

Grand County Road & Bridge Standards



Amended: July 7, 2015

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**GRAND COUNTY ROAD AND BRIDGE STANDARDS
ADOPTIONS/AMENDMENTS**

INDEX

Chapter 1

Introduction



CHAPTER 1: INTRODUCTION

1.1 SHORT TITLE

These standards together with all future amendments shall be known as the “Grand County Road and Bridge Standards.” The original Road and Bridge Standards (formally known as the Grand County Road Policy) were adopted by the Board of County Commissioners on July 29, 1976, and are hereby repealed and replaced with these Road and Bridge Standards (All adoptions and revisions can be found on the Adoptions/Revision sheet attached to this document).

1.2 PURPOSE AND APPLICATION

Presented in these standards are the minimum design and technical criteria for the design and construction of roads, bridges, utilities and associated infrastructure for land development. All design and construction of these items, commencing after July 7, 2015, shall meet or exceed the criteria set forth herein, unless a variance is granted in accordance with SECTION 8.1.

1.3 AUTHORITY

The State of Colorado, by revised statutes (C.R.S. §43-2-201, §43.2-114), authorizes the Grand County Board of County Commissioners to administer the County road system including, but not limited to, maintenance, layout, alterations, deletions, additions, property acquisitions, and traffic regulations. The County enforces road construction standards, reviews plans, and conducts inspections for acceptance of roads into the system. The Road and Bridge Department maintains and improves roads accepted by Grand County, administers work within public Right-of-Way, reviews plans, and conducts inspections.

1.4 JURISDICTION

The requirements of these standards shall apply to all development permits, as that term is defined under C.R.S. §29-20-103 and §13-51.5-102, and further upon all subdividers, building permit applicants, applicants, developers, or other landowners, and their employees, agents and contractors, designing and construction of any public or private improvement, street, road, driveway, or vehicular access of any kind or duration, as such are subject to review and approval by Grand County, pursuant to Grand County Land Use Regulations and requirements. The Land Use Regulations shall include the applicable sections of the Grand County Subdivision Regulations, Zoning Regulations, Outright Exemption Regulations, Subdivision Exemption Regulations, Rural land Use Regulations and Planned Unit Development Regulations and Building Code.

1.5 AMENDMENT AND REVISIONS

These policies and criteria may be amended as new technology is developed and/or experience gained in the use of these Road and Bridge Standards which indicates a need for revision. The Board of County Commissioners, following the recommendations of the County Engineer, Road and Bridge Department, and the Planning and Zoning Department, may consider amendments to these Standards.

1.6 REVIEW AND APPROVAL

The County will review all submittals for general compliance with these standards in a timely manner. An approval by the County does not relieve the owner, engineer, or designer from responsibility of ensuring

that the calculations, plans, specifications and construction are in compliance with these standards and accepted engineering practices.

1.7 INTERPRETATION

In its interpretation and application, these Standards shall be regarded as the minimum requirements for the protection of public health, safety, comfort, morals, convenience, prosperity, and welfare of the residents and visitors of the County. These Road and Bridge Standards shall therefore be regarded as remedial and shall be liberally construed to further its underlying purpose.

Whenever a provision of these Standards and any other provision(s) of the County or any provision in any law, ordinance, resolution, rule, or regulation of any kind, contain any restrictions covering any of the same subject matter, whichever restrictions are more restrictive or impose higher standards or requirements shall govern.

These Standards shall not modify or alter any permits or approved reports, construction plans, easements, or covenants issued before the effective date of these Standards. This exception shall be subject to the conditions and limitations under which the County accepted said plans.

1.7.1 MEANINGS OF “SHALL”, “SHOULD”, AND “MAY”

The definitions below explain the use and intent for the words “shall”, “should”, and “may”.

Shall – A mandatory condition. Any Standard or Specification using the term “shall” must meet or exceed the requirement for which the term is used.

Should – An advisory condition. The word “should” is used as a suggested condition for a particular Standard or Specification. The usage of “should” is not a requirement, but a recommended condition to aid design.

May – A permissive condition. The use of the word “may” does not imply a Standard or Specification requirement. May is considered optional in design.

1.8 RELATIONSHIP TO OTHER STANDARDS

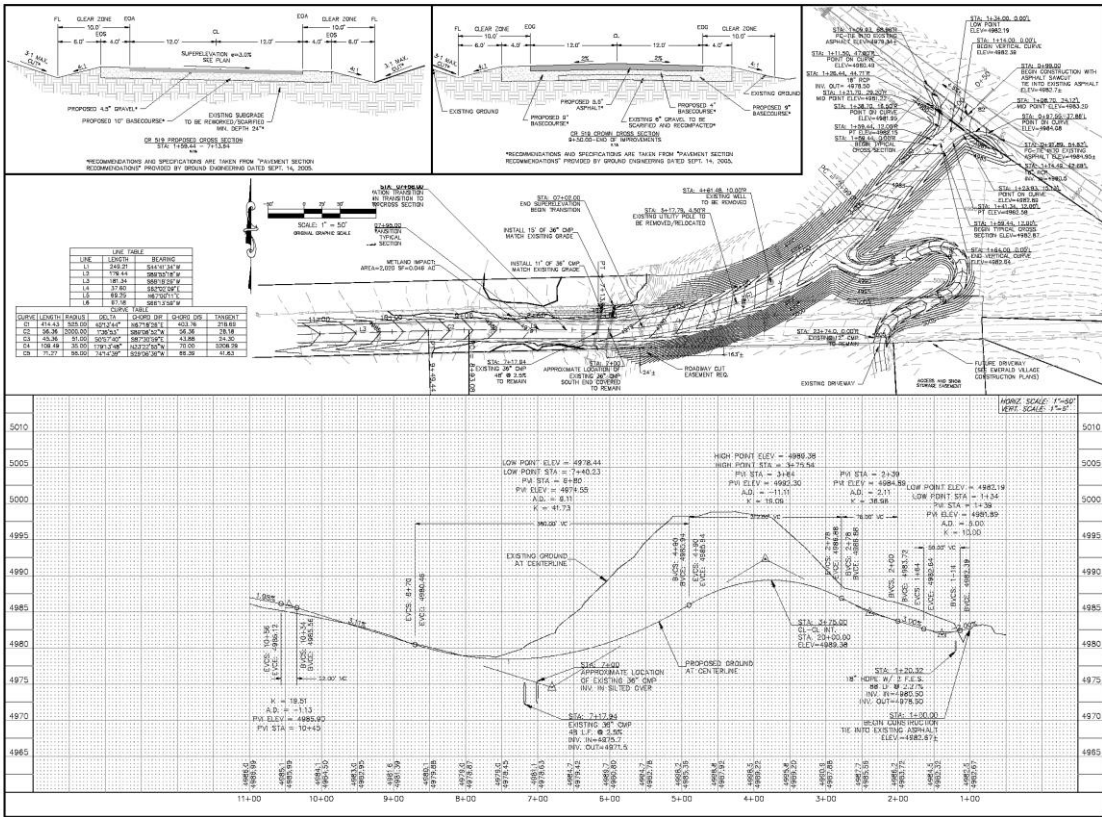
If a special district imposes more stringent criteria than that in these Standards, this difference is not considered a conflict. If the State or Federal Government imposes a stricter criteria, standards, or requirements, these may be incorporated into the County’s requirements after due process and public hearings needed to modify the County’s regulations and standards.

1.9 REGULATORY COMPLIANCE

All work shall comply with all applicable federal, state, county, and local regulations.

Chapter 2

Drawing Requirements



CHAPTER 2: DRAWING REQUIREMENTS

2.1 CONSTRUCTION PLANS

All construction plans, drainage reports, soils reports and pavement designs shall be prepared by, or under the direction of, a Colorado Licensed Professional Engineer, and shall be part of the submittal process, as defined per the applicable Land Use Regulations previously identified in Section 1.4. Throughout the preliminary and final plat review process, any of the documents listed above that are submitted to Grand County shall contain the date, the seal, and signature of the Engineer. If the signed and sealed documents are not final, they can be identified as “preliminary”, “for review” or “not for construction”. The engineer should be aware that whenever unusual or serious problems are anticipated in conjunction with a proposed design or construction, additional information and analysis beyond the minimum requirements of these specifications and criteria shall be required.

Grand County is not responsible for the accuracy and adequacy of the design or dimensions and elevations on the plans. Grand County, through the acceptance of the construction plans, assumes no responsibility for the completeness and/or accuracy of the construction plan.

Each drawing shall be 24” x 36” and shall contain a title block, sheet number, scale, north arrow, date and the seal and signature of the Colorado Licensed Professional Engineer responsible for plan preparation.

Existing and proposed contours shall be at two (2’) minimum intervals. Other intervals may be allowed or required by the County, in developments with flat or steep terrain.

The drawing shall be based or transformed to a known coordinate system, not an assumed local coordinate system. If GPS Lat/Long is not used for this reference, the Geographic Coordinate Data Base should be used to obtain relative coordinates available from the BLM at www.BLM.gov/GCDB. A permanent survey benchmark shall be shown on the plans.

2.1.1 COVER

The plans must include a statement on the cover sheet:

“These construction plans for (name of development or project) were prepared by me (or under my direct supervision) in accordance with the requirements of the Grand County Road and Bridge Standards and the Storm Drainage Design and Technical Criteria.”

Name of Engineer

Name of Firm

The statement shall be signed and stamped by the Colorado Licensed Professional Engineer who prepared or directed preparation of the construction plans.

1. A vicinity map, at the appropriate scale, which shows the location and name of all arterial streets/roads within one mile of the proposed development and all streets/roads within the proposed development.
2. Index of sheets.
3. Agency List.
4. A Utilities Notification Center note with phone number shall be on the plans.

2.1.2 GENERAL NOTES

The following general notes shall appear on the construction plans for all submittals containing roadway plans:

1. The County signature affixed to this document indicates the County has reviewed the document and found it in general conformance with the Grand County Road and Bridge Standards or approved variances to those regulations. The County through acceptance of this document, assumes no responsibility, other than stated above, for the completeness and/or accuracy of these documents. The owner and engineer understand that the responsibility for the engineering adequacy of the facilities depicted in this document lies solely with the Licensed Professional Engineer whose stamp and signature is affixed to this document.
2. All roadway construction shall conform to Grand County Road and Bridge Standards.
3. All materials and workmanship shall be subject to inspection by the County. The County reserves the right to accept or reject any such materials and workmanship that does not conform to its Standards and Specifications. This may result in a “stop work order” that will remain in effect until appropriate corrections are made to the satisfaction of Grand County.
4. The contractor prior to actual construction shall verify that location of existing utilities.
5. The contractor shall provide all lights, signs, barricades, flagmen, or other devices necessary to provide for the safety in accordance with the Manual of Uniform Traffic Control Devices.
6. The contractor shall be solely and completely responsible for conditions at and adjacent to the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and not be limited to normal working hours.
7. The duty of the County to conduct construction inspections and review of the contractor’s performance is not intended to include review of the contractor’s safety measures in, on, or near the construction sites.
8. It shall be the contractor’s responsibility to notify the owner/applicant of any problem in conforming to the approved plans for any element of the proposed improvements prior to its construction.
9. If construction has not commenced within two (2) years the construction plans may be considered invalid. These plans may be subject to re-review and re-approval by Grand County.
10. Paving shall not start until a soils report and pavement design is accepted by Grand County and subgrade compaction tests are taken and accepted by the geotechnical engineer.
11. If dewatering is used to install utilities, culverts, etc., then a State Construction Dewatering Wastewater Discharge Permit is required for discharge into a storm sewer, channel irrigation ditch, or any water of the United States. A copy of the permit shall be kept on site.

2.1.3 PLAN

The plan view shall include but not limited to, the following:

1. The scale shall be a minimum of 1" = 100'.
2. Locations and dimensions of existing and proposed property lines, setbacks, easements, and Right-of-Way.
3. Numbers (names) of streets / roads (existing and proposed). (See SECTION 3.8)
4. Survey line ties to Section or Quarter corners.
5. Survey lines, including the chord bearing and distances for all line and curve data, and centerline stationing. Curb and gutter stationing shall be equated to flowline stationing at horizontal radius curves, cul-de-sacs, and other departures from normal roadway cross-sections.
6. Centerline stations for all intersecting roadways and commercial driveways.
7. Existing and proposed street / road improvements, including shared driveways (sidewalk, curb, gutter, pavement limits, bridges, culverts, guardrails, handicap ramps, etc.). A dashed line shall depict existing improvements and a solid line shall depict proposed improvements.
8. Elevations and station shall be noted for all curb returns, points of curvature, and points of tangency, high or low point of all vertical curves.
9. The rate of superelevation and all pertinent superelevation information shall be shown on the construction plans, as applicable.
10. Typical template(s) for streets / roads.
11. Match lines and consecutive sheet numbers.
12. Key map.
13. A legend to identify existing (dashed) and proposed (solid) utilities and structures, including but not limited to (include: size, type, height, and location, as applicable):

water	fence line
fire hydrants	ditches or swales
sanitary sewer	gas
storm sewer	electric
telephone	cable television
mailboxes	postal boxes
snow storage	signs
trash enclosures	

14. Stations and critical elevations of all utility and drainage appurtenances.
15. Major road intersection design at a scale of 1" = 20'. This shall depict all pertinent information including sight triangles (See SECTION 3.7.6). When a new road intersects and existing road, the existing road data (grades, width, etc.) shall be shown within 500' of the intersection.
16. All existing curbs, gutters, sidewalks, and asphalt or gravel roads adjacent to the proposed design. Basis for existing grades shall be as-built elevations at intervals not to

exceed 50'. Previously approved designs are not an acceptable means of establishing existing grades.

17. All on-site slopes greater than 30% shall be shown on plans.
18. All proposed driveway centerlines will be shown on plans. The driveway length shall extend to the center of the building envelope or actual building location.
19. The design speed for all roads within the development.
20. Snow storage areas (dimensions, area, etc.) See SECTION 3.11.

2.1.4 PROFILE

The profile shall include, but not be limited to the following:

1. The vertical scale shall be a minimum of 1" = 5' for roadway profiles.
2. Existing (dashed) and proposed (solid) grades.
3. Continuous stationing for the entire portion of the roadway shown in the plan view with the centerline station for all intersecting roadways and commercial driveways clearly labeled.
4. Vertical curve data including length of curve, P.V.C., P.V.T., P.V.I., beginning and end grades. All vertical curves shall be symmetrical.
5. Separate flowline or top of curb profiles shall be provided for design of cul-de-sacs and any other departure from normal roadway cross slope.
6. Existing (dashed) and proposed (solid) utilities.
7. A profile will be required for all driveways when existing grades exceed five percent (5%).

2.1.5 GRADING AND DRAINAGE PLAN

The grading plan should include supporting data and a construction sequence outlining the grading and revegetation (See CHAPTER 6 and 7). The plans shall contain the following information:

1. Property Limits, accurate contours of existing ground, details of existing terrain, and existing drainage patterns.
2. Location of all natural features, such as watercourses and wetlands, on the proposed site or within 100' of the disturbed grading area.
3. Location and size of all existing utilities and easements on the proposed site.
4. Limits of disturbance.
5. Final elevations (including spot elevations when applicable) and contours to be achieved by the proposed grading, to include all drainage way information and details (including cross-sections, detention ponds, outlet structures, etc.).
6. Location and final elevations of any buildings or structures on the property where the work is to be performed and the location of any buildings or structures on adjacent land that are within 15' of the property or that may be affected by the proposed grading operations.

7. All recommendations included in the soils engineering report that are related to, or directly affect grading operations, shall be incorporated in the grading plans and specifications.

An Overlot Grading Plan shall be required for subdivisions with lot sizes under one-half (1/2) acre or for all multi-family development areas.

2.1.6 REVEGETATION, EROSION AND SEDIMENT CONTROL PLAN

A construction sheet shall contain the following:

1. Detention Pond/Water Quality Pond (See Grand County Drainage Standards).
2. Erosion Control: size, type, location (See SECTION 7.3.1).
3. Sediment Control: size, type, location (See SECTION 7.3.2).
4. Revegetation: type, location (See SECTION 7.4).

See CHAPTER 7 for all Revegetation, Erosion, and Sediment Control Plan requirements.

2.1.7 SIGNAGE AND STRIPING PLAN

A construction sheet shall contain the following (See SECTION 3.8):

1. Existing and proposed striping: size, type, color, location.
2. Existing and proposed signage: size, type, color, location.

2.2 AS-BUILT DRAWINGS

Identify and show on the “As-Built Drawings” all existing or abandoned utilities that were encountered during construction that were not shown on the design plans or that were shown on the design plans incorrectly.

The method to show locations (both for proposed construction and As-Built drawings) is by the use of centerline stations as depicted on the construction plans with suitable distances and offsets given relative to these lines.

All elevation information shall be based upon an existing on-site benchmark as depicted on the approved construction plans.

As-Built drawings are to be provided by a State of Colorado Licensed Professional Surveyor. All required As-Built drawing information shall be clearly shown with the original approved design information and all field design revisions made during the construction process (design information should be shaded back). A stamped hardcopy of the As-Built Drawings shall be submitted along with an electronic copy in ACAD format. Each sheet of the As-Built Drawings shall include the following statement along with the licensed professional surveyor’s stamp and date of execution.

“I, _____, A DULY LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, STATE THAT THE INFORMATION CONTAINED IN THESE AS-BUILT DRAWINGS ARE THE RESULTS OF FIELD SURVEY AND ARE TRUE AND ACCURATE TO

THE BEST OF MY KNOWLEDGE AND BELIEF, AS DETERMINED BY ME OR UNDER MY DIRECT SUPERVISION ON THIS DATE: _____.”

The following information shall be shown/corrected on the As-Built Drawings:

2.2.1 ROADWAY PROJECTS

1. Road locations: Location of road centerline, intersection radii, edge of asphalt, edge of gravel shoulder, and flowline of ditch, at 200-foot maximum intervals, and at all beginning and end of horizontal curves. Vertical information should be included in order to determine centerline grades, cross-slope grades, superelevation rates, flowline grades, and side slopes.
2. All existing infrastructure in road including, but not limited to: drainage appurtenances, vaults, manholes, inlets, catch basins, water valves, fire hydrants, etc. (see below for further requirements).
3. Guardrail: locations, types, alignments.
4. Retaining Walls: locations, type, height, alignment.
5. Clear Zone obstructions: location, type, alignment.
6. All signage within the Right-of-Way: location, type, alignment.
7. Verification of snow storage areas, per the plans, has been met.
8. Public Utility Easements/Right-of-Way: locations, widths, and location of road appurtenances within the Easement/Right-of-Way.

2.2.2 WATERLINE PROJECTS

1. Water Main Pipes: locations, materials, lengths, diameters and verification of minimum depth requirements (may require further information on vertical bends and utility crossings).
2. Water Valves, Fire Hydrants, and Blow-offs: locations, types, alignment, and depth or elevation.
3. Air and Vacuum Relief Valves, Pressure Reducing Valve, and Fire Suppression Tanks: Locations, depth, alignment, vault/tank size and as-constructed clearances within vault and/or tank appurtenances.
4. Water Main Blocking / Restraint: location and approximate volume/bearing surface area, or restraint length.
5. Water Service Lines: Valve locations and depths, materials, diameter, and lengths.
6. Detailed or Complex Connections: as applicable for situation.
7. Public Utility Easements: locations, widths, and location of water appurtenances within the easement.

2.2.3 SANITARY SEWER PROJECTS

1. Manholes: locations, types, rim and invert elevations.

2. Sewer Lines: locations, materials, lengths, slopes, diameters, diameter and locations of side sewer tees and stub outs, and invert elevations.
3. Side Sewer Lines: materials, lengths, diameter, cleanout locations, and depths of buried stub outs (vertical information may be required).
4. Public Utility Easements: locations, widths, and location of sanitary appurtenances within the easement.
5. TV Reports (as required by district responsible for maintenance): comparison of side sewer location shown on sewer line as-built with the TV reports.

2.2.4 STORM DRAINAGE PROJECTS

1. Manholes/Inlets/Catch Basins: locations, types rims & invert elevations.
2. Storm Lines: locations, materials, lengths, slopes, diameter, location of catch basins and side sewer tees, and invert elevations.
3. Public Utility Easements: locations, widths, and location of storm drainage appurtenances within the easements.
4. Retention/Detention Systems: volume of constructed system, pond storage and construction limits, overflow elevations and locations, discharge orifice diameters and locations.
5. Drainage Swales: location, width, depth, side slopes, lengths, elevations of inlet and outlet locations.

Chapter 3

Road Way Design



CHAPTER 3: ROADWAY DESIGN STANDARDS

3.1 BASIC DESIGN POLICIES

All new road designs (public and private, see Section 1.4) and related information must meet the minimum standards within the Grand County Road and Bridge Standards. Any design standards not included within the Grand County Road and Bridge Standards will be subject to the minimum standards set forth in the most up to date publications found in Chapter 12.

All road construction in other jurisdictions must meet the minimum standards set forth by that jurisdiction.

The design speed of any road shall not be less than 20 mph (C.R.S. §42-4-1101).

3.2 TRIP GENERATION

Trip generations for proposed development should be based on the type of occupancy for which the development is designed and shall be formulated from the following:

<u>DEVELOPMENT TYPE</u>	<u>TRIPS GENERATED</u>
Single Family	8 ADT/Unit
Multifamily	5 ADT/Unit

Other uses not listed above shall use the *ITE Trip Generation Manual* for trip generation. Other acceptable data sources may be acceptable in cases where the *ITE Manual* does not provide the information necessary.

