

Contract - shall be redefined as these Standards.

Section 2 Section 107, Legal Relations and Responsibility to Public

Payment - Delete any reference to payment for the use of these Standards.

107.04 - Delete Subsection.

107.07 - Delete "as specified under subsection 104.04".

107.09 - Delete Subsection.

107.16 - Paragraph one, line eight, revise to read the following: "the Contractor or Developer shall be required to assume any expenses entailed in maintaining traffic". Delete last sentence. Delete paragraphs two, three, and four.

107.19 - Delete Subsection.

107.10 - Is hereby revised as follows: Paragraph one - "In carrying out any of the provisions of these Standards; or in exercising any power or authority granted to them by Gunnison County; or performing their duties within the scope of their employment, there shall be no personal liability upon the Board, Director of Public Works, or their authorized representatives due to injuries sustained from an act or omission of such employee, except as may be provided by

law."

107.22 - Delete Subsection.

107.23 - Delete Subsection.

107.25 - Delete paragraph 2 of section - (c) Measurement and Payment.

APPENDIX B

APPENDIX C

APPENDIX D

APPENDIX E

APPENDIX F

APPENDIX G

RECLAMATION ~~RECOMMENDATIONS~~ FOR ~~NEW~~ EXPOSED EARTHWORK

Land Preparation: ~~Replace the disturbed soil as close to the original soil profile as possible prior to revegetation. After the topsoil is replaced, a firm seedbed is required before planting grass seed. The seedbed should be firm enough to allow good seed-to-soil contact.~~Follow the Gunnison County Weeds Program and the most recent Natural Resources Conservation Service~~NRCS~~ guidelines for the preparation of the land. This may include runoff control measures to insure the successful rehabilitation of the land.

Seeding Time: The seeding time with the greatest success is a dormant seeding for areas that cannot be irrigated. Spring seeding can be successful if rainfall is above the historical average. Late summer seedings (late July to mid-August) have shown success in some areas since August and September have historically been the highest rainfall months.

Suggested seeding times (without irrigation) based on Major Land Resource Area (MLRA):

7500-9500 feet elevation
Dormant Seeding (Best) – October 1-November 15 Spring Seeding – not recommended
Late Summer Seeding (Marginal) – August 1-31

Alpine Zone (10,000 feet elevation and above)
Dormant Seeding (Best) – September 1-30 Spring Seeding – not recommended
Late Summer Seeding (Marginal) – July 15-August 15

Seeding Methods: Drilling the grass seed is the best method. Drill depth should be placed between ½ and ¾ inch below the soil surface. For slopes that are greater than 3:1 slope, seeding may be broadcast by hand or mechanical spreader and rated into the upper soil layer (no deeper than ¾ inch). Slopes steeper than 2:1 shall require seed stabilization methods. **Seed should not be incorporated and applied simultaneously with ~~the~~ a hydromulch slurry.**

Rate of Seeding: Each specific seed mix will have a rate for the seed and climate. ~~When seeds are drilled use 10 pounds per acre of pre-mixed grass seed. When seed is broadcast by hand or mechanical seed spreader use 20 pounds per acre of pre-mixed grass seed.~~

Mulches: Straw and/or hay used for mulch, must be certified weed free. A hydromulch can be applied to the area after the seed has been drilled in or broadcast. On steep slopes where crimping is not possible, jute matting (biodegradable mesh) may be used as a mulch over the newly seeded areas.

Time Frame of Reclamation Process: Reclamation can require several years (1 to 5) to determine stand establishment. It should be expected that early seral species (such as summer and winter annuals) will occupy the area before the desired perennial stand dominates. Each year the revegetated ~~revegated~~ sites will be reviewed by the Gunnison County Weed Specialist upon which time the permittee will be advised as to the management practices that are expected to ~~insure~~ensure reclamation success.

~~Unreasonable demands will not be placed on the expected outcome of the reclamation.~~, ~~but~~ It is expected that the reclaimed areas will be ecologically comparable to the surrounding~~,~~ undisturbed land. ~~This would be defined by the percentage of desired grass species compared to weedy annual broadleaf species (which usually requires not less than three years).~~

SEEDS RECOMMENDATIONS~~DED~~

~~**DRY AREA RECOMMENDATION**~~

~~This recommendation covers most of the land area below 8500 feet in elevation.~~

~~Species~~	~~Variety~~	~~lbs./¼ acre~~
~~Smooth Bromegrass~~	~~Manchar~~	~~2~~
~~Crested Wheatgrass~~	~~Ephriam~~	~~2~~
~~Slender Wheatgrass~~	~~San Luis~~	~~1~~
~~Russian Wildrye~~	~~Bozoisky~~	~~1~~
~~Sheep Fescue~~	~~Big Horn~~	~~1~~
	~~Total~~	~~7 lbs. Pure Live Seed~~

~~MOIST AREA RECOMMENDATION~~

~~This recommendation covers most of the land area above 8500 feet in elevation.~~

~~Species~~	~~Variety~~	~~lbs./¼ acre~~
~~Smooth Bromegrass~~	~~Manchar~~	~~2~~
~~Timothy~~	~~Climax~~	~~1~~
~~Slender Wheatgrass~~	~~San Luis~~	~~1~~
~~Canadian Bluegrass~~	~~Ruebens~~	~~1~~
~~Total~~		~~5 lbs. Pure Live Seed~~

Seed mixes in Gunnison County are determined by elevation, moisture, surrounding foliage, and other considerations. The NRCS or the CSU Extension office employee experts that should be consulted for the specific project in question.

Sometimes certain varieties of seed can be substituted~~, but the above varieties are suited to our area~~.

This seeding recommendation was provided by the Natural Resources Conservation Service.
~~Seed can be ordered through the Gunnison Soil Conservation District by calling, (970) 641-0494.~~

APPENDIX H

APPENDIX I

APPENDIX J

DEVELOPMENT IMPROVEMENTS AGREEMENT

This Development Improvements Agreement is entered into this _____day of _, 20____ between the Board of County Commissioners of Gunnison County, Colorado (herein the "County"), and (herein the "Permittee") as follows:

1. PURPOSE. The Permittee has submitted to the County the ~~Permitte's~~~~Permitee's~~Permitee' application for a permit pursuant to the Gunnison County Standards and Specifications regarding _____(herein the "Project"). The legal description of the Project is attached hereto and incorporated herein as Exhibit "A". As valuable and sufficient consideration for this Agreement, the County and the Permittee agree that approval of such application by the County is expressly conditioned on completion of the improvements described in paragraph 7, below (herein the "Improvements") to the specifications described herein and by the times specified herein. The County and the Permittee further agree that such Improvements are appropriate and necessary requirements to be required by the County, and to be performed by the Permittee and which Permittee shall perform. The County and Permittee further agree that an agreement guaranteeing the Permittee's performance secured by suitable security to protect the interests of the County, and the public in the amount set forth herein is an appropriate condition to the County's approval of such permit. The parties have entered into this agreement to memorialize such understandings and agreements. The relationship of the parties to this Agreement is contractual; Permittee is an independent contractor and is not an agent of the County.

2. DEVELOPER BOUND. The Permittee agrees to accept and be bound by the terms and conditions of the County's issuance of its approval of the Permit and the terms and conditions of this agreement. Permittee accepts the County's review and permitting authority; process and performance of same in connection with the permit as legal and valid and waives any defect therein.

3. CONSTRUCTION.

~~A.~~ The Permittee agrees to complete construction of the Improvements within the Project in the locations set forth on the

~~—~~plans attached hereto as Exhibit __, and in accordance with the specifications thereof by not later than

A. _____, 20_~~0~~_, acts of God and any cause beyond the reasonable control of the Permittee excepted, including without limitation labor disputes, laws, regulations, or orders of any governmental entity, orders of court, inability to obtain any required authorization, act of war or donations arising out of or attributable to war, riot, civil strike, insurrection or rebellion, fire, explosion, earthquake, storm, flood or other adverse weather condition, delay or failure by suppliers or material men, contractors, or subcontractors, shortage of or inability to obtain labor, supplies or materials.

B. The completion deadline set forth in this paragraph 3 may be extended by the County in its sole discretion upon written request of Permittee if the County determines that: (1) such extension of time will not operate to the detriment of the County, the public or the owners of property within the Project; and (2) the County's security is adequate to ensure full performance by Permittee by the extended completion date; and (3) that such an extension would not be in conflict with the

conditions of the approved Permit. The County may require Permittee to provide, at Permittee's cost, supplemental estimates by Permittee's engineer of the costs of completion and to provide additional security as a prerequisite to its extension of any completion date. Any extended completion date granted by the County hereunder may be further extended in like manner.

C. Each contract entered into by Permittee for construction of the Improvements shall provide that the County is a third party beneficiary with all rights to enforce such contracts in place of Permittee in the event of a default by Permittee. Permittee shall provide to County a copy of each such contract upon its execution.

4. ESTIMATED COST. The total cost of the ~~Improvements~~ improvements to be constructed by the Permittee as provided by a third-party contractor bid that includes the full scope of work as presented in Exhibit A is estimated currently to be $_____ ~~plus~~ (including a 10% contingency amount).

5. SECURITY. In order to secure of obligations of the Permittee herein, the Permittee and the County agree that the Permittee shall, at Permittee's sole cost, and before starting work on any phase of the Project or Improvements, and before conveying any portion of the Project, obtain and provide to the County a bond, and/or irrevocable letter of credit or other performance guarantee in a form and content satisfactory to the County to the benefit of the county in ~~the~~ an amount of ~~$_____~~ which is ~~124~~ 125 percent of the currently estimated cost of the i~~I~~mprovements, ~~to~~ (~~include~~ including a ~~reasonable~~ 10% contingency amount).

If the contract(s) provided to the County pursuant to paragraph 3C indicate a substantially different total cost than estimated in paragraph 4, the amount of security may be increased or decrease. For the purposes of this paragraph 5, substantial is defined as 10 percent or more.

Pending full performance of all of the terms and conditions hereof by the Permittee, the County shall retain said security and shall remain the beneficiary of such security. In the event of any uncured default hereunder the County in its sole discretion, and without any other authority required, may draw upon said security up to the full amount of $~~-~~ _upon presentation by the County to the ____of a written statement by the County that such uncured default exists. Upon timely performance of all terms and conditions hereof, said security shall be tendered by the County to the Permittee.

6. CERTIFICATION.
   A. Not later than _____, 20~~0~~__, a registered Colorado engineer retained by the Permittee at it s expense shall certify to the County whether the Permittee's construction obligations regarding Improvements under this agreement have been fully and faithfully performed according to design and time specifications. Upon receipt of such certification and a complete copy of as built specifications and drawings, the County shall review the same and shall make an independent judgment whether to accept the same in the sole discretion of the County. Permittee agrees not to cover or otherwise prevent inspection of the Improvements constructed hereunder until Permittee's engineer and the County's representative have had reasonable opportunity to inspect such Improvements.
   B. Not later than _____, 20~~0~~__, Permittee shall provide to the County Attorney a sworn affidavit, signed by the Permittee's authorized representative, that the Improvements completed have been paid for, in full, by the Permittee. The Permittee shall be responsible for the information so provided. Said written certification will be reviewed by the County, but the County shall have no responsibility or liability to any part regarding the veracity of the information so provided.

7. SCOPE OF WORK.
   A. The scope of work to be done by the Permittee shall include, but not be limited to: ~~7.1~~Exhibit A (~~Fill~~ Attach~~in~~ applicable details)
   B. The conditions of this agreement and the permit are such that if the obligations hereunder of the Permittee are well, truly, faithfully and timely performed by Permittee, inspected and certified to by the Permittee's engineer, and such performance is accepted by the County in the County's sole discretion, the Permittee's obligations to the County under this agreement except as set forth in 7C below shall be at an end; otherwise such conditions and obligations shall remain in full force and effect.
   C. For a period of one year from and after the acceptance of all of the work described in paragraph 7A, above, Permittee shall, at its own expense, make all needed repairs and replacements to such work as shall, in the County's reasonable opinion, become necessary. The County shall have the right to retain up to $____of the security for up to one year following the acceptance of all of the work described in paragraph 7A. above, as security to ensure such repair and replacement.

8. PARTIAL RELEASE OF SECURITY.
   A. The County recognizes that as work proceeds upon the Improvements, the County's need for security shall be reduced. Accordingly, the County agrees to consider a ~~reasonable~~ partial release of the security to be delivered to the ~~County~~ Permittee pursuant to paragraph 5 hereof upon receipt of a written certification~~,~~ by Permittee's engineer~~,~~ stating the estimated ~~cost~~ percentage

of remaining work to reach completion, in which event the County ~~shall~~ may retain security equal to 125 percent of such estimated ~~cost~~ percent of remaining work to reach completion ~~plus 20 percent of the original estimated cost of the Improvements~~ and shall release the balance of ~~all~~ security held by the County.

B. Upon Permittee's entering into a contract or contracts for construction of improvements hereunder, Permittee and County may negotiate an addendum to this Agreement setting forth such reasonable schedule for partial releases of the security in accordance with the anticipated construction schedule. In such circumstance, the County shall designate and authorize the County Manager, Director of Public Works or County Attorney to make the partial release(s) hereunder after consultation with appropriate County staff.

9. PERMITTEES' DEFAULT. In the event of any default hereunder by the Permittee, the County shall give notice to the Permittee specifying the nature of such default, which notice shall be given by facsimile transmission or by certified mail with return receipt requested addressed to the Permittee at _____. In the event the Permittee does not remedy such default to the satisfaction of the County within 14 days following such notice, the County may elect, in its discretion to exercise all remedies available to it, including but not limited to:

9.1 To specifically enforce the terms and conditions of this agreement;
9.2 To draw upon or otherwise obtain the benefit of the security;
9.3 To exercise any other rights and obtain any other remedies provided by law;
9.4 To obtain from the Permittee either an extension of the County's security hereunder to guarantee the completion of the improvements only on the conditions (1) that suitable additional security is provided the County to guarantee the construction of said Improvements within the new time period determined by the County, and (2) that the County determines that it would not be detrimental to the interest of the County, the public or the owners

of property within the Project to allow such extension (3) that the County determines that it would not be in conflict with the conditions of the approved Permit.

10. RECORDING OF AGREEMENT. Upon its execution, this Agreement shall be recorded by the Permittee and shall be a covenant running with the property herein described in order to put prospective purchasers or other interested parties on notice as to the terms and provisions hereof.

11. RETENTION OF POLICE POWERS. The County retains the power and right to impose additional requirements upon Permittee with regard to the Project if the failure to do so would place the public or owners of property within the Project in a perilous condition, or in the event of substantially changed conditions; that is, nothing in this Agreement is or shall be construed to be a bargaining away of the County's police power.

12. TRANSFER OR ASSIGNMENT. No transfer or assignment of any of the rights or obligations of the Permittee under this Agreement shall be permitted without prior written approval of the County which approval shall not unreasonably be withheld.

13. TITLE AND AUTHORITY. The Permittee expressly warrants and represent to the county that it is the record owner of the real property constituting the Project, and further represents and warrants, together with the undersigned individual, that the undersigned individual has full power and authority to enter into Agreement. The Permittee and the undersigned individual understand that the County is relying on such representations and warranties in entering in to this Agreement.

14. LITIGATION. Nothing contained herein shall prevent either party from obtaining a judicial determination of the violation of its rights hereunder; provided however, that written notice to the other party advising the other party of the alleged violation, and advising that in the event the matter is not resolved by the parties within 14 days thereafter, shall be a condition precedent to the commencement of any litigation.

15. TIME OF ESSENCE. It is mutually agreed that time of performance is an essential part of this agreement and that all terms, covenants and conditions herein shall extend to and become obligatory upon the successors and assigns of the respective parties hereto.

16. VENUE AND CHOICE OF LAW. This agreement is entered into in Gunnison County, Colorado and it I agreed that the exclusive jurisdiction and venue of any action pertaining to the interpretation or enforcement of this agreement shall be in the District Court of Gunnison County, Colorado. The exclusive choice of law pertaining to this transaction shall be that of the State of Colorado without giving effect to Colorado choice of law principles.

17. SEVERABILITY. If any term or provision of this agreement shall be invalid or unenforceable, the remainder of this agreement and the terms and provisions thereof shall not be affected thereby and all other terms and provisions of the agreement shall be valid and enforceable to the full extent permitted by law.

18. ATTORNEYS' FEES. If any action is brought in a court of law by either party to this agreement as to the enforcement, interpretation or construction of this agreement or any document provided

for herein, the prevailing party in such action shall be entitled to reasonable attorneys' fees as well as all cost incurred in the prosecution of defense of such action.

19. ~~–~~HOLD ~~HARMLES~~HARMLESS CLAUSE. The Permittee shall indemnify, defend and hold harmless the County, its officials, employees and agents from and against liability for damages, injury or death which may arise from the direct or indirect operations of the owner, Permittee, contractors or subcontractors, which relate to the Project.

20. ~~–~~ENTIRE AGREEMENT. This agreement contains the entire and only agreement between the parties regarding development improvements, and no oral statements or representations not contained in this agreement shall be of any force and effect between the parties. This agreement shall not be modified or amended in any manner except by written instrument executed by the parties.

21. ~~–~~BINDING AGREEMENT. This agreement shall be binding upon and inure to the benefit of the heirs, personal representatives, successors and assigns of the parties hereto.

~~21.~~

22. NOTICE. All notices and other communications required or permitted under this Agreement shall be in writing and shall be, as determined by the person giving such notice, either hand delivered, mailed by registered or certified mail, return receipt requested or by telecopier or telegraphic communication to the required party at the following addresses:

COUNTY: Board of County Commissioners
200 East Virginia
Gunnison, CO 81230 Telecopier: (970) 641-3061

DEVELOPER: (Name, Address, Etc.)

IN WHEREOF the parties have executed this agreement the date first above written.

BOARD OF COUNTY COMMISSIONERS OF THE COUNTY OF GUNNISON COUNTY

Attest: _____ By: _____
County Clerk Chairperson or Designee

DEVELOPER

By: _____

STATE OF COLORADO)
__)
COUNTY OF __)

The foregoing instrument was acknowledged before me this _____day of _____, 20__. By _____.

My commission expires: _____
Witness my hand and official seal.

_____
Notary Public Address:

APPENDIXAP P E N D I X K

DEFINITIONS AND ABBREVIATIONS

The following words, terms and abbreviations shall have the following meanings when used in or for the execution of these Standards and Specifications, unless expressly defined in these standards, the words and phrases used in these Standards shall be the same as the LUR:

A. ABBREVIATIONS

1. **AASHTO** means American Association of State Highway and Transportation Officials

2. **CDOT** means Colorado Department of Transportation

3. **FHWA** means Federal Highway Administration

4. **HUTF** means Highway Users Tax Fund

5. **ITE** means Institute of Traffic Engineers

B. DEFINITIONS

~~A. Definitions~~

ABUT means adjacent or contiguous to, or sharing a common border.~~**ABUT** means adjacent or contiguous to, having a common border or point with, or separated from a common border by, a road or highway right-of-wayrights-of-way or easement.~~

ACCESS means the place, method, or way by which vehicles and pedestrians obtain usable ingress and egress to a property or land use.

1. Residential Access means ingress or egress to no more than two residential units, including any that includes a home occupation, or a multiple-family residence as defined by the Gunnison County Land Use Resolution. Residential access is a private ~~vehicular~~ access over 50 inches in width, for the exclusive use of the owners- occupants and their ~~invitees, and~~invitees and is not considered a road or highway.

2. Agricultural Access means the access providing ingress and egress exclusively to an agricultural operation and not to any residence(s).

3. Commercial Access means the access providing ingress and egress to any activity defined by the Gunnison County Land Use Resolution as commercial.

4. Industrial Access means the access providing ingress and egress to any activity defined by the Gunnison County Land Use Resolution as industrial.

- 5. Any other access as determined by the Director.

ADJACENT means abutting or contiguous to or sharing a common border.
~~**ADJACENT** means the same as "abut".~~

~~**AGRICULTURAL OPERATION** means an activity that primarily involves agriculture as defined herein.~~

AGRICULTURAL ROAD means a road that links agricultural ~~farmland~~ areas to highways and other roads, primarily to enable the transportation of inputs to the farm and agricultural produce to the market~~means any road whose primary use is to serve an agricultural operation~~.

~~**AGRICULTURE** means the use of the land for the primary purpose of making a profit from farming or ranching as it may include:~~

- ~~The production, cultivation, growing, and harvesting of plant crops, but not including the harvesting of trees unless incidental to other agricultural operations; or~~
- ~~The raising and/or the breeding of livestock including horses, dairy and beef cattle, sheep, goats, fur-bearing animals, poultry and swine, so long as they are not large confined animal feeding operations (CAFO); or~~
- ~~The production of nursery products and sod; and~~
- ~~The harvesting, storage, grading, packaging, processing, distribution, and sale or trade of such commodities where such activities occur at the point of production.~~
- ~~It specifically does not include the uses, structures and retail services normally associated with kennels, veterinary hospitals, the commercial slaughter of animals, and commercial riding stables. For purposes of this Resolution classification of the use of the property by the Gunnison County Assessor's Office is not definitive or binding for purposes of this definition, nor shall the existence of a conservation easement on the property otherwise defined as agricultural affect that definition.~~

ALTERNATIVE TRANSPORTATION FACILITY means a trail, sidewalk, public bus or van, rail, or other facility that provides an alternative mode of transportation to travel by private automobile.

ARTERIAL ROAD - See Article III section 3.1

AS-~~-~~BUILT (OR RECORD) DRAWINGS means a complete and accurate set of construction plans, with all pertinent information superimposed on them to identify the road or related facility as it actually has been constructed.

AVERAGE DAILY TRAFFIC (ADT) is the average number of vehicles that travel through a specific point of a road over a short duration time period (often 7 days or less). It is estimated by dividing the total daily volumes during a specified time period by the number of days in the period.~~means the average 24-hour volume, being the total number during a stated period, divided by the number of days in that period. Unless otherwise stated, the period is a year. The term is commonly abbreviated as ADT.~~

ANNUAL AVERAGE DAILY TRAFFIC~~nnual Average Daily Traffic~~ (AADT) -means it is the annualized volume of vehicle traffic of a highway or road. AADT estimates, with as little bias as possible, the mean traffic volume across all days for a year for a given location along a roadway. AADT is different from ADT because it represents data for the entire year. Gunnison County accepts the FHWA AADT method for AADT.

AXLE LOAD means the total load transmitted by all wheels on a single axle extending across the full width of the vehicle. Tandem axles 40 inches or less apart shall be considered as a single axle.

~~**BACKFILL (or BACK FILLING)** means the dumping of earthen materials into excavated holes, or covering exposed features with soil. This can be done to protect features, or to level ground for construction of a road or building.~~

BASE COURSE means the layers of specified or selected material of designated thickness placed on a subbase or a subgrade to support a surface course.

~~**BEST MANAGEMENT PRACTICES** means those conservation techniques and management measures that:~~

- ~~Control soil loss and reduce water quality degradation caused by nutrients, human and animal waste, toxins, and sediment; and~~
- ~~Minimize adverse impacts to groundwater and surface water flows; and~~
- ~~Minimize adverse impacts to the chemical, biological, and physical characteristics of wetlands, ponds, streams, and riparian areas.~~
- ~~Practices intended to produce the best outcome for the applicable task.~~

~~**BOARD** means the Board of County Commissioners of Gunnison County, Colorado, or its designee.~~

BRIDGE means a structure including wall or abutments erected over a depression or an obstruction, such as water, highway or railway and having a track or passageway for carrying traffic or other moving loads.

~~**BUILDING FOOTPRINT** means the outline of the total area that is covered by a building at ground level.~~

CEMENT TREATED BASE or "Flowable Fill" means a base consisting of a mixture of mineral aggregate (or soil) and Portland cement, mixed and spread on a prepared surface, to support a surface course. ~~Colloquially called flowable fill.~~

CHANNELIZATION means the separation or regulation of conflicting traffic movements into definite paths of travel by use of pavement markings, raised islands, or other suitable means to facilitate the safe

and orderly movement of traffic, both vehicular and pedestrian.

CITY STREET means roads that are within the boundaries of an incorporated municipality that are dedicated to the public ~~and are maintained by the City~~.

COLLECTOR ROAD - See Article III section 3.1

CONSTRUCTION PLANS means a complete and accurate set of detailed plans, including but not limited to profile, specifications, stationing, details, notes and any other information necessary for complete and timely construction of the road or related facility.

CONTROL OF ACCESS means the condition in which the right of access of owners or occupants of land abutting or adjacent to a roadway is controlled by public authority.~~means the condition where the right of owners or occupants of abutting land or other persons to access, light, air or view in connection with a highway is fully or partially controlled by public authority.~~

~~**COUNTY** means Gunnison County.~~

COUNTY PRIMARY ROAD SYSTEM means County roads selected ~~as such by the Board on the basis of greatest general importance; the County primary road system as selected shall constitute an integrated system within itself and/or with the state highway system and other roads identified by the Board~~pursuant to CRS §§ 43-2-109 and 110, as amended.

COUNTY ROAD means a public road which the Board has placed on the Count~~r~~y Primary Road System pursuant to CRS §§ 43-2-109 and 110, as amended.

~~under the authority of C.R.S. 43-2-109,110.~~

COUNTY SECONDARY ROAD SYSTEM means ~~all County~~ roads not on the County primary road system pursuant to pursuant to CRS § 43-2-110, as amended.

~~.~~

CROSS SLOPE (ROADWAY) means a geometric feature of pavement surfaces: the transverse slope with respect to the horizon.
~~- on divided highways each one-way pavement may be crowned separately as on 2- lane highways, or it may have a nondirectional slope across the entire width of pavement, almost downward to the outer edge.~~

CUL-DE-SAC ~~**ROAD**~~ means a local road open at one end only, and with special provisions for turning around.

CURBWALK means monolithic combination of curb and gutter and sidewalk.

CULVERT means a closed conduit, other than a bridge, which conveys water carried by a natural channel or waterway transversely under the roadway.

WORKING DAYS ~~means calendar days, not normal working days unless expressly identified as working days. Working Days means the typical 5 day works week excluding federal holidays.~~shall be defined by LUR sec 1-111 COMPUTATION OF TIME.

DELINEATORS means devices used to define the roadbed, and are used as an aid to alert drivers of day and night hazard conditions.

DEPARTMENT means the Gunnison County Public Works Department.

DESIGN LOAD means the loads that must be supported by a structure in terms of live and dead weight loads.

DESIGN PERIOD means geometric design generally based on estimated traffic requirements 20 years after construction.

DESIGN SPEED means a speed determined for design and correlation of the physical features of a road that influence vehicle operation; the maximum safe speed maintainable on a specified section of road when conditions permit design features to govern.

~~**DIRECTOR OF PUBLIC WORKS** means the Assistant County Manager for Gunnison County Public Works Director, or designee.~~

DRIVEWAY see "Residential Access"

ELECTRICAL ASSISTED BICYCLE (e-bike) means a vehicle having two or three wheels, fully operable pedals, and an electric motor not exceeding seven hundred fifty watts of power. Electrical assisted bicycles are further required to conform to one of three classes as follows:

(a) "Class 1 electrical assisted bicycle" means an electrical assisted bicycle equipped with a motor that provides assistance only when the rider is pedaling and that ceases to provide assistance when the bicycle reaches a speed of twenty miles per hour.
(b) "Class 2 electrical assisted bicycle" means an electrical assisted bicycle equipped with a motor that provides assistance regardless of whether the rider is pedaling but ceases to provide assistance when the bicycle reaches a speed of twenty miles per hour.
(c) "Class 3 electrical assisted bicycle" means an electrical assisted bicycle equipped with a motor that provides assistance only when the rider is pedaling and that ceases to provide

assistance when the bicycle reaches a speed of twenty-eight miles per hour.

~~**EASEMENT** means a conveyance or reservation of an incident of ownership in real property for one or more specific purposes, public or private.~~

~~**18K** **EDLA** means 18,000 pound~~ single axle Equivalent Daily Load Application~~s~~. (See "Axle Load" ~~and Equivalence Factor"~~.)

ENGINEER means Professional Engineer registered in the State of Colorado.

EROSION means the wearing away of a land surface by detachment and transporting of soil and rock particles by the action of water, wind, or other agents.

FLARED INTERSECTION means an un-channelized intersection, or a divided highway intersection without islands other than medians, where the traveled way of any intersection leg is widened or an auxiliary lane added.

FLEXIBLE PAVEMENT means a pavement structure which maintains intimate contact with and distributes loads to the subgrade and depends upon aggregate interlock, particle friction and cohesion of stability.

GEOMETRIC DESIGN means the arrangement of the visible elements of a road, such as alignment, grades, sight distances, widths, slopes, etc.

~~**GRADE** means the rate expressed in terms of percent, ascent or descent by length.~~

GUARDRAIL means a protective device intended to make highways safer by reducing accident severity.

~~**GUNNISON COUNTY** means the County of Gunnison County, Colorado.~~

GUNNISON COUNTY ROAD SYSTEM means all roads in the Gunnison County primary or secondary road systems.

HIGHWAY ~~**, STREET, OR ROAD**~~ means an open way reserved for the passage, generally, of people, vehicles, animals, and goods, ~~and includes trails and non-motorized ways in rural areas, or in urban areas~~ where there is comparatively little access and egress and provides~~,~~ a way between prominent termini, as defined by CRS 43-2-201 ~~is usually called a highway or road~~. ~~A way in an urban area, with or without provisions made for curbs, sidewalks, and paved gutters is ordinarily called a road.~~

HORIZONTAL ALIGNMENT means horizontal geometrics for safe and continuous operation at a uniform design speed for substantial lengths of highway and must afford at least the minimum stopping distance for the design speed at all points on the highway~~.~~

.

HVEEM STABILIMETER means a device to measure the lateral pressure transmitted by soil or aggregate being subjected to a vertical load. The pressure obtained is used to compute "R" Value. The internal resistance of the friction property of a bituminous pavement or a base course. Data obtained is used to compute the relative stability.

~~**IMPROVEMENTS** means an addition to or enhancement of property or its condition, amounting to more than mere repairs, including, but not limited to, structures, infrastructure, habitat compensation, restoration, reclamation, general landscaping, surface improvements, or such other installations as may be designated by the County.~~

INCLUDE means including without limitation.

INSPECTOR means the ~~Gunnison County Public Works~~ Director, or designee.

INTERSECTION means the area embraced within the prolongation or connection of the lateral curb lines, or if none, then the lateral boundary lines of the roadways of two highways, streets, roads or ~~driveways~~accesses, or any combination of thereof, which join one another at, or approximately at, right angles, or the area within which vehicles traveling on different highways joining at any other angle may come in conflict.

LANE - See Article III section 3.1

~~**LEGAL LOT** means a lot, parcel or tract of land that meets the definition of a "subdivision," or "subdivided land" as defined in C.R.S. 30-28-101 (10) (a) as it may be amended, or that is one of the exceptions to the definition of "subdivision" or "subdivided land" set out in the definition of "Subdivision or Subdivided Land" in C.R.S. 30-28-101 (10) (b), (c) or (d) as they may be amended, and that was created in compliance with all applicable laws, ordinances and regulations in effect at the time of its creation, and the legal description of which was recorded at the time of its creation in the records of the Clerk and Recorder of Gunnison County. A parcel as mapped for tax assessment records is not necessarily a legal lot.~~

LIME TREATED BASE means a base consisting of a mixture of soil, hydrated lime and water, usually mixed in place and placed to support a pavement structure, or the components thereof.

LOCAL ROAD- See Article III section 3.1

~~**LOT** means a parcel or tract of land. Also see definition of "Legal Lot".~~

LOW WATER CROSSING means a structure used to cross a drainage course that provides only for limited conveyance of run-off under the traveled way with higher flows passing both under and over the traveled way.

MAY means a permissive condition.

MINIMUM COVER means the point of minimum cover shall be the edge of the paved shoulder giving

the least cover over the ~~pipe~~culvert or structure.

MINIMUM TURNING RADIUS means the engineer determined radius of a minimum turning path ~~of the outside of the outer front tire~~.

NON-MOTORIZED TRAIL means a dirt, gravel or paved trail suitable for Class 1 or 2 E-bicycle, bicycle, pedestrian or equestrian travel that is physically constrained to 50" or less in width.

~~. **PARCEL** means a tract or lot of land. Also see definition of "Legal Lot".~~

PASSING SIGHT DISTANCE means the minimum sight distance on two or three lane highways that must be available to enable the driver of one vehicle to pass another vehicle safely and comfortably without interfering with the speed of an on- coming vehicle traveling at the designed speed should it come into view after the overtaking maneuver is started.

PAVEMENT means that part of a roadway having a constructed surface for the facilitation of vehicular movement.

PAVEMENT STRUCTURE means the combination of subbase, base course and surface course placed on a subgrade to support the traffic load and distribute it to the roadbed.

~~**PERSON/PERSONS** means any individual, partnership, corporation, association, company, or other public or corporate entity, including the state or federal government, and any of their political subdivisions, agencies, instrumentalities.~~

PHYSICAL SURVEY means a field survey resulting in a drawing that shows all physical improvements located on the property. This will include topographic information of locations of both human-made and natural features on a parcel of land. These features may include roads, buildings, ditches, trees, streams and utilities. To perform a physical survey, the surveyor shall visit the property, locate the boundaries, set boundary corner monuments, and verify the accuracy of existing boundary markers.

PLANT MIXED BITUMINOUS BASE means a base consisting of mineral aggregate and bituminous material, mixed in a central plant, laid and compacted while hot, on subbase or a subgrade, to support a surface course.

PORTLAND CEMENT CONCRETE PAVEMENT means a pavement composed of ~~portland~~Portland cement concrete on a prepared subgrade or base course in accordance with plans and specifications.

~~**PRIME COAT** means the application of a low viscosity liquid bituminous material to an absorbent surface, preparatory to any subsequent treatment, for the purpose of hardening or toughening the surface and promoting adhesion between it and the superimposed construction.~~

PRIMITIVE ROAD means a road that has all of the following characteristics:

1. The road does not have the physical capacity to allow ready access to emergency services providers (e.g. medical emergency or fire suppression vehicles);

2. No public utility has been extended after May 7, 2002, or is proposed to be extended, to any lot served by the road;

~~3. There is no more than one single family residence existing or proposed on any lot served by the road;~~

Does not currently serve, and is not proposed to serve, average daily traffic more than the minimum threshold for a local intermittent road;

4. Any residential use established after May 7, 2002, shall be limited to seasonal use only by deed restriction or other instrument acceptable to Gunnison County

PRIVATE ROAD means any road that is not a public road.

PRIVATE ROADS UNDER COUNTY JURISDICTION means roads that have been permitted through the County Land Use Process.

PUBLIC ROAD OR HIGHWAY means:

1. All roads over private lands dedicated to the public use by deed to that effect, filed with the office of the Gunnison County Clerk and Recorder when such dedication has been accepted by the Board; and

2. All roads over private or other lands dedicated to public uses by due process of law, ~~including a subdivision plat approved by Gunnison County and recorded in the office of the Gunnison County Clerk and Recorder,~~ and not heretofore vacated by an order of the Board duly entered of record in the proceedings of the Board; and

~~3. All roads previously incorporated and now disincorporated from a municipality and not heretofore vacated by an order of the Board duly entered of record in the proceedings of the Board~~

All roads over private lands that have been used adversely without interruption or objection on the

part of the owners of such lands for 20 consecutive years; as defined by Colorado law; and

4. All toll roads or portions of them that may be purchased by the Board from the incorporators or charter holders of them, and thrown open to the public; and

5. All roads over the public domain whether agricultural or mineral.

PUBLIC WORKS DIRECTOR, ~~or~~ DIRECTOR OF PUBLIC WORKS, OR DIRECTOR means the Assistant County Manager for Public Works or the person functionally responsible for ~~various high level~~the administrative and managerial duties ~~typical~~ of the Public Works Department.

R VALUE means the resistance value of the soil while in a state of density and degree of saturation typical of the most adverse conditions to be expected on the road during the service life.

REGIONAL FACTOR means a numerical factor expressed as a summation of the values assigned for precipitation, elevation and drainage. This factor is used to adjust the structural number.

RESIDENTIAL DRIVEWAY - See "Access"

~~**RIGHT-OF-WAY**~~**RIGHTS-OF-WAY** means a general term denoting lane, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes.

~~**ROAD means** is a linear way for the conveyance of traffic that mostly has an improved surface for use by vehicles (motorized and non-motorized) and pedestrians and not primarily terminating at residences (see access).~~

~~**ROADBED** means the graded portion of a highway, usually considered as the area between the intersections of top and side slopes, upon which the subbase, base course, surface course and shoulders are constructed. Divided highways are generally considered to have two roadbeds.~~

ROAD is a general term for denoting an open public way, including the entire area within the right-of-way. reserved or ordinarily used for the passage, generally, of people, vehicles, animals and goods and includes trails and non-motorized ways.

ROADSIDE means the area adjoining the ~~outer~~ edge of the roadway. ~~Extensive areas between the roadways of a divided highway may also be considered roadside .~~

ROAD SIGN means a traffic control device mounted on a support above the level of the roadway that conveys a specific message by means of unchanging words or symbols.

ROADWAY means the portion of a highway, including shoulders, for vehicular use. ~~A divided highway has two or more roadways.~~

ROADWAY PRISM means the area of a road bounded by the traveled surface, the shoulders and lines projecting downward and away from the outside edge of the shoulder. ~~and intersecting the ground surface at an a specific angle of thirty (30) agrees to horizontal~~the horizontal plane~~.~~

~~**RURAL** means the character of an area that is primarily agricultural, low-density residential, unimproved and open.~~

~~**SEASONAL USE** means use limited to those months when snow normally is not on the ground in Gunnison County, that is, the months of May through October inclusive.~~

~~**SENSITIVE AREAS** means those areas identified by the Board that contain, or in which activity will have a significant impact on, human, historical, natural, environmental or archeological resources of great significance; a sensitive area shall be a specific geographic location that is defined with specific boundaries.~~

SERVICEABILITY INDEX means a number which is indicative of the pavement's ability to serve traffic at any specific time.

SHALL means a mandatory condition.

SHOULD means a recommended but not mandatory condition.

SHOULDER means the portion of a roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use and for lateral support of base and surface courses.

SIGHT DISTANCE means the distance visible to the driver of a passenger vehicle, measured along normal travel path of a roadway, to the roadway surface or to a specified height above the roadway, when the view is unobstructed by traffic.

~~**SIGNIFICANT** means of considerable or substantial consequence.~~

SINGLE-UNIT TRUCK means a freight vehicle of two or three axles, a single unarticulated frame, and larger than a pickup.

SLOPE EASEMENT means an easement for cuts or fills.

SPEED STUDY or TRAFFIC STUDY means the collection and assessment of crash data, recent and planned roadway or adjacent land use changes, and even anecdotal information that can be obtained from safety, planning, enforcement, and other stakeholders. The data collected shall be used by a licensed engineer to examine the speeds of free-flowing traffic, roadway geometry, crash characteristics, land use, and access. ~~The study shall provide details regarding some or all of the following: • Average annual and hourly vehicular, bicycle, and pedestrian traffic volume. • Traffic speeds for each flow direction by hour of day. • Road design elements that may be crash factors, such as horizontal and~~

~~vertical road curvature, access points, drainage, pavement condition, sight distance restrictions, roadside objects, signage, markings and delineation, etc. • Road lighting and traffic control devices, including signals, signal timing, and STOP signs. • Summary of crashes and crash causes over a multiyear period • Plans for expected new development, changes in the type of development, or major closing of existing development that may change the traffic flow characteristics in the future. • Engineer stamped recommendations for the speed limit.~~

STANDARDS means the Standards identified in this Gunnison County Standards and Specifications ~~for Roads and Bridges Construction,~~ as ~~it may be~~ amended.

STABILIZATION means modification of soils or aggregate by incorporating materials that will increase load bearing capacity, firmness and resistance to weathering or displacement.

STATE HIGHWAY means roads that are within the County that are dedicated to the public, but are maintained by the Colorado Department of Transportation.

STOPPING SIGHT DISTANCE means the distance required by a driver of a vehicle, traveling at a given speed, to bring his vehicle to a stop after an object on the roadway becomes visible. It includes the distance traveled during the perception and reaction times and the vehicle braking distance.

STREET means a linear way for the conveyance of traffic that mostly has an improved surface for use by vehicles (motorized and non-motorized) and pedestrians and is primarily terminating at residences (see access).

STRUCTURE means anything constructed or erected, that requires location on the ground, or is attached to something having location on the ground, including portable shelters for human habitation or use, recreational vehicles and tents, storage, transmission or distribution facilities or public utilities, but not including transmission lines of less than 45 kilovolt capacity, or fences.

SUBBASE means the layer or layers of specified or selected material of designed thickness placed on a subgrade ~~—~~to support a base course.

S~~S~~UBGRADE means the top surface of a roadbed upon which the pavement structure and shoulders, including curbs, are constructed.

SUPERELEVATION means the vertical distance between the heights of inner and outer edges of highway pavement used to prevent a vehicle from sliding outward, or to counteract all the centrifugal force of a vehicle traveling at an assumed speed.

SURVEY (BOUNDARY SURVEY)~~Survey (Boundary Survey)~~ means a drawing of the property that details the location of the lot, property lines, home, Onsite Wastewater Treatment System, and any other structures within its bounds. Also known as land survey plats (LSPs), a boundary survey is used to measure and depict the precise and exact corners and limits of a particular parcel of land. The most common use of these surveys are within real-estate transactions to assess the size and shape of a plot of land before purchase; to plan the construction of property-defining assets; to make improvements on

existing structures; to create easements or encroachments; or to resolve disputes, such as party responsibility for property damage.~~The purpose of a survey is to confirm land boundaries and setbacks.~~

SUSTAINED GRADE means a continuous highway grade of appreciable length and consistent or nearly consistent gradient.

TEMPORARY ACCESS OR ROAD means an access or road that is limited in scope, duration, and/or frequency of use to serve only a vacant parcel and which does not require ~~any~~ major cut and fill, and is constructed only for the purpose of determining the constructability of the submitted site plan, land use application, or proposed structure.

TERRAIN means the topography of the profile of a highway, road, or street. As used in this manual, the term generally has one of two modifiers; rolling, or mountainous. These two modifiers represent combinations or geometric features in varying degrees which relate primarily to gradients and horizontal and vertical alignment. They reflect the effect on capacity of the operating characteristics of trucks in terms of their passenger cars are equivalent under the different geometric conditions.

TOPOGRAPHY means the configuration of the earth surface including the shape and position of it's natural and man- made features.

TRAFFIC CONTROL DEVICE means any sign, signal, marking or installation placed or erected under public authority, for the purpose of regulating, warning, or guiding.

TRAIL means an open way reserved for the passage and use, generally, of people, mechanized or non-mechanized machines, motorized or non-motorized vehicles, and animals and goods that is physically constrained to 50" or less wide.

TRAVELED WAY means the portion of the roadway for the movement of vehicles, exclusive of Shoulders and auxiliary lanes.

~~**VERTICAL ALIGNMENT** means the presence of heights and depths in vertical axis with respect to horizontal axis of alignment. These heights and depths in roads may be in the form of gradients (straight lines in a vertical plane) or vertical curves.???? When properly designed, should provide adequate sight distance, safety, comfortable driving, good drainage, pleasing appearance. Minimum lengths of crest vertical curves are controlled by stopping sight distance requirements.~~

~~**WATERWAY** means a stream, river or creek, or any other natural channel or other topographic feature through which "live" water flows, but does not mean ditches used for agricultural purposes.~~

~~**WETLAND** means an area inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under usual circumstances, supports a~~

prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known a hydrophytic vegetation. Wetland areas generally include marshes, bogs, seeps, riparian and similar areas, but do not include those artificial wetlands intentionally created from non-wetland areas, including irrigation and drainage ditches, grass-lined swales, canals, detention facilities, ranch ponds and landscape amenities. Exempt from the definition are areas in which there are wastewater treatment systems, including treatment ponds and lagoons designed to meet the requirements of the Clean Water act (33 U.S.C. Sec. 1341), treated water distribution and storage facilities or treated water that otherwise meet the criteria in this definition, and areas created by irrigation-related activities from agriculture and ranching. However, wetlands may include those artificial wetlands intentionally created from non-wetland areas created for the purpose of mitigating conversion of wetland, if permitted by the County.

B. Abbreviations

AASHTO means American Association of State Highway and

Transportation Officials CDOT means Colorado Department of

Transportation

FHWA means Federal

Highway Administration

HUTF means Highway Users

Tax Fund

ITE means Institute of Traffic Engineers

EXHIBIT A

GUNNISON COUNTY PUBLIC WORKS DEPARTMENT
SCHEDULE OF FEES

Adopted separately by the Gunnison County Board of Commissioners January, 2025~~March 6, 2018~~

ALL FEES DUE IMMEDIATELY

~~Maps~~

~~County Maintained/Plowed Roads (set of 3) $ 30.00~~

~~Publications~~

~~Gunnison County Standards and Specifications for New Road & Bridge Construction $ 15.00 Postage if mailed $ 5.00~~

~~Public Works Fees~~ ~~All Fees Must be Paid in Advance.~~

Access Permit:

~~$250~~500.00

Review of existing access or modified site plan $100.00 / ~~occurence~~occurrence

Driveways up to 150 feet $788.00

Driveways from 150 feet up to 600 feet $1,062.00

Driveways over 600 feet $1,687.00

Final r~~Final R~~re-inspection fee~~(per re-inspection)~~ $500.00

Reclamation Permit ~~(within sage grouse habitat)~~ $~~670.00~~250

~~75~~150.00 Under ~~Over 10~~5,000 square feet of ~~total ground disturbance~~

Reclamation Permit Bonding (~~in or~~ Deposit~~out of sage grouse habitat~~) - Refundable ~~$150~~252500.00

Initial 10,000 square feet of disturbance $1,500.00~~At or above 10,000 square feet of total ground~~

Each additional 1,000 square feet $200.00~~disturbance~~

~~Reclamation Permit Bonding Amounts~~

~~Initial 10,000 square feet of ground disturbance~~Base Rate ~~$500.00 Each additional 1,000 square feet of ground~~

~~disturbance~~	~~$100.00~~
Special Transport Permit (Oversize/Overweight)	
Single Trip Permit	$30.00 - $125.00 plus $10 per axle ~~f~~for overweight
Annual Permit	$250.00 - $650.00
Revocable ~~Right-of-Way~~Rights-of-way Permit	$~~100~~274~~500~~.00
Utility ~~Surface Alteration~~ Permit $2,500.00 security	~~$ 50~~150.00 ~~or 5%~~ $817.00 + ~~depoosit~~deposit for fist 500 feet + $5.00 / linear foot after~~of financial security (Financial Security is required/calculated per project)~~ ~~Underground Utility Construction Permit (Road Cut) $ 50~~150.00 ~~(Financial Security is required/calculated by road type)~~
Final re-inspection fee	$500.00 / occurrence
Vacation of a Street or Alley	$1,524.00
~~Administrative Cost~~	~~$500.00~~
~~Advertising of Legal Notice~~	~~Actual cost of advertising Certified/RRR Mailing (if done by County)~~
	~~Actual cost of mailing$250.00 plus the actual cost of the mailing~~
Waiver of Standards ~~requiring a (Decision by the BOCC)~~	$300.00 / occurrence
Stop Work Order Fee	$703.00 / violation + any hourly violation fees incurred**
Violation Hourly Rate	$200.00**

**** Additional cost of office materials, advertising, postage, or staff time will be extra**
Fees adjust accordingly every year based on CPI

~~Administrative Cost~~	~~$500.00~~
~~Advertising of Legal Notice~~	~~Actual cost of advertising~~
~~Waiver of Standards requiring a (Decision by Public Works Director)~~	
~~Administrative Cost~~	~~$100~~175.00 ~~- if a site visit is required~~

~~FIGURE 4-1~~

~~FIGURE 4-2~~

~~FIGURE 4-3~~

FIGURE 4-41



NEEDS EDITED

TABLE 3-1

SUMMARY OF ROAD WAY DESIGN ELEMENTS

Functional FUNCTIONAL Classification CLASSIFICATION	Average Daily Traffic AVERAGE DAILY TRAFFIC	Minimum Right-of-Way Width MINIMUM RIGHT OF WAY RIGHTS OF WAY WIDTH	Rights-of-Way Width High-Snow RIGHT OF WAY RIGHTS OF WAY WIDTH HIGH SNOW	# of Lanes # OF LANES	Lane Width LANE WIDTH	Shoulder Width Each Side SHOULDER WIDTH EACH SIDE	Curb & Gutter Ped. Path CURB & GUTTER PED. PATH
Major Arterial (Paved)	3000+	100’	~~100’~~120’	2-3	12’	4’	2’/5’ (Optional)
Suburban Com/Ind Collector (Paved or Gravel)	0-500	60’	~~80’~~100’	2	12’	4’	2’/0’ (Optional)
Suburban Lane (Paved or Gravel)	13-~~55~~00	60’	~~80’~~100’	2	~~12’~~10’	~~4’~~2’	
Rural Arterial (Paved)	1000-2999	80’	100’	2	~~12’~~11’	2~~4~~’	2’/0’ (Optional)
Rural Collector (Paved)	500-999	60’	80’	2	~~12’~~11’	~~3’~~2’	
Rural Local (Gravel/Paved)	200-499	60’	80’	2	~~12’~~10’	~~3’~~2’	
Rural Lane (Gravel)	~~91~~30-199	60’	80’	2	~~11’~~10’	~~2’~~1’	
Local Intermittent *(Native/Gravel)	13-90	~~60’40~~60’	80’	~~1~~2	~~16’~~8’	0’	
Primitive Recreation Road	N/A	~~20’~~40	~~N/A~~40’	1	8-16’	0’	

* Single lane roads with turnouts used for low volume traffic. Turnouts shall be inter~~visable~~visible

~~Right-of-way~~Rights-of-way width – Snow requirements based on snow load maps in Gunnison County ~~Building Inspector's Office~~High-Snow areas are when the Design Ground Snow Load is equal to or greater than 90 pounds per square foot for adjacent properties as determined by the building department, using the Structural Engineers Association of Colorado, Colorado Ground Snow Map.

TABLE 4-1
MINIMUM CURVE RADIUS FOR DESIGN SPEED ON LOCAL ROAD AND LANES
(without superelevation)

$e + f = 0.0'67v'$

v	e	f	Radius R
15	0	.19	80
20	0	.18	150
25	0	.17	250
30	0	.16	375

e – superelevation
f – side friction factor
V – design speed
R – curve radius

TABLE 4-2
MINIMUM CURVE RADIUS FOR SEDESAIGNDESIGN SPEED ON COLLECTORS, MINOR ARTERIALS AND PRINCIPAL ARTERIALS

Design Speed v	Max e	Max f	Min R	Max e	Max f	Min R	Max e	Max f	Min R
40	.04	.15	561	.06	.15	508	.08	.15	464
50	.04	.14	926	.06	.14	833	.08	.14	758
60	.04	.13	1412	.06	.13	1263	.08	.13	1143

TABLE 4-3
MAXIMUM SUPERELEVATION RATES

Road Type	Rural	Urban
Principal Arterial	.08	.06
Minor Arterial	.08	.06
Collector	.06	.06
ResidentailResidential Sub Collector	.06	.04

TABLE 4-4
SIDE FRICTION FACTORS FOR DESIGN SPEED

v	f
15	.19
20	.18

~~25~~	~~.17~~
~~30~~	~~.16~~
~~40~~	~~.15~~
~~60~~	~~.13~~

TABLE 4-5

CUT AND FILL SLOPES

Height	Cut Slopes	Fill Slopes
0-5 feet	3:1 1/2:1	2:1 1 ½:1
5-10 feet	2:1 1 ½:1	1 1/2:1
10-15 feet	1 1/2:1	1 1/2:1
Above 15 feet	1:1	1 1/2:1

TABLE 4-6

SUMMARY OF DRIVEWAYACCESS DESIGN ELEMENTS

TYPE OF ACCESS (driveway)	# OF LANES	LANE WIDTH
1. **Residential**	1	16 feet
2. **Agricultural**	1	16 feet
3. **Commercial**	2	11 feet
4. **Industrial**	2	11 feet

TABLE 4-7

INTERSECTION SIGHT DISTANCE

*Vehicle expected to enter or cross highway	Sight Distance is given in feet per 10 mph of posted speed limit	
	2 Lane	4 Lane
Passenger Car	100	120
Single Unit Truck	130	150
Multi-Unit Trucks	170	200

TABLES 4-1 THROUGH 4-7 WERE MOVED TO THE BODY OF THIS DOCUMENT WHERE APPLICABLE

TABLE 4-8

PAVEMENT DESIGN REGIONAL FACTOR

Annual Precipitation

~~Over 34”~~	~~1.00~~
~~24” – 34”~~	~~0.50~~
18” – 23”	0.00
14” – 17”	-0.25
Less than 14”	-0.50

Elevation

Over 9500	1.50
8500 – 9500	1.00
7500 – 8500	0.50
Less than 6500	0.25

Drainage

*Very Poor	1.00
Poor	0.50
Fair	0.25
Good	-0.25

* High groundwater table

Frost

**Frost boils in area	3.00
**Frost susceptible soil, frost penetration over 28”	1.00
Frost susceptible soil, frost p~~P~~enetration under 28”	0.25

** Moisture available when subject to frost action

The Minimum Regional Factor shall be no less than 2.00.

Other conditions that may influence the choice of regional factors are:

~~(1)~~ 1. Elevation of the grade line, especially in swampy areas where the roadbed soils may be saturated for long time periods.

~~(2)~~2. Number of freezing and thawing cycles during winter and early spring.

~~(3)~~3. Steep grades with large volume of heavy trucks.

~~(4)~~4. Areas of concentrated turning and stopping movements, such as bus stops, etc.

TABLE 4-9

PAVEMENT DESIGN STRENGTH COEFFICIENTS

Component	Limiting Test Criteria	Coefficient
Plant Mix Seal		0.25
Hot Bituminous Pavement	Rt ≧95	0.44
" " "	Rt = 90-94	0.40
" " "	Rt = 87-89	0.35
" " "	Rt = 84-86	0.30
" " "	Rt ≦83	0.25
Road Mix Bituminous Pavement		0.20
Existing Bituminous Pavement		0.20 to 0.44
Plant Mix Bituminous Base	Rt ≧90	0.34
" " "	Rt = 85-89	0.30
" " "	Rt = 80-84	0.25
" " "	Rt ≦79	0.22
Aggregate Base Course [A.B.C.]	"R" ≧84	0.14
" " "	"R" = 78-83	0.12
" " "	"R" = 70-77	0.11
" " "	"R" ≦69	0.10
Emulsified Asphalt Treated A.B.C.	Rt ≧95	0.23
" " "	Rt = 90-94	0.20
" " "	Rt = 84-89	0.15
" " "	Rt ≦83	0.12
Cement Treated A.B.C.	7-day test ≧650 psi	0.23
" " "	7-day test = 400-649 psi	0.20
" " "	7-day test ≦399 psi	0.15
Hydrated Lime Treated A.B.C.	"R" = 84	0.14
" " " "	"R" = 78-83	0.12
Borrow Material		0.10 *

* Used only to determine a value of strength for layers of soil and/or borrow material which are located above the soil layer from which the soil support value of the subgrade is determined.

NOTE: The minimum strength coefficient for the Base Course on highways having a current ADT volume of 750 or greater shall be 0.12.

TABLE 4-10

PERMISSIBLE VELOCITIES FOR ROADSIDE DRAINAGE DITCHES

Roadside channels with erodible linings Major (earth; no vegetation):	**Minor and Design Storm**
Soil Type or Lining	Permissible velocity (fps)
Fine sand (~~noncolliodal~~noncolloidal)	2.5
Sandy loam (noncolloidal)	2.5
Silt loam (noncolloidal)	3.0
Ordinary firm loam	3.5
Fine gravel	5.0
Stiff clay (very colloidal)	5.0
Graded, loam to cobbles (noncolloidal)	5.0
Graded, silt to cobbles (noncolloidal)	5.5
Alluvial silts (noncolloidal)	3.5
Alluvial silts (colloidal)	5.0
Coarse gravel (noncolloidal)	6.0
Cobbles and shingles	5.5
Shales and hard pans	6.0
Roadside channels, lines with various grass covers (uniform stand; well maintained)	
~~Cover~~Slope range~~Soils that are (%)Erosion~~Easily resistanteroded	
~~Bermuda grass~~	
~~Crested wheatgrass~~	
~~Buffalo grass0-56.05.0~~	
~~Kentucky bluegrass5-105.04.0~~	
~~Smooth bromeOver 104.03.0~~	
~~Blue grama~~	
~~Grass mixture0-54.03.0~~	
~~5-103.02.5~~	
~~Lispedeza~~Lesped~~eza sericea~~	
~~Weeping lovegrass Yellow bluestem~~	
~~Alfalfa0-53.02.0~~	
~~Crabgrass~~	
~~Common lespedeza~~	
~~Sudan grass~~	

LOW ELEVATION (< 8,500 FT)

Dry areas with well-drained (often more sandy or shallow) areas dominated by lower-growing sagebrush and sparse vegetation. Low amounts of flowers and moderate levels of bare soil.

Area examples: Antelope Hills, Parlin, Doyleville, Hartman Rocks.

Seed Mix: Sheep Fescue-1, Sandberg Bluegrass-1, Western Wheatgrass-4 (Totaling 6 lbs/acre). May add Indian Ricegrass and Bottlebrush Squirreltail.

Use crested wheatgrass in areas where other species are not taking.

MID ELEVATION (8,500-9,500 FT)

Slightly higher in elevation, but still dominated by sagebrush. More robust grass cover and a moderate diversity of flowers. Areas will have snowberry interspersed throughout, indicating a slightly higher moisture regime. Soils are deep (greater than 3 ft).

Area examples: Mid-Ohio Creek, Powderhorn.

Seed Mix: Western Wheatgrass-4, Sandberg Bluegrass-1, Indian Ricegrass-3, Squirreltail-1 (Totaling 9 lbs per acre).

HIGH ELEVATION (9,000-10,000 FT)

Areas where sagebrush is still dominant, but where pockets of aspen begin to come in. Grasses & flowers are prevalent, and bare ground is very low. The soil is deep and dark, but still well-drained.

Area examples: Arrowhead, CB South, Upper Ohio Creek, Crested Butte

Seed Mix: Western Wheatgrass 36%, Slender Wheatgrass 55%, Canby Bluegrass 9% (Totaling 11 lbs/acre)

~~**NEEDS EDITED BY JASON EVANKO**~~

TABLE 5-1

COMPACTION REQUIREMENTS

A. Minimum Requirements for Compaction of Embankments and Subgrades~~MINIMUM REQUIREMENTS FOR COMPACTION OF EMBANKMENTS AND SUBGRADES~~

Density, Percent of AASHTO Standard T-99 Embankments

~~Embankments~~

Class of Soil (ASSHTO M145)	Under 50 ft(a) High	50 ft & Over	Subgrade
A-1, A-3	95	95	100
A-2-4, A-2-5	95	95	100
A-2-6, A-2-7	95	(b)	95
A-4, A-5, A-6, A-7	95	(b)	95

(a) 1 ft = 0.3048 m.

(b) Use of these materials requires special attention to design and ~~construction, and~~construction and shall be specified by the design engineer and approved by the County Public Works Department.

B. Minimum Requirements for Compactions of Utility Trenches~~MINIMUM REQUIREMENTS FOR COMPACTIONS OF UTILITY TRENCHES~~

Material	Density Percent	AASHTO Standard.
Bedding Material	90%	T-99
Backfill	95%	T-99

TABLE 5-2

REQUIRED QUALITY CONTROL TESTS

Item	Type of Test	Minimum Test Frequency
Subgrade and Embankment	Moisture-Density Curve	1 per soil type
Compaction	In-Place Density	1/3, 400 sq.ft./lift*
Aggregate Base Course or Subbase Course	Gradation	1/1,000 ton or fraction thereof on each class
	Moisture-Density Curve	1/source on each class
	In-Place Density	1/200 ton*
Hot Bituminous Pavement	Asphalt Content	1/500 tons or 2 per project whichever is the lesser
	Gradation	Aggregate-minimum of 2/source
Sidewalks and Curbing (Concrete)	Compressive Strength	1 set cylinders (4) per 1,000 sq. yds. Of sidewalks and/or 2,000 In. ft. of curbing, minimum 1 set per project
	Slump & Air Content	1 per set of cylinders and as often as needed for quality control
Utility Trench Backfill	In-Place Density	1/400 In. ft. of trench; or 1/branch of section if <400 ft. ½ ft. vertical lift of backfill material (First test ≤ 2 ft. above the pipe, last test at pavement subgrade or 6 in. below ground surface on unpaved areas)
Manholes/Structures Compaction	In-Place Density	1/structure per 2 ft. vertical lift

***Failing areas are to be retested**

All testing shall be done in accordance with the most recent edition of AASHTO Test Standards.

GUNNISON COUNTY
STANDARDS AND SPECIFICATIONS
FOR
ROADS AND BRIDGES

Adopted October 22, 1991
Amended March 2, 1993
Amended May 28, 1996
Amended June 3, 1997
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SECTION 1

GENERAL PROVISIONS

1.1 Title

This document (as it may be amended by the Board of County Commissioners) shall be known as the "Gunnison County Standards and Specifications for Roads and Bridges" and will be referred to herein as "these Standards and Specifications."

1.2 Purpose

The purpose of these Standards and Specifications is to provide for the uniform planning, design, construction, maintenance, and permitting of roads and related facilities and/or improvements to roads and related facilities in Gunnison County, and further, to provide for the administration of the Gunnison County Road System and other roads under the jurisdiction of Gunnison County in a manner consistent with applicable federal, state and local statutes, ordinances and regulations. These Standards and Specifications identify the minimum standard or specification necessary to achieve public safety, functional effectiveness, ease of maintenance, pleasing appearance, and to address environmental concerns.

1.3 Permit Required

Unless otherwise expressly excepted by these Standards and Specifications, no person shall engage in, cause or allow any construction of, or work on, in, or over any road under the jurisdiction of Gunnison County or approved by Gunnison County unless that person has first obtained each appropriate permit required by Gunnison County. If such activity has begun before issuance of such permit(s), no permit shall be issued until the applicant ceases the activity, remedies any damage caused, and complies with all enforcement actions taken by Gunnison County. The following permits are required as appropriate according to the anticipated work:

A. Rights-of-way Work Permit (see Section 7.3)

B. Access Permit (see Section 7.4)

C. Oversize/Overweight Permits (see Section 7.5)

D. Snow Management Permit (see Section 7.6)

E. Rights-of-way Encroachment Permit (see Section 7.7)

F. Parking Permit

G. Reclamation Permit for Revegetation and Noxious Weed Control

H. Any permit required by any governmental or other agency that applies to the work in question.

In order to compensate the County for the cost of reviewing and processing permits, each applicant shall pay the fees, as shown in a schedule of fees charged for permits issued by the Public Works Department, adopted and amended from time to time by the Board. The fee schedule (Exhibit A) is designed to make the amount of the fee proportional to the amount of expense likely to be incurred by the County in reviewing and processing the application.

1.4 Scope and Application

These Standards and Specifications apply to County, public, and private roads, accesses and trails within the jurisdiction of Gunnison County.

1.5 Partial Exemptions

The following are partially exempt from the requirements of these Standards and Specifications:

A. Agricultural (as defined by the Gunnison County Land Use Resolution in Section 2-102) roads are exempt from these Standards and Specifications except that they require access permits as set forth herein. (see Section 4.5 and Section 7.4) Residential accesses to agricultural operations are not exempt from these Standards and Specifications.

1.6 Authority

It is the intent of the Board in adopting and enforcing these Standards and Specifications to fully exercise all authority and power conferred on it by, and to rely on, Colorado law including but not limited to C.R.S. 43-1-101 et. seq., 43-2- 101 et. seq. and 30-11-107 (1)(h); 30-15-401.

C.R.S. Title 42, Article 4 authorizes the Board to regulate traffic on County roads and public roads under County jurisdiction. C.R.S. Title 42, Article, 4, and Title 43, Article 2 also authorizes local governments to regulate vehicular access to or from any public highway under their respective jurisdiction to or from property adjoining such highway in order to protect the public health, safety and welfare, to maintain smooth traffic flow, to maintain highway rights-of-way and to protect the functional levels of public highways. Colorado law, including but not limited to C.R.S. Sections 43-5-301 et. seq. prohibits anyone from obstructing a highway. The Board , the Public Works Director, or the Public Work's Director's designee, is authorized to interpret and enforce these standards.

1.7 Amendments

These Standards and Specifications, may be amended, or repealed, in whole or in part, by the Board.

1.8 Severability

If any section, clause, provision, or portion of these Standards and Specifications should be found to be unconstitutional or otherwise invalid by a court of competent jurisdiction, such determination shall not affect the validity of these Standards and Specifications as a whole or

any part of these Standards and Specifications other than the part determined to be unconstitutional or invalid. Nor will such a finding affect the validity of any permit previously issued, financial security previously accepted, or action previously taken by the County, except as specifically adjudicated by a court of competent jurisdiction.

1.9 Waiver

A. No waiver of these Standards and Specifications shall be valid unless approved as set forth in this section.

B. Only the Board may approve a waiver of these Standards and Specifications, except that the Director of Public Works has authority to waive these Standards and Specifications for an access or for a minor extension of an existing road; though the Director may refer any such waivers to the Board. The Board or the Director of Public Works may place special conditions on the approval of a waiver. Such conditions may include but are not necessarily limited to:

1. Seasonality of use;
2. Number of structures;
3. Size of structures;
4. Type of use;
5. Geography;
6. Existence or installation of public utilities; and
7. Risk to emergency services personnel.

C. All waivers shall be project specific and shall not establish a precedent for any other proposed waiver.

D. No waiver shall be granted:

1. Unless and until all related fees and costs have been paid to Gunnison County.

2. If the applicant is in violation of any Gunnison County rule or regulation, including but not limited to the Gunnison County Building Code, the Gunnison County Onsite Wastewater Treatment System regulations, and the Gunnison County Land Use Resolution.

E. A request for a waiver must be applied for in writing and identify the following:

1. The name, address and telephone number of the applicant;

2. Identification of the subject property, proposed site improvements, expected use, and public road access point;

3. A specific description of the requested waiver (including relevant information and proposed access construction plans);

4. A detailed explanation of why the proposed waiver is warranted by site specific conditions which create an unusual aspect or feature not shared by property in general; and

5. A detailed explanation of why the proposed waiver:

    a. Would not adversely affect the safe, efficient and orderly movement of motorized and non-motorized traffic;

    b. Would not adversely affect health or safety;

    c. Would not cause substantial injury to the owner or occupant of adjacent land(s);

    d. Would not cause substantial injury to the environment; and

    e. Would provide the functional intent of these Standards and Specifications.

6. Any other information required by the Board or Director of Public Works (e.g. physical survey, engineered plans).

F. The determination of whether an application is complete lies within the sole discretion of the Director of Public Works.

G. No public meeting is required for a determination of a waiver by the Director of Public Works, except that the applicant for such waiver may appeal the Director's determination to the Board by submitting a written appeal to the Director within fourteen (14) days of the Director's decision. The Board may accept or decline to hear such appeal at its discretion. Should it accept such appeal, the Board will decide the application for waiver *de novo* under the procedures set forth in Paragraphs ____ through _____.

H. After receipt by the Board of a complete application for waiver or an appeal set forth in Paragraph 1.9 F, the Board shall set a date, time and place for a public meeting on that petition. The applicant shall publish, at a minimum, notice of such meeting once a week, for the two consecutive weeks immediately before the meeting. The applicant for the waiver must notify all property owners adjacent to the property on which the waiver applies no later than fourteen days before the meeting, by mailing to each of them, by certified mail, return receipt requested, a complete copy of the request for a waiver and a copy of the notice of the public meeting; the applicant must provide proof of such notification to the Director of Public Works at least seven days prior to the public meeting.

I. The Board, or if applicable, the Director of Public Works, may grant a waiver in its

discretion pursuant to this Section. In deciding whether to grant a waiver, the Board or the Director of Public Works should consider the following factors:

1. The waiver is warranted by site specific conditions which create an unusual aspect or feature not a shared by property in general;

2. The waiver will not adversely affect the safe, efficient and orderly movement of motorized and non-motorized traffic;

3. The waiver will not adversely affect public, health, safety or welfare;

4. The waiver will not cause substantial injury to the owner or occupant of adjacent land(s);

5. The waiver will not cause substantial injury to the environment;

6. The waiver is not otherwise prohibited by or inconsistent with any other Gunnison County rule or regulation, including but not limited to the Gunnison County building code, the Gunnison County Onsite Wastewater Treatment System regulations, and the Gunnison County Land Use Resolution; and

7. Granting the waiver would be consistent with the purpose and spirit of these Standards and Specifications.

J. The Board may deny a waiver orally but shall state on the record its findings under Paragraph I above. The Board may grant a waiver only through written instrument, which shall be duly recorded with the Gunnison County Clerk and Recorder and in the chain of title for the property(ies) on which the waiver applies. Any costs of recording shall be borne solely by the applicant. Such approval shall include the findings of the Board under Paragraph I above and any conditions imposed pursuant to Paragraph I above.

K. The Public Works Director shall grant or deny a waiver application in writing, setting forth the Director's finding for grant or denial of a waiver under Paragraph G above and, if granted, any condition imposed. The written statement of the Public Works Director granting a waiver shall be provided to the applicant, who shall record such statement in the chain of title for the property(ies) on which the waiver applies.

L. An application for a waiver may be considered concurrently with other applications under the Gunnison County Land Use Resolution unless the Public Works Director concludes in their discretion that there is or will be significant public concern, in which case the waiver shall be considered first.

M. The applicant must prepay the cost of processing the waiver application as identified in the Schedule of Fees (Exhibit A).

SECTION 2

ADMINISTRATION

2.1 Road Systems

The road system in Gunnison County consists of federal highways, state highways, county roads, city streets and alleys, town streets and alleys, other public roads and private roads, lanes, accesses, and trails over 50 inches wide or trails that intersect with other roads lanes accesses or trails covered by this document. The defined road system does not indicate acceptance of any road by the County. Acceptance of a road for County maintenance requires affirmative action by resolution by the Board.

A. The Colorado State Highway System

1. The Colorado State Highway System in Gunnison County is administered by the Colorado Department of Transportation under the direction of the Executive Director and the State Highway Commission. The Colorado Department of Transportation has full responsibility for the construction and maintenance of all Colorado state highways within the unincorporated areas of Gunnison County. Within incorporated areas, maintenance responsibilities may be assumed by a municipality under a maintenance agreement. The placement of traffic control signs on all County roads at an intersection with a state highway is under the jurisdiction of the Colorado Department of Transportation.

2. Access to the Colorado State Highway System in Gunnison County is administered by the Colorado Department of Transportation through the State Highway Access Code, any access control plan adopted by the Board, and/or other applicable regulations.

3. **NOTE:** The portion of the access from the edge of CDOT rights-of-way to the building footprint must comply with the access requirements in Section 4.5 and Section 7.4.

4. Planning for state highways is conducted by the Colorado Department of Transportation in cooperation with the county, local municipalities, and other agencies.

B. The County Road System

The State of Colorado, by statute, authorizes the Board to administer the County Road System, including but not limited to planning, design, construction, maintenance, and traffic regulation of County, public, and private roads under County jurisdiction.

1. The Gunnison County Road Map

   Pursuant to C.R.S. Section 43-2-110(1)(a), a Gunnison County Road Maintenance Map has been adopted by the Board of County Commissioners. This map shall be

updated periodically to reflect additions, deletions, and alterations to the primary road system in the County. Copies of the County Road Map shall be available online. (See Exhibit A). Nothing in these Standards shall be construed as the Board of County Commissioners assuming responsibility for any road not expressly and unambiguously displayed on the County Road Map as a numbered primary County road.

2. Road Administration

The Board shall determine the standards, policies, practices and priorities of the County as to County roads and public and private roads under County jurisdiction. The Board shall develop planning, design and construction standards, and regulate, inspect and enforce activity conducted pursuant to such standards.

a. At the Board's discretion and subject to available manpower and resources, the County Public Works Department is responsible for the maintenance, repair, and improvement of certain designated County roads and bridges, and the inspection and regulation of utilities and access points in County rights-of-way.

b. County Maintenance. Consistent with applicable law, Gunnison County shall maintain or contract for maintenance of all roads for which the County receives gas tax monies pursuant to Highway User Tax Fund reporting. Nothing in these Standards and Specifications creates or shall be construed to create any specific obligation of Gunnison County to maintain, or to allow private maintenance of, any road or portion of a road; the location, quantity, quality, and frequency of such maintenance shall be in the sole discretion of the Board.

c. County Snowplowing. Nothing in these Standards and Specifications or any prior policy or practice of Gunnison County creates or shall be construed to create any obligation of Gunnison County to snowplow, or to allow private snowplowing, of any road or portion of a road; the location, quantity, quality, and frequency of such snowplowing shall be in the sole discretion of the Board.

3. Nothing in these Standards and Specifications shall be construed to apply to the County Road System except 1) to the extent required by other law or regulation, and 2) as expressly provided in these Standards and Specifications.

C. Municipal Streets

Each municipality in the County should have a street system that consists of streets open to and used by the public.

D. Mixed Jurisdiction

Situations arise in which both the County and a municipality or other government entity have ownership and/or jurisdiction over portions of the same road (e.g., a municipality annexes to the centerline of a County road.) The standards applicable in each such situation shall be determined on a case-by-case basis by the governing authorities and shall be reduced to a binding written instrument. To reduce jurisdictional problems, municipalities shall annex full width roads when annexing areas. Absent express direction from the Board or pursuant to a duly executed intergovernmental agreement, Gunnison County will not normally assume the financial or operational responsibility of winter or summer maintenance of any road or portion of road within the jurisdiction or service area of any other federal, state or local government entity, including but not limited to special districts, municipalities, the United States Forest Service, the Bureau of Land Management, the National Park Service, the Colorado Department of Transportation, the Colorado State Lands Board, and counties adjacent to Gunnison County.

E. Other Public Roads

Colorado Revised Statues, C.R.S., Section 43-2-201, as amended, determines what are public roads or highways in Colorado. Public roads are not County roads except as provided by Section 2.1.2(A) of these Standards. Public roads shall comply with these standards and specifications in order to provide predictable, consistent, and safe roads for users. In order to provide predictable, consistent and safe roads, public roads must comply with the Manual for Uniform Traffic Control Devices for all road signage.

F. Private Roads

Gunnison County assumes no maintenance responsibility on private roads, and does not regulate utilities on private roads. The use of the private roads for emergency services, postal delivery, or school transport shall be arranged by the owner with the appropriate governmental entity. Private roads shall comply with these standards and specifications in order to provide predictable, consistent, and safe roads for users. In order to provide predictable, consistent and safe roads, private roads must comply with the Manual for Uniform Traffic Control Devices for all road signage.

2.2 County System Regulations

A. Traffic Control Devices

No person shall install a traffic control device on a County road or public road under County jurisdiction without prior written permission from Gunnison County; all traffic control devices installed on County roads or public roads under County jurisdiction shall conform to the latest edition of the Manual on Uniform Traffic Control Devices, published by U.S. Department of Transportation, Federal Highway Administration, as edited and accepted by the State of Colorado, and as amended. Said manuals will be available for review at the County Public Works Department. The County Public Works Department may conduct accident studies, traffic analysis, traffic control studies, or any other engineering studies required by state law or by the Manual on Uniform Traffic Control Devices which are prerequisite for the installation of

traffic control devices on roads. The cost of obtaining such information shall be borne in whole or in part by the project proponent as reasonably determined by the Director of Public Works.

If the need for such device is caused by traffic resulting from a development as demonstrated by a traffic study, the cost shall of such device and such study be borne in whole or in part by the project proponent, except where the project proponent is the County, in which case such study and such device are not required by these Standards and Specifications (though such device may be required by state or federal law or regulation).

B. Cooperation with Other Entities

To the extent reasonably practicable, the County Public Works Department, and other officials of Gunnison County, should seek the cooperation of law enforcement officials and federal, state and local governments in administering the provisions of these Standards and Specifications, and in developing ways and means to improve traffic conditions.

2.3 Enforcement

These Standards and Specifications shall be enforced in accordance with the requirements of Federal and Colorado law and as provided herein. Each enforcement remedy can be invoked by Gunnison County independently or in conjunction with any or all of the other enforcement remedies. The Director of Public Works and their designees are each individually and collectively charged with and authorized to enforce all the requirements of these Standards and Specifications.

A. Notification To Correct Violation

When a County official, employee, agent or attorney charged with enforcement of these Standards and Specifications has reasonable cause to believe that any activity is being conducted or any condition exists which is contrary to or in violation of these Standards and Specifications, or any permit issued pursuant to them, the Director shall give written notice to the responsible person. The notification shall state which requirements are being violated, shall state the conditions that are to be satisfied for compliance, and shall state that the violator shall correct the violation within thirty (30) days, or sooner, of receipt of the notification, unless otherwise determined by the Director. Such written notification is cumulative to, and not a prerequisite to, any other enforcement remedies available to Gunnison County. The Director shall issue a written compliance letter only if the activity or condition that is the basis for the notice has been remedied and any required reclamation work completed.

B. Stop Order

When a person charged with enforcement of these Standards and Specifications has reasonable cause to believe that any activity is being conducted or any condition exists which is contrary to or in violation of these Standards and Specifications or any permit issued pursuant to them, the Director may, by written notice ("Stop Order") order the activity stopped, and/or condition remedied immediately or by a time certain. The stop order shall be served by delivering it or mailing it certified mail, return receipt requested, to any person engaged in the activity or

responsible for the condition. The stop order shall be complied with by all persons, departments, agencies, or others. The stop order applies to all work, permits, reviews, or other situations covered by these Standards and Specifications or County Land Use resolution for all properties under the ownership or control of the person, persons, or group covered by the stop order. The stop order shall remain in effect until the Director determines that the activity or condition that is the basis for the stop order has been remedied, and the Director issues a written compliance letter only if the activity or condition that is the basis for the notice has been remedied and any reclamation work completed. The issuance of a stop order is cumulative to, and not a prerequisite to, any other enforcement remedies available to Gunnison County.

C. Suspension or Revocation of Permit

When a person charged with enforcement of these Standards and Specifications has reasonable cause to believe that any activity is being conducted or any condition exists which is contrary to or in violation of these Standards and Specifications or any permit issued pursuant to them, such person may request, and upon such request the Board shall schedule a hearing to determine whether any relevant permit shall be suspended or revoked. The Board shall give written notice of the hearing to the holder of the permit by mailing notice by electronic mail, if available, and certified mail, return receipt requested at the last known address, postmarked at least fourteen (14) days before the hearing. The notice shall contain a summary of the grounds for the potential suspension or revocation. The permit holder shall provide to the Board, to the County Attorney and to the Director at least seven (7) days before the hearing a written response to the foregoing summary. At the hearing, the person(s) charged with enforcement of these Standards and Specifications shall demonstrate, why the permit should be suspended or revoked. The permit holder or applicant shall be given an opportunity to be heard at such hearing and present evidence and testimony, but the Board may place reasonable limitations on the presentation of evidence or testimony by any party to the hearing. The Board shall suspend or revoke the permit if, after the close of the hearing, and based on credible evidence obtained at the hearing, either of the following findings is made by the Board:

1. The permit was issued in reliance on materially erroneous or misleading information from the applicant or his/her representative; or

2. Activity is being conducted or a condition exists that is a violation of these Standards and Specifications or a permit issued pursuant to them. Notification of the Board's decision shall be provided by the Director to the holder of the permit by certified mail, return receipt requested, within 7 days of the Board's decision. The suspension or revocation shall remain in effect until the Board determines that the activity or condition that is the basis of the suspension or revocation has been remedied and any required reclamation work completed, and the Board issues a written compliance order. The remedy of suspension or revocation is cumulative to, and not a prerequisite to, any other enforcement remedies available to the Board.

D. No Processing of Applications.

No permit application shall be processed or approved pursuant to these Standards and Specifications, and no Building permit or other permits shall be issued by Gunnison County, for any persons and any properties that are the subject of an active Notice of Violation, Stop Order, or Suspension Order issued by any County department. This enforcement remedy is cumulative to, and not a prerequisite to, any other enforcement remedies available to the Board.

E. Other Remedies

The Board may seek all civil, criminal and /or other legal or equitable remedies available to it for any violation of these Standards and Specifications, including but not limited to any fees associated with the investigation and prosecution of such violation as set forth in Appendix ___ to these Standards. Such remedies are cumulative to, and not a prerequisite to, any other enforcement remedies available to the Board.

F. Abatement and Reclamation

No compliance order shall be issued unless and until the activity or condition is abated and reclaimed to the satisfaction of the Director of Public Works at the cost of the violator; Gunnison County shall have the right to abate and reclaim the violation at the cost of the violator.

2.4 Inspection

The Director, or the Director's designee, to the fullest extent permitted by law, may inspect and examine the use, occupation, or development of, or activity in, each and every area or activity subject to these Standards and Specifications for the purpose of determining from time to time whether any use, occupation, development or activity is in violation of any of the provisions of these Standards and Specifications or of any permit issued or required pursuant to these Standards and Specifications. This includes, but is not necessarily limited to, any land use change as that term is defined in Section 3.2 of these Standards and Specifications. . The Director may refuse to accept or process any application for a permit under these Standards and Specifications if an applicant fails or refuses to allow the Director or Director's designee to inspect those portions of property or structures implicated by the permit application.

2.5 County Road System Additions and Improvements

A. By the County

To the fullest extent permitted by law, the Board may lay out, alter, restrict use of, close, or change any road in the County Road system under its jurisdiction, and acquire lands for County roads. The County Public Works Department has the primary responsibility for the planning, design, rights-of-way acquisition, construction, and inspection of all additions and improvements to the existing County Road System. Such activities will comply with these Standards and Specifications.

B. By Others

Any road proposed by other than the County to be added to the existing County Road System will ordinarily pass through multiple review steps (in writing): planning, acceptance of design, permitting, acceptance of rights-of-way dedication, construction, and inspection. As a final step, the Board may accept maintenance and/or plowing responsibilities for the road by duly adopted resolution. Such activities will comply with these Standards and Specifications.

C. Planning

The planning or layout of any road subject to these Standards and Specifications and any improvements to any existing roads subject to these Standards and Specifications shall be in accordance with Article III as it may be amended. If a road is created through the land use change process, all provisions of these Standards and Specifications and the Gunnison County Land Use Resolution shall be met.

D. Design

The design of any road subject to these Standards and Specifications and any improvements to any existing roads subject to these Standards and Specifications shall be in accordance with Article IV as it may be amended. Road and bridge plans and specifications shall be prepared by a Professional Engineer in accordance with these Standards and Specifications and shall be approved in writing by the Director of Public Works before any construction activity whatsoever commences. Any such written approval shall expire without further notice one year from the date it is issued. Any amendment or revision to a plan or specification, and any resubmission of a plan or specification must conform to the Standards and Specifications, as they exist at the time of the amendments, revision or resubmission.

E. Rights-of-way Dedication/Acceptance

Dedications of Rights-of-Way shall comply with standards in section 12-103 of the LUR.

2.6 Development Improvement Agreement Required

Development Improvement Agreements shall comply, to the fullest extent practicable, with Section 16-118 of the LUR, as amended, but the Director may depart from such standards in their discretion so long as such departure is consistent with these Standards and Specifications.

A. Vacant Land Access Permits may require a Development Improvement Agreement as a condition of issuance at the discretion of the Director . The Vacant Land Access Permit shall include the purpose and intended use of the access and parcel as part of the application.

2.7 Construction

Construction of County, public, and private roads under County jurisdiction and reconstruction of same shall conform to the provisions of Section 5 of these Standards and Specifications. Permits shall be obtained as per Section 7.

A. Inspection

Inspections and testing shall be performed to ensure compliance with these Standards and Specifications and any other requirements and conditions before any County Public Works Department recommendation is made to the Board for acceptance and/or release of a guarantee or financial security. Requirements for inspections and testing are found in Section5 - Construction Specifications; compliance is the sole responsibility of the developer or permittee.

2.8 Acceptance of Roads for Dedication to the County and for County Maintenance.

A. Dedication can be statutory or by written instrument at the sole discretion of the Board.

B. Conditions for new dedications are by written instrument. Any instrument of dedication must be on a County form and include language approved by the Gunnison County Attorney.

C. Requirements for acceptance include but are not limited to the following:

1. The road shall have been constructed in accordance with these Standards and Specifications.

2. Roads located within a 3-mile radius of an incorporated municipality should be paved before acceptance into the County Road System.

3. The Director of Public Works or their designee shall have completed final inspection and shall have approved the roads in accordance with Section 5of these Standards and Specifications and shall have provided a recommendation for or against to the Board.

4. The road and all associated appurtenances shall be in good repair, requiring no maintenance (except plowing for snow), improvements, or additions by the County at the time of acceptance.

5. The road must connect to another maintained County road, state highway, or municipal street of the same or higher functional classification.

6. A written request for acceptance of the road shall have been submitted to the County Public Works Department. The application shall have been submitted at least four (4) weeks before performance of the final inspection is requested. An application for acceptance will not be accepted by the Director of Public Works, nor will any inspection be performed when, in the sole discretion of the Director, weather conditions prohibit a complete inspection.

7. All required road signs and traffic control devices shall have been installed in accordance with the most current version of the Manual of Uniform Traffic Control Devices. Reflective signs showing road numbers or street names shall be installed to facilitate emergency services response prior to acceptance.

8. A guarantee of financial security shall have been submitted to the County in an amount determined by the Board to warrant the integrity of the road construction for two (2) years after the date of the acceptance by the County. In the sole discretion of the Board, such time period may be enlarged. An inspection by the County shall be conducted at the end of the time period. The obligations of the developer or permittee shall terminate only upon correction or repair by the developer or permittee of all deficiencies identified by such inspection.

9. All required subsurface utilities shall have been installed in the roadway prior to finishing subgrade. A Subsurface Utility Engineering Survey that meets state requirements shall be complete for all buried infrastructure. All subsurface utilities within the roadway profile shall have been installed prior to the road inspection.

10. All survey monuments that were in a roadway or a road rights-of-way shall have been reset by a surveyor licensed in the State of Colorado.

11. Trench compaction tests and results, as required in Article V of these Standards and Specifications and as required by any permit shall have been submitted to and approved by the Director of Public Works for all trenches within the road rights-of-way. Such tests and results shall have been submitted and approved prior to placement of any road base material whatsoever.

12. A reproducible 11" x 17" copy and/or digital copy of as-built drawings shall have been submitted to the Director of Public Works. The drawings shall accurately show all road construction details, utility, and lateral locations and depths, property boundaries and corners, and other pertinent information as required. Upon its submission to the Director, the copy shall become and remain the property of the County. The County reserves the right to require the submission of plans in any digital format.

13. Such other conditions as the Board deems necessary for public health, safety, or budget constraints shall have been satisfied. The Director of Public Works, in their sole discretion, shall assign the road a Level of Service rating.

D. Roadways through State and Federally Owned Lands. It may be to the benefit of the general public for the County to accept roads through state and federally owned land whether or not such roads meet these Standards and Specifications. Upon the receipt of a petition for acceptance of such roads into the County Road System, roads which fall into these classifications may be accepted into the County Road System by the Board pursuant to the waiver process set forth in Section 1.9.

2.9 Private Road Construction and Inspection

The construction, substantial improvement, or extension of a private road that is subject to the Gunnison County Land Use Resolution shall comply with the processes and procedures set forth herein

2.10 Deletions from the Road System

A. Abandonment

1. Abandoned State Highway

   When a portion of a state highway is relocated and, because of such relocation, a portion of the route as it existed before such relocation is, in the opinion of the State Transportation Commission, no longer necessary as a State Highway, such portion shall be considered as abandoned. An abandoned state highway or portion thereof shall become a county highway, upon the adoption of a resolution to that effect by the board of county commissioners of an affected county, or a city street, upon the adoption of an ordinance to that effect by the governing body of any affected municipality, within ninety days after the official notification of abandonment by the transportation commission. f in the written and recorded opinion of the Board, the portion of the road is not needed for a public purpose, the Board shall approve the title to it reverting to the owners of the land through which such abandoned portion may lie subject to the provisions of state law.

2. Abandoned County Roads

   A County road shall be abandoned only when a portion of the County Road System is relocated and because of such relocation a portion of the route as it existed before such relocation is, in the written and recorded opinion of the Board, or no longer needed for a public purpose; in such a case, such portion shall be considered as abandoned, and title to it shall revert to the owners of the land through which such abandoned portion may lie, subject to the provisions of state law.

3. Removal from the County Road System

   Consistent with CRS § 43-2-120, the Board may approve the removal of a road from the County Road system.

B . Policy and Procedures Regarding Vacation of County Road or Public Road Under County Jurisdiction

The purpose of this section is to establish standards and a uniform process by which the Board may act on request to vacate a County Road or public road or rights-of-way under county jurisdiction.

It is the intent of the Board in adopting this section to exercise the Board's authority

pursuant to, among other statutes, C.R.S. 43-2-301 et. seq. No person shall be deemed to have a right to vacation of a public road. The vacation of any particular road by the Board shall not be deemed precedent with regard to any future request for vacation of a road; nor shall this Section be deemed to create any rights, including property rights, in any person or individual.

The Board has discretion, but no obligation, to vacate all or a portion of a County Road or public road or rights-of-way under County jurisdiction. No such road shall be vacated so as to leave any parcel adjoining such road without any established public road connecting said parcel with another established public road or create impracticable barriers to access a parcel or right of way section.

1. The applicant for a vacation shall bear the burden to prove to the Board that the request meets the criteria of C.R.S. 43-2-301 et. seq., as amended, and these Standards and Specifications.

2. This wisdom of granting a vacation is a matter committed to the discretion of the Board and is not controlled by any one factor. In determining whether to grant a request to vacate all or a portion of a county road or public road under County jurisdiction, the Board of may consider one or more of the following criteria:

    a. The vacation would create demonstrable benefit to public health, safety or welfare and would not solely or exclusively benefit a single or small group of private landowners;

    b. The vacation meets any requirements of C.R.S. 43-2-301 et. seq., as amended;

    c. The Vacation is consistent with any comprehensive land use, corridor or master plan adopted by Gunnison County;

    d. The vacation would not unreasonably or unduly limit access from a public road to any public or private parcel.

    e. The vacation would not disrupt existing or anticipated travel modes;

    f. The proposed vacation accounts for any changed or anticipated conditions related to traffic or development patterns;

    g. The vacation would cause no adverse impact to the local ecosystem, wildlife, water or air quality, climate, soils, riparian areas, or noxious weed and invasive species management ;

    h. The vacation would not interfere with the existence, operation, control or maintenance of other County roads, other public roads under County jurisdiction, utilities, or access to public lands, water, or other public resources; and

    i. The vacation would not unduly or unreasonably interfere with access to persons or property for emergency response, law enforcement or first responder services.

Does not functionally remove right-of-way by reducing its width to a size that does not allow for reasonable use by the Public.

3. Application Process.

The applicant shall complete and file with the Director of Public Works an application in the form required by the Director.

a. At a minimum the request shall contain:

1. Applicant's name, address, email, and phone number.

2. Legal description from a licensed surveyor, f not a platted street or alley.

3. A narrative explaining the need for the vacation and its effects, covering the criteria listed in section 2.9.2.

4. Name, address, phone number for person or firm authorized to represent the applicant.

5. Map showing location of section to be vacated which also shows names and addresses of all owners of property adjacent to the section or street or alley to be vacated.

6. If any portion of the street or alley is within a subdivision, whether an active common interest community or not, or is adjacent to a subdivision lot, the applicant must provide the names and addresses of all property owners within the subdivision.

7. A Property Improvement Survey Plat by a Colorado licensed surveyor of affected properties and street rights-of-way prior to Board consideration. Applicant shall commit to a licensed surveyor placing monuments at the new property corner locations, should the vacation be approved. The County reserves the right to have this survey performed and bill the successful applicant the full cost of the work if not completed by the applicant.

b. The Director of Public Works will forward copies of all information to the pertinent County Departments and other agencies that may have an interest.

c. The applicant for the vacation shall notify all property owners adjacent to the road, and if the road is within a subdivision, all property owners within that subdivision, in writing on a form approved by the Director of Public Works, postmarked no later than thirty (30) days before the hearing, by mailing to each of them, by certified mail, return receipt requested, a complete copy of the request for a vacation and a copy of the notice of the public hearing; the applicant shall provide proof of such notification to the Director of Public Works at least seven (7) days prior to the public hearing.

d. As applicable, letters of consent to the vacation from utility providers and special

districts whose facilities are located in legal easements in or adjacent to the proposed vacation, and a copy of the easement agreements, if such agreements exist, shall be provided to the Director of Public works at least fourteen days prior to the public hearing. A precondition to granting any vacation shall be the granting and recording of perpetual easements for all existing and proposed utilities on the rights-of-way being vacated, should they not already exist.

e. A staff report based on information available will be prepared for the Board and included in the agenda documentation before the public hearing is held.

f. The applicant, at its sole expense, will prepare all proposed documentation if the street vacation is approved by the Board; such documentation shall be subject to review and approval by the County Attorney or their designee.

g. Any condition required by the Board shall be completed before the vacation is made effective.

h. The applicant for a vacation shall be required to prepay all estimated costs, including but not limited to administrative costs, costs of publication of legal notice of public hearing, travel time and cost of certified and regular mailings, pertinent to application whether or not the application is granted. The prepayment is not refundable. (See Exhibit A).

2.10 Road Name and/or Number Changes

A. Neither the name nor number of any road dedicated to public use or to the County may be changed except upon written application to and written approval by the Director of Public Works.

B. The applicant shall be responsible for all costs and expenses associated with establishing the new road number or name.

C. The name or number of a road within a recorded subdivision may be changed only after such application and approval by amending the final plat in compliance with the Gunnison County Land Use Resolution.

D. No road names or numbers shall be used which are generally deemed offensive, or will duplicate, or be readily confused with, the names of any existing street or road in Gunnison County. Emergency response agencies will have the opportunity to comment on all road name changes.

E. The County will be responsible for changing the applicable physical road number signs of any road accepted by the County as a County road. If the road name or number change is for a road that has not been accepted by the County as a County road, the applicant, homeowner's association, or the developer is responsible for changing the physical road name or number signs.

2.11 Snowplowing

Gunnison County shall not snowplow any road unless and until such road has been dedicated to the public use and accepted by the County as a County road, in writing, by the Board. It shall be in the sole discretion of the Board to determine which such roads so accepted will be plowed by the County. The plowing of County roads, not maintained in the winter by the County, shall be arranged through a written permit agreement and approved by the Board, except that the Director in their discretion may renew an existing snowplow permit without express approval of the Board as set forth in these Standards and Specifications.

A. Policy and Procedures for Requests for Gunnison County to Provide Snow Removal Services on County Roads.

1. The County shall not provide snow removal services on private, non-public roads. With regard to public roads, the decision on whether to provide snow removal services rests with the discretion of the County, as exercised by the Board. In deciding whether to cease snow removal on a public road, the Board should consider the public benefit of continued winter maintenance.

2. In addition to the requirements of the Gunnison County Land Use Resolution, Section 5-210, a request for the County to provide snow removal services on a County road**,** or public road under County jurisdiction, to an area not currently being served shall be submitted in written form to the Director of Public Works. The written request shall include at a minimum:

    a. The applicant(s)' name, address and telephone number.

    b. The name and number (if applicable) of the road requested to be plowed.

    c. A map designating the portion of the road to be plowed.

    d. The distance to be plowed.

    e. Description of the location where plowing is anticipated to terminate and the resulting turnaround for plowing equipment.

    f. Evidence that the road is a public road.

    g. Confirmation of any land use change associated with plowing request.

    h. Evidence of no significant adverse impact on wildlife, water and air quality, or the local ecosystem.

    i. A list of property owners benefiting from or affected by the proposed service.

    j. The reason the plowing is being requested.

3. All requests shall be submitted to the Director of Public Works before August 1 of the year when plowing is requested to begin. Requests received after August 1 will be considered as requests for the following winter season.

a. Upon receipt of the request, the Director of Public Works may require the applicant to provide information in addition to the subject matters contained in the written request. After receipt of the written request and any additional information, the Director or their designee shall conduct a site visit and prepare a report for the Board. The report shall address the following:

i. An assessment of the condition of the road including width, base drainage, fencing, etc.

ii. An evaluation and estimate of cost to bring the road up to a standard suitable for winter maintenance and plowing.

iii. A recommendation of the type of equipment that would be required to remove snow; the frequency, duration and extent of snowplowing, the amount of manpower and time involved and an estimate of cost.

iv. An assessment of safety considerations involved with the request.

v. A statement as to whether the road is a natural extension of an existing snowplow route.

vi. A statement of any general public benefit served by providing snow removal service.

vii. An assessment of any negative impact that might result from providing snow removal service.

viii. Any other criteria set by the board.

4. The written request to provide snow removal service together with the evaluation prepared by the Director of Public Works shall be submitted to the Board. Requests shall be considered in a public meeting of the Board. At its discretion, the Board may approve or deny the request for the County to plow the road. The Board may conditionally approve the request based on specific, written conditions.

5. The County shall exercise its appropriate, lawful authority to ensure compliance with this section. Should either the Director or the Board fail or refuse to comply with this section A, such failure or refusal shall not be deemed to create any right or interest in any person, including any right to appeal such failure or refusal. Nor shall any person be deemed to have a right to appeal any decision made under this section A.

B. County Policy and Procedures for Requests by Private Individuals to Plow a County Road or Public Road under County Jurisdiction

The purpose of this section is to outline the procedures and criteria by which the Board

will consider requests presented to perform private snow removal on County and public roads under County jurisdiction.

1. In order to facilitate the plowing of a road that might not otherwise be plowed, the Board may allow a private individual or company to remove snow from all or part of a County or public road under County jurisdiction.

    a. Private Plow Permits do not run with the land, and the issuance or denial of a private plow permit shall not be deemed to create any entitlement, property interest or right in the permittee or any other person.

    b. No person shall remove snow from a County road, or public road under County jurisdiction without first receiving permission from the Board and a Snow Removal Permit issued by the Director of Public Works.

2. If an applicant is requesting permission to plow a public road or a section of road beyond current snowplowed access, such applicant must obtain a Land Use Change Permit per section 11-110 of the Gunnison County Land Use Resolution. The first issuance of a permit is reviewed and approved by the Board. After the initial permit is obtained, the applicant will only need apply for the renewal of the permit from the Director of Public Works. If issued, the first permit issuance will be for a single season. The applicant shall be responsible to apply for renewal of a permit(s).

3. In addition to the requirements and process set forth in the Gunnison County Land Use Resolution, a permit for private snow removal on a County or public road shall comply with the requirements and procedures set forth in this section. The Public Works Director or the Board, in their discretion, may impose additional conditions on any permit issued under this section, and such additional conditions shall appear on the face of the permit issued by the Public Works Director.

4. A request to plow a County road, or public road under County jurisdiction, shall be made in writing to the Director of Public Works. The written request shall include at a minimum:

    a. The name and/or number of the road to be plowed.

    b. If less than the entire road, a map designating the portion of the road to be plowed.

    c. The distance in miles to be plowed privately.

    d. The type of equipment to be used to remove the snow.

    e. The name, address, and telephone number of the person(s) responsible for snow removal.

    f. The names and mailing addresses of property owners located along the proposed snow removal route.

    g. The reason the plowing is being requested.

h. The time period for which the permit is being requested.

5. Requests to provide snow removal must be submitted to the Director of Public Works no later than August 1 of the year when plowing is requested.

6. Upon receipt of the request, the Director of Public Works or designee shall conduct a site visit and prepare a report for the Board. The report shall address the following:

   a. An assessment of the condition of the road including width, base drainage, fencing, etc.

   b. An evaluation and estimate of cost to bring the road up to a standard suitable for winter maintenance and plowing.

   c. A recommendation of the type of equipment that would be required to remove snow; the frequency of plowing; and the duration of plowing.

   d. An assessment of safety considerations involved with the request.

   e. A statement of any general public benefit served by providing snow removal service.

   f. An assessment of any negative impact that might result from allowing snow removal service.

7. If the plowing is authorized by the Board, the Director of Public Works or designee and the person requesting permission to remove snow shall meet on-site to evaluate the condition of the road before plowing begins.

8. The County may require that reasonable improvements and repairs be made to the road that are necessary for public safety and to protect and preserve the road. Such improvements or repairs shall be made at the expense of the applicant unless otherwise agreed to by the County.

9. For the purposes of this section, snow removal work shall include:

   a. Removal of snow from all the traveled way, including sufficient turnouts for safe and efficient use of all emergency and other users.
   b. Leaving culvert inlets in a natural condition without snow or other material excessively plowed into them so that the drainage system will function normally.

10. Upon review of the plow request, the Board may request a bond, cash deposit, or other form of security acceptable to the County to secure performance according to this section. The amount of security required will be relative to the distance being plowed, and the surface of the road.

11. As a condition of any permit issued under this section, a permittee shall:

    a. Obtain and maintain insurance coverage in amount(s) the County deems necessary to protect the County from any and all claims related to the permittee's snow removal operations.

    b. Indemnify and hold harmless the County with regard to any and all claims related to the permittee's snow removal operations.

12. The foregoing may be waived by the Board in its discretion, but only after conferral with the County Attorney and for reasons stated on the record at a public meeting of the Board.

13. The applicant shall acknowledge in writing that they have read, understand and agrees to comply with the conditions set forth in this section and with the conditions of a permit if one is issued.

14. The County shall exercise its' appropriate, lawful authority to ensure compliance with this Snow Removal section.

15. Nothing in this section is, or shall be construed to be, an obligation of the County to allow the private snowplowing of all or part of any particular road.

16. The Board may reduce or remove plow services at its discretion with rationale provided in writing in a public meeting.

2.12 No Personal Liability

Any County official, employee or agent charged with enforcement of these Standards and Specifications who acts in good faith in the discharge of the duties required herein or by any permit, other pertinent law, ordinance or regulation shall not thereby be rendered personally liable for any damages that may accrue to any person or property as a result of an act or by any permit, omission to act in the discharge of these duties.

2.13 No County Liability

These Standards and Specifications do not make, and shall not be construed to make, Gunnison County or any of its officials, employees or agents responsible for or liable for any injury to person or property resulting from any action taken pursuant to these Standards and Specifications.

2.14 Responsibility Not Lessened

These Standards and Specifications do not, and shall not be construed to, relieve from or lessen or eliminate the responsibility of any person acting pursuant to a permit issued hereunder for any damages to person or property.

2.15 No Waiver of Governmental Immunity

Nothing in these Standards and Specifications is, or shall be construed to be, a waiver by Gunnison County, or any of its officials, employees or agents, of governmental immunity under the Colorado Governmental Immunity Act or otherwise.

SECTION 3

TRANSPORTATION PLANNING AND DEVELOPMENT POLICIES

3.1 Functional Classification of Roads

All roads in the Gunnison County Road System shall receive a functional classification from the Director. The functional classifications used in Gunnison County are: (Also See Table 3-1)

A. Major Arterial (Paved)
3,000+ ADT Residential, commercial, and recreational traffic - significant economic importance to County (example: Gothic Road)

B. Commercial/Industrial Collector (Paved or Gravel)
10 to 500 ADT Heavy duty traffic - significant economic importance to County (example: Landfill Road/Industrial Park Roads)

C. Suburban Lane (Paved or Gravel)
30 to 500 ADT Primarily residential traffic -- width needed for parking and other density factors (example: Panaview, Castle Mountain, Meridian Lake)

D. Rural Arterial (Paved)
1,000 to 2,999 ADT Residential, commercial and recreational traffic - significant economic importance to County (example: Gold Basin, Marble, Brush Creek, Cement Creek, and Taylor River)

E. Rural Collector (Paved)
500 to 999 ADT Primarily residential or recreational traffic, but some commercial (examples: Cottonwood, Washington Gulch, Slate River, Antelope, Kebler, and Lower Quartz Creek)

F. Rural Local (Paved or Gravel)
200 to 499 ADT Primarily residential, recreational, and ranching uses (examples: Powderhorn, Upper Quartz Creek, Kebler over the top, Brush Creek after Avion, and Gothic Road after Mt. Crested Butte)

G. Rural Lane (Gravel Road)
30 TO 199 ADT Primarily residential or agricultural use (examples: Little Cimarron, Pine Creek, Sap Mesa, and Steuben Creek)

H. Local Intermittent (Native surface/Gravel)
13 TO 90 ADT Primarily recreational, residential or commercial traffic (logging). May be joint jurisdiction, such as forest service and county and maintained by county under agreement. Can be access to National Forest and Bureau of Land Management lands. (Examples: Rainbow lake, Alpine Tunnel, Red Creek and Upper Taylor River above reservoir.)

I. Primitive Recreation (Native Surface)
No ADT Available - Limited and/or recreational use only

3.2 Land Use Changes – Applicability

FA land use change may require application of these Standards and Specifications. For purposes of these Standards and Specifications, "land use change" shall mean:

A. A land use change, as defined by the *Gunnison County Land Use Resolution*, that requires compliance with Section 12-103 of the *Gunnison County Land Use Resolution* is required; or

B. An activity or system that requires a permit under the applicable Gunnison County Building Code(s) or Gunnison County Onsite Wastewater Treatment System Regulations and:

1. Such permit(s) are for activities or systems on vacant land;
2. The activity or system requiring such permit(s) would encroach upon or substantively interfere with the use of any existing road, bridge or access to the property on which such activity or system is contemplated by such permit(s); or

3. Such activity or system presents a potential hazard to public health, safety, or welfare in relation to a road, bridge or access governed by these Standards or Specifications, as determined by the Director or their designee in their discretion.

3.3 Planning Principles

A. Basic factors in the design of a road system include:

1. Safety for both vehicular and pedestrian traffic.
2. Efficiency of Service for all users.
3. Livability, especially as affected by traffic elements in the circulation system.
4. Economy in both construction and use of land. Design should minimize maintenance costs and maximize ease of snow removal.
5. Environment design should minimize the impact of road construction on wildlife, plant species, water and air quality, erosion, soils, invasive plan species promulgation, and forest health to the extent feasible.

B. Each of the following principles is an elaboration on one or more of these four factors. The principles are not intended as absolute criteria, since instances may appear where certain principles conflict. Therefore, the principles should be used as guides to proper system layout.

1. Insure Vehicular and Pedestrian Access. Road widths, placement of sidewalks or pathways, patterns of roads, crosswalk installations, and number of intersections shall be related to safe and efficient use of the road and access to abutting lands.

2. Control Access to Arterials. Local road systems and land development patterns should not detract from the efficiency of peripheral arterial facilities. Ideally, land development should occur so that no parcels require direct access to arterial routes. The local flow of traffic should be managed with an internal traffic management plan. The number of access points between the local road system and the arterial system should be minimized. Intersections along arterial routes should be properly spaced for efficient and safe traffic flow. The roads that do intersect the arterial system will tend to have high traffic volumes since they are the only access points. The number of residential lots directly accessing collector roads should be minimized.

3. Discourage Speeding. Residential roads should be designed to discourage excessive vehicle speed through generally accepted traffic engineering methods.

4. Courts and Cul-de-Sacs. A road ending with a cul-de-sac should normally not be longer than six hundred (600) feet. All cul-de-sacs shall have a minimum radius of forty five (45) feet of maintained and plowed area as measured to the outside edge of the traveled surface and have defined and permanent snow storage locations with demonstrable drainage solutions.

C. Roads which do not connect or intersect with other roads shall have a turn around at the end of the road segment that meets the requirements of the local emergency agencies. A cul-de-sac that is being vacated shall be improved to the functional classification standard of the road which it serves if access is provided to dwellings or other structures. Turnarounds shall comply with any fire proception district requirements related to setbacks from flammable structures. (See Appendix E for Turnaround Standards.)

SECTION 4

DESIGN STANDARDS

4.1 Application of Design Standards

A. Minimum Standards

The standards set forth in this Article provide uniform minimum acceptable values. If it can be shown that an alternate design standard will provide an outcome equal to or better than the required minimum, then such alternate may be approved in the sole discretion of the Department and upon review and approval by the Director of plans submitted and signed by a professional engineer. Life cycle cost shall be considered in meeting minimum acceptable values.

4.2 Design Factors

A . Road Classification

Each road or trail or access as defined by the County proposed for construction or improvement shall receive, from the Director, a functional classification as defined in Section 3.1.

B . Projected Traffic Volumes

A traffic analysis is normally required to project future traffic volumes for roads. The most recent edition of the Institute of Transportation Engineers "Trip Generation Manual", shall be the County guideline where no detailed trip generation data is available. Traffic studies shall comply with the requirements of Section 12-103 of the LUR.

The Director of Public Works shall consult with the County Planning Director to determine whether a traffic analysis will be required. The traffic analysis will be done during the initial application phase of the development, and at the sole cost of the road developer.

C . Terrain Classification

For the purpose of these Standards and Specifications, the terrain in Gunnison County shall be classified in two categories:

1. Flat or Rolling Terrain. Average cross slope less than fifteen (15) percent and the ridges and draws are not well defined.

2. Mountainous Terrain. Average cross slope greater than fifteen (15) percent and the ridges and draws are steep and well defined.

D. Design Speed

The choice of a design speed is influenced primarily by the terrain classification, functional classification of the road, and land use. Design speeds will utilize the AASHTO Green Book and CDOT's Roadway Design Guide to justify said design speed. All speed limits shall comply with C.R.S. § 42-4-1101 and consider the following factors, if applicable:

A. Roadway environment (such as roadside development, number and frequency of driveways and access points, and land use), functional classification, public transit volume and location or frequency of stops, parking practices, and pedestrian and bicycle facilities and activity;

B. Roadway characteristics (such as lane widths, shoulder condition, grade, alignment, median type, and sight distance);

C. Geographic context (such as an urban district, rural town center, non-urbanized rural area, or suburban area), and multi-modal trip generation;

D. Reported crash experience for at least a 12-month period;

E. Speed distribution of free-flowing vehicles, including the pace, median (50th-percentile), and 85th Percentile speeds; and/or

F. A review of past engineering speed studies to identify any trends in operating speeds.

4.3 Geometric Standards

A. Horizontal Alignment

1. General Considerations. The major considerations in horizontal alignment are topography, road classification, design speed, grade profile, subsurface conditions, safety, and sight distance. All of these must be balanced to produce an alignment that is safe and adequate for the functional classification of the road.

2. Sight Distance. Horizontal alignment must provide at least minimum stopping sight distance for the design speed at all points. This includes visibility at intersections, as well as around curves and roadside obstruction.

    a. The minimum stopping sight distance is the distance required by the driver of a vehicle traveling at a given speed to bring the vehicle to a stop after an object on the road becomes visible. Stopping sight distance is measured from the driver's eye, which is assumed to be three and one-half (3.5) feet above the roadway surface, to an object 6 inches high on the road.

    b. The required stopping distance for a given design shall comply with the AASHTO Green Book and CDOT's Roadway Design Guide. Criteria for measuring stopping sight distance include an eye height of 3.5 feet and an object height of 2.0 feet. Passing sight distance criteria include an eye height of 3.5 feet and the object height of 3.5 feet.

    c. In some cases, passing sight distance may be required on collectors or arterials. The CDOT Roadway Design Guide should be used in determining passing sight distance.

Standards for Curvature. The permissible minimum curve radii and the permissible maximum allowable rate of superelevation for the various functional classifications shall comply with the AASHTO Green Book and CDOT's Roadway Design Guide based on design speed, friction factors, and superelevation,

d. Sudden reductions in speed introduce the element of surprise to the driver and should be avoided. Where physical restrictions cannot be overcome and it becomes necessary to design curvature which is lower than the design speed for the project, the design speed between successive curves shall not change by more than 10 mile-per-hour increments. Normally a curve for a design speed lower than the design speed of the project shall not be introduced at the end of a long tangent or at other locations where high approach speeds may be anticipated. Use of lower standard curve radii is subject to approval by the County.

e. Angle points less than one degree require no curve radius. A compound curve is two curves of different radii joining with no tangent between them. A compound curve will not be permitted. A broken-back curve is two curves in the same direction joined by a short tangent. Broken-back curves are not permitted.

3. Superelevation.. The standard superelevation rates shall comply with the AASHTO Green Book and CDOT's Roadway Design Guide and shall be designed to hold the side friction factor within tolerable limits for those operating speeds expected for the range of curve radii given.

    a. For undivided roads, the axis of rotation of superelevation is usually the centerline. Where curves are preceded by long relatively level tangents, the plane of superelevation may be rotated to about the edges of the pavement to improve the perception of the curve.

    b. A superelevation transition is variable in length depending upon the amount of superelevation. Two-thirds of the transition is in the tangent approach at the beginning and the end of the curve, and one-third of the full superelevation is at the beginning and at the end of the curve. Where spiral curves are permitted, the transitions are to be designed using the latest edition of the Colorado Department of Transportation Roadway Design Manual.

4. Coordination with Vertical Alignment. To avoid the possibility of introducing serious traffic hazards, coordination is required between horizontal and vertical alignment. Particular care must be exercised to maintain proper sight distance at all times. Sharp horizontal curves introduced at or near the top of a pronounced crest, or at the bottom of sag vertical curves should be avoided.

B . Vertical Alignment

1. General Considerations. The centerline profile is a reference line by which the elevation or grades of the pavement and other features of the roadway are established. It is controlled mainly by topography, structure clearances, horizontal alignment, safety, sight distance, design speed, and the performance of heavy vehicles on a grade.

2. Minimum and Maximum Grades. To provide for adequate drainage, the minimum sustained grades shall be no less than 1 percent (1%) on roadway sections with curb and gutter and two percent (2%) on all other roads.

   a. Maximum permissible sustained grades (expressed in percents) for roads are related to design speed and shall be as follows:

      The maximum design grade should be used infrequently rather than as a value to be used in most cases.

   b. All grades shall flatten to at most four (4) percent for at least one hundred (100) feet approaching intersections, and for at least fifty (50) feet entering and leaving turn-arounds or cul-de-sacs. In mountainous terrain, all grades shall flatten to four (4) percent or less for at least fifty (50) feet approaching intersections and entering switchbacks or cul-de-sacs.

3. Vertical Curves. All vertical curves shall be designed to provide adequate stopping and passing sight distance, headlight sight distance, comfortable driving, good drainage, and a pleasing appearance.

   a. Vertical curves shall be parabolic.

   b. Vertical curves are not required where the algebraic difference of grades is less than 0.40%. The preferred minimum length of vertical curves, both crest and sag, is four hundred (400) feet.

   c. The minimum length of a vertical curve shall be three hundred (300) feet for design speeds above thirty (30) miles per hour, and two hundred (200) feet for design speeds of thirty (30) miles per hour and lower. Unequal tangent vertical curves are permitted only in special circumstances as approved by the County.

   a. Vertical curves that are long and flat may develop poor drainage at the level section.

	Design Speed - MPH						
Terrain Classification	15	20	25	30	40		
Rolling	7	6	6	6	6		
Mountainous	11	11	10	9	8		

   This must be overcome by adjusting the flow line of the ditch section.

4. Sight Distance. Minimum lengths of crest vertical curves are controlled by stopping sight distance requirements as shown in as determined by the ASHTO green book.

4.4 Cross Section Standards

A . Typical Sections

Typical sections for each functional classification are given in Appendix B - D. Table 3-1 also provides a summary of design elements. Variations from these sections may be approved by the County when there is sufficient evidence that certain design elements can be reduced or eliminated.

B . Rights-of-Way Width

The basic minimum rights-of-way width for each typical section is shown in Table 3-1. This width is sufficient only to accommodate the specific geometric cross-sectional elements that are required. Additional rights-of-way may be required for snow removal and storage, pedestrian infrastructure, or other uses. Cut and fill slopes beyond the hinge point and rights-of-way may require additional easements.

C . Cross Slope

Cross slope is provided to provide a drainage gradient so that water will run off the surface to a drainage system such as a street gutter or ditch. Inadequate cross slope will contribute to aquaplaning.

1. On straight sections of normal two-lane roads, the pavement cross section is usually highest in the center (crown of road) and drains to both sides.

2. In horizontal curves, the cross slope is banked into superelevation to reduce steering effort and lateral force required to go around the curve.

3. Cross slope criteria apply to typical tangent alignments.

4. On high-speed roadways, normal cross slope is 1.5–2.0 percent, with the cross-slope break (the algebraic difference in slopes between the lanes) at the centerline not exceeding 4 percent.

5. In areas of intense rainfall and where there are three or more lanes in each direction, additional cross slope may be necessary for adequate drainage.

6. Accomplishing other design features (superelevation transitions, pavement warping at intersections, etc.) will inevitably require removal of cross slope in spot locations. These cases are routine and necessary in design and a design exception is not required. In addition to the cross slope of the lanes, the cross-slope break on the high side of superelevated curves should not exceed 8 percent (Figure 23). A formal design exception is required when this condition is not met. At intersections, or in unusual situations, the crown position may vary depending upon drainage or other factors.

7. Standard cross slopes minimums to be used on the traveled way for different pavement and surface types are as follows:

Type of Surface	Cross Slope (Percent)
Portland Cement	1.5

Bituminous Mix Pavements	2.0
Penetration Treated Earth or Gravel	3.0
Unsurfaced Graded Section	4.0

D . Barrow or Bar Ditches

Ditches may be required in cut sections without curbs and gutters. The slope from the edge of the shoulder to the bottom of the ditch shall not be steeper than 3:1.

E . Curbs and Gutters

1. Curbs and gutters may be required as follows:
   a. On urban roads.
   b. When drainage, traffic, or public safety necessitates.
   c. As determined by the department.

2. All curbs and gutters shall conform to standards detailed in the latest edition of Colorado Department of Transportation Standard Specifications for Type 2 curb and gutter, unless otherwise specified by the County Public Works Department.

F . Side Slopes

1. Cut and Fill Slopes: Shall comply with LUR standards.
2. Flatter slopes shall be required in unstable soils. Cut slopes that are steeper than the standard may be considered in special situations, such as in solid material, but require prior approval by the County. Some side slopes may require additional measures to stabilize or revegetate the slope.

3. The tops of all cut slopes shall be rounded with a minimum of a four (4) foot radius where the material is other than solid rock, and shall be reseeded with vegetation native to the area or as recommended by the local Natural Resources Conservation Service. The backslopes at the ends of all cuts, except rock, shall be flattened. The ditch at the lower end of the cut shall be widened gradually to discharge side ditch drainage away from base of adjacent fill slopes in order to avoid erosion and improve appearance.

G . Ramps for Physically Handicapped

All newly constructed, repaired, or replaced sidewalks and curbs shall provide adequate and reasonable access for the safe and convenient movement of persons and in compliance with the most current and adopted Americans with Disabilities Act Guidelines and amendments and Architectural Barriers Act Accessibility Guidelines for the Public Rights-of-Way.

H . Trails

Recreation path standard specifications may be developed or promulgated by Gunnison

County. All submittals for trails may be referred to the Sustainable Tourism and Outdoor Recreation Committee for recommendations and should conform to LUR section 12-104 and the Gunnison County Trails Master Plan, as amended.

I . Horizontal and Vertical Clearance

The following are minimum clearances for structures or other roadside obstructions, including but not limited to, shrubs, trees, signs, gates, and fences. Additional clearances may be required for sight distance and/or other requirements. Accesses will be assessed on a case-by-case basis.

1. In all areas without curbs, or with mountable curbs, and with design speeds of 40 MPH or less, a minimum clear zone of fifteen (15) feet shall be provided. The minimum horizontal clearance shall be provided from the outside edge of the traveled way of a public or private road.,
2. Mailboxes may be placed 4 feet from the edge of the traveled way and must comply with CDOT's Roadway Design Manual.
3. The minimum vertical clearance for all overhead structures including signs, cables, etc. shall be in accordance with those specified in the applicable provisions of the latest edition of CDOT's Roadway Design Manual and/or the Manual on Uniform Traffic Control Devices In no case shall the overhead clearance be less than 13 feet 6 inches.
4. When roads or highways under the jurisdiction of other agencies are involved, the clearance as required by said agency, if more restrictive than these Standards and Specifications, shall apply.

4.5 Access Control Standards

A. The County shall apply these access control standards to all connections made within the rights-of-way by any highway, road, drive, trail (>50 inches), path (50 inches), or access otherwise determined by the County. Accesses shall be constructed to meet all Standards and Specifications.

1. All residential accesses that connect to a County road or public or private rights-of-way shall have a minimum surface width of twenty (20) feet at the edge of the pavement or road surface, and taper to a minimum surface width of sixteen (16) feet at a distance of two feet from the edge of the road, and maintain this surface width to the end of the access. No residential access shall be in excess of 24 feet wide in the Rights-Of-Way, excluding corner Radii.
2. All such accesses shall be constructed with the following surface treatment section dimensions or combination thereof:

Access Material	Minimum Section Depth
Concrete	6 inches
HBP (asphalt)	3 inches with 4 inches Class 6 aggregate base course
Gravel (compacted)	6 inches Class 6 aggregate base course
Native Material	Permissible only if access road is native material and native material provides structural stability and an all-weather driving surface

and shall be installed in accordance with both an approved access permit and all applicable sections of these Standards and Specifications. Access to a County road or rights-of-way must be obtained as described in Section 7.4. "Uniform screened aggregate" shall not be used in the ROW or on grades in excess of 4%.

3. The maximum grades for accesses shall be 11%. This will be measured in the center of the travel way and as an average over 30-foot-long sections. The grade of the entrance/exit shall slope away from the road surface at the same rate as the cross slope and for a distance at least equal to the width of the shoulder or to the centerline of the drainage ditch, in order to allow water to effectively drain from the roadway and enter the designed drainage..

4. All accesses and approaches shall not interfere with the drainage system of the roadway. The Director may require a stormwater management plan for the access as a condition of approval. The applicant shall be required to pay for and install, at their own expense, drainage structures at entrances and exits which will become an integral part of the existing drainage system. The dimensions of all drainage structures must be approved by the Gunnison County Public Works Department prior to installation and may require an engineered plan. The minimum size of culvert installed parallel to the road will be a 12" diameter. Installation, maintenance, and replacement of the culvert shall be the responsibility of the property owner and shall maintain the original efficiency of the installation.

5. The horizontal axis of an approach to the roadway shall be at right angle to the centerline of the roadway and extend a minimum of thirty (30) feet beyond the traveled way. An angle between 90 and 70 degrees may be permitted if it can be shown that physical constraints exist that require a different approach angle. An angle less than 60 degrees shall not be permitted. No more than one access shall be allowed regardless of ownership or subdivision, on any parcel of property when there is less than one hundred (100) feet of property frontage. No more than one access approach shall be provided to an individual parcel or to contiguous parcels under the same ownership, except adjacent platted subdivision lots, unless it can be shown that, they are necessary for the safe use of the property. In such cases, any additional accesses, measured from the center line tangent, must be separated by more than one hundred (100) feet or more. Additional accesses may be considered only when the site geography inhibits internal connections and the public right-of-way is the only way to achieve the proposed land use. Additional accesses must comply with these regulations.

6. The extension of the access into the right-or-way or the radius-taper portion of an access, shall not encroach upon adjoining property. Property lines shall be extended on the existing tangent to the middle of the right-of-way to assess encroachment.

7. An access approach that is gated shall be designed so that the longest vehicle commonly using it can completely clear the traveled way when the gate is closed. In no event shall such distance be less than thirty-five (35) feet. Public rights-of-way shall not be gated unless approved by BOCC resolution.

8. Intersecting public and private roads shall be located opposite each other where possible or be offset by a minimum of one hundred twenty-five (125) feet.

9. Accesses shall have an all-weather driving surface. In most cases a manufactured product will be required. A native material road must be requested in writing and the access shall achieve the characteristics that provide an all-weather driving surface.

10. Accesses shall be measured from the edge of the traveled way, along the centerline of the access, to the structure or proposed building envelope if no structure is constructed.

11. Accesses 150' or longer - shall have a cul-de-sac, or a "Y" or "T" turn around adequate to accommodate emergency service vehicles. All turn around areas shall be kept open and clear, and shall have sufficient area for snow storage outside of the road prism, and shall be plowed by the owner in the winter. All turnarounds shall be reviewed by the fire district responsible for fire suppression in the area and subject to additional requirements. (See Appendix E).

12. Accesses which are in excess of 600 feet in length and are single lane shall have standard inter-visible turnouts. The minimum number of intervisible turnouts is one per 600-foot section. The location of the intervisible turnout will be determined in cooperation with Public Works and the fire district responsible for fire suppression in the area and may be impacted by multiple variables. (See Appendix D).

13. Access designs that allow for backing onto or off of a county road are discouraged and shall be evaluated on a case-by-case basis. Lot size, proposed house location, traffic volume, and speed can be used as determining factors but are not exhaustive. The Director of Public Works shall make the final determination.

14. Any access permit application that has the potential to be used for a road for future development may be referred to the Community Development office for proper review.

15. Accesses that exceed 4% grade, uphill or downhill, will require an approach area with slopes below 4% grade in all directions for a minimum of 30 feet measured from the edge of the traveled way.

16. A temporary access road as defined herein shall be required to meet all Standards and

Specifications only within the right-of-way. The temporary access or road shall be removed and reclaimed within one (1) year of the temporary access permit issuance if an access permit is not submitted to convert the temporary access or road permit to a permanent access.

17. Adequate vehicle parking must be provided on the private parcel based on the proposed land use. Constructed or designated parking along the road, in the emergency turnaround, or protruding into the right-of way shall not be permitted.

18. Any overhead structures designed for vehicles to travel under, such as a Porte-cochère, passageway, screen wall, archway, or other shall be at least 13’ 6” high for the width of the travel way, measured from the road surface.

19. Reflective address signs as required by the local fire district shall be installed at the access approach if the structure is in excess of 100 feet from the public right-of-way.

20. Snow storage shall be identified on site plan. Snow removed from accesses shall not be or stored on Road rights-of-way.

21. Storing of construction materials in the Road Rights-of-way is not allowed.

22. Summary of Access Width Elements:

Type of Access	# of Lanes	Lane Width
Residential	1	16 feet
Agricultural	1	16 feet
Commercial	2	11 feet
Industrial	2	11 feet

23. Commercial Accesses shall be assessed based on the commercial use of the land and the necessary use of the parcel. Safety of the public is paramount to the assessment of commercial use. Each commercial access permit will be addressed on a case-by-case basis and does not create precedent.
24. Site Plan shall be in compliance with LUR standards and Requirements and these standards and specifications.

    a. **Maps and Site Plans.** Maps and site plans submitted with any application shall be engineer quality and at a scale and sheet size that can be easily viewed or digital format with adequate resolution. A minimum scale of 1" = 100' is preferred. Sheet size shall not exceed 24 inches by 36 inches.

    b. **All Property Served by the Access.** Include all land served by proposed access. This can be a simple, hand-drawn layout, but it must be legible, clearly marked, drawn to scale, and signed and dated by the person who drew it.

    c. **Phasing.** Any proposed phases of the construction, and their timing.

d. **Total Acreage of Contiguous Property Owned by the Applicant.** Total acreage and location of all contiguous property owned by the applicant.

e. **Total Acreage Impacted by Access Permit.** Total acreage of the site on which the applicant wants to obtain approval for the Access Permit.

f. **Adjacent Landowners.** Names and actual land uses of adjacent landowners (including federal, State of Colorado and other publicly owned lands), to the site (in addition to the separate narrative listing). This includes properties that may be across a road, stream or river from the applicant's property.

g. **Utility Locations in Area.** Location of all existing utilities on the property (septic tanks, wells, electric, gas, telephone or cable lines) that will serve the property.

h. **Topographic Features.** Streams, lakes, ponds, wetlands, contour lines and elevations, any prominent ridgelines, and any other significant visual resource areas on the property.

i. **Livestock Drives and Fencelines.** Historic or recorded stock drive easements crossing or adjoining the development property, including the location of any existing fences along property lines, and the location of new fences or other obstacles proposed to be built across any such stock drive.

j. **Irrigation Ditches.** The location(s), and name(s), of any irrigation ditch crossing or adjoining the development property, as available from the Colorado Division of Water Resources, or ditch commissioner's records.

k. **Drainage.** Drainage patterns and structures proposed or existing, on and adjacent to the Project property. Snow Storage and drainage impacts from snow storage location.

l. **Parking.** Design and location of parking areas, both existing and proposed, This information should include length, width, Dimensions of emergency access turn arounds and intervisible pullouts, Access grade and points of grade changes, Radii of tight curves or switch backs, Sight distances, Elevations of access approach, and proposed elevation of home, Angle of access approach to roadway, and/or other items.

m. **Existing Structures.** Locations and sizes of existing structures.

n. **Proposed Structures.** Locations and sizes of proposed structures.

o. **Boundaries.** Boundaries and related measurements.

B . Access to Arterial Roads

1. Private Direct Access. Private direct access to any arterial roads shall be permitted only when the property in question has no other feasible access to the public road system. When direct access must be provided, the following shall be considered:

   a. Access shall continue until such time that some other reasonable access to a lower functional classification road or highway is available and permitted. The access

permit shall specify the future reasonable access location and, if known, the date the change will be made. Subdivisions shall be designed, if possible, to provide for alternative access at a future date.

No more than one access approach shall be provided to an individual parcel or to contiguous parcels under the same ownership except adjacent platted subdivision lots unless it can be shown that, they are required for the safe use of the property.

2. Spacing and Signing.

    a. For rural road sections, minimum spacing of all intersecting public roads, roads and highways shall be on one-half (1/2) mile intervals for paved arterials and one-quarter (1/4) mile intervals for gravel arterials, plus or minus approximately 200 feet. Where topography makes such spacing inappropriate, location of public approaches shall be determined by topography, property ownerships, property lines and physical design constraints. The final location should serve as many properties and interests as possible to minimize the need for direct private access to the road system.

    b. In areas where development accesses an arterial road, a traffic engineering study shall be completed to properly locate all proposed approaches. These studies shall be submitted to the Director of Public Works for review prior to the issuance of a Access Permit and shall be paid for solely by the applicant.

C . Access to Collector Roads

1. Private Direct Access. No more than one access approach shall be provided to an individual parcel or to contiguous parcels under the same ownership except adjacent platted subdivision lots unless it can be shown that they are necessary for the safe use of the property.
2. Subdivision of a parcel shall not result in additional access unless shown to be necessary for safe use of the property.

3. Accesses located near an intersection shall be constructed so that the side nearest the intersection is no less than one hundred (100) feet from the centerline of the intersecting road

4. Access onto collector roads shall be spaced at a minimum on-quarter (1/4) mile intervals plus or minus two hundred (200) feet.

D . Local Roads/Lanes

1. Private Direct Access. No more than one access approach shall be provided to an individual parcel or to contiguous parcels under the same ownership except adjacent platted subdivision lots unless it can be shown that additional access approaches are required due to geography, and would not be detrimental to the safety and operation of the road. Multiple accesses are at the discretion of the director and require waivers.

2. Accesses located near an intersection shall be constructed so that the side nearest the intersection is no less than one hundred (100) feet from the centerline of the intersecting road.

4.6 Intersections

A . General Requirements

To minimize conflicts and to provide for the anticipated crossing and turning movements, geometric design of each intersection must be given careful consideration.

Intersections occurring on horizontal curves or crest vertical curves are undesirable. When latitude exists in the selection of intersection locations, vertical or horizontal curvature should be avoided. A line or grade change may be warranted when major intersections are involved.

B . Intersection or Access Corner Radii

1. Intersections and Access Approaches shall not have a corner radius of less than two (2) feet.

2. Accesses designed for use by vehicles exceeding thirty (30) feet in overall length shall have a minimum effective corner radius of twenty-eight (28) feet.

3. The access approach corner radii shall not be less than that necessary to accommodate the turning radius of the largest vehicle for which the access approach is intended for use on a regular basis.

4. Road Intersection corner radii shall be determined on a case-by-case basis.

C . Sight Distance

1. The required stopping sight distance necessary, as measured from the traveling vehicle to the intersection or access approach, shall be determined according to Section 4.3.A.2.

2. The minimum sight distance necessary for the entering vehicle will be based on the following criteria:

   a. Intersection Sight Distance:

Design speed (mph)	AASHTO design sight distance criteria (feet)
15	80
20	115
25	155

30	200
35	250
40	305
45	360

b. Sight distance shall be measured at a height of 3.5 feet between the entering driver and the oncoming vehicle.

c. The entering driver's eyes shall be considered to be fifteen (15) feet back from the edge of the traveled way.

d. The vehicle shall be the largest vehicle normally intended to use the access approach. Normally means in excess of an average of one per day.

e. After sight distance requirements are met and an access permit issued, a sign structure or parked vehicle shall not be permitted where it will obstruct the required sight distance.

4.7 Pavement Structure Design

A. General Design Procedure and Requirements

The requirements for the design of pavement structure sections shall be based on the most applicable section of the current edition of the Colorado Department of Transportation Roadway Design Manual.

B. Pavement Structure Design Report

A pavement structure design report shall be prepared by a professional engineer, as a requirement of road plan approval. The pavement structure design report shall include at minimum the following information:

1. Soil logs along the proposed roadway alignment at a maximum of five hundred (500) intervals.

2. Each log shall have a soil profile of a least four (4) feet below proposed subgrade elevation.

3. Representative samples for pavement design from each log shall be within two (2) feet below proposed subgrade elevation.

4. Each representative sample shall be classified according to the AASHTO Unified Soil

Classification Table, along with an Atterberg Limits Test and sieve analysis.

5. The pavement design procedure is based on the Hveem Stabilimeter Test or the Expansion Pressure Test, which is used to compute a Resistance Value (R) of the subgrade. The California Bearing Ratio test may also be used to determine design parameters.

6. Proposed average daily traffic volumes (ADT) for each road shall be based on 100% of full development build-out including an adjustment for construction traffic. Traffic analysis for the purpose of pavement design shall be part of submittal requirements as defined in Section 4.2.2.

7. Recommended structural sections, based on the design considerations, proposed typical sections, and sections of roadway which may require additional stabilization or treatment.

C. Flexible Pavement Design Considerations

The following elements are to be used in the design procedure:

1. The design procedure is based on the number of 18,000 pound single axle equivalent daily load applications (18k EDLA) per traveled lane.

   The 18k EDLA shall be equivalent to 100% of fully developed ADT adjusted for construction traffic (110%). In no case will the 18k EDLA be less than 5 on private roads, lane and place roads, and local roads and 25 on collectors.

2. The serviceability index (SI) for private roads, collector roads, local roads, and lanes will be 2.0. The SI for arterial, will be 2.5.The SI will be determined using the CDOT Pavement Design Manual..

3. The regional factor shall be summarized as per Table 4-8. In no case will regional factor be less than 2.00.

4. Evaluation of subgrade soils and pavement structure materials shall follow the procedure in the Colorado Department of Transportation Roadway Design Manual and Table 4-9 of these Standards and Specifications.

5. An economic evaluation of alternate structure sections is encouraged. In making adjustments to the various layers of the pavement structure, a more economical design may result. For example, by increasing the asphalt thickness, a decrease in gravel and earthwork may result. By stabilizing a poor subgrade with lime or cement, a thinner structure section may result.
6. Also, the use of asphalt treated base or cement treated subbase or ridged concrete pavement may be a more economical use of materials. Life cycle cost analysis will help determine most economic materials to use.

D. Minimum Structural Sections

The minimum compacted depths of Hot Bituminous Pavement (HBP) and Aggregate Base Course (ABC) Class 6 (3/4") per road type which will be allowed are as follows:

	HBP	ABC
Gravel Roads	0”	6”
Local Road	3”	6”
Collectors	Dictated by project design	
Arterial	Dictated by project design	

Evaluation of the pavement design as per Section 4.7.3 (e) may result in an increase in HBP or substituting ABC with Plant Mix Bituminous Base (PMBB) or Portland Cement Treated Base. In no case will substitute sections be any less than three inches in depth.

Minimum compacted depths of HBP and ABC shall only be used when all of the design consideration requirements and the pavement structure design report requirements have been fulfilled and show a section less than this minimum needed to support the design loads.

E. Rigid Pavement Design

The design of Rigid Pavements or portland cement concrete overlay for roadway surfaces shall conform to the applicable section of the latest edition of the Colorado Department of Transportation Roadway Design Manual. Thickness shall be dictated by the project design, and in no case shall the pavement thickness be less than 3 inches, overlays shall have a thickness of at least 2 inches.

4.8 Drainage

A. Applications

This section presents minimum required standards for the design of road and access drainage systems. Design of ditches, storm sewers, drainage courses and drainage crossings shall be performed by an engineer. Proper and adequate accommodation of drainage shall be provided for the protection of the roadway improvements and safety of the public.

B. Design Criteria

Design criteria for the collection of and movement of water through public roads are based on the size of the drainage basin.

1. Minor Drainage Basin. A minor drainage basin will consist of a surface area less than one hundred (100) acres. All water courses and structures in a minor drainage basin shall be designed for ten year storms.

2. Major Drainage Basin. Drainage basins with surface areas greater than one hundred (100) acres shall be classified major drainage basins, in which one hundred (100) year storms shall be used as design criteria.

C. Hydrology

One of the following four computational techniques must be used in the planning and engineering of a drainage system. In addition, a written explanation must be given by the applicant why the particular technique was used.

1. Rational Method. The rational method is recommended for storm sewer, culvert design, and overland flow of minor drainage basin. It is simple, and when used with adequate input parameters it provides reasonable results for use in project design.

   The basic equation is Q=CIA Where:

   Q - Peak discharge in cubic feet per second (cfs)
   C - Coefficient of runoff (dimensionless)
   I - Average rainfall intensity for a duration equal to the time of concentration of the watershed (inches/hour)
   A - Drainage area of the watershed (acres)

2. Soil Conservation Service (SCS) Unit Hydrograph Method and SCS Tabular Hydrograph Method. In most drainage basins, rainfall runoff data from which unit hydrographs can be derived is unavailable, thus a synthetic unit hydrograph must be developed. The USDA Soil Conservation Service has developed a method of hydrograph syntheses which is now being widely used. The Tabular Hydrograph Method provides a tabular approach to estimating peak discharges from urban areas using the time of concentration and travel time. This method can readily predict the increase in peak flow when all or a portion of the watershed is to be developed.

3. Soil Conservation Service (SCS) Method. The SCS method was developed particularly for agricultural watersheds. This widely used method is applicable to the mountainous regions on areas from two hundred (200) acres up to ten square miles, and above 6,000 feet in elevation. The method is presented in Procedures for Determining Peak Flows in Colorado - 1980 Edition (U.S. Department of Agriculture, Soil Conservation Service, 1980), or the most recent update.

4. Regional Analysis - A statistical or regional approach appears to be most appropriate for those areas in Gunnison County where peak flows occur from seasonal snow melt. Also, where large watersheds are expected to undergo significant urbanization, computer simulation techniques should be utilized, such as the HEC I and HEC II Programs.

D. Drainage and Irrigation Structures within County Road Rights-of-way

1. Materials. Culverts shall be constructed from acceptable polymers. The Public Works Department may allow reinforced concrete, corrugated aluminum, corrugated galvanized steel, or other material. The minimum pipe size installed perpendicular to the road shall be a fifteen (15) inch diameter round pipe or shall have an equivalent 15 inch diameter round cross sectional area for other shapes.

2. Inlets and Outlets. Culverts may need to be designed either with headwalls and wingwalls, or flared-end sections at the inlet and outlet. Additional protection may also be required at the inlet and outlet due to the potential scouring velocities.

3. Velocity. A minimum velocity during a minor storm event of three feet (3) per second is required to assure a self- cleansing condition of the culvert. The maximum culvert velocity is dictated by the channel conditions at the outlet. If the outlet velocities area less than seven fps for grassed channels, then only a minimal amount of protection is required. Higher outlet velocities will require substantially more protection. The maximum outlet velocity shall be twelve (12) fps along with the proper erosion protection.

4. Structures. All culverts, as a minimum, shall be designed in accordance with the procedures of AASHTO Standard Specifications for Highway Bridges and with the pipe manufacturer's recommendations.

5. Irrigation Ditches. Ditches may cross roads, but shall not parallel a road within the road right-of way. The County is only responsible for conveying the water through the rights-of-way in a manner that maintains the efficient use of the irrigation water. The type, alignment, and size of the pipe will be determined by the County in consultation with the water right owner. Metering, diverting, measuring, or otherwise managing the water shall occur outside the rights-of-way and is not the County's responsibility.

E. Barrow or Bar or Roadside Ditches

1. In areas here no curb and gutter is required, the maximum allowable capacity for the roadside ditch shall be no more than that calculated through the use of Manning's formula with an appropriate roughness coefficient. If the natural channel slope would cause erosion velocity, suitable channel protection, as approved by the Public Works Department shall be installed. (See Table 4-10).

2. The design must give full consideration to sediment disposition and to scour, as well as hydraulics.

3. For anticipated drainage velocities in excess of twelve (12) Feet Per Second erosion protection shall be provided for the channel. Erosion protection design must be approved by the County Public Works Department.

F. Bridges and Low Water Crossings.

All private or public bridges over waterways shall meet or exceed legal load limit requirements, have an Army Corp 404 permit, and obtain a Permit from the Gunnison County Community Development Department before construction may begin. All private or public bridges not over waterways will also meet or exceed legal load limit requirements and obtain all necessary permits before construction may begin.

1. Standards for Bridges. The design and supporting calculations for bridges shall be prepared and certified by an engineer. The following minimum standards shall apply to all bridges:

    a. A minimum clear width of no less than 16 feet or equal to the width of the approved approach road, sufficient to provide service for proposed use. In no case shall a bridge be designed in a way that excludes emergency personnel and their vehicles.

    b. Grade Criteria: Minimum of 0.5 percent / Maximum of 4.0 percent

    f. Highway Semitrailer 15-ton (HS-15) load rating. In all cases the bridge load limit and bridge ownership shall be conspicuously posted by the permit applicant. Posting shall be in accordance with the latest edition of the Manual of Uniform Traffic Control Devices and the signs shall be owned, posted, and maintained by the applicant or property owner in perpetuity. An alternative loading may be allowed by the County where it can be demonstrated that anticipated loads will not exceed an HS-10 rating. The design may need to be altered to restrict loads in excess of HS-10.

    g. Non-County Bridges in public rights-of-way and open to public travel may be required to provide inspections at the sole cost of the responsible party in accordance with CDOT standards.

    d. Hydraulic criteria:

        i. A single clear span bridge.

        ii. All bridges shall include a minimum one (1) foot clearance, between the lowest horizontal member and the base flood elevation.

        iii. Where bridge abutments and foundations are located below the base flood elevation, concrete wingwalls shall be required at forty (40) degree to sixty (60) degree angles tied to the existing side slopes to prevent erosion behind the abutments.

        iv. At no time shall the waterway section at the bridge accelerate to velocities sufficient to scour and undermine the bridge's abutments and wingwalls.

h. Utilities attached to bridges shall not obstruct flows within the stream channel; or waterway users (i.e. boats, rafts); or sight distance to drivers using the structure. Attached utilities shall not interfere or encumber the maintenance of the bridge.

i. All bridges on roads proposed for acceptance into the County Road System shall meet AASHTO Standards for the use being served. Acceptance will be made in accordance with the following policies:

i. New Structures. All structures shall be designed by a professional engineer in accordance with AASHTO specifications for highway bridges. Designs for said structures shall be reviewed for approval by the Gunnison County Public Works Department. Upon approval of the plans, any person, partnership, association, or corporation desiring to have such a bridge constructed shall bear all costs associated with the construction and final inspection. All new bridges shall have a sufficiency rating greater than ninety (90) when evaluated by FHWA/CDOT procedures.

ii. Existing Structures. All structures being reviewed for acceptance shall meet current AASHTO specifications and receive a sufficiency rating of greater than seventy (70) when evaluated by FHWA/ CDOT procedures. The petitioner shall present plans and specifications for review to the County Public Works Department. Upon approval of said plans and specifications, the subject bridge may be considered for acceptance subject to a final field inspection by the County. After it has been determined that the subject structure meets all requirements, the County Public Works Director shall submit the petition to the Board for consideration of acceptance into the County Road System.

j. All bridge abutments shall be located to avoid adversely affecting the natural hydraulics and inundation characteristics of wetland areas.