3.3 ROAD CLASSIFICATIONS

County roads are classified according to function and ADT's. Functional classifications shall be established by the County. The County has the authority to determine which classification applies to any given road. The applicant may be required to conduct existing traffic counts at the direction of the County to establish existing roadway classifications.

The minimum road design standards are based on the following road classifications and can be found in TABLE 3.3.

3.3.1 ARTERIAL ROAD SYSTEM

The arterial road system links towns and other large traffic generators with minimal interference to through movements and higher design speeds.

3.3.2 COLLECTOR ROAD SYSTEM

Collector roads provide a link between arterials and local roads and therefore serve travel from rural development to towns. More moderate speeds may be typical on collector roads.

3.3.3 LOCAL ROAD SYSTEM

The local road system, in comparison to collectors and arterial systems, primarily provides access to land adjacent and provides travel through developments. A local road is a road whose primary function is to provide access to residences, farms, business, or abutting property, rather than to serve through traffic.

3.3.4 LOW-VOLUME ROAD SYSTEM

A low-volume road has the same characteristics of a local road, in that its primary use is as an access road, not a through road, and it primarily serves drivers who are familiar with the road way.

TABLE 3.3 – ROADWAY CLASSIFICATION AND MINIMUM DESIGN CRITERIA

CLASS	# LANES	ADT LEVELS	DESIGN SPEED (mph)	WIDTH	CLEAR ZONE	RIGHT-OF-WAY
PRINCIPAL ARTERIALS	See <i>State Highway Access Code (CDOT)</i> for design criteria					
ARTERIALS	2 – 4	To be determined	To be determined	12' + 6'	SPECIAL DESIGN	80'
MAJOR COLLECTOR	2 – 4	>2500	30 – 50	12' + 6'	12'	80'
MINOR COLLECTOR	2	1000 – 2500	30 - 50	12' + 4'	10'	80'
LOCAL	2	450 - 1000	20 - 40	12' + 2'	8'	60'
LOW VOLUME	2	< 450	20 - 40	10' + 1'	N/A	60'
DRIVEWAY	1	≤ 20	15 - 25	14'	N/A	25' Min. Easement

NOTE: The minimum RIGHT-OF-WAY/easement widths may be increased by the County to accommodate for drainage improvements, excessive cut/fill slopes, intersections, clear zones, or snow storage.

Typical cross-sections can be found in FIGURES 1-3, pages 119-121.

3.4 HORIZONTAL ALIGNMENT

3.4.1 CENTERLINE CURVE RADIUS

Superelevation shall be required on all collector roads (See TABLE 3.4.1A) unless the minimum requirements shown in the top row of TABLE 3.4.1A can be met. The maximum superelevation rate is six percent (6%) (See SECTION 3.5.2). Compound curves and reverse curves are prohibited without an approved variance. See TABLE 3.4.1B for minimum tangent lengths.

Superelevation is not required on local or low-volume roads if the minimum requirements in TABLE 3.4.1B can be met. The minimum curve radius is ultimately determined by the stopping sight distance.

**TABLE 3.4.1A – MINIMUM CENTERLINE CURVE RADIUS
WITH SUPERELEVATION**

Based on Exhibit 3-26 A Policy on Geometric Design of Highways and Streets (2004)

e (%)	Design Speed (mph)						
	20	25	30	35	40	45	50
2	1120	1630	2240	2950	3770	4680	5700
3	635	944	1320	1760	2270	2840	3480
4	309	511	766	1070	1440	1840	2300
5	169	292	456	654	911	1190	1510
6	81	144	231	340	485	643	1060

This table shall be used for all collector and arterial roads.

**TABLE 3.4.1B – MINIMUM CENTERLINE CURVE RADIUS AND
TANGENT LENGTH WITHOUT SUPERELEVATION**

Based on Exhibit 3-16 A Policy on Geometric Design of Highways and Streets (2004)

Design Speed (mph)	Radius (ft)	Tangent Length (ft)
15	75	50
20	107	75
25	198	100
30	333	150
35	510	200
40	762	250

This table shall be applicable for local and low volume roads.

3.4.2 ACCESS

Roadway systems shall provide at least two (2) access points to the development. All edges of roads (measured from edge of shoulder) must be a minimum of five feet (5') from the adjacent property line. All single-family and multi-family developments may not be required to provide two (2) points of access if all of the following conditions are met.

- a) The total development is ≤ 9 units.
- b) The dead end street is no more than 600' (may be increased to 1000' with Fire District approval).
- c) A turnaround is provided as shown in FIGURE 4.

Lane widening may be necessary on sharper curves and where large vehicle traffic is expected, and should satisfy the requirements within the *A Policy of Geometric Design of Highways and Streets*. At the discretion of the County, turning templates may be required for roads and/or parking lot designs (See TABLE 3.4.2).

Any access that is proposed to multiple lots shall be constructed by the land developer (i.e. a proposed shared driveway to two lots will require that the driveway be constructed through the first lot and in conjunction with the adjacent site improvements).

TABLE 3.4.2 – DESIGN VEHICLE TURNING TEMPLATE

Based on Exhibit 2-2 A Policy on Geometric Design of Highways and Streets (2004)

Vehicle	AASHTO Designation	Minimum Design Radius (ft)
Passenger Car	Passenger Vehicle (P)	24
Fire Truck	Fire District Standard	
Garbage Truck	Single Unit Truck (SU)	42
Semi-Trailer	Intermediate Semi-Trailer (WB-50)	45
Snow Plow	Road and Bridge Standard	

3.4.3 DEAD-ENDS AND TURNAROUNDS

Dead end roads exceeding 200' that do not have turnarounds are not allowed in the County. Using cul-de-sac streets shall be avoided. Where cul-de-sac streets are the only alternative, turnarounds shall be provided per FIGURE 4. All turnarounds shall provide ten feet (10') of flat, treeless ground around the perimeter and within the island. The internal island may not be used as part of the open space calculation and shall not be used for utilities. All turnarounds shall be signed accordingly (to restrict parking, dead-ends, etc.).

The maximum length of roads ending in turnarounds shall be 600'. With the approval from the Fire District, the maximum distance may be increased to 1000'. When a variance from this standard is requested, approval from appropriate Fire District is required and may include the following:

- a) Central water service.
- b) An alternative water supply acceptable to the appropriate Fire District.
- c) Additional turnouts to be installed.

All turnarounds shall be subject to Fire District review and approval.

3.4.4 SWITCHBACKS

A switchback is defined as a curve with a delta greater than 120 ° and a radius $\leq 100'$. Switchbacks will not be allowed on collector or arterial roadways. On all other roadways when other alternatives may cause significant adverse impacts, the use of switchbacks may be allowed on a case-by-case basis, with approval from the County Engineer. Switchbacks shall be designed with a minimum centerline radius of 60'. Maximum centerline grades within 25' of a switchback curve and throughout the curve shall not exceed four percent (4%). Special attention should be given to provide adequate snow storage and sight distance. Widening of the roadway around the curve may be necessary to allow for wide turning vehicle (i.e. fire trucks, snow plows, trash trucks, etc.).

3.5 CROSS SECTIONS

Typical cross-sections can be found in FIGURES 1-3.

3.5.1 SURFACING REQUIREMENTS

At the discretion of the Board of County Commissioners all roads in a development having a planned density greater than three (3) units per acre shall be paved with asphalt and will require a pavement design per SECTION 3.13. All Collector and Arterial roads shall be paved with a minimum thickness of 4” of asphalt. Reference SECTION 3.13 for additional pavement design requirements.

Gravel roadways intersecting paved roads shall provide an asphalt apron for the minimum distance listed below:

Driveway – 5’ or beyond culvert

Local/Low Vol. – 25’

3.5.2 CROWN / SUPERELEVATION

The minimum crown of all gravel roads built to County standards is three percent (3%) (paved is two percent (2%)). The maximum desirable superelevation rate is 0.060 foot per foot, but 0.080 can be used where the grade of the road is less than five percent (5%). Superelevation requirements are defined in SECTION 3.4.1A. Where superelevation is used, the minimum tangent lengths between curves shall be consistent with the guidelines outlined in *A Policy of Geometric Design of Highways and Streets.*

3.5.3 CLEAR ZONE

The minimum clear zone required for County roads are shown in TABLE 3.3, the clear zone required should be based on ADT’s, speed, horizontal and vertical alignments. Slopes of 3:1 or steeper are considered critical slopes, on which a vehicle is likely to overturn. Therefore, all newly constructed roads shall provide a minimum clear zone with a maximum 4:1 slope as defined in TABLE 3.3. The clear zone is measured from the outside edge of the adjacent driving lane.

The clear zone width should be increased on the outside of curves to accommodate the path of an errant vehicle. Determination of the width of the clear zone should take into consideration right-of-way availability, environmental concerns, economic factors, safety needs, and accident histories. If these minimum clear zone widths are not feasible, guardrail installation may be necessary.

3.5.4 GUARDRAIL

The use of guardrail is discouraged within Grand County and should not be used when it is economically feasible to remove the obstruction, correct the hazardous condition, or where it is determined that the guardrail would create a more serious hazard than the feature it would shield. Installation of guardrail will be considered after an analysis is completed (which could require a traffic study) and installation is recommended by a Colorado Licensed Professional Engineer, and after review and approval by the Road and Bridge Department and County Engineer. The *Roadside Design Guide* shall be used as the most recent guide for the analysis for guardrail warrants, design and implementation.

The use of guardrail may be considered if any of the following conditions exist:

- a) Roadside hazards are present within the “clear zone”.
- b) A road built to County Standards contains an isolated sharp curve in conjunction with a side slope steeper than 4:1.
- c) A section of road has a history of vehicular accidents.

When guardrails are considered for installation, especially for extended lengths, provisions shall be made for adequate snow storage and removal.

3.5.5 PEDESTRIAN FACILITIES

Pedestrian trails may be required where, in the opinion of the County, the number of pedestrians is sufficient to interfere with traffic, or significant pedestrian usage is anticipated. For example, dense residential development near a school site, Parking lot access to buildings or between mixed land zoning districts may be required to provide walkways or other type of pedestrian travel ways. All pedestrian trails shall be designed using the *Guide for the Planning, Design, and Operation of Pedestrian Facilities*. It is encouraged that all trails be linked to the Headwater Trail Alliance Trail System whenever possible.

3.6 VERTICAL ALIGNMENT

3.6.1 GRADES

The minimum centerline grade for all streets and roads is one percent (1%). A minimum flowline grade of one percent (1%) shall be maintained around all full and partial cul-de-sac bulbs. If curb and gutter are proposed, the minimum flowline grade may be one half percent (0.5%).

Continuous grade changes shall not be permitted. The use of grade breaks in lieu of vertical curves is discouraged; however, if a grade break is necessary and the algebraic difference in grade (A) does not exceed one half percent (0.5%) along the street / road, the grade break will be permitted.

The maximum grade for all streets is seven percent (7%). Where roads approach intersections see TABLE 3.7.4. A local or low volume road may have sections with a grade of seven percent (7%) to eight point, nine, nine percent (8.99%) provided all of the following conditions are met:

- a) The section shall be no longer than 500’.
- b) The section shall have a horizontal radius of 1000’ or greater.
- c) Grades shall not exceed seven percent (7%) for 500’ on either end of the section.
- d) Curves with a horizontal radius of less than 600’ shall not be within 500’ on either end of the section.

Each side of the road section (RIGHT-OF-WAY) must be designated with a restricted access line.

For a grade of more than nine percent (9%), (10% is the maximum) the previous conditions must be met along with the following:

- a) The section of road will not serve more than 40 ADTs.
- b) The design speed is 30 MPH or lower.

3.6.2 VERTICAL CURVES

The County standard for rate of vertical curvature ('K' value) and minimum lengths is controlled by standards shown in *A Policy of Geometric Design of Highways and Streets* and by stopping sight distance. (See TABLE 3.6.2).

TABLE 3.6.2 – DESIGN CONTROLS FOR VERTICAL CURVES AND STOPPING SIGHT DISTANCE

Exhibits 3-72 and 3-75, A Policy on Geometric Design of Highways and Streets (2004)

SAG VERTICAL CURVES			
Design Speed (mph)	Stopping Sight Distance (ft)	Rate of vertical curvature, K^a	
		Calculated	Design
15	80	9.4	10
20	115	16.5	17
25	155	25.5	26
30	200	36.4	37
35	250	49	49
40	305	63.4	64
45	360	78.1	79
50	425	95.7	96
55	495	114.9	115
60	570	135.7	136
65	645	156.5	157
CREST VERTICAL CURVES			
Design Speed (mph)	Stopping Sight Distance (ft)	Rate of vertical curvature, K^a	
		Calculated	Design
15	80	3	3
20	115	6.1	7
25	155	11.1	12
30	200	18.5	19
35	250	29	29
40	305	43.1	44
45	360	60.1	61
50	425	83.7	84
55	495	113.5	114
60	570	150.6	151
65	645	192.8	193

^a Rate of vertical curvature, K, is the length of the curve (ft) per percent algebraic difference intersecting grades (A). $K=L/A$

See *A Policy on Geometric Design of Highways and Streets* for “k” values associated with vertical curve designs based on passing sight distance.

3.6.3 STOPPING SIGHT DISTANCE

See Table 3.6.3-A and B for stopping distances.

TABLE 3.6.3A – STOPPING SIGHT DISTANCE*Exhibit 3-1 - A Policy on Geometric Design of Highways and Streets (2004)*

Design Speed (mph)	Brake Reaction Distance (ft)	Braking Distance on level (ft)	Stopping Sight Distance	
			Calculated (ft)	Design (ft)
15	55.1	21.6	76.7	80
20	73.5	38.4	111.9	115
25	91.9	60.0	151.9	155
30	110.3	86.4	196.7	200
35	128.6	117.6	246.2	250
40	147.0	153.6	300.6	305
45	165.4	194.4	359.8	360
50	183.8	240.0	423.8	425
55	202.1	290.3	492.4	495
60	220.5	345.5	566.0	570
65	238.9	405.5	644.4	645

Note: Brake reaction distance predicated on a time of 2.5s; deceleration rate of 11.2 ft/s² used to determine calculated sight distance

TABLE 3.6.3B – STOPPING SIGHT DISTANCE ON GRADES*Exhibit 3-2 - A Policy on Geometric Design of Highways and Streets (2004)*

Design Speed (mph)	Stopping Sight Distance (ft)					
	Downgrades			Upgrades		
	3%	6%	9%	3%	6%	9%
15	80	82	85	75	74	73
20	116	120	126	109	107	104
25	158	165	173	147	143	140
30	205	215	227	200	184	179
35	257	271	287	237	229	222
40	315	333	354	289	278	269
45	378	400	427	344	331	320
50	446	474	507	405	388	375
55	520	553	593	469	450	433
60	598	638	686	538	515	495
65	682	728	785	612	584	561

See *A Policy on Geometric Design of Highways and Streets* for Decision Sight Distance where unexpected vehicular maneuvers are required. (i.e. intersections, changes in cross section, etc.)

3.7 INTERSECTIONS

All connections to existing asphalt roads will require an asphalt sawcut and be paved according to SECTION 3.5.1 SURFACE REQUIREMENTS.

3.7.1 SKEW ANGLES

All new road/driveway connections shall intersect existing roads at 90°. Where this is not possible the following maximum skew angles and distances (measured from edge of shoulder) must be met:

- a) A maximum skew angle of 10° for 20' on local/low volume roads.
- b) A maximum skew angle of 10° for 50' on collector roads.
- c) A maximum skew angle of 10° for 100' on arterial roads.
- d) A maximum skew angle of 25° for 20' on driveways.

3.7.2 EDGE OF SHOULDER RADII

All new road/driveway connections shall meet the minimum design standards for intersection edge of shoulder radii (TABLE 3.7.2). The width of intersection should be limited to accommodate the turning radii of vehicles anticipated to use the intersection. Oversized intersections are discouraged.

The maximum fall, in feet, around the radii return shall be equal to the steepest grade coming into or out of the return multiplied by the return length plus .02'.

TABLE 3.7.2 – MINIMUM EDGE OF SHOULDER RADII FOR INTERSECTING ROADWAYS

EXISTING ACCESS		NEW ACCESS					
		ARTERIAL	MAJOR COLLECTOR	MINOR COLLECTOR	LOCAL	LOW VOL.	DRIVE
	HIGHWAY	See <i>State Highway Access Code (CDOT)</i> for design requirements					
	ARTERIAL	SPECIAL DESIGN	SPECIAL DESIGN	50'	30'	*	*
	MAJOR COLLECTOR	----	50'	50'	30'	*	*
	MINOR COLLECTOR	----	----	50'	25'	20'	10'
	LOCAL	----	----	----	20'	20'	10'
LOW VOL.	----	----	----	----	20'	10'	

* Access is discouraged. Variances will be required.

3.7.3 HORIZONTAL OFFSET

All new road/driveway connections shall meet the minimum design standards for intersection offsets (measured centerline to centerline) to existing roads/driveways (TABLE 3.7.3).

TABLE 3.7.3 – MINIMUM INTERSECTION OFFSETS

		NEW ACCESS			
		MAJOR COLLECTOR	MINOR COLLECTOR	LOCAL/ LOW VOL.	DRIVE
E X I S T I N G I N T E R S E C T I O N S	HIGHWAY	See <i>State Highway Access Code (CDOT)</i> for design requirements			
	⊥ ARTERIAL	1320'	1320'	*	*
	⊥ MAJOR COLLECTOR	1320'	1320'	*	*
	⊥ MINOR COLLECTOR	1320'	1320'	*	*
	⊥ LOCAL/ LOW VOL.	700'	700'	*	*
	⊥ DRIVE	700'	700'	*	*
	ARTERIAL				
	⊥ MAJOR COLLECTOR	N/A	1000'	800'	*
	⊥ MINOR COLLECTOR	1000'	800'	500'	*
	⊥ LOCAL/ LOW VOL.	800'	500'	500'	*
	⊥ DRIVE	500'	200'	300'	*
	MAJOR COLLECTOR				
	⊥ MINOR COLLECTOR	1000'	800'	500'	*
	⊥ LOCAL/LOW VOL.	800'	500'	500'	*
	⊥ DRIVE	500'	200'	200'	*
	MINOR COLLECTOR				
	⊥ MINOR COLLECTOR	-	N/A	500'	200'
	⊥ LOCAL/LOW VOL.	-	500'	200'	125'
	⊥ DRIVE	-	200'	125'	100'
	LOCAL/ LOW VOL.				
⊥ LOCAL/LOW VOL.	-	-	200'	125'	
⊥ DRIVE	-	-	125'	50'	

* Access is discouraged. Variances will be required unless there is only one point of access and no other roads adjacent to property.

When a new development can access two different roads, access shall always be to the road with the lowest classification.

3.7.4 GRADES

All intersections shall utilize vertical curves unless SECTION 3.6.1 is met. The minimum design speed for all vertical curves (See TABLE 3.6.2) at intersections shall be 15 MPH.

TABLE 3.7.4 – MAXIMUM GRADE AT INTERSECTIONS

NEW ACCESS							
T H R O U G H S T R E E T		ARTERIAL	MAJOR COLLECTOR	MINOR COLLECTOR	LOCAL	LOW VOL.	DRIVE
	HIGHWAY	2% - 200'	2% - 200'	3% - 200'	*	*	*
	ARTERIAL	2% - 200'	2% - 200'	3% - 200'	3% - 100'	3% - 100'	*
	MAJOR COLLECTOR	-----	3% - 150'	3% - 150'	3% - 100'	3% - 100'	*
	MINOR COLLECTOR	-----	-----	3% - 100'	3% - 100'	3% - 100'	5% - 50'
	LOCAL	-----	-----	-----	3% - 50'	3% - 50'	5% - 50'
	LOW VOLUME	-----	-----	-----	-----	3% - 50'	5% - 50'

NOTE: Distance Measurement starts from edge of shoulder of the through street. The vertical curve may be included if the maximum values shown above are not exceeded.

* Access is discouraged. Variances will be required unless there is only one point of access and no other roads adjacent to property.

3.7.5 CORNER SIGHT DISTANCE

The minimum corner sight distance is defined in TABLE 3.7.5. Using the plan and profile of the intersection the design engineer shall verify these minimum sight distances can be attained.

TABLE 3.7.5 – MINIMUM CORNER SIGHT DISTANCE

DESIGN SPEED (MPH)	CORNER SIGHT DISTANCE (FEET)
20	225
30	335
40	445
50	555

Sight distance shown is for a stopped passenger car to turn left onto a two-lane road with no median and grades of three percent (3%) or less. For other conditions, the time gap must be adjusted and required sight distance recalculated.

Truck traffic entering onto roads requires longer sight distances than shown in TABLE 3.7.5. Any proposed public or private road or driveway regularly used by truck traffic may require an

individual analysis. When the criteria for sight distance cannot be met, the County may deny the access, prohibit right or left turns by vehicles entering the road, or require speed change lanes.

3.7.6 SIGHT TRIANGLE

For safety and visibility purposes, a sight distance triangle shall be maintained at street intersections and where driveways intersect streets (See FIGURE 7). Development layouts shall pay particular attention to the size and shape of their corner lots in order to maintain these minimum sight triangles. Any object within the sight triangle that is greater than 12” in diameter between three feet (3’) and eight feet (8’) above the roadway elevation of the adjacent street shall constitute a sight obstruction, and shall be removed. Such objects include: snow, buildings, cut slopes, hedges, trees, bushes, utility cabinets or tall crops. This criteria also requires the elimination of parking within the sight triangle and applies whether the intersecting roads are level or on grades.