2. Low Water Crossings. To protect water quality, wet low water crossings are prohibited. A dry low-water crossing (also known as an Irish bridge, causeway, low-level crossing or low-water bridge) is a low-elevation roadway traversing over a waterbody that stays dry above the water when the flow is low, but is designed to get submerged under high-flow conditions. The design and supporting calculations for all low water crossings must be prepared and signed by an engineer. The following are minimum standards for private low water crossings.

a. A minimum clear roadway width sufficient to provide service for proposed use.

b. Grade criteria: Minimum of 0.5 percent / Maximum of 10.0 percent

c. Side slopes shall not be steeper than 3:1 and shall be protected by a six-inch concrete facing or by eighteen (18) inch rip-rap.

d. The culverts used must be a minimum of fifteen (15) inches in diameter.

e. Minimum cover over the culverts will be as follows:

Round pipe – twelve (12) inches or as recommended by the manufacturer

Arch pipe – twelve (12) inches or as recommended by the manufacturer.

f. Hydraulic criteria: Culverts shall have the capacity to carry the ten-year peak discharge from that stream, with a HW/D ratio not to exceed 1.5.

g. At no time shall the waterway section at the crossing cause a significant rise (one foot) in the intermediate regional flood elevation or cause flows to accelerate to velocities greater than those expected during the intermediate regional flood.

4.9 Road Appurtenances

A. Road Signs and Traffic Control Devices

All road signs, striping, delineators, barricades, signals, and other traffic control devices shall conform to the most recent Edition of the Manual on Uniform Traffic Control Devices (MUTCD) published by U.S. Department of Transportation, Federal Highway Administration, and any applicable Colorado supplement.

The permittee shall bear all expenses for the fabrication and installation of road name signs, permanent barricades, and/or signs for implementing the approved project design (i.e. one way, no parking, dead end, private drive.) Road name signs shall be lettered and erected in accordance with the latest edition of the Manual on Uniform Traffic Control Devices. Non-typical signs shall not be the responsibility of the County to repair or replace after acceptance of the road. Materials shall require the review and approval of the Gunnison County Public Works Department. All Signs and traffic control devices shall be in place prior to road acceptance.

B. Guardrail

Guardrail may be required by the Public Works Department based on to the following criteria:

1. To protect a fixed object.

2. At a location with a high accident rate (vehicles accidentally leaving the traveled roadway).

3. In areas of steep terrain or high embankments.

4. On an isolated sharp curve on a road otherwise built to higher standards.

5. On curves requiring a reduction in approach speeds where one of the following

conditions exist:

a. The height of embankment is more than ten feet.

b. The side slope is steeper than 4:1.

c. Substandard pavement and shoulder widths.

d. Other roadside hazards.

6. Bridge Approaches. Approach guardrail for bridges on roads classified as Major Arterial, Suburban Collector, Suburban Lane, Rural Arterial or Rural Collector shall conform to current Colorado Department of Transportation M-Standards for Guardrail. Approach guardrail for bridges on roads classified as Rural Local, Rural Lane, Local Intermittent or Primitive Recreation shall conform to Engineered plans.

C . Cattle Guards

Cattle guards may be installed where they are necessary for the control of livestock to improve the safety of the travelling public. New applications for cattleguards shall be made in writing. Unless the County agrees otherwise expressly and in writing, the cost of construction, installation, and replacement shall be the applicant's sole responsibility including any fence attachments or posts. The clear opening of the cattle guard shall extend from the edge of the shoulder to edge of shoulder for the standard roadway section approved. Each cattle guard location shall also have a bypass gate installed to allow livestock passage. Cattle guard and gate location and design shall be approved by the Director of Public Works prior to installation.

Appendix H is a drawing of the standard 24-foot cattle guard built and used by the Department. Any proposed non-standard design or width must apply for a waiver of these standards from the Director.

4.10 Utilities

Any utility within a road right-of-way shall be designed and located to maximize public safety and minimize road impact and maintenance and snowplowing costs. All utilities requiring above-ground risers or boxes shall locate them at least twenty feet (20) from the centerline of the road All new underground facilities must be electronically locatable when installed, including laterals up to the structure or the building being served. All plowed or trenched installations must include appropriate color-coded warning tape placed not less than 12 inches vertically above the top of the line. The warning tape shall be surface-detectable if needed to facilitate detection of the line. When a utility company must make an emergency repair on a County road to restore service, they may do so. The company should notify the Director of Public Works within 48 hours to coordinate the repair of the site as soon as possible.

A. Underground Utilities

1. Where the installation crosses a paved roadway, it shall be

made by mechanical boring or jacking beneath the road surface. Open cutting shall be allowed to the edge of the shouldered portion of the road. No tunneling shall be permitted. In no circumstance shall an existing culvert be used for an installation of an utility. The Director of Public Works may, in their sole discretion, authorize pavement cuts with associated requirements based on the condition of the asphalt and known soil conditions in the area.

2. If micro-trenching installation is requested, it will be evaluated based on several factors, including but not limited to: roadway classification (e.g., arterial, collector, or local), traffic volumes, signalized intersections, condition and age of the existing pavement, existing utility infrastructure, and other site specific circumstances. Requests for micro-trench installations are required to include detailed drawings of the proposed route(s), location of micro-trench along route (including laterals), justification for the nonstandard trench installation, and if approved, an electronic as-built file.

2. Pavement cuts are permitted when: two unsuccessful attempts have been made to bore or jack the installation; conflicting utilities place constraints as to elevation or alignment on the proposed installation; connecting to an existing utility located beneath the paved portion of the roadway; and approved in advance by the Director of Public Works.

   Cutting existing asphalt shall be accomplished so as to provide a neat even line perpendicular to the centerline of the roadway, the cut and resulting repair will be done in accordance with the "T patching" best practice.

3. When an open cut is allowed, the permittee is responsible for restoring the disturbed portion of the roadway to its original condition. The disturbed area shall be repaired within forty-eight (48) hours from the time of excavation, or twenty-four (24) hours from completion of the project within the roadway. Prior to completing the repair the cut must be left in an acceptable condition for public use. Any repairs not completed within 48 hours must be approved by the Director of Public Works. (See Figure 4-1).

   Backfilling within the roadway prism shall be made in six-inch lifts and mechanically compacted and to 90% density around the utility, and 95% density for the remaining portion of the trench between the base course and the utility. Backfill outside the roadway prism shall be compacted to a density consistent with the adjoining area. Relative densities shall be determined by AASHTO T-99, with the material within one percent of optimum moisture. Backfill material shall be of clean, random (non-granular) material. Bedding material may be granular. Imported backfill meeting standards defined by the Department of Transportation, Division of Highways, State of Colorado, Standard Specifications for New Road and Bridge Construction, latest edition may be required when existing material is unsuitable.

   Permittee may be required to perform compaction control testing. The compaction testing

schedule is as follows:

1. One test at 1/2 trench depth from zero to five feet deep, and one test at finish grade.

2. Two tests, one at each third point for trenches five to ten feet deep, and one test at finish grade.

3. Three tests, one at each quarter point for trenches ten feet deep and over, and one test at finish grade.

Tests shall be performed at thirty (30) foot intervals for trenches one to one hundred twenty (120) feet in length, fifty (50) foot intervals for trenches one hundred twenty (120) to three hundred (300) feet, and one hundred (100) foot intervals for trenches over three hundred (300) feet in length. Permittee shall bear all expense for testing fees and repair costs. The County reserves the right to conduct in-place density tests to confirm the permittee's density test results, and require retesting of areas where conflicting test results are obtained.

An acceptable surety guaranteeing repair or replacement of failures within a one-year period after completion of the last repair shall be required for road cuts.

Structural backfill (flow-fill) meeting an approved design containing portland cement water, coarse aggregate and fine aggregate and, resulting in a maximum of 60 psi in 28-days may be used in lieu of compaction testing.

Hot Bituminous Pavement Mix Grading C, CX, G, OR F as defined by the Department of Highways, Division of Transportation, State of Colorado, Standard Specifications for New Road and Bridge Construction, latest edition, shall be used for patching material, except when unavailable, during which time a temporary cold mix patch shall be allowed. Temporary patches shall be replaced with hot mix patches within five working days after material becomes available. . The layer of patching shall be at least as thick as the original road surface, and in no case less than two inches. Asphalt cuts shall be twenty-four (24) inches wider (twelve inches per side) than the width of the excavation.

Permittee shall be responsible for patch failure and subsequent surface settlement for a period of twelve months after completion of the last repair.

Repairs to failed patches may be made by the county and billed directly to the permittee.

4. No underground utility may be installed within a road rights-of-way if such installation would interfere in any fashion whatsoever with any existing utility installation or water course, including a corral, ditch or culvert, except with the prior written authorization of the owner of the existing utility installation or water course. Damage to any existing utility or in-ground infrastructure shall be the responsibility of the permittee, given that the existing utility complied with Colorado subsurface utility

regulations.

5. The traveling public shall be protected during the repair or installation of utilities with proper warning signs or signals. Warning signs and signals shall be installed and maintained by and at the expense of the permittee, in accordance with latest edition of The Manual on Uniform Traffic Control Devices. The County Public Works Department may require a construction signing plan prior to the granting of this permit. If proper signs are not in place during the work or a critical safety deficiency is observed, the Director of Public Works or authorized representative shall immediately stop all work until proper corrective actions are taken.

6. Utility placement by plowing may be allowed in certain locations. Plowing shall not occur across paved roads. Where plowing operations occur across the roadway prism and result in an open cut, backfilling shall be done in accordance with Section 4.10.1.C. Longitudinal plowing on a gravel road within the travelway shall require aggregate replacement.

7. When a road closure due to utility installation becomes necessary, the permittee shall notify the Gunnison County Sheriff's Office and/or State Patrol, transit authority, ambulance, fire department, and school district stating duration of all road closures. All road closures must be approved by the Director of Public Works in writing in advance of road closure.

8. No cleated or tracked equipment shall work on or move over asphalt surfaces without mats.

9. Any materials excavated as the result of utility installation shall be removed from road surface each day unless the material pile is signed per the MUTCD and may serve as a barrier to an open excavation. The Director of Public Works may require that road surfaces be washed. (C.R.S. Section 42-4-1207)

10. Requests for permits should allow **48 HOURS** for a field review by the County Public Works Department prior to the issuance of any permit.

11. Construction of underground installations will generally require the services of an inspector approved by the County Public Works Department. All extraordinary costs related to such inspection will be borne by the permittee.

12. Failure to obtain a permit when working within the County road rights-of-way will result in a fee five (5) times the regularly scheduled fee.

13. Road cuts for utility installation or repair made parallel to the centerline of the road, and which cause damage to, or require the removal of asphalt in any traffic lane, require the replacement of asphalt to the full lane width throughout the disturbed section.

14. When utilities are to be located behind the curb, the trench or excavation shall be located

at a distance away from the back of curb or edge or asphalt equal to the depth of the trench or excavation.

15. No placement of underground utilities will be allowed when there is more than four inches (4") of frost present.
16. Utility Locate Markers. All flagging feathers used for utility locates shall be removed by the applicant before release of financial security.

17. As-Built Plans. All applicants for surface alteration or road cut permits will be required to submit a complete set of as-built plans before the final release of financial security.

18. Reclamation of Disturbed Areas. The permittee shall be responsible for the complete reclamation of areas disturbed within the rights-of-way to prevent the introduction and/or spread of noxious weeds and soil erosion. Soil disturbance of 500 square feet or greater shall be revegetated. Revegetation requirements for soil disturbance less than 500 square feet will be at the discretion of Gunnison County.

19. Noxious Weed Control. The permittee shall be responsible for noxious weed control in disturbed areas utilizing Integrated Weed Management (IWM) practices. Colorado Revised Statutes 35-5.5-101, *et seq*: the *Colorado Noxious Weed Act*, Gunnison Basin Integrated Weed Management Plan; Board Resolution 95-74, as amended, and Gunnison County Land Use Resolution require that noxious weeds be controlled. Noxious weed infestations should be properly identified to determine proper control measures. Noxious weeds can be controlled by utilizing one or more of the following IWM practices: 1) biological control, 2) cultural control, 3) herbicide control, or 4) physical control. Contact Gunnison County for the current list of noxious weeds mandated by law to be controlled and for assistance in weed identification and control methods.

4.11 Procedures for Encroachments to Rights-of-way

A. Purpose and Procedure.

The purpose of this section is to establish public works, engineering, inspection, permitting and other requirements that must be met before a structure, repair or other improvement (including but not limited to or temporary construction parking) can be placed by a public or private property owner within the rights-of-way of a County road, or public road under County jurisdiction, or private road under County jurisdiction.

1. No person or persons shall begin work on a proposed structure, repair or improvement, or make substantial renovation to an existing structure, repair or improvement, within County Rights-of-way, a County road, or public road under County jurisdiction, or private road under County jurisdiction except as specifically permitted herein, without first obtaining a Right-of-way Encroachment Permit to erect or maintain a structure, repair or improvement on rights-of-way from the County. A separate permit will be required for each structure, repair or improvement proposed, unless a group or series of

structures are proposed at one time.

2. Installation, maintenance, or improvements of a utility in, on or below a County Road or public road under the jurisdiction of Gunnison County shall require:

a. A permit for improvement in the right-of-way

b. A Right-of-way permit.

3. A permit will not be required, and the structure, repair or improvement considered exempt, for the following:

   a. Minor or insubstantial maintenance to an existing specific structure. Such work includes, but may not be limited to, cleaning, painting or other minor resurfacing to an existing structure or structures; repairing or mending an existing structure or structures.

   b. Any work within the rights-of-way to repair or maintain existing irrigation ditches or impoundments.

   c. The Director of Public Works can determine if a proposed structure, or improvement or maintenance is exempt, .

4. Whenever Gunnison County determines that an existing structure or structures, improvement or improvements, approved or not approved, becomes a hazard to public safety or interferes with the County's maintenance or structure plans for the rights-of-way on which it is placed, the owner of the property which the structure benefits, upon receipt of written notice from the Director of Public Works or their representative shall, within the period specified therein, repair, move, or eliminate said structure(s) or improvement (s), so as to eliminate the hazard or impedance and be in conformance with the requirements contained herein. Requirements contained herein may be enforced as set forth in Section 2.3.2**.**

5. To receive a permit to erect or maintain a structure or improvement in a public rights-of-way, each applicant is required to submit a Right-of-way Encroachment permit application form and any associated plans or specifications required by the County. The applicant is advised to meet with the County Public Works staff prior to application submission to ensure that all necessary information is provided.

   a. Two (2) sets of plans and specifications shall be submitted for review by the Director of Public Works or her representative. If required by the County, these plans and specifications shall be prepared and signed by a Colorado Registered Professional Engineer. In all cases when they are requested, the plans and specifications shall show the following:

      i. Structure(s) plan and profile;

ii. If the structures(s), repair(s), or improvement(s) impact existing roadside drainage, a plan showing how such impacts shall be mitigated by the applicant;

iii. Map or letters from utility companies detailing utility placement in the area of the proposed structure(s);

iv. Any relevant current land use approvals;

v. Map showing property ownership and easements**.** Director of Public Works may require a survey.

vi. Proposed structure(s), repair(s), or improvement(s) design and site plan, showing reclamation/revegetation plan if hillsides are to be disturbed of if fill or cut is to take place as part of the plan;

vii. Signage plans, if any;

viii. Maintenance requirements and plan; and

ix. Any other requirements as determined by the Director in thier discretion.

b. Supplemental reports and data (i.e., geology, soils, water, drainage, wildlife, etc.) may be required. Supplemental reports are to be prepared by qualified professionals as required by the Director of Public Works or her representative.

c. Gunnison County shall have the reasonable right to have all plans, specifications and supplemental reports reviewed by qualified professionals identified by Gunnison County at the cost of the applicant.

d. If required, the applicant shall execute and fully fund a security agreement in the form and amount determined by the Director of Public Works in consultation with the County Attorney.

6. Neither the issuance of a permit nor compliance with the provisions hereof or with any conditions imposed in the permit issued hereunder shall relieve the applicant from the full responsibility for any damage whatsoever caused to persons or property, nor impose any liability upon any official, appointee, or employee of Gunnison County for damage to person or property. Nothing herein is or shall be construed to be a waiver by Gunnison County of governmental immunity.

7. The application shall be denied if the Director of Public Works determines that it is not in the public interest or that it will adversely affect public health, safety, or welfare.

8. Whenever a permit is required by this section and the permit is denied by the Director of Public Works, or his/her designee, the applicant for the permit may, within fifteen (15) days from the date of such denial, request in writing to the Director of Public Works, an appeal of the denial to the Board. The Director of Public Works shall,

within fifteen (15) days of receiving the request, submit to the Board the written request for the appeal, and any administrative record consisting of documents considered by the Director of Public Works in her denial, including the application for the permit and all relevant documents. The Board will then decide, based upon a review of the record, whether to accept or reject the decision of the officer, within thirty (30) working days of receiving the permit application and all relevant documents. The Board may, in its discretion, request additional or other information from the applicant, the county officer who issued the denial, or other county staff. The decision rendered by the Board is the final decision of the County. For Gunnison County "Right-of-way Encroachment Permit" application information please refer to Section 7.7.

9. For fee information see Exhibit A.

SECTION 5

CONSTRUCTION SPECIFICATIONS

5.1 General Policies

A. Gunnison County Construction Specifications

During the execution of road and bridge construction and related work, all materials, performance, and quality of work shall conform to the requirements of these Standards and Specifications, the applicable sections for the most current edition of the Department of Transportation, State of Colorado Standard Specifications for Road and Bridge Construction, Colorado Standards Plans, Division of Highways M & S Standards, American Association of State Highway and Transportation Officials, and the Standard Specification for Highway Bridges.

If these Standards and Specifications or the Department of Transportation Standard Specifications do not cover a specific situation during the course of work, applicable specifications must be approved by and permission obtained from the County. In the event that there is conflict between the various reference specifications, they shall govern in the following order:

1. Gunnison County Standards and Specifications for Road and Bridge Construction

2. Most recent, adopted, and applicable State of Colorado Department of Transportation, , Standard Specifications for Road and Bridge Construction; and M & S Standards and specifications

3. Most recent, adopted, and applicable AASHTO Standard Specifications

The County shall be the final authority on the meaning or interpretation of all specifications.

B. The Project Engineer

Each road developer shall designate to the County Public Works Department a person who shall be responsible for general compliance with these Standards and Specifications, approved permits, and development improvement agreements, and the following:

1. To provide to the County any engineering details, documentation, or any other information regarding the prosecution of the work;

2. To apply to the County for written approval by the County any proposed alternations to the approved plans and specifications prior to construction;

3. To provide reproducible "as-built" plans, and specifications to the County Public

Works Department upon completion of all work to be performed on the project as a condition of final approval of the work;

4. To furnish and set construction stakes and marks establishing all lines, grades, and measurements necessary to the proper prosecution of the work in its final location as shown on the approved plans and specifications;

5. To make sure all survey monuments disturbed or removed are replaced in kind at their original locations; and

6. To provide all materials testing necessary to establish parameters required to inspect work for compliance with approved plans and specifications.

7. To stop dirt work when frost levels reach four inches (4").

C. Inspection and Testing

1. All work done on County roads and those roads required to be in compliance with approved land use change permits may be inspected by the County Public Works Department to ensure compliance with these Standards and Specifications, and the applicable provisions of the land use change conditions, approved plans, or subdivision agreement.

2. The County shall suspend the work wholly, or in part, due to the failure of the contractor to carry out provisions of these Standards and Specifications, approved permits and development improvement agreements.

3. To ensure compliance with these Standards and Specifications and approved plans, adequate in-process inspection and testing is required. The Project Engineer shall be responsible for certifying all work is completed in accordance with the approved plans and specifications.

4. The County shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Project Engineer and contractor as required to make a complete and detailed inspection. The County may require that any work done or materials used without inspection must be ordered, removed, or replaced. The County may, at any time before acceptance of the work, direct the Contractor to remove or uncover any such portion of the finished work. After examination, and approval of the work by the County, the Contractor shall restore the disturbed portions of the work to the standard required by the specifications. Inspection by the County shall not relieve the developer and/or contractor, or their designated representatives of the responsibility to control the work and insure compliance with the approved plans and specifications. The County shall not be responsible for insuring project compliance with the approved plans and specifications.

5. When the Construction Specifications of other jurisdictions are involved in the work,

written approval shall be provided by the other jurisdictions and made available to the County prior to final acceptance of the work. Regular in-progress materials testing shall be provided to the County in a timely manner during the course of the work, and should be a requirement of final acceptance.

6. All materials testing shall be performed by an independent laboratory, under the supervision of a professional engineer. All testing shall be at the expense of the developer, the Project Engineer, or the contractor.

7. Prior to acceptance by the County, all work not in compliance with these Standards and Specifications, approved permits, and/or development improvement agreements shall be brought into compliance at the Contractor's or owner's sole expense.

8. For the minimum requirements for compaction of embankments, sub-grades, and utility trenches, see Table 5-1. For required quality tests, see Table 5-2.

9. Embankment shall be exempt from controlled compaction testing and the following shall apply: Embankment shall be by layer placement. Surfaces steeper than a ratio of 3 horizontal to 1 vertical (3:1) upon which embankment is to be placed, shall be roughened or stepped to provide permanent bonding of new and old materials.

10. Embankment shall be layer placed, except over rock surfaces, in which case material may be placed by end dumping to the minimum depth needed for operation of spreading equipment. Each embankment layer shall be leveled and smoothed before placement of subsequent layers. Hauling and spreading equipment shall be operated uniformly over the full width of each layer. Suitable material shall be placed in layers no more than 12 inches thick, except when the material contains rock more than 9 inches in diameter, in which case layers may be of sufficient thickness to accommodate the material involved. No layer shall exceed 24 inches before compaction.

11. Placing individual rocks or boulders greater than 24 inches will be permitted provided the embankment will accommodate them. Such rocks and boulders shall be at least 6 inches below sub-grade. They shall be carefully distributed and the voids filled with finer material to form a dense and compacted mass.

12. At a minimum, Material shall be a moisture content suitable to obtain a mass that will not visibly deflect under the load of hauling and spreading equipment.

D. The Use of Approved Plans and Specifications

1. Any work performed without approved plans and specifications shall be considered unauthorized and may be ordered removed and the pre-existing conditions restored.

2. Standard drawings for proposed road and bridges submitted to Gunnison County for approval shall be drawn on standard plan and profile sheet 24" x 36" or submitted in an acceptable digital format.

a. Plan drawings shall be on a scale of not less than one inch (1") equals one hundred feet (100'). Bearings and distances shall be shown in plan view.

b. Profile drawing shall be on a scale of not less than one inch (1") equals ten feet (10') vertically and one inch (1") equals one hundred feet (100') horizontally. Length of vertical curves and percent of grade shall be shown on profile. Size, length and station location of pipe shall be shown on profile.

3. A typical roadway cross section of a scale not less than one inch (1") equals ten feet (10') shall be furnished with all road plans. Cross section shall show road width, surfacing type, width and depth, cut and fill slopes and other special treatments such as top soiling or rip rap. A cross section shall be drawn for each culvert installation showing size and length of pipe, height of cover over pipe and grade of pipe.

4. All standard drawings shall be drawn on reproducible quality paper or in digital format with adequate resolution.

5. The approved plans, specifications, supplementary specifications, standards, supplementary standards and any special provisions required or approved by the County shall be considered consistent, to describe and provide for the complete work.

6. The contractor shall not take advantage of any error or omission in the approved plans, standards, and specifications. In the event and apparent error or omission is discovered, the Project Engineer and the County shall be notified. The developer and/or contractor, acting through the Project Engineer, shall make any corrections required, subject to approval by the County.

E. Acceptance of Work

1. Partial Acceptance. Immediately after a section of the work is completed such as a section of the subgrade, structures, trench backfill, etc., acceptance of that element is required prior to proceeding with the next element. An example would be acceptance of subgrade prior to the placement of subbase. If, after partial acceptance of an element of work, conditions change and the next element is not constructed for a period of time, the County may require a re-inspection and acceptance as per Section 5.1.3.

2. Final Acceptance. Immediately upon completion of the project the road developer shall notify the County Public Works Department and schedule a final inspection.

3. If the County Public Works Department determines that construction is in compliance with these Standards and Specifications, approved permits and/or development improvement agreements it may initiate the procedure for acceptance by the Board for maintenance or release of the performance guarantee securing the completion of the work within 364 days.

4. If the County Public Works Department determines that construction is not in

compliance with these Standards and Specifications, the County shall provide written notification of the deficient items to the road developer and to the Gunnison County Community Development Department. In the event the work is not done, the developer or owner is responsible for maintenance of the work until such time as all such items are completed or corrected and a satisfactory re-inspection is made, and the work approved in writing by the Director of Public Works.

F. Cooperation with Utilities

1. The developer shall be responsible for coordinating the location, relocation, installation or removal of all utilities involved with the construction of the project.

2. The construction plans for the proposed project shall be submitted to the affected utilities as soon as possible. Adequate notice shall be given to utilities for utility locations required for the work to avoid damage to existing utilities and conflicts in the work.

G. Guidelines for Traffic Studies

Traffic Studies shall be required as determined by the Director. Traffic studies shall follow the guidelines in the LUR SECTION 12-103: ROAD SYSTEM or as determined by the Director in their discretion

SECTION 6

PERMITS

6.1 Issuance of Permits

Permit fees and bonds for any permit named in these Standards and Specifications shall be set by the Board.

6.2 Right-of-way Permit (Work Within Rights-of-way)

A. No individual, company or corporation, or public agency shall construct or alter any road, drainage, or other infrastructure within a County road rights-of-way, County road, or public road under County jurisdiction, or private road under County jurisdiction without a Surface Alteration Permit from the Director of Public Works. Road construction shall be in accordance with engineering plans prepared by a professional engineer, in conformance with these Standards and Specifications, with said plans to be approved by Gunnison County.

B. No individual, company, corporation, or public agency shall modify, install, repair, or otherwise change any utility located in, on, or over and within thirty (30) feet of the centerline of any County Road, or public road under County jurisdiction, or private road under County jurisdiction without first obtaining a Permit from the Public Works Department. Financial security may be required to insure conformance with these Standards and Specifications. Gunnison County may hold the financial security for one (1) year from the completion and inspection of the work by Gunnison County staff. It may be refunded earlier, in the sole discretion of the Director of Public Works.

C. Permits shall be submitted for approval at least five (5) business days prior to commencement of the scheduled time of road cutwork unless the work is officially deemed an emergency by the utility owner. An approved permit must be issued forty-eight (48) hours or more in advance of commencing the work. The applicant shall submit a written schedule of the work, including materials and length of disturbance, the total time area will be disturbed, and a Manual for Uniform Traffic Control Devices compliant signing and traffic management plan. In the case of an emergency repair, the utility owner must notify the Public Works Department as soon as is reasonable to obtain a permit. The applicant must notify the Public Works Department at least twenty-four (24) hours (1 business day) of performing and emergency repair.
Such Permit is not transferable to any successor, assignee, designee, heir, parent or subsidiary, or person other than the named permit holder.
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6.3 Access Permits

No person shall construct, substantially improve, change, and/or extend any access providing vehicular and/or off highway vehicle (OHV) and/or mechanized access to or from any public

highway or rights-of-way, or County road or public road, or private road from or to property requiring or utilizing access to such road without a County Access Permit issued by the Public Works Department. Internal circulation roads, trails or accesses are subject to the access permit process. No access permit shall be issued without there having been a site inspection by the Director of Public Works or their representative. The Director, or their representative may specify certain conditions and/or requirements in addition to those set forth in these Standards and Specifications for issuance of an access permit. Work associated with Access Permits shall be complete within two years of issuance or shall be considered withdrawn and not refunded unless an extension is granted per the permit language. Access permits are assigned to the specific parcel being accessed. Easements shall be provided for every parcel the access crosses regardless of ownership. Access Permits shall not expire once a final inspection is approved and the permit is completed. This Permit shall be transferable through transfer of deed.

6.4 Oversize/Overweight Permits

The Director of Public Works may, upon application in writing and good cause being shown, issue an Oversize/Overweight Permit to operate or move a vehicle or combination of vehicles of a size or weight of vehicle or load exceeding the maximum legal load permitted by the State of Colorado. The County Public Works Department may limit the number of trips and/or the hours of operation, or otherwise prescribe conditions of operation of such vehicles to ensure against undue damage to road foundations, surfaces, or structures, and to ensure the safety of the motoring public. Further, the County Public Works Department may require such fee, undertaking, bonding, or other security as may be deemed necessary to compensate for any damage to any roadway or structure. In the case of a declared emergency permitting may be expanded to cover all traffic on a County road even if the vehicle is typically exempted from permit regulations. Such Permit is not transferable to any successor, assignee, designee, heir, parent or subsidiary, or person other than the named permit holder.

6.5 Snow Removal or Grooming Permit

The Director of Public Works may, after an application has been submitted, an evaluation has been prepared, and the permit has been approved by the Board of County Commissioners, issue a Snow Removal and/or Grooming Permit. Renewals may be issued for up to three (3) consecutive winter seasons at the Director's discretion and until either party has cause to terminate or not renew the permit. The Snow Removal or Grooming Permit may contain such conditions as necessary to preserve the integrity of the road, comply with the LUR and/or a land use change, provide for the safety of the road users, protect the County from liability, or other conditions as determined by the Board in its sole discretion. The County Public Works Department may require financial security as may be deemed necessary to repair any damage to the roadway or structures. Such Permit is not transferable to any successor, assignee, designee, heir, parent or subsidiary, or person other than the named permit holder.

6.6 Right-of-Way Encroachment Permit

The Director of Public Works may, after an application has been submitted and evaluated, issue

a permit for the construction, installation and/or maintenance of any artificially constructed semi-permanent or permanent structure, repair, or improvement in the road right-of-way of a County road, public road under the jurisdiction of Gunnison County, or private road under the jurisdiction of Gunnison County. The Right-of-way Encroachment Permit may contain such conditions as necessary to preserve the integrity of the road and the rights-of-way, and provide for the safety of the road users. The rights-of-way encroachment permit is fully and freely revocable at any time by the County for any reason, or no reason at all, and shall not be construed to grant any right or privilege to any permit holder other than the revocable and limited rights afforded by the permit. Further, the County Public Works Department may require financial security as may be deemed necessary to repair any damage to the road, structure, or rights-of-way. Such Permit is transferable to a successor, assignee, designee, heir, parent or subsidiary, or person other than the named permit holder through legal instrument.

6.7 Parking Permits

The Director of Public Works may issue parking permits at its discretion on land that the County controls, owns, or has agreement to administer. These permits apply only to the designated location offset forth on the permit, will set forth specific criteria or conditions with which the permit holder must comply, and may also require compliance with other provisions of these Standards. Issuance of such permit shall not be deemed to create any right or privilege in any permit holder other than the limited and temporary rights afforded by the terms of the permit and these Standards, and are fully and freely revocable by the Director of Public Works for any reason, or no reason at all. Vertical, on-site signage describing the parking restrictions may provide notice of parking policies for that area, but such signage is not required for the County to enforce such policies, these Standards, or any other law or rule. There shall be no overnight parking in the public rights of way without a parking permit. Parking Permits are not transferable to any successor, assignee, designee, heir, parent or subsidiary, or person other than the named permit holder.

6.8 Reclamation Permits for the Control of Noxious Weeds

Except as otherwise exempted, construction or development as defined or regulated by the County by any individual, company or corporation, or public agency which results in any site disturbance of 10,000 or more square feet of disturbance, shall be required to obtain a Reclamation Permit for Revegetation and Noxious Weed Control from the Gunnison County Public Works Department Weed Management Program Coordinator. The permittee shall be responsible for the complete reclamation of all disturbed areas to prevent the introduction and/or spread of noxious weeds and soil erosion in accordance with Colorado Revised Statutes 35-5.5-101, *et seq*: the *Colorado Noxious Weed Act*, Gunnison Basin Integrated Weed Management Plan; Board Resolution 95-74, and Gunnison County Land Use Resolution. Termination of Reclamation Permit coverage occurs when vegetation required pursuant to *Section 13-115: Reclamation and Noxious Weed Control* is established and growing within two full growing seasons of the date of the issuance of a Certificate of Occupancy or Closing of the Building Permit associated the applicable Gunnison County Reclamation Permit. Such Permit is not transferable to any successor, assignee, designee, heir, parent or subsidiary, or person other than the named permit holder.

6.9 Financial Security

As a condition of the issuance of any permit, the Director, at the Director's sole discretion, may require a permittee to file a guarantee of financial security in an amount established by the Director and payable to the County. The guarantee may be in the form of cash, irrevocable letters of credit issued by a bank acceptable to the Board, surety bonds issued by a company authorized to do business in Colorado, or any other form, or combination of forms, established by the Board.

REFERENCED REPORTS

1. Gunnison County, Colorado Land Use Resolution, as amended, Gunnison County Planning Department.

2. State Highway Access Code, State of Colorado, Department of Transportation.

3. Manual on Uniform Traffic Control Devices, U.S. Department of Transportation, Federal Highway Administration.

4. Colorado Vehicle Code, Colorado State Patrol Troop Office, Grand Junction, Colorado.

5. Geometric Design of Highways and Roads, The American Association of State Highway and Transportation Officials.

6. Roadway Design Manual, State of Colorado, Department of Transportation.

7. Trip Generation, The Institute of Transportation Engineers.

8. Standard Specifications for Road and Bridge Construction, State of Colorado, Department of Transportation.

9. Gunnison County Flood Damage Prevention Resolution, Gunnison County, Colorado. Gunnison County Planning Department.

10. Procedures for Determining Peak Flows in Colorado, U.S. Department of Agriculture, Soil Conservation Service, 1980.

11. Concrete Pipe Design Manual, ACPA Arlington, Virginia, February, 1974.

12. Handbook of Steel Drainage and Highway Construction Products, A151, Washington, D.C. 1971.

13. Standard Specifications for Highway Bridges, The American Association of State Highway and Transportation Officials.

14. Colorado Standard Plans, State of Colorado, Department of Transportation .

15. Standard Plans for Highway Bridges, U.S. Department of Transportation, Federal Highway Administration.

16. Uniform Construction Standards for Colorado Public Works, Colorado Contractors Association, Inc.

APPENDIX A

LEGAL RESPONSIBILITIES

The latest edition of the Division of Highways, State of Colorado, Standard Specifications for Road and Bridge Construction; Section 107 - Legal Relations and Responsibilities to the Public, shall be considered Supplemental Specifications to these Standards with the additions, deletions, or revisions noted in Sections one and two as supplied annually by the Division of Highways, State of Colorado.

Section 1 Definitions

State - shall be redefined as Gunnison County, Colorado.

Division - shall be redefined as the Gunnison County Public Works Department.

Engineer - shall be the Project Engineer as defined in Section 5.1.2 when acting as the authorized agent of the developer or contractor or the County as defined in Section 5.1.3 when acting in behalf of the Public Works Department.

Contract - shall be redefined as these Standards.

Section 2 Section 107, Legal Relations and Responsibility to Public

Payment - Delete any reference to payment for the use of these Standards.

107.04 - Delete Subsection.

107.07 - Delete "as specified under subsection 104.04".

107.09 - Delete Subsection.

107.16 - Paragraph one, line eight, revise to read the following: "the Contractor or Developer shall be required to assume any expenses entailed in maintaining traffic". Delete last sentence. Delete paragraphs two, three, and four.

107.19 - Delete Subsection.

107.10 - Is hereby revised as follows: Paragraph one - "In carrying out any of the provisions of these Standards; or in exercising any power or authority granted to them by Gunnison County; or performing their duties within the scope of their employment, there shall be no personal liability upon the Board, Director of Public Works, or their authorized representatives due to injuries sustained from an act or omission of such employee, except as may be provided by law."

107.22 - Delete Subsection.

107.23 - Delete Subsection.

107.25 - Delete paragraph 2 of section - (c) Measurement and Payment.

APPENDIX B

APPENDIX C

APPENDIX D

APPENDIX E

APPENDIX F

APPENDIX G

RECLAMATION FOR EXPOSED EARTHWORK

Land Preparation: Follow the Gunnison County Weeds Program and the most recent Natural Resources Conservation Service guidelines for the preparation of the land. This may include runoff control measures to insure the successful rehabilitation of the land.

Seeding Time: The seeding time with the greatest success is a dormant seeding for areas that cannot be irrigated. Spring seeding can be successful if rainfall is above the historical average. Late summer seedings (late July to mid-August) have shown success in some areas since August and September have historically been the highest rainfall months.

Suggested seeding times (without irrigation) based on Major Land Resource Area (MLRA):

7500-9500 feet elevation
Dormant Seeding (Best) – October 1-November 15 Spring Seeding – not recommended
Late Summer Seeding (Marginal) – August 1-31

Alpine Zone (10,000 feet elevation and above)
Dormant Seeding (Best) – September 1-30 Spring Seeding – not recommended
Late Summer Seeding (Marginal) – July 15-August 15

Seeding Methods: Drilling the grass seed is the best method. Drill depth should be placed between ½ and ¾ inch below the soil surface. For slopes that are greater than 3:1 slope, seeding may be broadcast by hand or mechanical spreader and rated into the upper soil layer (no deeper than ¾ inch). Slopes steeper than 2:1 shall require seed stabilization methods. **Seed should not be incorporated and applied simultaneously with a hydromulch slurry.**

Rate of Seeding: Each specific seed mix will have a rate for the seed and climate.

Mulches: Straw and/or hay used for mulch, must be certified weed free. A hydromulch can be applied to the area after the seed has been drilled in or broadcast. On steep slopes where crimping is not possible, jute matting (biodegradable mesh) may be used as a mulch over the newly seeded areas.

Time Frame of Reclamation Process: Reclamation can require several years (1 to 5) to determine stand establishment. It should be expected that early seral species (such as summer and winter annuals) will occupy the area before the desired perennial stand dominates. Each year the revegetated sites will be reviewed by the Gunnison County Weed Specialist upon which time the permittee will be advised as to the management practices that are expected to ensure reclamation success.

It is expected that the reclaimed areas will be ecologically comparable to the surrounding undisturbed land.

SEEDS RECOMMENDATIONS

Seed mixes in Gunnison County are determined by elevation, moisture, surrounding foliage, and other considerations. The NRCS or the CSU Extension office employee experts that should be consulted for the specific project in question.

Sometimes certain varieties of seed can be substituted.

This seeding recommendation was provided by the Natural Resources Conservation Service.

APPENDIX H

APPENDIX I

APPENDIX J

DEVELOPMENT IMPROVEMENTS AGREEMENT

This Development Improvements Agreement is entered into this _____day of , 20____ between the Board of County Commissioners of Gunnison County, Colorado (herein the "County"), and (herein the "Permittee") as follows:

1. PURPOSE. The Permittee has submitted to the County the Permitee' application for a permit pursuant to the Gunnison County Standards and Specifications regarding _____(herein the "Project"). The legal description of the Project is attached hereto and incorporated herein as Exhibit "A". As valuable and sufficient consideration for this Agreement, the County and the Permittee agree that approval of such application by the County is expressly conditioned on completion of the improvements described in paragraph 7, below (herein the "Improvements") to the specifications described herein and by the times specified herein. The County and the Permittee further agree that such Improvements are appropriate and necessary requirements to be required by the County, and to be performed by the Permittee and which Permittee shall perform. The County and Permittee further agree that an agreement guaranteeing the Permittee's performance secured by suitable security to protect the interests of the County, and the public in the amount set forth herein is an appropriate condition to the County's approval of such permit. The parties have entered into this agreement to memorialize such understandings and agreements. The relationship of the parties to this Agreement is contractual; Permittee is an independent contractor and is not an agent of the County.

2. DEVELOPER BOUND. The Permittee agrees to accept and be bound by the terms and conditions of the County's issuance of its approval of the Permit and the terms and conditions of this agreement. Permittee accepts the County's review and permitting authority; process and performance of same in connection with the permit as legal and valid and waives any defect therein.

3. CONSTRUCTION.
   A. The Permittee agrees to complete construction of the Improvements within the Project in the locations set forth on the plans attached hereto as Exhibit __, and in accordance with the specifications thereof by not later than _____, 20__, acts of God and any cause beyond the reasonable control of the Permittee excepted, including without limitation labor disputes, laws, regulations, or orders of any governmental entity, orders of court, inability to obtain any required authorization, act of war or donations arising out of or attributable to war, riot, civil strike, insurrection or rebellion, fire, explosion, earthquake, storm, flood or other adverse weather condition, delay or failure by suppliers or material men, contractors, or subcontractors, shortage of or inability to obtain labor, supplies or materials.
   B. The completion deadline set forth in this paragraph 3 may be extended by the County in its sole discretion upon written request of Permittee if the County determines that: (1) such extension of time will not operate to the detriment of the County, the public or the owners of property within the Project; and (2) the County's security is adequate to ensure full performance by Permittee by the extended completion date; and (3) that such an extension would not be in conflict with the conditions of the approved Permit. The County may require Permittee to provide, at Permittee's cost, supplemental estimates by Permittee's engineer of the costs of completion and to provide additional security as a prerequisite to its extension of any completion date. Any

extended completion date granted by the County hereunder may be further extended in like manner.

C. Each contract entered into by Permittee for construction of the Improvements shall provide that the County is a third party beneficiary with all rights to enforce such contracts in place of Permittee in the event of a default by Permittee. Permittee shall provide to County a copy of each such contract upon its execution.

4. ESTIMATED COST. The total cost of the improvements to be constructed by the Permittee as provided by a third-party contractor bid that includes the full scope of work as presented in Exhibit A is estimated currently to be $_____ (including a 10% contingency amount).

5. SECURITY. In order to secure of obligations of the Permittee herein, the Permittee and the County agree that the Permittee shall, at Permittee's sole cost, and before starting work on any phase of the Project or Improvements, and before conveying any portion of the Project, obtain and provide to the County a bond, and/or irrevocable letter of credit or other performance guarantee in a form and content satisfactory to the County to the benefit of the county in an amount of which is 125 percent of the currently estimated cost of the improvements, (including a 10% contingency amount).

If the contract(s) provided to the County pursuant to paragraph 3C indicate a substantially different total cost than estimated in paragraph 4, the amount of security may be increased or decrease. For the purposes of this paragraph 5, substantial is defined as 10 percent or more.

Pending full performance of all of the terms and conditions hereof by the Permittee, the County shall retain said security and shall remain the beneficiary of such security. In the event of any uncured default hereunder the County in its sole discretion, and without any other authority required, may draw upon said security up to the full amount of $____upon presentation by the County to the __of a written statement by the County that such uncured default exists. Upon timely performance of all terms and conditions hereof, said security shall be tendered by the County to the Permittee.

6. CERTIFICATION.

A. Not later than _____, 20__, a registered Colorado engineer retained by the Permittee at it s expense shall certify to the County whether the Permittee's construction obligations regarding Improvements under this agreement have been fully and faithfully performed according to design and time specifications. Upon receipt of such certification and a complete copy of as built specifications and drawings, the County shall review the same and shall make an independent judgment whether to accept the same in the sole discretion of the County. Permittee agrees not to cover or otherwise prevent inspection of the Improvements constructed hereunder until Permittee's engineer and the County's representative have had reasonable opportunity to inspect such Improvements.

B. Not later than _____, 20_, Permittee shall provide to the County Attorney a sworn affidavit, signed by the Permittee's authorized representative, that the Improvements completed have been paid for, in full, by the Permittee. The Permittee shall be responsible for the information so provided. Said written certification will be reviewed by the County, but the County shall have no responsibility or liability to any part regarding the veracity of the information so provided.

7. SCOPE OF WORK.
   A. The scope of work to be done by the Permittee shall include, but not be limited to: Exhibit A (Attach applicable details)
   B. The conditions of this agreement and the permit are such that if the obligations hereunder of the Permittee are well, truly, faithfully and timely performed by Permittee, inspected and certified to by the Permittee's engineer, and such performance is accepted by the County in the County's sole discretion, the Permittee's obligations to the County under this agreement except as set forth in 7C below shall be at an end; otherwise such conditions and obligations shall remain in full force and effect.
   C. For a period of one year from and after the acceptance of all of the work described in paragraph 7A, above, Permittee shall, at its own expense, make all needed repairs and replacements to such work as shall, in the County's reasonable opinion, become necessary. The County shall have the right to retain up to $____of the security for up to one year following the acceptance of all of the work described in paragraph 7A. above, as security to ensure such repair and replacement.

8. PARTIAL RELEASE OF SECURITY.
   A. The County recognizes that as work proceeds upon the Improvements, the County's need for security shall be reduced. Accordingly, the County agrees to consider a partial release of the security to be delivered to the Permittee pursuant to paragraph 5 hereof upon receipt of a written certification by Permittee's engineer stating the estimated percentage of remaining work to reach completion, in which event the County may retain security equal to 125 percent of such estimated percent of remaining work to reach completion and shall release the balance of security held by the County.
   B. Upon Permittee's entering into a contract or contracts for construction of improvements hereunder, Permittee and County may negotiate an addendum to this Agreement setting forth such reasonable schedule for partial releases of the security in accordance with the anticipated construction schedule. In such circumstance, the County shall designate and authorize the County Manager, Director of Public Works or County Attorney to make the partial release(s) hereunder after consultation with appropriate County staff.

9. PERMITTEES' DEFAULT. In the event of any default hereunder by the Permittee, the County shall give notice to the Permittee specifying the nature of such default, which notice shall be given by facsimile transmission or by certified mail with return receipt requested addressed to the Permittee at _____. In the event the Permittee does not remedy such default to the satisfaction of the County within 14 days following such notice, the County may elect, in its discretion to exercise all remedies available to it, including but not limited to:

   9.1 To specifically enforce the terms and conditions of this agreement;
   9.2 To draw upon or otherwise obtain the benefit of the security;
   9.3 To exercise any other rights and obtain any other remedies provided by law;
   9.4 To obtain from the Permittee either an extension of the County's security hereunder to guarantee the completion of the improvements only on the conditions (1) that suitable additional security is provided the County to guarantee the construction of said Improvements within the new time period determined by the County, and (2) that the

County determines that it would not be detrimental to the interest of the County, the public or the owners

of property within the Project to allow such extension (3) that the County determines that it would not be in conflict with the conditions of the approved Permit.

10. RECORDING OF AGREEMENT. Upon its execution, this Agreement shall be recorded by the Permittee and shall be a covenant running with the property herein described in order to put prospective purchasers or other interested parties on notice as to the terms and provisions hereof.

11. RETENTION OF POLICE POWERS. The County retains the power and right to impose additional requirements upon Permittee with regard to the Project if the failure to do so would place the public or owners of property within the Project in a perilous condition, or in the event of substantially changed conditions; that is, nothing in this Agreement is or shall be construed to be a bargaining away of the County's police power.

12. TRANSFER OR ASSIGNMENT. No transfer or assignment of any of the rights or obligations of the Permittee under this Agreement shall be permitted without prior written approval of the County which approval shall not unreasonably be withheld.

13. TITLE AND AUTHORITY. The Permittee expressly warrants and represent to the county that it is the record owner of the real property constituting the Project, and further represents and warrants, together with the undersigned individual, that the undersigned individual has full power and authority to enter into Agreement. The Permittee and the undersigned individual understand that the County is relying on such representations and warranties in entering in to this Agreement.

14. LITIGATION. Nothing contained herein shall prevent either party from obtaining a judicial determination of the violation of its rights hereunder; provided however, that written notice to the other party advising the other party of the alleged violation, and advising that in the event the matter is not resolved by the parties within 14 days thereafter, shall be a condition precedent to the commencement of any litigation.

15. TIME OF ESSENCE. It is mutually agreed that time of performance is an essential part of this agreement and that all terms, covenants and conditions herein shall extend to and become obligatory upon the successors and assigns of the respective parties hereto.

16. VENUE AND CHOICE OF LAW. This agreement is entered into in Gunnison County, Colorado and it I agreed that the exclusive jurisdiction and venue of any action pertaining to the interpretation or enforcement of this agreement shall be in the District Court of Gunnison County, Colorado. The exclusive choice of law pertaining to this transaction shall be that of the State of Colorado without giving effect to Colorado choice of law principles.

17. SEVERABILITY. If any term or provision of this agreement shall be invalid or unenforceable, the remainder of this agreement and the terms and provisions thereof shall not be affected thereby and all other terms and provisions of the agreement shall be valid and enforceable to the full extent permitted by law.

18. ATTORNEYS' FEES. If any action is brought in a court of law by either party to this agreement as to the enforcement, interpretation or construction of this agreement or any document provided for herein, the prevailing party in such action shall be entitled to reasonable attorneys' fees as well as all cost incurred in the prosecution of defense of such action.

19. HOLD HARMLESS CLAUSE. The Permittee shall indemnify, defend and hold harmless the County, its officials, employees and agents from and against liability for damages, injury or death which may arise from the direct or indirect operations of the owner, Permittee, contractors or subcontractors, which relate to the Project.

20. ENTIRE AGREEMENT. This agreement contains the entire and only agreement between the parties regarding development improvements, and no oral statements or representations not contained in this agreement shall be of any force and effect between the parties. This agreement shall not be modified or amended in any manner except by written instrument executed by the parties.

21. BINDING AGREEMENT. This agreement shall be binding upon and inure to the benefit of the heirs, personal representatives, successors and assigns of the parties hereto.

22. NOTICE. All notices and other communications required or permitted under this Agreement shall be in writing and shall be, as determined by the person giving such notice, either hand delivered, mailed by registered or certified mail, return receipt requested or by telecopier or telegraphic communication to the required party at the following addresses:

COUNTY: Board of County Commissioners
200 East Virginia
Gunnison, CO 81230 Telecopier: (970) 641-3061

DEVELOPER: (Name, Address, Etc.)

IN WHEREOF the parties have executed this agreement the date first above written.

BOARD OF COUNTY COMMISSIONERS OF THE
COUNTY OF GUNNISON COUNTY

Attest: _____ By: _____
County Clerk Chairperson or Designee

DEVELOPER

By: _____

STATE OF COLORADO)
)
COUNTY OF)

The foregoing instrument was acknowledged before me this _____day of _____, 20__. By _____.

My commission expires: _____
Witness my hand and official seal.

_____
Notary Public Address:

APPENDIX K

DEFINITIONS AND ABBREVIATIONS

The following words, terms and abbreviations shall have the following meanings when used in these Standards and Specifications, unless expressly defined in these standards, the words and phrases used in these Standards shall be the same as the LUR:

A. ABBREVIATIONS

1. **AASHTO** means American Association of State Highway and Transportation Officials
2. **CDOT** means Colorado Department of Transportation
3. **FHWA** means Federal Highway Administration
4. **HUTF** means Highway Users Tax Fund
5. **ITE** means Institute of Traffic Engineers

B. DEFINITIONS

ABUT means adjacent or contiguous to, or sharing a common border.

ACCESS means the place, method, or way by which vehicles and pedestrians obtain usable ingress and egress to a property or land use.

1. Residential Access means ingress or egress to no more than two residential units, including any that includes a home occupation, or a multiple-family residence as defined by the Gunnison County Land Use Resolution. Residential access is a private access over 50 inches in width, for the exclusive use of the owners- occupants and their invitees and is not considered a road or highway.
2. Agricultural Access means the access providing ingress and egress exclusively to an agricultural operation and not to any residence(s).
3. Commercial Access means the access providing ingress and egress to any activity defined by the Gunnison County Land Use Resolution as commercial.
4. Industrial Access means the access providing ingress and egress to any activity defined by the Gunnison County Land Use Resolution as industrial.
5. Any other access as determined by the Director.

ADJACENT means abutting or contiguous to or sharing a common border.

AGRICULTURAL ROAD means a road that links agricultural areas to highways and other roads, primarily to enable the transportation of inputs to the farm and agricultural produce to the market.

ALTERNATIVE TRANSPORTATION FACILITY means a trail, sidewalk, public bus or van, rail, or other facility that provides an alternative mode of transportation to travel by private automobile.

ARTERIAL ROAD - See Article III section 3.1

AS-BUILT (OR RECORD) DRAWINGS means a complete and accurate set of construction plans, with all pertinent information superimposed on them to identify the road or related facility as it actually has been constructed.

AVERAGE DAILY TRAFFIC (ADT) is the average number of vehicles that travel through a specific point of a road over a short duration time period (often 7 days or less). It is estimated by dividing the total daily volumes during a specified time period by the number of days in the period.

ANNUAL AVERAGE DAILY TRAFFIC (AADT) means it is the annualized volume of vehicle traffic of a highway or road. AADT estimates, with as little bias as possible, the mean traffic volume across all days for a year for a given location along a roadway. AADT is different from ADT because it represents data for the entire year. Gunnison County accepts the FHWA AADT method for AADT.

AXLE LOAD means the total load transmitted by all wheels on a single axle extending across the full width of the vehicle. Tandem axles 40 inches or less apart shall be considered as a single axle.

BASE COURSE means the layers of specified or selected material of designated thickness placed on a subbase or a subgrade to support a surface course.

BRIDGE means a structure including wall or abutments erected over a depression or an obstruction, such as water, highway or railway and having a track or passageway for carrying traffic or other moving loads.

CEMENT TREATED BASE or "Flowable Fill" means a base consisting of a mixture of mineral aggregate (or soil) and Portland cement, mixed and spread on a prepared surface, to support a surface course.

CHANNELIZATION means the separation or regulation of conflicting traffic movements into definite paths of travel by use of pavement markings, raised islands, or other suitable means to facilitate the safe and orderly movement of traffic, both vehicular and pedestrian.

CITY STREET means roads that are within the boundaries of an incorporated municipality that are dedicated to the public.

COLLECTOR ROAD - See Article III section 3.1

CONSTRUCTION PLANS means a complete and accurate set of detailed plans, including but not limited to profile, specifications, stationing, details, notes and any other information necessary for complete and timely construction of the road or related facility.

CONTROL OF ACCESS means the condition in which the right of access of owners or occupants of land abutting or adjacent to a roadway is controlled by public authority.

COUNTY PRIMARY ROAD SYSTEM means County roads selected pursuant to CRS §§ 43-2-109 and 110, as amended.

COUNTY ROAD means a public road which the Board has placed on the County Primary Road System pursuant to CRS §§ 43-2-109 and 110, as amended.

COUNTY SECONDARY ROAD SYSTEM means roads not on the County primary road system pursuant to pursuant to CRS § 43-2-110, as amended.

CROSS SLOPE (ROADWAY) means a geometric feature of pavement surfaces: the transverse slope with respect to the horizon.

CUL-DE-SAC means a local road open at one end only, and with special provisions for turning around.

CURBWALK means monolithic combination of curb and gutter and sidewalk.

CULVERT means a closed conduit, other than a bridge, which conveys water carried by a natural channel or waterway transversely under the roadway.

WORKING DAYS shall be defined by LUR sec 1-111 COMPUTATION OF TIME.

DELINEATORS means devices used to define the roadbed, and are used as an aid to alert drivers of day and night hazard conditions.

DEPARTMENT means the Gunnison County Public Works Department.

DESIGN LOAD means the loads that must be supported by a structure in terms of live and dead weight loads.

DESIGN PERIOD means geometric design generally based on estimated traffic requirements 20 years after construction.

DESIGN SPEED means a speed determined for design and correlation of the physical features of a road that influence vehicle operation; the maximum safe speed maintainable on a specified section of road when conditions permit design features to govern.

DRIVEWAY see "Residential Access"

ELECTRICAL ASSISTED BICYCLE (e-bike) means a vehicle having two or three wheels, fully

operable pedals, and an electric motor not exceeding seven hundred fifty watts of power. Electrical assisted bicycles are further required to conform to one of three classes as follows:

(a) “Class 1 electrical assisted bicycle” means an electrical assisted bicycle equipped with a motor that provides assistance only when the rider is pedaling and that ceases to provide assistance when the bicycle reaches a speed of twenty miles per hour.
(b) “Class 2 electrical assisted bicycle” means an electrical assisted bicycle equipped with a motor that provides assistance regardless of whether the rider is pedaling but ceases to provide assistance when the bicycle reaches a speed of twenty miles per hour.
(c) “Class 3 electrical assisted bicycle” means an electrical assisted bicycle equipped with a motor that provides assistance only when the rider is pedaling and that ceases to provide assistance when the bicycle reaches a speed of twenty-eight miles per hour.

EDLA means single axle Equivalent Daily Load Application. (See "Axle Load".)

ENGINEER means Professional Engineer registered in the State of Colorado.

EROSION means the wearing away of a land surface by detachment and transporting of soil and rock particles by the action of water, wind, or other agents.

FLARED INTERSECTION means an un-channelized intersection, or a divided highway intersection without islands other than medians, where the traveled way of any intersection leg is widened or an auxiliary lane added.

FLEXIBLE PAVEMENT means a pavement structure which maintains intimate contact with and distributes loads to the subgrade and depends upon aggregate interlock, particle friction and cohesion of stability.

GEOMETRIC DESIGN means the arrangement of the visible elements of a road, such as alignment, grades, sight distances, widths, slopes, etc.

GUARDRAIL means a protective device intended to make highways safer by reducing accident severity.

GUNNISON COUNTY ROAD SYSTEM means all roads in the Gunnison County primary or secondary road systems.

HIGHWAY means an open way reserved for the passage, generally, of people, vehicles, animals, and goods, where there is comparatively little access and egress and provides a way between prominent termini, as defined by CRS 43-2-201 .

HORIZONTAL ALIGNMENT means horizontal geometrics for safe and continuous operation at a uniform design speed for substantial lengths of highway and must afford at least the minimum stopping distance for the design speed at all points on the highway.

HVEEM STABILIMETER means a device to measure the lateral pressure transmitted by soil or aggregate being subjected to a vertical load. The pressure obtained is used to compute "R" Value. The

internal resistance of the friction property of a bituminous pavement or a base course. Data obtained is used to compute the relative stability.

INCLUDE means including without limitation.

INSPECTOR means the Director, or designee.

INTERSECTION means the area embraced within the prolongation or connection of the lateral curb lines, or if none, then the lateral boundary lines of the roadways of two highways, streets, roads or accesses, or any combination of thereof, which join one another at, or approximately at, right angles, or the area within which vehicles traveling on different highways joining at any other angle may come in conflict.

LANE - See Article III section 3.1

LIME TREATED BASE means a base consisting of a mixture of soil, hydrated lime and water, usually mixed in place and placed to support a pavement structure, or the components thereof.

LOCAL ROAD- See Article III section 3.1

LOW WATER CROSSING means a structure used to cross a drainage course that provides only for limited conveyance of run-off under the traveled way with higher flows passing both under and over the traveled way.

MAY means a permissive condition.

MINIMUM COVER means the point of minimum cover shall be the edge of the paved shoulder giving the least cover over the culvert or structure.

MINIMUM TURNING RADIUS means the engineer determined radius of a minimum turning path.

NON-MOTORIZED TRAIL means a dirt, gravel or paved trail suitable for Class 1 or 2 E-bicycle, bicycle, pedestrian or equestrian travel that is physically constrained to 50" or less in width.

PASSING SIGHT DISTANCE means the minimum sight distance on two or three lane highways that must be available to enable the driver of one vehicle to pass another vehicle safely and comfortably without interfering with the speed of an on- coming vehicle traveling at the designed speed should it come into view after the overtaking maneuver is started.

PAVEMENT means that part of a roadway having a constructed surface for the facilitation of vehicular movement.

PAVEMENT STRUCTURE means the combination of subbase, base course and surface course placed on a subgrade to support the traffic load and distribute it to the roadbed.

PHYSICAL SURVEY means a field survey resulting in a drawing that shows all physical improvements located on the property. This will include topographic information of locations of both human-made and natural features on a parcel of land. These features may include roads, buildings, ditches, trees, streams and utilities. To perform a physical survey, the surveyor shall visit the property, locate the boundaries, set boundary corner monuments, and verify the accuracy of existing boundary markers.

PLANT MIXED BITUMINOUS BASE means a base consisting of mineral aggregate and bituminous material, mixed in a central plant, laid and compacted while hot, on subbase or a subgrade, to support a surface course.

PORTLAND CEMENT CONCRETE PAVEMENT means a pavement composed of Portland cement concrete on a prepared subgrade or base course in accordance with plans and specifications.

PRIMITIVE ROAD means a road that has all of the following characteristics:

1. The road does not have the physical capacity to allow ready access to emergency services providers (e.g. medical emergency or fire suppression vehicles);

2. No public utility has been extended after May 7, 2002, or is proposed to be extended, to any lot served by the road;

3. Does not currently serve, and is not proposed to serve, average daily traffic more than the minimum threshold for a local intermittent road;

4. Any residential use established after May 7, 2002, shall be limited to seasonal use only by deed restriction or other instrument acceptable to Gunnison County

PRIVATE ROAD means any road that is not a public road.

PRIVATE ROADS UNDER COUNTY JURISDICTION means roads that have been permitted through the County Land Use Process.

PUBLIC ROAD OR HIGHWAY means:

1. All roads over private lands dedicated to the public use by deed to that effect, filed with the office of the Gunnison County Clerk and Recorder when such dedication has been accepted by the Board; and

2. All roads over private or other lands dedicated to public uses by due process of law, and not heretofore vacated by an order of the Board duly entered of record in the proceedings of the Board; and

3. All roads over private lands that have been used adversely without interruption or objection on the part of the owners of such lands for 20 consecutive years; as defined by Colorado law; and

4. All toll roads or portions of them that may be purchased by the Board from the incorporators or charter holders of them, and thrown open to the public; and

5. All roads over the public domain whether agricultural or mineral.

PUBLIC WORKS DIRECTOR, DIRECTOR OF PUBLIC WORKS, OR DIRECTOR means the Assistant County Manager for Public Works or the person functionally responsible for the administrative and managerial duties of the Public Works Department.

R VALUE means the resistance value of the soil while in a state of density and degree of saturation typical of the most adverse conditions to be expected on the road during the service life.

REGIONAL FACTOR means a numerical factor expressed as a summation of the values assigned for precipitation, elevation and drainage. This factor is used to adjust the structural number.

RESIDENTIAL DRIVEWAY - See "Access"

RIGHTS-OF-WAY means a general term denoting lane, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes.

ROAD is a general term for denoting an open public way, including the entire area within the right-of-way. reserved or ordinarily used for the passage, generally, of people, vehicles, animals and goods and includes trails and non-motorized ways.

ROADSIDE means the area adjoining the edge of the roadway.

ROAD SIGN means a traffic control device mounted on a support above the level of the roadway that conveys a specific message by means of unchanging words or symbols.

ROADWAY means the portion of a highway, including shoulders, for vehicular use.

ROADWAY PRISM means the area of a road bounded by the traveled surface, the shoulders and lines projecting downward and away from the outside edge of the shoulder.

SERVICEABILITY INDEX means a number which is indicative of the pavement's ability to serve traffic at any specific time.

SHALL means a mandatory condition.

SHOULD means a recommended but not mandatory condition.

SHOULDER means the portion of a roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use and for lateral support of base and surface courses.

SIGHT DISTANCE means the distance visible to the driver of a passenger vehicle, measured along

normal travel path of a roadway, to the roadway surface or to a specified height above the roadway, when the view is unobstructed by traffic.

SINGLE-UNIT TRUCK means a freight vehicle of two or three axles, a single unarticulated frame, and larger than a pickup.

SLOPE EASEMENT means an easement for cuts or fills.

SPEED STUDY or TRAFFIC STUDY means the collection and assessment of crash data, recent and planned roadway or adjacent land use changes, and even anecdotal information that can be obtained from safety, planning, enforcement, and other stakeholders. The data collected shall be used by a licensed engineer to examine the speeds of free-flowing traffic, roadway geometry, crash characteristics, land use, and access.

STANDARDS means the Standards identified in this Gunnison County Standards and Specifications, as amended.

STABILIZATION means modification of soils or aggregate by incorporating materials that will increase load bearing capacity, firmness and resistance to weathering or displacement.

STATE HIGHWAY means roads that are within the County that are dedicated to the public, but are maintained by the Colorado Department of Transportation.

STOPPING SIGHT DISTANCE means the distance required by a driver of a vehicle, traveling at a given speed, to bring his vehicle to a stop after an object on the roadway becomes visible. It includes the distance traveled during the perception and reaction times and the vehicle braking distance.

STREET means a linear way for the conveyance of traffic that mostly has an improved surface for use by vehicles (motorized and non-motorized) and pedestrians and is primarily terminating at residences (see access).

STRUCTURE means anything constructed or erected, that requires location on the ground, or is attached to something having location on the ground, including portable shelters for human habitation or use, recreational vehicles and tents, storage, transmission or distribution facilities or public utilities, but not including transmission lines of less than 45 kilovolt capacity, or fences.

SUBBASE means the layer or layers of specified or selected material of designed thickness placed on a subgrade to support a base course.

SUBGRADE means the top surface of a roadbed upon which the pavement structure and shoulders, including curbs, are constructed.

SUPERELEVATION means the vertical distance between the heights of inner and outer edges of highway pavement used to prevent a vehicle from sliding outward, or to counteract all the centrifugal force of a vehicle traveling at an assumed speed.

SURVEY (BOUNDARY SURVEY) means a drawing of the property that details the location of the lot, property lines, home, Onsite Wastewater Treatment System, and any other structures within its bounds. Also known as land survey plats (LSPs), a boundary survey is used to measure and depict the precise and exact corners and limits of a particular parcel of land. The most common use of these surveys are within real-estate transactions to assess the size and shape of a plot of land before purchase; to plan the construction of property-defining assets; to make improvements on existing structures; to create easements or encroachments; or to resolve disputes, such as party responsibility for property damage.

SUSTAINED GRADE means a continuous highway grade of appreciable length and consistent or nearly consistent gradient.

TEMPORARY ACCESS OR ROAD means an access or road that is limited in scope, duration, and/or frequency of use to serve only a vacant parcel and which does not require major cut and fill, and is constructed only for the purpose of determining the constructability of the submitted site plan, land use application, or proposed structure.

TERRAIN means the topography of the profile of a highway, road, or street. As used in this manual, the term generally has one of two modifiers; rolling, or mountainous. These two modifiers represent combinations or geometric features in varying degrees which relate primarily to gradients and horizontal and vertical alignment. They reflect the effect on capacity of the operating characteristics of trucks in terms of their passenger cars are equivalent under the different geometric conditions.

TOPOGRAPHY means the configuration of the earth surface including the shape and position of it's natural and man- made features.

TRAFFIC CONTROL DEVICE means any sign, signal, marking or installation placed or erected under public authority, for the purpose of regulating, warning, or guiding.

TRAIL means an open way reserved for the passage and use, generally, of people, mechanized or non-mechanized machines, motorized or non-motorized vehicles, and animals and goods that is physically constrained to 50” or less wide.

TRAVELED WAY means the portion of the roadway for the movement of vehicles, exclusive of Shoulders and auxiliary lanes.

EXHIBIT A

GUNNISON COUNTY PUBLIC WORKS DEPARTMENT
SCHEDULE OF FEES

Adopted separately by the Gunnison County Board of Commissioners January, 2025

ALL FEES DUE IMMEDIATELY

Access Permit:	
Review of existing access or modified site plan	$100.00 / occurrence
Driveways up to 150 feet	$788.00
Driveways from 150 feet up to 600 feet	$1,062.00
Driveways over 600 feet	$1,687.00
Final re-inspection fee	$500.00
Reclamation Permit	$670.00
Reclamation Permit Bonding (Deposit) - Refundable	
Initial 10,000 square feet of disturbance	$1,500.00
Each additional 1,000 square feet	$200.00
Special Transport Permit (Oversize/Overweight)	
Single Trip Permit	$30.00 - $125.00 plus $10 per axle for overweight
Annual Permit	$250.00 - $650.00
Revocable Right-of-way Permit	$274.00
Utility Permit	$817.00 + $2,500.00 security deposit for fist 500 feet + $5.00 / linear foot after
Final re-inspection fee	$500.00 / occurrence
Vacation of a Street or Alley	$1,524.00
Waiver of Standards	$300.00 / occurrence
Stop Work Order Fee	$703.00 / violation + any hourly violation fees incurred**
Violation Hourly Rate	$200.00**

**** Additional cost of office materials, advertising, postage, or staff time will be extra**
Fees adjust accordingly every year based on CPI

FIGURE 4-1

INSERT GRAPHIC HERE

TABLE 3-1

SUMMARY OF ROAD WAY DESIGN ELEMENTS

Functional Classification	Average Daily Traffic	Minimum Right-of-Way Width	Rights-of-Way Width High-Snow	# of Lanes	Lane Width	Shoulder Width Each Side	Curb & Gutter Ped. Path
Major Arterial (Paved)	3000+	100’	120’	2-3	12’	4’	2’/5’ (Optional)
Suburban Com/Ind Collector (Paved or Gravel)	0-500	60’	100’	2	12’	4’	2’/0’ (Optional)
Suburban Lane (Paved or Gravel)	13-500	60’	100’	2	10’	2’	
Rural Arterial (Paved)	1000-2999	80’	100’	2	11’	2’	2’/0’ (Optional)
Rural Collector (Paved)	500-999	60’	80’	2	11’	2’	
Rural Local (Gravel/Paved)	200-499	60’	80’	2	10’	2’	
Rural Lane (Gravel)	30-199	60’	80’	2	10’	1’	
Local Intermittent *(Native/Gravel)	13-90	60’	80’	2	8’	0’	
Primitive Recreation Road	N/A	40	40’	1	8-16’	0’	

* Single lane roads with turnouts used for low volume traffic. Turnouts shall be intervisible

High-Snow areas are when the Design Ground Snow Load is equal to or greater than 90 pounds per square foot for adjacent properties as determined by the building department, using the Structural Engineers Association of Colorado, Colorado Ground Snow Map.

TABLE 4-8

PAVEMENT DESIGN REGIONAL FACTOR

Annual Precipitation

18" – 23"	0.00
14" – 17"	-0.25
Less than 14"	-0.50

Elevation

Over 9500	1.50
8500 – 9500	1.00
7500 – 8500	0.50
Less than 6500	0.25

Drainage

*Very Poor	1.00
Poor	0.50
Fair	0.25
Good	-0.25

* High groundwater table

Frost

**Frost boils in area	3.00
**Frost susceptible soil, frost penetration over 28"	1.00
Frost susceptible soil, frost penetration under 28"	0.25

** Moisture available when subject to frost action

The Minimum Regional Factor shall be no less than 2.00.

Other conditions that may influence the choice of regional factors are:

1. Elevation of the grade line, especially in swampy areas where the roadbed soils may be saturated for long time periods.

2. Number of freezing and thawing cycles during winter and early spring.

3. Steep grades with large volume of heavy trucks.

4. Areas of concentrated turning and stopping movements, such as bus stops, etc.

TABLE 4-9

PAVEMENT DESIGN STRENGTH COEFFICIENTS

Component	Limiting Test Criteria	Coefficient
Plant Mix Seal		0.25
Hot Bituminous Pavement	Rt ≧95	0.44
" " "	Rt = 90-94	0.40
" " "	Rt = 87-89	0.35
" " "	Rt = 84-86	0.30
" " "	Rt ≦83	0.25
Road Mix Bituminous Pavement		0.20
Existing Bituminous Pavement		0.20 to 0.44
Plant Mix Bituminous Base	Rt ≧90	0.34
" " "	Rt = 85-89	0.30
" " "	Rt = 80-84	0.25
" " "	Rt ≦79	0.22
Aggregate Base Course [A.B.C.]	"R" ≧84	0.14
" " "	"R" = 78-83	0.12
" " "	"R" = 70-77	0.11
" " "	"R" ≦69	0.10
Emulsified Asphalt Treated A.B.C.	Rt ≧95	0.23
" " "	Rt = 90-94	0.20
" " "	Rt = 84-89	0.15
" " "	Rt ≦83	0.12
Cement Treated A.B.C.	7-day test ≧650 psi	0.23
" " "	7-day test = 400-649 psi	0.20
" " "	7-day test ≦399 psi	0.15
Hydrated Lime Treated A.B.C.	"R" = 84	0.14
" " " "	"R" = 78-83	0.12
Borrow Material		0.10 *

* Used only to determine a value of strength for layers of soil and/or borrow material which are located above the soil layer from which the soil support value of the subgrade is determined.

NOTE: The minimum strength coefficient for the Base Course on highways having a current ADT volume of 750 or greater shall be 0.12.

TABLE 4-10

PERMISSIBLE VELOCITIES FOR ROADSIDE DRAINAGE DITCHES

Roadside channels with erodible linings Major (earth; no vegetation):	**Minor and Design Storm**
Soil Type or Lining	Permissible velocity (fps)
Fine sand (noncolloidal)	2.5
Sandy loam (noncolloidal)	2.5
Silt loam (noncolloidal)	3.0
Ordinary firm loam	3.5
Fine gravel	5.0
Stiff clay (very colloidal)	5.0
Graded, loam to cobbles (noncolloidal)	5.0
Graded, silt to cobbles (noncolloidal)	5.5
Alluvial silts (noncolloidal)	3.5
Alluvial silts (colloidal)	5.0
Coarse gravel (noncolloidal)	6.0
Cobbles and shingles	5.5
Shales and hard pans	6.0
Roadside channels, lines with various grass covers (uniform stand; well maintained)	

LOW ELEVATION (< 8,500 FT)

Dry areas with well-drained (often more sandy or shallow) areas dominated by lower-growing sagebrush and sparse vegetation. Low amounts of flowers and moderate levels of bare soil.

Area examples: Antelope Hills, Parlin, Doyleville, Hartman Rocks.

Seed Mix: Sheep Fescue-1, Sandberg Bluegrass-1, Western Wheatgrass-4 (Totaling 6 lbs/acre). May add Indian Ricegrass and Bottlebrush Squirreltail.

Use crested wheatgrass in areas where other species are not taking.

MID ELEVATION (8,500-9,500 FT)

Slightly higher in elevation, but still dominated by sagebrush. More robust grass cover and a moderate diversity of flowers. Areas will have snowberry interspersed throughout, indicating a slightly higher moisture regime. Soils are deep (greater than 3 ft).

Area examples: Mid-Ohio Creek, Powderhorn.

Seed Mix: Western Wheatgrass-4, Sandberg Bluegrass-1, Indian Ricegrass-3, Squirreltail-1 (Totaling 9 lbs per acre).

HIGH ELEVATION (9,000-10,000 FT)

Areas where sagebrush is still dominant, but where pockets of aspen begin to come in. Grasses &

flowers are prevalent, and bare ground is very low. The soil is deep and dark, but still well-drained.

Area examples: Arrowhead, CB South, Upper Ohio Creek, Crested Butte

Seed Mix: Western Wheatgrass 36%, Slender Wheatgrass 55%, Canby Bluegrass 9% (Totaling 11 lbs/acre)

TABLE 5-1

COMPACTION REQUIREMENTS

A. Minimum Requirements for Compaction of Embankments and Subgrades

Density, Percent c

Class of Soil (ASSHTO M145)	Under 50 ft(a) High	50 ft & Over	Subgrade
A-1, A-3	95	95	100
A-2-4, A-2-5	95	95	100
A-2-6, A-2-7	95	(b)	95
A-4, A-5, A-6, A-7	95	(b)	95

(a) 1 ft = 0.3048 m.
(b) Use of these materials requires special attention to design and construction and shall be specified by the design engineer and approved by the County Public Works Department.

B. Minimum Requirements for Compactions of Utility Trenches

Material	Density Percent	AASHTO Standard
Bedding Material	90%	T-99
Backfill	95%	T-99

TABLE 5-2

REQUIRED QUALITY CONTROL TESTS

Item	Type of Test	Minimum Test Frequency
Subgrade and Embankment	Moisture-Density Curve	1 per soil type
Compaction	In-Place Density	1/3, 400 sq.ft./lift*
Aggregate Base Course or Subbase Course	Gradation	1/1,000 ton or fraction thereof on each class
	Moisture-Density Curve	1/source on each class
	In-Place Density	1/200 ton*
Hot Bituminous Pavement	Asphalt Content	1/500 tons or 2 per project whichever is the lesser
	Gradation	Aggregate-minimum of 2/source
Sidewalks and Curbing (Concrete)	Compressive Strength	1 set cylinders (4) per 1,000 sq. yds. Of sidewalks and/or 2,000 In. ft. of curbing, minimum 1 set per project
	Slump & Air Content	1 per set of cylinders and as often as needed for quality control
Utility Trench Backfill	In-Place Density	1/400 In. ft. of trench; or 1/branch of section if <400 ft. ½ ft. vertical lift of backfill material (First test $\leq$ 2 ft. above the pipe, last test at pavement subgrade or 6 in. below ground surface on unpaved areas)
Manholes/Structures Compaction	In-Place Density	1/structure per 2 ft. vertical lift

***Failing areas are to be retested**
All testing shall be done in accordance with the most recent edition of AASHTO Test Standards.

GUNNISON COUNTY

STANDARDS AND SPECIFICATIONS

FOR

NEW CONSTRUCTION OF

ROADS AND BRIDGES

Adopted October 22, 1991
Amended March 2, 1993
Amended May 28, 1996
Amended June 3, 1997
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GUNNISON COUNTY
STANDARD SPECIFICATIONS
FOR
NEW CONSTRUCTION OF
ROADS AND BRIDGES

ARTICLE I

GENERAL PROVISIONS

1.1 Title

This document (as it may be amended by the Board of County Commissioners) shall be known as the "Gunnison County Standards and Specifications for New Construction of Roads and Bridges", and will be referred to herein as "these Standards and Specifications."

1.2 Purpose

The purpose of these Standards and Specifications is to provide for the uniform planning, design, construction, and permitting of new roads and related facilities and/or improvements to existing roads and related facilities in Gunnison County, and further, to provide for the administration of the Gunnison County Road System and public roads under the jurisdiction of Gunnison County in a manner consistent with applicable federal, state and local statutes, ordinances and regulations. These Standards and Specifications identify the minimum standard or specification necessary to achieve public safety, functional effectiveness, ease of maintenance, pleasing appearance, and to address environmental concerns.

1.3 Permit Required

Unless otherwise expressly excepted by these Standards and Specifications, no person shall engage in, cause or allow any construction of, or work on or in, any road under the jurisdiction of Gunnison County or approved by Gunnison County unless that person has first obtained each appropriate permit required by these Standards and Specifications. If such activity has begun before issuance of such permit(s), no permit shall be issued until the applicant ceases the activity, remedies any damage caused, and complies with all enforcement actions taken by Gunnison County. The following permits are required as appropriate according to the anticipated work:

1. Underground Utility Construction Permit (see Section 7.2)
2. Surface Alteration Permit/Road Cut Permit (see Section 7.3)
3. Access Permit (see Section 7.4)
4. Oversize/Overweight Permits (see Section 7.5)
5. Snow Removal Permit (see Section 7.6)
6. Revocable Right-of-Way Permit (see Section 7.7)

1.4 Scope and Application

These Standards and Specifications apply to County, public and private roads under the jurisdiction of Gunnison County.

1.5 Partial Exemptions

The following are partially exempt from the requirements of these Standards and Specifications:

1. Agricultural roads are exempt from these Standards and Specifications except that they require access permits as set forth herein. (see Section 4.5 and Section 7.4)

1.6 Authority

It is the intent of the Board in adopting and enforcing these Standards and Specifications to fully exercise all authority and power conferred on it by, and to rely on, Colorado law including but not limited to C.R.S. 43-1-101 et. seq., 43-2-101 et. seq. and 30-11-107 (i)(h).

C.R.S. Title 42, Article 4 authorizes the Board to regulate traffic on County roads and public roads under County jurisdiction. C.R.S. Title 42, Article, 4, and Title 43, Article 2 also authorizes local governments to regulate vehicular access to or from any public highway under their respective jurisdiction to or from property adjoining such highway in order to protect the public health, safety and welfare, to maintain smooth traffic flow, to maintain highway right-of-way drainage and to protect the functional levels of public highways. Colorado law, including but not limited to C.R.S. Sections 43-5-301 et. seq. prohibit anyone from obstructing a highway.

1.7 Amendments

These Standards and Specifications, may be amended, or repealed, in whole or in part, by the Board only after a public hearing on the proposed amendment, or repeal. Notice of such public hearing, setting forth the date, time, place and general purpose of such public hearing, shall be published in a newspaper of general circulation within Gunnison County at least once a week for two consecutive weeks immediately before the hearing; such notice need not include the specific language of the proposed amendment or repeal.

1.8 Severability

If any section, clause, provision, or portion of these Standards and Specifications should be found to be unconstitutional or otherwise invalid by a court of competent jurisdiction, such determination shall not affect the validity of these Standards and Specifications as a whole or any part of these Standards and Specifications other than the part determined to be unconstitutional or invalid. Nor will such a finding affect the validity of any permit previously issued, financial security previously accepted, or action previously taken by the County, except as specifically adjudicated by the court.

1.9 Waiver

A. No waiver of these Standards and Specifications shall be valid unless approved by the Board in writing as set forth in this section.

B. Only the Board may approve a waiver of these Standards and Specifications except that the Director of Public Works has the limited authority to waive these Standards and Specifications only for a driveway or for an insignificant extension of an existing road; the Director may refer such waivers to the Board. The Board, or if applicable the Director of Public Works, may place special conditions on the approval of a waiver. Such conditions may relate to the following:

1. Seasonal use;
2. Number of structures;
3. Size of structures;
4. Type of use;
5. Existence of public utilities; and
6. No increased risk to emergency services personnel, without limitation.

C. A waiver shall be project specific and shall not establish a precedent for any other proposed waiver.

D. No waiver shall be granted unless and until all fees and costs set forth on Exhibit A have been paid to Gunnison County.

E. A request for a waiver must be made in writing and identify the following:

1. The name, address and telephone number of the applicant;

2. Identification of the subject property and road;

3. A specific description of the requested waiver (including relevant, proposed construction plans);

4. A detailed explanation of why the proposed waiver is warranted by site specific conditions which create an unusual aspect or feature not shared by property in general; and

5. A detailed explanation of why the proposed waiver:

a. Would not adversely affect the safe, efficient and orderly movement of motorized and non-motorized traffic;

b. Would not adversely affect health or safety;

c. Would not cause substantial injury to the owner or occupant of adjacent land(s);

d. Would not cause substantial injury to the environment; and

e. Would provide the functional equivalent of these Standards and Specifications.

6. Any other information required by the Board or Director of Public Works (e.g. survey).

F. No public hearing is required for a determination of a waiver by the Director of Public Works.

G. Within fourteen days of receipt by the Board of a complete petition for waiver, to be determined by the Board, the Board shall set a date, time and place for a public hearing on that petition. The Public Works Department shall publish, at a minimum, notice of such hearing once a week, for the two consecutive weeks immediately before the hearing. The applicant for the waiver must notify all property owners adjacent to the road, no later than fourteen days before the hearing, by mailing to each of them, by certified mail, return receipt requested, a complete copy of the request for a waiver and a copy of the notice of the public hearing; the applicant must provide proof of such notification to the Director of Public Works at least seven days prior to the public hearing.

H. No waiver shall be granted unless the Board, or if applicable the Director of Public Works, determines in writing the applicant has established by clear and convincing evidence that:

1. The waiver is warranted by site specific conditions which create an unusual aspect or feature not shared by property in general; and

2. The waiver will not adversely affect the safe, efficient and orderly movement of motorized and non-motorized traffic; and

3. The waiver will not adversely affect health or safety; and

4. The waiver will not cause substantial injury to the owner or occupant of adjacent land(s); and

5. The waiver will not cause substantial injury to the environment; and

6. The proposal will provide the functional equivalent of these Standards and Specifications.

I. An application for a waiver may be considered concurrently with an application for a land use change unless staff believes there will be significant neighbor or public concern, in which case the waiver will be considered first.

The applicant must prepay the estimated cost of administrative fees, publication and certified mailings as identified in the Schedule of Fees (Exhibit A).

ARTICLE II

ADMINISTRATION

2.1 Road Systems

The road system in Gunnison County consists of federal highways, state highways, county roads, city streets and alleys, town streets and alleys, other public roads and private roads.

2.1.1 The Colorado State Highway System

The Colorado State Highway System in Gunnison County is administered by the Colorado Department of Transportation under the direction of the Executive Director and the State Highway Commission. The Colorado Department of Transportation has full responsibility for the construction and maintenance of all Colorado state highways within the unincorporated areas of Gunnison County. Within incorporated areas, maintenance responsibilities may be assumed by a municipality under a maintenance agreement. The placement of traffic control signs on all County roads at an intersection with a state highway is under the jurisdiction of the Colorado Department of Transportation.

Access to the Colorado State Highway System in Gunnison County is administered by the Colorado Department of Transportation through the State Highway Access Code, and other applicable regulations.

NOTE: The portion of the access from the edge of the CDOT right-of-way to the building footprint must comply with the access requirements in Section 4.5 and Section 7.4.

Planning for state highways is conducted by the Colorado Department of Transportation in cooperation with the county, local municipalities, and other agencies.

2.1.2 The County Road System

The State of Colorado, by statute, authorizes the Board to administer the County Road System, including but not limited to planning, design, construction, maintenance and traffic regulation of County, public and private roads under County jurisdiction.

A. The Gunnison County Road Map. A Gunnison County Road Maintenance Map has been adopted by the Board of County Commissioners. This Map shall be updated periodically to reflect additions, deletions and alterations to the County Road System. Copies of the County Road Map shall be available from the County Public Works Department for a nominal fee. (See Exhibit A).

B. Road Administration. The Board shall determine the general policies and priorities of the County as to County roads, and public and private roads under County jurisdiction. The Board shall develop planning, design and construction standards, and regulate, inspect and enforce activity conducted pursuant to such standards.

1. The County Public Works Department is responsible for the maintenance, repair and improvement of certain designated County roads and bridges, and the inspection and regulation of utility installation and access points in County rights-of-way.

2. County Maintenance. Gunnison County shall maintain all roads under its jurisdiction for which the County receives gas tax monies pursuant to HUTF reporting. Nothing in these Standards and Specifications creates or shall be construed to create any obligation of Gunnison County to maintain, or to allow private maintenance, of any road or portion of a road; the quantity, quality and frequency of such maintenance shall be in the sole discretion of the Board.

3. County Snowplowing. Nothing in these Standards and Specifications creates or shall be construed to create any obligation of Gunnison County to snowplow, or to allow private snowplowing, of any road or portion of a road; the quantity, quality and frequency of such snowplowing shall be in the sole discretion of the Board.

2.1.3 City Streets

Each city and town in the County should have a street system that consists of all streets open and used by the public. Those streets will be designated as required by the federal aid to urban systems.

2.1.4 Mixed Jurisdiction

Situations arise in which both the County and a municipality or other government agency have ownership and/or jurisdiction over portions of the same road (e.g., a municipality annexes to the centerline of a County road.) The standards applicable in each such situation shall be determined on a case-by-case basis by the governing authorities and shall be reduced to a binding written instrument. To reduce jurisdictional problems, municipalities are encouraged to annex full width roads when annexing new areas.

2.1.5 Other Public Roads

Colorado Revised Statues, C.R.S., Section 43-2-401 declares the following to be public highways:

A. All roads over private lands dedicated to the public use by deed, to that effect, filed with the County Clerk and Recorder of the county in which such roads are situated, when such dedication has been accepted by the Board of County Commissioners. A certificate of the County Clerk and Recorder with whom such deed is filed, showing the date of the dedication and the lands so dedicated, shall be filed with the County Assessor of the county in which such roads are situated;

B. All roads over private or other lands dedicated to public uses by due process of law and not heretofore vacated by an order of the Board of County Commissioners duly entered of record in the proceedings of said Board;

C. All roads over private lands that have been used adversely without interruption or objection on the part of the owners of such lands for twenty (20) consecutive years;

D. All toll roads or portions thereof, which may be purchased by the Board of County Commissioners of any county from the incorporators or charter holders thereof and thrown open to the public;

E. All roads over the public domain, whether agricultural or mineral.

2.1.6 Private Roads

Gunnison County assumes no maintenance responsibility on private roads, and does not regulate utilities on private roads. The use of the private roads for emergency services, postal delivery, or school pickups must be arranged by the owner with the appropriate agency.

2.2 Road System Regulations

2.2.1 Traffic Control Devices

No person shall install a traffic control device on a County road or public road under County jurisdiction without prior written permission from Gunnison County; all traffic control devices installed on County roads or public roads under County jurisdiction shall conform to the latest edition of the Manual on Uniform Traffic Control Devices, published by U.S. Department of Transportation, Federal Highway Administration. Said manuals will be available for review at the County Public Works Department. The County Public Works Department may conduct accident studies, traffic analysis, traffic control studies, or any other engineering studies required by state law or by the Manual on Uniform Traffic Control Devices which are prerequisite for the installation of traffic control devices on County roads. The cost of obtaining such information shall be borne in whole or in part by the project proponent as reasonably determined by the Director of Public Works.

If the need for such device is caused by additional traffic resulting from a new development, the project proponent shall be required to pay all or a pro-rata share of the necessary installation.

2.2.2 Cooperation with Other Entities

Insofar as possible, the County Public Works Department, and other officials of Gunnison County, should seek the cooperation of all law enforcement officials in administering the provisions contained herein, and in developing ways and means to improve traffic conditions.

2.3 Enforcement

A. These Standards and Specifications shall be enforced in accordance with the requirements of Colorado law and as provided herein. Each enforcement remedy can be invoked by Gunnison County independently or in conjunction with any or all of the other enforcement remedies.

B. The Board, County Manager and designees, the Director of Public Works and designees, and such other persons as the Board may designate are charged with and authorized to enforce all the requirements of these Standards and Specifications.

C. Notification To Correct Violation. When a person charged with enforcement of these Standards and Specifications has reasonable cause to believe that any activity is being conducted or any condition exists which is contrary to or in violation of these Standards and Specifications, or any permit issued pursuant to them, the Director shall give written notice to the responsible person, by certified mail, return receipt requested, at that person's last known address. The notification shall state which requirements are being violated, shall state the conditions that are to be satisfied for compliance, and shall state that the violator shall correct the violation within seven (7) days, or sooner, of receipt of the notification. Such written notification is cumulative to, and not a prerequisite to, any other enforcement remedies available to Gunnison County. The Director shall issue a written compliance letter only if the activity or condition that is the basis for the notice has been remedied and any required reclamation work completed.

D. Stop Order. When a person charged with enforcement of these Standards and Specifications has reasonable cause to believe that any activity is being conducted or any condition exists which is contrary to or in violation of these Standards and Specifications or any permit issued pursuant to them, the Director may, by written notice ("Stop Order") order the activity stopped, and/or condition remedied immediately or by a time certain. The stop order shall be served by delivering it or mailing it certified mail, return receipt requested, to any person engaged in the activity or responsible for the condition. The stop order shall be complied with by all persons. The stop order shall remain in effect until the Director determines that the activity or condition that is the basis for the stop order has been remedied, and the Director issues a written compliance letter only if the activity or condition that is the basis for the notice has been remedied and any reclamation work completed. The issuance of a stop order is cumulative to, and not a prerequisite to, any other enforcement remedies available to Gunnison County.

E. Suspension or Revocation of Permit. When a person charged with enforcement of these Standards and Specifications has reasonable cause to believe that any activity is being conducted or any condition exists which is contrary to or in violation of these Standards and Specifications or any permit issued pursuant to them, the Board may schedule a hearing to determine whether any relevant permit shall be suspended or revoked. The Board shall give written notice of the hearing to the holder of the permit by mailing notice by certified mail, return receipt requested at the last know address, postmarked at least 14 days before the hearing. The notice shall contain a summary of the grounds for the potential suspension or revocation. At the hearing, the Director shall have the burden to demonstrate, by credible evidence, that the permit should be suspended or revoked. The Board shall suspend or revoke the permit if, after the close of the hearing, and based on credible evidence, obtained at the hearing, either of the following findings is made by the Board:

1. The permit was issued in reliance on materially erroneous or misleading information from the applicant or his/her representative;

2. Activity is being conducted or a condition exists that is a violation of these Standards and Specifications or a permit issued pursuant to them. Notification of the Board's decision shall be provided by the Director to the holder of the permit by certified mail, return receipt requested, within 7 days of the Board's decision. The suspension or revocation shall remain in effect until the Board determines that the activity or condition that is the basis of the suspension or revocation has been remedied and any required reclamation work completed, and the Board issues a written compliance order. The remedy of suspension or revocation is cumulative to, and not a prerequisite to, any other enforcement remedies available to the Board.

F. No Processing of Applications. No permit application shall be processed or approved pursuant to these Standards and Specifications, and no Building permit or other permits shall be issued by Gunnison County, for persons or property that is the subject of an existing stop order or suspension order. This enforcement remedy is cumulative to, and not a prerequisite to, any other enforcement remedies available to the Board.

G. Other Remedies. The Board may seek all civil, criminal and /or other legal or equitable remedies available to it for any violation of these Standards and Specifications. Such remedies are cumulative to, and not a prerequisite to, any other enforcement remedies available to the Board.

H. Abatement and Reclamation. No compliance order shall be issued unless and until the activity or condition is abated and reclaimed to the satisfaction of the Director of Public Works at the cost of the violator; Gunnison County shall have the right to abate and reclaim the violation at the cost of the violator.

2.4 Inspection

A. The Director is hereby empowered and directed to inspect and examine the use, occupation, or development of, or activity in, each and every area or activity subject to these Standards and Specifications for the purpose of determining from time to time whether any use, occupation, development or activity is in violation of any of the provisions of these Standards and Specifications or of any permit issued or required pursuant to these Standards and Specifications.

2.5 County Road System Additions and Improvements

A. By the County. The Board may lay out, alter, or change any road in the County Road system under its jurisdiction, and acquire lands for County roads. The County Public Works Department has the primary staff responsibility for the planning, design, right-of-way acquisition, construction and inspection of all additions and improvements to the existing County Road System. Such activities will comply with these Standards and Specifications.

B. By Others. Any road proposed by other than the County to be added to the existing County Road System will ordinarily pass through six review steps: planning, acceptance of design, permitting, acceptance of right-of-way dedication, construction, and inspection. As a final step, the Board may accept maintenance and/or plowing responsibilities for the road. Such activities will comply with these Standards and Specifications.

2.5.1 Planning

The planning or layout of any new road subject to these Standards and Specifications and any improvements to any existing roads subject to these Standards and Specifications shall be in accordance with Article III as it may be amended. If a road is created through the land use change process, all provisions of these Standards and Specifications, and the Gunnison County Land Use Resolution shall be met.

2.5.2 Design

The design of any new road subject to these Standards and Specifications and any improvements to any existing roads subject to these Standards and Specifications shall be in accordance with Article IV as it may be amended. Road and bridge plans and specifications shall be prepared by a Professional Engineer in accordance with these Standards and Specifications and must be approved in writing by the Director of Public Works before any construction activity whatsoever commences. Any such written approval shall expire without further notice one year from the date it is issued. Any amendment or revision to a plan or specification, and any resubmission of a plan or specification must conform to the Standards and Specifications, as they exist at the time of the amendments, revision or resubmission.

2.5.3 Right-of-Way Dedication/Acceptance

Affirmative written action by the Board is required for County acceptance of any dedication to the public or the County of a road or road right-of-way. The road, however, shall not be maintained or snowplowed by the County until the requirements set forth in Section 2.8 are met.

2.6 Development Improvement Agreement Required

A. Improvement Agreement Shall Be Required. This agreement is not intended to duplicate any other agreement, permit or financial security required by the County. Public utilities may post financial security such as bond or letter of credit acceptable to Gunnison County. When public or private improvements are a required component of a permit issued pursuant to these Standards and Specifications, the Board shall require as a condition of permit approval, that the applicant execute and fund with Gunnison County a Development Improvement Agreement acceptable to Gunnison County in form and substance, and amount and type of security. The

Improvement Agreement shall constitute the applicant's agreement to construct the public improvements and private improvements identified as requirements of project approval. The Development Improvement Agreement shall specifically identify such requirements including plans, drawings and schedules for completion and shall be substantially in the form referenced in Section E below.

B. Financial Security. The Development Improvement Agreement shall require the applicant to provide to the County a guarantee of financial security, acceptable to the County, in an amount established by the Board based on no less that 125 percent of the estimated cost of the project, and payable on demand to the County. The purpose of the guarantee of financial security is to assure that the public improvements and private improvements identified as requirements of project approval are timely and fully completed, that all mitigation requirements and permit conditions are timely and fully performed, and that the development area is timely and fully reclaimed.

C. Ensure Completion Of Improvements. The Development Improvement Agreement shall provide that if the Board determines that any of the required improvements are not timely and fully constructed or if any of the requirements of approval are not performed as provided in the Agreement, including reasonable requirements for the correction of deficiencies upon notice thereof, the Board may draw upon the financial security as may be necessary to complete the improvements in accordance with the specifications included in the Agreement and the Board may exercise any or all of the other remedies available to it pursuant to the Agreement and these Standards and Specifications.

D. Certification Of Completion And Release Of Security. The Development Improvement Agreement may include requirements for certification of completion, partial releases of the security, and holdover of security to ensure repairs or replacement, demonstrated performance of required facilities, substitution of security, and other requirements deemed appropriate by the Board.

E. Form Of Agreement. A general form of the Development Improvement Agreement is incorporated in these Standards and Specifications as Appendix J. This form of agreement may be modified from time to time by the County in its discretion without formal amendment to these Standards and Specifications.

F. Access Permits. The Director of Public Works may waive the requirements for a Development Improvement Agreement, for an access permit only, if she determines in writing, that the permitted improvement and disturbance are minimal.

2.7 Construction

Construction of new County, public and private roads under County jurisdiction and reconstruction of same shall conform to the provisions of Article V of these Standards and Specifications. Surface Alteration Permits shall be obtained as per Section 7.3.

2.7.1 Inspection

Inspections and testing shall be performed to ensure compliance with these Standards and Specifications and any other requirements and conditions before any County Public Works Department recommendation is made to the Board for maintenance acceptance and/or release of a guarantee or financial security. Requirements for inspections and testing are found in Article V - Construction Specifications; compliance is the sole responsibility of the developer or permittee.

2.8 Acceptance of Roads for Dedication to the County and for County Maintenance.

A. Dedication can be statutory, by common law, express or implied, or by written instrument at the sole discretion of the Board.
B. Conditions for new dedications by written instrument. Required Language – any instrument of dedication must be on a County form and include language approved by the Gunnison County Attorney.

C. Requirements for acceptance.

1. The road shall have been constructed in accordance with these Standards and Specifications.

2. The Director of Public Works shall have completed final inspection and shall have approved the roads in accordance with Article V of these Standards and Specifications and shall have recommended acceptance.

3. The road must connect to another maintained County road, state highway, or municipal street of the same or higher functional classification.

4. A request for acceptance of the road shall have been submitted to the County Public Works Department. The application shall have been submitted at least two weeks before performance of the final inspection. An application for acceptance will not be accepted by the Director of Public Works, nor will any inspection be performed when, in the sole discretion of the Director, weather conditions prohibit a complete inspection.

5. All required road signs and traffic control devices shall have been installed in accordance with the Manual of Uniform Traffic Control Devices. Reflective signs showing road numbers or street names shall be installed to facilitate emergency services response.

6. A guarantee of financial security shall have been submitted to the County in an amount determined by the Board to warrant the integrity of the road construction for one (1) year after the date of the acceptance by the County. In the sole discretion of the Board, such time period may be enlarged. An inspection by the County shall be conducted at the end of the time period. The obligations of the developer or permittee shall terminate only upon correction or repair by the developer or permittee of all deficiencies identified by such inspection.

7. All required subsurface utilities shall have been installed in the roadway prior to finishing subgrade. All laterals crossing the roadway shall have been installed prior to the road inspection.

8. All survey monuments that were in a roadway or a road right-of-way shall have been reset by a surveyor licensed in the State of Colorado.

9. Trench compaction tests and results, as required in Article V of these Standards and Specifications and as required by any permit shall have been submitted to and approved by the Director of Public Works for all trenches within the road right-of-way. Such tests and results shall have been submitted and approved prior to placement of any road base material whatsoever.

10. A reproducible copy of as-built drawings shall have been submitted to the Director of Public Works. The drawings shall accurately show all road construction details, utility and lateral locations and depths, property boundaries and corners, and other pertinent information as required. Upon its submission to the Director, the copy shall become and remain the property of the County. An Ascii DXF file in any AutoCad Format (or other files as required by the County) shall be submitted (no proprietary information is necessary).

11. Such other conditions as the Board deems necessary for public health, safety, or budget constraints shall have been satisfied. The Director of Public Works in his/her sole discretion shall assign the road a Level of Service rating.

D. Roadways through State and Federally Owned Lands. It may be to the benefit of the general public for the County to accept roads through state and federally owned land whether or not such roads meet these Standards and Specifications. Upon the receipt of a petition for acceptance of such roads into the County Road System, roads which fall into these classifications may be accepted into the County Road System by the Board pursuant to the waiver process set forth in Section 1.9.

2.8.1 Private Road Construction and Inspection

The construction or extension of a new private road that is subject to the Gunnison County Land Use Resolution shall comply with the process and procedures set forth herein for a County road except that:

A. Section 2.4 b, shall not apply;

B. The guarantee required by Section 2.4 b, shall warrant the integrity of the road construction for no less than one year after such construction is completed and is accepted by Gunnison County.

2.9 Deletions from the Road System

2.9.1 Abandonment

A. Abandoned State Highway. When a portion of a state highway is relocated and, because of such relocation, a portion of the route as it existed before such relocation is, in the opinion of the State Transportation Commission, no longer necessary as a State Highway, such portion shall be considered as abandoned. If it appears that the abandoned portion is necessary for use as a public highway, street or road, or other public purpose the abandoned portion shall become a County road, upon adoption of a resolution to that effect by the Board. Such resolution shall be adopted within ninety days after such abandonment. If the portion of the road is not needed for a public purpose, title to it shall revert to the owners of the land through which such abandoned portion may lie subject to the provisions of state law.

B. Abandoned County Roads. A County road shall be abandoned only when a portion of the County Road System is relocated and because of such relocation a portion of the route as it existed before such relocation is, in the written and recorded opinion of the Board, or no longer needed for a public purpose; in such a case, such portion shall be considered as abandoned, and title to it shall revert to the owners of the land through which such abandoned portion may lie, subject to the provisions of state law.

2.9.2 Policy and Procedures Regarding Vacation of County Road or Public Road Under County Jurisdiction

A. Purpose.

The purpose of this section is to establish standards and a uniform process by which the Board will act on request to vacate a county road or public road under county jurisdiction.

It is the intent of the Board in adopting this section to exercise the Board's authority pursuant to, among other statutes, C.R.S. 43-2-301 et. seq.

On occasion, vacation of all or a portion of a county road or public road under county jurisdiction may be warranted due to specific circumstances or changes in traffic or development patterns. In those limited circumstances, the Board has discretion, but no obligation, to vacate all or a portion of a county road or public road under county jurisdiction. No such road shall be vacated so as to leave any parcel adjoining such road without an established public road connecting said parcel with another established public road.

The applicant for a vacation shall bear the burden to prove to the Board that the request meets the criteria of C.R.S. 43-2-301 et. seq. and these Standards and Specifications.

This wisdom of granting a vacation is a matter committed to the discretion of the Board and is not controlled by any one factor. In determining whether to grant a request to vacate all or a portion of a county road or public road under County jurisdiction, the Board of shall consider the following criteria:

1. Requirements of C.R.S. 43-2-301 et. seq.;
2. Consistency with any comprehensive plan adopted by Gunnison County;
3. Vacation shall not restrict access to any parcel so that access is unreasonably difficult or costly;
4. Not disruptive to existing travel modes;
5. Changed conditions in traffic or development patterns;
6. Anticipated conditions in traffic or development patterns;
7. No adverse impact to natural environment;
8. Community needs;
9. Public health, safety and welfare;
10. No conflict with other established County roads or public roads under County jurisdiction;
11. No increased risk to emergency services personnel;
12. Benefits outweigh detriments;
13. Public benefits; and
14. Effect on maintenance of structures deemed necessary by the County.

B. Application Process.

The applicant shall complete and file with the Director of Public Works three copies of an application in the form required by the Director with ten copies of all attachments.

At a minimum the request must contain:

1. Applicant's name, address and phone number.
2. Legal description if not a platted street or alley.
3. Name, address, phone number for person or firm authorized to represent the applicant.
4. Map showing location of section to be vacated which also shows names and addresses of all owners of property adjacent to the section or street or alley to be vacated.
5. If any portion of the street or alley is within a subdivision or is adjacent to a subdivision lot the applicant must provide the names and addresses of all property owners within the subdivision.
6. Survey by a Colorado licensed surveyor of adjacent properties and street right-of-way.

The Director of Public Works will forward copies of all information to the County Attorney and the County Planning Director and other County Departments that might have an interest.

The applicant for the vacation must notify all property owners adjacent to the road, postmarked no later than fourteen days before the hearing, by mailing to each of them, by certified mail, return receipt requested, a complete copy of the request for a vacation and a copy of the notice of the public hearing; the applicant must provide proof of such notification to the Director of Public Works at least seven days prior to the public hearing.

As applicable, letters of consent to the vacation from utility companies whose facilities are located in legal easements in or adjacent to the proposed vacation, and a copy of the easement agreements, if such agreements exist, must be provided to the Director of Public works at least seven days prior to the public hearing.

A staff recommendation based on information available will be prepared for the Board before a public hearing is held (the recommendation may change based on public input).

The County Attorney's office will finalize the necessary documentation if the street vacation is approved by the Board.

Any condition required by the Board must be completed before the vacation shall be made effective.

A precondition to granting any vacation shall be the granting and recording of perpetual easements for all existing and proposed utilities on the right-of-way being vacated.

The applicant for a vacation shall will be required to prepay all estimated costs, including but not limited to administrative costs, costs of publication of legal notice of public hearing, travel time and cost of certified and regular mailings, pertinent to application, whether or not the application is granted. (See Exhibit A).

2.10 Road Name and/or Number Changes

Neither the name nor number of any road dedicated to public use or to the County may be changed except upon written application to and written approval by the Director of Public Works. The name or number of a road within a recorded subdivision may be changed only after such application and approval by amending the final plat in compliance with the Gunnison County Land Use Resolution. No road names or numbers shall be used which will duplicate, or be confused with, the names of any existing street or road in Gunnison County.

The County will be responsible for changing the applicable road number signs of any road accepted by the County for maintenance. If the road name or number change is for a road that has not been accepted by the County for maintenance, the applicant, homeowner's association, or the developer of the affected subdivision is responsible for changing the road name or number signs.

2.11 Snowplowing

Gunnison County shall not snowplow any road unless and until such road has been dedicated to the public use and accepted for County maintenance by the Board except that it shall be in the sole discretion of the Board to determine from time to time which such roads so dedicated and accepted will be plowed by the County.

A. Policy and Procedures for Requests for Gunnison County to Provide Snow Removal Services on County Roads.

It is the policy of the County not to provide snow removal services on private non-public roads.

In addition to the requirements of the Gunnison County Land Use Resolution, Section 5-210, a request for the County to provide snow removal services on a County road**,** or public road under County jurisdiction, to an area not currently being served shall be submitted in written form to the Director of Public Works. The written request shall include at a minimum:

1. The applicants name, address and telephone number.
2. The name and number of the road requested to be plowed.
3. If necessary, a map designating the portion of the road to be plowed.
4. The distance to be plowed.
5. If required, evidence that the road is a public road.
6. Other information that may be required by the Director of Public Works.
7. A list of property owners benefiting from the proposed service.
8. The reason the plowing is being requested.

All requests shall be submitted to the Director of Public Works before September 1 of the year when plowing is requested to begin. Requests received after September 1 will be considered as requests for the following winter season.

Upon receipt of the request, the Director of Public Works shall conduct a site visit and prepare evaluation report for the Board. The report shall address the following:

1. An assessment of the condition of the road including width, base drainage, fencing, etc.

2. An evaluation and estimate of cost to bring the road up to a standard suitable for winter maintenance and plowing.

3. A recommendation of the type of equipment that would be required to remove snow; the frequency, duration and extent of snowplowing, the amount of manpower and time involved and an estimate of cost.

4. An assessment of safety considerations involved with the request.

5. A statement as to whether the road is a natural extension of an existing snowplow route.

6. A statement of any general public benefit served by providing snow removal service.

7. An assessment of any negative impact that might result from providing snow removal service.

The written request to provide snow removal service together with the evaluation prepared by the Director of Public Works shall be submitted to the Board. All requests shall be considered in a public meeting of the Board. At its discretion, the Board may approve or deny the request for the County to plow the road. The Board may conditionally approve the request based on, but not limited to, the following conditions:

1. The frequency, duration and extent of snow plowing services to be provided.
2. Property owners' financial participation in preparing the road for snow removal.
3. A time limit with periodic review for continuation of the service.

The County shall exercise its appropriate, lawful authority to ensure compliance with this section.

B. County Policy and Procedures for Requests by Private Individuals to Plow a County Road or Public Road under County Jurisdiction

The purpose of this section is to outline the procedures and criteria by which the Board will consider requests presented to perform private snow removal on a County road, and public roads under County jurisdiction.

No person shall remove snow from a County road, or public road under County jurisdiction without first receiving permission from the Board and a Snow Removal Permit issued by the Director of Public Works.

If an applicant is requesting permission to plow all or a section of road that has not been previously plowed they must first obtain a Land Use Change Permit per section 5-210 of the Gunnison County Land Use Resolution. After that permit is obtained, the applicant will only need apply for the yearly permit from the Director of Public Works.

The requirements and procedures set forth herein and in the permit shall be considered the minimum and additional information or criteria may be applied.

In order to facilitate the plowing of a road that might not otherwise be plowed, the Director of Public Works may allow a private individual or company to remove snow from all or part of a County, or public road under County jurisdiction. If issued, the permit will be for a single season. The applicant must apply yearly.

A request to plow a County road, or public road under County jurisdiction, shall be made in writing to the Director of Public Works. The written request shall include at a minimum:

1. The name and/or number of the road to be plowed.
2. If necessary, a map designating the portion of the road to be plowed.
3. The distance in miles to be plowed privately.
4. The type of equipment to be used to remove the snow.
5. The name, address, and telephone number of the person(s) responsible for snow removal.
6. The names and mailing addressed of property owners located along the proposed snow removal route.
7. The reason the plowing is being requested.
8. The time period for which the permit is being requested.

Requests to provide snow removal must be submitted to the Director of Public Works no later than September 1 of the year when plowing is requested.

Upon receipt of the request, the Director of Public Works shall conduct a site visit and prepare an evaluation report for the Board. The report shall address the following:

1. An assessment of the condition of the road including width, base drainage, fencing, etc.
2. An evaluation and estimate of cost to bring the road up to a standard suitable for winter maintenance and plowing.
3. A recommendation of the type of equipment that would be required to remove snow; the frequency of plowing; and the duration of plowing.
4. An assessment of safety considerations involved with the request.
5. A statement of any general public benefit served by providing snow removal service.
6. An assessment of any negative impact that might result from allowing snow removal service.

If the plowing is authorized by the Board, the Director of Public Works and the person requesting permission to remove snow shall meet on-site to evaluate the condition of the road before plowing begins.

The County may require that reasonable improvements and repairs be made to the road that are necessary for public safety and to protect and preserve the road. Such improvements or repairs shall be made at the expense of the applicant unless otherwise agreed to by the County.

For the purposes of this section, snow removal work shall include: (1) removal of snow from all the traveled way, including sufficient turnouts for safe and efficient use of all emergency and other users, and (2) leaving culvert

inlets in a natural condition without snow or other material plowed into them so that the drainage system will function normally.

Upon review of the plow request, the Board may request a bond or a cash deposit to secure performance according to this section. The amount of security required will be relative to the distance being plowed, and the surface of the road.

The applicant shall acknowledge in writing that he/she has read, understands and agrees to comply with the conditions set forth in this section and with the conditions of a permit if one is issued.

The County shall exercise its' appropriate, lawful authority to ensure compliance with this Snow Removal section.

Nothing in this section is, or shall be construed to be, an obligation of the Board to permit the private snowplowing of all or part of any particular road.

2.12 No Personal Liability

Any County official, employee or agent charged with enforcement of these Standards and Specifications who acts in good faith in the discharge of the duties required herein or by any permit, other pertinent law, ordinance or regulation shall not thereby be rendered personally liable for any damages that may accrue to any person or property as a result of an act or by any permit, omission to act in the discharge of these duties.

2.13 No County Liability

These Standards and Specifications do not make, and shall not be construed to make, Gunnison County or any of its officials, employees or agents responsible for or liable for any injury to person or property resulting from any action taken pursuant to these Standards and Specifications.

2.14 Responsibility Not Lessened

These Standards and Specifications do not, and shall not be construed to, relieve from or lessen or eliminate the responsibility of any person acting pursuant to a permit issued hereunder for any damages to person or property.

2.15 No Waiver of Governmental Immunity

Nothing in these Standards and Specifications is, or shall be construed to be, a waiver by Gunnison County, or any of its officials, employees or agents, of governmental immunity under the Colorado Governmental Immunity Act or otherwise.

ARTICLE III

TRANSPORTATION PLANNING AND DEVELOPMENT POLICIES

3.1 Functional Classification of Roads

All roads in the Gunnison County Road System shall receive a functional classification from the Director. The functional classifications used in Gunnison County are: (Also See Table 3-1)

Major Arterial (Paved)
3,000+ ADT Residential, commercial, and recreational traffic - significant economic importance to County (example: Gothic Road)

Commercial/Industrial Collector (Paved or Gravel)
13 to 500 ADT Heavy duty traffic - significant economic importance to County (example: Landfill Road/Industrial Park Roads)

Suburban Lane (Paved or Gravel)
13 to 500 ADT Primarily residential traffic -- width needed for parking and other density factors (example: Crested Butte South)

Rural Arterial (Paved)
1,000 to 2,999 ADT Residential, commercial and recreational traffic - significant economic importance to County (example: Gold Basin, Marble, Brush Creek, Cement Creek, and Taylor River)

Rural Collector (Paved)
500 to 999 ADT Primarily residential or recreational traffic, but some commercial (examples: Cottonwood, Gold Basin after KOA, Washington Gulch, Slate River, Antelope, Kebler, and Lower Quartz Creek)

Rural Local (Paved or Gravel)
200 to 499 ADT Primarily residential, recreational, and ranching uses (examples: Powderhorn, Upper Quartz Creek, Kebler over the top, Brush Creek after Avion, and Gothic Road after Mt. Crested Butte)

Rural Lane (Gravel Road)
91 TO 199 ADT Primarily residential or agricultural use (examples: Little Cimarron, Pine Creek, Sap Mesa, and Steuben Creek)

Local Intermittent (Native surface/Gravel)
13 TO 90 ADT Primarily recreational, residential or commercial traffic (logging). May be joint jurisdiction, such as forest service and county and maintained by county under agreement. Can be access to National Forest and Bureau of Land Management lands. (Examples: Rainbow lake, Alpine Tunnel, Red Creek and Upper Taylor River above reservoir.)

Primitive Recreation (Native Surface)
No ADT Available - Limited use only

3.2 Land Use Changes - Compliance

Land use changes may include subdivisions, building permits, uses by special review, and other developments, which change or intensify the use of the land. All such changes must be in compliance with the Gunnison County Land Use Resolution and, if applicable, the Gunnison County Regulations for Special Development Projects. Right-of-way dedications pursuant to a land use change shall be made in conformity with the functional classification assigned to such road by the Director of Public Works and shall align with the centerline of existing rights-of-way.

In the case of proposed new alignments, detailed site planning and alignment studies may be required. The planning principles for roads in Section 3.3 shall be followed for land use change permit applications.

3.3 Planning Principles

Basic factors in the design of a road system include:

Safety - for both vehicular and pedestrian traffic

Efficiency of Service - for all users

Livability - especially as affected by traffic elements in the circulation system

Economy - of both construction and use of land, design should minimize maintenance costs and maximize ease of snow removal.

Environment – design should minimize the impact of road construction in sensitive areas.

Each of the following principles is an elaboration on one or more of these four factors. The principles are not intended as absolute criteria, since instances may appear where certain principles conflict. Therefore, the principles should be used as guides to proper system layout.

A. Insure Vehicular and Pedestrian Access. Road widths, placement of sidewalks or pathways, patterns of roads and number of intersections shall be related to safe and efficient use of the road and access to abutting lands.

B. Control Access to Arterials. Local road systems and land development patterns should not detract from the efficiency of peripheral arterial facilities. Ideally, land development should occur so that no parcels require direct access to arterial routes. The number of access points between the local road system and the arterial system should be minimized. Intersections along arterial routes should be properly spaced for efficient and safe traffic flow. The roads that do intersect the arterial system will tend to have high traffic volumes since they are the only access points. The number of residential lots directly accessing collector roads should be minimized.

C. Discourage Speeding. Residential roads should be designed to discourage excessive vehicle speed.

D. Courts and Cul-de-Sacs. A road ending with a cul-de-sac should normally not be longer than six hundred (600) feet. All cul-de-sacs shall have a minimum radius of forty five (45) feet of maintained and plowed area as measured to the outside edge of the traveled surface.

   Roads which do not connect or intersect with other roads shall have a cul-de-sac, loop design, or a "Y" or a "T" turn around at the end of the road segment. A cul-de-sac which may be vacated in the future shall be improved to the functional classification standard of the road which it serves if access is provided to dwellings or other structures. “T” turnarounds shall be a minimum of twenty (20) feet from any flammable structure. (See Appendix E for Turnaround Standards.)

ARTICLE IV

Design Standards

4.1 Application of Design Standards

4.1.1 Minimum Standards

The standards set forth in this Article provide uniform minimum acceptable values. If and only if it can be shown that an alternate design standard will provide an outcome equal to or better than the required minimum, then such alternate may be approved in the sole discretion of the Director upon review and approval by the Director of plans submitted and signed by a professional engineer. Life cycle cost shall be considered in meeting minimum acceptable values.

4.2 Design Factors

4.2.1 Road Classification

Each road proposed for construction or improvement shall receive from the Director a functional classification as defined in Section 3.1. If such a classification is not specified on the County Road Map, a functional classification shall be assigned and based primarily on volume and traffic per Table 3-1.

4.2.2 Projected Traffic Volumes

A traffic analysis is normally required to project future traffic volumes. A key element in any traffic analysis is trip generation by land use type. The report entitled Trip Generation, published by the Institute of Transportation Engineers, shall be the County guideline where no detailed trip generation data is available. This report is available for review in the Gunnison County Planning Department.

A twenty (20) year design period or full development shall generally be used to project traffic volumes. Factors provided by the Colorado Department of Transportation and/or the Gunnison County Planning Director shall be used to adjust average daily traffic volumes to design hourly volumes.

The Director of Public Works shall consult with the County Planning Director to determine whether a traffic analysis will be required. The traffic analysis will be done during the initial application phase of the development, and at the sole cost of the road developer.

4.2.3 Terrain Classification

For the purpose of these Standards and Specifications, the terrain in Gunnison County shall be classified in two categories:

Flat or Rolling Terrain. Average cross slope less than fifteen (15) percent and the ridges and draws are not well defined.

Mountainous Terrain. Average cross slope greater than fifteen (15) percent and the ridges and draws are steep and well defined.

4.2.4 Design Speed

The choice of a design speed is influenced primarily by the terrain classification, functional classification of the road, and land use. The design speed is generally slightly higher than the posted speed. Acceptable ranges of minimum design speeds are as follows:

	Flat or Rolling		Mountainous	
Functional Classification	Design Speed	Posted Design Speed	Design Speed	Posted Design Speed
Arterial	60	45-55	50	30-40

Collector	45	30-40	40	30
Local Road	25	20-25	25	20
Lane or Place	20	20	15	15

4.3 Geometric Standards

4.3.1 Horizontal Alignment

A. General Considerations. The major considerations in horizontal alignment are topography, road classification, design speed, grade profile, subsurface conditions, safety, and sight distance. All of these must be balanced to produce an alignment that is safe and adequate for the functional classification of the road.

B. Sight Distance. Horizontal alignment must provide at least minimum stopping sight distance for the design speed at all points. This includes visibility at intersections, as well as around curves and roadside obstruction.

The minimum stopping sight distance is the distance required by the driver of a vehicle traveling at a given speed to bring the vehicle to a stop after an object on the road becomes visible. Stopping sight distance is measured from the driver's eye, which is assumed to be three and one-half (3.5) feet above the roadway surface, to an object 6 inches high on the road.

The required stopping distance for a given design is as follows:

Design Speed (MPH)	Stopping Sight Distance (ft.)
15	100
20	150
25	175
30	200
35	250
40	300
50	450
60	650

In some cases, passing sight distance may be required on collectors or arterials. The Colorado Division of Highways' Road Design Manual should be used in determining passing sight distance.

C. Standards for Curvature. Tables 4-1 through 4-4 set the permissible minimum curve radii and the permissible maximum allowable rate of superelevation for the various functional classifications. The tables are based on design speed, friction factors, and superelevation, and do not consider sight distance.

Sudden reductions in speed introduce the element of surprise to the driver and should be avoided. Where physical restrictions cannot be overcome and it becomes necessary to design curvature which is lower than the design speed for the project, the design speed between successive curves shall not change by more than 10 mile-per-hour increments. Under no conditions shall a curve for a design speed lower than the design speed of the project be introduced at the end of a long tangent or at other locations where high approach speeds may be anticipated. Use of lower standard curve radii is subject to approval by the County.

Angle points less than one degree require no curve radius. A compound curve is two curves of different radii joining with no tangent between them. A compound curve will not be permitted. A broken-back curve is two curves in the same direction joined by a short tangent. Broken-back curves are not permitted.

D. Superelevation. One of the most important factors to consider in highway safety is the centrifugal force generated when a vehicle traverses a curve. Centrifugal force increases as the velocity of the vehicle and/or degree of curvature increases. The standard superelevation rates shown on Table 4-1 through Table 4-4 are designed to hold the side friction factor within tolerable limits for those operating speeds expected for the range of curve radii given.

For undivided roads, the axis of rotation of superelevation is usually the centerline. Where curves are preceded by long relatively level tangents, the plane of superelevation may be rotated to about the edges of the pavement to improve the perception of the curve.

A superelevation transition is variable in length depending upon the amount of superelevation. Two-thirds of the transition is in the tangent approach at the beginning and the end of the curve, and one-third of the full superelevation is at the beginning and at the end of the curve. Where spiral curves are permitted, the transitions are to be designed using the latest edition of the Colorado Department of Transportation Roadway Design Manual.

E. Coordination with Vertical Alignment - To avoid the possibility of introducing serious traffic hazards, coordination is required between horizontal and vertical alignment. Particular care must be exercised to maintain proper sight distance at all times. Sharp horizontal curves introduced at or near the top of a pronounced crest, or at the bottom of sag vertical curves should be avoided.

4.3.2 Vertical Alignment

A. General Considerations. The centerline profile is a reference line by which the elevation or grades of the pavement and other features of the roadway are established. It is controlled mainly by topography, structure clearances, horizontal alignment, safety, sight distance, design speed, and the performance of heavy vehicles on a grade.

B. Minimum and Maximum Grades. To provide for adequate drainage, the minimum sustained grades shall be no less than 0.5 percent on roadway sections with curb and gutter and one (1%) percent on all other roads.

Maximum permissible sustained grades (expressed in percents) for new roads are related to design speed and shall be as follows:

	(Design Speed - MPH)						
Terrain Classification	15	20	25	30	40	50	60
Flat and Rolling	6	6	6	6	6	5	4
Mountainous	11	10	9	9	8	6	NA

The maximum design grade should be used infrequently rather than as a value to be used in most cases. For short grades less than three hundred (300) feet, the maximum gradient may be increased by one percent.

In flat or rolling terrain, all grades shall flatten to four percent for at least one hundred (100) feet approaching intersections, and for at least fifty (50) feet entering and leaving turn-arounds or cul-de-sacs. In mountainous terrain, all grades shall flatten to six percent or less for at least fifty (50) feet approaching intersections and entering switchbacks or cul-de-sacs.

C. Vertical Curves. All vertical curves shall be designed to provide adequate stopping and passing sight distance, headlight sight distance, comfortable driving, good drainage, and a pleasing appearance. Vertical curves shall be parabolic.

Vertical curves are not required where the algebraic difference of grades is less than .40%. The preferred minimum length of vertical curves, both crest and sag, is four hundred (400) feet.

The minimum length of a vertical curve shall be three hundred (300) feet for design speeds above thirty (30) miles per hour, and two hundred (200) feet for design speeds of thirty (30) miles per hour and lower. Unequal tangent vertical curves are permitted only in special circumstances as approved by the County.

Vertical curves that are long and flat may develop poor drainage at the level section. This must be overcome by adjusting the flow line of the ditch section.

D. Sight Distance. Minimum lengths of crest vertical curves are controlled by stopping sight distance requirements as shown in Figure 4-1.

4.4 Cross Section Standards

4.4.1 Typical Sections

Typical sections for each functional classification are given in Appendix B - D. Table 3-1 also provides a summary of design elements. Variations from these sections may be approved by the County when there is sufficient evidence that certain design elements can be reduced or eliminated.

4.4.2 Right-of-Way Width

The basic minimum right-of-way width for each typical section is shown in Table 3-1. This width is sufficient only to accommodate the specific geometric cross-sectional elements that are required. Additional right-of-way may be required for snow removal and storage. Cut and fill slopes beyond the hinge point and right-of-way may require slope easements.

4.4.3 Crown Slope

On roads in tangent alignment, the high point of the crown shall be at the centerline of the pavement and the pavements sloped toward the edges of a uniform grade. In mountainous terrain, local roads may be insloped or outsloped on a constant two percent (2%) slope to alleviate surface erosion due to runoff, provided safe speed requirements are met. At intersections, or in unusual situations, the crown position may vary depending upon drainage or other factors.

Standard crown slopes to be used on the traveled way for different pavement and surface types are as follows:

Type of Surface	Crown Slope (Percent)
Portland Cement	1.5
Bituminous Mix Pavements	2.0
Penetration Treated Earth or Gravel	2.0
Unsurfaced Graded Section	2.0

4.4.4 Side Ditches

Side ditches may be required in cut sections without curbs and gutters. The slope from the edge of the shoulder to the bottom of the ditch shall not be steeper than 3:1.

4.4.5 Curbs and Gutters

Curbs and gutters may be required as follows:

A. On urban roads
B. When drainage, traffic, or public safety necessitates

All curbs and gutters are to be constructed with Class B Concrete and shall conform to standards detailed in the latest edition of Colorado Department of Transportation Standard Specifications for two feet curb and gutter Type 2, unless otherwise approved by the County Public Works Department.

4.4.6 Side Slopes

Cut and fill slopes shall be as shown in Table 4-5. Flatter slopes shall be required in unstable soils. Cut slopes that are steeper than the standard may be considered in special situations, such as in solid material, but require prior approval by the County.

The tops of all cut slopes shall be rounded with a minimum of a four (4) foot radius where the material is other than solid rock, and shall be reseeded with vegetation native to the area or as recommended by the United States Soil Conservation Service. The backslopes at the ends of all cuts, except rock, shall be flattened. The ditch at the lower end of the cut shall be widened gradually to discharge side ditch drainage away from base of adjacent fill slopes in order to avoid erosion and improve appearance.

4.4.7 Ramps for Physically Handicapped

All newly constructed, repaired or replaced sidewalks and curbs shall provide adequate and reasonable access for the safe and convenient movement of physically handicapped persons, including those in wheelchairs.

4.4.8 Trails

Recreation path standard specifications may be developed by Gunnison County. All submittals for trails will be reviewed by the Trails Commission and should conform to the Gunnison County Trails Master Plan as amended.

4.4.9 Horizontal and Vertical Clearance

The following are minimum clearances for structures or other roadside obstructions, including but not limited to mailboxes, shrubs, trees and fences. Additional clearances may be provided for sight distance and other requirements.

When roads or highways under the jurisdiction of other agencies are involved, the clearance as required by said agency, if more restrictive than these Standards and Specifications, shall apply.

The minimum horizontal clearance shall be four (4') feet from the outside edge of the traveled way. The minimum vertical clearance for all overhead structures including signs, cables, etc. shall be in accordance with those specified in the applicable provisions of the latest edition of Colorado Department of Transportation Roadway Design Manual.

4.5 Access Control Standards

All driveways that access a County road or right-of-way shall have a minimum surface width of eighteen (18) feet at the edge of the pavement or road surface, and taper to a minimum surface width of sixteen (16) feet at a distance of six feet from the edge of the road, and maintain this surface width to the end of the driveway. All such driveways shall be constructed with the following minimum section dimensions:

Driveway Material	Minimum Section Depths
Concrete	6 inches;
HBP	2 inches with 6 inches Class 6 aggregate base course;
Gravel	6 inches Class 6 aggregate base course;
Native Material	Permissible only if access road is native material or native material provides structural stability and an all-weather driving surface.

and shall be installed in accordance with both an approved driveway permit and all applicable sections of these Standards and Specifications. Access to a County road or right-of-way must be obtained as described in Section 7.4.

The maximum grades for driveways shall be 11%. The grade of entrance and exit shall slope downward and away from the road surface at the same rate as the normal cross slope and for a distance equal to the width of the shoulder, but in no case less than ten feet from the traveled way.

All driveways and approaches shall be constructed so that they shall not interfere with the drainage system of the roadway. The applicant will be required to pay for and install, at his own expense, drainage structures at entrances and exits which will become an integral part of the existing drainage system. The dimensions of all drainage structures must be approved by the Gunnison County Public Works Department representative prior to installation. The minimum size of culvert installed parallel to the road will be 12" diameter. Maintenance of the culvert shall be the responsibility of the property owner.

The horizontal axis of an approach to the roadway shall normally be at right angle to the centerline of the roadway and extend a minimum of forty (40) feet beyond the traveled way. An angle between 90 and 60 degrees shall be permitted if it can be shown that physical constraints exist that require an approach new angle of less than 90 degrees. An angle less than 60 degrees is not permitted.

No more than one approach shall be allowed on any parcel of property when there is less than one hundred (100) feet of property frontage.

In the case of flared driveways, the flared portion adjacent to the traveled way shall not encroach upon adjoining property.

An access approach that is gated shall be designed so that the longest vehicle using it can completely clear the traveled way when the gate is closed. In no event shall such distance be less than thirty five (35) feet.

Intersecting public and private roads shall be located opposite each other where possible or be offset by a minimum of one hundred twenty five (125) feet.

Driveways shall have an all weather driving surface. In the case of a native material road, the driveway shall match the existing surface.

Driveways shall have a minimum surface width of 18 feet at the edge of pavement or road surface and taper to 16 feet at a distance 6 feet from the edge of the road and maintain this surface width to the end of the driveway.

Driveways which are in excess of 600 feet in length and are single lane shall be required to have standard inter-visible turnouts. (See Appendix D).

Driveways at the End of the Road – Driveways 150' or longer in length that end at a private residence, a business or structure larger than 600 square feet**,** shall have a cul-de-sac, loop design or a "Y" or "T" turn around adequate to accommodate emergency service vehicles. "T" turnarounds shall be a minimum of 20' from any flammable structure. All turn around areas shall be kept open and clear, and shall have sufficient area for snow storage outside of road prism, and shall be plowed by the owner in the winter**.** (See Appendix E).

Driveway designs that allow for backing onto or off of a county road shall be evaluated on a case-by-case basis. Lot size, proposed house location and traffic volume and speed can be used as determining factors. The Director of Public Works will make the final determination.

Any driveway permit application that is over 250 feet in length and has the potential to be used for a road for future development may be referred to the planning office for proper review.

Driveways shall be constructed to meet all Standards and Specifications from the edge of the County road, or public road, or private road under County jurisdiction, to the building footprint.

Driveways on steep uphill or downhill will require a flat landing area for a minimum of 30 feet before the intersection with the edge of the road.

A temporary access road as defined herein shall be required to meet all Standards and Specifications only from the edge of the road to the property line.

Adequate vehicle parking must be provided on the private parcel. No parking along the road will be permitted.

Any overhead entry structures shall be at least 13' 6" high, measured from the road surface.

4.5.1 Access to Arterial Roads

A. Private Direct Access. Private direct access to major and rural arterial roads shall be permitted only when the property in question has no other reasonable access to the County road system. When direct access must be provided, the following shall be considered:

1. Access shall continue until such time that some other reasonable access to a lower functional classification road or highway is available and permitted. The access permit shall specify the future reasonable access location and, if known, the date the change will be made. Subdivisions shall be designed, if possible, to provide for alternative access at a future date.

2. No more than one access approach shall be provided to an individual parcel or to contiguous parcels under the same ownership unless it can be shown that additional accesses would be significantly

beneficial to the safety and operation of the road or the local circulation system. Subdivision of a parcel shall not result in additional access unless shown as necessary for safety or operational reasons. Agricultural roads shall be exempt from this requirement.

B. Spacing and Signing.

1. For rural road sections where significant development is not expected in the foreseeable future, minimum spacing of all intersecting public roads, roads and highways shall be on one-half (1/2) mile intervals for paved arterials and one-quarter (1/4) mile intervals for gravel arterials, plus or minus approximately 200 feet. Where topography makes such spacing inappropriate, location of public approaches shall be determined by topography, property ownerships, property lines and physical design constraints. The final location should serve as many properties and interests as possible to minimize the need for direct private access to the road system.

2. In areas where development accesses an arterial road, a traffic engineering study shall be completed to properly locate all proposed approaches. These studies shall be submitted to the Director of Public Works for review prior to the issuance of a Driveway Permit and shall be paid for solely by the applicant.

4.5.2 Access to Collector Roads

A. Private Direct Access. No more than one access approach shall be provided to an individual parcel or to contiguous parcels under the same ownership except adjacent platted subdivision lots unless it can be shown that additional access approaches would not be detrimental to the safety and operation of the road, and are necessary for the safe and efficient use of the property.

Subdivision of a parcel shall not result in additional access unless shown to be necessary for safety or operational reasons.

Driveways located near an intersection shall be constructed so that the side nearest the intersection is no less than one hundred (100) feet from the centerline of the intersecting road for commercial driveways and fifty (50) feet for residential driveways.

B. Access onto collector roads shall be spaced at a minimum one-quarter (1/4) mile intervals plus or minus two hundred (200) feet.

4.5.3 Local Roads/Lanes

A. Private Direct Access. No more than one access approach shall be provided to an individual parcel or to contiguous parcels under the same ownership except adjacent platted subdivision lots unless it can be shown that additional access approaches would not be detrimental to the safety and operation of the road, and are necessary for the safety and efficient use of the property.

Driveways located near an intersection shall be constructed so that the side nearest the intersection is no less than one hundred (100) feet from the centerline of the intersecting road for commercial driveways and fifty (50) feet for residential driveways.

4.6 Intersections

4.6.1 General Requirements

To minimize conflicts and to provide for the anticipated crossing and turning movements, geometric design of each intersection must be given careful consideration.

Intersections occurring on horizontal curves or crest vertical curves are undesirable. When latitude exists in the selection of intersection locations, vertical or horizontal curvature should be avoided. A line or grade change may be warranted when major intersections are involved.

4.6.2 Intersection or Access Approach Radii

A. Access approaches shall not have an equivalent turning radius less than twenty (20) feet.

B. Access designed for use by single or multi use vehicles exceeding thirty (30) feet shall have a minimum fifty (50) foot turning radii.

C. The access approach equivalent turning radii shall not be less than that necessary to accommodate the turning radius of the largest vehicle for which the access approach is intended for use on a daily basis.

4.6.3 Sight Distance

A. The required stopping sight distance necessary, as measured from the traveling vehicle to the intersection or access approach, shall be determined according to Section 4.3.1 (B).

B. Table 4-7 shall be used to establish the minimum sight distance necessary for the entering vehicle, based on the following criteria:

1. Sight distance shall be measured at a height of 3.5 feet between the entering driver and the oncoming vehicle.

2. The entering driver's eyes shall be considered to be fifteen (15) feet back from the edge of the traveled way.

3. The vehicle shall be the largest vehicle normally intended to use the access approach. Normally means in excess of an average of one per day.

4. After sight distance requirements are met and an access permit issued, a sign structure or parked vehicle shall not be permitted where it will obstruct the required sight distance.

4.7 Pavement Structure Design

4.7.1 General Design Procedure and Requirements

The requirements for the design of pavement structure sections shall be based on the most applicable section of the current edition of the Colorado Department of Transportation Roadway Design Manual.

4.7.2 Pavement Structure Design Report

A pavement structure design report shall be prepared by a professional engineer, as a requirement of road plan approval.

The pavement structure design report shall include at minimum the following information:

1. Soil logs along the proposed roadway alignment at a maximum of five hundred (500) intervals.

2. Each log shall have a soil profile of a least four (4) feet below proposed subgrade elevation.

3. Representative samples for pavement design from each log shall be within two (2) feet below proposed subgrade elevation.

4. Each representative sample shall be classified according to the AASHTO Unified Soil Classification Table, along with an Atterberg Limits Test and sieve analysis.

5. The pavement design procedure is based on the Hveem Stabilimeter Test or the Expansion Pressure Test, which is used to compute a Resistance Value (R) of the subgrade. The California Bearing Ratio test may also be used to determine design parameters.
6. Proposed average daily traffic volumes (ADT) for each road shall be based on 100% of full development build-out including an adjustment for construction traffic. Traffic analysis for the purpose of pavement design shall be part of submittal requirements as defined in Section 4.2.2.

7. Recommended structural sections, based on the design considerations, proposed typical sections, and sections of roadway which may require additional stabilization or treatment.

4.7.3 Flexible Pavement Design Considerations

The following elements are to be used in the design procedure:

1. The design procedure is based on the number of 18,000 pound single axle equivalent daily load applications (18k EDLA) per traveled lane.

   The 18k EDLA shall be equivalent to 100% of fully developed ADT adjusted for construction traffic (110%). In no case will the 18k EDLA be less than 5 on private roads, lane and place roads, and local roads and 25 on collectors.

2. The serviceability index (SI) for private roads, collector roads, local roads, and lanes will be 2.0. (See Figure 4-2). The SI for arterial, will be 2.5. (See Figure 4-3).

3. The regional factor shall be summarized as per Table 4-8. In no case will regional factor be less than 2.00.

4. Evaluation of subgrade soils and pavement structure materials shall follow the procedure in the Colorado Department of Transportation Roadway Design Manual and Table 4-9 of these Standards and Specifications. Evaluation of subgrade soils shall be revised as per Section 4.7.2 (E).

5. An economic evaluation of alternate structure sections is encouraged. In making adjustments to the various layers of the pavement structure, a more economical design may result. For example, by increasing the asphalt thickness, a decrease in gravel and earthwork may result. By stabilizing a poor subgrade with lime or cement, a thinner structure section may result. Also, the use of asphalt treated base or cement treated subbase or ridged concrete pavement may be a more economical use of materials. Life cycle cost analysis will help determine most economic materials to use.

4.7.4 Minimum Structural Sections

The minimum compacted depths of Hot Bituminous Pavement (HBP) and Aggregate Base Course (ABC) Class 6 (3/4") per road type which will be allowed are as follows:

	HBP	ABC
Gravel Roads	0"	6"
Paved Roads	2"	6"
Collectors	dictated by project design	
Arterial	dictated by project design	

Evaluation of the pavement design as per Section 4.7.3 (e) may result in an increase in HBP or substituting ABC with Plant Mix Bituminous Base (PMBB) or Portland Cement Treated Base. In no case will substitute sections be any less than three inches in depth.

Minimum compacted depths of HBP and ABC shall only be used when all of the design consideration requirements and the pavement structure design report requirements have been fulfilled and show a section less than this minimum needed to support the design loads.

4.7.5 Rigid Pavement Design

The design of Rigid Pavements or portland cement concrete overlay for roadway surfaces shall conform to the applicable section of the latest edition of the Colorado Department of Transportation Roadway Design Manual. Thickness shall be dictated by the project design, and in no case shall the pavement thickness be less than six inches, overlays shall have a thickness of at least 3 1/2 inches.

4.8 Drainage

4.8.1 Applications

This section presents minimum required standards for the design of road drainage systems. Design of ditches, storm sewers, drainage courses and drainage crossings shall be performed by an engineer. Proper and adequate accommodation of drainage shall be provided for the protection of the roadway improvements and safety of the public.

4.8.2 Design Criteria

Design criteria for the collection of and movement of water through public roads are based on the size of the drainage basin.

1. Minor Drainage Basin. A minor drainage basin will consist of a surface area less than one hundred (100) acres. All water courses and structures in a minor drainage basin shall be designed for ten year storms.

2. Major Drainage Basin. Drainage basins with surface areas greater than one hundred (100) acres shall be classified major drainage basins, in which one hundred (100) year storms shall be used as design criteria.

4.8.3 Hydrology

One of the following four computational techniques must be used in the planning and engineering of a drainage system. In addition, a written explanation must be given by the applicant why the particular technique was used.

A. Rational Method. The rational method is recommended for storm sewer, culvert design, and overland flow of minor drainage basin. It is simple, and when used with adequate input parameters it provides reasonable results for use in project design.

The basic equation is $Q=CIA$

Where:

Q - Peak discharge in cubic feet per second (cfs)

C - Coefficient of runoff (dimensionless)

I - Average rainfall intensity for a duration equal to the time of concentration of the watershed (inches/hour)

A - Drainage area of the watershed (acres)

B. Soil Conservation Service (SCS) Unit Hydrograph Method and SCS Tabular Hydrograph Method. In most drainage basins, rainfall runoff data from which unit hydrographs can be derived is unavailable, thus a synthetic unit hydrograph must be developed. The USDA Soil Conservation Service has developed a method of hydrograph syntheses which is now being widely used. The Tabular Hydrograph Method provides a tabular approach to estimating peak discharges from urban areas using the time of concentration and travel time. This method can readily predict the increase in peak flow when all or a portion of the watershed is to be developed.

C. Soil Conservation Service (SCS) Method. The SCS method was developed particularly for agricultural watersheds. This widely used method is applicable to the mountainous regions on areas from two hundred (200) acres up to ten square miles, and above 6,000 feet in elevation. The method is presented in Procedures for Determining Peak Flows in Colorado - 1980 Edition (U.S. Department of Agriculture, Soil Conservation Service, 1980), or the most recent update.

D. Regional Analysis - A statistical or regional approach appears to be most appropriate for those areas in Gunnison County where peak flows occur from seasonal snow melt. Also, where large watersheds are expected to undergo significant urbanization, computer simulation techniques should be utilized, such as the HEC I and HEC II Programs.

4.8.4 Drainage and Irrigation Structures within County Road Right-of-Way

A. Materials. Culverts shall be constructed from reinforced concrete, corrugated aluminum, corrugated steel, or acceptable polymers. The minimum pipe size installed perpendicular to the road shall be an 15 inch diameter round pipe or shall have an equivalent 15 inch diameter round cross sectional area for other shapes.

B. Inlets and Outlets. Culverts may need to be designed either with headwalls and wingwalls, or flared-end sections at the inlet and outlet. Additional protection may also be required at the inlet and outlet due to the potential scouring velocities.