All intersections within a proposed roadway shall depict the necessary sight triangles on the intersection plan sheet and the plat.

3.8 SIGNAGE AND STRIPING

Grand County Road and Bridge is mandated by State Statute C.R.S. §42-4-104, C.R.S. §42-4-105 and C.R.S. §42-4-110 to follow the Manual on Uniform Traffic Control Devices (MUTCD) and the Colorado Supplement to the MUTCD. All signs, striping, markers, delineators, signals and other traffic control services must conform to the requirements of the MUTCD and the Colorado Supplement.

Pavement striping material shall be applied according to the CDOT Standard Specifications for Road and Bridge Construction. All pavement symbols shall be inlaid to a depth that the symbol is flush with the surrounding pavement to prevent snowplow interference.

No signs and/or striping shall be placed within the County Right-of-Way without first obtaining permission of the County and filling out a “General Release of Liability” form.

In all new developments, all required street sign numbers (names are not allowed), speed limit signs, stop signs, striping and other traffic control devices shall be installed and paid for by the Applicant.

The County shall assign road numbers for all proposed roadways. County owned roads, shall be signed and contain the County logo and number (names are not allowed). County owned roads that are not maintained shall contain a NCM (Non County Maintained) designation (available through the County Road and Bridge Department). All private roads will have number designation only. See FIGURE 8 for sign details.

Nonstandard signs shall not be permitted within the Right-of-Way without the approval of the Grand County Road and Bridge Department. This shall include but is not limited to: archways, driveway delineators, welcome/entrance signs, commercial signage, road names, etc. Nonstandard signs shall comply with the requirements set forth in the Grand County Zoning Regulations. Roadside memorial signs may be installed according to C.R.S. §43-2-149.

All sign sheeting shall be a minimum of High Intensity Grade or better and meet federally mandated minimum retro reflectivity requirements. (Engineer grade will no longer be allowed).

All sign posts shall be new and meet the National Cooperative Highway Research Program (NCHRP) Report 350. Sign installers shall have on hand and supply the Grand County Road and Bridge Department with a copy of the certifying letter (provided by the manufacture) stating that the posts being installed meets the minimum standards set by the NCHRP Report 350.

The following is the county procedure for considering requests by the public for alterations to existing roadside signage and striping:

- 1) All requests to be submitted to the Road and Bridge Department.
- 2) Requests for Low Volume Roads (<400 ADTs) will be reviewed by the Road and Bridge Superintendent.
- 3) All other requests will be reviewed by the County Engineer to determine the required parameters of the analysis, including the need for a Traffic Study (if necessary).
- 4) Road and Bridge will organize accident history reports from the State Highway Patrol and will collect traffic counts, if necessary.
- 5) Pertinent data will be compiled and summarized by the County Engineer and the Road and Bridge Superintendent will review pertinent data and determine if alterations are warranted and/or necessary.
- 6) In the event the County Engineer and/or Road and Bridge Superintendent determine that alterations are not necessary or warranted the applicant may, submit in writing to Grand County Road and Bridge, a request for the matter to be reviewed by the BOCC.
- 7) All decisions made by the BOCC shall be final.

3.9 PARKING REQUIREMENTS

3.9.1 GENERAL

Parking on County roads or within the Right-of-Way is illegal as provided in (C.R.S. §42-4-1204). The backing of parked vehicles onto County roads is discouraged; exceptions may be made on Local and Low Volume Roads.

Typical Parking Stall Dimensions	Maximum Grade in Parking Area	Minimum Grade in Parking Area
10' x 20'*	5% parallel to parking stalls 5% for cross slope	Asphalt - 1% Gravel - 2%

* Special Design will be needed for parallel parking. Underground/covered parking may use 9' x 18'. Minimum/Maximum grade requirements are considered to be average grades at the middle of the parking area.

The number of parking stalls required shall conform to Section 3.9.3 of these standards. The use of compact stalls is not allowed in Grand County.

3.9.2 AMERICANS WITH DISABILITES ACT (A.D.A.) COMPLIANCE

A.D.A. parking design shall accommodate the operation of wheel chairs between vehicles, must be clearly signed and must meet all design requirements (including maximum grades) contained in the most recent version of the ADA Standards for Accessible Design from the Department of Justice. Article 5, C.R.S. §9-5-101 et. seq. shall apply for all A.D.A. parking and access.

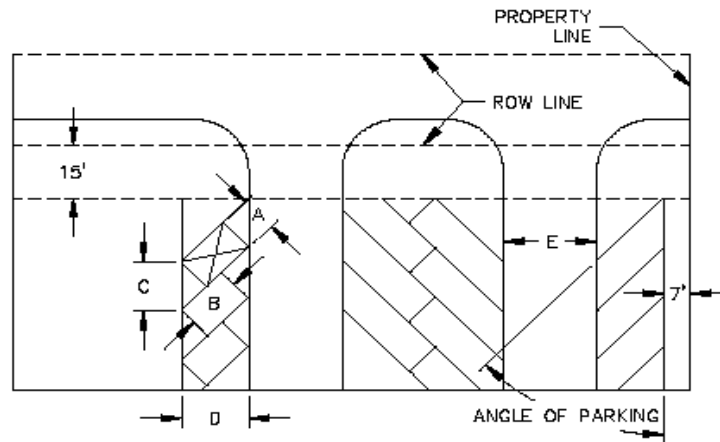
3.9.3 OFF-STREET PARKING

These parking requirements are the minimum, and, based on individual circumstances, may be increased or decreased at the discretion of the County.

- a) Single-family or multi-family dwellings with one (1) bedroom, one and one-half (1-1/2) spaces per dwelling unit.
 - b) Single-family or multi-family dwellings with two (2) bedrooms, two (2) spaces per dwellings.
 - c) Single-family or multi-family dwellings with three (3) bedrooms or more, three (3) spaces per dwelling unit.
 - d) Mobile homes, two (2) spaces per dwelling unit.
 - e) Hotels, motels, lodges, boarding and rooming houses, one and one-half (1-1/2) spaces per rental unit.
 - f) Rest homes, hospitals, sanitariums, one (1) space per unit.
 - g) Offices (professional or non-professional), one (1) space per three hundred (300) square feet of gross floor area.
 - h) Eating and drinking establishments, one (1) space per four (4) seats.
 - i) Retail sales-one (1) space per three hundred (300) square feet of gross floor area excluding areas devoted exclusively to storage and warehousing.
 - j) Auditoriums, churches, theaters – one (1) space per eight (8) seats if fixed seating or one (1) space per one hundred (100) square feet of floor area in the seating area.
 - k) For uses not listed or not fitting within one (1) of the above categories, the Grand County Planning & Zoning Department and the Grand County Planning Commission shall determine the parking requirements subject to the approval of the Board of County Commissioners of Grand County.
 - l) Warehouse and Manufacturing buildings, one (1) space per one-thousand (1000) square feet of gross floor area.
- (2) Location and Description of Parking Space and Aisles
- a) All parking spaces shall be set back a minimum of fifteen (15) feet from all Rights-of-Way.
 - b) No parking shall be permitted in side yard setbacks.
 - c) Required parking spaces must be provided on the same property as the principal building or use.
 - i. In multi-family developments, parking shall be within two hundred (200) feet of the principal use. Details regarding ownership of the parking areas shall be based on the homeowners' s association covenants.
 - ii. In commercial or industrial developments, the parking area shall be within six hundred (600) feet of the principal building or use.
 - iii. All parking areas shall be owned by the owner of the principal use for which parking spaces are being provided.

- d) Parking areas shall be surfaced with asphalt, or concrete, or compacted gravel which shall be treated with environmentally sensitive material(s) to control fugitive dust.
- e) Parking areas shall be designed to manage stormwater drainage that will result from increase runoff from the site, designed to prevent non-point source pollution. Design shall be based on the Grand County Stormwater Drainage Design and Criteria Manual, meeting federal and state regulations.
- f) Access driveway shall be designed per CHAPTER 4.
- g) A land owner with access to a state highway will be required to contact the Colorado Department of Transportation regarding specific permit and design requirements.
- h) Parking shall comply with all applicable federal and state accessibility requirements.
- i) Except as provided in Section 3.9.3, all parking areas shall be separate from adjacent property by the use of open space areas of a minimum dimension of seven feet (7'). Such open space areas shall define the parking area and help define traffic flow so as to allow snow removal from parking areas without trespass upon or interference with adjacent property owners.

Angle of Parking	(A) Stall Width	(B) Stall Length	(C) Curb Length	(D) Stall Depth	(E) Minimum Drive Way	
0°	10'	20'	23'	10'	12'	24'
45°	10'	20'	14' 2"	21' 3"	16'	N/A
60°	10'	20'	11' 6"	22' 4"	18'	24'
90°	10'	20'	10'	20'	24'	24'



PARKING REQUIREMENTS

FIGURE IV

REFERENCE: ITE TECHNICAL COUNCILING COMMITTEE 5D-8, GUIDELINES FOR PARKING FACILITY LOCATION AND DESIGN, ITE, 1994, FIG. 3.

3.10 MULTI-FAMILY DEVELOPMENT

Multi-family developments shall meet the requirements of all applicable sections noted in SECTION 1.4 and within these regulations.

Limited deviation in design requirements may be permitted based on urban design sections within AASHTO *Geometric Design of Very Low-Volume Local Roads*. The minimum design speed for all internal roadways shall be 15 mph. Particular attention should be made to meet the minimum stopping sight distance requirements. All structures within multi-family development (i.e. buildings, garages, dumpsters, etc.) shall be located at least 10' from the edge of all driving surfaces, or as determined by the County based on setback requirements.

3.10.1 RIGHT-OF-WAY / EASEMENT

THE MINIMUM Right-of-Way/easement width should comply with TABLE 3.3. The road Right-of-Way/easement shall accommodate all utilities, roads, drainage, and snow storage requirements or separate easements shall be required.

3.10.2 INTERSECTIONS

At the discretion of the County, driveway offsets to roads may be reduced to 50' (measured centerline to centerline) on internal roadways which are classified Local or Low-volume. This design criteria does not reduce other design criteria required in these standards (i.e. site triangles, intersection site distance, setbacks, etc.).

3.10.3 REVEGETATION, EROSION AND SEDIMENT CONTROL

See CHAPTER 7 for requirements.

3.10.4 PARKING

See Section 3.9 for requirements.

3.10.5 LIGHTING

All lighting requirements shall be according to appropriate land use regulations listed in SECTION 1.4. See SECTION 5.2.4.

3.10.6 PEDESTRIAN FACILITIES

See SECTION 3.5.5 for requirements.

3.10.7 SNOW OPERATIONS

See SECTION 3.11 for requirements.

3.11 SNOW OPERATIONS

All sites shall provide snow storage on-site. The use of the County Right-of-Way for development snow storage shall not be permitted (C.R.S. §43-5-301, 43-5-303).

Driving surfaces (including gravel shoulders), parking areas, and pedestrian walkways shall be required to provide snow storage. The snow storage area required is 30% of the total area as mentioned in the previous sentence and shall be a minimum of four feet (4') measured from the edge of road. Shoulders, detention ponds, cut slopes exceeding 3:1, center islands and private land not maintained by a homeowners association shall not be used as snow storage. Snow storage shall not be shown within three feet (3') of all surface utilities. Designated snow storage areas shall be placed in practical locations (as determined by the County) throughout the site and shall not interfere with the intersection sight triangle (See FIGURE 7). Designated snow storage areas should be located to ensure that runoff from these areas will drain to the appropriate drainage facility (inlets, detention ponds, etc.).

If the 30% snow storage requirement cannot be met, a variance may be granted for heated hard surfaces or sites with a long-term maintenance program for hauling snow to predetermined offsite locations. Both of these options may be required to meet current water quality and drainage detention standards.

The County shall not be responsible for any snow removal required to gain access to any utility or other infrastructure within the County Right-of-Way.

3.12 TRAFFIC STUDIES

There are three types of general Traffic Studies that may be required by Grand County. The type of traffic study required will be based on the level of detail necessary to analyze a proposed alteration or addition to traffic volumes or road infrastructure (i.e. road signs, driving surface widths, new subdivision, guardrail installation, etc.).

The following list represents potential road alterations that shall require a Phase I Traffic Study, which will be completed, at the direction of the Road and Bridge Superintendent:

- Posted speed limit change

The following list represents potential road alterations that *may* require a Phase I Traffic Study, which will be completed, at the direction of the Road and Bridge Superintendent:

- Pavement striping addition or alteration
- Guardrail installation or removal
- Roadside signage addition or alteration

In general, a Phase II Traffic Impact Analysis may be required to analyze any proposed increase in traffic volumes, most notably from a new subdivision or commercial property that will access or impact a County Road.

In general, a Phase III Traffic Impact Study, including existing traffic counts, shall be required by the County if:

- The proposed development impacts a Collector or Arterial Road
- The road classification of an existing road may be altered
- The proposed development creates > 400 ADTs
- The initial results from the Phase II Traffic Impact Analysis require further analysis

A Phase II and III Traffic Study shall be based on the projected traffic needs twenty (20) years after construction and shall encompass the needs from existing development, future development, and the proposed development. Trip generations from future development over the design period shall be based on zoning, existing land use, proximity to developed areas, historic growth, and other factors expected to influence development. See SECTIONS 3.2 & 3.3 for vehicle trip calculations and road classifications.

Any proposed development in Grand County that may impact traffic volumes on County Roads that intersect a State Highway may require additional coordination and permitting with CDOT (see State Highway Access Code for more information).

3.12.1 PHASE I - TRAFFIC STUDY

The Phase I Traffic Study should contain, but not be limited to the following information:

- 1) Current Traffic Data
- 2) 85TH and 50TH Percentile Speeds
- 3) Accident history and severity of accidents
- 4) Daily and hourly traffic volumes

A written analysis of the current road infrastructure, classification and users, including:

- 1) The extent of the study area and location of traffic data collection devices
- 2) Current classification and type of traffic users (i.e. local, passenger, commercial, etc.)
- 3) Road geometry
- 4) Roadside conditions (i.e. lack of shoulders, hazards close to road, etc.)
- 5) Estimated volume of pedestrian and bicycle traffic
- 6) Identification of special circumstances (i.e. school area)
- 7) Number of existing access points in the study area
- 8) Review and analysis of pertinent signage and striping regulations (i.e. MUTCD, C.R.S, etc.)

3.12.2 PHASE II - TRAFFIC IMPACT ANALYSIS

The Phase II Traffic Impact Analysis (T.I.A.) shall be prepared by a Colorado Licensed Professional Engineer and should contain, but not be limited to the following information:

- a) A description of the proposed land use, a site plan and an overall plan view of proposed roads within the development and all accesses to County roads with offset distances to other intersections (including driveways) within 1,500’.
- b) A determination stating if the proposed increase in traffic will result in a road classification change. All costs associated with the road improvements required by the change in road classification, including accel/decel lanes and signalization may be the responsibility of the developer.
- c) On-site issues including number and location of driveways, parking needs/layout, circulation, pedestrians, truck access and operations transit and safety.
- d) Description of and maps depicting existing roadway/transportation conditions affected by the development.
- e) Identification of traffic congestion, roadways classifications, safety issues, and possible deficiencies of the existing transportation system affected by the development. This should address and anticipate “seasonal” traffic volumes, effects of phased construction, and opening day/planned special events.

- f) Anticipated nearby land development (planned or under construction) and associated traffic, along with the anticipated trip generation, and daily and peak-hour traffic volumes of the proposed development at full build and at any interim construction phase.
- g) The impacts of the development on the existing road and transportation system and the need for potential improvements to existing roads, in order for these roads to be in compliance with the Grand County Road and Bridge Standards, including, but not limited to horizontal alignment, vertical alignment. All costs associated with any improvements may be the responsibility of the developer.

3.12.3 PHASE III - TRAFFIC IMPACT STUDY

The Phase III Traffic Impact Study (T.I.S.) shall be prepared by a Colorado Licensed Professional Engineer and should contain, but not be limited to the following information:

- a) A scaled map of the vicinity showing all roadways and highways adjacent to the site, a scaled map of the study area including land uses, and a map of the immediate access area, a plan showing on-site anticipated vehicular circulation patterns.
- b) Map identification and textual consideration of all accesses that are existing and possible future access locations including signal locations for at least one half (1/2) mile in each direction along the roadway as well as all potential roadway and signal improvements.
- c) Evaluation of current daily and peak hour traffic data and 20th year projections including turning movements at all intersections and any key year midpoints assuming a build out of the study area based upon zoning, comprehensive plans and growth estimates.
- d) A determination stating if the proposed increase in traffic will result in a road classification change. All costs associated with a change in road classifications may be the responsibility of the developer.
- e) An evaluation of the level of service and capacity for all design and traffic operations elements including mainline roadway and affected intersections.
- f) An analysis of the clear zone and the horizontal and vertical sight distance.
- g) Accurate and understandable diagrams.
- h) All assumptions and adjustment factors.
- i) An analysis of all reasonable alternatives including no build or alternative roadway access.
- j) Current and projected travel speed, travel time and delay time within the study area that will be impacted by the access proposal.
- k) Trip generation distribution and assignments.
- l) Analysis of queue lengths for all turn lanes affected to the 20th year.
- m) A safety analysis including conflict points, turning movements and three (3) years of accident history.
- n) A conceptual design showing all geometric elements and their approximate dimensions with analysis of any element of the access that will be below standard.
- o) Sources of information, data and references.

- p) The existence of any current traffic problems in the local area such as a high accident location, confusing intersection or an intersection in need of a traffic signal.
- q) The current projected level of service of the roadway system adjacent to the development, which will be significantly affected.
- r) The sensitivity of the adjacent neighborhoods or other areas that may be perceived as impacted.
- s) The proximity of the site driveways to the other access points or intersections.
- t) The ability of the adjacent existing or planned roadway system to handle increased traffic or the feasibility of improving the roadway system to handle increased traffic.
- u) Other specific problems or deficiencies that may be affected by the proposed development or affect the ability of the development to be satisfactorily accommodated (seasonal traffic volumes, phased construction, opening day/special events).

3.13 PAVEMENT DESIGN

3.13.1 DESIGN

At the direction of the Board of County Commissioners a pavement design report with proposed road structural sections shall be developed for all new roadways, or for existing roadways that are classified as Collector or Arterial. The Applicant shall provide a report performed by a geotechnical engineer licensed in the State of Colorado, prior to approval of the final road design. The Road and Bridge Department will determine an acceptable surfacing material type and design thickness for all Low-Volume and Local roads and may request a pavement design report in some instances.

The final pavement design for all asphalt roads must meet all the procedures and requirements within CDOT Pavement Design Manual. The final pavement design for all gravel-surfaced roads must meet all the procedures and requirements in accordance with AASHTO's Design of Pavement Structures - Low Volume Road Design." The geotechnical engineer shall decide the number of test pits required based on the consistency of the soils being tested.

3.13.2 CONSTRUCTION / TESTING REQUIREMENTS

All road construction shall conform to the pavement design requirements, approved by Grand County, as required in SECTION 3.13 (i.e. maximum lift thickness, densities and moisture content of materials, proof-rolling requirements, etc.). Construction sampling and testing must be submitted to Grand County for all phases of the project in accordance with the schedule for minimum materials sampling as found in Section 106 of CDOT's Standard Specifications for Road and Bridge Construction, and in accordance with the testing calculations, procedures and analysis as found in CDOT's Laboratory Manual of Test Procedures. See SECTIONS 9.5 – 9.6 for pertinent information regarding road closures and construction safety.

3.14 BRIDGE DESIGN

Vehicular bridges are to conform to the AASHTO Standard Specifications for Highway Bridges requirements and specifications. All bridges shall satisfy HS20 load design ratings as minimum requirements. Plans are to be prepared by a Colorado Licensed Professional Engineer and are to be submitted to the County for review and approval.

Clear deck width must accommodate the full width of the traveled lanes and shoulders of approach roads. Pedestrian walkways and railings shall be required as warranted. Guardrail end sections shall be provided on the approach and opposing sides of traffic flow and shall comply with CDOT *M&S Standards*. All bridges shall be designed and provide conduits for all shallow utilities (gas, electric, cable, etc...). The waterway area shall accommodate the 100-year storm. A minimum of one foot (1') freeboard is required. Additional freeboard shall be required when debris laden flow is anticipated.

Chapter 4

Driveway Design



CHAPTER 4: DRIVEWAY DESIGN STANDARDS

4.1 BASIC DESIGN AND PERMITTING POLICY

A driveway shall be designed to provide safe ingress and egress to structures and is defined as an access serving ≤ 20 Average Daily Trip (ADT's). Driveway policy and permitting shall be managed by Grand County Road and Bridge. These Driveway Design Standards apply to the first 50' of any driveway that accesses any public road measured from the edge of the driving surface.

Driveway's that attach to private roads do not require a permit. The owner may still choose to obtain a driveway permit to ensure the driveway is constructed to County Standards.

If an access serves more than 20 ADT's (up to two single family homes or four multi-family units), it shall be classified as a roadway rather than a driveway and must meet the County's standards and requirements for roadway construction. Trip generations for other types of proposed developments shall use the *ITE Trip Generation Manual* for trip generation. Other acceptable data sources may be used in cases where the *ITE Manual* does not provide the information necessary.

All construction must comply with the Grand County Road and Bridge Standards defined in this chapter. If an Applicant desires to design and construct a driveway in variance to these driveway standards, such variance(s) shall meet the variance criteria shown in this chapter.