C. Velocity. A minimum culvert velocity of three feet per second is recommended in order to assure a self-cleaning condition.

The maximum culvert velocity is dictated by the channel conditions at the outlet. If the outlet velocities area less than seven fps for grassed channels, then only a minimal amount of protection is required. Higher outlet velocities will require substantially more protection. The maximum outlet velocity shall be twelve (12) fps along with the proper erosion protection.

D. Structures. All culverts, as a minimum, shall be designed in accordance with the procedures of AASHTO Standard Specifications for Highway Bridges and with the pipe manufacturer's recommendations.

E. Irrigation Ditches. All ditches may cross roads, but shall not parallel a road within the road right-of way.

4.8.5 Roadside Ditches

In areas where no curb and gutter is required, the maximum allowable capacity for the roadside ditch shall be no more than that calculated through the use of Manning's formula with an appropriate roughness coefficient. If the natural channel slope would cause erosion velocity, suitable channel protection, as approved by the Director of Public Works shall be installed. (See Table 4-10).

The most desirable roadside drainage ditches are those lined with grass. The grass will stabilize the body of the ditch, consolidate the soil mass of the bed, and check the erosion on the ditch surface and the movement of soil particles along the ditch bottom. The presence of grass in ditches can result in turbulence which means loss of energy and increased retardation of flows. Therefore, the design must give full consideration to sediment disposition and to scour, as well as hydraulics.

For velocities in excess of (12) FPS erosion protection shall be provided for the channel. Erosion protection design must be approved by the County Public Works Department.

4.8.6 Bridges and Low Water Crossings.

All private or public bridges over waterways will meet legal load limit requirements, have an Army Corp 404 permit, and obtain a Flood Development Permit from the Gunnison County Planning Department before construction may begin.

A. Standards for Bridges. The design and supporting calculations for bridges must be prepared and certified by an engineer. The following minimum standards shall apply to all bridges:

1. A minimum clear roadway width equal to width of the approach road sufficient to provide service for proposed use.

2. Grade Criteria: Minimum of 0.5 percent / Maximum of 4.0 percent

3. An alternative loading may be allowed by the County where it can be demonstrated that anticipated loads will not exceed eight tons. In all cases the bridge load limit and bridge ownership shall be conspicuously posted by the permit applicant. Posting shall be in accordance with the latest edition of the Manual of Uniform Traffic Control Devices and the signs shall be owned, posted, and maintained by the applicant or property owner.

4. Hydraulic criteria:

A single clear span bridge.

Low steel or other spanning material shall be a minimum of one foot above the one hundred (100) year water surface elevation for that stream.

Where bridge abutments and foundations are located below the one hundred (100) year water surface elevation, concrete wingwalls shall be required at forty (40) degree to sixty (60) degree angles tied to the existing side slopes to prevent erosion behind the abutments.

At no time shall the waterway section at the bridge cause a significant rise (one foot) in the intermediate regional flood surface elevation or cause flow to accelerate to velocities sufficient to scour and undermine the bridge's abutments and wingwalls.

5. Utilities attached to bridges shall not obstruct flows within the stream channel; or waterway users (i.e. boats, rafts); or sight distance to drivers using the structure. Attached utilities should not interfere or encumber the maintenance of the bridge.

6. All bridges on roads proposed for acceptance into the County Road System shall meet AASHTO Standards for the use being served. Acceptance will be made in accordance with the following policies:

    a. New Structures. All structures shall be designed by a professional engineer in accordance with AASHTO specifications for highway bridges. Designs for said structures shall be reviewed for approval by the Gunnison County Public Works Department. Upon approval of the plans, any person, partnership, association, or corporation desiring to have such a bridge constructed shall bear all costs associated with the construction and final inspection. All new bridges shall have a sufficiency rating greater than eighty (80) when evaluated by FHWA/CDOH procedures.

    b. Existing Structures. All structures being reviewed for acceptance shall meet current AASHTO specifications. The petitioner shall present plans and specifications for review to the County Public Works Department. Upon approval of said plans and specifications, the subject bridge may be considered for acceptance subject to a final field inspection by the County. After it has been determined that the subject structure meets all requirements, the County Public Works Director shall submit the petition to the Board for acceptance into the County Road System.

7. All bridge abutments shall be located to avoid adversely affecting the natural hydraulics and inundation characteristics of wetland areas.

B. Standards for Low Water Crossings. The design and supporting calculations for all low water crossings must be prepared and signed by an engineer. The following are minimum standards for private low water crossings.

1. A minimum clear roadway width sufficient to provide service for proposed use.

2. Grade criteria: Minimum of 0.5 percent / Maximum of 10.0 percent

3. Side slopes shall not be steeper than 3:1 and shall be protected by a six-inch concrete facing or by eighteen (18) inch rip-rap.

4. The culverts used must be a minimum of fifteen (15) inches in diameter.

5. Minimum cover over the culverts will be as follows:

    Round pipe – twelve (12) inches or as recommended by the manufacturer

    Arch pipe – twelve (12) inches or as recommended by the manufacturer.

6. Hydraulic criteria: Culverts shall have the capacity to carry the ten-year peak discharge from

that stream, with a HW/D ratio not to exceed 1.5.

At no time shall the waterway section at the crossing cause a significant rise (one foot) in the intermediate regional flood elevation or cause flows to accelerate to velocities greater than those expected during the intermediate regional flood.

4.9 Road Appurtenances

4.9.1 Road Signs and Traffic Control Devices

All road signs, striping, delineators, barricades, signals, and other traffic control devices shall conform to the Millennium Edition of the Manual on Uniform Traffic Control Devices (MUTCD) published by U.S. Department of Transportation, Federal Highway Administration, and any applicable Colorado supplement.

The permittee shall bear all expenses for the fabrication and installation of road name signs, permanent barricades, and/or signs for implementing the approved project design (i.e. one way, no parking, dead end, private drive.) Road name signs shall be green in color. These signs shall be lettered and erected in accordance with the latest edition of the Manual on Uniform Traffic Control Devices. The selection of materials shall be consistent with the County Public Works Department's ability to maintain the signs after acceptance. Materials shall require the review and approval of the Gunnison County Public Works Department. Signs and barricades shall be in place prior to road acceptance.

4.9.2 Guardrail

Guardrail may be required by the Public Works Department based on to the following criteria:

A. To protect a fixed object.

B. At a location with a high accident rate (vehicles accidentally leaving the traveled roadway).

C. In areas of steep terrain or high embankments.

D. On an isolated sharp curve on a road otherwise built to higher standards.

E. On curves requiring a reduction in approach speeds where one of the following conditions exist:

1. The height of embankment is more than ten feet.
2. The side slope is steeper than 4:1.
3. Substandard pavement and shoulder widths.
4. Other roadside hazards.

F. Bridge Approaches. Approach guardrail for bridges on roads classified as Major Arterial, Suburban Collector, Suburban Lane, Rural Arterial or Rural Collector shall conform to current Colorado Department Standards. Approach guardrail for bridges on roads classified as Rural Local, Rural Lane, Local Intermittent or Primitive Recreation shall conform to these Standards and Specifications. (See Appendix I).

4.9.3 Cattle Guards

Cattle guards shall be installed where they are necessary for the control of livestock. The clear opening of the cattle guard shall extend from the edge of the shoulder to edge of shoulder for the standard roadway section approved. Each cattle guard location shall also have a gate installed to allow livestock passage. Cattle guard and gate design shall be approved by the Director of Public Works prior to installation.

Appendix H is a drawing of the standard 24 foot cattle guard built and used by the Gunnison County Public Works Department.

4.10 Utilities

Any utility within a road right-of-way must be designed and located primarily to maximize public safety and secondarily to minimize road maintenance and snowplowing costs. All utilities requiring above-ground risers or boxes at intersections shall locate them twenty-eight feet (28') from the centerline of all existing roads.

When a utility company must make an emergency repair on a County road to restore service, they may do so. The company should notify the Director of Public Works within 48 hours, and repair the site as soon as possible.

4.10.1 Underground Utilities

A. Where the installation crosses a paved roadway, it shall be made by boring or jacking beneath the road surface. Open cutting shall be allowed to the edge of the shoulder portion of the road. No water shall be used in boring and no tunneling shall be permitted. In no circumstance shall an existing culvert be used for an installation of a new underground utility. The Director of Public Works may, in her sole discretion, authorize pavement cuts based on the condition of the asphalt and known soil conditions in the area.

B. Pavement cuts are permitted when: two unsuccessful attempts have been made to bore or jack the installation; conflicting utilities place constraints as to elevation or alignment on the proposed installation; connecting to an existing utility located beneath the paved portion of the roadway; approved in advance by the Director of Public Works.

   Cutting existing asphalt shall be accomplished so as to provide a neat even line perpendicular to the centerline of the roadway, unless otherwise approved by the Director of Public Works in advance.

C. When an open cut is allowed, the permittee is responsible for restoring the disturbed portion of the roadway to its original condition. The disturbed area shall be repaired within forty-eight (48) hours from the time of excavation, or twenty-four (24) hours from completion of the project within the roadway. When weather conditions prohibit complete repair the cut must be left in an acceptable condition for public use. The final repair must be done as soon as weather permits. Any repairs not completed within 48 hours must be pre-approved by the Director of Public Works. (See Figure 4-4).

   Backfilling within the roadway prism shall be made in six-inch lifts and mechanically compacted and densified to 90% density around the utility, and 95% density for the remaining portion of the trench between the base course and the utility. Backfill outside the roadway prism shall be compacted to a density consistent with the adjoining area. Relative densities shall be determined by AASHTO T-99, with the material within one percent of optimum moisture. Backfill material shall be of clean, random (non-granular) material. Bedding material may be granular. Imported backfill meeting standards defined by the Department of Transportation, Division of Highways, State of Colorado, Standard Specifications for New Road and Bridge Construction, latest edition) may be used or required when existing material is unsuitable.

   Permittee may be required to perform compaction control testing. The compaction testing schedule is as follows:

   1. One test at 1/2 trench depth from zero to five feet deep, and one test at finish grade.

   2. Two tests, one at each third point for trenches five to ten feet deep, and one test at finish grade.

   3. Three tests, one at each quarter point for trenches ten feet deep and over, and one test at finish grade.

   Tests shall be performed at thirty (30) foot intervals for trenches one to one hundred twenty (120) feet in length, fifty (50) foot intervals for trenches one hundred twenty (120) to three hundred (300) feet, and one hundred (100) foot intervals for trenches over three hundred (300) feet in length. Permittee shall bear all expense for testing fees and repair costs. The County reserves the right to conduct in-place density tests to confirm the permittee's density test results, and require retesting of areas where conflicting test results are obtained.

   Compaction control testing and documentation of results may be waived by the Director of Public Works upon submittal of an acceptable surety guaranteeing repair or replacement of failures within a one year period after completion of the last repair.

   Structural backfill (flow-fill) meeting an approved design containing portland cement water, coarse aggregate and fine aggregate and, resulting in a maximum of 60 psi in 28-days may be used at the approval of the Director of Public Works. Compaction of this type of structural backfill will not be required if material meeting the approved design is used.

Hot Bituminous Pavement Mix Grading C, CX, G, OR F as defined by the Department of Highways, Division of Transportation, State of Colorado, Standard Specifications for New Road and Bridge Construction, latest edition, shall be used for patching material, except when unavailable, during which time a temporary cold mix patch shall be allowed. Temporary patches shall be replaced with hot mix patches within five working days after material becomes available. All disturbed areas to be patched shall be prime-coated with MC-70, or the equivalent, applied at a rate of 0.15 to 0.30 gallon per square yard. The layer of patching shall be as thick as the original road surface, and in no case less than two inches. Asphalt cuts shall be twenty four (24) inches wider (twelve inches per side) than the width of the excavation.

Permittee shall be responsible for patch failure and subsequent surface settlement for a period of twelve months after completion of patching.

Repairs to failed patches may be made by the county and billed directly to the permittee.

D. No underground utility may be installed within a road right-of-way if such installation would interfere in any fashion whatsoever with any existing utility installation or water course, including a corral, ditch or culvert, except with the prior written authorization of the owner of the existing utility installation or water course.

E. The traveling public must be protected during the repair or installation of utilities with proper warning signs or signals. Warning signs and signals shall be installed and maintained by and at the expense of the permittee, in accordance with latest edition of The Manual on Uniform Traffic Control Devices. The County Public Works Department may require a construction signing plan prior to the granting of this permit. If proper signs are not in place during the work, the Director of Public Works or authorized representative shall immediately stop all work until proper signs are in place.

F. Utility placement by plowing may be allowed. Plowing shall not occur across paved roads. Where plowing operations occur across the roadway prism and result in an open cut, backfilling shall be done in accordance with Section 4.10.1.C.

G. When a road closure due to utility installation becomes necessary, the permittee shall notify the Gunnison County Sheriff's Office and/or State Patrol, ambulance, fire department, and school district stating duration of all road closures. All road closures must be approved by the Director of Public Works in writing in advance of road closure.

H. No cleated or track equipment shall work on or move over asphalt surfaces without mats.

I. Any materials excavated as the result of utility installation shall be removed from road surface each day unless material is signed per the mutcd and is serving as a barrier to an open excavation. The Director of Public Works may require that road surfaces be washed. (C.R.S. Section 42-4-1207)

J. Requests for utility permits should allow **48 HOURS** for a field review by the County Public Works Department prior to the issuance of any permit.

K. Construction of underground installations will generally require the services of an inspector approved by the County Public Works Department. All extraordinary costs related to such inspection will be borne by the permittee.

L. A copy of the fee schedule for Underground Utility Permits is available from the County Public Works Department. Failure to obtain a permit when working within the County road right-of-way will result in a fee five (5) times the regularly scheduled fee.

M. Road cuts for utility installation or repair made parallel to the centerline of the road, and which cause damage to, or require the removal of asphalt in any traffic lane, require the replacement of asphalt to the full lane width throughout the disturbed section unless a waiver is obtained from the Director of Public Works.

N. When utilities are to be located behind the curb, the trench or excavation shall be located at a distance away from the back of curb or edge or asphalt equal to the depth of the trench or excavation.

O. No placement of underground utilities will be allowed when there is more than four inches (4") of frost present.

P. Utility Locate Markers. All flagging feathers used for utility locates shall be removed by the applicant before release of financial security.

Q. As Built Plans. All applicants for surface alteration or road cut permits will be required to submit a complete set of as built plans before the final release of financial security.

R. Reclamation of Disturbed Areas. The permittee shall be responsible for the complete reclamation of areas disturbed within the right-of-way to prevent the introduction and/or spread of noxious weeds and soil erosion. Soil disturbance of 500 square feet or greater must be revegetated. Revegetation requirements for soil disturbance less than 500 square feet will be at the discretion of Gunnison County. (See Appendix G).

S. Noxious Weed Control. The permittee shall be responsible for noxious weed control in disturbed areas utilizing Integrated Weed Management (IWM) practices. State Law, C.R.S. 35-5.5 et seq., and the Gunnison Basin Integrated Weed Management Plan; Board Resolution 95-74, require that certain noxious weeds be controlled. Noxious weed infestations to be controlled should be properly identified to determine proper control measures. Noxious weeds can be controlled by utilizing one or more of the following IWM practices: 1) biological control, 2) cultural control, 3) herbicide control, or 4) physical control. Contact the Gunnison County Weed Specialist for the current list of noxious weeds mandated by law to be controlled and for assistance in weed identification and control methods.

4.11 Procedures for Improvements in Right-of-Way

A. Purpose and Procedure.

The purpose of this section is to establish public works, engineering, inspection, permitting and other requirements that must be met before a structure, repair or other improvement (including but not limited to or temporary construction parking) can be placed by a public or private property owner within the right of way of a County road, or public road under County jurisdiction, or private road under County jurisdiction while a Development Improvement Agreement for such road is in effect.

No person or persons shall begin work on a proposed structure, repair or improvement, or make substantial renovation to an existing structure, repair or improvement, within a County Right-of-Way, a County road, or public road under County jurisdiction, or private road under County jurisdiction while a Development Improvement Agreement for such road is in effect, except as specifically permitted herein, without first obtaining a Revocable Right of Way Permit to erect or maintain a structure, repair or improvement on a right-of-way from the County. A separate permit will be required for each structure, repair or improvement proposed, unless a group or series of structures are proposed at one time.

Note: Installation, maintenance, or improvements of a utility in, on or below a County Road or public road under the jurisdiction of Gunnison County shall require:

1. **A revocable permit for improvement in the right-of-way**
2. **A road cut or surface alteration permit.**

A permit will not be required, and the structure, repair or improvement considered exempt, for the following:

1. Minor or insubstantial maintenance to an existing specific structure. Such work includes, but may not be limited to, cleaning, painting or other minor resurfacing to an existing structure or structures; repairing or mending an existing structure or structures.

2. Any work within the right-of-way to repair or maintain existing irrigation ditches or impoundments.

3. The only person who can determine that a proposed structure, or improvement or maintenance is exempt, shall be the Director of Public Works.

Whenever Gunnison County determines that an existing structure or structures, improvement or improvements, approved or not approved, becomes a hazard to public safety or interferes with the County's maintenance or structure plans for the right-of-way on which it is placed, the owner of the property which the structure benefits, upon receipt of written notice from the Director of Public Works or his representative shall, within the period specified therein, repair or eliminate said structure(s) or improvement (s), so as to eliminate the hazard or impedance and be in conformance with the requirements contained herein.

Requirements contained herein may be enforced as set forth in Section 2.3.2**.**

To receive a permit to erect or maintain a structure or improvement in a public right-of-way, each applicant is required to submit a Revocable Right-of-Way permit application form and any associated plans or specifications required by the County. The applicant is advised to meet with the County Public Works staff members prior to application submission to insure that all necessary information is provided.

Two (2) sets of plans and specifications shall be submitted for review by the Director of Public Works or her representative. If required by the County, these plans and specifications shall be prepared and signed by a Colorado Registered Professional Engineer. In all cases when they are requested, the plans and specifications shall show the following:

1. Structure(s) plan and profile;
2. If the structures(s), repair(s), or improvement(s) impact existing roadside drainage, a plan showing how such impacts shall be mitigated by the applicant;
3. Map or letters from utility companies detailing utility placement in the area of the proposed structure(s);
4. Any relevant current land use approvals;
5. Map showing property ownership and easements**.** Director of Public Works may require a survey.
6. Proposed structure(s), repair(s), or improvement(s) design and site plan, showing reclamation/revegetation plan if hillsides are to be disturbed of if fill or cut is to take place as part of the plan;
7. Signage plans, if any; and
8. Maintenance requirements and plan.

Supplemental reports and data (i.e., geology, soils, water, drainage, wildlife, etc.) may be required. Supplemental reports are to be prepared by qualified professionals as required by the Director of Public Works or her representative.

Gunnison County shall have the reasonable right to have all plans, specifications and supplemental reports reviewed by qualified professionals identified by Gunnison County at the cost of the applicant.

As a condition of approval, the applicant shall execute and fully fund a security agreement in the form and amount determined by the Director of Public Works and County Attorney.

Neither the issuance of a permit nor compliance with the provisions hereof or with any conditions imposed in the permit issued hereunder shall relieve the applicant from the full responsibility for any damage whatsoever caused to persons or property, nor impose any liability upon any official, appointee, or employee of Gunnison County for damage to person or property. Nothing herein is or shall be construed to be a waiver by Gunnison County of governmental immunity.

The application shall be denied if the Director of Public Works determines that it is not in the public interest or that it will adversely affect public health, safety, or welfare.

Whenever a permit is required by this section and the permit is denied by the Director of Public Works, or his/her designee, the applicant for the permit may, within fifteen (15) days from the date of such denial, request in writing to the Director of Public Works, an appeal of the denial to the Board. The Director of Public Works shall, within fifteen (15) days of receiving the request, submit to the Board the written request for the appeal, and any administrative record consisting of documents considered by the Director of Public Works in her denial, including the application for the permit and all relevant documents. The Board will then decide, based upon a review of the record, whether to accept or reject the decision of the officer, within thirty (30) working days of receiving the permit application and all relevant documents. The Board may, in its discretion, request additional or other information from the applicant, the county officer who issued the denial, or other county staff. The decision rendered by the Board is the final decision of the County. For Gunnison County "Revocable Right-of-Way Permit" application information please refer to Section 7.7.

For fee information see Exhibit A.

ARTICLE V

CONSTRUCTION SPECIFICATIONS

5.1 General Policies

5.1.1 Gunnison County Construction Specifications

During the execution of road and bridge construction and related work, all materials, performance, and quality of work shall conform to the requirements of these Standards and Specifications, the applicable sections for the most current edition of the Department of Transportation, State of Colorado Standard Specifications for New Road and Bridge Construction, Colorado Standards Plans, Division of Highways M & S Standards, American Association of State Highway and Transportation Officials, and the Standard Specification for Highway Bridges.

If these Standards and Specifications or the Department of Transportation Standard Specifications do not cover a specific situation during the course of work, applicable specifications must be approved by and obtained from the County. In the event that there is conflict between the various reference specifications, they shall govern in the following order:

1. Gunnison County Standards and Specifications for New Road and Bridge Construction

2. Department of Transportation, State of Colorado, Standard Specifications for New Road and Bridge Construction; Standard Plans; M & S Standards

3. AASHTO Standard Specifications for Highway Bridges

The County shall be the final authority on the meaning or interpretation of all specifications.

5.1.2 The Project Engineer

Each road developer shall designate to the County Public Works Department a person who shall be responsible for general compliance with these Standards and Specifications, approved permits, and development improvement agreements, and the following:

A. To provide to the County any engineering details, documentation, or any other information regarding the prosecution of the work;

B. To apply to the County for written approval by the County any proposed alternations to the approved plans and specifications prior to construction;

C. To provide reproducible "as-built" plans, and specifications to the County Public Works Department upon completion of all work to be performed on the project as a condition of final approval of the work;

D. To furnish and set construction stakes and marks establishing all lines, grades, and measurements necessary to the proper prosecution of the work in its final location as shown on the approved plans and specifications;

E. To make sure all survey monuments disturbed or removed are replaced in kind at their original locations; and

F. To provide all materials testing necessary to establish parameters required to inspect work for compliance with approved plans and specifications.

G. To stop dirt work when frost levels reach four inches (4").

5.1.3 Inspection and Testing

All work done on County roads and those roads required to be in compliance with approved land use change permits may be inspected by the County Public Works Department to ensure compliance with these Standards and Specifications, and the applicable provisions of the land use change conditions, approved plans, or subdivision agreement.

The County shall suspend the work wholly, or in part, due to the failure of the contractor to carry out provisions of these Standards and Specifications, approved permits and development improvement agreements.

To ensure compliance with these Standards and Specifications and approved plans, adequate in-process inspection and testing is required. The Project Engineer shall be responsible for certifying all work is completed in accordance with the approved plans and specifications.

The County shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Project Engineer and contractor as required to make a complete and detailed inspection. The County may require that any work done or materials used without inspection must be ordered, removed, or replaced. The County may, at any time before acceptance of the work, direct the Contractor to remove or uncover any such portion of the finished work. After examination, and approval of the work by the County, the Contractor shall restore the disturbed portions of the work to the standard required by the specifications. Inspection by the County shall not relieve the developer and/or contractor, or their designated representatives of the responsibility to control the work and insure compliance with the approved plans and specifications. The County shall not be responsible for insuring project compliance with the approved plans and specifications.

When the Construction Specifications of other jurisdictions are involved in the work, written approval shall be provided by the other jurisdictions and made available to the County prior to final acceptance of the work. Regular in-progress materials testing shall be provided to the County in a timely manner during the course of the work, and should be a requirement of final acceptance.

All materials testing shall be performed by an independent laboratory, under the supervision of a professional engineer. All testing shall be at the expense of the developer, the Project Engineer, or the contractor.

Prior to acceptance by the County, all work not in compliance with these Standards and Specifications, approved permits, and/or development improvement agreements shall be brought into compliance at the Contractor's or owner's sole expense.

For the minimum requirements for compaction of embankments, sub-grades, and utility trenches, see Table 5-1. For required quality tests, see Table 5-2.

Roads constructed to a Local Intermittent standard shall be exempt from controlled compaction testing and the following shall apply. Embankment shall be by layer placement. Surfaces steeper than a ratio of 3 horizontal to 1 vertical (3:1) upon which embankment is to be placed, shall be roughened or stepped to provide permanent bonding of new and old materials.

Embankment shall be layer placed, except over rock surfaces, in which case material may be placed by end dumping to the minimum depth needed for operation of spreading equipment. Each embankment layer shall be leveled and smoothed before placement of subsequent layers. Hauling and spreading equipment shall be operated uniformly over the full width of each layer.

Suitable material shall be placed in layers no more than 12 inches thick, except when the material contains rock more than 9 inches in diameter, in which case layers may be of sufficient thickness to accommodate the material involved. No layer shall exceed 24 inches before compaction.

Placing individual rocks or boulders greater than 24 inches will be permitted provided the embankment will accommodate them. Such rocks and boulders shall be at least 6 inches below sub-grade. They shall be carefully distributed and the voids filled with finer material to form a dense and compacted mass.

Material shall be a moisture content suitable to obtain a mass that will not visible deflect under the load of hauling and spreading equipment.

5.1.4 The Use of Approved Plans and Specifications

Any work performed without approved plans and specifications shall be considered unauthorized and may be ordered removed and the pre-existing conditions restored.

Standard drawings for proposed road and bridges submitted to Gunnison County for approval shall be drawn on standard plan and profile sheet 23" x 36".

Plan drawing shall be on a scale of not less than one inch (1") equals one hundred feet (100'). Bearings and distances shall be shown in plan view.

Profile drawing shall be on a scale of not less than one inch (1") equals ten feet (10') vertically and one inch (1") equals one hundred feet (100') horizontally. Length of vertical curves and percent of grade shall be shown on profile. Size, length and station location of pipe shall be shown on profile.

A typical roadway cross section of a scale not less than one inch (1") equals ten feet (10') shall be furnished with all road plans. Cross section shall show road width, surfacing type, width and depth, cut and fill slopes and other special treatments such as top soiling or rip rap. A cross section shall be drawn for each culvert installation showing size and length of pipe, height of cover over pipe and grade of pipe.

All standard drawings shall be drawn on reproducible quality paper.

The approved plans, specifications, supplementary specifications, standards, supplementary standards and any special provisions required or approved by the County shall be considered consistent, to describe and provide for the complete work.

The contractor shall not take advantage of any error or omission in the approved plans, standards, and specifications. In the event and apparent error or omission is discovered, the Project Engineer and the County shall be notified. The developer and/or contractor, acting through the Project Engineer, shall make any corrections required, subject to approval by the County.

5.1.5 Acceptance of Work

A. Partial Acceptance. Immediately after a section of the work is completed such as a section of the subgrade, structures, trench backfill, etc., acceptance of that element is required prior to proceeding with the next element. An example would be acceptance of subgrade prior to the placement of subbase. If, after partial acceptance of an element of work, conditions change and the next element is not constructed for a period of time, the County may require a re-inspection and acceptance as per Section 5.1.3.

B. Final Acceptance. Immediately upon completion of the project the road developer shall notify the County Public Works Department and schedule a final inspection.

   If the County Public Works Department determines that construction is in compliance with these Standards and Specifications, approved permits and/or development improvement agreements it shall initiate the procedure for acceptance by the Board for maintenance or release of the performance guarantee securing the completion of the work.

   If the County Public Works Department determines that construction is not in compliance with these Standards and Specifications, the County will provide written notification of the deficient items to the road developer and to the Gunnison County Planning Department. In the event the work is not done, the developer or owner is responsible for maintenance of the work until such time as all such items are completed or corrected and a satisfactory re-inspection is made, and the work approved in writing by the Director of Public Works.

5.1.6 Cooperation with Utilities

The developer, acting through the Project Engineer, shall be responsible for coordinating the location, relocation, installation or removal of all utilities involved with the construction of the project.

The construction plans for the proposed project shall be submitted to the affected utilities as soon as possible. Adequate notice shall be given to utilities for utility locations required for the work to avoid damage to existing utilities and conflicts in the work.

ARTICLE VI

TRAFFIC STUDIES

6.1 Guidelines for Traffic Studies

Traffic consultants are invited to discuss projects with the Public Works Department and/or Planning Department prior to initiation of the study. This should provide a firm base of cooperation and communication between the County, the Owner/Developer and the consultant in creating traffic characteristics that are in the best interest of the total community.

All traffic studies shall contain, as a minimum, the following information:

A. A summary table listing each type of land use by development within each development, and on surrounding public lands; the number of units involved, generation rates used, and the resultant trip generation. Trip generation should be calculated from the latest data utilized by the Colorado Department of Transportation and approved by the Gunnison County Planning Department.

B. Site location map(s) showing location of each land use and a network map that shows all existing and proposed road facilities.

C. Proposed improvements (including roadway widenings, channelization, signalized intersections) should be identified, and preliminary design schematics submitted.

D. Traffic graphics should show:

1. Peak hours site traffic (in and out and on adjacent facilities).

2. Peak hour total traffic (current traffic plus site traffic in and out and on adjacent facilities).

3. Peak hour total traffic (twenty (20) year projection) in and out and on adjacent facilities.

4. Total daily traffic (with site traffic shown in parenthesis) both existing and twenty (20) year projected.

5. Turning movements before and after project at major intersections. In the absence of any meaningful peak hour data, peak hour trips shall be assumed to be twenty (20) percent of total daily trips.

ARTICLE VII

PERMITS

7.1 Issuance of Permits

Permit fees and bonds for any permit named in these Standards and Specifications shall be set by the Board. No fees or bonds may be imposed on special districts; however such districts shall be required to obtain all necessary permits.

7.2 Underground Utility Construction Permit (Road Cuts)

No individual, company, corporation, or public agency shall modify, install, or otherwise change any utility located within thirty (30) feet of the centerline of any County Road, or public road under County jurisdiction, or private road under County jurisdiction while a Development Improvement Agreement for such road is in effect without first obtaining an Underground Utility Construction Permit from the Director of Public Works. Financial security will be required to insure conformance with these Standards and Specifications.

Underground Utility Construction permits shall be obtained at least forty-eight (48) hours prior to commencement of the road cut. The applicant must notify the Public Works Department at least twenty-four (24) hours in advance of scheduled work.

Gunnison County may hold the financial security for one year. It may be refunded earlier, if in the sole discretion of the Director of Public Works, it is determined that the cut is stable and no further work will be needed.

7.3 Surface Alteration Permit (Work Within Right-of-Way)

No individual, company or corporation, or public agency shall construct or alter any road, drainage, or other improvements within a County road right-of-way, County road, or public road under County jurisdiction, or private road under County jurisdiction while a Development Improvement Agreement for such road is in effect without a Surface Alteration Permit from the Director of Public Works. Road construction shall be in accordance with engineering plans prepared by a professional engineer, in conformance with these Standards and Specifications, with said plans to be approved by Gunnison County.

Surface Alteration Permits shall be obtained at least forty-eight (**48**) hours prior to commencement of the road cut. The applicant must notify the Public Works Department at least twenty-four (24) hours in advance of scheduled work. A list of required field tests and inspections will be attached to the permit. The applicant shall submit a written schedule of the work, including quantities of materials and length in feet of surface disturbance, and total time area will be disturbed.

Approved permits shall not be changed without the written consent of Gunnison County. Gunnison County may hold the financial security for one year after completion of the work. It may be refunded earlier, if in the sole discretion of the Director of Public Works, it is determined that the cut is stable and no further work will be needed.

7.4 Access Permits

No person shall construct any access providing vehicular access to or from any public highway or right-of-way, or County road or public road, or private road from or to property adjoining such road without a County Access Permit issued by the Director of Public Works. No access permit shall be issued without there having been a site inspection by the Director of Public Works or her representative. The Director, or her representative, may, specify certain conditions, in addition to those set forth in these Standards and Specifications, for issuance of an access permit.

7.5 Oversize/Overweight Permits

The Director of Public Works may, upon application in writing and good cause being shown, issue an Oversize/Overweight Permit to operate or move a vehicle or combination of vehicles of a size or weight of vehicle or load exceeding the maximum legal load permitted by the State of Colorado. The County Public Works Department may limit the number of trips and/or the hours of operation, or otherwise prescribe conditions of operation of such vehicles to ensure against undue damage to road foundations, surfaces, or structures, and to ensure the safety of the

motoring public. Further, the County Public Works Department may require such undertaking, bonding, or other security as may be deemed necessary to compensate for any damage to any roadway or structure.

7.6 Snow Removal Permit

The Director of Public Works may, after an application has been submitted, an evaluation has been prepared, and the plowing has been approved by the Board of County Commissioners, issue a Snow Removal Permit. The Permit will be valid for only one plowing season. The Snow Removal Permit may contain such conditions as necessary to preserve the integrity of the road and provide for the safety of the road users. Further the County Public Works Department may require financial security as may be deemed necessary to repair any damage to the roadway or structures.

7.7 Revocable Right-of-Way Permit

The Director of Public Works may, after an application has been submitted and evaluated, issue a Revocable Right-of-Way permit for the placement of a structure, repair or improvement in the road right-of-way of a County road, public road under the jurisdiction of Gunnison County, or private road under the jurisdiction of Gunnison County while a Development Improvement Agreement for such road is in effect. The Revocable Right-of-Way Permit may contain such conditions as necessary to preserve the integrity of the road and the right-of-way, and provide for the safety of the road users. Further, the County Public Works Department and/or County Attorney may require financial security as may be deemed necessary to repair any damage to the road, structure, or right-of-way.

7.8 Transfer of Permits

A permit may be transferred only with the written consent of the Director which consent shall be in the Director's sole discretion. The Director, before consenting to any transfer, may condition or restrict such transfer to ensure that the health, welfare and safety of the public are protected. Each prospective transferee must ensure, before approval of any transfer, that the proposed transferee can and will comply with all of the applicable requirements, regulations, standards, and conditions.

7.9 Financial Security

As a condition of the issuance of any permit, the Director, at the Director's sole discretion, may require the permittee to file a guarantee of financial security in an amount established by the Director and payable to the County. The guarantee may be in the form of cash, federally-insured certificates of deposit, irrevocable letters of credit issued by a bank acceptable to the Board, surety bonds issued by a company authorized to do business in Colorado, written guarantees backed by collateral acceptable by the Board, or any other form, or combination of forms, established by the Board.

REFERENCED REPORTS

1. Gunnison County Land Use Resolution, Gunnison County Planning Department.
2. State Highway Access Code, State of Colorado, Department of Transportation.
3. Manual on Uniform Traffic Control Devices, U.S. Department of Transportation, Federal Highway Administration.
4. Colorado Vehicle Code, Colorado State Patrol Troop Office, Grand Junction, Colorado.
5. Geometric Design of Highways and Roads, The American Association of State Highway and Transportation Officials.
6. Roadway Design Manual, Colorado Department of Transportation.
7. Trip Generation, The Institute of Transportation Engineers.
8. Standard Specifications for New Road and Bridge Construction, State of Colorado, Division of Highways.
9. Gunnison County Flood Damage Prevention Resolution, Gunnison County, Colorado. Gunnison County Planning Department.
10. Procedures for Determining Peak Flows in Colorado, U.S. Department of Agriculture, Soil Conservation Service, 1980.
11. Concrete Pipe Design Manual, ACPA Arlington, Virginia, February, 1974.
12. Handbook of Steel Drainage and Highway Construction Products, A151, Washington, D.C. 1971.
13. Standard Specifications for Highway Bridges, The American Association of State Highway and Transportation Officials.
14. Colorado Standard Plans, Division of Highways M and S Standards.
15. Standard Plans for Highway Bridges, U.S. Department of Transportation, Federal Highway Administration.
16. Uniform Construction Standards for Colorado Public Works, Colorado Contractors Association, Inc.

APPENDIX A

LEGAL RESPONSIBILITIES

The latest edition of the Division of Highways, State of Colorado, Standard Specifications for New Road and Bridge Construction; Section 107 - Legal Relations and Responsibilities to the Public, shall be considered Supplemental Specifications to these Standards with the additions, deletions, or revisions noted in Sections one and two as supplied annually by the Division of Highways, State of Colorado.

Section 1 Definitions

State - shall be redefined as Gunnison County, Colorado.

Division - shall be redefined as the Gunnison County Public Works Department.

Engineer - shall be the Project Engineer as defined in Section 5.1.2 when acting as the authorized agent of the developer or contractor or the County as defined in Section 5.1.3 when acting in behalf of the Public Works Department.

Contract - shall be redefined as these Standards.

Section 2 Section 107, Legal Relations and Responsibility to Public

Payment - Delete any reference to payment for the use of these Standards.

107.04 - Delete Subsection.

107.07 - Delete "as specified under subsection 104.04".

107.09 - Delete Subsection.

107.16 - Paragraph one, line eight, revise to read the following: "the Contractor or Developer shall be required to assume any expenses entailed in maintaining traffic". Delete last sentence. Delete paragraphs two, three, and four.

107.19 - Delete Subsection.

107.10 - Is hereby revised as follows: Paragraph one - "In carrying out any of the provisions of these Standards; or in exercising any power or authority granted to them by Gunnison County; or performing their duties within the scope of their employment, there shall be no personal liability upon the Board, Director of Public Works, or their authorized representatives due to injuries sustained from an act or omission of such employee, except as may be provided by law."

107.22 - Delete Subsection.

107.23 - Delete Subsection.

107.25 - Delete paragraph 2 of section - (c) Measurement and Payment.

APPENDIX B

APPENDIX C

APPENDIX D

APPENDIX E

APPENDIX F

APPENDIX G

RECLAMATION RECOMMENDATIONS FOR NEW EXPOSED EARTHWORK

Land Preparation: Replace the disturbed soil as close to the original soil profile as possible prior to revegetation. After the topsoil is replaced, a firm seedbed is required before planting grass seed. The seedbed should be firm enough to allow good seed-to-soil contact.

Seeding Time: The seeding time with the greatest success is a dormant seeding for areas that cannot be irrigated. Spring seeding can be successful if rainfall is above the historical average. Late summer seedings (late July to mid-August) have shown success in some areas since August and September have historically been the highest rainfall months.

Suggested seeding times (without irrigation) based on Major Land Resource Area (MLRA):

7500-9500 feet elevation
- Dormant Seeding (Best) – October 1-November 15
- Spring Seeding – not recommended
- Late Summer Seeding (Marginal) – August 1-31

Alpine Zone (10,000 feet elevation and above)
- Dormant Seeding (Best) – September 1-30
- Spring Seeding – not recommended
- Late Summer Seeding (Marginal) – July 15-August 15

Seeding Methods: Drilling the grass seed is the best method. Drill depth should be placed between ½ and ¾ inch below the soil surface. For slopes that are greater than 3:1 slope, seeding may be broadcast by hand or mechanical spreader and rated into the upper soil layer (no deeper than ¾ inch). **Seed should not be incorporated and applied simultaneously with the hydromulch slurry.**

Rate of Seeding: When seeds are drilled use 10 pounds per acre of pre-mixed grass seed. When seed is broadcast by hand or mechanical seed spreader use 20 pounds per acre of pre-mixed grass seed.

Mulches: Straw and/or hay used for mulch, must be certified weed free. A hydromulch can be applied to the area after the seed has been drilled in or broadcast. On steep slopes where crimping is not possible, jute matting (biodegradable mesh) may be used as a mulch over the newly seeded areas.

Time Frame of Reclamation Process: Reclamation can require several years (1 to 5) to determine stand establishment. It should be expected that early seral species (such as summer and winter annuals) will occupy the area before the desired perennial stand dominates. Each year the revegated sites will be reviewed by the Gunnison County Weed Specialist upon which time the permittee will be advised as to the management practices that are expected to insure reclamation success.

Unreasonable demands will not be placed on the expected outcome of the reclamation, but it is expected that the reclaimed areas will be ecologically comparable to the surrounding, undisturbed land. This would be defined by the percentage of desired grass species compared to weedy annual broadleaf species (which usually requires not less than three years).

SEEDS RECOMMENDED

DRY AREA RECOMMENDATION

This recommendation covers most of the land area below 8500 feet in elevation.

Species	Variety	lbs./ ¼ acre
Smooth Bromegrass	Manchar	2
Crested Wheatgrass	Ephriam	2
Slender Wheatgrass	San Luis	1
Russian Wildrye	Bozoisky	1
Sheep Fescue	Big Horn	1
	Total	7 lbs. Pure Live Seed

MOIST AREA RECOMMENDATION

This recommendation covers most of the land area above 8500 feet in elevation.

Species	Variety	lbs./ ¼ acre
Smooth Bromegrass	Manchar	2
Timothy	Climax	1
Slender Wheatgrass	San Luis	1
Canadian Bluegrass	Ruebens	1
	Total	5 lbs. Pure Live Seed

Sometimes certain varieties of seed can be substituted, but the above varieties are suited to our area.

This seeding recommendation was provided by the Natural Resources Conservation Service. Seed can be ordered through the Gunnison Soil Conservation District by calling, (970) 641-0494.

APPENDIX H

APPENDIX I

APPENDIX J

DEVELOPMENT IMPROVEMENTS AGREEMENT

This Development Improvements Agreement is entered into this _____ day of _____, 20___ between the Board of County Commissioners of Gunnison County, Colorado (herein the "County"), and (herein the "Permittee") as follows:

1. PURPOSE. The Permittee has submitted to the County the Permitte's application for a permit pursuant to the Gunnison County Standards and Specifications regarding _____ (herein the "Project"). The legal description of the Project is attached hereto and incorporated herein as Exhibit "A". As valuable and sufficient consideration for this Agreement, the County and the Permittee agree that approval of such application by the County is expressly conditioned on completion of the improvements described in paragraph 7, below (herein the "Improvements") to the specifications described herein and by the times specified herein. The County and the Permittee further agree that such Improvements are appropriate and necessary requirements to be required by the County, and to be performed by the Permittee and which Permittee shall perform. The County and Permittee further agree that an agreement guaranteeing the Permittee's performance secured by suitable security to protect the interests of the County, and the public in the amount set forth herein is an appropriate condition to the County's approval of such permit. The parties have entered into this agreement to memorialize such understandings and agreements. The relationship of the parties to this Agreement is contractual; Permittee is an independent contractor and is not an agent of the County.

2. DEVELOPER BOUND. The Permittee agrees to accept and be bound by the terms and conditions of the County's issuance of its approval of the Permit and the terms and conditions of this agreement. Permittee accepts the County's review and permitting authority; process and performance of same in connection with the permit as legal and valid and waives any defect therein.

3. CONSTRUCTION.
   A. The Permittee agrees to complete construction of the Improvements within the Project in the locations set forth on the plans attached hereto as Exhibit __, and in accordance with the specifications thereof by not later than _____, 200__, acts of God and any cause beyond the reasonable control of the Permittee excepted, including without limitation labor disputes, laws, regulations, or orders of any governmental entity, orders of court, inability to obtain any required authorization, act of war or donations arising out of or attributable to war, riot, civil strike, insurrection or rebellion, fire, explosion, earthquake, storm, flood or other adverse weather condition, delay or failure by suppliers or material men, contractors, or subcontractors, shortage of or inability to obtain labor, supplies or materials.
   B. The completion deadline set forth in this paragraph 3 may be extended by the County in its sole discretion upon written request of Permittee if the County determines that: (1) such extension of time will not operate to the detriment of the County, the public or the owners of property within the Project; and (2) the County's security is adequate to ensure full performance by Permittee by the extended completion date; and (3) that such an extension would not be in conflict with the conditions of the approved Permit. The County may require Permittee to provide, at Permittee's cost, supplemental estimates by Permittee's engineer of the costs of completion and to provide additional security as a prerequisite to its extension of any completion date. Any extended completion date granted by the County hereunder may be further extended in like manner.
   C. Each contract entered into by Permittee for construction of the Improvements shall provide that the County is a third party beneficiary with all rights to enforce such contracts in place of Permittee in the event of a default by Permittee. Permittee shall provide to County a copy of each such contract upon its execution.

4. ESTIMATED COST. The total cost of the Improvements to be constructed by the Permittee is estimated currently to be $ plus a contingency amount.

5. SECURITY. In order to secure of obligations of the Permittee herein, the Permittee and the County agree that the Permittee shall, at Permittee's sole cost, and before starting work on any phase of the Project or Improvements, and before conveying any portion of the Project, obtain and provide to the County a bond, and irrevocable letter of credit or other performance guarantee in a form and content satisfactory to the County to the benefit of the county in the amount of $_____ which is 124 percent of the currently estimated cost of the Improvements to include a reasonable contingency amount.

   If the contract(s) provided to the County pursuant to paragraph 3C indicate a substantially different total cost than estimated in paragraph 4, the amount of security may be increased or decrease. For the purposes of this paragraph 5, substantial is defined as 10 percent or more.

Pending full performance of all of the terms and conditions hereof by the Permittee, the County shall retain said security and shall remain the beneficiary of such security. In the event of any uncured default hereunder the County in its sole discretion, and without any other authority required, may draw upon said security up to the full amount of $-_____ upon presentation by the County to the _____ of a written statement by the County that such uncured default exists. Upon timely performance of all terms and conditions hereof, said security shall be tendered by the County to the Permittee.

6. CERTIFICATION.
   A. Not later than _____, 200__, a registered Colorado engineer retained by the Permittee at it s expense shall certify to the County whether the Permittee's construction obligations regarding Improvements under this agreement have been fully and faithfully performed according to design and time specifications. Upon receipt of such certification and a complete copy of as built specifications and drawings, the County shall review the same and shall make an independent judgment whether to accept the same in the sole discretion of the County. Permittee agrees not to cover or otherwise prevent inspection of the Improvements constructed hereunder until Permittee's engineer and the County's representative have had reasonable opportunity to inspect such Improvements.
   B. Not later than _____, 200__, Permittee shall provide to the County Attorney a sworn affidavit, signed by the Permittee's authorized representative, that the Improvements completed have been paid for, in full, by the Permittee. The Permittee shall be responsible for the information so provided. Said written certification will be reviewed by the County, but the County shall have no responsibility or liability to any part regarding the veracity of the information so provided.

7. SCOPE OF WORK.
   A. The scope of work to be done by the Permittee shall include, but not be limited to: 7.1 (Fill in applicable details)
   B. The conditions of this agreement and the permit are such that if the obligations hereunder of the Permittee are well, truly, faithfully and timely performed by Permittee, inspected and certified to by the Permittee's engineer, and such performance is accepted by the County in the County's sole discretion, the Permittee's obligations to the County under this agreement except as set forth in 7C below shall be at an end; otherwise such conditions and obligations shall remain in full force and effect.
   C. For a period of one year from and after the acceptance of all of the work described in paragraph 7A, above, Permittee shall, at its own expense, make all needed repairs and replacements to such work as shall, in the County's reasonable opinion, become necessary. The County shall have the right to retain up to $_____ of the security for up to one year following the acceptance of all of the work described in paragraph 7A. above, as security to ensure such repair and replacement.

8. PARTIAL RELEASE OF SECURITY.
   A. The County recognizes that as work proceeds upon the Improvements, the County's need or security shall be reduced. Accordingly, the County agrees to a reasonable partial release of the security to be delivered to the County pursuant to paragraph 5 hereof upon receipt of a written certification, by Permittee's engineer, stating the estimated cost of remaining completion, in which event the County shall retain security equal to 125 percent of such estimated cost of remaining completion plus 20 percent of the original estimated cost of the Improvements and shall release the balance of all security held by the County.
   B. Upon Permittee's entering into a contract or contracts for construction of improvements hereunder, Permittee and County may negotiate an addendum to this Agreement setting forth such reasonable schedule for partial releases of the security in accordance with the anticipated construction schedule. In such circumstance, the County shall designate and authorize the County Manager, Director of Public Works or County Attorney to make the partial release(s) hereunder after consultation with appropriate County staff.

9. PERMITTEES' DEFAULT. In the event of any default hereunder by the Permittee, the County shall give notice to the Permittee specifying the nature of such default, which notice shall be given by facsimile transmission or by certified mail with return receipt requested addressed to the Permittee at _____. In the event the Permittee does not remedy such default to the satisfaction of the County within 14 days following such notice, the County may elect, in its discretion to exercise all remedies available to it, including but not limited to:

   9.1 To specifically enforce the terms and conditions of this agreement;
   9.2 To draw upon or otherwise obtain the benefit of the security;
   9.3 To exercise any other rights and obtain any other remedies provided by law;
   9.4 To obtain from the Permittee either an extension of the County's security hereunder to guarantee the completion of the improvements only on the conditions (1) that suitable additional security is provided the County to guarantee the construction of said Improvements within the new time period determined by the County, and (2) that the County determines that it would not be detrimental to the interest of the County, the public or the owners

of property within the Project to allow such extension (3) that the County determines that it would not be in conflict with the conditions of the approved Permit.

10. RECORDING OF AGREEMENT. Upon its execution, this Agreement shall be recorded by the Permittee and shall be a covenant running with the property herein described in order to put prospective purchasers or other interested parties on notice as to the terms and provisions hereof.

11. RETENTION OF POLICE POWERS. The County retains the power and right to impose additional requirements upon Permittee with regard to the Project if the failure to do so would place the public or owners of property within the Project in a perilous condition, or in the event of substantially changed conditions; that is, nothing in this Agreement is or shall be construed to be a bargaining away of the County's police power.

12. TRANSFER OR ASSIGNMENT. No transfer or assignment of any of the rights or obligations of the Permittee under this Agreement shall be permitted without prior written approval of the County which approval shall not unreasonably be withheld.

13. TITLE AND AUTHORITY. The Permittee expressly warrants and represent to the county that it is the record owner of the real property constituting the Project, and further represents and warrants, together with the undersigned individual, that the undersigned individual has full power and authority to enter into Agreement. The Permittee and the undersigned individual understand that the County is relying on such representations and warranties in entering in to this Agreement.

14. LITIGATION. Nothing contained herein shall prevent either party from obtaining a judicial determination of the violation of its rights hereunder; provided however, that written notice to the other party advising the other party of the alleged violation, and advising that in the event the matter is not resolved by the parties within 14 days thereafter, shall be a condition precedent to the commencement of any litigation.

15. TIME OF ESSENCE. It is mutually agreed that time of performance is an essential part of this agreement and that all terms, covenants and conditions herein shall extend to and become obligatory upon the successors and assigns of the respective parties hereto.

16. VENUE AND CHOICE OF LAW. This agreement is entered into in Gunnison County, Colorado and it I agreed that the exclusive jurisdiction and venue of any action pertaining to the interpretation or enforcement of this agreement shall be in the District Court of Gunnison County, Colorado. The exclusive choice of law pertaining to this transaction shall be that of the State of Colorado without giving effect to Colorado choice of law principles.

17. SEVERABILITY. If any term or provision of this agreement shall be invalid or unenforceable, the remainder of this agreement and the terms and provisions thereof shall not be affected thereby and all other terms and provisions of the agreement shall be valid and enforceable to the full extent permitted by law.

18. ATTORNEYS' FEES. If any action is brought in a court of law by either party to this agreement as to the enforcement, interpretation or construction of this agreement or any document provided for herein, the prevailing party in such action shall be entitled to reasonable attorneys' fees as well as all cost incurred in the prosecution of defense of such action.

19. HOLD HARMLES CLAUSE. The Permittee shall indemnify, defend and hold harmless the County, its officials, employees and agents from and against liability for damages, injury or death which may arise from the direct or indirect operations of the owner, Permittee, contractors or subcontractors, which relate to the Project.

20. ENTIRE AGREEMENT. This agreement contains the entire and only agreement between the parties regarding development improvements, and no oral statements or representations not contained in this agreement shall be of any force and effect between the parties. This agreement shall not be modified or amended in any manner except by written instrument executed by the parties.

21. BINDING AGREEMENT. This agreement shall be binding upon and inure to the benefit of the heirs, personal representatives, successors and assigns of the parties hereto.

22. NOTICE. All notices and other communications required or permitted under this Agreement shall be in writing and shall be, as determined by the person giving such notice, either hand delivered, mailed by registered or certified mail, return receipt requested or by telecopier or telegraphic communication to the required party at the following addresses:

COUNTY: Board of County Commissioners
200 East Virginia
Gunnison, CO 81230 Telecopier: (970) 641-3061

DEVELOPER: (Name, Address, Etc.)

IN WHEREOF the parties have executed this agreement the date first above written.

BOARD OF COUNTY COMMISSIONERS OF
THE COUNTY OF GUNNISON COUNTY

Attest: _____ By:_____
County Clerk Chairperson or Designee

DEVELOPER

By:_____

STATE OF COLORADO)
)
COUNTY OF)

The foregoing instrument was acknowledged before me this _____ day of _____, 20___.
By _____.

My commission expires: _____
Witness my hand and official seal.

_____
Notary Public
Address:

APPENDIX K

DEFINITIONS AND ABBREVIATIONS

The following words, terms and abbreviations shall have the following meanings when used in these Standards and Specifications:

A. Definitions

ABUT means adjacent or contiguous to, having a common border or point with, or separated from a common border by, a road or highway right-of-way or easement.

ACCESS means the place, method or way by which vehicles and pedestrians obtain usable ingress and egress to a property or land use.

- Residential Access means ingress or egress to no more than two residential units, including any that includes a home occupation, or a multiple-family residence as defined by the Gunnison County Land Use Resolution. Residential access is a private vehicular access, for the exclusive use of the owners-occupants and their invitees, and is not considered a road or highway.

- Agricultural Access means the access providing ingress and egress exclusively to an agricultural operation and not to any residence(s).

- Commercial Access means the access providing ingress and egress to any activity defined by the Gunnison County Land Use Resolution as commercial.

- Industrial Access means the access providing ingress and egress to any activity defined by the Gunnison County Land Use Resolution as industrial.

ADJACENT means the same as “abut”.

AGRICULTURAL OPERATION means an activity that primarily involves agriculture as defined herein.

AGRICULTURAL ROAD means any road whose primary use is to serve an agricultural operation.

AGRICULTURE means the use of the land for the primary purpose of making a profit from farming or ranching as it may include:

- The production, cultivation, growing, and harvesting of plant crops, but not including the harvesting of trees unless incidental to other agricultural operations; or
- The raising and/or the breeding of livestock including horses, dairy and beef cattle, sheep, goats, fur-bearing animals, poultry and swine, so long as they are not large confined animal feeding operations (CAFO); or
- The production of nursery products and sod; and
- The harvesting, storage, grading, packaging, processing, distribution, and sale or trade of such commodities where such activities occur at the point of production.
- It specifically does not include the uses, structures and retail services normally associated with kennels, veterinary hospitals, the commercial slaughter of animals, and commercial riding stables. For purposes of this Resolution classification of the use of the property by the Gunnison County Assessor’s Office is not definitive or binding for purposes of this definition, nor shall the existence of a conservation easement on the property otherwise defined as agricultural affect that definition.

ALTERNATIVE TRANSPORTATION FACILITY means a trail, sidewalk, public bus or van, rail, or other facility that provides an alternative mode of transportation to travel by private automobile.

ARTERIAL ROAD - See Article III section 3.1

AS BUILT (OR RECORD) DRAWINGS means a complete and accurate set of construction plans, with all pertinent information superimposed on them to identify the road or related facility as it actually has been constructed.

AVERAGE DAILY TRAFFIC means the average 24-hour volume, being the total number during a stated period, divided by the number of days in that period. Unless otherwise stated, the period is a year. The term is commonly abbreviated as ADT.

AXLE LOAD means the total load transmitted by all wheels on a single axle extending across the full width of the vehicle. Tandem axles 40 inches or less apart shall be considered as a single axle.

BACKFILL (or BACK FILLING) means the dumping of earthen materials into excavated holes, or covering exposed features with soil. This can be done to protect features, or to level ground for construction of a road or building.

BASE COURSE means the layers of specified or selected material of designated thickness placed on a subbase or a subgrade to support a surface course.

BEST MANAGEMENT PRACTICES means those conservation techniques and management measures that:

- Control soil loss and reduce water quality degradation caused by nutrients, human and animal waste, toxins, and sediment; and
- Minimize adverse impacts to groundwater and surface-water flows; and
- Minimize adverse impacts to the chemical, biological, and physical characteristics of wetlands, ponds, streams, and riparian areas.

BOARD means the Board of County Commissioners of Gunnison County, Colorado, or its designee.

BRIDGE means a structure including wall or abutments erected over a depression or an obstruction, as water, highway or railway and having a track or passageway for carrying traffic or other moving loads.

BUILDING FOOTPRINT means the outline of the total area that is covered by a building at ground level.

CEMENT TREATED BASE means a base consisting of a mixture of mineral aggregate (or soil) and Portland cement, mixed and spread on a prepared surface, to support a surface course.

CHANNELIZATION means the separation or regulation of conflicting traffic movements into definite paths of travel by use of pavement markings, raised islands, or other suitable means to facilitate the safe and orderly movement of traffic, both vehicular and pedestrian.

CITY STREET means roads that are within the boundaries of an incorporated municipality that are dedicated to the public and are maintained by the City.

COLLECTOR ROAD - See Article III section 3.1

CONSTRUCTION PLANS means a complete and accurate set of detailed plans, including but not limited to profile, specifications, details, notes and any other information necessary for complete and timely construction of the road or related facility.

CONTROL OF ACCESS means the condition where the right of owners or occupants of abutting land or other persons to access, light, air or view in connection with a highway is fully or partially controlled by public authority.

COUNTY means Gunnison County.

COUNTY PRIMARY ROAD SYSTEM means County roads selected by the Board on the basis of greatest general importance; the County primary system as selected shall constitute an integrated system within itself and/or with the state highway system and other roads identified by the Board.

COUNTY ROAD means a public road which the Board has placed on the Country Road System under the authority of C.R.S. 43-2-109,110.

COUNTY SECONDARY ROAD SYSTEM means all County roads not on the County primary road system.

CROSS SLOPE (ROADWAY) means on divided highways each one-way pavement may be crowned separately as on 2-lane highways, or it may have a nondirectional slope across the entire width of pavement, almost downward to the outer edge.

CUL-DE-SAC ROAD means a local road open at one end only, and with special provisions for turning around.

CURBWALK means monolithic combination of curb and gutter and sidewalk.

CULVERT means a closed conduit, other than a bridge, which conveys water carried by a natural channel or waterway transversely under the roadway.

DAYS means calendar days, not normal working days unless expressly identified as working days.

DELINEATORS means devices used to define the roadbed, and are used as an aid to alert drivers of day and night hazard conditions.

DEPARTMENT means the Gunnison County Public Works Department.

DESIGN LOAD means the loads that must be supported by a structure in terms of live and dead weight loads.

DESIGN PERIOD means geometric design generally based on estimated traffic requirements 20 years after construction.

DESIGN SPEED means a speed determined for design and correlation of the physical features of a road that influence vehicle operation; the maximum safe speed maintainable on a specified section of road when conditions permit design features to govern.

DIRECTOR OF PUBLIC WORKS means the Gunnison County Public Works Director, or designee.

EASEMENT means a conveyance or reservation of an incident of ownership in real property for one or more specific purposes, public or private.

18K EDLA means 18,000 pound single axle Equivalent Daily Load Applications. (See "Axle Load" and Equivalence Factor".)

ENGINEER means Professional Engineer registered in the State of Colorado.

EROSION means the wearing away of a land surface by detachment and transporting of soil and rock particles by the action of water, wind, or other agents.

FLARED INTERSECTION means an un-channelized intersection, or a divided highway intersection without islands other than medians, where the traveled way of any intersection leg is widened or an auxiliary lane added.

FLEXIBLE PAVEMENT means a pavement structure which maintains intimate contact with and distributes loads to the subgrade and depends upon aggregate interlock, particle friction and cohesion of stability.

GEOMETRIC DESIGN means the arrangement of the visible elements of a road, such as alignment, grades, sight distances, widths, slopes, etc.

GRADE means the rate expressed in terms of percent, ascent or descent by length.

GUARDRAIL means a protective device intended to make highways safer by reducing accident severity.

GUNNISON COUNTY means Gunnison County, Colorado.

GUNNISON COUNTY ROAD SYSTEM means all roads in the Gunnison County primary or secondary systems.

HIGHWAY, STREET, OR ROAD means an open way reserved for the passage, generally, of people, vehicles, animals and goods and includes trails and non-motorized ways in rural areas, or in urban areas where there is comparatively little access and egress, a way between prominent termini is usually called a highway or road. A way in an urban area, with or without provisions made for curbs, sidewalks, and paved gutters is ordinarily called a road.

HORIZONTAL ALIGNMENT means horizontal geometrics for safe and continuous operation at a uniform design speed for substantial lengths of highway and must afford at least the minimum stopping distance for the design speed at all points on the highway.

HVEEM STABILIMETER means a device to measure the lateral pressure transmitted by soil or aggregate being subjected to a vertical load. The pressure obtained is used to compute "R" Value. The internal resistance of the friction property of a bituminous pavement or a base course. Data obtained is used to compute the relative stability.

IMPROVEMENTS means an addition to or enhancement of property or its condition, amounting to more than mere repairs, including, but not limited to, structures, infrastructure, habitat compensation, restoration, reclamation, general landscaping, or such other installations as may be designated by the County.

INCLUDE means including without limitation.

INSPECTOR means the Gunnison County Public Works Director, or designee.

INTERSECTION means the area embraced within the prolongation or connection of the lateral curb lines, or if none, then the lateral boundary lines of the roadways of two highways, streets, roads or driveways, or any combination of thereof, which join one another at, or approximately at, right angles, or the area within which vehicles traveling on different highways joining at any other angle may come in conflict.

LANE - See Article III section 3.1

LEGAL LOT means a lot, parcel or tract of land that meets the definition of a “subdivision,” or “subdivided land” as defined in C.R.S. 30-28-101 (10) (a) as it may be amended, or that is one of the exceptions to the definition of “subdivision” or “subdivided land” set out in the definition of “Subdivision or Subdivided Land” in C.R.S. 30-28-101 (10) (b), (c) or (d) as they may be amended, and that was created in compliance with all applicable laws, ordinances and regulations in effect at the time of its creation, and the legal description of which was recorded at the time of its creation in the records of the Clerk and Recorder of Gunnison County. A parcel as mapped for tax assessment records is not necessarily a legal lot.

LIME TREATED BASE means a base consisting of a mixture of soil, hydrated lime and water, usually mixed in place and placed to support a pavement structure, or the components thereof.

LOCAL - See Article III section 3.1

LOT means a parcel or tract of land. Also see definition of “Legal Lot”.

LOW WATER CROSSING means a structure used to cross a drainage course that provides only for limited conveyance of run-off under the traveled way with higher flows passing both under and over the traveled way.

MAY means a permissive condition.

MINIMUM COVER means the point of minimum cover shall be the edge of the paved shoulder giving the least cover over the pipe.

MINIMUM TURNING RADIUS means the radius of a minimum turning path of the outside of the outer front tire.

NON-MOTORIZED TRAIL means a dirt, gravel or paved trail suitable for bicycle, pedestrian or equestrian travel.

PARCEL means a tract or lot of land. Also see definition of “Legal Lot”.

PASSING SIGHT DISTANCE means the minimum sight distance on two or three lane highways that must be available to enable the driver of one vehicle to pass another vehicle safely and comfortably without interfering with the speed of an on-coming vehicle traveling at the designed speed should it come into view after the overtaking maneuver is started.

PAVEMENT means that part of a roadway having a constructed surface for the facilitation of vehicular movement.

PAVEMENT STRUCTURE means the combination of subbase, base course and surface course placed on a subgrade to support the traffic load and distribute it to the roadbed.

PERSON/PERSONS means any individual, partnership, corporation, association, company, or other public or corporate entity, including the state or federal government, and any of their political subdivisions, agencies, instrumentalities.

PLANT MIXED BITUMINOUS BASE means a base consisting of mineral aggregate and bituminous material, mixed in a central plant, laid and compacted while hot, on subbase or a subgrade, to support a surface course.

PORTLAND CEMENT CONCRETE PAVEMENT means a pavement composed of portland cement concrete on a prepared subgrade or base course in accordance with plans and specifications.

PRIME COAT means the application of a low viscosity liquid bituminous material to an absorbent surface, preparatory to any subsequent treatment, for the purpose of hardening or toughening the surface and promoting adhesion between it and the superimposed construction.

PRIMITIVE ROAD means a road that has all of the following characteristics:

- The road does not have the physical capacity to allow ready access to emergency services providers (e.g. medical emergency or fire suppression vehicles);
- No public utility has been extended after May 7, 2002, or is proposed to be extended, to any lot served by the road;
- There is no more than one single family residence existing or proposed on any lot served by the road;
- Does not currently serve, and is not proposed to serve, average daily traffic more than the minimum threshold for a local intermittent road;
- Any residential use established after May 7, 2002, shall be limited to seasonal use only by deed restriction or other instrument acceptable to Gunnison County

PRIVATE ROAD means any road that is not a public road.

PRIVATE ROADS UNDER COUNTY JURISDICTION means roads that have been permitted through the County Land Use Process.

PUBLIC ROAD means:

- All roads over private lands dedicated to the public use by deed to that effect, filed with the office of the Gunnison County Clerk and Recorder when such dedication has been accepted by the Board; and
- All roads over private or other lands dedicated to public uses by due process of law, including a subdivision plat approved by Gunnison County and recorded in the office of the Gunnison County Clerk and Recorder, and not heretofore vacated by an order of the Board duly entered of record in the proceedings of the Board; and
- All roads over private lands that have been used adversely without interruption or objection on the part of the owners of such lands for 20 consecutive years; as defined by Colorado law; and
- All toll roads or portions of them that may be purchased by the Board from the incorporators or charter holders of them, and thrown open to the public; and
- All roads over the public domain whether agricultural or mineral.

R VALUE means the resistance value of the soil while in a state of density and degree of saturation typical of the most adverse conditions to be expected on the road during the service life.

REGIONAL FACTOR means a numerical factor expressed as a summation of the values assigned for precipitation, elevation and drainage. This factor is used to adjust the structural number.

RESIDENTIAL DRIVEWAY - See “Access”

RIGHT-OF-WAY means a general term denoting lane, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes.

ROADBED means the graded portion of a highway, usually considered as the area between the intersections of top and side-slopes, upon which the subbase, base course, surface course and shoulders are constructed. Divided highways are generally considered to have two roadbeds.

ROADSIDE means the area adjoining the outer edge of the roadway. Extensive areas between the roadways of a divided highway may also be considered roadside.

ROAD SIGN means a traffic control device mounted on a support above the level of the roadway that conveys a specific message by means of unchanging words or symbols.

ROADWAY means the portion of a highway, including shoulders, for vehicular use. A divided highway has two or more roadways.

ROADWAY PRISM means the area of a road bounded by the traveled surface, the shoulders and lines projecting downward and away from the outside edge of the shoulder and intersecting the ground surface at an angle of thirty (30) agrees to horizontal.

RURAL means the character of an area that is primarily agricultural, low-density residential, unimproved and open.

SEASONAL USE means use limited to those months when snow normally is not on the ground in Gunnison County, that is, the months of May through October inclusive.

SENSITIVE AREAS means those areas identified by the Board that contain, or in which activity will have a significant impact on, human, historical, natural, environmental or archeological resources of great significance; a sensitive area shall be a specific geographic location that is defined with specific boundaries.

SERVICEABILITY INDEX means a number which is indicative of the pavement's ability to serve traffic at any specific time.

SHALL means a mandatory condition.

SHOULD means a recommended but not mandatory condition.

SHOULDER means the portion of a roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use and for lateral support of base and surface courses.

SIGHT DISTANCE means the distance visible to the driver of a passenger vehicle, measured along normal travel path of a roadway, to the roadway surface or to a specified height above the roadway, when the view is unobstructed by traffic.

SIGNIFICANT means of considerable or substantial consequence.

SINGLE-UNIT TRUCK means a freight vehicle of two or three axles and larger than a pickup.

SLOPE EASEMENT means an easement for cuts or fills.

STANDARDS means the Standards identified in this Gunnison County Standards and Specifications for Road and Bridge Construction as it may be amended.

STABILIZATION means modification of soils or aggregate by incorporating materials that will increase load bearing capacity, firmness and resistance to weathering or displacement.

STATE HIGHWAY means roads that are within the County that are dedicated to the public, but are maintained by the Colorado Department of Transportation.

STOPPING SIGHT DISTANCE means the distance required by a driver of a vehicle, traveling at a given speed, to bring his vehicle to a stop after an object on the roadway becomes visible. It includes the distance traveled during the perception and reaction times and the vehicle braking distance.

STRUCTURE means anything constructed or erected, that requires location on the ground, or is attached to something having location on the ground, including portable shelters for human habitation or use, recreational vehicles and tents, storage, transmission or distribution facilities or public utilities, but not including transmission lines of less than 45 kilovolt capacity, or fences.

SUBBASE means the layer or layers of specified or selected material of designed thickness placed on a subgrade to support a base course.

SUBGRADE means the top surface of a roadbed upon which the pavement structure and shoulders, including curbs, are constructed.

SUPERELEVATION means the vertical distance between the heights of inner and outer edges of highway pavement used to prevent a vehicle from sliding outward, or to counteract all the centrifugal force of a vehicle traveling at an assumed speed.

SUSTAINED GRADE means a continuous highway grade of appreciable length and consistent or nearly consistent gradient.

TEMPORARY ACCESS ROAD means a road that is limited in scope, duration and frequency to serve only a vacant parcel and which does not require any cut and fill.

TERRAIN means the topography of the profile of a highway, road, or street. As used in this manual, the term generally has one of two modifiers; rolling, or mountainous. These two modifiers represent combinations or geometric features in varying degrees which relate primarily to gradients and horizontal and vertical alignment. They reflect the effect on capacity of the operating characteristics of trucks in terms of their passenger cars are equivalent under the different geometric conditions.

TOPOGRAPHY means the configuration of the earth surface including the shape and position of it's natural and man-made features.

TRAFFIC CONTROL DEVICE means any sign, signal, marking or installation placed or erected under public authority, for the purpose of regulating, warning, or guiding.

TRAIL means an open way reserved for the passage, generally, of people, non-motorized vehicles, animals and goods.

TRAVELED WAY means the portion of the roadway for the movement of vehicles, exclusive of Shoulders and auxiliary lanes.

VERTICAL ALIGNMENT means properly designed, should provide adequate sight distance, safety, comfortable driving, good drainage, pleasing appearance. Minimum lengths of crest vertical curves are controlled by stopping sight distance requirements.

WATERWAY means a stream, river or creek, or any other natural channel or other topographic feature through which "live" water flows, but does not mean ditches used for agricultural purposes.

WETLAND means an area inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under usual circumstances, supports a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known a hydrophytic vegetation. Wetland areas generally include marshes, bogs, seeps, riparian and similar areas, but do not include those artificial wetlands intentionally created from non-wetland areas, including irrigation and drainage ditches, grass-lined swales, canals, detention facilities, ranch ponds and landscape amenities. Exempt from the definition are areas in which there are wastewater treatment systems, including treatment ponds and lagoons designed to meet the requirements of the Clean Water act (33 U.S.C. Sec. 1341), treated water distribution and storage facilities or treated water that otherwise meet the criteria in this definition, and areas created by irrigation-related activities from agriculture and ranching. However, wetlands may include those artificial wetlands intentionally created from non-wetland areas created for the purpose of mitigating conversion of wetland, if permitted by the County.

B. Abbreviations

AASHTO means American Association of State Highway and Transportation Officials

CDOT means Colorado Department of Transportation

FHWA means Federal Highway Administration

HUTF means Highway Users Tax Fund

ITE means Institute of Traffic Engineers

EXHIBIT A

GUNNISON COUNTY PUBLIC WORKS DEPARTMENT
SCHEDULE OF FEES

Adopted by the Gunnison County Board of Commissioners
March 6, 2018

Maps

County Maintained/Plowed Roads (set of 3)	$ 30.00

Publications

Gunnison County Standards and Specifications for New Road & Bridge Construction	$ 15.00
Postage – if mailed	$ 5.00

Public Works Fees – All Fees Must be Paid in Advance.