Any construction started prior to permit issuance, will result in a fine of \$500.00 to the property owner.

All permits will expire one (1) year from date of issuance. Post inspections of driveways will only occur in the spring, summer or fall months.

4.2 DRIVEWAY PERMITS

4.2.1 PERMIT APPLICATION INSTRUCTIONS

1. Prior to any driveway construction, a Driveway Permit Application must be submitted and approved by the County.
2. Applicant must mark with wooden lath the centerline of the proposed Driveway for the first 50' prior to submitting application.
3. Applicant's property address must be displayed at the site prior to submitting application.
4. One (1) application must be submitted for each proposed driveway.
5. Applications must be complete, signed and include applicable fees (see Section 4.2.3). Incomplete applications will be denied.
6. A detailed sketch of the work site must accompany the application and must show the placement of the driveway.
7. The application must include Underground Notification Center of Colorado (UNCC) locate ticket number. (To contact UNCC, dial 811 from any phone. This service is at no cost.)

4.2.2 INSPECTION REQUIREMENTS

1. Once a completed application is received by Grand County Road and Bridge, a site inspection will be conducted within 5 business days.
2. If the site inspection determines that the existing topography is greater than 5%, a driveway profile will be required. If the profile shows that the driveway meets standards, the permit may be issued. If the profile shows that the driveway does not meet standards, a variance may be applied for as defined in this chapter.
3. A copy of the approved permit application shall be available for inspection at the work site at all times.
4. If a Driveway fails the post inspection the property owner has ten (10) calendar days after notification to repair the work site to Grand County Road and Bridge Standards (Chapter 4 Driveway Design Standards) and a re-inspection fee of \$100.00 shall be assessed.
5. Consideration shall be given to placement of construction items such as dumpsters, portable toilets, equipment, building materials, etc. These items shall **not** be placed within a County Right-of-Way.
6. No Certificate of Occupancy will be issued by the Grand County Building Department without an approved post Driveway inspection.
7. Excavated material from the site shall not be stored within the Right-of-Way (ROW) and shall be disposed of properly.

4.2.3 FEES

Grand County Driveway Permit fee is \$125.00 per application.

Grand County Re-Inspect Fee is \$100.00 for each re-inspection.

Installing Driveway without Permit is \$500.00.

Also see Variance Costs (Section 4.13.4) in this chapter.

4.3 ACCESS DESIGN

Single family and multi-family residences are allowed one access point onto the County road system unless separated by a minimum separation of 250' (measured centerline to centerline). When a lot can access two different roads, driveway access should always be onto the road with the lowest classification.

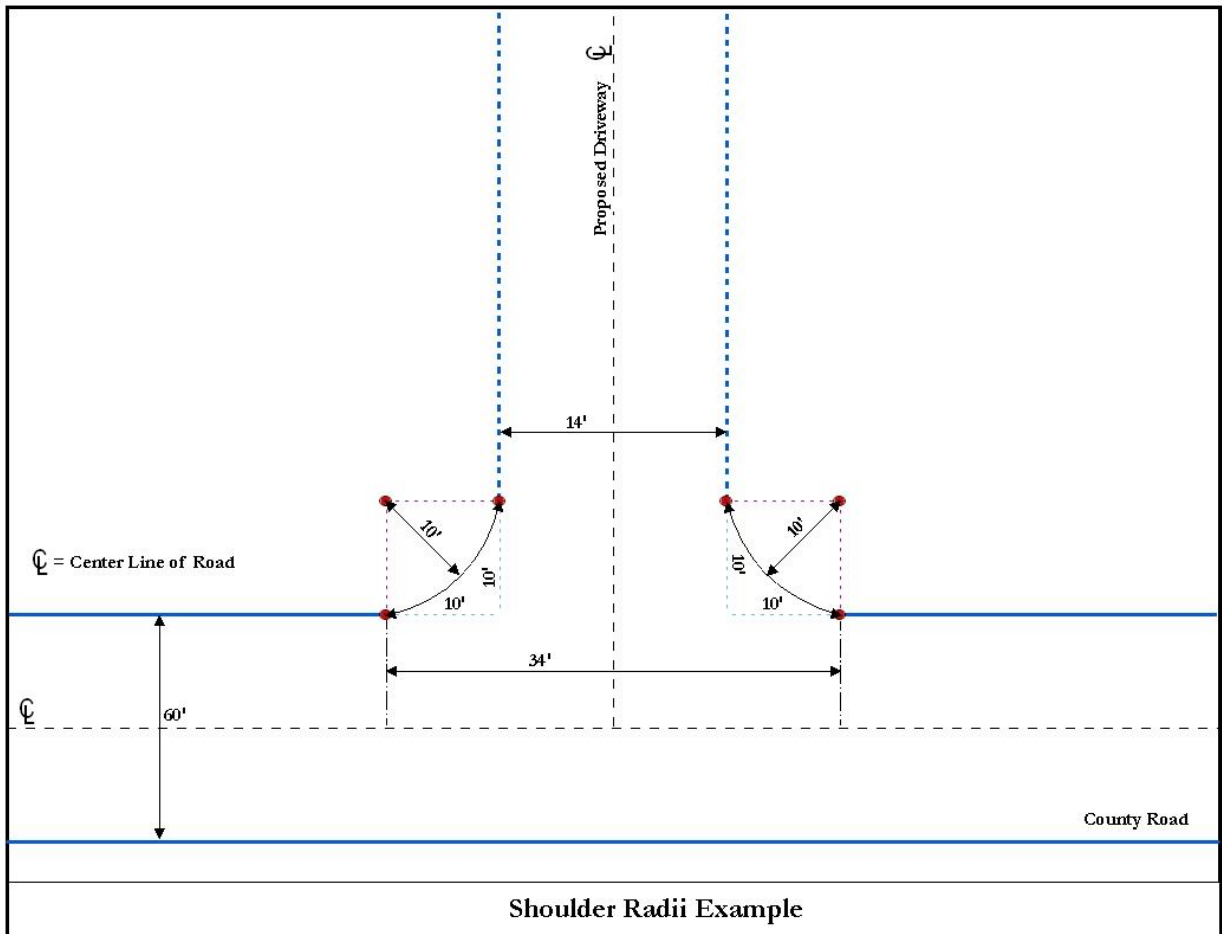
Driveways connecting onto an arterial or major collector are considered a detriment to the safety and capacity of the road, and will require a variance application be submitted to the County for review. Backing onto County roads for access shall not be permitted on arterials or collector roads and is discouraged on other road classification based on site restrictions as shown in this chapter.

Driveways shall not access County Roads if the County Road has a grade greater than 7%.

4.3.1 ALIGNMENT

A minimum horizontal curve radius of 35' at centerline is required if a curve falls within the first 50' of the driveway.

The entrance of the driveway shall have an edge of shoulder radii of 10'.

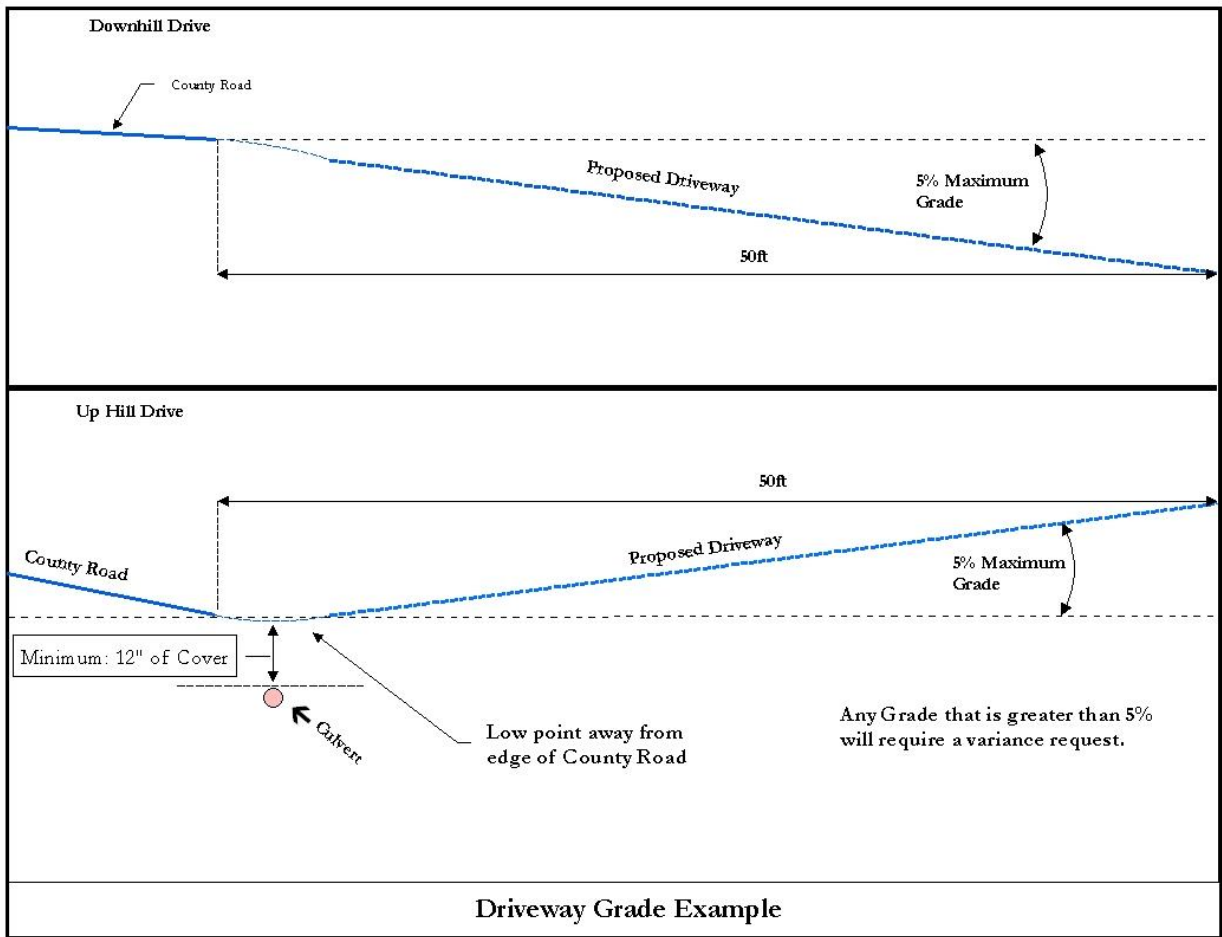


4.3.2 ENTRANCE GRADES

Entrance grades shall be a maximum of 5% within the first 50'.

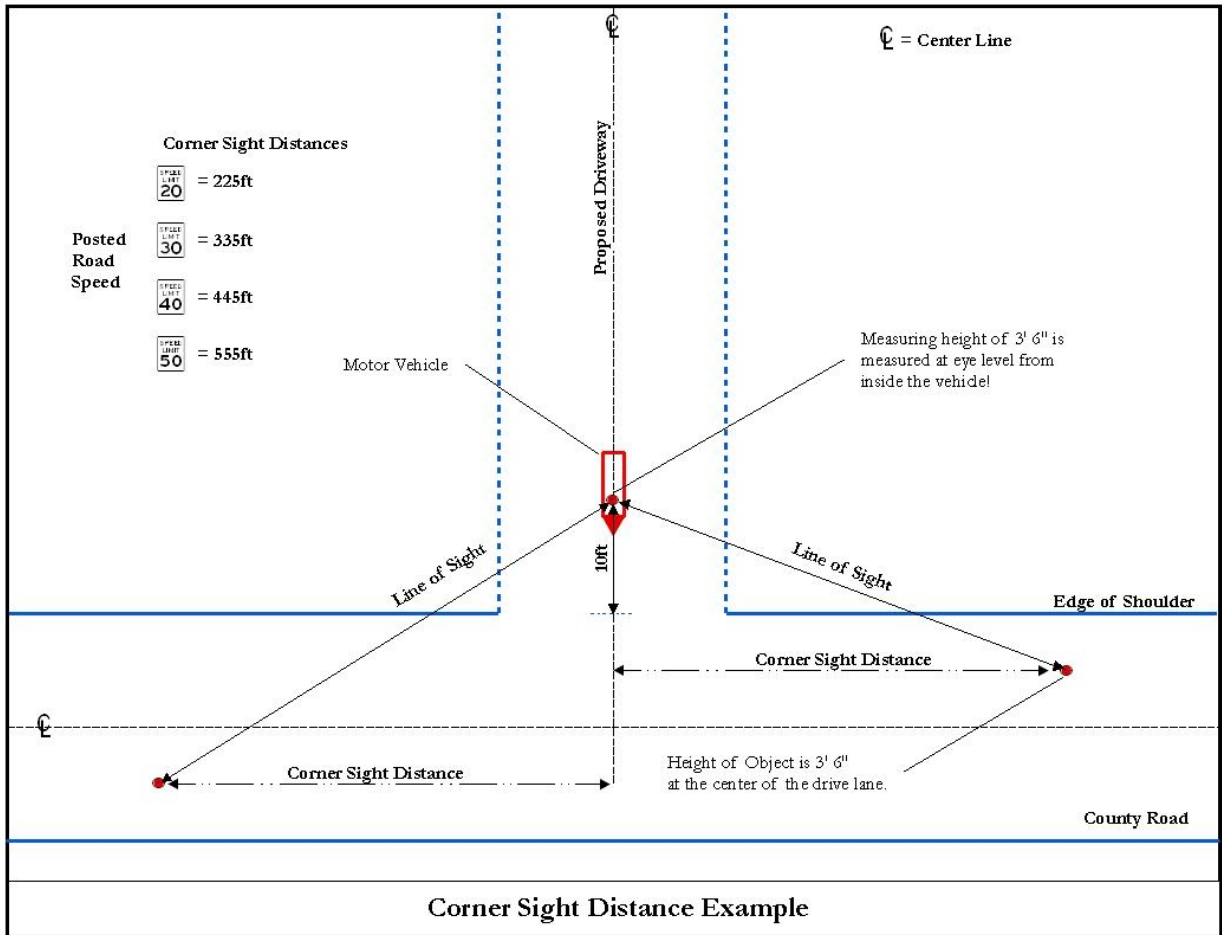
No driveway shall be built to allow the flow of water from a driveway onto an adjoining road.

A low point shall be constructed between the proposed driveway and County Road. This low point shall drain to the proposed driveway culvert.



4.3.3 SIGHT DISTANCE

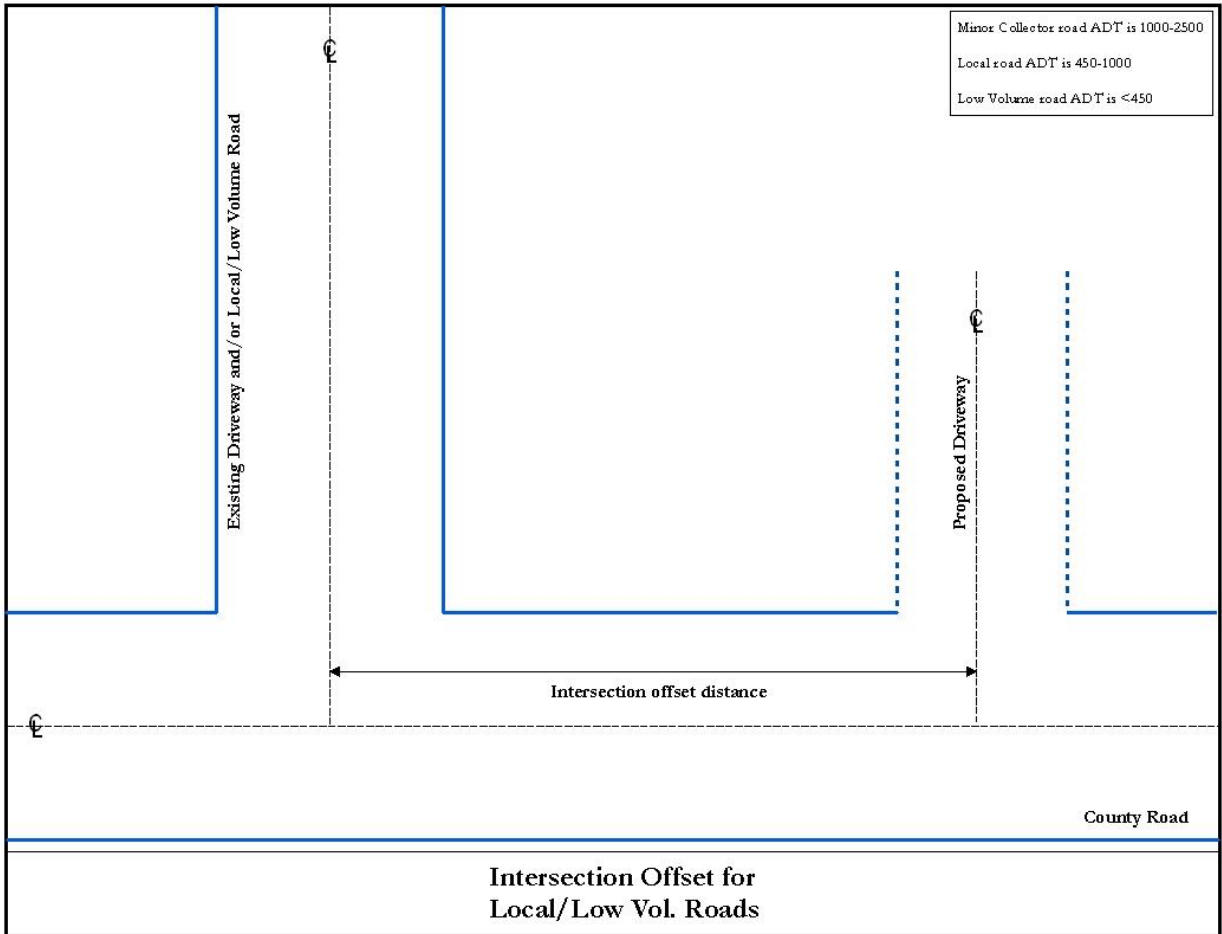
The access design shall provide a minimum corner sight distance as shown in the following example.



4.3.4 INTERSECTION OFFSET

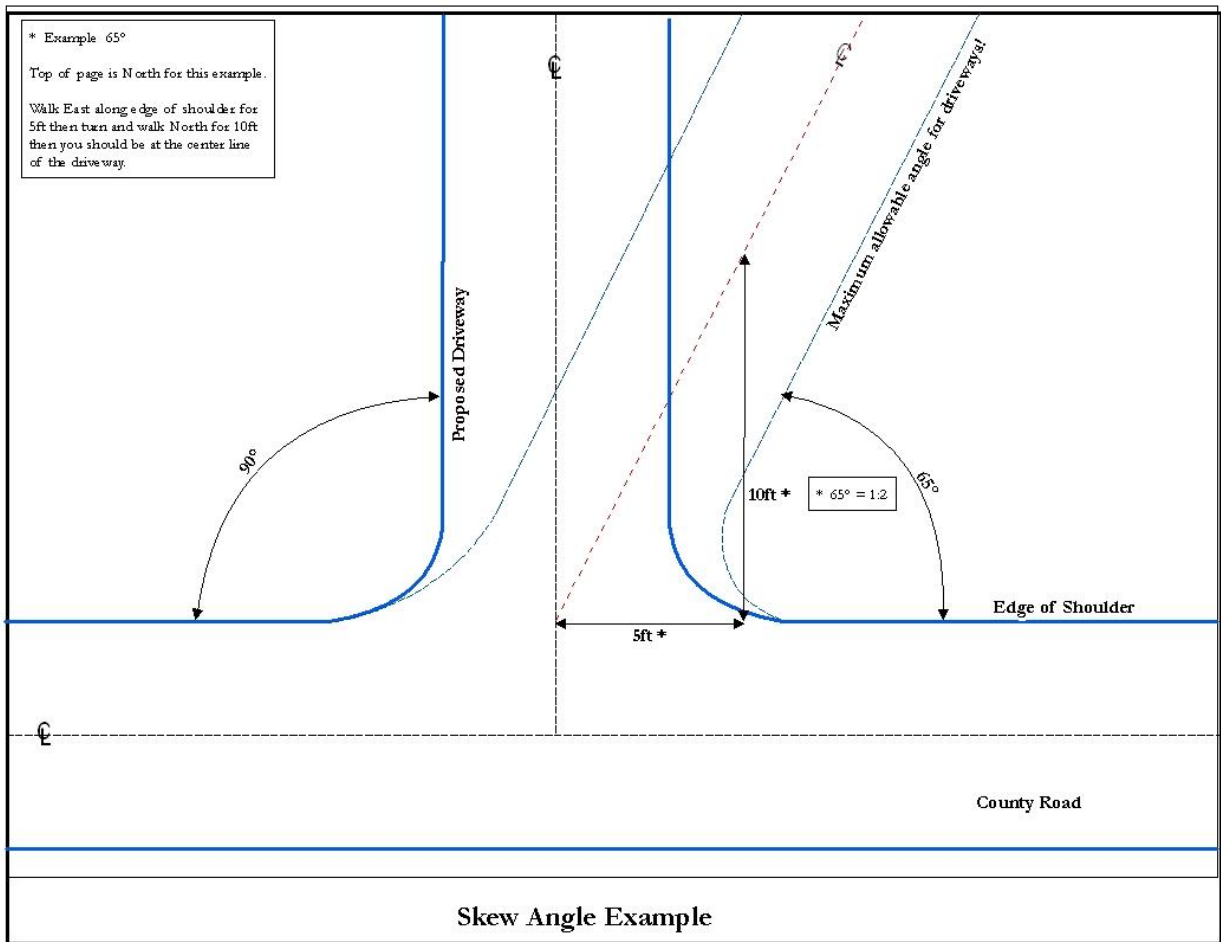
Proposed driveways on Local/Low Volume roads shall be separated a minimum of 50' from adjacent driveways and 125' from Local/Low Volume roads.

Proposed driveways on Minor Collector roads shall be separated a minimum of 100' from adjacent driveways, 125' from a Local/Low Volume road and 200' from a Minor Collector.



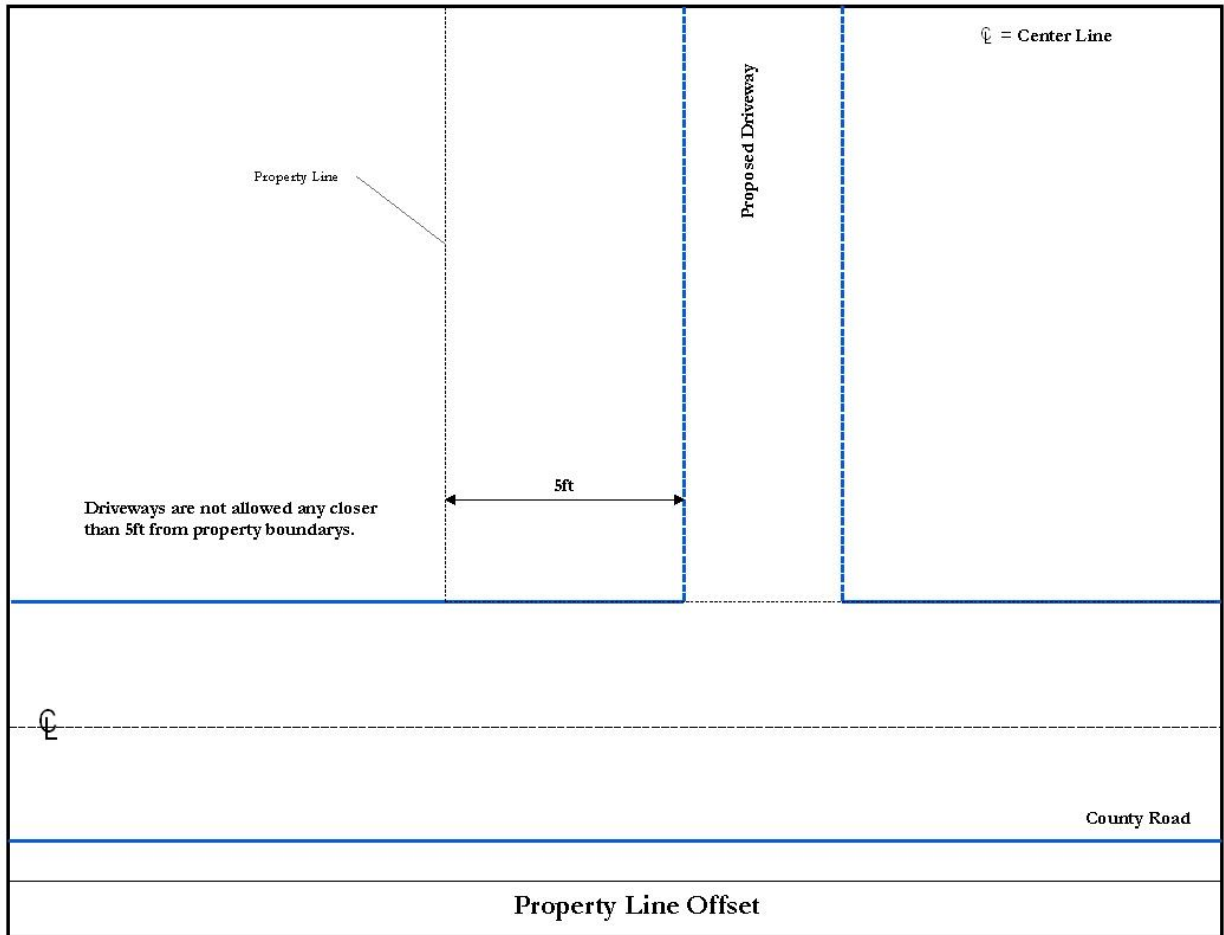
4.3.5 SKEW ANGLE

Driveway connections shall intersect existing roads at 90°. Where this is not possible, the maximum skew angle allowed is 65°.



4.3.6 PROPERTY LINE OFFSET

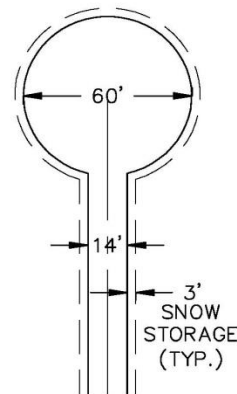
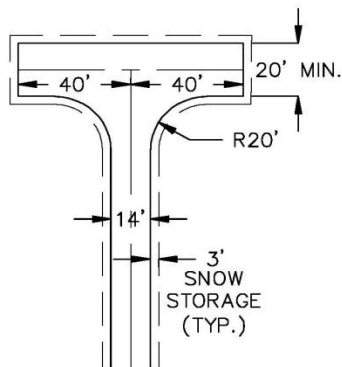
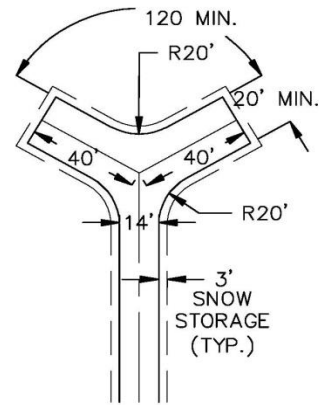
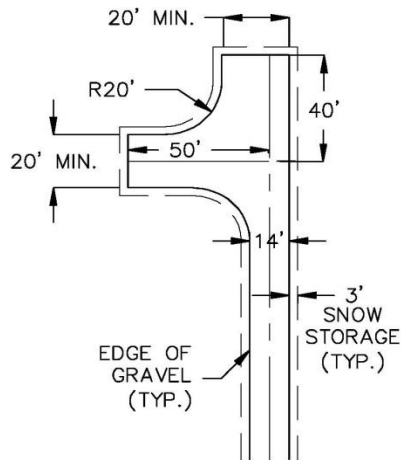
All edges of driveways shall be a minimum of five feet (5') from the adjacent property line.



4.4 RECOMMENDED ADDITIONAL DESIGN PARAMETERS

Driveway design shall accommodate emergency vehicle access. Emergency access for large vehicles may be restricted if proper widening, overhead clearances, and surfacing are not considered in the design. Unless otherwise required by any County land use process, after the first 50' the following is **recommended** for all driveways:

1. A minimum horizontal curve radius of 35' at centerline.
2. A maximum grade of ten percent (10%) on straight sections and a maximum grade of eight percent (8%) for curves with radius of $\leq 50'$ at centerline.
3. If the length of the driveway exceeds 200', a turn-around shall be provided in accordance with these examples.



4. When a horizontal curve turns greater than 120° the maximum centerline grade within 25' and through this section will not exceed six percent (6%).

4.5 STRUCTURES

All driveways that utilize a bridge or box culvert to cross a waterway shall be designed and signed by a Colorado Licensed Professional Engineer and shall conform to the AASHTO Standard Specifications for Highway Bridges.

4.6 CULVERTS

A driveway culvert shall be installed during initial driveway construction. The property owner shall be responsible for the maintenance and replacement of their driveway culvert.

In certain instances, a culvert may not be required by virtue of topography. In that event, the driveway permit will indicate that a culvert is not required. A waiver for culvert installation does not constitute a waiver of the permit fee, inspections or any other requirements for the driveway.

The minimum driveway culvert size is 15". A culvert capacity analysis may be required by the Grand County Road and Bridge Department. Unless a variance is granted by the Road and Bridge Department and/or the County Engineer, the proposed driveway culvert size shall be equal to or larger than all existing upstream culverts.

Driveway connections to any road shall not be constructed in such a way as to impede the normal flow across the driving surface of the County Road or in roadside ditches, culverts, under drains, bridges or other drainage works. In the event that such an impediment results in damage to any of the items listed above, Grand County Road and Bridge may remove the impediment and bill the property owner for the costs of repairs, including labor, equipment and material.

Installation of a concrete pan in place of a culvert will be considered on a case-by-case basis and shall require a detailed design prior to review and approval by the Road and Bridge Department and/or the County Engineer.

The type of culvert installed is subject to the Road and Bridge Department approval. High Density Polyethylene (HDPE) culverts exceeding 24" and HDPE flared end sections shall not be allowed. Corrugated Metal Pipe (CMP) shall be a minimum of 16 gauge, for pipes exceeding 24" see the CDOT M&S Standards for minimum gauge. Reinforced concrete pipe (RCP), HDPE and CMP pipes shall meet all applicable and current ASTM and AASHTO Standards.

4.7 CULVERT INSTALLATION

Culverts shall be installed in accordance with the following requirements:

1. The installation shall meet CDOT M&S Standards and CDOT Highway Specifications.
2. The minimum cover shall be 12" (measured from top of pipe to final grade of driveway). If minimum cover cannot be met, a variance, with an alternative design shall be submitted with the following information:
 - a. Evidence that the roadside ditch capacity is not compromised (drainage calculations may be required).
 - b. Evidence that existing conditions do not allow for proper culvert cover.

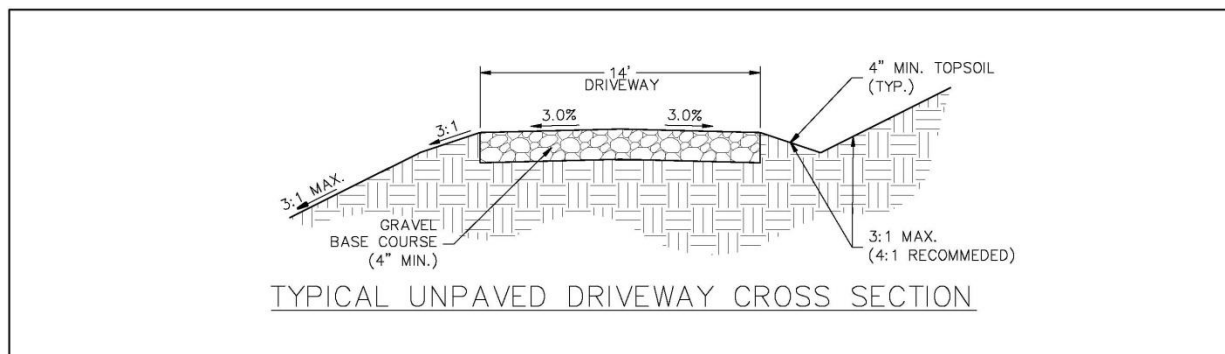
3. The installation of multiple pipes will require spacing of $\frac{1}{2}$ the diameter (1' min. and 4' maximum) between pipes.
4. Driveway culverts must be constructed with a 1% minimum flowline grade, with no vertical or horizontal bends. If bends are proposed a cleanout access will be required.
5. Class 1 bedding shall be used for all culverts, unless suitable material is available and approved by a geotechnical engineer. Minimum bedding depth below culverts is 4" in soil and 12" in rock. In addition, HDPE pipe requires that bedding material be uniformly placed, tamped and compacted to 12" above top of pipe.
6. Compacted backfill shall be required for the full depth of the trench above the bedding in the following locations:
 - a. Beneath driveways, parking areas, road or other surface construction or structures.
 - b. Driveway and parking area shoulder.
 - c. Beneath fills or embankments.

Compacted backfill shall consist of job-excavated material, finely divided and free from debris, organic material, cinders or other corrosive material, and stones larger than 3" in greatest dimensions; moist, stiff clay shall not be used. Job excavated materials shall be placed in uniform layers not exceeding 8" in uncompacted thickness. The method of compaction and the equipment used shall not transmit damaging shocks to the pipe. Suitable material excavated from the trench may be used for backfill subject to approval of the Grand County Road and Bridge Department. At no time shall contaminated, wet, soggy, frozen or other unsuitable material be allowed as backfill. If proper backfill material is not at the excavation site, suitable material must be brought in and unsuitable material (i.e. organics, topsoil) removed from the site. Backfill shall extend to the subgrade of the road or to natural ground.

4.8 SURFACING

All driveways shall be surfaced with a minimum four inches (4") of Class 6 (CDOT) base material and have a minimum gravel surface width of 14' (20' maximum). When applicable, it is recommended that a geotechnical engineer provide recommendations for minimum surface depths to accommodate heavy truck access (i.e. fire trucks).

Driveway entrance width shall be minimized whenever possible.



4.9 RETAINING WALLS

Retaining walls (including gabion baskets) are not allowed within the County Right-of-Way without an approved variance. In no case, shall the County maintain any retaining wall(s) within the County Right-of-Way.

All retaining walls shall be less than 4' in height and shall be no steeper than 1:1. A minimum bench of 4' at 8:1 shall be required when the use of multiple retaining walls in sequence is proposed (measured from the top of wall to the bottom of the next wall). Retaining walls that do not meet the above requirements shall be signed and stamped by a Colorado Licensed Professional Engineer and require a building permit.

4.10 SLOPES

The maximum cut/fill slope requirement is 2:1 (horizontal: vertical). Slopes steeper than 2:1 shall require a submittal for approval by the County with the following data supplied by a Colorado Licensed Professional Engineer:

- a. A slope stability analysis
- b. Soil profile
- c. Erosion control and turf reinforcing design
- d. Detailed list of seeding and mulching materials
- e. Implementation plan – including time frame to completion

Slopes steeper than 3:1 shall be treated with an approved rolled erosion control product. Drainage ways including culverts and roadside ditches with side slopes exceeding 4:1 shall be treated with an approved rolled erosion control product and/or slope protection.

4.11 REVEGETATION, EROSION AND SEDIMENT CONTROL

In drainage ways where flows are considered erosive by the Grand County Road and Bridge Department and/or the County Engineer, the installation of angular riprap may be required at the outlet of the driveway culvert.

Inlet and outlet protection (i.e. straw wattles) shall be installed at all driveway culverts and shall not be removed until all disturbed areas have been revegetated.

Vehicle Tracking Control may be required by the Grand County Road and Bridge Department and/or the County Engineer on a case-by-case basis. It is the landowner's responsibility to ensure that vehicles do not track dirt, mud, etc. onto the adjoining road surface and that the adjoining road is cleaned on a daily basis if needed.

Permanent revegetation is required on all disturbed areas that are either at finished grade or expected to remain dormant for a period longer than one year. Permanent seeding shall consist of an appropriate native perennial cover crop as recommended by the Natural Resources Conservation Service (NRCS) office in Kremmling (970-724-3456), or approved equal by the County Engineer.

Reference *East Grand Water Quality Board Erosion and Sediment Control for Construction Activities Guidance Handbook* for erosion and sediment control Best Management Practices (BMPs). Additional BMPs should be considered as site characteristics dictate (i.e. rock check dams, perimeter protection, etc.).

4.12 SNOW STORAGE

Snow storage for driveways shall be provided onsite. Driveway intersections should be designed and constructed with gradual side slopes when intersecting a County Roadway to allow for sufficient on-site snow storage. **It is unlawful to push snow onto a County Road under C.R.S. § 43.5.301.**

4.13 VARIANCE

4.13.1 VARIANCE REQUEST

If an applicant desires to design and construct a driveway in variance to these standards, such variance(s) shall be specified in a detailed letter addressed to Grand County Road and Bridge. The variance request(s) shall consist of:

- a) Name
- b) Mailing & Property Address
- c) Phone number
- d) E-mail address (optional)
- e) A detailed sketch of the work site showing the placement of the proposed driveway
- f) Identification of the driveway standards to be waived or varied
- g) Identification of the alternative design for driveway
- h) A detailed letter requesting the variance and addressing the items in 4.13.2
- i) Letter of recommendation or denial from Grand County Emergency Medical Services (EMS) and Fire department are required. (Any recommendation or denial by EMS or the Fire department will be recorded with the property if variance is approved)
- j) Variance fees as shown in this chapter

Variance requests may be required to be signed and stamped by a Colorado Licensed Professional Engineer. Grand County Road & Bridge staff will notify the applicant if this is required.

4.13.2 VARIANCE REVIEW

Variations from the driveway standards contained in these regulations shall be reviewed by Grand County Road & Bridge and/or the County Engineer. Once a review of the variance request has been completed, Grand County staff and/or the County Engineer will determine if the variance will be approved. The following circumstances will be considered:

- a) Where, by reason of exceptional situations or conditions, the strict application of these driveway standards would result in peculiar practical difficulties, undue hardship upon an individual or would result in excessive cut and fill slopes, visual scarring, or other environmental damage.
- b) A variance from the difficulties or hardship may be granted provided relief will not result in substantial detriment to public health, safety and welfare, substantial impairment of the driveway design or the granting of any special privilege or use.

4.13.3 VARIANCE APPEAL

Any applicant who has been denied a variance by Grand County Road and Bridge staff and/or the County Engineer may present their appeal to the Board of County Commissioners (BOCC). The appeal process is as follows:

- a) Letter of request to Grand County Road and Bridge asking to be placed on the BOCC agenda to appeal the decision to the original variance request.
- b) Grand County Road and Bridge will schedule a time before the BOCC.
- c) Applicant will be notified of time and date to present their appeal to the BOCC.
- d) All documents presented to the Grand County Road and Bridge at the time of the original variance will be presented to the BOCC.

All decisions made by the BOCC shall be final.

4.13.4 VARIANCE COSTS

Once it has been determined by Grand County Road and Bridge and/or the County Engineer that a variance will be required any and all cost associated with the variance are required to be paid for by the applicant including County Engineer Fees as applicable. A deposit of \$420.00 for all variance(s) requests shall be provided at the time the variance is requested. Variance cost will not exceed \$1000.00.

Chapter 5

Utilites



CHAPTER 5: UTILITIES

All utility installation within the County Right-of-Way shall require Grand County Road and Bridge approval prior to any installation activity. See CHAPTER 9 for Road Cut Standards, Regulations and Right-of-Way Permit and the attached Application for Grand County Public Right-of-Way Use permit.

All utility lines shall be designed according to the governing utility company or district standards. All utilities must be clearly labeled on the plans and include the type, size, height, etc.

The County shall not maintain any utilities (fire hydrants, mailboxes, etc.) within the County Right-of-Way, this includes but not limited to snow removal to gain access.

5.1 UNDERGROUND UTILITIES

All road level accesses (manholes, valves, vaults, etc.) to utilities, where permitted, shall be of heavy-duty construction, capable of safely supporting anticipated maintenance equipment and vehicular traffic. Manholes and water valve boxes shall be located six inches (6") below the surface on a grave road and ¾" below the surface on a paved road. All underground utilities within public Right-of-Way shall be suitably marked with a durable marker post showing the depth and offset at least every 1000' and at points where the installation first enters and leaves the Right-of-Way. Services from public utilities and sanitary sewers shall be stubbed out for each lot in such a manner that it will not be necessary to disturb the street pavement, curb, gutter, roadside ditch, sidewalk, and/or Right-of-Way when connections are made.

5.1.1 INSTALLATION

All utilities installed within the County Right-of-Way shall be installed in conduit beneath the road (all utilities shall be a minimum of five feet (5') beyond the flowline or eight feet (8') from edge of road). This includes existing, proposed or platted roads or driveways. The following are the minimum depths required within the Right-of-Way of Grand County:

UTILITY	MINIMUM DEPTH	Conduit Required
WATER	9' or based on district standards	No
SANITARY SEWER	9' or based on district standards	No
ELECTRICAL*	4'	Yes
FIBER OPTICS	4'	Yes
GAS**	3'	No
PHONE	3'	Yes
T.V. CABLE	3'	Yes

* minimum depth is reduced to three feet (3') at service crossings

** All high pressure gas lines shall be a minimum of 3ft deep

Utility placement by plowing shall be allowed only after the approval of the County.

5.1.2 BRIDGE/CULVERT CROSSING

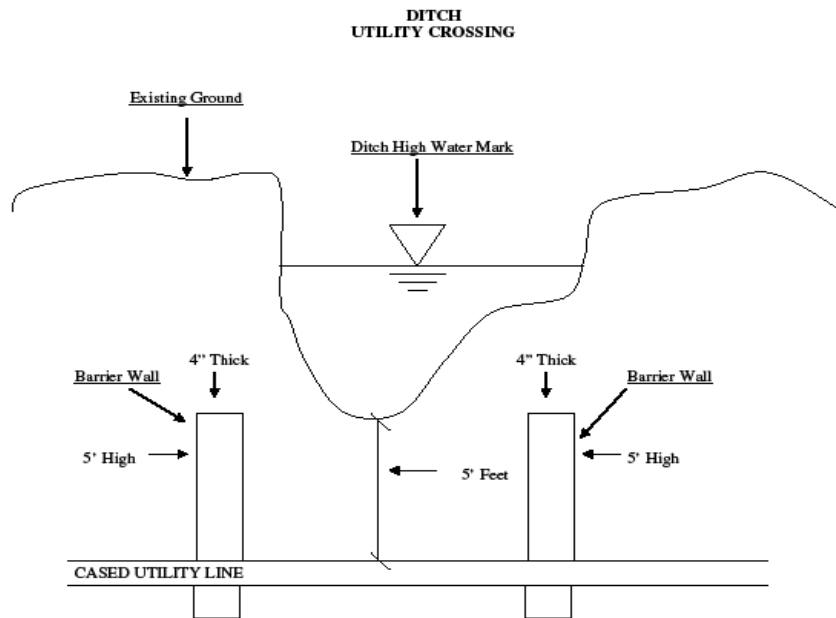
In general, water and sewer utilities are not permitted to be attached to bridges but must be placed at least four feet (4') below the ditch or creek flowing as close to the Right-of-Way line as conditions permit. The utility must be continued four feet (4') below the flowline elevation for a minimum distance of at least 10' on either side of the ditch bank or 20' beyond the Historic High Water Line as determined by the County. This would generally permit future bridge and channel improvements without the necessity of relocating utilities. Where utilities are permitted to be

attached to bridges due to overriding conditions encountered in the field, as determined by the County, then such utilities shall be placed so as not to obstruct the waterway of the bridge.