Access Permit	$250.00
Review of existing access or modified site plan	$100.00
Final re-inspection (per re-inspection)	$500.00
Reclamation Permit (within sage grouse habitat) Under 10,000 square feet of total ground disturbance	$ 75.00
Reclamation Permit (in or out of sage grouse habitat) At or above 10,000 square feet of total ground disturbance	$150.00
Reclamation Permit Bonding	
Initial 10,000 square feet of ground disturbance	$500.00
Each additional 1,000 square feet of ground disturbance	$100.00
Special Transport Permit (Oversize/Overweight)	
Single Trip Permit	$30.00 - $125.00 plus $10 per axle for overweight
Annual Permit	$250.00 - $650.00
Revocable Right-of-Way Permit	$100.00
Surface Alteration Permit (Financial Security is required/calculated per project)	$ 50.00 or 5% of financial security
Underground Utility Construction Permit (Road Cut) (Financial Security is required/calculated by road type)	$ 50.00
Vacation of a Street or Alley	
Administrative Cost	$500.00
Advertising of Legal Notice	Actual cost of advertising
Certified/RRR Mailing (if done by County)	Actual cost of mailing
Waiver of Standards (Decision by BOCC)	
Administrative Cost	$500.00
Advertising of Legal Notice	Actual cost of advertising
Waiver of Standards (Decision by Public Works Director)	
Administrative Cost	$100.00 - if a site visit is required

FIGURE 4-1

FIGURE 4-2

FIGURE 4-3

FIGURE 4-4

TABLE 3-1

SUMMARY OF ROAD WAY DESIGN ELEMENTS

FUNCTIONAL CLASSIFICATION	AVERAGE DAILY TRAFFIC	MINIMUM RIGHT OF WAY WIDTH	RIGHT OF WAY WIDTH SNOW	# OF LANES	LANE WIDTH	SHOULDER WIDTH EACH SIDE	CURB & GUTTER PED. PATH
Major Arterial (Paved)	3000+	100'	100'	2-3	12'	4'	2'/5' (Optional)
Suburban Com/Ind Collector (Paved or Gravel)	0-500	60'	80'	2	12'	4'	2'/0' (Optional)
Suburban Lane (Paved or Gravel)	13-500	60'	80'	2	12'	4'	
Rural Arterial (Paved)	1000-2999	80'	100'	2	12'	4'	2'/0' (Optional)
Rural Collector (Paved)	500-999	60'	80'	2	12'	3'	
Rural Local (Gravel/Paved)	200-499	60'	80'	2	12'	3'	
Rural Lane (Gravel)	91-199	60'	80'	2	11'	2'	
Local Intermittent *(Native/Gravel)	13-90	60'	80'	1	16'	0'	
Primitive Recreation Road	N/A	20'	N/A	1	8-16'	0'	

* Single lane roads with turnouts used for low volume traffic. Turnouts shall be intervisable

Right-of-way width – Snow requirements based on snow load maps in Gunnison County Building Inspector's Office

TABLE 4-1

MINIMUM CURVE RADIUS FOR DESIGN SPEED ON LOCAL ROAD AND LANES
(without superelevation)

$e + f = \frac{0.0'67v'}{R}$

e – superelevation
f – side friction factor
V – design speed
R – curve radius

v	e	f	Radius
15	0	.19	80
20	0	.18	150
25	0	.17	250
30	0	.16	375

TABLE 4-2

MINIMUM CURVE RADIUS FOR SEDAIGN SPEED ON COLLECTORS,
MINOR ARTERIALS AND PRINCIPAL ARTERIALS

Design Speed v	Max e	Max f	Min R	Max e	Max f	Min R	Max e	Max f	Min R
40	.04	.15	561	.06	.15	508	.08	.15	464
50	.04	.14	926	.06	.14	833	.08	.14	758
60	.04	.13	1412	.06	.13	1263	.08	.13	1143

TABLE 4-3

MAXIMUM SUPERELEVATION RATES

Road Type	Rural	Urban
Principal Arterial	.08	.06
Minor Arterial	.08	.06
Collector	.06	.06
Residentail Sub Collector	.06	.04

TABLE 4-4

SIDE FRICTION FACTORS FOR DESIGN SPEED

v	f
15	.19
20	.18
25	.17
30	.16
40	.15
60	.13

TABLE 4-5

CUT AND FILL SLOPES

Height	Cut Slopes	Fill Slopes
0-5 feet	3:1	2:1
5-10 feet	2:1	1 1/2:1
10-15 feet	1 1/2:1	1 1/2:1
Above 15 feet	1:1	1 1/2:1

TABLE 4-6

SUMMARY OF DRIVEWAY DESIGN ELEMENTS

TYPE OF ACCESS (driveway)	# OF LANES	LANE WIDTH
1. **Residential**	1	16 feet
2. **Agricultural**	1	16 feet
3. **Commercial**	2	11 feet
4. **Industrial**	2	11 feet

TABLE 4-7

INTERSECTION SIGHT DISTANCE

*Vehicle expected to enter or cross highway	Sight Distance is given in feet per 10 mph of posted speed limit	
	2 Lane	4 Lane
Passenger Car	100	120
Single Unit Truck	130	150
Multi-Unit Trucks	170	200

TABLE 4-8

PAVEMENT DESIGN REGIONAL FACTOR

Annual Precipitation	
Over 34”	1.00
24” – 34”	0.50
18” – 23”	0.00
14” – 17”	-0.25
Less than 14”	-0.50
Elevation	
Over 9500	1.50
8500 – 9500	1.00
7500 – 8500	0.50
Less than 6500	0.25
Drainage	
*Very Poor	1.00
Poor	0.50
Fair	0.25
Good	-0.25
* High groundwater table	
Frost	
**Frost boils in area	3.00
**Frost susceptible soil, frost penetration over 28”	1.00
Frost susceptible soil, frost Penetration under 28”	0.25
** Moisture available when subject to frost action	

The Minimum Regional Factor shall be 2.00.

Other conditions that may influence the choice of regional factors are:

(1) Elevation of the grade line, especially in swampy areas where the roadbed soils may be saturated for long time periods.

(2) Number of freezing and thawing cycles during winter and early spring.

(3) Steep grades with large volume of heavy trucks.

(4) Areas of concentrated turning and stopping movements, such as bus stops, etc.

TABLE 4-9

PAVEMENT DESIGN STRENGTH COEFFICIENTS

Component	Limiting Test Criteria	Coefficient
Plant Mix Seal		0.25
Hot Bituminous Pavement	$R_t \geqq 95$	0.44
" " "	R_t = 90-94	0.40
" " "	R_t = 87-89	0.35
" " "	R_t = 84-86	0.30
" " "	$R_t \leqq 83$	0.25
Road Mix Bituminous Pavement		0.20
Existing Bituminous Pavement		0.20 to 0.44
Plant Mix Bituminous Base	$R_t \geqq 90$	0.34
" " "	R_t = 85-89	0.30
" " "	R_t = 80-84	0.25
" " "	$R_t \leqq 79$	0.22
Aggregate Base Course [A.B.C.]	"R" $\geqq 84$	0.14
" " "	"R" = 78-83	0.12
" " "	"R" = 70-77	0.11
" " "	"R" $\leqq 69$	0.10
Emulsified Asphalt Treated A.B.C.	$R_t \geqq 95$	0.23
" " "	R_t = 90-94	0.20
" " "	R_t = 84-89	0.15
" " "	$R_t \leqq 83$	0.12
Cement Treated A.B.C.	7-day test $\geqq$ 650 psi	0.23
" " "	7-day test = 400-649 psi	0.20
" " "	7-day test $\leqq$ 399 psi	0.15
Hydrated Lime Treated A.B.C.	"R" = 84	0.14
" " " "	"R" = 78-83	0.12
Borrow Material		0.10 *

* Used only to determine a value of strength for layers of soil and/or borrow material which are located above the soil layer from which the soil support value of the subgrade is determined.

NOTE: The minimum strength coefficient for the Base Course on highways having a current ADT volume of 750 or greater shall be 0.12.

TABLE 4-10

PERMISSIBLE VELOCITIES FOR ROADSIDE DRAINAGE DITCHES

Roadside channels with erodible linings (earth; no vegetation):		**Minor and Major Design Storm**	
Soil Type or Lining		Permissible velocity (fps)	
Fine sand (noncolliodal)		2.5	
Sandy loam (noncolloidal)		2.5	
Silt loam (noncolloidal)		3.0	
Ordinary firm loam		3.5	
Fine gravel		5.0	
Stiff clay (very colloidal)		5.0	
Graded, loam to cobbles (noncolloidal)		5.0	
Graded, silt to cobbles (noncolloidal)		5.5	
Alluvial silts (noncolloidal)		3.5	
Alluvial silts (colloidal)		5.0	
Coarse gravel (noncolloidal)		6.0	
Cobbles and shingles		5.5	
Shales and hard pans		6.0	
Roadside channels, lines with various grass covers (uniform stand; well maintained)			
Cover	Slope range (%)	Soils that are Erosion resistant	Easily eroded
Bermuda grass Crested wheatgrass Buffalo grass Kentucky bluegrass Smooth brome Blue grama	0-5 5-10 Over 10	6.0 5.0 4.0	5.0 4.0 3.0
Grass mixture	0-5 5-10	4.0 3.0	3.0 2.5
Lispedeza sericea Weeping lovegrass Yellow bluestem Alfalfa Crabgrass Common lespedeza Sudan grass	0-5	3.0	2.0

TABLE 5-1

MINIMUM REQUIREMENTS FOR COMPACTION OF EMBANKMENTS AND SUBGRADES

Density, Percent of AASHTO Standard T-99

Embankments

Class of Soil (ASSHTO M145)	Under 50 ft(a) High	50 ft & Over	Subgrade
A-1, A-3	95	95	100
A-2-4, A-2-5	95	95	100
A-2-6, A-2-7	95	(b)	95
A-4, A-5, A-6, A-7	95	(b)	95

(a) 1 ft = 0.3048 m.
(b) Use of these materials requires special attention to design and construction, and shall be specified by the design engineer and approved by the County Public Works Department.

MINIMUM REQUIREMENTS FOR COMPACTIONS OF UTILITY TRENCHES

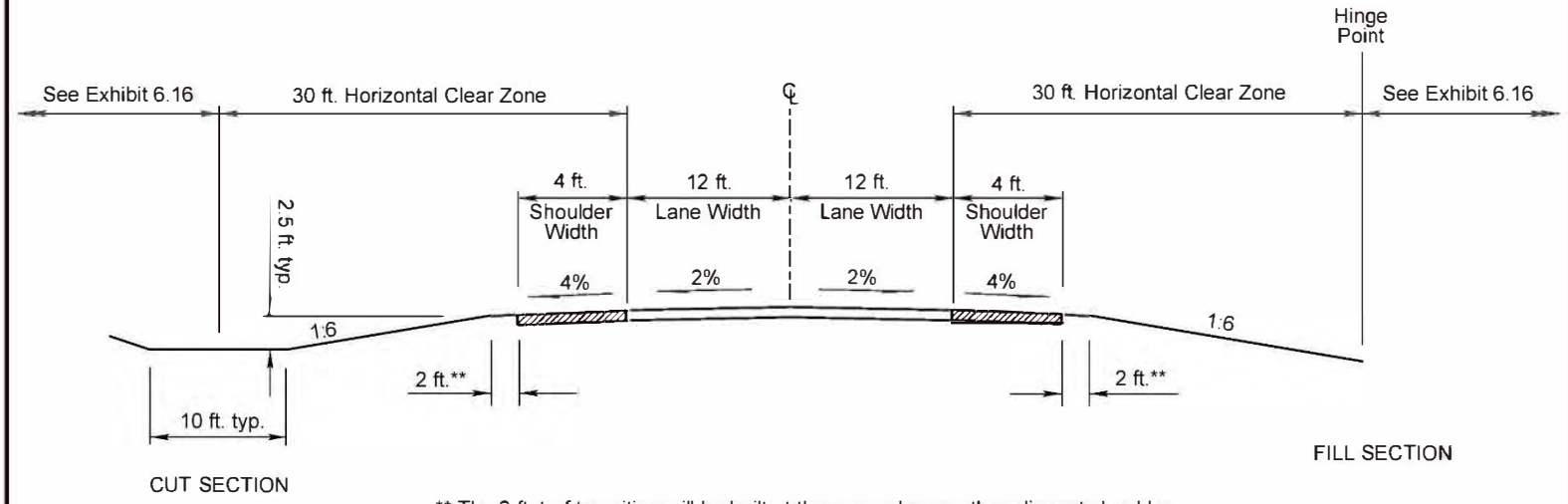
Material	Density Percent	AASHTO Std.
Bedding Material	90%	T-99
Backfill	95%	T-99

TABLE 5-2

REQUIRED QUALITY CONTROL TESTS

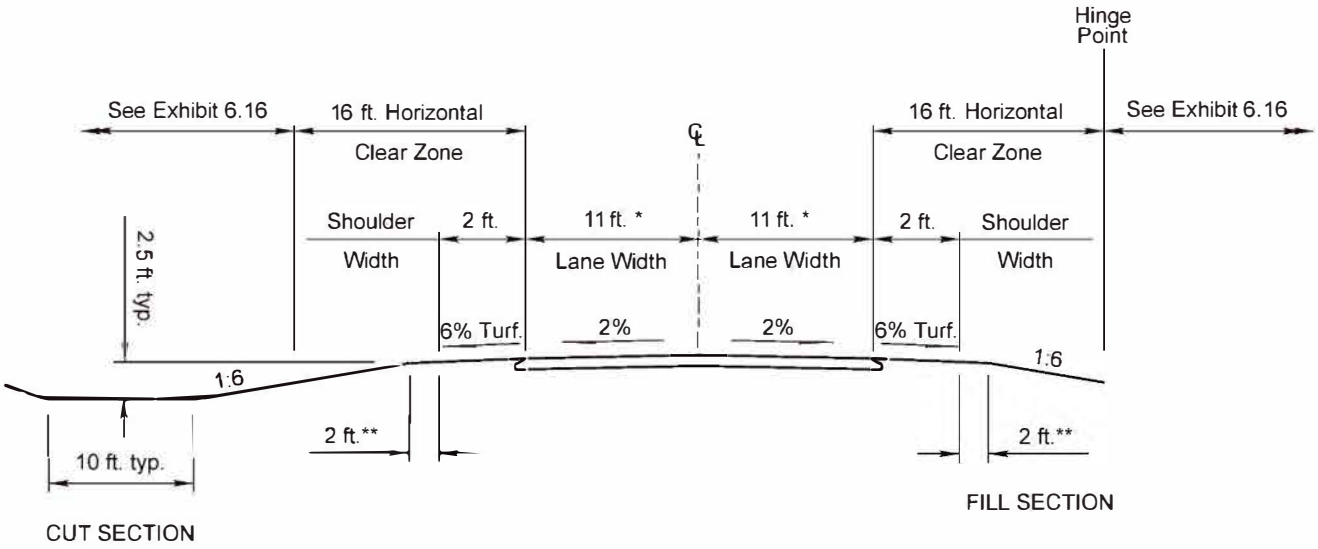
Item	Type of Test	Minimum Test Frequency
Subgrade and Embankment	Moisture-Density Curve	1 per soil type
Compaction	In-Place Density	1/3, 400 sq.ft./lift*
Aggregate Base Course or Subbase Course	Gradation	1/1,000 ton or fraction thereof on each class
	Moisture-Density Curve	1/source on each class
	In-Place Density	1/200 ton*
Hot Bituminous Pavement	Asphalt Content	1/500 tons or 2 per project whichever is the lesser
	Gradation	Aggregate-minimum of 2/source
Sidewalks and Curbing (Concrete)	Compressive Strength	1 set cylinders (4) per 1,000 sq. yds. Of sidewalks and/or 2,000 ln. ft. of curbing, minimum 1 set per project
	Slump & Air Content	1 per set of cylinders and as often as needed for quality control
Utility Trench Backfill	In-Place Density	1/400 ln. ft. of trench; or 1/branch of section if <400 ft. ½ ft. vertical lift of backfill material (First test ≤ 2 ft. above the pipe, last test at pavement subgrade or 6 in. below ground surface on unpaved areas)
Manholes/Structures Compaction	In-Place Density	1/structure per 2 ft. vertical lift

*** Failing areas are to be retested**
All testing shall be done in accordance with the most recent edition of AASHTO Test Standards.



** The 2 ft. turf transition will be built at the same slope as the adjacent shoulder.

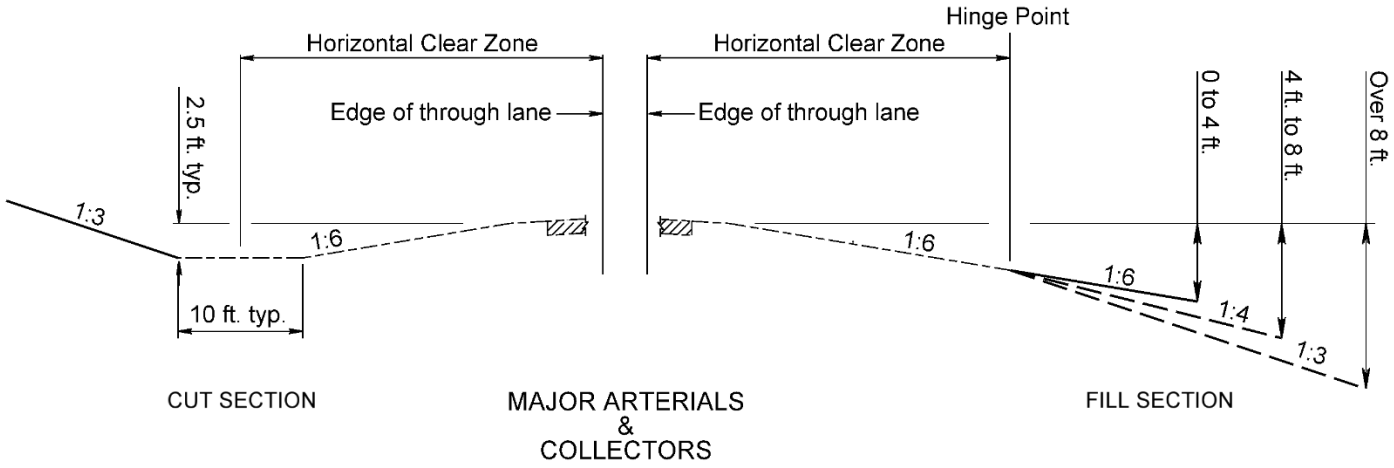
TYPICAL CROSS-SECTION
MAJOR ARTERIAL



Note: Existing shoulder surfacing allowed to remain if greater than the 2 ft. minimum width.

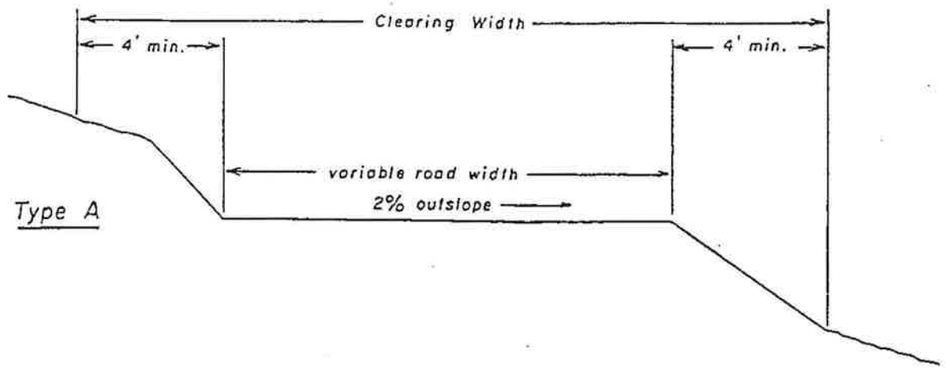
** The 2 ft. turf transition will be built at the slope of the adjacent shoulder.

TYPICAL CROSS-SECTION RURAL ARTERIAL ROADWAY

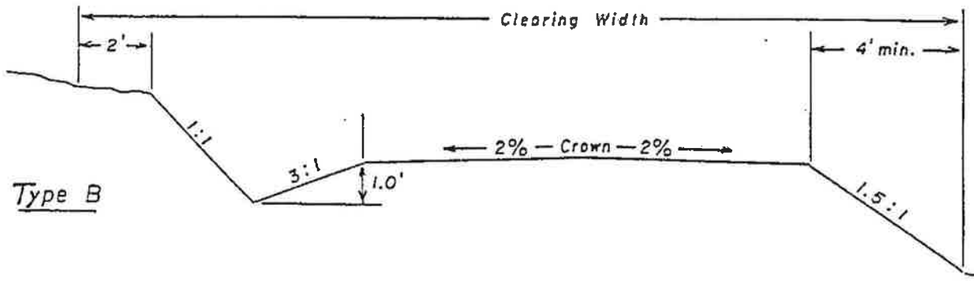


TYPICAL SIDE SLOPE GRADING
NEW AND RECONSTRUCTED PROJECTS

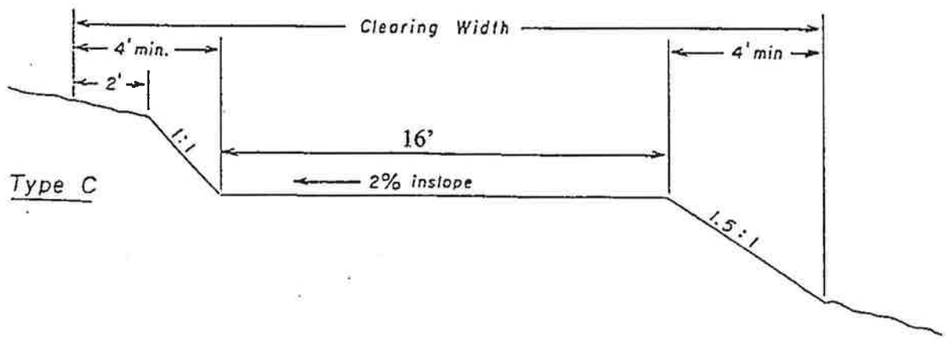
LOCAL INTERMITTENT SECTION



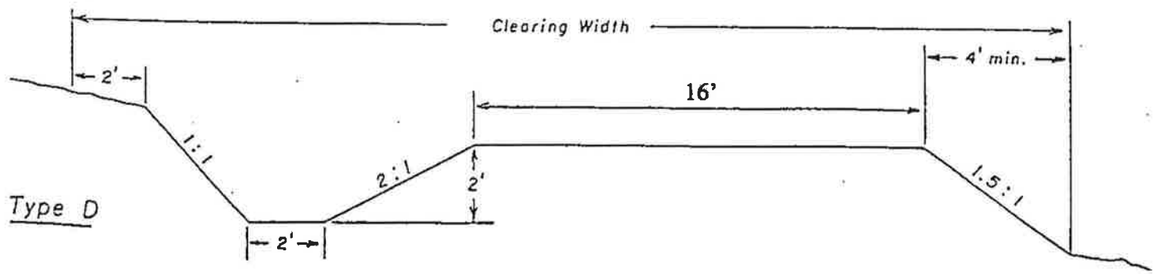
Type A



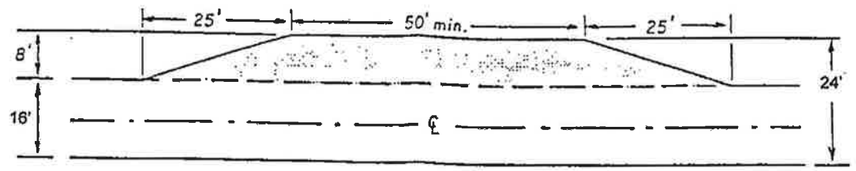
Type B



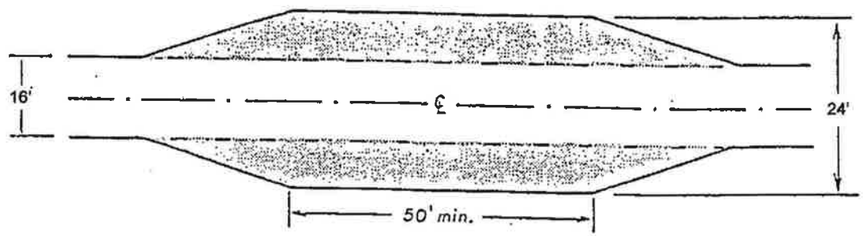
Type C



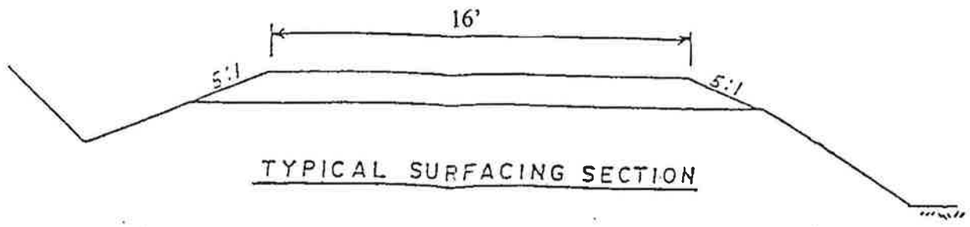
Type D



Typical Turnout



Typical Turnout



TYPICAL SURFACING SECTION

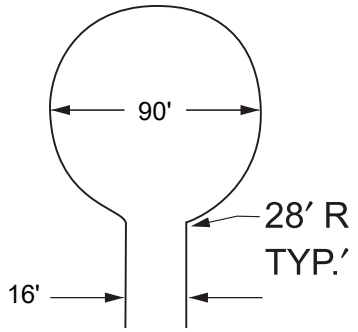
APPENDIX E

STANDARD TURNAROUND OPTIONS

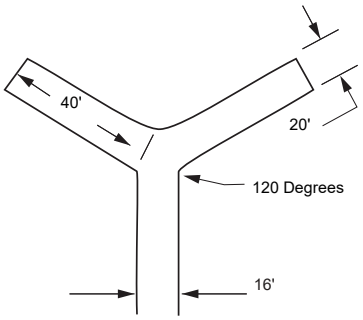
1. Road width may exceed the 16-foot minimum.
2. Road grade approaching the Turnaround shall not exceed 4% for 50 feet.
3. Grades in Turnarounds shall not exceed + or - 4%.
4. A minimum of 2% crown shall be constructed into the Turnaround to provide drainage.
5. T - Turnarounds shall be a minimum of 20 feet from any flammable structures.

REQUIREMENTS FOR ACCESS ROADS

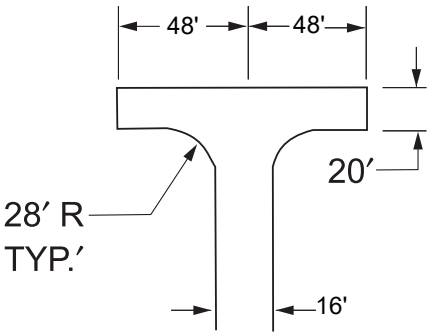
LENGTH (feet)	WIDTH (feet)	TURNAROUNDS REQUIRED
0-150	16	None required
151-500	16	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac in accordance with Figure D103.1
501-750	16	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac in accordance with Figure D103.1



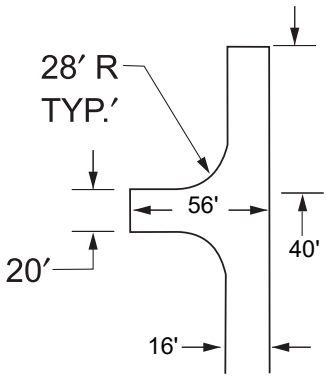
Cul-De-Sac



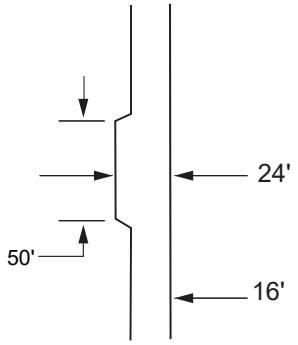
Y - Turnaround



T- Turnaround



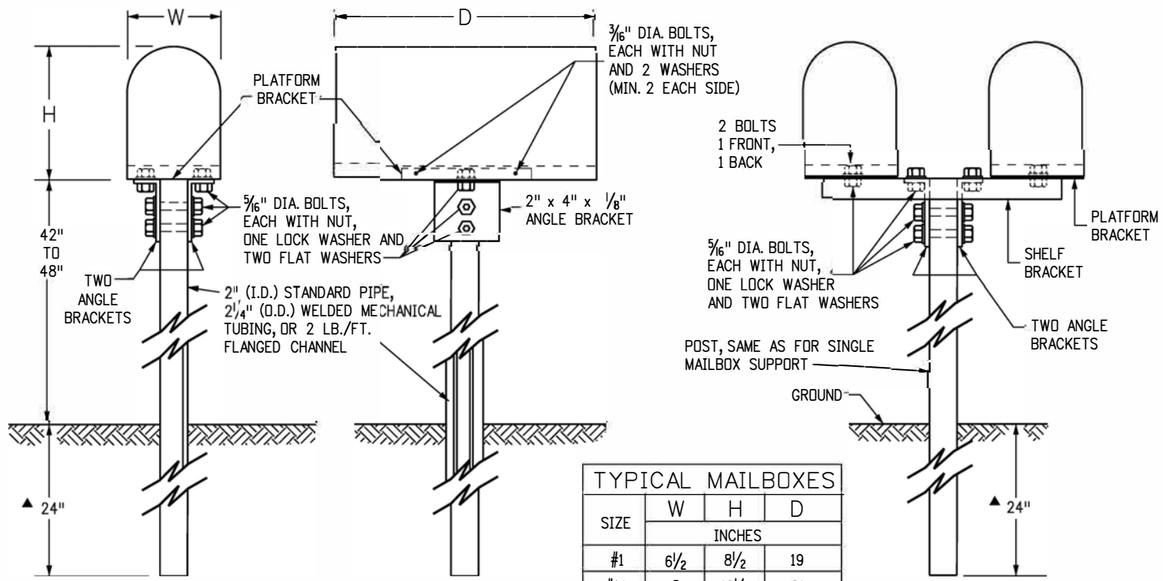
T - Turnaround Alternative



INTERVISIBLE PULLOUT

When driveways are in excess of 150 feet, the driveway shall be installed so as to provide serviceable fire department access prior to and during construction.

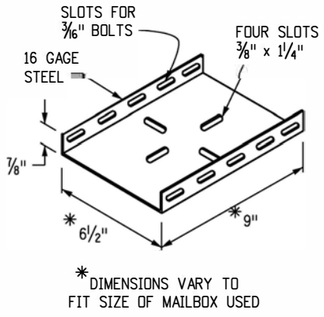
Drawings not to scale.



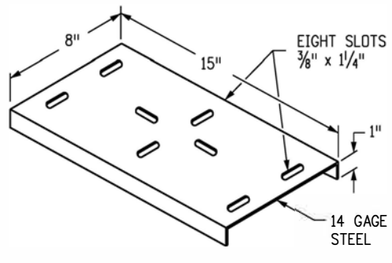
TYPICAL MAILBOXES			
SIZE	W	H	D
	INCHES		
#1	6½	8½	19
#1A	8	10½	21
#2	11½	13½	23½

▲ 30 IN. WITH POST MOUNTING SOCKET MAY BE USED, SEE DETAIL ON SHEET 2 OF 2.

SINGLE (TYPE 1) AND DOUBLE (TYPE 2) MAILBOX SUPPORTS



PLATFORM BRACKET



SHELF BRACKET

GENERAL NOTES

A SINGLE MAILBOX SHALL BE RESET AT THE FINAL DESIGNATED LOCATION ON A NEW TYPE 1 SUPPORT. TWO MAILBOXES RESET AT THE SAME LOCATION SHALL BE RESET ON ONE DOUBLE (TYPE 2) SUPPORT OR ON TWO SINGLE (TYPE 1) SUPPORTS AS DESIGNATED. THREE, FOUR, OR FIVE MAILBOXES SHALL BE RESET ON A MULTIPLE (TYPE 3) SUPPORT. AN EXISTING MAILBOX THAT IS MOUNTED ON A CANTILEVER SUPPORT SHALL BE RESET ON A CANTILEVER (TYPE 4) SUPPORT. ALL WORK AND MATERIALS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR "RESET MAILBOX STRUCTURE (TYPE _)".

3. WHEN THE ENGINEER DETERMINES THAT THE EXISTING MAILBOX CAN NOT BE REUSED, A NEW METAL MAILBOX OF SIMILAR SIZE SHALL BE SUPPLIED AND ERECTED BY THE CONTRACTOR. A NEW PLASTIC MAILBOX CONFORMING TO POSTAL SERVICE SPECIFICATIONS MAY BE USED AS AN ALTERNATIVE WHEN APPROVED BY THE ENGINEER. AN EXISTING MAILBOX LARGER THAN A SIZE NO. 2 SHALL BE REPLACED WITH A NEW SIZE NO. 2 MAILBOX. THE COST OF SUPPLYING THE NEW MAILBOX WILL BE PAID FOR IN ACCORDANCE WITH SUBSECTION 109.04(b). EXCEPTION: A CUSTOM BUILT, RURAL-TYPE MAILBOX MAY BE RESET IF THE MAILBOX OWNER OBTAINS PRIOR WRITTEN APPROVAL FROM THE POSTMASTER.

4. THE ADDRESS INFORMATION THAT APPEARED ON THE ORIGINAL MAILBOX SHALL BE PLACED ON THE APPROACH SIDE OF THE REPLACEMENT MAILBOX. SIZE AND STYLE OF LETTERING AND MATERIALS ARE SUBJECT TO THE ENGINEER'S APPROVAL.

6. POSTS, BRACKETS, AND ALL MOUNTING HARDWARE SHALL BE GALVANIZED IN CONFORMANCE WITH AASHTO M 232 AND M 111, EXCEPT THE WELDED MECHANICAL TUBING COATING SHALL BE G-90 OR EQUIVALENT CONFORMING TO ASTM A 525. A 2 IN. OUTSIDE DIAMETER, 14 GAGE WELDED MECHANICAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 513.

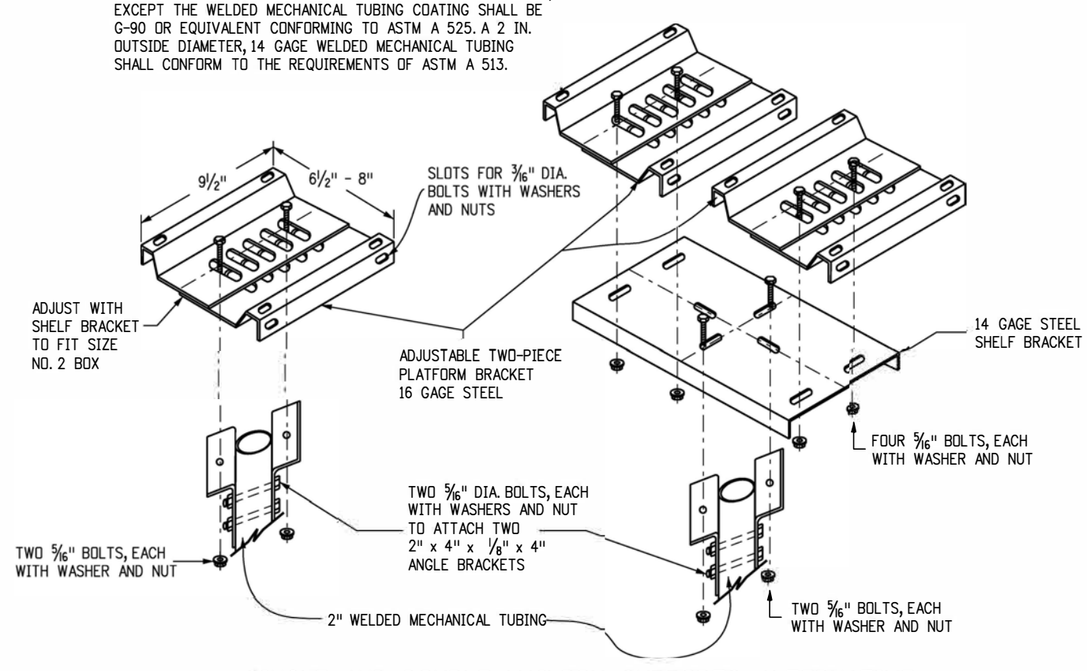
EXACT DIMENSIONS OF ANGLES, PLATFORM AND SHELF BRACKETS,
6. BOLT HOLES, SLOTS AND MULTIPLE MAILBOX SUPPORT COMPONENTS MAY VARY FROM THOSE SHOWN OR IMPLIED HEREIN SO THAT ALL COMPONENTS WILL FIT TOGETHER PROPERLY.

PLASTIC NEWSPAPER RECEPTACLES MAY BE MOUNTED BELOW
7. THE MAILBOX ON THE SUPPORT. PLASTIC NEWSPAPERECEPTACLES SHALL BE MOUNTED IN THEIR INTENDED ORIENTATION USING A GALVANIZED U-BOLT AND HARDWARE OR OTHER MOUNTING SYSTEM APPROVED BY THE ENGINEER. ASSOCIATED COSTS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE WORK.

8. ON ROADS WITH CURB AND GUTTER, THE MAILBOX SUPPORT SHALL BE LOCATED IN THE GROUND SO THE FRONT OF THE MAILBOX SHALL BE 8 IN. TO 12 IN. BACK FROM THE CURB FACE. THE HEIGHT SHALL BE 42 IN. TO 48 IN. MEASURED FROM THE GUTTER FLOW LINE TO THE BOTTOM OF THE MAILBOX.

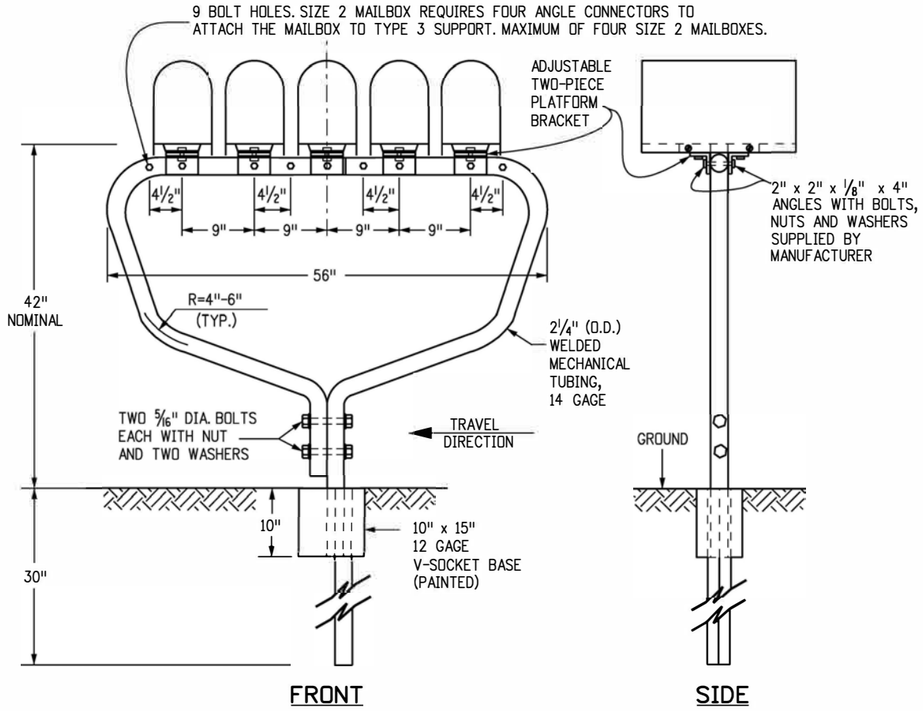
9. ON ROADS WITH SIDEWALK ATTACHED TO CURB AND GUTTER, THE MAILBOX SUPPORT SHALL BE LOCATED IN THE GROUND BEHIND THE SIDEWALK. THE FRONT OF THE MAILBOX SHALL BE IN LINE WITH OR SLIGHTLY BEHIND THE EDGE OF THE SIDEWALK. THE MOUNTING HEIGHT SHALL BE 42 IN. TO 48 IN. ABOVE THE SIDEWALK.

10. THE GROUND SURROUNDING THE MAILBOX SUPPORTS SHALL BE FIRM, UNDISTURBED GROUND, OR WELL COMPACTED REGRADED SOIL. THE SUPPORTS ARE NORMALLY DRIVEN, BUT THEY MAY BE PLACED IN A DUG HOLE WITH WELL COMPACTED BACKFILL.



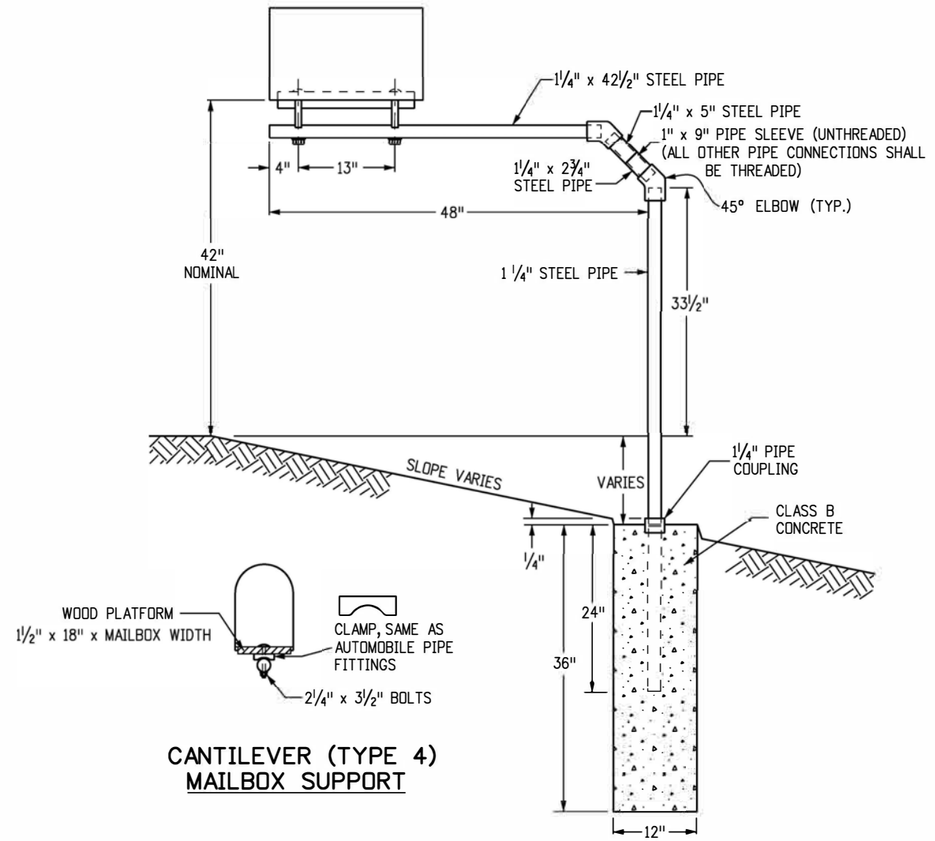
SINGLE AND DOUBLE MAILBOX SUPPORTS ALTERNATIVE

MAILBOX SUPPORTS

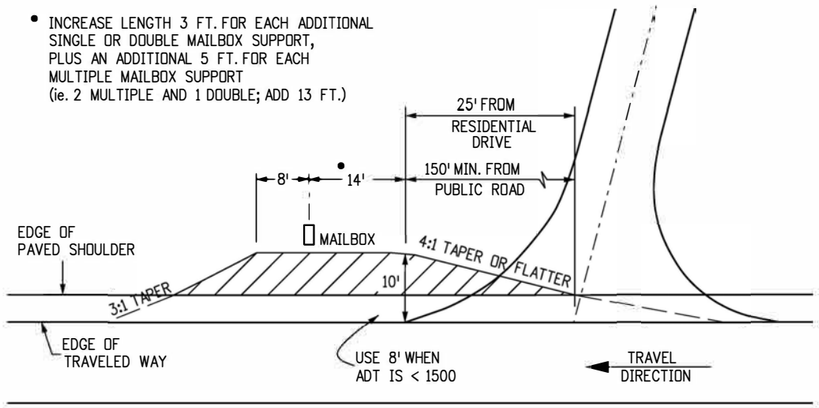


MULTIPLE (TYPE 3) MAILBOX SUPPORT
FOR 3, 4, OR 5 MAILBOXES OR APPROVED EQUAL

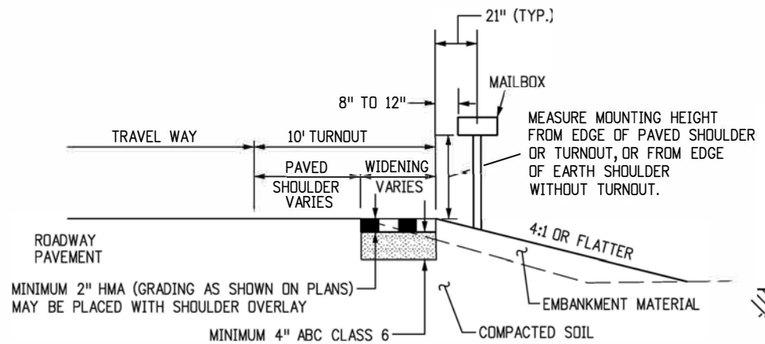
FIVE SIZE 1 MAILBOXES SHOWN



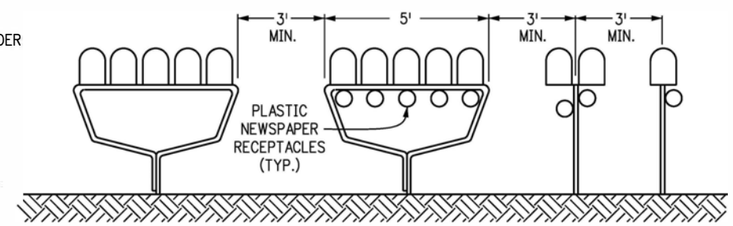
CANTILEVER (TYPE 4) MAILBOX SUPPORT



MAILBOX TURNOUT



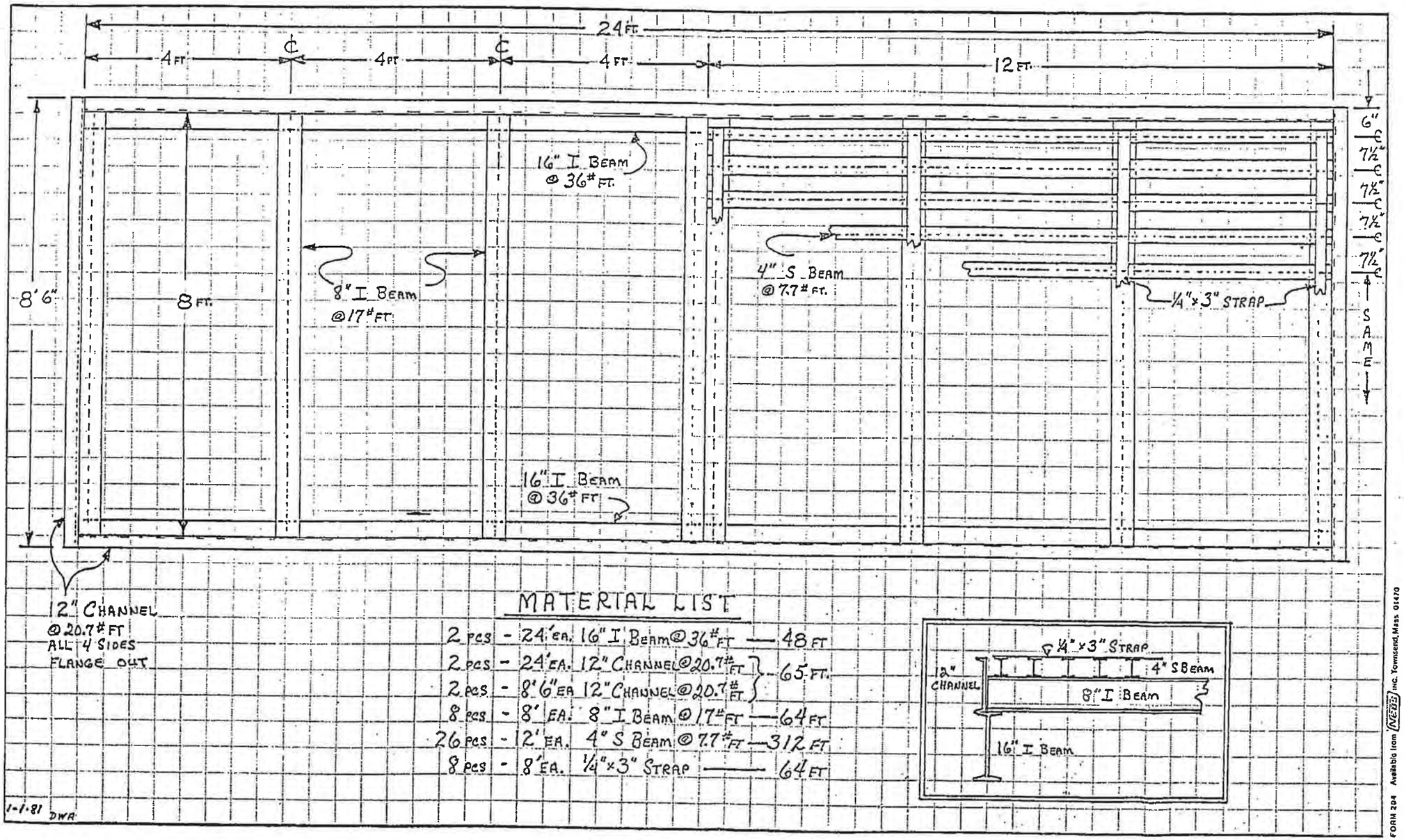
TURNOUT TYPICAL SECTION

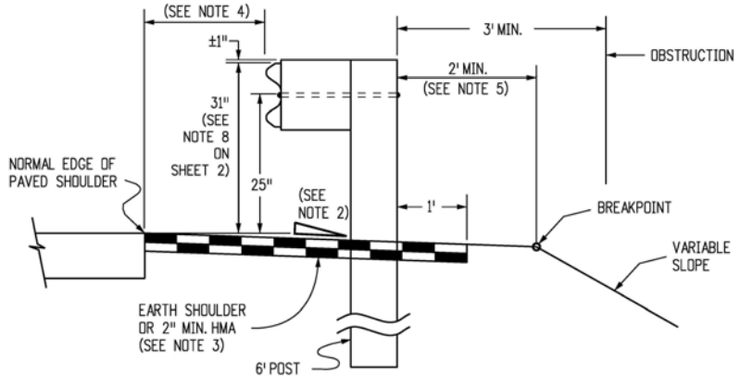


SUPPORT SPACING

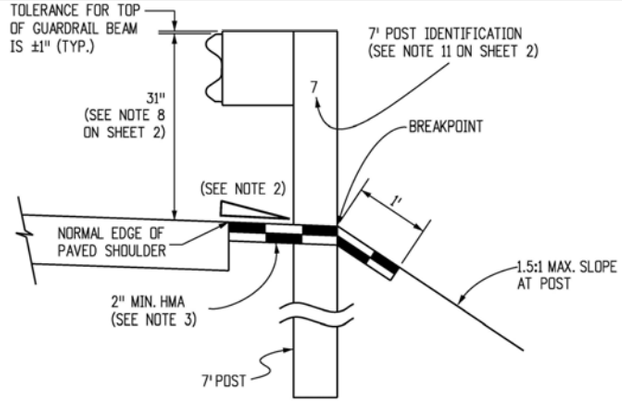
NOTE: SEE SHEET 1, GENERAL NOTE 7, FOR MOUNTING PLASTIC NEWSPAPER RECEPTACLES.

MAILBOX SUPPORTS

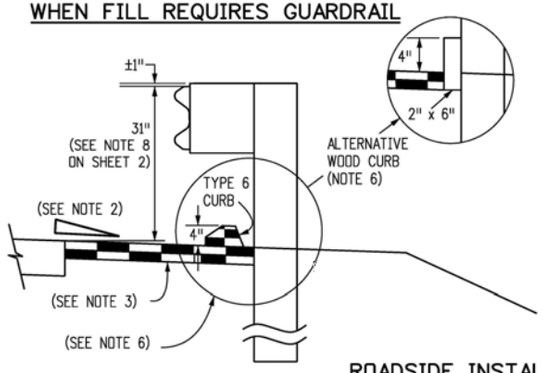

24 FT.
4 FT
4 FT
4 FT
12 FT.
℄
℄
8'6"
8 FT.
8" I Beam
@17# FT.
16" I Beam
@ 36# FT.
4" S Beam
@ 7.7# FT.
1/4" x 3" STRAP
6" ℄
7½" ℄
7½" ℄
7½" ℄
7½" ℄
SAME
16" I Beam
@ 36# FT
12" CHANNEL
@ 20.7# FT
ALL 4 SIDES
FLANGE OUT
MATERIAL LIST
2 pcs - 24' EA. 16" I Beam @ 36# FT — 48 FT
2 pcs - 24' EA. 12" CHANNEL @ 20.7# FT } 65 FT.
2 pcs - 8'6" EA 12" CHANNEL @ 20.7# FT }
8 pcs - 8' EA. 8" I Beam @ 17# FT — 64 FT
26 pcs - 12' EA. 4" S Beam @ 7.7# FT — 312 FT
8 pcs - 8' EA. 1/4" x 3" STRAP — 64 FT
1/4" x 3" STRAP
4" S Beam
12" CHANNEL
8" I Beam
16" I Beam
1-1-81 DWA
FORM 204 Available from NEDS INC. Townsend, Mass. 01470



NORMAL ROADSIDE INSTALLATION
WHEN FILL REQUIRES GUARDRAIL

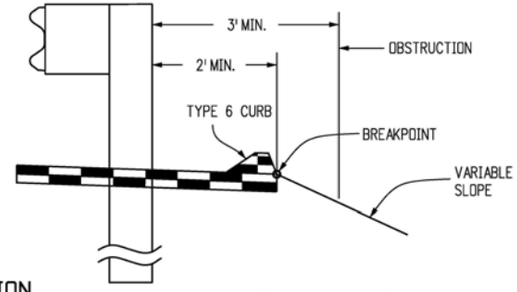


RESTRICTIVE ROADSIDE INSTALLATION
WITH 7 FOOT GUARDRAIL POSTS
(SEE NOTE 5)

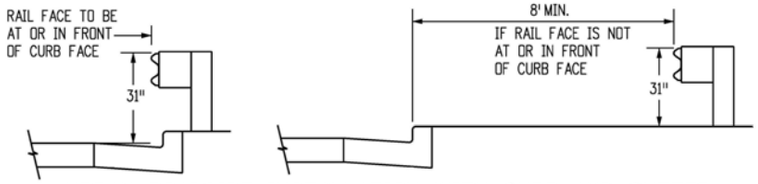


OPTION A

ROADSIDE INSTALLATION
WITH EROSION CONTROL CURB



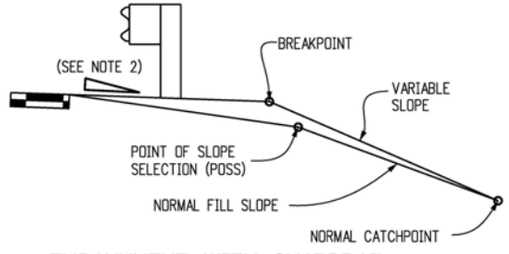
OPTION B (PREFERRED)



URBAN ROADSIDE INSTALLATION WITH CURB AND GUTTER

LOCATION	SPACING
ALL LOCATIONS EXCEPT BRIDGE RAIL LOCATIONS	6'-3"
BRIDGE OR STRUCTURE APPROACH	SEE SHEETS 11 & 19

NORMAL CENTER-TO-CENTER POST SPACING



EMBANKMENT WITH GUARDRAIL

(NOTE: THE CATCHPOINT REMAINS THE SAME AS THAT FOR "NORMAL" FILL SLOPE. FOR THE WIDER "Z" DISTANCES, THE VARIABLE SLOPE MAY "CATCH" AT THE POSS.)

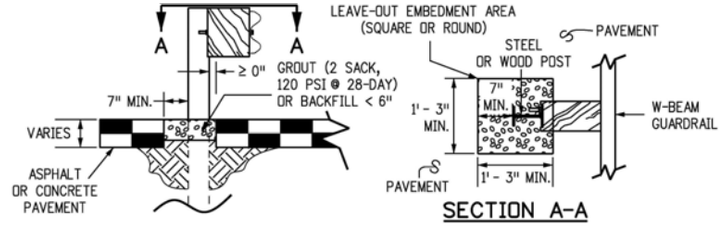
GENERAL NOTES (CONTINUE ON SHEET 2)

1. ALL GUARDRAILS SHOWN ARE MASH 2016 TL-3 COMPLIANT.
2. RATE OF SLOPE DEPENDS ON GUARDRAIL LOCATION:
   A. FOR GUARDRAIL FACE 2 FT. OR LESS FROM THE NORMAL EDGE OF PAVED SHOULDER, CONTINUE THE RATE OF SLOPE OF THE NORMAL PAVED SHOULDER TO THE BREAKPOINT.
   B. FOR GUARDRAIL FACE MORE THAN 2 FT. FROM THE NORMAL EDGE OF THE PAVED SHOULDER, THE SLOPE SHALL BE 10:1 OR FLATTER.
3. WHEN SPECIFIED ON THE PLANS, EXTEND A 2 IN. MINIMUM THICKNESS PAVED SURFACE TO 1 FT. BEHIND THE GUARDRAIL POSTS OR TO THE EROSION CONTROL CURB AS SHOWN ON PLANS. ASPHALT CUTTING & PATCHING OR OTHER APPROVED METHOD SHALL BE USED TO MINIMIZE DAMAGE TO ALL PAVED SURFACES UNDER GUARDRAIL INSTALLATIONS. ALL REPAIRS TO THE PAVED AREA WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE WORK. A MINIMUM 3 IN. THICK FIBER REINFORCED CONCRETE PAVEMENT MAY ALSO BE USED FOR PAVING BENEATH THE GUARDRAIL. INSTALL THE POST IN A 1/2 IN. OVERSIZED FORMED HOLE FOR GUARDRAIL RUNS AND TERMINALS AS DIRECTED. PAYMENT FOR THIS PAVED SURFACE WILL BE MADE UNDER A PAVEMENT OR CONCRETE PAY ITEM WITH QUANTITIES SHOWN ON THE PLANS.
4. THE MINIMUM GUARDRAIL OFFSET FROM PAVED SHOULDER EDGE SHALL BE:
   0 FT. FOR SHOULDERS 8 FT. OR WIDER
   2 FT. FOR SHOULDERS 6 FT. OR LESS

   THE GUARDRAIL OFFSET FROM PAVED INSIDE SHOULDER EDGE OF A DIVIDED HIGHWAY SHALL BE;
   0 FT. MINIMUM FOR SHOULDERS 6 FT. OR WIDER
   2 FT. DESIRABLE FOR 4 FT. SHOULDERS

   THE ABOVE 2 FT. GUARDRAIL TO SHOULDER OFFSET IS DESIRABLE BUT NOT REQUIRED FOR:
   A. FOR AN EXISTING HIGHWAY WITH A DESIGN SPEED LESS THAN 50 MPH, THE MINIMUM OFFSET IS 4 FT. FROM THE TRAVELED WAY.
   B. FOR A ONE-WAY ONE-LANE RAMP, AND WHERE ONE OR MORE OF THE FOLLOWING ARE TRUE:
      (1) THE NON-OFFSET GUARDRAIL BEGINS AT LEAST 100 FT. BEYOND RAMP NOSE.
      (2) THE NON-OFFSET GUARDRAIL IS NOT LOCATED ON THE RAMP EXIT OR ENTRANCE CURVE CONNECTION TO THE MAJOR HIGHWAY.
      (3) THE RAMP SHOULDERS ARE 4 FT. OR WIDER.

   USE OF GREATER THAN MINIMUM OFFSET DIMENSIONS IS ENCOURAGED TO MEET THE DESIRABLE GOAL OF PLACING THE GUARDRAIL AS FAR AS POSSIBLE FROM THE TRAVEL WAY, EVEN FOR SHORT DISTANCES, WHILE PROVIDING A SMOOTH CHANGE IN GUARDRAIL ALIGNMENT.
5. IF 2 FT. CANNOT BE PROVIDED BETWEEN THE BACK OF THE GUARDRAIL POST AND THE BREAKPOINT, USE 7 FT. GUARDRAIL POSTS. REFER TO THE "RESTRICTIVE ROADSIDE INSTALLATION" DETAIL.
6. WHEN SPECIFIED ON THE PLANS, INSTALL 4 IN. HIGH TYPE 6 CURB WITH ITS FACE AT OR BEHIND THE RAIL FACE. AS AN ALTERNATIVE WHEN SPECIFIED ON THE PLANS, INSTALL A 2 IN. x 6 IN. TREATED (AASHTO M 133) WOOD CURB. FASTEN WITH A 4 IN. LAG BOLT AND WASHER AT EACH WOOD POST, OR WITH A 1#4 IN. DIA. BOLT WITH WASHER AND NUT AT EACH STEEL POST. IF THE 2 IN. x 6 IN. WOOD CURB IS SPECIFIED, IT WILL BE INCLUDED IN THE COST OF THE GUARDRAIL. IF APPROVED BY THE ENGINEER, A 2 IN. x 4 IN. TREATED WOOD CURB MAY BE SUBSTITUTED FOR THE 2 IN. x 6 IN. CURB AND SET ON TOP OF PAVEMENT SURFACE AND ATTACHED AS DESCRIBED ABOVE. NO SPLICING SHALL BE ALLOWED IN WOOD CURBS. ADJACENT BOARDS SHALL BE BUTTED TOGETHER AND BOLTED AT A POST LOCATION. JOINTS SHALL BE LOCATED AT THE POSTS.



SECTION A-A

LEAVE-OUT AREA FOR GUARDRAIL POSTS LOCATED IN PAVEMENT

NOTE: LEAVE-OUT AREAS SHALL BE PROVIDED FOR ALL GUARDRAIL POSTS LOCATED IN PAVEMENT TO ALLOW THE POSTS TO ROTATE IN THEIR EMBEDMENT SUCH THAT VEHICLE IMPACT LOADS ARE DISTRIBUTED THROUGH THE POST INTO THE EMBEDMENT MATERIAL PRIOR TO THE POSTS BREAKING PREMATURELY.

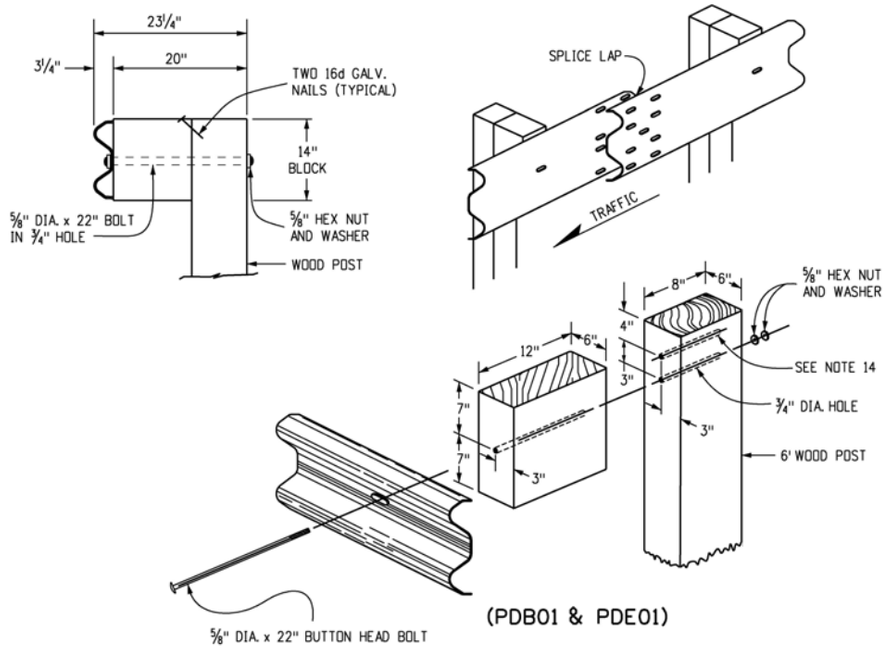
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Designer Initials: JBK	(R-X)	03/05/20	Revised Gen. Note 1 to show MASH compliant.
Last Modification Date: 03/05/20	(R-X)		
Detailer Initials: LTA	(R-X)		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	(R-X)		

Colorado Department of Transportation
2829 West Howard Place
CDOT HQ, 3rd Floor
Denver, CO 80204
Phone: 303-757-9021 FAX: 303-757-9868
Project Development Branch JBK

MIDWEST
GUARDRAIL SYSTEM (MGS)
TYPE 3 W-BEAM 31 INCHES

Issued by the Project Development Branch: July 31, 2019

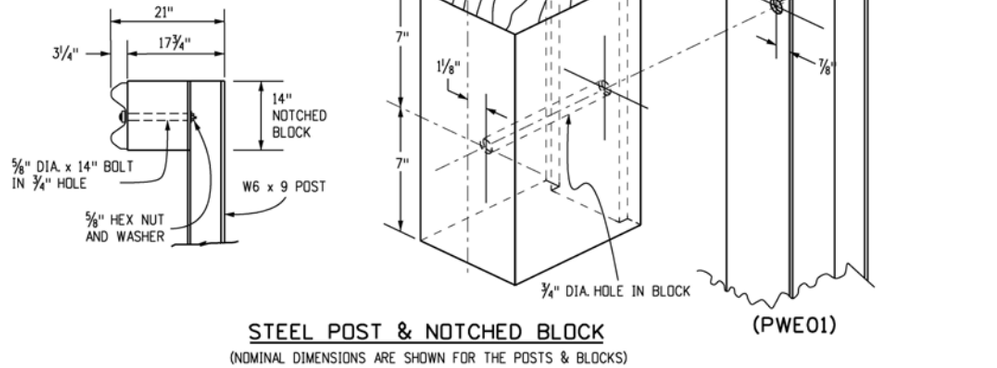
STANDARD PLAN NO.
M-606-1
Standard Sheet No. 1 of 19
Project Sheet Number:



(PDB01 & PDE01)

WOOD POST & BLOCK

(NOMINAL DIMENSIONS ARE SHOWN FOR THE POSTS & BLOCKS)



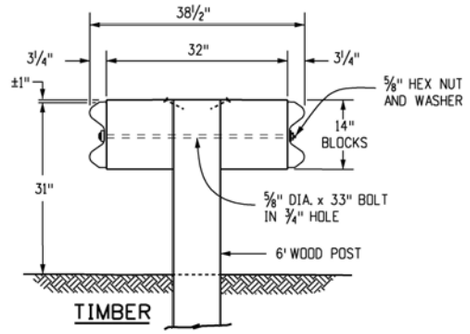
(PWE01)

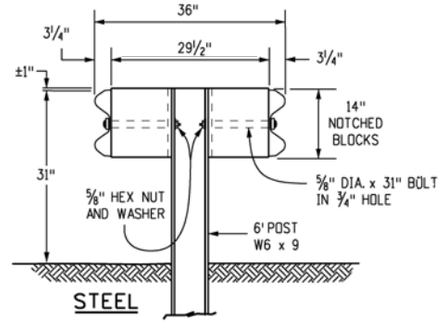
STEEL POST & NOTCHED BLOCK

(NOMINAL DIMENSIONS ARE SHOWN FOR THE POSTS & BLOCKS)

GENERAL NOTES (CONTINUED FROM SHEET 1)

7. SEE SHEETS 7 AND 9 FOR CURB TREATMENTS AT GUARDRAIL TERMINALS.
8. IF THIS DIMENSION WILL BE LESS THAN 28 INCHES, RESET GUARDRAIL HEIGHT TO 28 INCHES OR ABOVE.
9. ALL W-BEAM SPLICES, AND SPLICES OF TERMINAL CONNECTORS TO W-BEAM SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC UNLESS OTHERWISE NOTED IN THE PLANS OR BY THE MANUFACTURER.
10. MATERIAL TYPE AND SHAPE OF POSTS AND BLOCKS SHALL BE THE SAME THROUGHOUT THE PROJECT EXCEPT WHEN SPECIFIC POSTS AND BLOCKS ARE SPECIFIED, i.e. AT END ANCHORAGES AND BOX CULVERTS.
11. WHEN SPECIFIED IN THE CONTRACT, 7 FT. POSTS SHALL BE INSTALLED INSTEAD OF THE STANDARD 6 FT. POSTS. THE 7 FT. POSTS SHALL BE MARKED WITH THE NUMBER 7 TO ENSURE PERMANENT INDENTIFICATION. STEEL POSTS SHALL BE STAMPED PRIOR TO GALVANIZING. THE NUMBER 7 SHALL BE A MINIMUM 2 IN. TALL AND LOCATED AS SHOWN ON THE ELEVATION VIEW ON SHEET 1.
12. THE STANDARD 3 IN. X 1¾ IN. X 5/16 IN. RECTANGULAR WASHER USED UNDER POST BOLT HEADS IN THE PAST MAY REMAIN IN EXISTING INSTALLATIONS BUT SHALL NOT BE USED IN NEW CONSTRUCTION, REPAIRS, OR RESETTING OF RAIL, EXCEPT WHEN SPECIFICALLY IDENTIFIED ON THE STANDARD PLAN.
13. STANDARD GALVANIZED ROUND STEEL WASHERS SHALL BE USED UNDER ALL NUTS IN CONTACT WITH WOOD POSTS.
14. AN ADDITIONAL HOLE SHALL BE PROVIDED IN THE POSTS TO FACILITATE FUTURE RAISING OF THE RAIL ELEMENTS AND BLOCKS FOR OVERLAYS. POSTS PROVIDED MAY ALSO HAVE ADDITIONAL HOLES (UP TO 4 PER FLANGE) FOR MEDIAN GUARDRAIL APPLICATION.
15. RETROREFLECTOR TABS SHALL BE INSTALLED AT 25 FT. INTERVALS (SEE SHEETS 6 AND 8 FOR EXCEPTIONS). RETROREFLECTOR TABS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK. THE TABS SHALL BE INSTALLED ON SPLICE BOLTS, NOT ON POST BOLTS AND SHALL BE MOUNTED SO THE BOLT SLOT FACES AWAY FROM TRAFFIC, AND THE RETROREFLECTOR SURFACE FACES THE APPROACHING TRAFFIC FOR ONE-WAY ROADS. FOR TWO-WAY ROADS, BOTH SIDES OF THE TABS SHALL BE RETROREFLECTIVE, SO THAT DELINEATION IS PROVIDED FOR BOTH DIRECTIONS OF TRAVEL. THE RETROREFLECTIVE SHEETING COLOR SHALL MATCH THE COLOR OF THE ADJACENT TRAVEL WAY EDGE LINE. SEE THE RETROREFLECTOR TAB DETAIL ON SHEET 3.
16. AT THE TIME OF INSTALLATION, WOOD POSTS OR BLOCKS WITH SEASONING CHECKS GREATER THAN ¼ IN. SHALL NOT BE USED WHEN THE CHECK EXTENDS THE FULL LENGTH OF THE PIECE.
17. WOOD BLOCKS SHALL BE CUT FROM THE SAME CROSS-SECTION, SPECIES, AND GRADE, AND SHALL RECEIVE THE SAME PRESERVATIVE TREATMENT AS THE POSTS WHEN WOOD POSTS ARE USED.
18. REFERENCES SUCH AS "PDB01", "PDE01", AND "PWE01" IN THIS STANDARD PLAN SPECIFY HARDWARE DETAILS FROM "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE" PREPARED BY THE AASHTO-AGC-ARTBA JOINT COOPERATIVE COMMITTEE.
19. RAIL BLOCKS MANUFACTURED FROM SYNTHETIC MATERIAL WILL BE ACCEPTED AS ALTERNATIVES TO WOOD BLOCKS FOR USE WITH STEEL POSTS PROVIDED THAT THE BLOCKS HAVE RECEIVED FHWA APPROVAL.
20. WOOD POSTS SHALL BE MADE OF TIMBER WITH AN EXTREME FIBER STRESS IN BENDING OF 1200 PSI STRESS GRADING AND POST DIMENSIONS SHALL CONFORM WITH THE RULES OF THE WEST COAST INSPECTION BUREAU, OR THE SOUTHERN PINE BUREAU, OR THE WESTERN WOOD PRODUCTS ASSOCIATION. TIMBER FOR POSTS SHALL BE EITHER ROUGH SAWN (UNPLANED) OR S4S (SURFACED FOUR SIDES) WITH NOMINAL DIMENSIONS INDICATED. ONLY ONE TYPE OF SURFACE FINISH SHALL BE USED FOR POSTS AND BLOCKS IN ANY ONE CONTINUOUS LENGTH OF GUARDRAIL.
21. GLULAM POSTS AND BLOCKS WILL BE ACCEPTED AS ALTERNATIVES PROVIDED THAT THE SUPPLIED MATERIALS HAVE RECEIVED FHWA APPROVAL AND ARE CERTIFIED AS IDENTICAL TO THE SPECIMENS USED FOR TESTING AND APPROVAL.
22. PRESSURE TREATMENT OF POSTS AND BLOCKS SHALL CONFORM TO AASHTO M 133 EXCEPT THAT BLOCKS NEED NOT BE INCISED. PRESERVATION ASSAY RETENTION REPORTS SHALL BE SUBMITTED TO THE ENGINEER. THE CONTRACTOR SHALL CERTIFY THAT THE SPECIES AND GRADE MEET THE REQUIREMENTS OF THE CONTRACT.
23. W-BEAM AND THRIE-BEAM GUARDRAIL POSTS SHALL BE MANUFACTURED USING AASHTO M 270 (ASTM A 709) GRADE 36 STEEL UNLESS CORROSION RESISTANT STEEL IS REQUIRED, IN WHICH CASE THE POST SHALL BE MANUFACTURED FROM AASHTO M 270 (ASTM A 709) GRADE 50W STEEL. THE DIMENSIONS OF THE CROSS-SECTION SHALL CONFORM TO A W6 X 9 SECTION AS DEFINED IN AASHTO M 160 (ASTM A 6). W6 X 8.5 WIDE FLANGE STEEL POSTS ARE AN ACCEPTABLE ALTERNATIVE TO THE W6 X 9.
24. AFTER THE SECTION IS CUT AND ALL HOLES ARE DRILLED OR PUNCHED THE COMPONENT SHALL BE ZINC-COATED CONFORMING TO AASHTO M 111 (ASTM A 123) UNLESS CORROSION-RESISTANT STEEL IS USED. WHEN CORROSION-RESISTANT STEEL IS USED THE PORTION OF THE POST TO BE EMBEDDED IN SOIL SHALL BE ZINC-COATED CONFORMING TO AASHTO M 111 (ASTM A 123) AND THE PORTION ABOVE THE SOIL SHALL NOT BE ZINC-COATED, PAINTED OR OTHERWISE TREATED.
25. FIELD MODIFICATION TO RAIL ELEMENTS IS ALLOWED PER MANUFACTURER'S RECOMMENDATIONS, OR WITH THE APPROVAL OF THE STANDARDS AND SPECIFICATIONS UNIT. POSTS SHALL NOT BE MODIFIED. COMPONENTS ON WHICH THE SPELTER COATING HAS BEEN DAMAGED SHALL BE EITHER REGALVANIZED OR RECOATED IN CONFORMANCE WITH AASHTO M 36, OR PAINTED WITH ONE FULL BRUSH COAT OF ZINC RICH PAINT CONFORMING TO MILITARY SPECIFICATION DOD-P-21035A.