5.1.3 DITCH UTILITY CROSSING

Installation of utilities across ditches requires the rights of the ditch owner(s) to access and maintain ditch without any increased burden of maintenance or liability due to the installation of utilities. If crossings are necessary to install the utility then the following rules shall apply:

- a) All utilities crossing the ditch must be cased, at as near a right angle as feasible and installed at a minimum of five feet (5') from the bottom of the ditch to the top of the casing. This is to allow for future cleaning and ditch maintenance.
- b) Any approved ditch crossing by any utility company shall be cased so future maintenance of the carrier pipe will not interfere with the operation of the ditch. Additionally, the location of any crossing shall be clearly marked on each side of the ditch.
- c) All open cuts across any irrigation ditch are allowed only during the off season while the ditch is dry and shall be placed with a four inch (4") thick barrier wall constructed of impermeable soil. The barrier walls shall meet soil classification CL or ML-CL and shall be compacted to 95% of the standard proctor density. The barrier wall shall be constructed so as to prevent water flow along the utility trench.
- d) Utilities installed during the irrigation season while the ditch is in operation must be bored so as to not interrupt the operation of the ditch.



5.2 ABOVE GROUND UTILITIES

All aboveground utilities shall be located and installed so as not to cause unnecessary obstruction to pedestrian and vehicular traffic or damage to the utility itself that could be harmful to the general public. No pole or structure aboveground shall be set to be in conflict with a pedestrian walkway or be set less than 10' from the shoulder of any County road. However, a lesser distance will be considered if

insufficient cleared Right-of-Way does not permit the minimum distance and safety concerns are addressed. In no case will a pole be permitted within the clear zone unless proper safety measures are in place (i.e. guardrail, breakaway posts, etc.) All above ground utilities located within the County Right-of-Way (i.e. vaults, pedestals, etc.) shall be visible or flagged (a rigid material with contrasting colors of red, yellow or orange) a minimum of eight feet (8') above the surrounding ground elevation. The flagging should be a rigid material with a contrasting color and shall be placed on/next to the object nearest to the road. The use of Bollards is strongly suggested and be marked with the appropriate flagging.

5.2.1 OVERHEAD LINES

The minimum vertical clearance of overhead utility lines and equipment above a road in Grand County shall be at a height in which not to restrict vehicles complying with C.R.S. §42-4-504(1).

“No vehicle unladen or with load shall exceed a height of 13’; except that vehicles with a height of 14’6” shall be operated only on highways designated by the State Department of Transportation.”

This clearance shall apply to conductors at maximum final sag conditions with half inch (1/2”) of ice at 32°F (no wind displacement), at 120°F (no wind displacement), or maximum conductor temperature for which the line was designed to operate, whichever produces the largest final sag.

This clearance shall consider possible snow accumulation and/or future road grades/surfacing changes on the roadway up to one foot (1’).

5.2.2 FIRE HYDRANTS

Fire Hydrants shall be placed a minimum of 10’ away from the shoulder but not more than 15’. All fire hydrants shall be flagged (Red) or according to the district standards and a minimum of 4’ above the outlet.

5.2.3 MAILBOXES

In unincorporated Grand County or within developments where provisions were not specifically made for rural free delivery mailboxes or multi box modules, the homeowner, homeowners association, or if one does not exist, a designated group from the subdivision shall be responsible for submitting a proposal to the County. The submitted proposal shall first consider locations in front of or adjacent to the property owners requesting the installation of a mailbox or multi box module. The County shall evaluate all sites in front of or adjacent to property owners requesting rural mail delivery before evaluating any other sites. In evaluating the proposal, staff shall determine if the proposed site meets all the following criteria:

- a) The Postal Service shall provide delivery service to the area proposed.
- b) The mail box or module shall be a minimum of 10’ from the edge of shoulder of the road.
- c) Adequate space for an eight feet (8’) wide by 40’ long pull off shall be provided.
- d) A minimum sight distance of 250’ in all directions shall be provided.
- e) The pull off shall not have a grade in excess of three percent (3%).
- f) Adequate space for snow storage and removal within the Right-of-Way or appropriate snow stack easement shall be provided.

- g) The site shall not adversely impact the normal flow of traffic or the surrounding properties.

In addition, the following information shall be provided:

- a) If the proposed location is adjacent to private property, the affected property owner(s) shall provide a letter stating they have no objection to the mailbox or module location.
- b) A letter signed by the homeowner or homeowner's association president or other approved individual indemnifying Grand County from any damage that may occur due to road maintenance operations.

Once it is determined that these criteria have been met, the Applicant shall stake the proposed location of the mailbox or module and the edge of the Right-of-Way. The Right-of-Way shall be staked for a distance of 50' on either side of the proposed location of the mailbox or module. Upon completion of the staking, the County and the Postmaster shall inspect the proposed site to insure all the site requirements are met before giving preliminary approval. After preliminary approval, the County shall notify all property owners within a minimum of 300' of the proposed site and inform them of the request and allow them fourteen (14) days to appeal the staff decision. If no appeals are received in the allotted time, staff will inform the Applicant by written notice that they can begin construction once they obtain a Right-of-Way permit. In the event of an appeal, the County will schedule a hearing with the Board of County Commissioner within thirty (30) days of receiving the appeals request. Property owners originally noticed for the proposed site will be re-noticed for the appeal. The applicant and opponents will have the opportunity to state their arguments supporting their respective positions. The Board of County Commissioners decision will be final. After construction has been completed, a final inspection shall be performed by the County to insure the mailbox or module was properly installed and the pull off was constructed to County standards. All deficiencies shall be corrected before final approval can be given to start mail service.

The homeowner, homeowners association or other designated group from the subdivision shall be responsible for all costs associated with the construction of the mailbox or module and pull off and all future maintenance including snow removal of the pull off area.

5.2.4 TRASH DUMPSTER

Grand County does not allow any trash dumpsters in the public Right-of-Way and are in violation of C.R.S. §43-5-301 found in Section 8.8.1 of these standards.

5.2.5 INTERSECTION/STREET LIGHTING

All street lighting requests must meet the following requirements:

The homeowner, homeowners association, or if one does not exist, a designated group from the subdivision may submit a street lighting application to the County. The submitted application shall first consider locations in front of or adjacent to the property owners requesting the installation of the Intersection/Street Lighting. The County staff along with the County Engineer shall evaluate all sites in front of or adjacent to property owners requesting installation of Intersection/Street Lighting. In evaluating the application, staff shall determine if the proposed site meets all the following criteria:

- a) The proposed Intersection/Street Lighting meets CDOT *M&S Standards* requirements.
- b) All proposed Intersection/Street Lighting shall be required to be full cut off fixtures that emit no light above horizontal.
- c) No pole or structure aboveground shall be set to be in conflict with a pedestrian walkway or be set less than 10' from the shoulder of any County road. However, a lesser distance will be considered if insufficient cleared Right-of-Way does not permit the minimum distance and safety concerns are addressed.
- d) Proposed installations within center medians will take into consideration protection for the traveling public.

In addition, the following information shall be provided:

- 1) If the proposed location is adjacent to private property, the affected property owner(s) shall provide a letter stating they have no objection to the Intersection/Street Lighting or its location.
- 2) A letter signed by the homeowner or homeowner's association president or other approved individual indemnifying Grand County from any damage that may occur due to road maintenance operations.

Once it is determined that these criteria have been met, the Applicant shall stake the proposed location of the Intersection/Street Lighting. Upon completion of the staking, the County staff and/or the County Engineer shall inspect the proposed site to insure all the site requirements are met before giving preliminary approval. After preliminary approval, the County shall post a public notice at the proposed site with information informing the public of the request. The posting will allow fourteen (14) days to appeal the staff decision. If no appeals are received in the allotted time, staff will inform the Applicant by written notice that they can begin construction once they obtain a Right-of-Way permit. In the event of an appeal, the County will schedule a hearing with the Board of County Commissioner within thirty (30) days of receiving the appeals request. The proposed site will be posted with a re-notice for the appeal. The applicant and opponents will have the opportunity to state their arguments supporting their respective positions. The Board of County Commissioners decision will be final.

After construction has been completed, a final inspection shall be performed by the County to insure the Intersection/Street Lighting was properly installed. All deficiencies shall be corrected before final approval can be given to start electrical service.

The homeowner, homeowners association or other designated group from the subdivision shall be responsible for all costs associated with the application, construction and installation of the Intersection/Street Lighting. In no case shall the County be responsible for maintenance of any Intersection/Street Lighting. All future maintenance including all electric utility bills will be paid for by the property owners or homeowners association of the Intersection/Street Light.

5.3 CULVERTS

Culverts are required at every natural flowline encountered and as conditions dictate.

The type of culvert installed is subject to the Road and Bridge Department approval. High Density Polyethylene (HDPE) culverts **exceeding** 24" shall not be allowed in the Right-of-Way. Corrugated Metal Pipe (CMP) shall be a minimum of 16 gauge, for pipes exceeding 24" see the CDOT *M&S Standards* for

minimum gauge. Reinforced concrete pipe (RCP), HDPE and CMP pipes shall meet all applicable and current ASTM and AASHTO Standards. The installation shall meet CDOT M&S standards and CDOT Highway Specifications.

5.3.1 INSTALLATION

Culverts/Pipes shall be laid to the grade required by the drawings (MIN. 1.0%) and shall be installed in accordance with the following requirements:

- a) The culvert/pipe shall be protected from lateral displacement by means of a pipe embedding material as specified in SECTION 5.3.2. The minimum cover shall be 18” for roadways and 12” for driveway culverts. If minimum cover cannot be met, a variance, with an alternative design shall be submitted with the following information:
 - i. The roadside ditch capacity is not compromised (drainage calculations may be required).
 - ii. Existing conditions that do not allow for proper culvert cover.
- b) The installation of multiple culvert/pipes will require spacing of ½ the diameter (1’ minimum and 4’ maximum) between pipes.
- c) Cleanout access to culverts/pipes shall be provided at least every 150’ for pipes 24” in diameter or less and every 300’ for pipes 24” or more. Cleanout access is required at every bend (vertical and horizontal).
- d) All culverts/pipes are required to address inlet and outlet protection, flared end sections should be installed. This may include the installation of headwalls/wing walls and level spreaders to prevent soil erosion. Slopes immediately surrounding the culvert/pipe will not exceed 4:1, unless erosion protection is designed and installed.
- e) Driveway or road connections to a County road shall not be constructed in such a way as to impede the normal flow of drainage in roadside ditches, culverts/pipes, under drains, bridges or other drainage works, or to cause such damage to flow onto or across the driving surface of a County Road. In the event that such an impediment results in damage to a County road, the Road and Bridge Department will remove the impediment and bill the property owner for the costs of repairs to the road, including labor, equipment and material.

In certain instances, a culvert/pipe may not be required by virtue of topography. In that event, a written waiver shall be obtained from the Road and Bridge Department. Such a waiver does not constitute a waiver of the permit fee, inspection of the access or any other requirement of the access.

5.3.2 BEDDING MATERIAL

Class 6 (CDOT) bedding shall be used for all culverts/pipes, unless suitable material is available and approved by Geotechnical Engineer. Compacted backfill shall be required for the full depth of the trench above the bedding in the following locations (See CDOT M&S Standards for detail):

- a) Beneath driveways, parking areas, road or other surface construction or structures.
- b) Driveway and parking area shoulder.

c) Beneath fills or embankments.

Compacted backfill shall consist of job-excavated material, finely divided and free from debris, organic material, cinders or other corrosive material, and stones larger than three inches (3") in greatest dimension. Masses of moist, stiff clay shall not be used. Job excavated materials shall be placed in uniform layers not exceeding 8" in uncompacted thickness. The method of compaction and the equipment used shall not transmit damaging shocks to the culvert/pipe. Suitable material excavated from the trench may be used for backfill subject to approval of the County. At no time shall contaminated, wet, soggy, frozen or other unsuitable material be allowed as backfill. If proper backfill material is not at the excavation site, suitable material must be brought in and unsuitable material (i.e. organics, topsoil) removed from the site. Backfill shall extend to the subgrade of the road or to natural ground. Backfill outside the roadway shall be suitably placed and compacted to 90% of the maximum dry density at optimum moisture content as determined by AASHTO T-180. Field determination of densities shall be by AASHTO Designation T-191. Subbase and base course materials in general must conform to current Colorado Highway Specifications.

Chapter 6

Grading and Drainage



CHAPTER 6: GRADING AND DRAINAGE

Slopes should be gradual at intersections with County roads to allow for sufficient snow storage as to not interfere with the intersection sight triangle. All specifications for earthwork compaction, moisture content, materials, and construction limitations shall be based on recommendations within the geotechnical report.

6.1 RETAINING WALLS

Retaining walls that cannot meet the requirements outlined in this section shall be signed and stamped by a Colorado Licensed Professional Engineer. Retaining walls four feet (4') in height or higher are not allowed in setbacks or open space and will require an approved building permit from the Grand County Community Development Department before any construction begins.

Any retaining walls proposed in the County Right-of-Way shall require a variance in accordance with SECTION 8.1.1, 8.1.2. The responsibility of maintaining any retaining wall shall be defined in the variance request process. Grand County will not be responsible for maintain any retaining wall.

Retaining walls are not allowed without an approved variance within the County Right-of-Way.

All retaining walls shall be less than four feet (4') in height and shall be no steeper than 1:1. A minimum bench of eight feet (8') at 8:1 shall be required when the use of multiple retaining walls in sequence is proposed (measured from top of wall to the bottom of wall of the next wall). Gabion baskets shall not be used within the County Right-of-Way. Retaining walls shall not be positioned near flowlines unless proper design and erosion control installation has been addressed (See CHAPTER 7). Sufficient drainage conveyance shall be designed behind the wall to redirect surface runoff and to accommodate potential discharge points for drains behind the wall.

6.2 SLOPES

See CHAPTER 7 for proper Revegetation, Erosion and Sediment Control of all slopes. The maximum cut/fill slope requirement is 3:1 (horizontal: vertical). Slopes steeper than 3:1 shall require a submittal for approval by the County with the following data supplied by a Colorado Licensed Professional Engineer:

1. A slope stability analysis
2. Soil profile
3. Erosion control and turf reinforcing design
4. Detailed list of seeding and mulching materials
5. Implementation plan – including time frame to completion

Slopes steeper than 3:1 shall be treated with an approved rolled erosion control product. Cut slopes exceeding 3:1 shall not be considered usable snow storage.

Positive drainage away from all structures shall be provided as required by the current Grand County Building Codes.

6.3 GRADING

No grading shall be allowed within County Right-of-Way without an approved Right-of-Way Permit. All grading shall be in compliance with an approved Geotechnical report and recommendations.

6.4 DRAINAGE

See Grand County Storm Drainage Design and Criteria Manual. All drainage appurtenances shall be designed and constructed in compliance with the CDOT M&S Standards and CDOT Standard Specifications for Road and Bridge Construction. All earth drainage ways shall have a minimum flowline grade of one percent (1%), two percent (2%) should be utilized whenever possible. This does not apply to designed sedimentation basins. Drainage ways including roadside ditches with side slopes exceeding 4:1 shall be treated with an approved rolled erosion control product and/or slope protection.

Chapter 7

Revegetation, Erosion and Sediment Control



CHAPTER 7: REVEGETATION, EROSION AND SEDIMENT CONTROL

7.1 INTRODUCTION

Erosion and resulting sedimentation is a naturally occurring process which has the potential to be rapidly accelerated as a result of land disturbing activities associated with development. The purpose of establishing and implementing these Revegetation, Erosion and Sediment Control Criteria is to prevent degradation to downstream properties and receiving waterways as a result of the site disturbance process within the County.

See the *Erosion and Sediment Control for Construction Activities Guidance Handbook*. This handbook is available through the East Grand Water Quality Control Board and the Grand County Community Development Department.

7.2 REGULATORY REQUIREMENTS

The Federal Clean Water Act (CWA), implemented through the Environmental Protection Agency (EPA) requires authorization to discharge stormwater associated with construction activities through the National Pollutant Discharge Elimination System (NPDES). In Colorado, the NPDES is administered through the Colorado Department of Public Health and Environment – Water Quality Control Division (CDPHE-WQCD). Currently any and all construction activities disturbing more than one acre are required to comply with the provisions stipulated in a General Permit for Stormwater Discharges Associated with Construction Activity. The owner or operator of the construction activity shall submit this General Permit Application at least 10 days prior to the anticipated date of land disturbing activities to:

Colorado Department of Public Health and Environment
Water Quality Control Division
WQCD-Permits
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530
(303) 692-3517

The main provision with the Permit is the development and implementation of the Stormwater Management Plan (SWMP).

ACCEPTANCE OF THE SWMP (if required) BY THE COUNTY IS REQUIRED PRIOR TO FINAL PLAT ACCEPTANCE. SWMP APPLICATION TO THE STATE MUST BE APPROVED PRIOR TO COMMENCING ANY CONSTRUCTION.

THE COUNTY SHALL HAVE AUTHORIZATION TO ISSUE A STOP WORK ORDER FOR FAILURE TO COMPLY WITH THE PROVISIONS OF THE PERMIT AND/OR THESE CRITERIA. COUNTY STAFF MAY REQUIRE EMERGENCY MITIGATION MEASURES.

7.3 BEST MANAGEMENT PRACTICES (BMP's)

As the SWMP is the main requirement of the Permit, the BMP's are the main provision of the SWMP. The purpose of this section of the Criteria is to provide a guideline for acceptable practices to be utilized within the County. Although many references are available to the design engineer with respect to

selection and design of appropriate BMP's, the Urban Storm Drainage Criteria Manual – Volume 3, Best Management Practices, is the basis for these Criteria.

The Erosion and Sediment Control industry has experienced rapid progress over the last decade and is continuing to expand. As such, the design engineer is strongly encouraged to utilize the latest advances in selection methodology and information now available. The greatest benefits to enhancing the water resources of Grand County are realized if Erosion Control is thought of as preventative in nature whereas Sediment Control is treatment.

The NPDES requirements are strict and the penalties associated with non-compliance are severe. Planning, designing and implementing a thorough SWMP are the most effective way to protect the water resources within the County, thereby complying with the NPDES requirements. These Erosion and Sediment control BMP's are intended to eliminate non-point source pollution to receiving waterways as a result of the land development process during construction activities. Establishing vegetated cover capable of providing equal or greater erosion control benefits as compared to historic conditions is the goal of the Erosion Control BMP's. The maintenance requirements of the Sediment Control BMP are described in these Criteria cannot be overemphasized, that is to say if they are functioning properly, accumulated sediment will need to be removed. As construction phases progress, the SWMP and associated BMP's will need to adapt to the changing conditions of the site. In addition to these construction BMP's, Administrative Control BMP's are equally as important. Administrative BMP's include ideas and methodology concerning the manner in which construction occurs. Education, training and coordination of all involved parties is an effective way to limit the erosion on a project, thereby limiting the need for sediment control, and is prime example of an Administrative Control BMP.

7.3.1 EROSION CONTROL BMP's

1. Exposed soil shall be stabilized and protected from erosive forces as soon as possible, but no later than 14 days of achieving finished grade or if the area will remain dormant (disturbed, but not at finished grade). Appropriate soil stabilization techniques include:
 - Mulching
 - Rolled Erosion Control Products or Turf Reinforcement Mats (RECP's or TRM's)
 - Proprietary Geosynthetics
 - Bonded Fiber Matrix (BFM's)
2. In addition to the soil stabilization techniques applied, Temporary Revegetation is required on all disturbed areas having a period of exposure of one year or longer prior to final stabilization. Temporary seeding shall consist of an annual grass cover crop and may be applied:
 - Hydraulically
 - Drilled
 - Broadcast
3. Permanent Revegetation is required on all disturbed areas that are either at finished grade or expected to remain dormant for a period longer than one year (1yr). Permanent seeding shall consist of an appropriate native perennial cover crop as recommended by the Natural Resource Conservation Service (NRCS) office in Kremmling Colorado, or approved equal.