DOUBLE BLOCK AND GUARDRAIL TYPE 3 (DOUBLE) FOR MEDIAN BARRIER

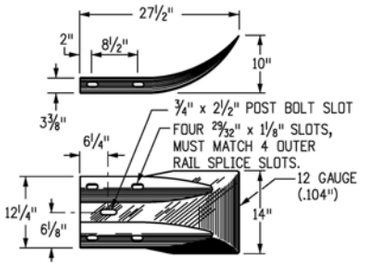
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Creation Date: 07/31/19		Date:	Comments
Designer Initials: JBK	(R-X)		
Last Modification Date: 03/05/20	(R-X)		
Detailer Initials: LTA	(R-X)		
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MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES

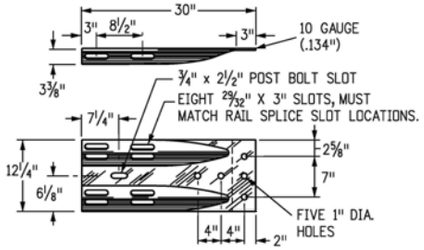
Issued by the Project Development Branch: July 31, 2019

STANDARD PLAN NO.
M-606-1
Standard Sheet No. 2 of 19
Project Sheet Number:

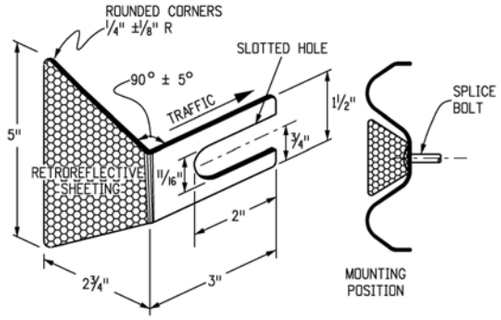


(RWE01a)

TERMINAL SECTION (FLARED)

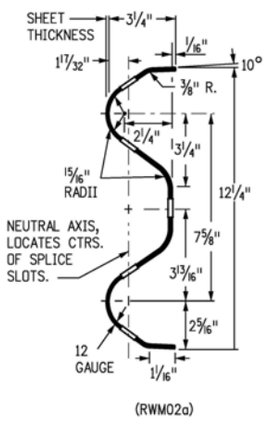


TERMINAL SECTION (CONNECTOR)



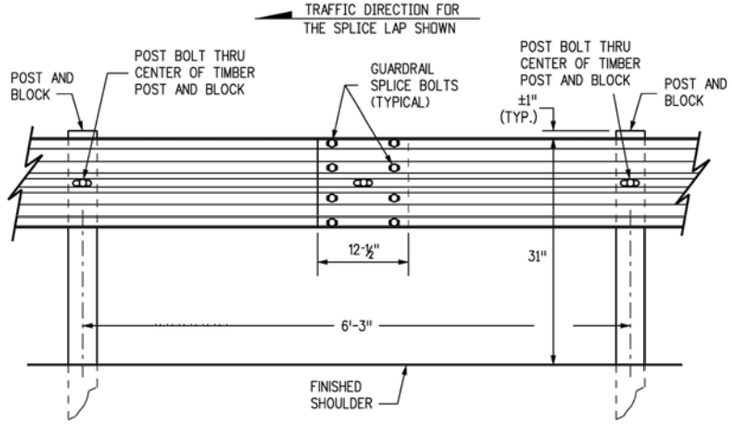
RETROREFLECTOR TAB

NOTE: RETROREFLECTOR TABS SHALL BE MANUFACTURED FROM 12 TO 14 GAUGE STEEL AND SHALL CONFORM TO THE REQUIREMENTS OF S STANDARD S-612-1.



(RWM02a)

W-BEAM RAIL SECTION

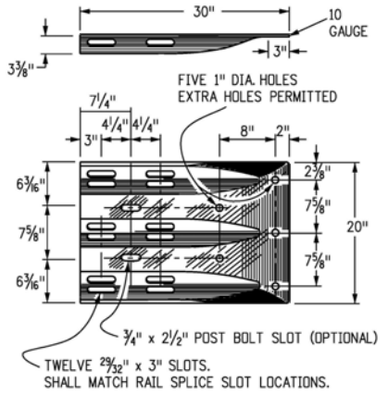


W-BEAM RAIL SPLICE

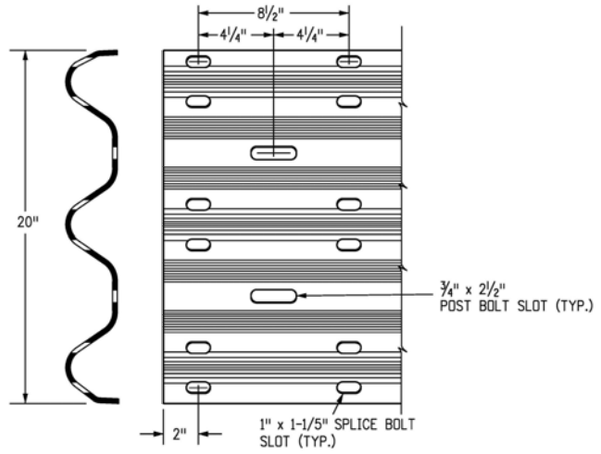
PART	MATERIAL SPEC.	GALVANIZING SPEC.	CORROSION-RESISTANT SPEC.
W-BEAM RAIL & TERMINAL SECTIONS	AASHTO M 180, CLASS A OR B	AASHTO M 180, TYPE 1 OR 2	AASHTO M 180, TYPE 4
BASE PLATE	ASTM A 36	AASHTO M 111	N.A.
NUTS, BOLTS & STUDS FOR GENERAL USE	ASTM A 307	AASHTO M 232, CLASS C OR ASTM B 695 CLASS 50 TYPE 1	
HIGH STRENGTH BOLTS & NUTS	ASTM A 325		
HIGH STRENGTH STUDS & NUTS	ASTM A 449		
ROUND STEEL WASHERS	ASTM F 436		
RECTANGULAR WASHERS	AASHTO M 180		
OTHER FITTINGS	ASTM A 36	AASHTO M 111	

THE TABULATION OF GUARDRAIL WILL SPECIFY THE TYPE OF CORROSION PROTECTION: GALVANIZED OR CORROSION - RESISTANT STEEL.

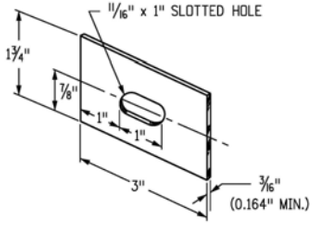
STEEL POSTS SHALL HAVE THE SAME CORROSION PROTECTION AS SPECIFIED FOR THE METAL BEAM RAIL. PUNCHING, DRILLING, CUTTING, OR WELDING OF POSTS WILL NOT BE PERMITTED AFTER GALVANIZING.



THRIE BEAM TERMINAL SECTION (CONNECTOR)



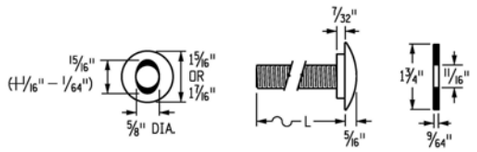
THRIE BEAM DETAIL



(FWR03)

RECTANGULAR WASHER

(TO BE USED ONLY WHERE SPECIFIED.)



BUTTON HEAD BOLT WITH OVAL SHOULDER

WASHER

HEX NUT

DIAMETER & TYPE (INCHES)	12" BLOCKS L = LENGTH (INCHES)	THREAD LENGTH (INCHES)	INTENDED USE	AASHTO-AGC-ARTBA STANDARD NUMBER	NO. BOLTS, NUTS & WASHERS
⅝	1¼	FULL (1 1/32)	ALL RAIL SPLICES	FBB01	8 PER SPLICE*
BUTTONHEAD OVAL SHLDR.	22	MIN. 2½	SINGLE BLOCK & POST (TIMBER)	FBB04	1 PER POST
	33	MIN. 2	DOUBLE BLOCK & POST (TIMBER)	FBB05	1 PER POST
	14	MIN. 2	FASTEN NOTCHED BLOCK TO STEEL POST	FBB03	1 PER BLOCK
WASHERS NOT USED AT RAIL SPLICES					

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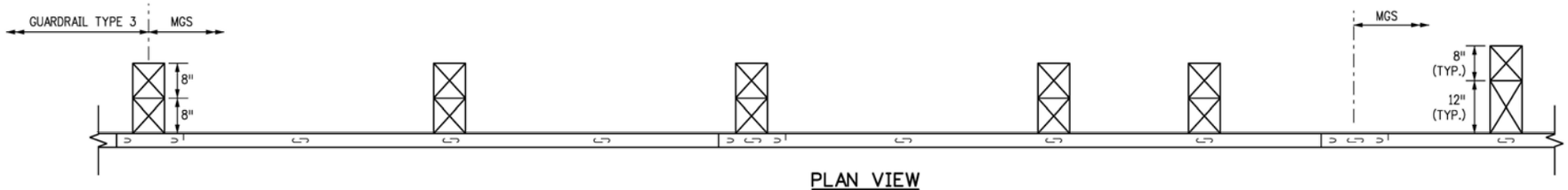
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES

Issued by the Project Development Branch: July 31, 2019

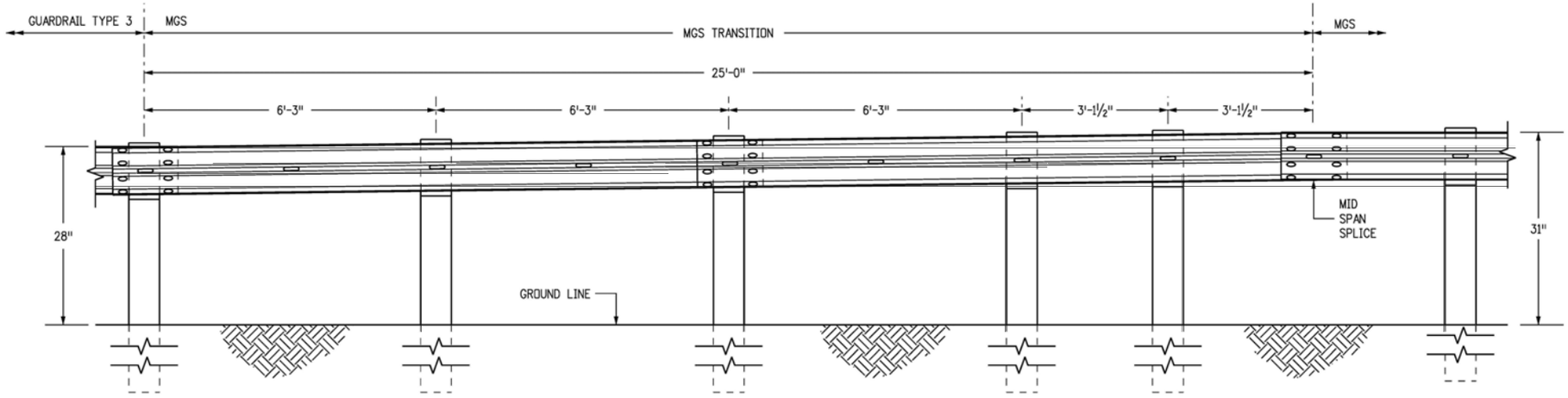
STANDARD PLAN NO.
M-606-1
Standard Sheet No. 3 of 19
Project Sheet Number:

NOTES

1. THE MGS TRANSITION FROM A TYPE 3 GUARDRAIL SHALL BE COMPLETED OUTSIDE THE MGS END ANCHORAGE LIMITS.

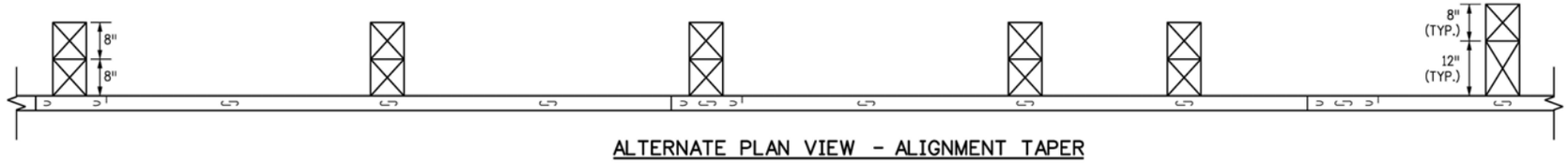


PLAN VIEW



ELEVATION VIEW

TRANSITION FROM 28 INCH GUARDRAIL TO 31 INCH MGS



ALTERNATE PLAN VIEW - ALIGNMENT TAPER

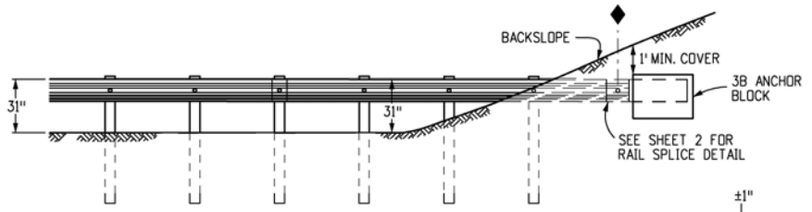
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MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES

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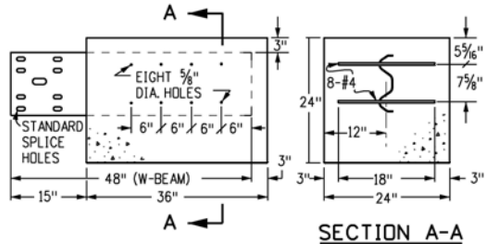
STANDARD PLAN NO.
M-606-1
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Project Sheet Number:



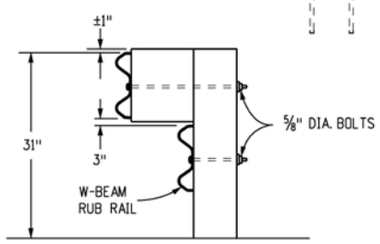
SEE TYPE 3B (RUB RAIL) PLAN VIEW FOR ALIGNMENT. THE 100 FT. FLARE LENGTH MAY BE SHORTENED IF THE SLOPE IS LESS THAN 8 FT. WIDE.

END ANCHORAGE TYPE 3B

(MAX. 10:1 AND NO ROADSIDE DITCH AT GUARDRAIL)



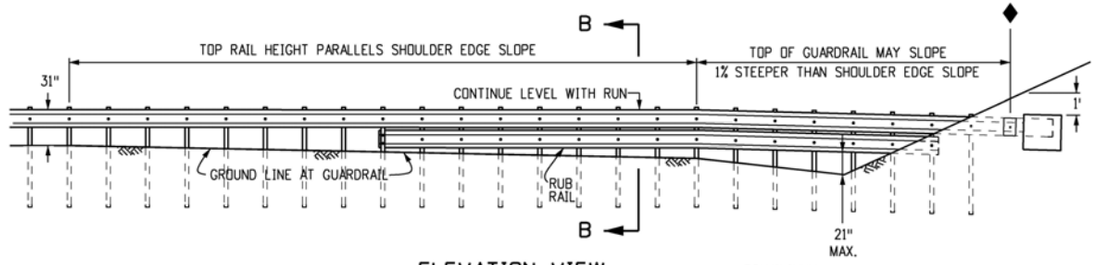
TYPE 3B ANCHOR BLOCK DETAIL



SECTION B-B

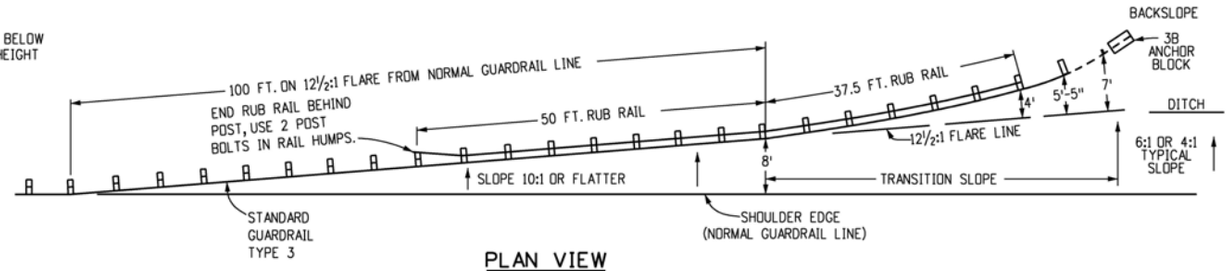
MOUNT A W-BEAM RUB RAIL 1-1/2 IN. BELOW THE TOP RAIL WHEN THE TOP RAIL HEIGHT EXCEEDS 33 IN. ABOVE THE GROUND

SECTION A-A



ELEVATION VIEW

(MAXIMUM 4:1 FORSLOPE)

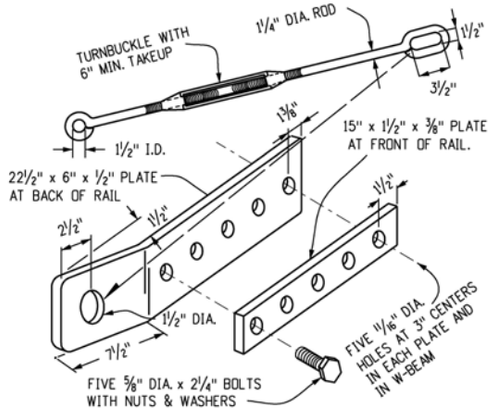


PLAN VIEW

END ANCHORAGE TYPE 3B (RUB RAIL)

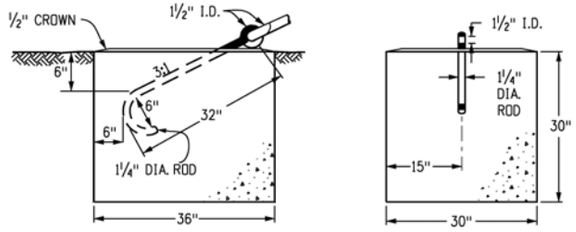
(WITH ROADSIDE DITCH AT GUARDRAIL)

◆ END OF GUARDRAIL PAY LENGTH



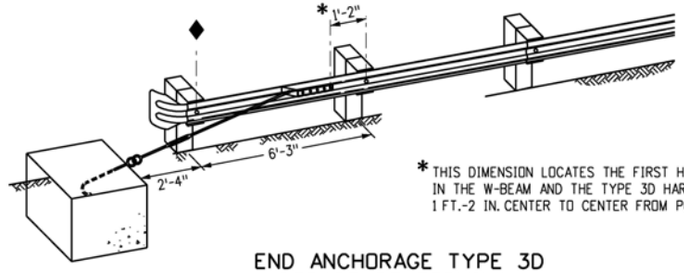
TYPE 3D HARDWARE DETAILS

NOTE: ALL PARTS SHALL BE GALVANIZED



FRONT END

TYPE 3D ANCHOR BLOCK DETAIL



* THIS DIMENSION LOCATES THE FIRST HOLE IN THE W-BEAM AND THE TYPE 3D HARDWARE. 1 FT.-2 IN. CENTER TO CENTER FROM POST BOLT HOLE.

END ANCHORAGE TYPE 3D DEPARTURE TERMINAL

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MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES

Issued by the Project Development Branch: July 31, 2019

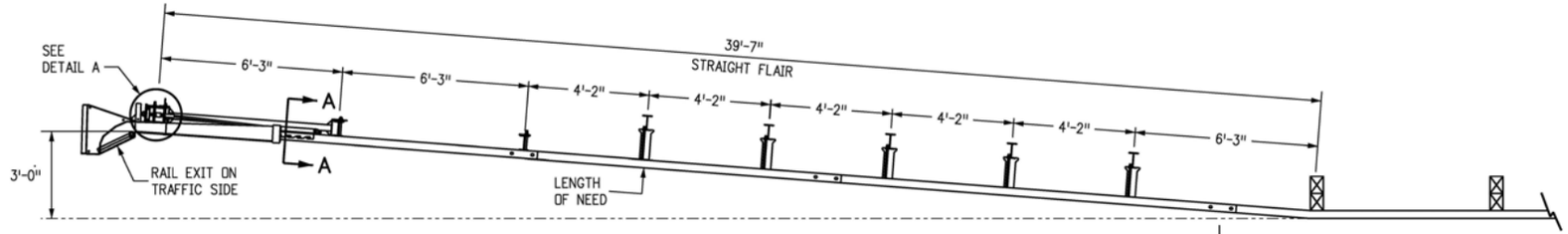
STANDARD PLAN NO. M-606-1

Standard Sheet No. 5 of 19

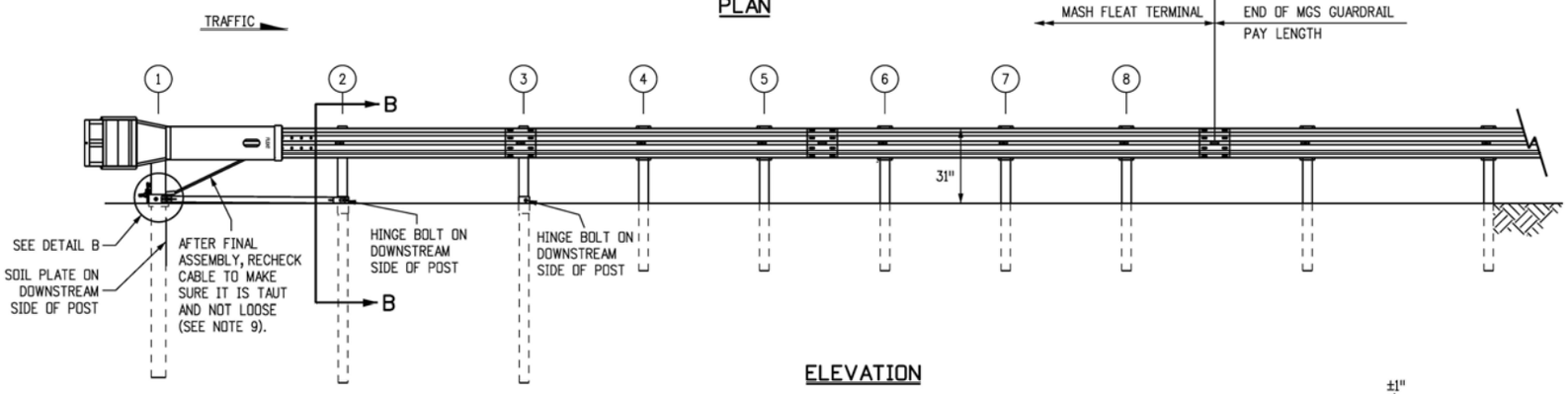
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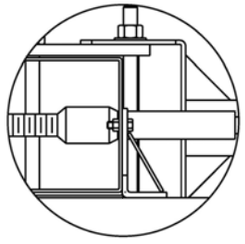
OFFSET NOTES

1. POST OFFSET DIMENSIONS ARE GIVEN TO THE CENTER OF THE TRAFFIC FACE OF POSTS.
2. THE GUARDRAIL BETWEEN POST (1) THRU (8) IS ON A STRAIGHT LINE FLARE.

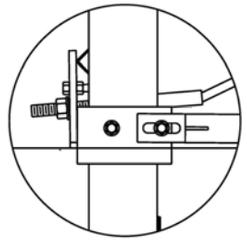


PLAN



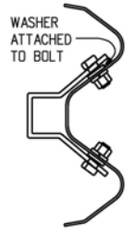


DETAIL A
IMPACT HEAD CONNETION

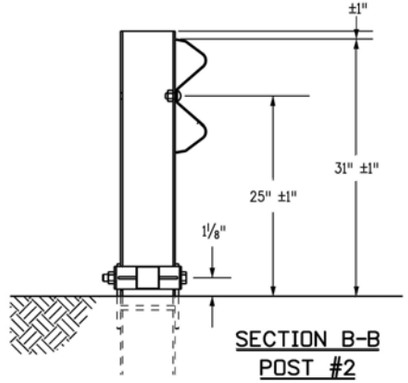


DETAIL B
POST #1 CONNECTION

ELEVATION



SECTION A-A
ANCHOR BRACKET



SECTION B-B
POST #2

NOTES

1. THE END ANCHORAGE (FLARED) SHALL BE THE MFLEAT TERMINAL, AS MANUFACTURED BY ROAD SYSTEMS INC. (TELEPHONE #: 432-263-2435). ONE END ANCHORAGE (FLARED) SHALL INCLUDE ALL POST, RAIL, AND ALL HARDWARE ITEMS REQUIRED FOR A COMPLETE UNIT. THE END ANCHORAGE (FLARED) SHALL BE INSTALLED CONFORMING TO THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL PROVIDE A COPY OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND PARTS LIST TO THE ENGINEER PRIOR TO INSTALLATION OF THE DEVICE.
2. RETROREFLECTOR TABS SHALL NOT BE USED ON END ANCHORAGE POSTS.
3. DELINEATION SHALL BE APPLIED TO THE END PIECE, AND SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.
4. AESTHETIC TREATMENT OPTIONS MAY BE AVAILABLE WITH PRIOR APPROVAL OF THE PROJECT ENGINEER. CONTACT THE MANUFACTURER FOR APPROVED AESTHETIC TREATMENT OPTIONS.
5. ALL BOLTS, NUTS, CABLE ASSEMBLIES, CABLE ANCHORS AND BEARING PLATES SHALL BE GALVANIZED.
6. THE LOWER SECTIONS OF THE POSTS 1, 2, AND 3 SHALL NOT PROTRUDE MORE THAN 4 INCHES ABOVE THE GROUND (MEASURED ALONG A 5 FOOT CORD). SITE GRADING MAY BE NECESSARY TO MEET THIS REQUIREMENT.
7. THE LOWER SECTIONS OF THE HINGED POSTS SHOULD NOT BE DRIVEN WITH THE UPPER POST ATTACHED. IF THE POST IS PLACED IN A DRILLED HOLE, THE BACKFILL MATERIAL MUST BE SATISFACTORILY COMPACTED TO PREVENT SETTLEMENT.
8. WHEN COMPETENT ROCK IS ENCOUNTERED, A 12 INCH DIA. POST HOLE, DRILLED 20 INCHES DEEP INTO THE ROCK SURFACE SHALL BE USED IF APPROVED BY THE ENGINEER FOR POSTS 1 AND/OR 2. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE, APPROXIMATELY 2.5 INCHES DEEP TO PROVIDE DRAINAGE. THE FIRST AND/OR SECOND POST SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH SUITABLE BACKFILL. THE SOIL PLATE MAY BE TRIMMED IF REQUIRED.
9. THE BREAKAWAY CABLE ASSEMBLY SHALL BE TAUT. A LOCKING DEVICE (VICE GRIPS OR CHANNEL LOCK PLIERS) SHOULD BE USED TO PREVENT THE CABLE FROM TWISTING WHEN TIGHTENING NUTS.

MFLEAT TERMINAL

(MASH CERTIFIED)

END ANCHORAGES (FLARED)

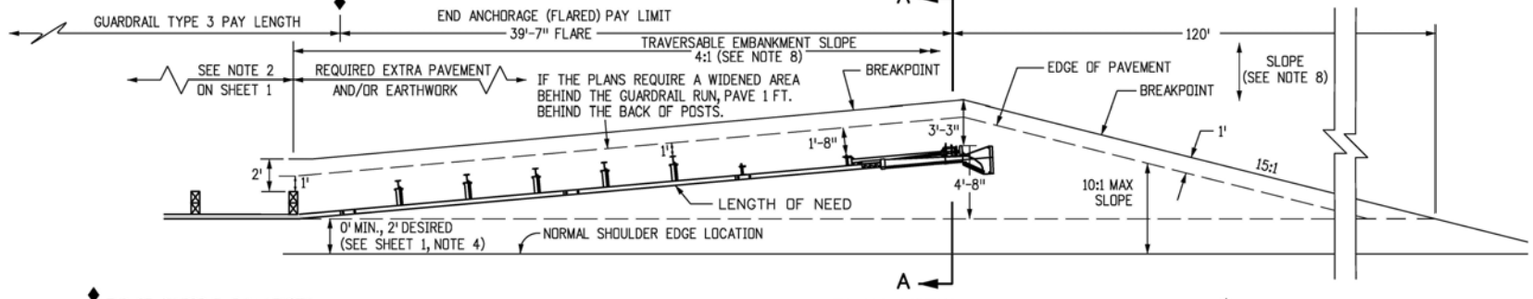
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Designer Initials: JBK	(R-X)	03/05/20	Replaced the SRT-31 and FLEAT 350 flared terminals with the MFLEAT flared terminal to be MASH compliant.
Last Modification Date: 03/05/20	(R-X)		
Detailer Initials: LTA	(R-X)		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	(R-X)		

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MIDWEST
GUARDRAIL SYSTEM (MGS)
TYPE 3 W-BEAM 31 INCHES

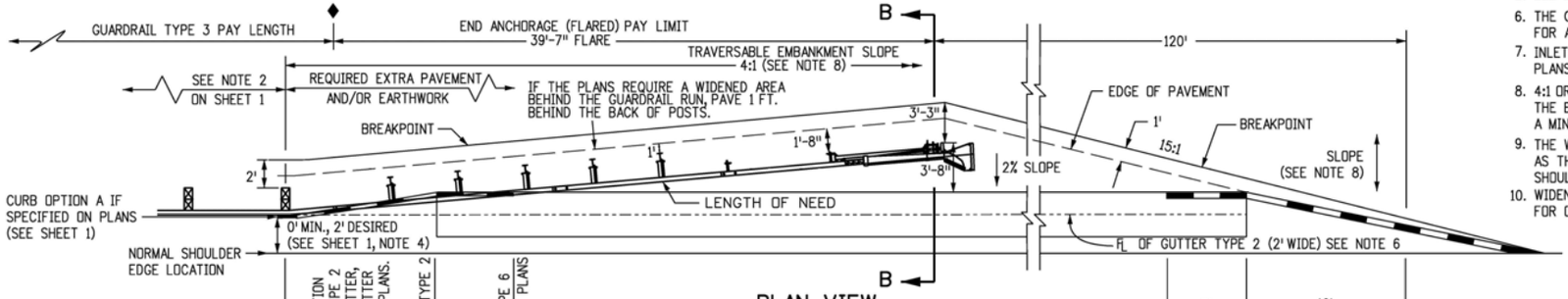
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STANDARD PLAN NO.
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Standard Sheet No. 6 of 19
Project Sheet Number:

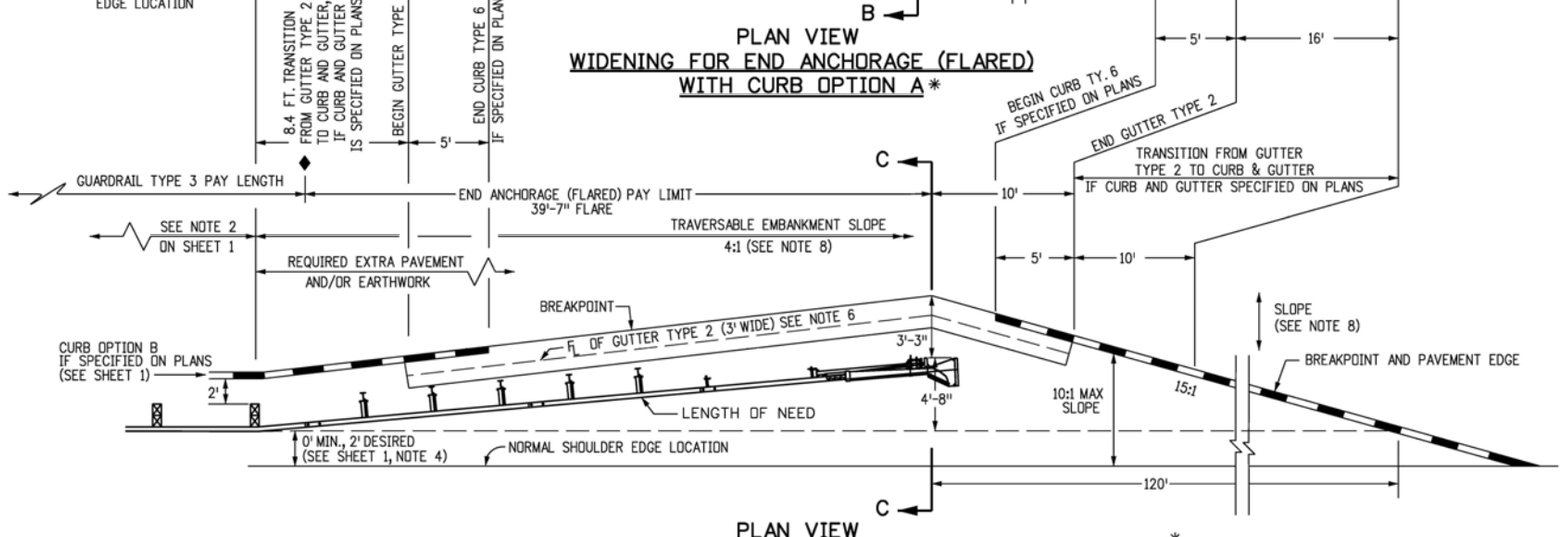


PLAN VIEW
WIDENING FOR END ANCHORAGE (FLARED) *

* THIS PLAN VIEW SHOWS ONLY THE SRT-31. THE FLEAT-350 USES THE SAME WIDENING DETAILS.



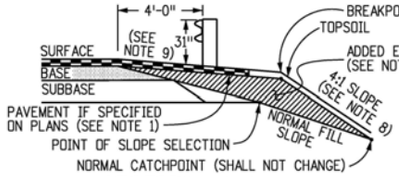
PLAN VIEW
WIDENING FOR END ANCHORAGE (FLARED)
WITH CURB OPTION A *



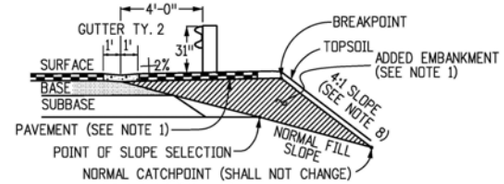
PLAN VIEW
WIDENING FOR END ANCHORAGE (FLARED) WITH CURB OPTION B *

NOTES

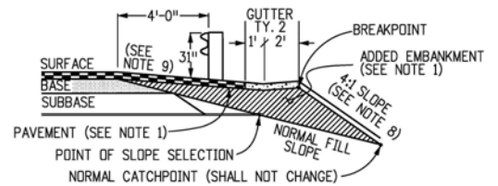
1. PAYMENT FOR THE ADDED EMBANKMENT (APPROXIMATELY 45 CU. YDS.) FOR THE FLARE SHALL BE AS FOLLOWS:
   A. UNDER PAY ITEM 203 WHEN THE CONTRACT PLAN INCLUDES PAY ITEM 203
   B. INCLUDED IN THE COST OF THE END ANCHORAGE (FLARED) WHEN THE CONTRACT PLANS DO NOT INCLUDE PAY ITEM 203. THE ADDED EMBANKMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH SUBSECTION 203.07, AASHTO T 99.
2. WHEN THE WIDENED AREA IS PAVED, PAYMENT FOR THE PAVEMENT (APPROX. 70 SQ. YDS.) SHALL BE AS FOLLOWS:
   A. UNDER PAY ITEM 403 OR 412 WHEN THE CONTRACT PLAN INCLUDES PAY ITEM 403 OR 412
   B. INCLUDED IN THE COST OF THE END ANCHORAGE (FLARED) WHEN THE CONTRACT PLAN DOES NOT INCLUDE PAY ITEM 403 OR 412 (SEE SHEET 1, NOTE 2 FOR PAVEMENT TYPES)
3. CONCRETE PAVED AREAS SHALL HAVE THEIR TAPERED ENDS SQUARED OFF AS DIRECTED BY THE ENGINEER.
4. WHEN OVERLAY PAVING, THE FINISHED SURFACE AT EACH POST SHALL NOT BE ABOVE THE TOP BREAKAWAY HOLE OR STRUT ASSEMBLY. THE WIDENED AREA AT THE FLARED END ANCHORAGE SHOULD NOT BE OVERLAYED UNLESS PAVEMENT CONDITIONS WARRANT IT BEING OVERLAYED. ANY OVERLAY PAVEMENT ABUTTING THE FLARED END ANCHORAGE SHALL BE TAPERED TO PREVENT A DROP IN THE PAVED SURFACE BELOW THE RAIL.
5. SEE SHEETS 1, 2, 3, AND 5 FOR STANDARD TYPE 3 GUARDRAIL INSTALLATION DETAILS.
6. THE COST OF THE GUTTER WILL BE PAID FOR AS "GUTTER TYPE 2 (2 FT.)" FOR A LENGTH OF 134 FT. OR "GUTTER TY. 2 (3 FT.)" FOR A LENGTH OF 40 FT.
7. INLETS OR RUNDOWNS MAY BE USED INSTEAD OF THE GUTTER IF SPECIFIED ON THE PLANS. NO ADDITIONAL CURB SHALL BE ADDED IN THE VICINITY OF THE END ANCHORAGE.
8. 4:1 OR FLATTER SLOPES IN THE TRAVERSABLE AREA SHALL BE USED BEHIND THE END ANCHORAGE, AND IN ADVANCE OF POST (1) IF THIS IS NOT POSSIBLE, A MINIMUM 3:1 SLOPE MAY BE USED IF APPROVED BY THE ENGINEER.
9. THE WIDENED AREA, EXCEPT FOR CURB OPTION A, SHALL HAVE THE SAME GRADING AS THE ADJACENT GUARDRAIL: 10:1 OR FLATTER IF MORE THAN 2 FT. FROM SHOULDER OR SLOPE EQUAL TO ROADWAY SLOPE IF 2 FT. OR LESS FROM SHOULDER.
10. WIDENING FOR END ANCHORAGES SHALL BE PAVED ON INTERSTATES AND FREEWAYS. FOR OTHER HIGHWAYS, PAVING SHALL BE AS SHOWN ON THE PLANS.



SECTION A-A



SECTION B-B



SECTION C-C

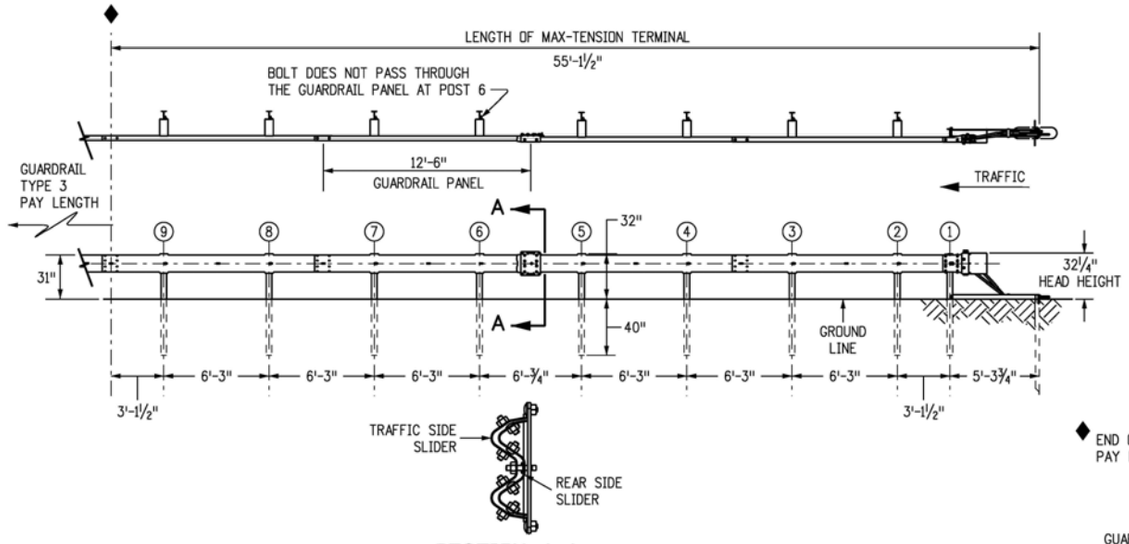
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Designer Initials: JBK	(R-X)	03/05/20	Replaced the old end anchorage drawings with the new MELEAT end anchorage drawing.
Last Modification Date: 03/05/20	(R-X)		
Detailer Initials: LTA	(R-X)		
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MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES

Issued by the Project Development Branch: July 31, 2019

STANDARD PLAN NO.
M-606-1
Standard Sheet No. 7 of 19
Project Sheet Number:



SECTION A-A

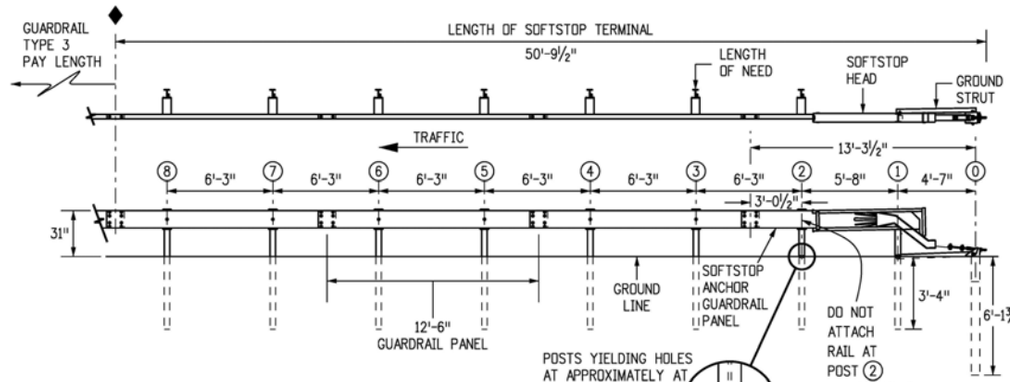
MAX-TENSION TERMINAL END ANCHORAGE (NONFLARED)

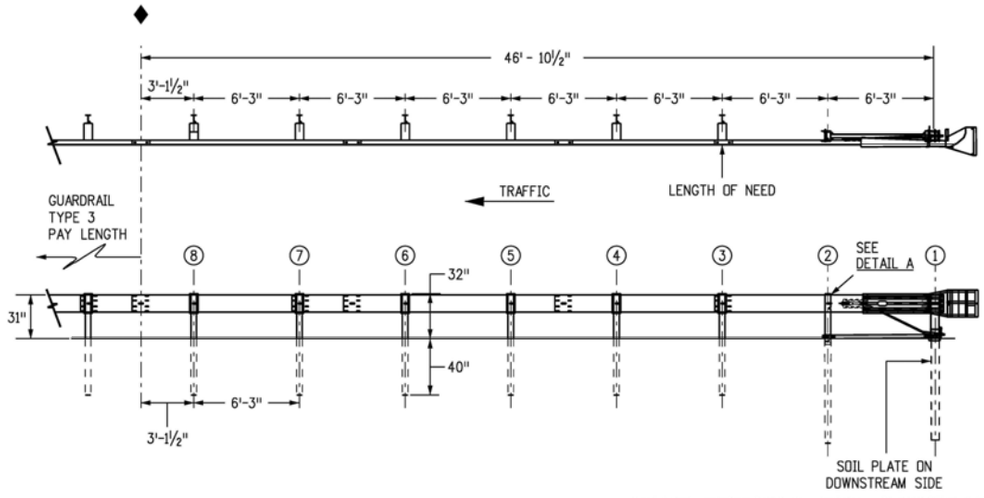
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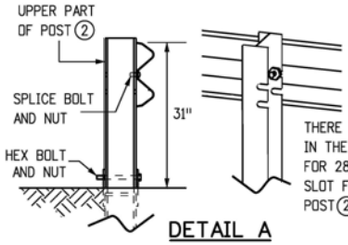
NOTES FOR NONFLARED

1. THE END ANCHORAGE (NONFLARED) SHALL EITHER BE THE SOFTSTOP AS MANUFACTURED BY TRINITY INDUSTRIES, INC. (TEL. #: 1-888-356-2363), OR THE MAX-TENSION AS MANUFACTURED BY LINDSAY TRANSPORTATION SOLUTIONS (TEL. #: 402-829-6800), OR THE MSKT AS MANUFACTURED BY ROAD SYSTEMS, INC. (TEL. #: 432-263-2435). THE END ANCHORAGE (NONFLARED) SHALL INCLUDE ALL POST, RAIL, AND HARDWARE ITEMS REQUIRED FOR A COMPLETE UNIT. THE END ANCHORAGE (NONFLARED) SHALL BE INSTALLED CONFORMING TO THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL PROVIDE A COPY OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND PARTS LIST TO THE ENGINEER PRIOR TO THE INSTALLATION OF THE DEVICE.
2. DO NOT ATTACH THESE END ANCHORAGES DIRECTLY TO A RIGID BARRIER (EX. CONCRETE BARRIER, STEEL BARRIER, CONCRETE STRUCTURE) WITHOUT A PROPER TRANSITION.
3. CONNECTIONS TO W-BEAMS WHERE THE SPLICE IS NOT AT MID-SPAN BUT AT A POST CAN BE MADE USING A 3'-1½", 9'-4½", OR 15'-7½" W-BEAM PANEL DOWNSTREAM OF TRAFFIC.
4. FOR MSKT END ANCHORAGES (NONFLARED), USE THE MANUFACTURER'S SPECIFIED STEEL FOUNDATION TUBES FOR POSTS (1) AND (2).
5. RETROREFLECTOR TABS SHALL NOT BE USED ON END ANCHORAGE POSTS.
6. DELINEATION SHALL BE APPLIED TO THE END PIECE AND SHALL NOT BE PAID FOR SEPARATELY BUT BE INCLUDED IN THE COST OF THE WORK. SEE STANDARD PLAN S-612-1.

END OF GUARDRAIL PAY LENGTH

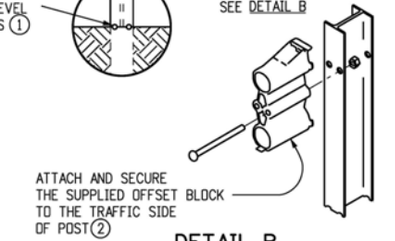






DETAIL A

THERE ARE TWO SETS OF OPEN-ENDED SLOTS IN THE UPPER PART OF POST (2). THESE ARE FOR 28" AND 31" RAIL HEIGHTS. USE THE TOP SLOT FOR THE 31" MSKT TERMINAL. INSTALL POST (2) WITH THE SLOTS FACING POST (1)



DETAIL B

MSKT TERMINAL END ANCHORAGE (NONFLARED)

(MASH CERTIFIED)

SOFTSTOP TERMINAL END ANCHORAGE (NONFLARED)

(MASH CERTIFIED)

END ANCHORAGES (NONFLARED)

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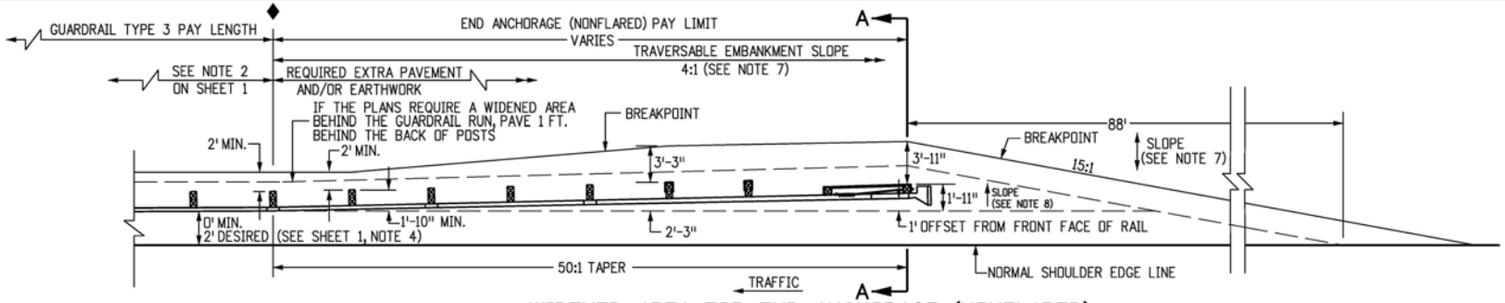
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES

Issued by the Project Development Branch: July 31, 2019

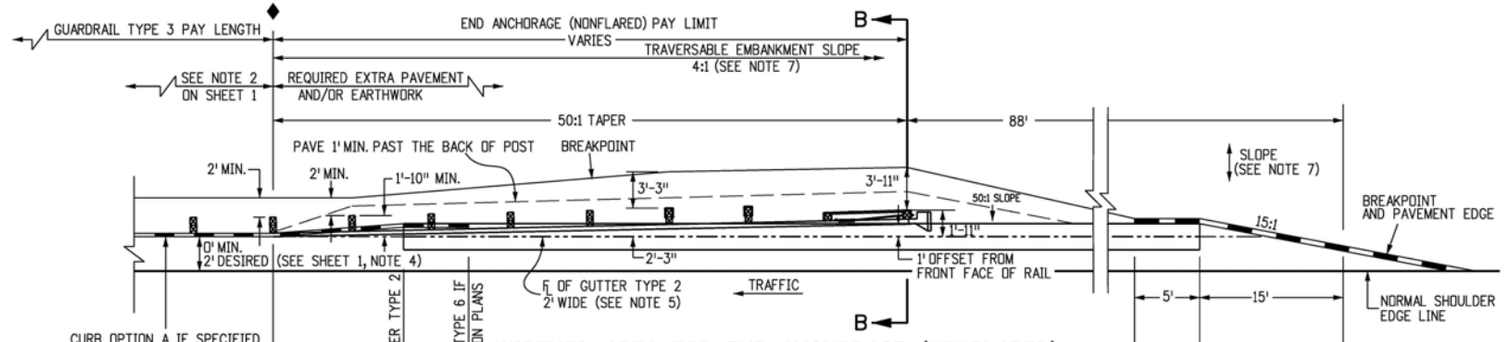
STANDARD PLAN NO. M-606-1

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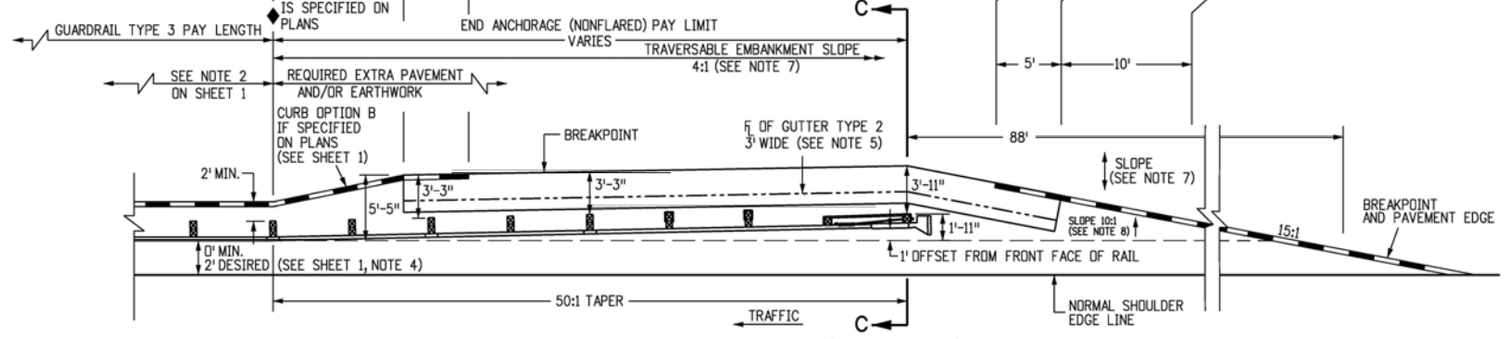
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WIDENED AREA FOR END ANCHORAGE (NONFLARED)
PLAN VIEW



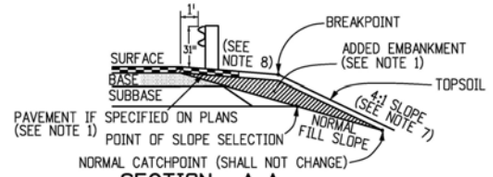
WIDENED AREA FOR END ANCHORAGE (NONFLARED)
WITH CURB OPTION A
PLAN VIEW



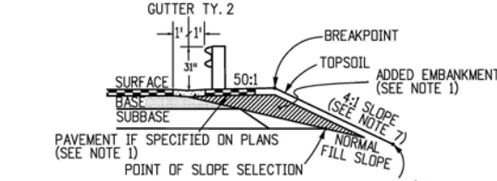
WIDENED AREA FOR END ANCHORAGE (NONFLARED) WITH CURB OPTION B
PLAN VIEW

NOTES

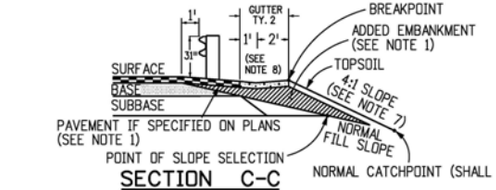
1. PAYMENT FOR THE ADDED EMBANKMENT (APPROXIMATELY 25 CU. YDS.) FOR THE FLARE SHALL BE AS FOLLOWS:
   A. UNDER PAY ITEM 203 WHEN THE CONTRACT PLAN INCLUDES PAY ITEM 203.
   B. INCLUDED IN THE COST OF THE END ANCHORAGE (NONFLARED) WHEN THE CONTRACT PLANS DOES NOT INCLUDE PAY ITEM 203. THE ADDED EMBANKMENT SHALL BE BE CONSTRUCTED IN ACCORDANCE WITH SUBSECTION 203.07, AASHTO T 99.
2. WHEN THE WIDENED AREA IS PAVED, PAYMENT FOR THE PAVEMENT (APPROX. 39 SQ. YDS.) SHALL BE AS FOLLOWS:
   A. UNDER PAY ITEM 403 OR 412 WHEN THE CONTRACT PLAN INCLUDES PAY ITEM 403 OR 412.
   B. INCLUDED IN THE COST OF THE END ANCHORAGE (NONFLARED) WHEN THE CONTRACT PLAN DOES NOT INCLUDE PAY ITEM 403 OR 412, (SEE SHEET 1, NOTE 2 FOR PAYMENT TYPES).
3. WHEN OVERLAY PAVING, THE FINISHED SURFACE AT EACH POST SHALL NOT BE ABOVE THE TOP BREAKWAY HOLE OR STRUT ASSEMBLY. THE WIDENED AREA AT THE END ANCHORAGE (NONFLARED) SHALL NOT BE OVERLAYED UNLESS PAVEMENT CONDITIONS WARRANT IT BEING OVERLAYED. ANY OVERLAY PAVEMENT ABUTTING THE END ANCHORAGE (NONFLARED) SHALL BE TAPERED TO PREVENT A DROP IN THE PAVED SURFACE BELOW THE RAIL.
4. SEE SHEETS 1, 2, 3, AND 5 FOR STANDARD TYPE 3 GUARDRAIL INSTALLATION DETAILS.
5. THE COST OF THE GUTTER WILL BE PAID FOR AS "GUTTER TYPE 2 (2 FT.)" FOR A LENGTH OF 111 FT., OR "GUTTER TY. 2 (3 FT.)" FOR A LENGTH OF 50 FT.
6. INLETS OR RUNDOWNS MAY BE USED INSTEAD OF THE GUTTER IF SPECIFIED ON THE PLANS. NO ADDITIONAL CURB SHALL BE ADDED IN THE VICINITY OF THE END TREATMENT.
7. 4:1 OR FLATTER SLOPES IN THE TRAVERSABLE AREA SHALL BE USED BEHIND THE END ANCHORAGE AREA, AND IN ADVANCE OF POST (1) IF THIS IS NOT POSSIBLE A MINIMUM 3:1 SLOPE MAY BE USED IF APPROVED BY THE ENGINEER.
8. THE WIDENED AREA, EXCEPT FOR CURB OPTION A, SHALL HAVE THE SAME GRADING AS BENEATH THE ADJACENT GUARDRAIL: 10:1 OR FLATTER IF MORE THAN 2 FT. FROM SHOULDER, OR SLOPE EQUAL TO ROADWAY SLOPE IF 2 FT. OR LESS FROM SHOULDER.
9. WIDENING FOR END ANCHORAGES SHALL BE PAVED ON INTERSTATES AND FREEWAYS. FOR OTHER HIGHWAYS, PAVING SHALL BE AS SHOWN ON THE PLANS.



SECTION A-A



SECTION B-B



SECTION C-C

Computer File Information		Sheet Revisions	
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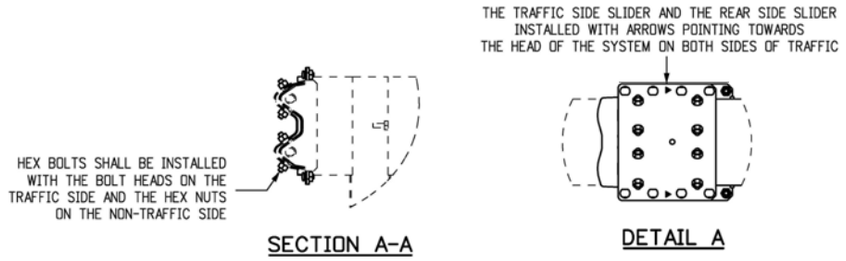
MIDWEST
GUARDRAIL SYSTEM (MGS)
TYPE 3 W-BEAM 31 INCHES

Issued by the Project Development Branch: July 31, 2019

STANDARD PLAN NO.
M-606-1
Standard Sheet No. 9 of 19
Project Sheet Number:

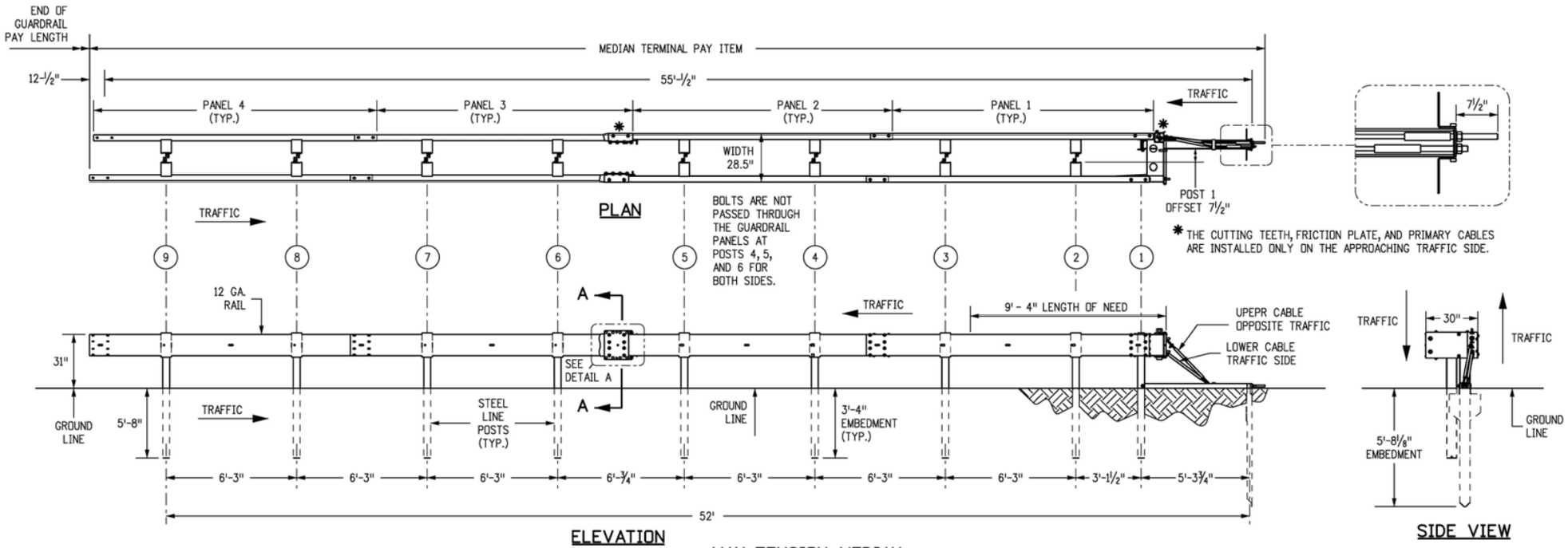
MEDIAN TERMINAL NOTES

1. THE MEDIAN TERMINAL SHALL BE THE MAX-TENSION MEDIAN AS MANUFACTURED BY BY BARRIER SYSTEM BY LINDSAY (LINDSAY TRANSPORTATION SOLUTIONS) (TEL #: 888 800-3691).
2. THE MAX-TENSION SHALL BE APPLIED DIRECTLY TO W-BEAM GUARDRAIL SYSTEMS AT, OR TRANSITIONED TO, 31 INCH WITH PANELS AND POST SPACING CONFIGURED AT MID-SPAN SPLICE. TRANSITIONS TO STRONG POST W-BEAM GUARDRAIL SYSTEMS OR OTHER BARRIERS WHERE THE SPLICE IS NOT MID-SPAN SHALL BE ACCOMPLISHED USING A 3 FT. 1-1/2 INCH, 9 FT. 4-1/2 INCH OR 15 FT. 7-1/2 INCH PANELS AFTER THE MAX-TENSION SYSTEM (MIN. OF 50 FT. DOWNSTREAM OF THE FIRST POST). TRANSITIONS TO OTHER BARRIER SYSTEMS SHALL ALSO BE AT A MIN. OF 50 FT. DOWNSTREAM FROM THE FIRST POST. SEE SHEET 4.
3. THE MAX-TENSION SHALL NOT BE ATTACHED DIRECTLY TO RIGID BARRIERS SUCH AS CONCRETE BARRIERS, STEEL BARRIERS OR CONCRETE STRUCTURES WITHOUT PROPER TRANSITION. IF ROCK OR STIFF SOIL IS ENCOUNTERED, THE POSTS AND SOIL ANCHOR MAY BE INSTALLED BY AUGURING AND BACKFILLING THE HOLE.
4. EITHER 8 INCH OR 12 INCH COMPOSITE OR TIMBER BLOCKOUTS SHALL BE USED PER MANUFACTURE'S RECOMMENDATIONS.
5. EITHER 12 FT.-6 INCH OR 25 FOOT PANELS SHALL BE USED DEPENDING ON SITE CONDITIONS OR CONNECTED BARRIER SYSTEMS.
6. RAIL PANELS SHALL BE LAPPED PER MANUFACTURER'S INSTALLATION MANUAL, REGARDLESS OF AN UPSTREAM OR DOWNSTREAM END SYSTEM POSITION.
7. ALL STEEL COMPONENTS SHALL BE GALVANIZED PER ASTM A123 OR EQUIVALENT UNLESS OTHERWISE STATED.
8. ONE MEDIAN TERMINAL SHALL INCLUDE ALL POSTS, RAIL, AND HARDWARE ITEMS REQUIRED FOR A COMPLETE UNIT. THE DEVICE SHALL BE INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S INSTRUCTIONS. THE CONTRACTOR SHALL PROVIDE A COPY OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND PARTS LISTS TO THE ENGINEER PRIOR TO THE INSTALLATION OF THE DEVICE.
9. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE MEDIAN TERMINAL SHALL BE INSTALLED FOR BIDIRECTIONAL TRAFFIC APPLICATION.
10. EACH INSTALLATION SHALL BE SUPERVISED AND CERTIFIED AS CORRECT UPON COMPLETION BY A REPRESENTATIVE OF THE DEVICE MANUFACTURER OR BY AN EMPLOYEE OF THE CONTRACTOR WHO IS A CERTIFIED INSTALLER. THE CERTIFIED INSTALLER SHALL HAVE COMPLETED DEVICE TRAINING AND SHALL BE REGISTERED WITH THE MANUFACTURER AS A CERTIFIED INSTALLER.
11. DELINEATION, IF REQUIRED, SHALL BE APPLIED TO THE END PIECE AND WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE WORK. SEE STANDARD PLAN S-612-1.



SECTION A-A

DETAIL A



MAX-TENSION MEDIAN

(MASH CERTIFIED)

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Last Modification Date: 03/05/20	(R-X)		
Detailer Initials: LTA	(R-X)		
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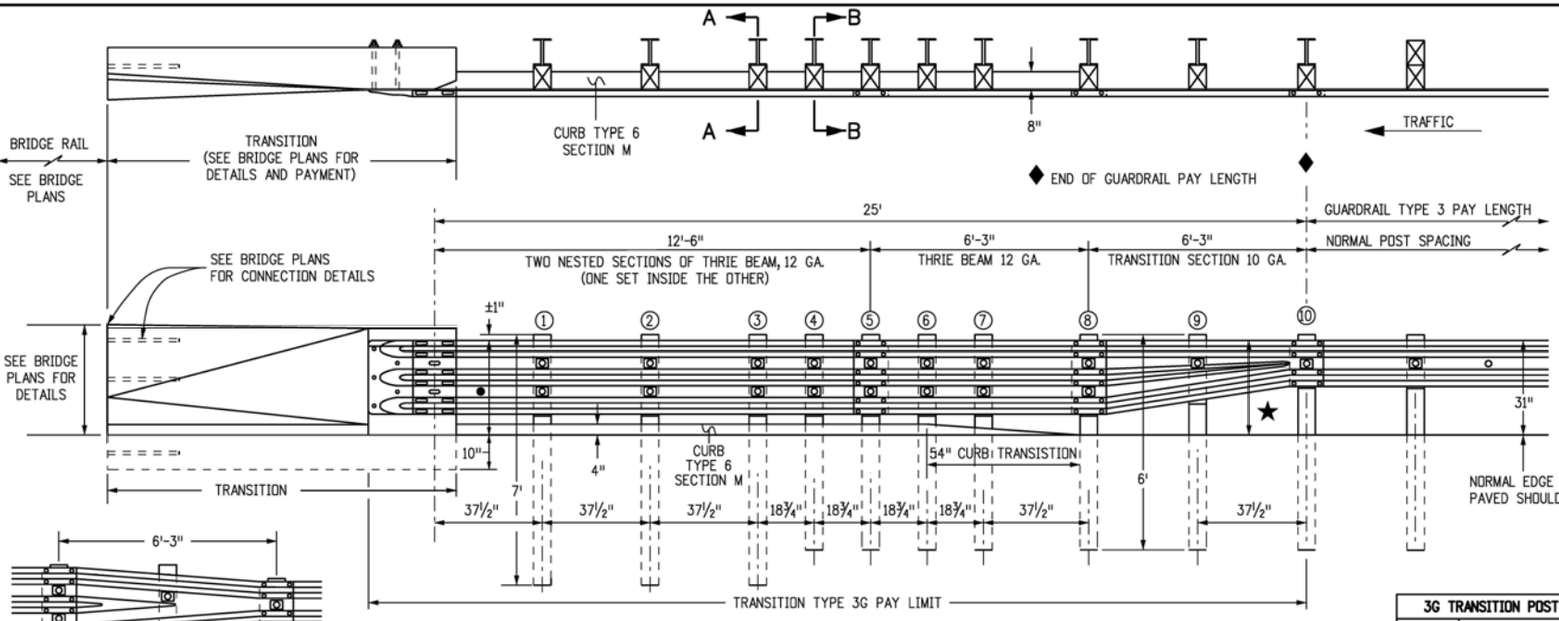
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES

Issued by the Project Development Branch: July 31, 2019

STANDARD PLAN NO. M-606-1

Standard Sheet No. 10 of 19

Project Sheet Number:

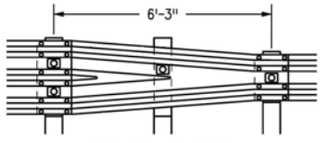


TRANSITION TYPE 3G

ALL POSTS SHALL BE STEEL

★ IF THE HEIGHT OF THE TRANSITION TYPES 3G OR 3H IS MORE THAN 31", THEN A SYMMETRICAL TRANSITION SECTION SHALL BE USED HERE.

● 31" FOR ASPHALT BRIDGE OVERLAY. 33.25" FOR POLYMER CONCRETE BRIDGE OVERLAY.

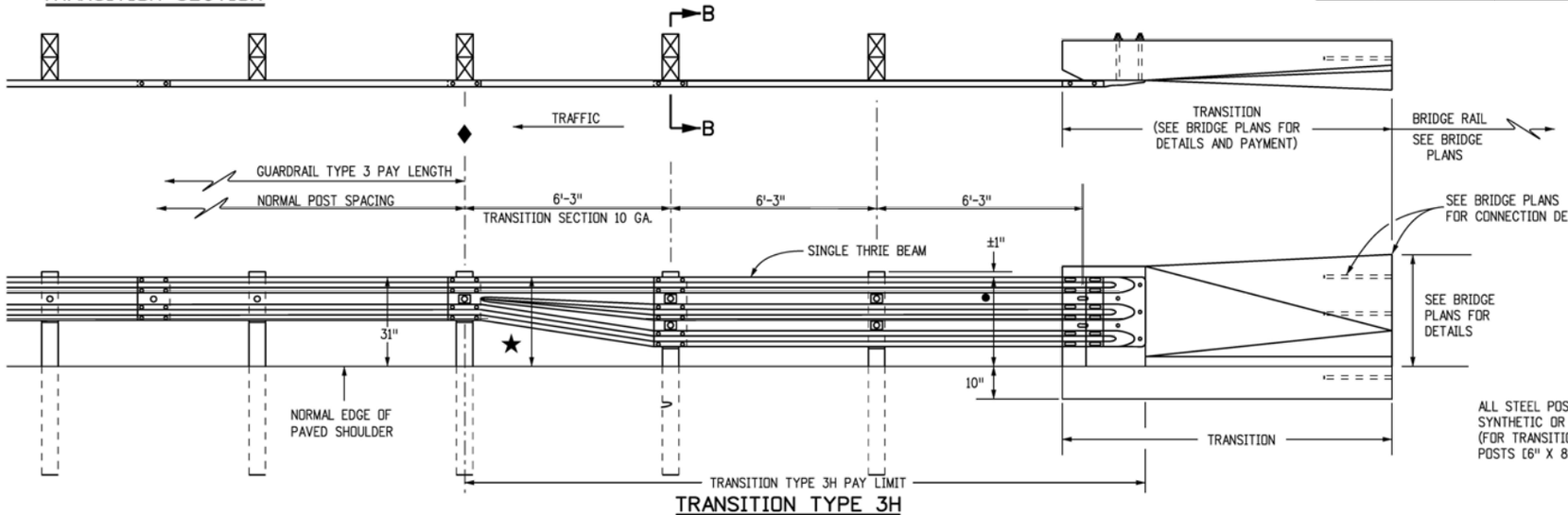


SYMMETRICAL TRANSITION SECTION

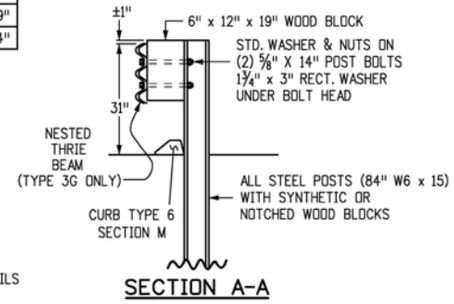
NOTES

1. TRANSITION TYPE 3G IS FOR USE AT BOTH ENDS OF BRIDGES ON TWO-WAY HIGHWAYS AND AT THE APPROACH END OF BRIDGES ON ONE-WAY HIGHWAYS.
2. TRANSITION TYPE 3H IS FOR USE AT THE TRAILING END OF BRIDGES ON ONE-WAY HIGHWAYS.
3. THE THRIE BEAM SECTION IN TRANSITION TYPES 3G AND 3H MAY BE SHOP BENT TO FIT CORRESPONDING RADIUS CURVES. HOWEVER, THE 6 FT.-3 IN. TRANSITION SECTION SHALL NOT BE BENT.
4. A TRANSITION SHALL BE REQUIRED BETWEEN TYPES 3G OR 3H AND THE BRIDGE RAILS. SEE STANDARD PLAN M-606-15 FOR THE TRANSITION TO TYPE 9 GUARDRAIL BARRIER.
5. TRANSITION TYPES 3G AND 3H ARE BOTH MASH COMPLIANT.
6. BACKUP PLATE IS NOT REQUIRED AT POSTS ON TYPE 3G AND 3H.
7. [o] THIS SYMBOL IN THE ELEVATION DRAWINGS SHOWS THE LOCATIONS WHERE A RECTANGULAR WASHER IS REQUIRED UNDER THE POST BOLT HEAD.
8. CURB TYPE 6 SECTION M, MAY BE ASPHALT OR CONCRETE. THE COST OF CURB IS INCLUDED IN THE WORK, UNLESS A SEPARATE PAY ITEM IS INCLUDED IN THE BID SCHEDULE.
9. FOR TYPE 3G, POSTS ① THRU ③ ARE 7 FT. LONG. ALL OTHER POSTS SHALL BE A STANDARD 6 FT. LONG UNLESS OTHERWISE SPECIFIED IN THE CONTRACT.
10. NOTCHED RAIL BLOCKS MANUFACTURED FROM SYNTHETIC MATERIAL WILL BE ACCEPTED AS ALTERNATIVES TO WOOD NOTCHED BLOCKS FOR USE WITH STEEL POSTS PROVIDED THAT THE BLOCKS HAVE RECEIVED FHWA APPROVAL AND ARE CERTIFIED AS IDENTICAL TO THE SPECIMENS USED FOR TESTING AND APPROVAL. STEEL BLOCKS ARE NOT ALLOWED.

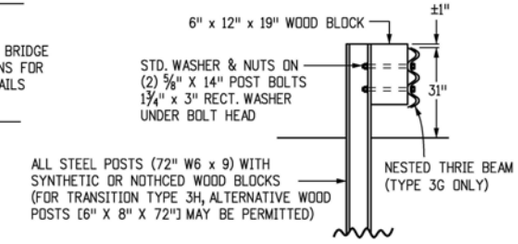
3G TRANSITION POST / BLOCK SIZING		
POST #	STEEL POST SIZE	BLOCKOUT SIZE
1 - 3	84" W6 X 15	6" X 12" X 19"
4 - 9	72" W6 X 9	6" X 12" X 19"
10	72" W6 X 9	6" X 12" X 14"



TRANSITION TYPE 3H



SECTION A-A



SECTION B-B

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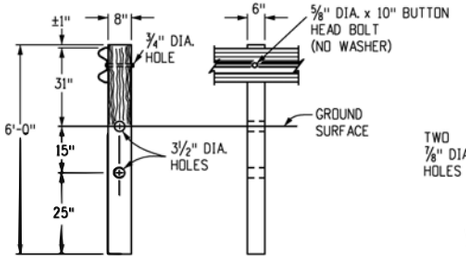
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Date:	Comments
03/05/20	Revised Gen. Notes 3 & 5. Revised transition sections notes to see the "Bridge Plans" and deleted their x-sections details. Revised the ★ note.

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Denver, CO 80204
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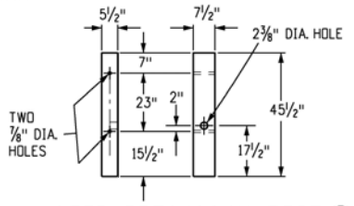
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES

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Standard Sheet No. 11 of 19
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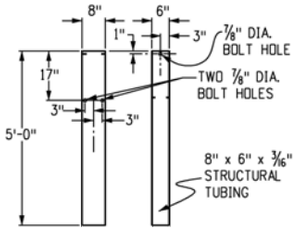
CONTROLLED RELEASING TERMINAL (CRT) POST ①



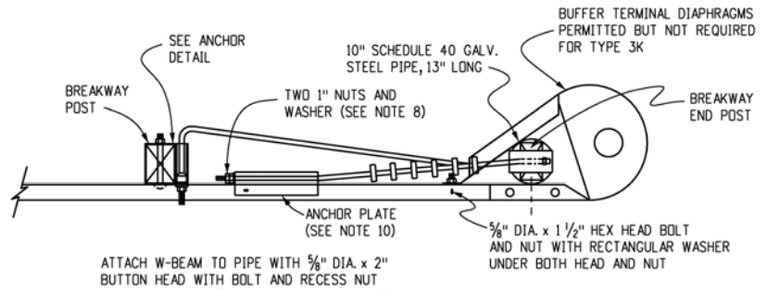
WOOD BREAKAWAY POST ②

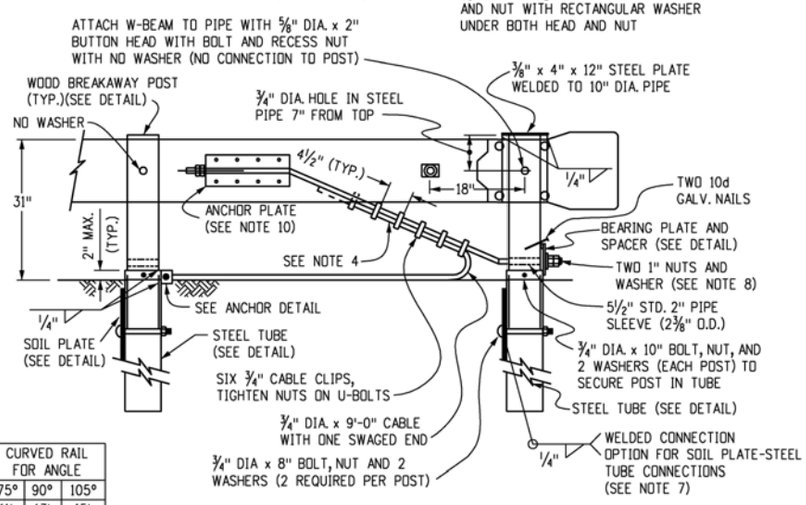
POST	DIMENSIONS	TYPE
①	6" x 8" x 6'	CRT
②	5 1/2" x 7 1/2" x 45 1/2"	BREAKAWAY

POSTS

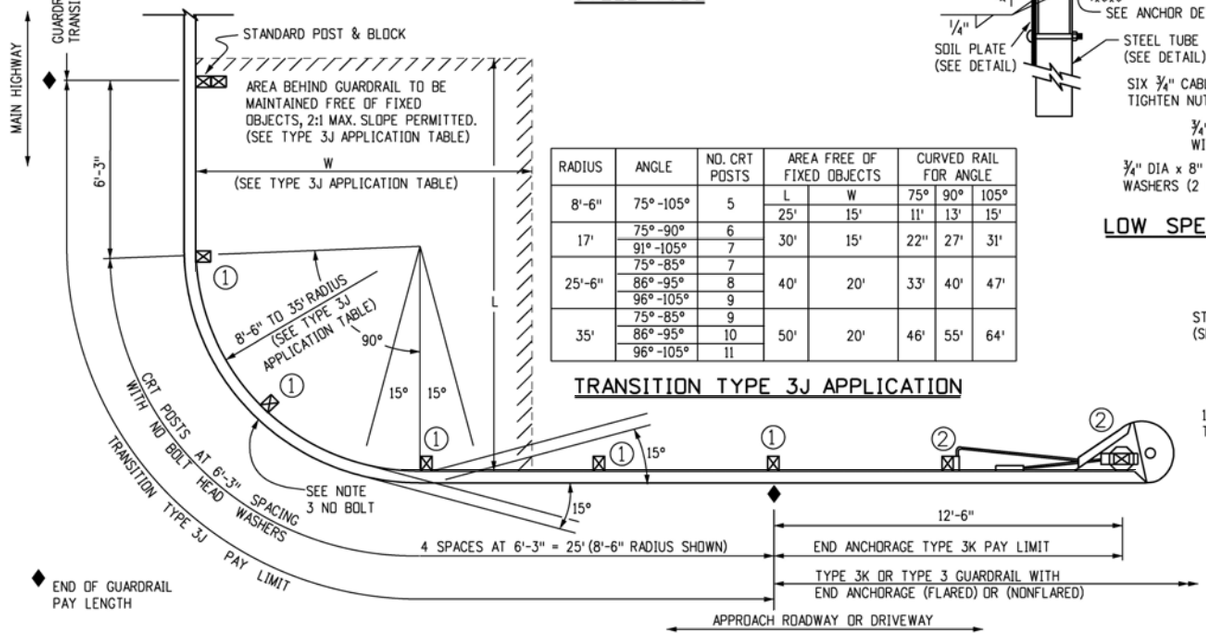


STEEL TUBE





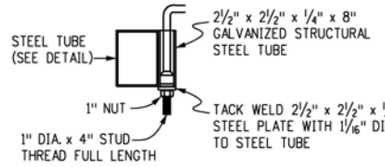
LOW SPEED END ANCHORAGE - TYPE 3K



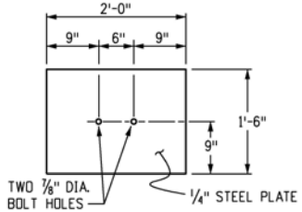
RADIUS	ANGLE	NO. CRT POSTS	AREA FREE OF FIXED OBJECTS		CURVED RAIL FOR ANGLE		
			L	W	75°	90°	105°
8'-6"	75°-105°	5	25'	15'	11'	13'	15'
17'	75°-90°	6	30'	15'	22"	27'	31'
	91°-105°	7					
25'-6"	75°-85°	7	40'	20'	33'	40'	47'
	86°-95°	8					
	96°-105°	9					
35'	75°-85°	9	50'	20'	46'	55'	64'
	86°-95°	10					
	96°-105°	11					

TRANSITION TYPE 3J APPLICATION

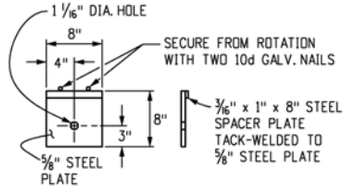
INTERSECTING ROADWAYS TRANSITION - TYPE 3J TRANSITION



ANCHOR DETAIL



SOIL PLATE



BEARING PLATE FOR STEEL TUBE

NOTES

1. APPLICATION: THE TRANSITION TYPE 3J MAY BE USED TO SHIELD HAZARDS AT THE INTERSECTION OF TWO ROADWAYS. TYPICAL APPLICATIONS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   A. CANAL SERVICE ROADS AT BRIDGE ENDS.
   B. INTERRUPTIONS IN GUARDRAIL RUNS BY INTERSECTING ROADWAYS, ETC.

   THE LOW SPEED (<45 MPH) END ANCHORAGE TYPE 3K SHALL BE USED ONLY ON DRIVEWAYS AND LOW SPEED SERVICE ROADS. ***END ANCHORAGE TYPE 3K IS NOT CRASHWORTHY.*** WHEN AN APPROVED CRASH-TESTED END TREATMENT IS REQUIRED, USE THE END ANCHORAGE (FLARED) OR (NONFLARED) WITH 37 FT.-6 IN. LENGTH.
2. GRADING AND PAVING FOR THE 3J & 3K SHALL MATCH THE GRADING AND PAVING OF THE GUARDRAIL TO WHICH THEY ARE ATTACHED, AND SHALL BE IN ACCORDANCE WITH SHEET ONE OF THIS STANDARD. MAXIMUM FILL SLOPE SHALL BE 2:1.
3. THE RAIL IS NOT BOLTED TO THE CRT POST AT THE CENTER OF THE CURVE FOR THE 8 FT.-6 IN., 17 FT., AND 25 FT.-6 IN. RADII. PLATES SHALL CONFORM TO ASTM A 36, AND THE STRUCTURAL TUBING TO ASTM A 500.
4. THE 3/4IN. GALVANIZED WIRE ROPE (CABLE) SHALL CONFORM TO AASHTO M 30 TYPE II.
5. PLATES SHALL CONFORM TO ASTM A 36, AND STRUCTURAL TUBING TO ASTM A 500. WELDING SHALL MEET ALL REQUIREMENTS OF THE AMERICAN WELDING SOCIETY.
6. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN CONFORMANCE WITH ASTM A 123. POSTS SHALL NOT BE PUNCHED, DRILLED, CUT, OR WELDED AFTER GALVANIZING.
7. WHEN THE SOIL PLATE WELDED OPTION IS SELECTED, SOIL PLATE CONNECTION BOLT HOLES ARE NOT REQUIRED.
8. OUTSIDE NUT SHALL BE TORQUED AGAINST INSIDE NUT WITH THE CABLE INSTALLED TAUT BETWEEN THE ANCHOR PLATE AND FIRST POST.
9. ALL CURVED GUARDRAIL SHALL BE SHOP BENT.
10. SEE SHEET 5 FOR ANCHOR PLATE AND OTHER DETAILS.
11. THE STEEL TUBE MAY BE DRIVEN WITH WOOD POST INSERTED IF NO DAMAGE OCCURS TO THE POST OR BOLTS.

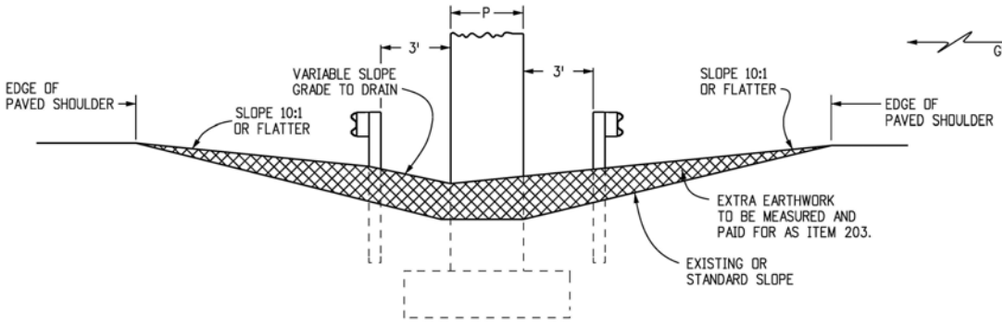
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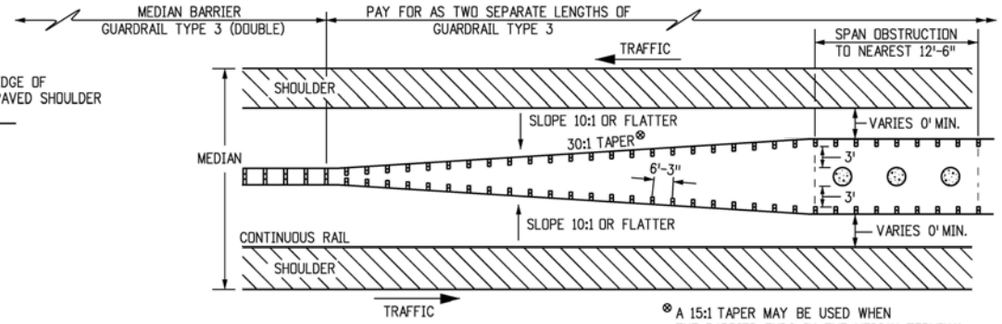
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES

Issued by the Project Development Branch: July 31, 2019

STANDARD PLAN NO.
M-606-1
Standard Sheet No. 12 of 19
Project Sheet Number:

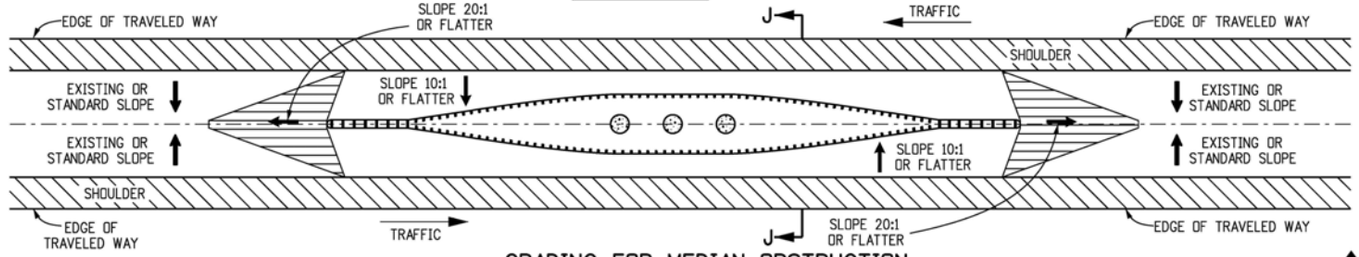


SECTION J-J

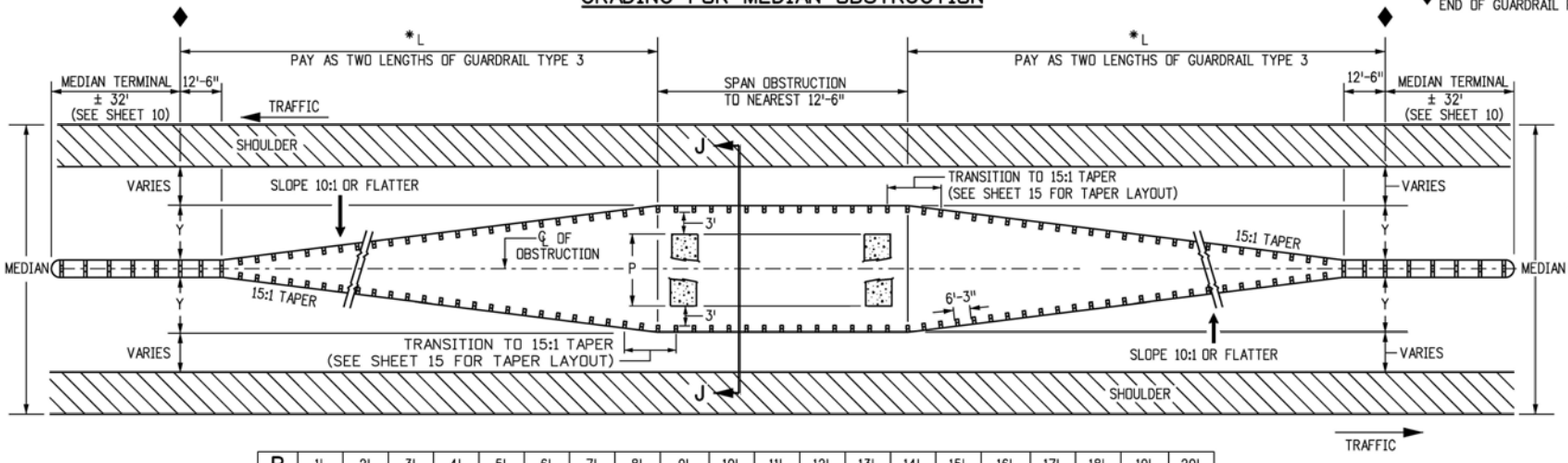


⊗ A 15:1 TAPER MAY BE USED WHEN THE BARRIER ENDS IN THE MEDIAN TERMINAL

OBSTRUCTION IN MEDIAN 30 FT. WIDE OR LESS



GRADING FOR MEDIAN OBSTRUCTION



◆ END OF GUARDRAIL PAY LENGTH

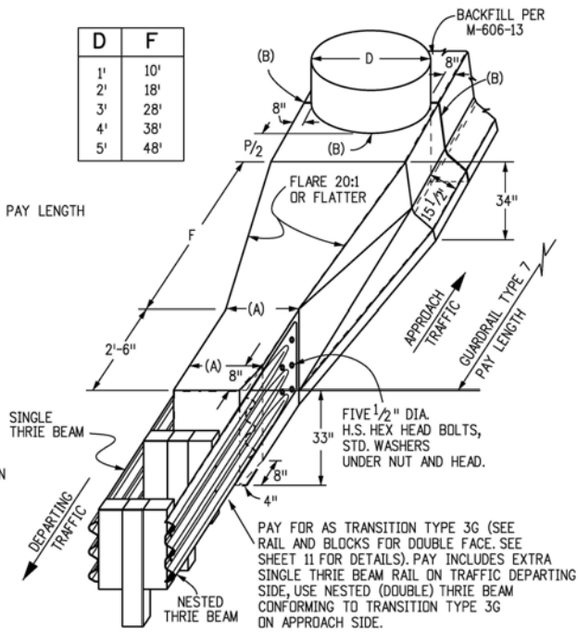
P	1'	2'	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'	15'	16'	17'	18'	19'	20'
Y	4'-1"	4'-7"	5'-1"	5'-7"	6'-1"	6'-7"	7'-1"	7'-7"	8'-1"	8'-7"	9'-1"	9'-7"	10'-1"	10'-7"	11'-1"	11'-7"	12'-1"	12'-7"	13'-1"	13'-7"
L	75'	87'-6"		100'	112'-6"		125'		137'-6"	150'		162'-6"		175'		187'-6"	200'		212'-6"	225'

*L IS MEASURED ALONG FACE OF GUARDRAIL

GUARDRAIL FOR OBSTRUCTION IN MEDIANS WIDER THAN 30 FT.

NOTE: FOR OBSTRUCTIONS (P) THAT ARE WIDER THAN 20 FT. IN MEDIANS USE SHEET 16.

D	F
1'	10'
2'	18'
3'	28'
4'	38'
5'	48'



PAY FOR AS TRANSITION TYPE 3G (SEE RAIL AND BLOCKS FOR DOUBLE FACE. SEE SHEET 11 FOR DETAILS). PAY INCLUDES EXTRA SINGLE THRIE BEAM RAIL ON TRAFFIC DEPARTING SIDE, USE NESTED (DOUBLE) THRIE BEAM CONFORMING TO TRANSITION TYPE 3G ON APPROACH SIDE.

(A). TIMBER POSTS 2 FT., STEEL POSTS 1 FT.-9½IN.

(B). ½ IN. PREFORMED JOINT MATERIAL

NARROW MEDIAN DETAIL

USUALLY LESS THAN 30 FT. WIDE MEDIAN WITH ALL PAVED SURFACE

OBSTRUCTIONS IN MEDIANS

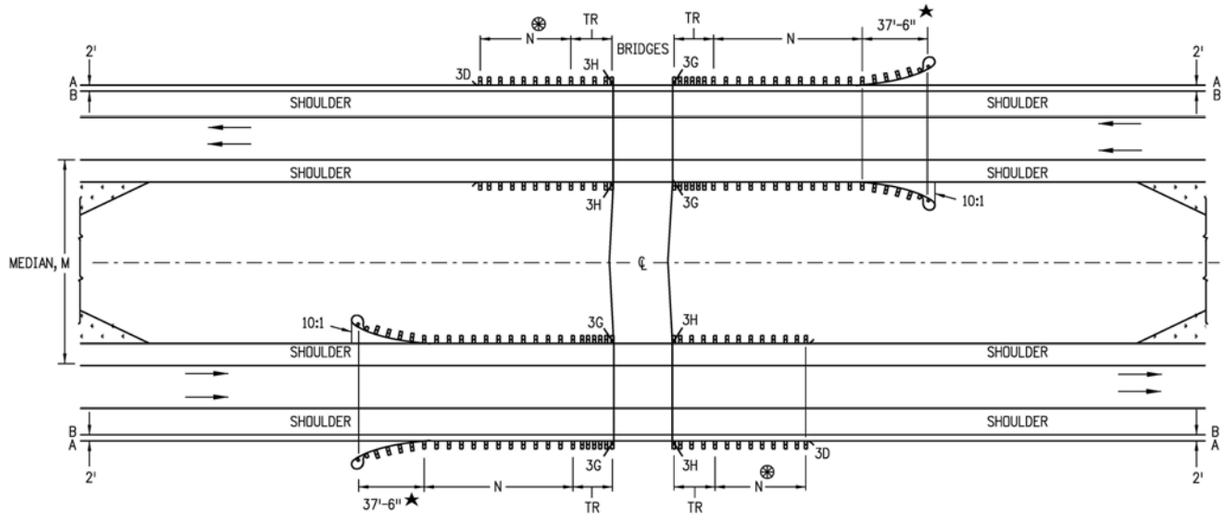
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MIDWEST
GUARDRAIL SYSTEM (MGS)
TYPE 3 W-BEAM 31 INCHES

Issued by the Project Development Branch: July 31, 2019

STANDARD PLAN NO.
M-606-1
Standard Sheet No. 13 of 19
Project Sheet Number:



MULTILANE DIVIDED HIGHWAYS FOR STEEP EMBANKMENTS IN MEDIAN

NOTES

1. MEDIAN BARRIERS TANGENT TO THE ROADWAY MAY BE USED WHERE THE SHOULDER SLOPES IN THE MEDIAN ARE STEEP.
2. BARRIER LENGTHS SHALL BE INCREASED TO ACCOUNT FOR STEEP EMBANKMENTS OR OTHER HAZARDS WITHIN CLOSE PROXIMITY OF BRIDGES.

⊛ — DO NOT CONSTRUCT THE TR AND GUARDRAIL ON THE TRAILING BRIDGE ENDS IF SITE CONDITIONS DO NOT WARRANT THE USE OF GUARDRAIL.

N — SHOWN ON PLANS. LENGTH TO SHIELD ALL HAZARDS IS BASED ON GUARDRAIL'S LENGTH OF NEED COMPUTATION. SEE AASHTO ROADWAY DESIGN GUIDE. THE MINIMUM SHALL BE 12 FT. - 6 IN., WHERE SITE CONDITIONS ALLOW. THE TOTAL LENGTH OF NEED WILL INCLUDE THE LENGTH OF TRANSITION, THE LENGTH OF RAIL (N), AND ANY REDIRECTIVE LENGTH IN THE RAIL END TREATMENT.

TR — 25 FEET FOR TRANSITION TYPES 3G AND 3H.

A — EDGE OF 8 FT. OR 10 FT. SHOULDER.

B — EDGE OF 6 FT. OR LESS SHOULDER.

★ — END ANCHORAGE CAN BE FLARED OR NONFLARED.

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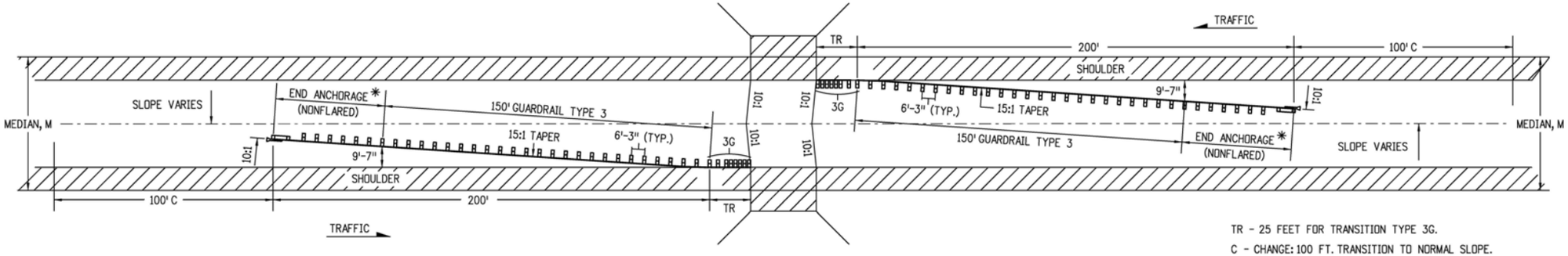
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES

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STANDARD PLAN NO. M-606-1

Standard Sheet No. 14 of 19

Project Sheet Number:



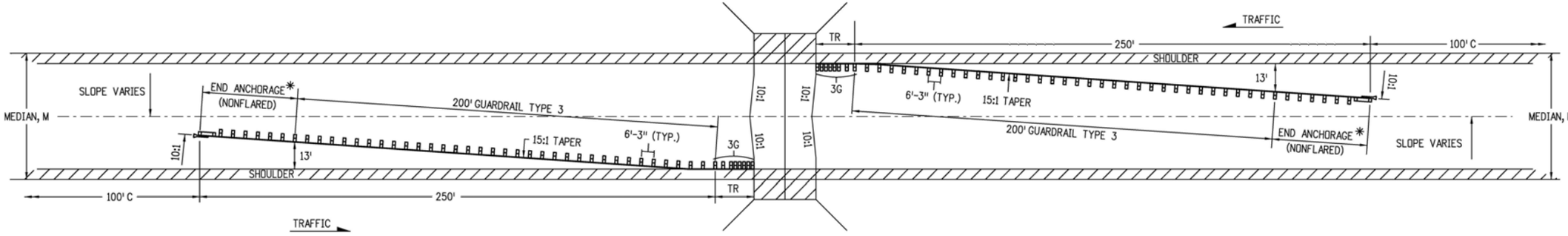
MEDIANS 60 FT. AND OVER WITH 10 FT. OR WIDER SHOULDERS.

TR - 25 FEET FOR TRANSITION TYPE 3G.

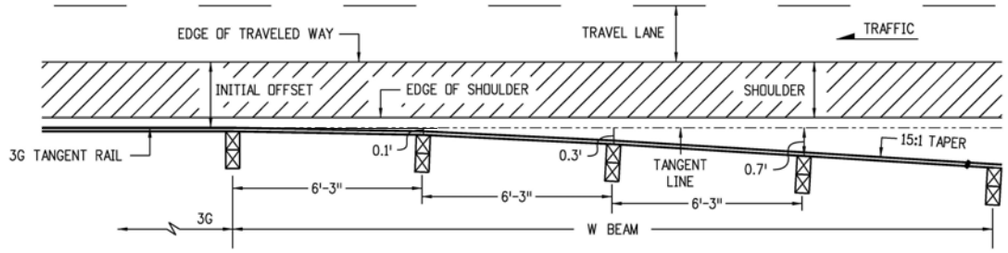
C - CHANGE: 100 FT. TRANSITION TO NORMAL SLOPE.

M - WIDTH OF MEDIAN.

* END ANCHORAGE LENGTH AND FLARE RATES VARY BY DEVICE.
SEE MANUFACTUERER/SUPPLIER FOR INSTALLATION REQUIREMENTS.



MEDIANS 60 FT. AND OVER WITH 4 to 8 FT. SHOULDERS.



TRANSITION TO TYPICAL 15:1 TAPER

NOTES

1. GUARDRAIL TRANSITIONS FROM PARALLEL TO ROADWAY SHOULDER AT 3G SEGMENT TO 15:1 TAPER WITHIN 25 FEET BASED ON POST OFFSET DIMENSIONS SHOWN.
2. SEE SHEET 14 FOR THE RIGHT SHOULDER GUARDRAIL LAYOUT.

MULTILANE DIVIDED HIGHWAYS - (DEPRESSED MEDIANS, 60 FT. AND OVER WITH OPEN HAZARDS OR OBSTRUCTIONS)

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MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES

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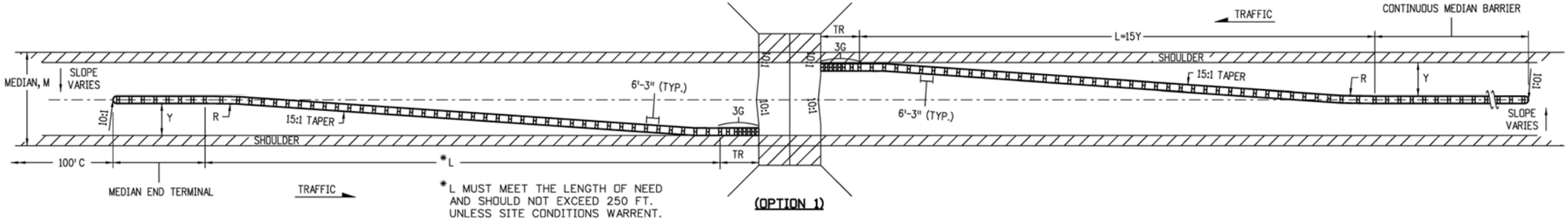
STANDARD PLAN NO. M-606-1

Standard Sheet No. 15 of 19

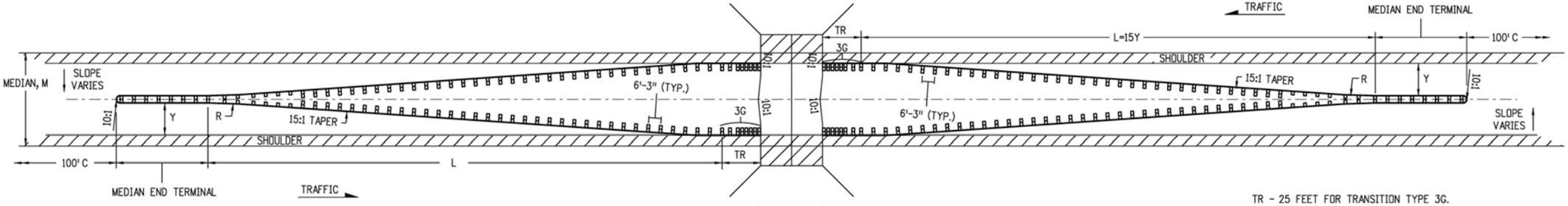
Project Sheet Number:

NOTES

1. GUARDRAIL TRANSITIONS FROM PARALLEL TO ROADWAY SHOULDER AT 3G SEGMENT TO 15:1 TAPER WITHIN 25 FEET BASED ON POST OFFSET DIMENSIONS SHOWN.
2. THE OPTION 1 LAYOUT SHALL BE USED WHEN "Y" EXCEEDS 16 FEET OR WHEN MEDIAN BARRIER IS CONTINUOUS.
3. THE OPTION 2 LAYOUT SHALL BE USED WHEN "Y" IS 16 FEET OR LESS.
4. SEE SHEET 14 FOR RIGHT SHOULDER GUARDRAIL LAYOUT.

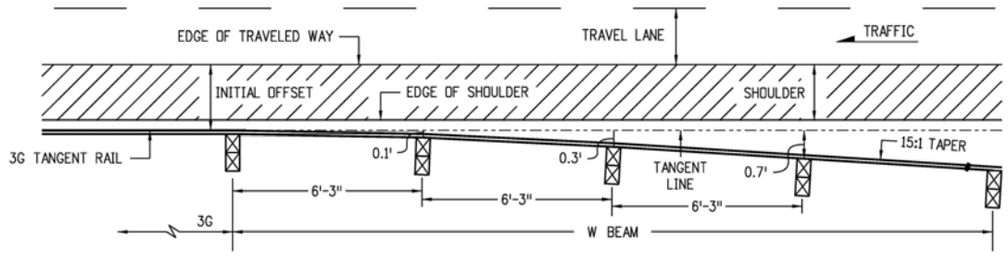


(OPTION 1)



(OPTION 2)

TR - 25 FEET FOR TRANSITION TYPE 3G.
C - CHANGE: 100 FT. TRANSITION TO NORMAL SLOPE.
M - WIDTH OF MEDIAN.
L - TOTAL LENGTH PAID AS GUARDRAIL TYPE 3.
Y - FINAL OFFSET AT END.



TRANSITION TO TYPICAL 15:1 TAPER

MULTILANE DIVIDED HIGHWAYS - (DEPRESSED MEDIANS, 21 - 59 FT. WITH OPEN HAZARDS OR OBSTRUCTIONS)

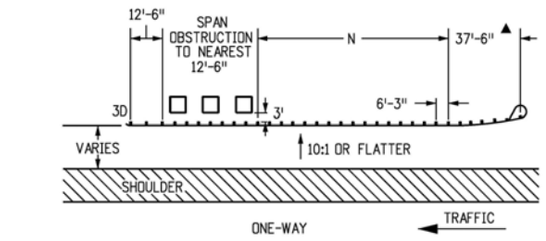
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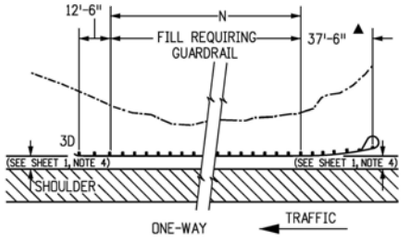
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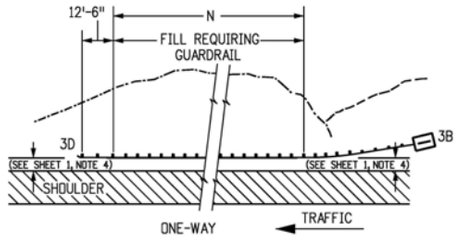
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES

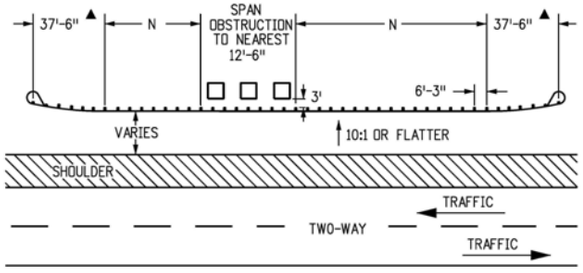
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STANDARD PLAN NO.
M-606-1
Standard Sheet No. 16 of 19
Project Sheet Number:

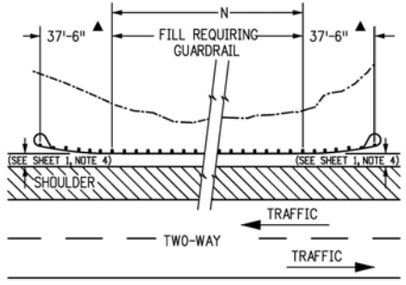




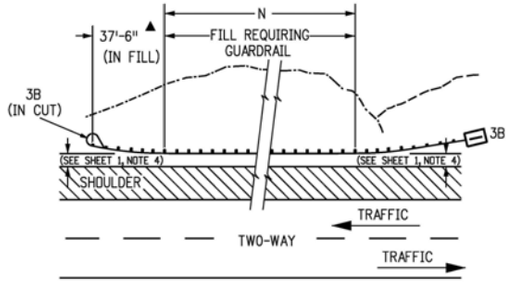




GUARDRAIL FOR ROADSIDE OBSTRUCTIONS



GUARDRAIL FOR ROADSIDE FILL CONSTRUCTION

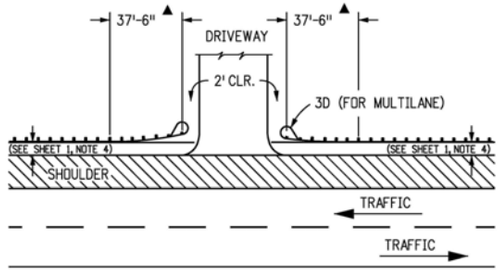


GUARDRAIL FOR ROADSIDE CUT-TO-FILL CONDITION

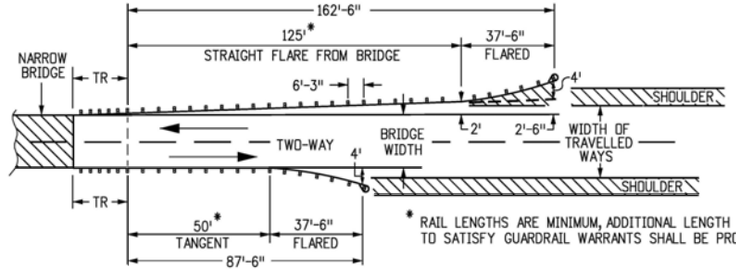
NOTES

1. A TYPE 3G OR 3H TRANSITION (SEE SHEET 11) SHALL BE USED TO CONNECT THE TYPE 3 W-BEAM TO A TYPE 9 CONCRETE BARRIER (SEE M-606-15) OR TO A TYPE 8 OR 10 BRIDGE RAIL.
2. "TR" SHALL BE 25 FEET FOR THE TRANSITION TYPES 3G AND 3H.
3. THE GUARDRAIL LENGTH DIMENSION "N" IS THE LENGTH AS DETERMINED BY THE LENGTH OF NEED COMPUTATION AND IS SHOWN ON THE PLANS. THE MINIMUM IS 12 FT.-6 IN. WHERE SITE CONDITIONS ALLOW. THE OVERALL REQUIRED LENGTH OF NEED CAN INCLUDE THE LENGTH OF TRANSITION, THE LENGTH OF RAIL (N), AND ANY REDIRECTIVE LENGTH IN THE RAIL END TREATMENT. A TRAVERSABLE SLOPE SHALL BE PROVIDED BEHIND THE TERMINAL TO DIMENSION "N" PRIOR TO THE OBSTRUCTION UNLESS OTHERWISE APPROVED BY THE ENGINEER.

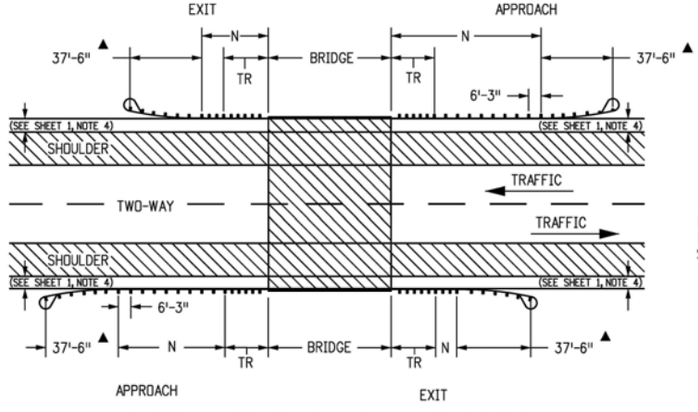
▲ END ANCHORAGE CAN BE FLARED OR NONFLARED



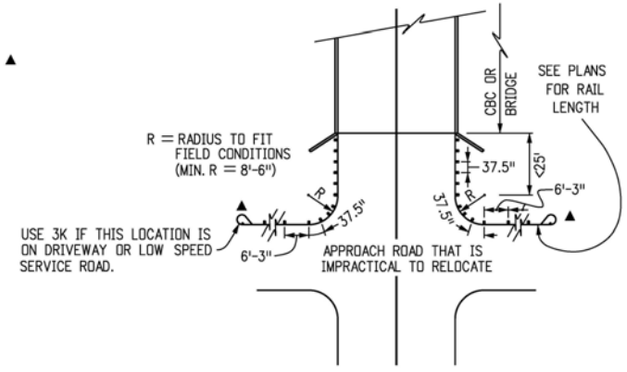
LAYOUT FOR DRIVEWAY APPROACH



2-WAY NARROW APPLICATION



2-WAY NORMAL BRIDGE APPLICATION



GUARDRAIL TYPE 3 WITH BLOCKED OUT POSTS SPACED AT 3'-1½" FROM STRUCTURE AROUND CURVE.

INTERRUPTED STRUCTURE APPROACH

(USE TYPE 3J ON SHEET 12 WHEN PRACTICAL)

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MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES

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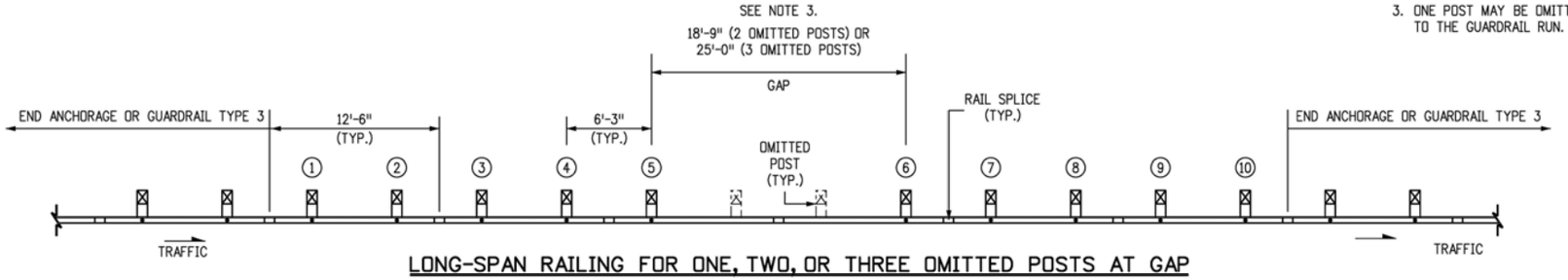
STANDARD PLAN NO. M-606-1

Standard Sheet No. 17 of 19

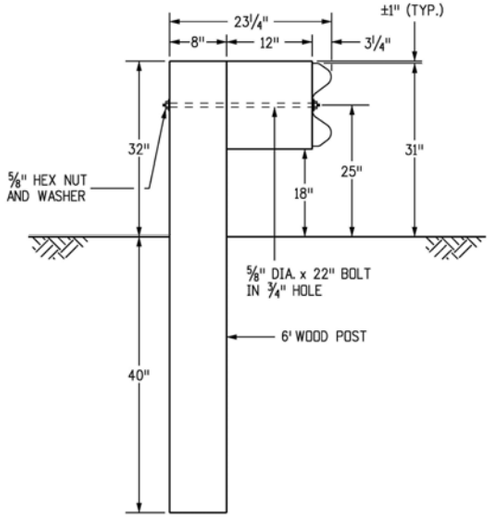
Project Sheet Number:

NOTES

1. POSTS ①, ②, ⑨, and ⑩ MAY BE TIMBER OR STEEL.
2. THE NUMBER OF OMITTED POSTS IS DEPENDENT ON THE LENGTH OF THE GAP.
3. ONE POST MAY BE OMITTED WITHOUT ANY MODIFICATION TO THE GUARDRAIL RUN.

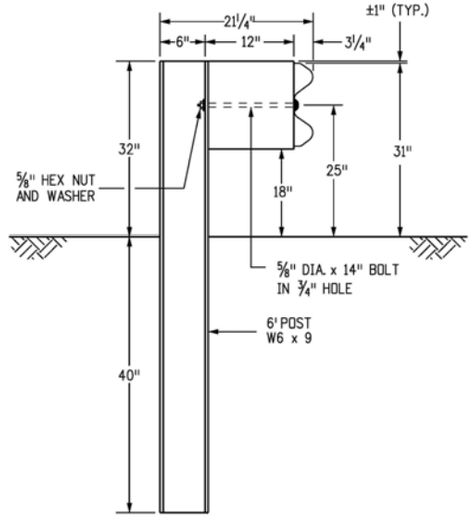


LONG-SPAN RAILING FOR ONE, TWO, OR THREE OMITTED POSTS AT GAP



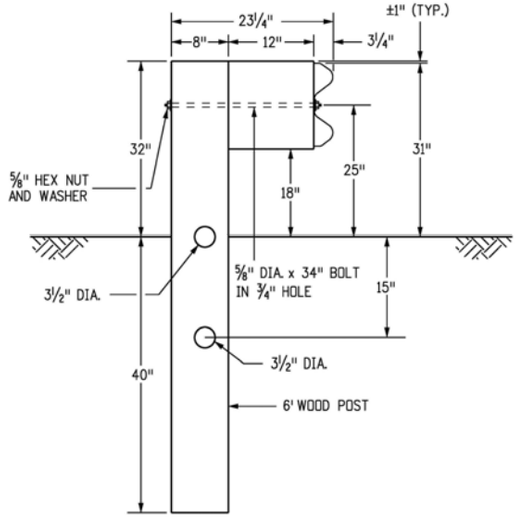
TIMBER POST

POSTS ①-② AND ⑨-⑩ (SEE NOTE 1)



STEEL POST

POSTS ①-② AND ⑨-⑩ (SEE NOTE 1)



BREAKWAY TIMBER POST

POSTS ③ - ⑧

Computer File Information		Sheet Revisions	
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Last Modification Date: 03/05/20	(R-X)		
Detailer Initials: LTA	(R-X)		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	(R-X)		

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2829 West Howard Place
CDOT HQ, 3rd Floor
Denver, CO 80204
Phone: 303-757-9021 FAX: 303-757-9868
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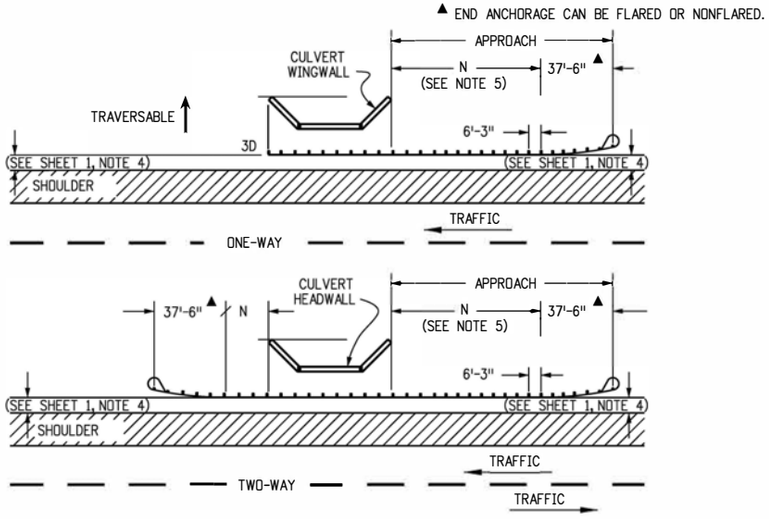
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES

Issued by the Project Development Branch: July 31, 2019

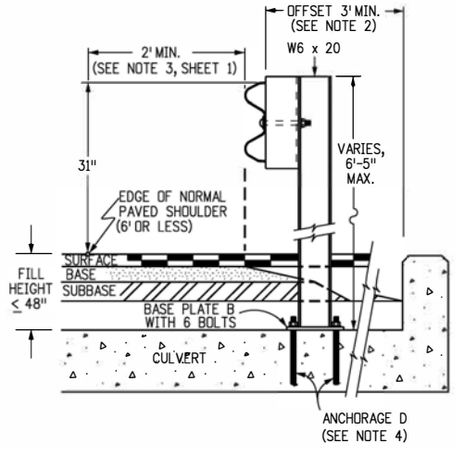
STANDARD PLAN NO. M-606-1

Standard Sheet No. 18 of 19

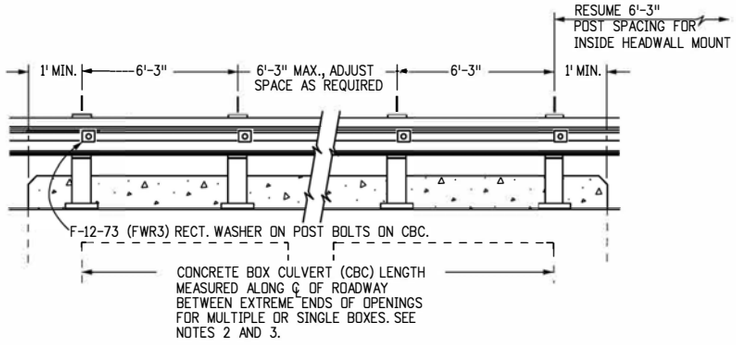
Project Sheet Number:



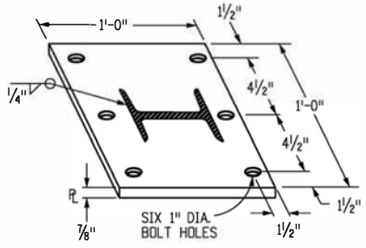
GUARDRAIL FOR CULVERTS



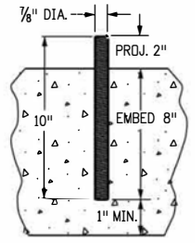
INSIDE MOUNT ON CBC



RAIL PLACEMENT FOR INSIDE MOUNT



BASE PLATE B
(FOR INSIDE MOUNT)



ANCHORAGE D
(FOR INSIDE MOUNT)

NOTES

1. LOCATION AND LENGTH OF MEDIAN GUARDRAIL APPROACHES TO CULVERTS WITH FULL HEADWALL AND WINGWALLS SHALL BE AS SHOWN FOR BRIDGES ON SHEET 15. THE GUARDRAIL TYPE 3 SHALL CONTINUE ACROSS THE CULVERT AS SHOWN ON THIS SHEET.
2. RIGHT SHOULDER BOX CULVERT TREATMENT IS SHOWN ON THIS SHEET FOR CULVERTS 20 FT. OR LESS IN LENGTH.
3. CONSTRUCTION AND PAYMENT FOR FILL HEIGHTS SHALL BE INCLUDED IN THE COST OF THE GUARDRAIL TYPE 3.
4. ANCHORAGE D: SIX BOLTS FOR BASE PLATE "B" WITH INSIDE MOUNT. THE BOLTS SHALL BE 7/8 IN. DIA X 10 IN. HIGH STRENGTH RODS THREADED FULL LENGTH AND ALL GALVANIZED. RODS SHALL BE CAST-IN-PLACE FOR NEW STRUCTURES. FOR EXISTING STRUCTURES, THE RODS SHALL BE INSTALLED IN 1-1/4 IN. DIA HOLES WITH NON-SHRINK GROUT OR EPOXY CONFORMING TO ASTM C 881. IF THE THICKNESS OF A CULVERT'S TOP PANEL REQUIRES BOLTS TO BE LESS THAN 10 IN. HIGH, THE BOLTS SHALL BE APPROVED BY THE ENGINEER.
5. THE GUARDRAIL LENGTH DIMENSION "N" IS THE LENGTH AS DETERMINED BY THE LENGTH OF NEED COMPUTATION AND IS SHOWN ON THE PLANS. THE MINIMUM IS 12 FT.-6 IN. WHERE SITE CONDITIONS ALLOW. THE OVERALL REQUIRED LENGTH OF NEED CAN INCLUDE THE LENGTH OF TRANSITION, THE LENGTH OF RAIL (N), AND ANY REDIRECTIVE LENGTH IN THE RAIL END TREATMENT.
6. ALL POSTS, BASE PLATES, AND ANCHOR BOLTS SHALL BE FABRICATED FROM ASTM A 36 STEEL. THE ABOVE MATERIAL, W-BEAM, AND ALL ANCHOR BOLTS AND MISCELLANEOUS BOLTS, NUTS,AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION INACCORDANCE WITH SECTION 509. CONCRETE, REINFORCING STEEL, AND STRUCTURAL STEEL ELEMENTS SHALL BE IN ACCORDANCE WITH SECTIONS 601, 602, AND 509, RESPECTIVELY.
7. POST ANCHORS, ENCASED IN CONCRETE, SHALL BE ASTM A 36 STEEL, AND NEED NOT BE GALVANIZED.
8. PRIOR TO INSTALLATION OF GUARDRAIL ON CULVERTS, THREE SETS OF WORKING DRAWINGS WHICH COMPLY WITH THE REQUIREMENTS OF SECTION 105 SHALL BE SUBMITTED TO THE ENGINEER FOR INFORMATION ONLY.

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MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES

Issued by the Project Development Branch: July 31, 2019

STANDARD PLAN NO. M-606-1

Standard Sheet No. 19 of 19

Project Sheet Number:

APPENDIX J

DEVELOPMENT IMPROVEMENTS AGREEMENT

This Development Improvements Agreement is entered into this _____ day of _____, 20___ between the Board of County Commissioners of Gunnison County, Colorado (herein the "County"), and (herein the "Permittee") as follows:

1. PURPOSE. The Permittee has submitted to the County the Permitte's application for a permit pursuant to the Gunnison County Standards and Specifications regarding _____ (herein the "Project"). The legal description of the Project is attached hereto and incorporated herein as Exhibit "A". As valuable and sufficient consideration for this Agreement, the County and the Permittee agree that approval of such application by the County is expressly conditioned on completion of the improvements described in paragraph 7, below (herein the "Improvements") to the specifications described herein and by the times specified herein. The County and the Permittee further agree that such Improvements are appropriate and necessary requirements to be required by the County, and to be performed by the Permittee and which Permittee shall perform. The County and Permittee further agree that an agreement guaranteeing the Permittee's performance secured by suitable security to protect the interests of the County, and the public in the amount set forth herein is an appropriate condition to the County's approval of such permit. The parties have entered into this agreement to memorialize such understandings and agreements. The relationship of the parties to this Agreement is contractual; Permittee is an independent contractor and is not an agent of the County.

2. DEVELOPER BOUND. The Permittee agrees to accept and be bound by the terms and conditions of the County's issuance of its approval of the Permit and the terms and conditions of this agreement. Permittee accepts the County's review and permitting authority; process and performance of same in connection with the permit as legal and valid and waives any defect therein.

3. CONSTRUCTION.
   A. The Permittee agrees to complete construction of the Improvements within the Project in the locations set forth on the plans attached hereto as Exhibit __, and in accordance with the specifications thereof by not later than _____, 200__, acts of God and any cause beyond the reasonable control of the Permittee excepted, including without limitation labor disputes, laws, regulations, or orders of any governmental entity, orders of court, inability to obtain any required authorization, act of war or donations arising out of or attributable to war, riot, civil strike, insurrection or rebellion, fire, explosion, earthquake, storm, flood or other adverse weather condition, delay or failure by suppliers or material men, contractors, or subcontractors, shortage of or inability to obtain labor, supplies or materials.
   B. The completion deadline set forth in this paragraph 3 may be extended by the County in its sole discretion upon written request of Permittee if the County determines that: (1) such extension of time will not operate to the detriment of the County, the public or the owners of property within the Project; and (2) the County's security is adequate to ensure full performance by Permittee by the extended completion date; and (3) that such an extension would not be in conflict with the conditions of the approved Permit. The County may require Permittee to provide, at Permittee's cost, supplemental estimates by Permittee's engineer of the costs of completion and to provide additional security as a prerequisite to its extension of any completion date. Any extended completion date granted by the County hereunder may be further extended in like manner.
   C. Each contract entered into by Permittee for construction of the Improvements shall provide that the County is a third party beneficiary with all rights to enforce such contracts in place of Permittee in the event of a default by Permittee. Permittee shall provide to County a copy of each such contract upon its execution.

4. ESTIMATED COST. The total cost of the Improvements to be constructed by the Permittee is estimated currently to be $ plus a contingency amount.

5. SECURITY. In order to secure of obligations of the Permittee herein, the Permittee and the County agree that the Permittee shall, at Permittee's sole cost, and before starting work on any phase of the Project or Improvements, and before conveying any portion of the Project, obtain and provide to the County a bond, and irrevocable letter of credit or other performance guarantee in a form and content satisfactory to the County to the benefit of the county in the amount of $_____ which is 124 percent of the currently estimated cost of the Improvements to include a reasonable contingency amount.

If the contract(s) provided to the County pursuant to paragraph 3C indicate a substantially different total cost than estimated in paragraph 4, the amount of security may be increased or decrease. For the purposes of this paragraph 5, substantial is defined as 10 percent or more.

Pending full performance of all of the terms and conditions hereof by the Permittee, the County shall retain said security and shall remain the beneficiary of such security. In the event of any uncured default hereunder the County in its sole discretion, and without any other authority required, may draw upon said security up to the full amount of $-_____ upon presentation by the County to the _____ of a written statement by the County that such uncured default exists. Upon timely performance of all terms and conditions hereof, said security shall be tendered by the County to the Permittee.

6. CERTIFICATION.
   A. Not later than _____, 200__, a registered Colorado engineer retained by the Permittee at it s expense shall certify to the County whether the Permittee's construction obligations regarding Improvements under this agreement have been fully and faithfully performed according to design and time specifications. Upon receipt of such certification and a complete copy of as built specifications and drawings, the County shall review the same and shall make an independent judgment whether to accept the same in the sole discretion of the County. Permittee agrees not to cover or otherwise prevent inspection of the Improvements constructed hereunder until Permittee's engineer and the County's representative have had reasonable opportunity to inspect such Improvements.
   B. Not later than _____, 200__, Permittee shall provide to the County Attorney a sworn affidavit, signed by the Permittee's authorized representative, that the Improvements completed have been paid for, in full, by the Permittee. The Permittee shall be responsible for the information so provided. Said written certification will be reviewed by the County, but the County shall have no responsibility or liability to any part regarding the veracity of the information so provided.

7. SCOPE OF WORK.
   A. The scope of work to be done by the Permittee shall include, but not be limited to: 7.1 (Fill in applicable details)
   B. The conditions of this agreement and the permit are such that if the obligations hereunder of the Permittee are well, truly, faithfully and timely performed by Permittee, inspected and certified to by the Permittee's engineer, and such performance is accepted by the County in the County's sole discretion, the Permittee's obligations to the County under this agreement except as set forth in 7C below shall be at an end; otherwise such conditions and obligations shall remain in full force and effect.
   C. For a period of one year from and after the acceptance of all of the work described in paragraph 7A, above, Permittee shall, at its own expense, make all needed repairs and replacements to such work as shall, in the County's reasonable opinion, become necessary. The County shall have the right to retain up to $_____ of the security for up to one year following the acceptance of all of the work described in paragraph 7A. above, as security to ensure such repair and replacement.

8. PARTIAL RELEASE OF SECURITY.
   A. The County recognizes that as work proceeds upon the Improvements, the County's need or security shall be reduced. Accordingly, the County agrees to a reasonable partial release of the security to be delivered to the County pursuant to paragraph 5 hereof upon receipt of a written certification, by Permittee's engineer, stating the estimated cost of remaining completion, in which event the County shall retain security equal to 125 percent of such estimated cost of remaining completion plus 20 percent of the original estimated cost of the Improvements and shall release the balance of all security held by the County.
   B. Upon Permittee's entering into a contract or contracts for construction of improvements hereunder, Permittee and County may negotiate an addendum to this Agreement setting forth such reasonable schedule for partial releases of the security in accordance with the anticipated construction schedule. In such circumstance, the County shall designate and authorize the County Manager, Director of Public Works or County Attorney to make the partial release(s) hereunder after consultation with appropriate County staff.

9. PERMITTEES' DEFAULT. In the event of any default hereunder by the Permittee, the County shall give notice to the Permittee specifying the nature of such default, which notice shall be given by facsimile transmission or by certified mail with return receipt requested addressed to the Permittee at _____. In the event the Permittee does not remedy such default to the satisfaction of the County within 14 days following such notice, the County may elect, in its discretion to exercise all remedies available to it, including but not limited to:

   9.1 To specifically enforce the terms and conditions of this agreement;
   9.2 To draw upon or otherwise obtain the benefit of the security;
   9.3 To exercise any other rights and obtain any other remedies provided by law;
   9.4 To obtain from the Permittee either an extension of the County's security hereunder to guarantee the completion of the improvements only on the conditions (1) that suitable additional security is provided the County to guarantee the construction of said Improvements within the new time period determined by the County, and (2) that the County determines that it would not be detrimental to the interest of the County, the public or the owners

of property within the Project to allow such extension (3) that the County determines that it would not be in conflict with the conditions of the approved Permit.

RECORDING OF AGREEMENT. Upon its execution, this Agreement shall be recorded by the Permittee and shall be a covenant running with the property herein described in order to put prospective purchasers or other interested parties on notice as to the terms and provisions hereof.

11. RETENTION OF POLICE POWERS. The County retains the power and right to impose additional requirements upon Permittee with regard to the Project if the failure to do so would place the public or owners of property within the Project in a perilous condition, or in the event of substantially changed conditions; that is, nothing in this Agreement is or shall be construed to be a bargaining away of the County's police power.

12. TRANSFER OR ASSIGNMENT. No transfer or assignment of any of the rights or obligations of the Permittee under this Agreement shall be permitted without prior written approval of the County which approval shall not unreasonably be withheld.

13. TITLE AND AUTHORITY. The Permittee expressly warrants and represent to the county that it is the record owner of the real property constituting the Project, and further represents and warrants, together with the undersigned individual, that the undersigned individual has full power and authority to enter into Agreement. The Permittee and the undersigned individual understand that the County is relying on such representations and warranties in entering in to this Agreement.

14. LITIGATION. Nothing contained herein shall prevent either party from obtaining a judicial determination of the violation of its rights hereunder; provided however, that written notice to the other party advising the other party of the alleged violation, and advising that in the event the matter is not resolved by the parties within 14 days thereafter, shall be a condition precedent to the commencement of any litigation.

15. TIME OF ESSENCE. It is mutually agreed that time of performance is an essential part of this agreement and that all terms, covenants and conditions herein shall extend to and become obligatory upon the successors and assigns of the respective parties hereto.

VENUE AND CHOICE OF LAW. This agreement is entered into in Gunnison County, Colorado and it I agreed that the exclusive jurisdiction and venue of any action pertaining to the interpretation or enforcement of this agreement shall be in the District Court of Gunnison County, Colorado. The exclusive choice of law pertaining to this transaction shall be that of the State of Colorado without giving effect to Colorado choice of law principles.

17. SEVERABILITY. If any term or provision of this agreement shall be invalid or unenforceable, the remainder of this agreement and the terms and provisions thereof shall not be affected thereby and all other terms and provisions of the agreement shall be valid and enforceable to the full extent permitted by law.

18. ATTORNEYS' FEES. If any action is brought in a court of law by either party to this agreement as to the enforcement, interpretation or construction of this agreement or any document provided for herein, the prevailing party in such action shall be entitled to reasonable attorneys' fees as well as all cost incurred in the prosecution of defense of such action.

19. HOLD HARMLES CLAUSE. The Permittee shall indemnify, defend and hold harmless the County, its officials, employees and agents from and against liability for damages, injury or death which may arise from the direct or indirect operations of the owner, Permittee, contractors or subcontractors, which relate to the Project.

20. ENTIRE AGREEMENT. This agreement contains the entire and only agreement between the parties regarding development improvements, and no oral statements or representations not contained in this agreement shall be of any force and effect between the parties. This agreement shall not be modified or amended in any manner except by written instrument executed by the parties.

21. BINDING AGREEMENT. This agreement shall be binding upon and inure to the benefit of the heirs, personal representatives, successors and assigns of the parties hereto.

22. NOTICE. All notices and other communications required or permitted under this Agreement shall be in writing and shall be, as determined by the person giving such notice, either hand delivered, mailed by registered or certified mail, return receipt requested or by telecopier or telegraphic communication to the required party at the following addresses:

COUNTY: Board of County Commissioners
200 East Virginia
Gunnison, CO 81230 Telecopier: (970) 641-3061

DEVELOPER: (Name, Address, Etc.)

IN WHEREOF the parties have executed this agreement the date first above written.

BOARD OF COUNTY COMMISSIONERS OF
THE COUNTY OF GUNNISON COUNTY

Attest: _____ By: _____
County Clerk Chairperson or Designee

DEVELOPER

By: _____

STATE OF COLORADO)
)
COUNTY OF)

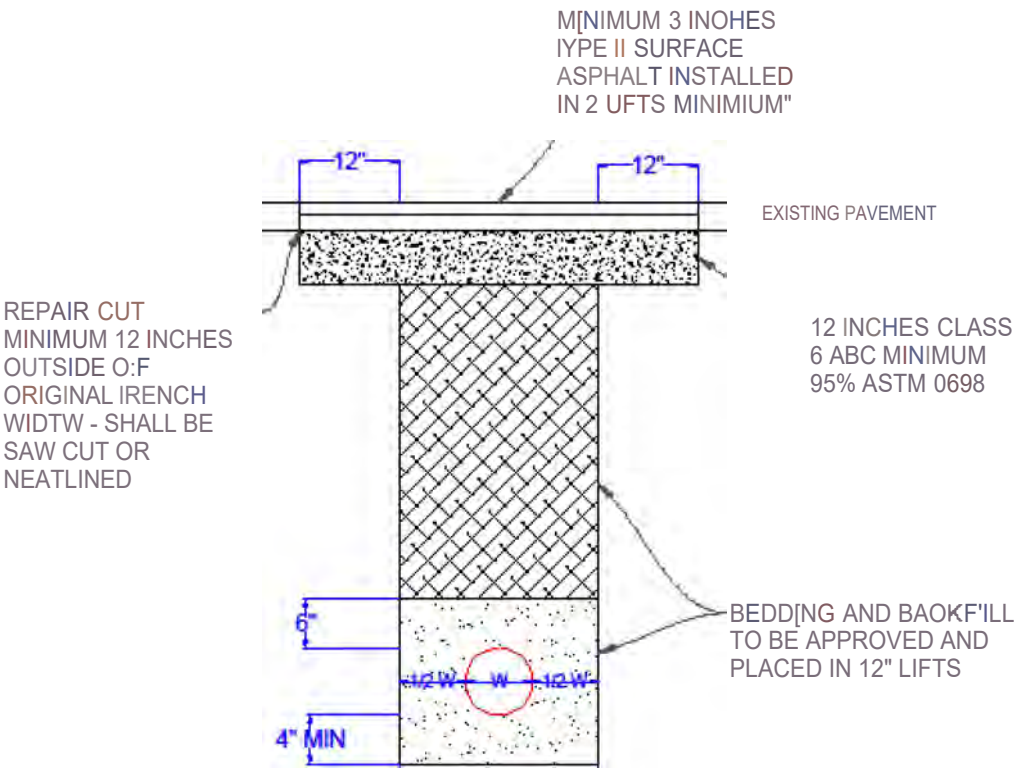
The foregoing instrument was acknowledged before me this _____ day of _____, 20___.
By _____.

My commission expires: _____
Witness my hand and official seal.

_____
Notary Public
Address:

FIGURE 4-1

TYPICAL ROAD CUT RESTORATION AND BACKFILL



"NOTES
1. SAW CUT SHALL BE FUil. [H>'IJ-1 OF EXISTING PAVEMB!fT SECTION.
2. TYPE I SI.RFAOE ASPI-W..T LIFTS 1:IW.I. BE AOJUSTED ACCORDINGLY.

T-PATCH REPAIR