4. Other Erosion Control BMP's recommended by the County include:
 - Limiting areas of disturbance
 - Limiting Directly Connected Impervious Areas (DCIA)
 - Establishing buffer strips
 - Planning, scheduling and phasing construction around times of heaviest expected precipitation and snowmelt
 - Transitioning changes in slope
 - Terracing long slopes
 - Surface roughening and contour furrowing

7.3.2 SEDIMENT CONTROL BMP's

1. Temporary Diversion Dikes or Continuous Berms controls shall be required on all disturbed slopes of 3:1 and greater than 20' in length or as soil condition and tributary area dictates. These dikes or berms must divert stormwater to a properly stabilized channel, slope drain or rundown to limit rill and gully erosion. This BMP can be designed at the top, mid and/or base of a disturbed slope, following the contour, to effectively limit sediment transport from the disturbed area and may be constructed of the following materials:
 - Compacted Soil
 - Straw Wattles
 - Aggregate Bags
 - Proprietary Geosynthetics
2. Sediment Barriers are perimeter controls designed to pond sediment laden stormwater as a result of overland sheet flow and slowly allows the stormwater to filter through the media as sediment settles out. This BMP shall be required around the perimeter of disturbed areas, at the base of disturbed slopes or as soil condition and tributary area dictates. Proper design of the BMP limits the tributary area to 1.4 Acre per 100 lf of barrier, following the contour, to effectively limit the transport of sediment laden stormwater. Sediment barriers may be constructed of the following materials:
 - Silt Fence
 - Straw Wattles
 - Aggregate Bags
 - Geotextile wrapped Brush Barriers
 - Proprietary Geosynthetics
3. Channel stabilization controls shall be required in all drainage ways where Froude numbers are expected to exceed 0.8 for the minor storm recurrence interval rainfall or as soil condition and tributary area dictates. Proper design of these BMP's either limits stormwater velocities or armors the channel to limit erosion from occurring therefore

eliminating sediment transport. Techniques, materials and methods for channel stabilization within the County include:

- Check Dams
 - a) Aggregate
 - b) Straw Wattles
 - c) Proprietary Geosynthetics
 - Channel Linings
 - a) Aggregate
 - b) RECP/TRM
 - c) Proprietary Geosynthetics
4. Energy dissipation controls shall be required at all culvert inlets and outlets. Additionally, energy dissipation controls may be necessary at the terminus of drainage ways, slope drains and/or rundowns to effectively limit erosive forces and sediment transport. Proper design and selection of these BMP's reduce turbulent flow and limit hydraulic jumps within a stabilized area. Techniques, materials and methods for channel stabilization within the County include:
- Riprap
 - Aggregate Drop Structures
 - Level Spreaders
 - Proprietary Geosynthetics
5. Inlet protection controls shall be required at all storm, sewer and/or culvert inlets. The intent of the BMP is to pond sediment laden runoff, allowing sediment to settle out prior to entering the conveyance structure. Proper design and selection of the BMP must allow the conveyance structure to accept the design flow prior to any major inundation as well as have the structural stability to withstand the forces generated by these focused flows. Inlet protection may be constructed of the following materials:
- Block and Aggregate
 - Aggregate Bags
 - Proprietary Devices
6. Vehicle tracking controls shall be required wherever construction traffic will enter onto an improved road from a construction site. Additionally, as sediment is tracked onto an improved road, the road shall be removed of accumulated sediment at the end of each workday. Proper design and placement of the BMP limits construction access to controlled points of ingress and egress before and after construction of the road base. Vehicle tracing controls shall be constructed of the following materials:
- Geosynthetic Fabric overlain by Course Aggregate
7. Sediment entrapment facilities shall be required on all construction sites of one acre or larger. The minimum required volume of the sediment basin shall be calculated based on 1800 cubic feet per tributary acre. The sediment basin shall incorporate a stabilized spillway capable of passing stormwater flows generated by the one hundred year recurrence interval rainfall. The sediment basin can easily be incorporated into the design of a permanent stormwater detention facility and generally provides the most functional and economical solution to implementing the BMP. The sediment basin is designed to

effectively slow the velocity of stormwater runoff and allow the suspended sediment to settle; as such the basin shall be dredged of accumulated sediment prior to becoming half full. Proper design and placement of this BMP serves as the final measure in eliminating sediment laden stormwater runoff from leaving the construction site.

7.4 REVEGETATION

All areas disturbed area of construction that require revegetation shall receive a minimum of four inches (4") topsoil replacement or an approved design from a landscape architect.

Revegetating disturbed during construction is critical to prevent soil erosion. Establishing vegetative cover capable of limiting erosion potential to that of pre-disturbed levels is necessary. Effective revegetation limits raindrop impact erosion, facilitates infiltration, reduces runoff and reduces negative impacts caused by noxious weeds (such as root establishment and out-competing native vegetation). The following seed mix is recommended by the Grand County National Resource Conservation Service and shall be implemented on all sites disturbing soil:

PERMANENT SEED MIX				
LAND USE	% OF MIX	SPECIES	VARIETY	APPLICATION RATE (LBS/AC)
DRY LAND NON-IRRIGATED RECLAMATION	50	SMOOTH BROOME	MANCHAR	16
	25	SHEEP FESCUE	COVAR	8
	20	PUBESCENT WHEATGRASS	LUNA	6.5
	5	WILD FLOWER	BLUE FLAX	2
NOTES:				
<ol style="list-style-type: none"> 1. The applied seed shall not be covered by a soil thickness greater than 0.5" in depth. 2. Seeding shall take place within 14 days of achieving finish grade. Seeding must occur within 3 days of topsoil placement. 3. To provide temporary erosion control prior to seed application, utilize surface roughening (on the contour or perpendicular to prevailing winds) and apply mulch. 4. Seed shall be planted with drill seeding equipment, whenever possible. 5. Areas that require broadcast seeding shall be mulched and tackified. 6. Seed applied hydraulically shall include tackifier in the mix, as specified by the manufacturer. 				

TEMPORARY SEED MIX				
LAND USE	% OF MIX	SPECIES	VARIETY	APPLICATION RATE (LBS/AC)
DRY LAND NON-IRRIGATED RECLAMATION	50	SMOOTH BROOME	MANCHAR	8
	50	PUBESCENT WHEATGRASS	LUNA	8

NOTES:

1. The applied seed shall not be covered by a soil thickness greater than 0.5” in depth.
2. Seeding shall take place on all disturbed areas and stockpiles expected to remain dormant for a period greater than 30 days.
3. To provide temporary erosion control prior to seed application, utilize surface roughening (on the contour or perpendicular to prevailing winds) and apply mulch.
4. Seed shall be planted with drill seeding equipment, whenever possible.
5. Areas that require broadcast seeding shall be mulched and tackified.

7.5 LANDSCAPING

The objective of a Landscape Plan is to provide a sustainable approach to ensure revegetation of the disturbed site, and to improve aesthetics of the built facilities in a sustainable manner upon completion of a new development. A multi-family development will include landscape features for all open space tracts, and areas disturbed during installation of utilities. A single-family development may include landscape features at the point the development enters a county road, as well as areas disturbed during installation of utilities. Landscaping shall be designed anticipating mature vegetation and shall not interfere with roadway site distances or overhead lines. If necessary, irrigation designs and costs shall be included in the construction plans and cost estimate.

The design shall be completed and signed by a Landscape Architecture, Horticulturist, or revegetation specialist (resource specialist, engineer, etc.) approved by the County. The construction cost shall include all features shown in the landscape plan, maintenance requirements for established plantings, and a two-year warranty.

All landscaping shall not interfere with the intersection sight triangle (See SECTION 3.7.6). The landscaping plan shall be designed anticipating fully mature plantings.

7.6 REFERENCES AND DESIGN AIDS

Environmental Protection Agency www.epa.gov
 Colorado Department of Public Health & Environment www.cdph.state.co.us
 Urban Drainage & Flood Control District www.udfcd.org
 Erosion Control Technology Council www.ectc.org
 International Erosion control Association www.ieca.org
 International Stormwater BMP Database www.bmbdatabase.org
 National Resource Conservation Service (NRCS) www.nrcs.usda.gov
 Northwest Colorado Council of Governments (NWCCOG) www.nwc.cog.co.us

Chapter 8

Policy and Procedures



CHAPTER 8: POLICIES AND PROCEDURES

8.1 VARIANCES

8.1.1 VARIANCE REQUEST

If an Applicant responsible to the County for public improvements desires to design and construct such improvements in variance to criteria in these standards. The variance request(s) shall consist of:

- a) Name.
- b) Project.
- c) Identification of the criteria provision to be waived or varied.
- d) Identification of the alternative design or construction criteria to be adhered to.
- e) A thorough justification of the variance request addressing the items in SECTION 8.1.2.
- f) A letter from EMS and the local Fire District having jurisdiction with comments to the variance.
- g) Any and all cost associated with the variance(s) are required to be paid for by the applicant including but not limited to County Engineer fees as applicable. A deposit of \$420.00 for all variance(s) requests shall be provided at the time the variance(s) is requested. Variance(s) cost will not exceed \$1000.00.

All variance requests shall be signed and stamped by a Colorado Licensed Professional Engineer and signed by the Applicant.

8.1.2 VARIANCE REVIEW AND ACCEPTANCE CRITERIA

Variances from the design criteria and construction specifications contained in these regulations shall be reviewed by the County and may be granted by the Board of County Commissioners under the following circumstances:

- a) Where, by reason of exceptional situations or conditions, the strict application of these regulations would result in peculiar practical difficulties, or undue hardship upon an individual provided the conditions in SECTION 8.1.2c are met.
- b) Where and individual is proposing to construct a low volume or local access road and the strict application of these regulations would result in excessive cut and fill slopes, visual scarring, or other environmental damage, variances in road design standards may be granted if granting the variance will result in lessened environmental damage, and the conditions in SECTION 8.1.2c are met.
- c) Variances from the difficulties or hardships described in SECTION 8.1.2a&b may be granted provided relief will not result in substantial detriment to public health, safety and welfare, substantial impairment of the road design and construction standards, or the granting of any special privilege or use.

8.2 INSPECTIONS

Prior to the commencement of construction within the County Right-of-Way, the Applicant must notify the County of their intent, obtain a Right-of-Way Use Permit and submit a proposed schedule of construction activities. The County, or their representative, shall inspect the work throughout the construction period to verify that county standards and regulations are being complied with. In cases where Right-of-Way is not publicly dedicated, the County shall, by the Subdivision Improvement Agreement, be allowed to inspect the construction of streets and drainage appurtenances to insure that it complies with the approved plat. The County Engineer / Road Supervisor shall be notified as to any changes in scheduling or in the approved design.

8.3 PAYMENT OF COSTS FOR ROAD CONSTRUCTION

Any and all costs of new road construction in new developments are the responsibility of the Applicant. The Applicant is responsible for constructing the new roads according to the Road Standards.

Existing County Roads serving a new development or an area proposed for either platting or replatting may be upgraded to the Road Standards when existing roads do not meet the Road Standards for the road classification or for the projected traffic volume.

The participation of the Applicant in the design and construction of new roads, and improvements to existing roads, shall be determined by the relative impacts identified in the Traffic Impact Study (See SECTION 3.12) and at the discretion of the Board of County Commissioners.

8.4 UPGRADING EXISTING ROADS

In many instances, older roads in Grand County are substandard because they were built prior to the County having an adequate system for enforcing design and construction standards, and property owners served by these roads may desire to make improvements to these roads. These instances could include correcting a grade, road width or drainage problem. It might include upgrading the roadway surface to pavement, asphalt, chip seal or concrete. All drainage and road improvement designs will be addressed under current Road and Bridge Standards and an engineer stamped drawing addressing the specific issues may be required at the discretion of the County Road and Bridge Superintendent.

A Subdivision Improvement Agreement (SIA) and BOCC approval must be in place prior to commencing any drainage or roadway improvements. It is the HOA or homeowners responsibility to provide a warranty security, which shall be in place for a two year period once preliminary acceptance has been granted in accordance with the provisions contained within the SIA. Upon request of the property owner, the County may assist in the formation of a local improvement district. Such districts allow for the sale of tax-exempt bonds to finance construction of the improvements over a fixed period of time usually ten (10) years. Completion of the improvements does not in itself constitute acceptance for maintenance.

8.5 ROAD MAINTENANCE POLICIES

8.5.1 ROAD MAINTENANCE OF COUNTY ROADS

THE POLICY OF GRAND COUNTY IS TO BASE THE LEVEL AND TYPE OF MAINTENANCE, IF ANY, FOR COUNTY ROADS ON THE ROAD AND BRIDGE DEPARTMENT'S PRIORITIZATION AND MANPOWER AND AS BUDGETED AND APPROVED BY THE BOARD OF COUNTY COMMISSIONERS.

The Road and Bridge Department is responsible for road maintenance on all “County Owned and Maintained roads.” Maintenance of these roads may include alterations to the final road surface (i.e. gravel, asphalt, concrete, recycled asphalt, etc.) and may include the removal of existing asphalt surface.

As it relates to road maintenance, each property owner living on county maintained roads is responsible for becoming familiar with the County’s snow plowing and road maintenance policies. Individuals interested in requesting road maintenance on roads that are currently not “County Owned and Maintained Roads” shall reference SECTION 8.10.

Please refer to the “CODE OF THE WEST” located on our web page <http://www.co.grand.co.us/244/Road-Bridge>.

8.5.2 MAINTENANCE ON NON-COUNTY MAINTAINED ROADS

THE POLICY OF GRAND COUNTY IS TO NOT UTILIZE COUNTY RESOURCES ON PRIVATE AND NON-COUNTY MAINTAINED ROADS.

This was addressed by the Board of County Commissioners by Resolution 2014-2-7, stating: “Grand County will no longer provide material, labor or assistance to residents who may request this on non-maintained county roads. Private enterprise in Grand County can provide material and labor to complete this work and should be utilized.”

Individuals or Homeowners Associations who utilize private enterprise for maintenance on county non-maintained roads will be required to apply for a Right-of-Way Permit from the Grand County Road and Bridge Department for review and approval.

8.5.3 ROAD STABILIZATION APPLICATION ON GRAVEL ROADS

THE POLICY OF GRAND COUNTY IS TO HAVE THE ROAD SUPERINTENDENT/ASSISTANT PRESENT THE BOARD OF COUNTY COMMISSIONERS ON AN ANNUAL BASIS WITH A LIST AND TOTAL MILEAGE FOR COUNTY ROADS THAT WILL RECEIVE ADVANCED ROAD STABILIZATION APPLICATIONS.

The Road and Bridge Department is responsible for selecting the type of road stabilization utilized on gravel roads maintained by the County. Most roads are stabilized by re-grading the surface, applying water and compaction, and placement of new gravel material. Currently the use of MgCl₂ (‘mag chloride’) is utilized as an advanced road stabilization material. The primary purpose of the application of MgCl₂ is for long-term stabilization of the road bed, which results in less road maintenance, graders, water trucks, rollers. The Road and Bridge Department shall consider the following before recommending roads for advanced road stabilization:

- Road Classification including Arterial and Collector roads that have high traffic counts.
- Roadways that have steep or continuous grades, curves/corners, and/or high speed.
- Low volume/low speed roads will generally not be considered.
- Dust control alone is not justification for the application of MgCl₂.

The Road and Bridge Department will perform this maintenance as early in the season as weather and rail car delivery permits.

Individuals requesting road stabilization on non-county maintained roads will be required to apply for a Right-of-Way Permit from the Grand County Road and Bridge Department for review and approval. Approval for each request will be considered on a case-by-case basis and will require written consent from all adjacent landowners.

8.6 ROAD MAINTENANCE DEFINITIONS

8.6.1 COUNTY OWNED AND MAINTAINED ROADS

Grand County Roads are defined in C.R.S §43-2-201. These roads are listed in the annual inventory filed with the State of Colorado and the County receives an annual allotment of Highway Users Tax Funds (HUTF) to defray maintenance costs, based on the mileage of roads listed.

8.6.2 COUNTY NON-MAINTAINED ROADS

This category includes roads which are public road rights-of-way, but are not currently maintained by the County. In some cases, County owned roads might be maintained by an adjacent town. Such arrangements have been made when it makes more sense for the town to plow a portion of a County road because of its location and its connection to town streets in exchange for the County plowing sections of outlying town roads.

8.6.3 COUNTY MAINTAINED ROADS, BUT OWNED BY OTHERS

A number of County roads include segments that cross National Forest lands. These segments are owned by the Federal government, but they allow continued public use through granting a master access permit to the County, and in turn, the County assumes maintenance of these segments.

8.6.4 MAINTENANCE CLASSIFICATIONS

- a) **FULL** – this category includes roads where the Right-of-Way or recreational pathway easement has been dedicated to the County, the road meets County design and construction standards, the Board of County Commissioners has accepted the Right-of-Way, or recreational pathway easement dedication, and the road has passed any required probationary period. It also includes roads which may or may not meet current County design and construction standards, but which were dedicated to and accepted by the County for full maintenance before road standards were adopted or enforced. Full maintenance status assigns complete responsibility to the Road and Bridge Department for snowplowing, grading, resurfacing, ditch maintenance and repair as necessary. For snowplowing, priorities are assigned which reflect the use of the road and its relative importance to traffic flow.
- b) **PROBATIONARY** – When roads are dedicated to the County as public roads, the Board of County Commissioners may consider probationary maintenance for a two year probationary period provided the roads meet the requirements outlined in SECTION 8.4.

During this period, any repairs are the responsibility of the property owners or Applicant seeking final acceptance from the County. The procedures for converting a road from probationary to final acceptance follow the same guidelines outlined in SECTION 8.4.

- c) LIMITED – This category includes roads which do not meet current County standards with respect to widths, curves, or grades, but which were dedicated to and accepted by the County prior to road standards being adopted or enforced. Such road may receive seasonal maintenance. This maintenance level is low priority and is dependent on the availability of funds, manpower and equipment.
- d) NO MAINTENANCE – This category includes any and all public or private roads that are not maintained by the County under any circumstances.

8.7 QUALITY CONTROL

Tests ordered by the County to ascertain compliance with specifications shall be the most recent standard methods of ASSHTO or ASTM and shall be made by an independent testing firm at the expense of the Applicant. Where the Applicant or owner maintains his own testing equipment and qualified personnel, the requirement for an independent testing firm may be waived by the County. Copies of test data are to be furnished to the County.

The roadway and roadside areas wherein construction work has been performed shall be thoroughly cleared of all debris and extraneous material and shall be restored to a condition at least as good as the original condition. Example: clean-up of pavement and all roadway appurtenances, pavement failures, broken concrete, damaged signs and fencing, debris on adjacent private property, etc. All deficiencies must be resolved to the satisfaction of the County Road and Bridge Department. The County may bring a civil action to collect for damages from any person causing damage to any public road or highway (C.R.S. §42-4-512).

8.8 SIGHT TRIANGLE MAINTENANCE

When the Road and Bridge Department receives a complaint of a sight obstruction on public land the appropriate jurisdiction will be responsible for removing the obstruction. If the obstruction is on private land the property owner will be given 30 days to remove the obstruction unless the structure was built prior to these Standards, the owner was previously granted a waiver, or the obstruction is due to the natural topography and not by earthwork undertaken by the current property owner. Where a building permit application is filed for property which was platted or replatted after the effective date of these Standards, no building permit shall be issued for any structure which would interfere with the maintenance of a sight triangle for such property. If the property was platted or replatted prior to the effective date of these Standards a sight triangle must be maintained unless application of these requirements would result in peculiar and exceptional practical difficulties to the individual proposing development of the property.

8.9 RIGHT-OF-WAY

8.9.1 OBSTRUCTION

C.R.S. §43-5-301 “No person or corporation shall erect any fence, house, or other structure, or dig pits or holes in or upon any highway, or place thereon or cause or allow to be placed thereon any stones, timber, or trees or any obstruction whatsoever. No person or corporation shall tear down, burn, or otherwise damage any bridge of any highway, or cause waste water or the water from any ditch, road, drain, flume, agricultural crop sprinkler system, or other source to flow or fall upon any road or highway so as to damage the same or to cause a hazard to vehicular traffic.....”

8.9.2 CATTLE GUARDS AND FENCES

Cattle guards may be installed and/or removed within the County Right-of-Way, only after submitting an application to Grand County Road and Bridge and the approval by the Board of County Commissioners. The Applicant shall be responsible for the installation and/or removal and associated costs. The County shall maintain all cattle guards approved by the County (C.R.S. §43.2.211).

The County shall not maintain Right-of Way fencing. Fencing shall not be within the County Right-of-Way unless in the act of attaching to a cattle guard.

8.10 ADOPT-A-COUNTY ROAD

Grand County has initiated an Adopt-A-County Road program. The program allows any organization or individual to take pride in the community by keeping it litter free. Joining the program costs nothing and efforts are rewarded with a sign posted at each end of the associated stretch of road containing the adopter's name. If there is a specific stretch of road that you would like to maintain, please request it, and we will try to accommodate your request the best we can.

8.10.1 TERMS

- a) Any organization or individual may apply to Adopt-A-County Road. Grand County reserves the right to determine whether an application is accepted or rejected and whether a road will or will not be available for adoption.
- b) The organization or individual must agree to a minimum of a two-year commitment in order for a sign to be placed (See attached Program Guidelines).
- c) Each individual must sign a liability waiver before they can volunteer (See attached Waiver and Release of Liability-Volunteer/participant).
- d) Safety Rules & Requirements form must be signed and strictly adhered to by volunteer/participant (See attached Safety Rules and Regulations).
- e) Adopt-A-County Road Request form must be filled out, signed and submitted to the Grand County Road and Bridge Central Maintenance Facility located at 467 E. Topaz Ave. Granby, CO. 80446 (See attached Adopt-A-County Road Request).

8.10.2 COUNTY COMMITMENT

- a) Determine the specific section of Right-of-Way to be adopted.
- b) Install and maintain signs (if necessary).
- c) Provide group members with trash bags.
- d) Remove and dispose of filled trash bags.
- e) Provide SPRUCE UP COLORADO VOLUNTEER SAFETY VIDEO to group coordinator (upon request).

Working together we can keep our participants safe and our community litter free.

8.11 ROAD HEARING PROCEDURES

The Grand County Road Hearings are held annually on the second Tuesday in September located in the Grand County Administration building in the Board of County Commissioners Meeting room (2nd floor).

- a) The Board of County Commissioners will consider the following:
 - Requests for maintenance on existing dedicated County Roads.
 - Request to increase or decrease the level of existing road maintenance on dedicated County Road.
 - Requests for acceptance of a dedicated County Road after the two year warranty period.
- b) The hearing determines the following year's official road maps.

Road vacations are a separate matter and will not be considered at this hearing.

Right-of-Way issues are a separate matter and will not be considered at this hearing.

The following will be required for the Board of County Commissioners to consider any request for maintenance:

An application for County maintenance requires a letter of interest for County maintenance, signed by all people or the HOA having ownership interest in the road along with a copy of the meeting minutes, requesting consideration by the Board of County Commissioners. The letter must be submitted to the County on or before August 1, for consideration at the annual road hearings, held in September. The County will not consider acceptance of roads for maintenance until Final Acceptance has been granted, after the two (2) year warranty period has been satisfied. The Board of County Commissioners shall base their decision upon recommendations from the County Road Superintendent and County Engineer that the roadway(s) have met the following minimum requirements:

- a) A signed and complete "Request for Maintenance on a County Road" form.
- b) Roads have been constructed according to County Regulations and Standards.
- c) A survey showing their current road alignment and Right-of-Way.
- d) All drainage criteria as outlined in the County regulations and standards have been satisfied.
- e) Proper easement for drainage requirements and pedestrian movements, both offsite and onsite have been identified and are shown on the plans.
- f) The included roads are properly connected to the existing County road system.
- g) All necessary road Right-of-Ways have been dedicated to Grand County.
- h) All combustible or objectionable material is cleared from the roadside and all required signing is property installed. All areas requiring seeding and/or foliage producing the proper stand as outlined in SECTION 7.4.
- i) A letter from a licensed Engineer indicating that the road meets all Road and Bridge Standards.

Grand County Staff will not submit to the Board of County Commissioner any requests that do not meet the requirements listed above.

NOTE: Acceptance of platted developments by the County does not constitute acceptance of the roads and Right-of-Ways for maintenance. Until each road is specifically accepted for maintenance by the Board of County Commissioners at the road hearings, held annually on the second Tuesday in September as defined in SECTION 8.10. Maintenance, construction repair and snow removal are the responsibility of the owners of the land within the development.

8.12 ROAD VACATION

Road vacations are a separate procedure following State Statute and BOCC action and are not a part of the Annual Road Hearings. In compliance with C.R.S. §43-2-305 all right, title, or interest of a County, of an incorporated Town or City, or of any of its political subdivisions in and to any roadway by any of the following methods:

1. The city council or other similar authority of a City or Town by ordinance may vacate any roadway or part thereof located within the corporate limits of said City or Town, subject to the provisions of the charter of such municipal corporation and the constitution and statutes of the state of Colorado.
2. The Board of County Commissioners of any County may vacate any roadway or any part thereof located entirely within said County if such roadway is not within the limits of any City or Town.
3. If such roadway constitutes the boundary line between two Counties, such roadway or any part thereof may be vacated only by the joint action of the Boards of County Commissioners of both Counties.
4. If said roadway constitutes the boundary line of a City or Town, it may be vacated only by joint action of the Board of County Commissioners of the County and the duly constituted authority of the City or Town.
5. No platted or deeded roadway or part thereof or unplatted or undefined roadway which exists by right of usage shall be vacated so as to leave any land adjoining said roadway without an established public road or private-access easement connecting said land with another established public road.
6. If any roadway has been established as a County road at any time, such roadway shall not be vacated by any method other than a resolution approved by the Board of County Commissioners of the County. No later than ten days prior to any County Commissioner meeting at which a resolution to vacate a County roadway is to be presented, the County Commissioners shall mail a notice by first-class mail to the last-known address of each landowner who owns one acre or more of land adjacent to the roadway. Such notice shall indicate the time and place of the County Commissioners meeting and shall indicate that a resolution to vacate the County roadway will be presented at the meeting.
7. If any roadway has been established as a municipal street at any time, such street shall not be vacated by any method other than an ordinance approved by the governing body of the municipality.
8. If any roadway has been established as a State Highway, such roadway shall not be vacated or abandoned by any method other than a resolution approved by the transportation commission pursuant to C.R.S. §43-1-106.

9. SECTIONS 8.12.6, 8.12.7, and 8.12.8 shall not apply to any roadway that has been established but has not been used as a roadway after such establishment.
10. If any roadway is vacated or abandoned, the documents vacating or abandoning such roadway shall be recorded pursuant to the requirements of C.R. S. §43-1-202.7.
11. In the event of vacation under SECTION 8.12, rights-of-ways or easements may be reserved for the continued use of existing sewer, gas, water, or similar pipelines and appurtenances, for ditches or canals and appurtenances, and for electric, telephone, and similar lines and appurtenances.
12. Any written instrument of vacation or a re-subdivision plat purporting to vacate or relocate roadways or portions thereof which remains of record in the counties where the roadways affected are situated for a period of seven years shall be prima facie evidence of an effective vacation of such former roadways. This SECTION 8.12.12 shall not apply during the pendency of an action commenced prior to the expiration of said seven-year period to set aside, modify, or annul the vacation or when the vacation has been set aside, modified, or annulled by proper order or decree of a competent court and such notice of pendency of action or a certified copy of such decree has been recorded in the recorder's office of the County where the property is located.

8.13 TRACKED EQUIPMENT

Tracked equipment (excluding rubber tracked equipment) shall not be allowed at any time to cross or travel on any County Road without prior written authorization from the Road and Bridge Department. Once written approval has been granted, the Applicant must protect the road surface at all times. Any damage to the road surface shall be repaired immediately by the parties damaging the road surface. A party who does not receive written authorization will be in violation of C.R.S. §43-5-301, and may be prosecuted as provided therein.

Chapter 9

Road Cut Standards and Regulations



CHAPTER 9: ROAD CUT STANDARDS, REGULATIONS AND RIGHT-OF-WAY PERMIT

9.1 STATEMENT AND PURPOSE

The purpose of this section is to prescribe the standards and procedures to be followed by the contractor and/or his representative in making proper excavations and backfilling of installations within the County Road Right-of-Way, and to define the position of the County in administering this regulation. No permit shall be required for work including, but not limited to, maintaining ditches, conducted in the Right-of-Way exclusively for purposes of Husbandry.

9.2 PERMIT AND REGULATIONS

The Right-of-Way use permit must be obtained at least five (5) days prior to any commencement of construction. Applications may be downloaded from the Grand County website at <http://co.grand.co.us/244>. The Applicant shall submit construction plans, specifications, and a written schedule covering the general sequence and staging of the work to be performed on large scale projects. The Right-of-Way Use Permit may contain stipulations and must be adhered to or the permit shall be revoked. Applications will not be accepted between October 15th and April 15th. After October 15th each request will be dealt with on a case by case basis. All construction shall be completed by October 31st.

Once the Permit is approved, no change shall be allowed to the schedule or plans, without the consent of the County. Permits must be available at the work site, on demand to County personnel at all times. Right-of-Way Use Permits expire at the approved scheduled ending date and must be renewed in advance so the bond is not to default.

Any person conducting work within the Right-of-Way without an approved Right-of-Way use Permit shall be fined five hundred (\$500.00) §C.R.S. 43-5-301.

9.2.1 BORING/JACKING

Where the installation crosses an asphalt surfaced roadway five (5) years old or newer, the installation shall be made by boring or jacking beneath the roadway surface; however 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. Any variance to this will require County approval.

9.2.2 ASPHALT CUTS

Pavement cuts are permitted only when unsuccessful attempt(s) has been made to bore or jack the installation or site constraints exists (i.e. attachment to manholes).

All road cut backfill should use flowable fill material during construction. Any road cuts within paved Right-of-Ways older than five (5) years shall require proof of density test meeting the requirements of CDOT's *Materials test Procedure Module* by compaction or flowable fill.

All cuts made in asphalt, concrete, or chip seal surfacing shall be made by mechanically cutting to a true horizontal and vertical line, and shall be cut one foot wider than the top of the trench excavation.

All excavations made in paved streets must be completely restored within 48 hours after acceptance of the backfill by the County. In hot mix asphaltic concrete, temporary repairs shall be made by tamping and rolling into place a cold mix asphaltic concrete. Such cold mix patches shall be removed and replaced by a permanent hot mix asphaltic concrete as soon as weather and availability of materials permit. Permanent hot mix asphaltic concrete patches shall be one and a half (1 ½) times the depth of the existing asphalt, but no less than 2", and shall be installed in accordance with good construction practice.

Damaged pavement shall be repaired by appropriate methods as approved by the County. In general, cracks are to be filled with the proper asphaltum product and the surface properly seal coated. An asphalt concrete overlay 1 ¼" thick for the full width of the paved surface shall be required in those instances, which in the opinion of the County, the ride quality, or the appearance of the finished roadbed has been impaired. Subgrade failures caused by the Applicant's operation of heavy equipment shall be rectified by reconstructing the subgrade layers and replacing the subbase, base and asphalt pavement.

In the event that asphaltic concrete base, soil cement or other base course materials are encountered during excavation, restoration shall be made in kind or as otherwise specified by the County.

All excavation work will expressly warrant and guarantee that the compaction and rebuild work on the road/Right-of-Way for a period of two (2) years will not fail. If the compaction/rebuild work fails at any time during that two (2) year period, the Applicant will be responsible for beginning repairs within forty-eight (48) hours of being notified that such repairs are needed and if those repairs are not made, the County may make repairs at the Applicant's expense.

9.3 PROCEDURES FOR OBTAINING A PERMIT

9.3.1 DRIVEWAY PERMIT

Refer to Chapter 4

9.3.2 RIGHT-OF-WAY PERMIT APPLICATION

- a) One (1) application must be completed for each installation.
- b) Each applications must be completed and signed by the construction Applicant, incomplete application will be denied.
- c) The application must be submitted to Grand County Road and Bridge **at least 5 working days prior** to the anticipated start of the installation. Applications may also be downloaded from the Grand County website at <http://co.grand.co.us/244>.
- d) Except in cases of emergency, SECTION 9.9, no work shall begin until a valid permit has been issued by Grand County Road and Bridge.
- e) The application is not a valid permit and is not a guarantee that a permit will be issued.
- f) Any construction started prior to permit issuance, will result in a penalty of **\$500.00** to the Applicant and/or criminal charges.
- g) A permit fee of \$100.00 is required with the submittal of this application.
- h) A job cost estimate must accompany this application.

- i) A detailed sketch of the work site must accompany this application and must show the placement of the utility or County Road access.
- j) A detailed traffic control plan, including signage and distances, must accompany the Right-of-Way application.
- k) Applicant must mark the work site prior to submitting application.
- l) Utilities must be buried to the minimum depth. See SECTION 5.1.1.
- m) Applicants are required to call for utility locates.
- n) Roadway must be capable of re-opening for emergency vehicles at all times.
- o) Applicants shall contact Grand County's Sheriff Dispatch office and Grand County Road and Bridge prior to closing any road and in case of emergencies.
- p) A copy of the permit application shall be available for inspection at the work site at all times.
- q) If the work site fails inspection upon completion of the installation, Applicant has ten (10) calendar days after notification to repair the work site to Grand County Road and Bridge standards and a re-inspection fee of \$100.00 shall be assessed.
- r) Failure to perform under any one (1) permit issued to Applicant may result in the suspension or revocation of any and all other open permits and permit applications pending for Applicant.
- s) Compaction tests are required and must be certified by a professional Geo-Tech engineer. Any failure in the first two (2) years will go against the Bond and after that, the utility owner will be responsible.
- t) Photo documentation may be required.
- u) All flaggers must be CDOT Certified (including appropriate apparel).

9.3.3 APPLICANT'S STATEMENT OF RESPONSIBILITY

- a) The Applicant for a Right-of-Way use permit understands that they have certain responsibilities.
- b) The Applicant shall return the road/Right-of-Way to its original condition including placement of vegetation, or they may incur additional fees and construction requirements.
- c) The Applicant shall be responsible for any and all damage occurring to the roadway during the installation.
- d) The Applicant shall call Grand County Road and Bridge upon completion of the construction project to schedule and inspection. If the work site fails inspection, the Applicant shall be responsible for repairing the work site to Grand County Road and Bridge standards within ten (10) calendar days of being notified that repairs are needed and the Applicant shall be responsible for payment of a \$100.00 re-inspection fee.
- e) The Applicant shall comply with all standards listed in this document.
- f) The Applicant shall take any and all measures to ensure the safety of all travelers over, around, and through the construction site, including, but not limited to, certified flaggers, barricades and signage.
- g) The Applicant shall not close any road to traffic without the authority/permission from Grand County Road and Bridge and the Grand County Sheriff's Office.

- h) The Applicant shall not store any excavated materials at the work site that will obstruct traffic in any manner.
- i) The Applicant shall remove contaminated materials and replace with new Class 6 Minus gravel at a depth of 6" on the road surface.
- j) The Applicant shall expressly warrant and guarantee the compaction and rebuild work on the road/Right-of-Way for a period of two (2) years. If the compaction and/or rebuild work fails at any time during that two (2) year period the Applicant will be responsible for beginning repairs within forty-eight (48) hours of being notified that repairs are needed and if the applicant does not perform repairs, the applicant shall authorize Grand County Road and Bridge to file a claim against the surety bond submitted with the Right-of-Way application.
- k) Grand County Road and Bridge is hereby released from liability for any damages to utilities not buried at the proper minimum depth or not installed in compliance with these standards. If during normal maintenance/grading, Grand County Road and Bridge damages a utility that is not at the proper minimum depth, the applicant shall be responsible for the damages during the bond period. The Applicant agrees to indemnify and hold harmless Grand County Road and Bridge, its employees and affiliates, from all liability for any and all damage to property or person resulting from improper installation of utilities under the Right-of-Way permit.
- l) The Applicant shall be required to sign the Right-of-Way permit application.

9.3.4 SURETY BONDS – TERMS AND CONDITIONS

- a) All surety bonds will be in the amount of 150% of the projected costs that are supplied with the application (a surety bond is required for each permit application).
- b) An annual general contractor liability bond in the amount of \$1 million dollars (\$1M) will be acceptable for meeting the bond requirements.
- c) The surety bond shall be ongoing and have a termination date of two (2) years after notification to the Road and Bridge Department by the Applicant that he/she has completed all Right-of-Way work in the County.
- d) Annual renewal notification of the surety bond shall be provided by the bonding company to the Road and Bridge Department. Failure to follow this requirement will result in suspension or revocation of any and all other open permits and future applications will not be approved.
- e) The bond may be called at the option of the Road and Bridge Superintendent to defray the cost of repairing defective work.
- f) The bonding company shall promptly notify the Road and Bridge Superintendent of any circumstances which affect the status of the bond. Failure to follow this requirement will result in suspension or revocation of any and all other open permits and future applications will not be approved.

9.3.5 WARRANTS

The applicant shall be responsible for the repair of all failed road cuts for a period of two (2) years following completion of the work. A failed road cut which will require repair shall be defined as a settlement or breakdown of the cut area whereby the riding surface is visibly impaired and/or the structural integrity of the installation and its backfill is impaired.

9.4 GENERAL POLICIES

Construction work is to be planned so as not to create safety hazards, maintenance problems, render portions of Right-of-Way infeasible for future road improvement or to obstruct drainage ways. Where feasible, parallel installations are to be placed outside the roadbed within the Right-of-Way, and transverse installations shall be “jacked” or “bored” under the road in lieu of trenching. No cuts will be permitted on County roads that have been overlaid (pavement or chip seal) without the consent of the County. The Road and Bridge Office shall be advised 48 hours prior to the start of construction as to when construction will begin and shall be advised when construction is completed.

No cleated or track equipment shall work on or move over asphalt surfaces without mats. Any damage to asphalt due to equipment operation shall be repaired immediately (to the satisfaction of the Road and Bridge Department) at the expense of the permittee.

9.5 ROAD CLOSURE

In general, road closures are not permitted unless justified on the basis of Safety or the overall benefit to the general public. When road closures are deemed necessary, the Applicant must:

1. Verify the road closures specified on the permit with the County and with their approval, notify one week in advance the appropriate fire protection district, school district, E.M.S., and Sheriff’s office of the exact location, date and time, and duration traffic will be impeded.
2. Erect and maintain, at Applicant’s own expense, necessary barricades, flashers, construction signs and CDOT approved flaggers (per Manual on Traffic Control Devices – Work Zone Traffic Control) and take all necessary precautions for public safety and convenience:
 - a) If explicitly specified on the approved Permit.
 - b) Between the hours of 8:30A.M. and 3:30 P.M. When closures of more than one day are approved, a suitable detour must be provided and be adequately marked and signed to accommodate night traffic.
 - c) May notify appropriate public notifications (i.e. newspapers), if time allows.

9.6 SAFETY AND PUBLIC CONVEYENCE

CDOT approved flaggers shall be required when restricting travel to one-lane or otherwise unsafe operations. Adequate warning signs, barricades, lighting and other devices as specified in the Manual on Uniform Traffic Control Devices (MUTCD) and as approved by the County shall be provided, maintained and paid for by the Applicant. The Applicant’s operations are to conform to the applicable requirements established by the Industrial Commission of Colorado and the Occupational Safety and Health Act (OSHA), as well as any other applicable State or Federal laws.

9.6.1 TRAFFIC CONTROL PLAN

A traffic control plan following MUTCD guidelines shall be submitted as part of the Right-of-Way use application for all road cuts. A Colorado Registered Professional Engineer or other applicable State of Colorado certification shall be responsible for the Traffic Control Plan. All traffic control plans shall include the following:

- a) Name of preparer
- b) Date prepared
- c) North Arrow
- d) Number of devices and type
- e) Number of flaggers if needed
- f) Distance between devices
- g) Statement "NOT TO SCALE"
- h) Drawing of the work zone & roadway
- i) Work hours
- j) Posted speed limit
- k) Reference to MUTCD typical application

9.7 ROAD CHANGES

In the event any changes are made in a County road Right-of-Way that would necessitate the removal or relocation of an installation made by a permit Applicant, the relocation or removal shall be at the utility owner's expense upon written request by the County. The relocation or removal shall be completed with 30 days after notification or for projects that do require extensive design, securing of contracts or material orders, the relocation or removal shall be within 90 days. To avoid the necessity for such changes, the Applicant is encouraged to locate his facility consistent with future plans for the roadway where they exist.

9.8 INSPECTIONS

The Road and Bridge Superintendent and/or his authorized representative are empowered to:

1. Review the methods specified for road repair and restoration on all permits.
2. Review the alignment of all utilities within the County Right-of-Way.
3. Direct that unsatisfactory material be removed and replaced.
4. Direct that special conditions warrant higher standards than contained herein, or that special precautions be taken to promote the safety and welfare of the public and to protect all property.
5. Inspect all completed road cuts before two (2) year warranty completion and acceptance.

If it is determined that the design or construction is unsatisfactory and the Applicant or his representative does not respond to the direction in a timely manner, the County is authorized to stop work immediately. If the work continues, the contractor is liable per Grand County Resolution No. 1984-5-1. Notification shall be given to the responsible contractor by the most expedient means when and emergency repair is apparent. If the contact cannot be made, County work forces will make the repair and charge the contractor. If the failure is not an immediate hazard to safety and property, a period of 72 hours will be allowed to the contractor for repair after notification.

Re-inspections for work within the Right-of-Way shall be **\$100.00**.

9.9 EMERGENCY

For true emergency situations where time is not available to follow the procedures outlined herein, work may be approved by calling the County Road Supervisor and then the Applicant must follow normal permit procedure within five (5) working days. An emergency will be defined as "the immediate threat to the loss of life, property or the overall health to the public".

Chapter 10

Extra-Legal

Vehicles or Loads



CHAPTER 10: EXTRA-LEGAL VEHICLES OR LOADS, RULES & REGULATIONS

10.1 STATEMENT AND PURPOSE

The purpose of this section is to prescribe the standards and procedures to be followed by transporters and/or his/her representative when transporting any extra-legal vehicles or loads within Grand County.

10.2 AUTHORITY

The specific statutory authority to adopt and promulgate rules and regulations pertaining to transport permits for operation or movement of extra-legal vehicles or loads, and any revisions thereto, is contained in C.R.S. §42-4-510 and C.R.S. §42.5-511(1). Statements of Basis, Specific Statutory Authority, and purpose for each of the following dates that the Rules were adopted, or amended are incorporated by reference in the Rules and are available upon request from the Colorado Department of Transportation, Staff Maintenance Branch.

June 30, 1984
January 30, 1986
November 30, 1986
January 30, 1988
April 30, 1988
May 30, 1988
March 4, 1991
April 30, 1992
June 17, 1999
January 30, 2004
August 1, 2007
August 1, 2010

10.2.1 OPERATIONS

An extra-legal vehicle or load shall not operate or move on any County road, except by permit. Grand County Road and Bridge may upon application in writing and good cause being shown, issue a special or annual permit authorizing the Applicant to operate or move an extra-legal vehicle or load of a size or weight exceeding the legal limits established by or otherwise not in conformity with C.R.S. §42-4-501 et.seq. All permits shall be issued at the discretion of Grand County Road and Bridge as provided in C.R.S. §42-4-510 and C.R.S. §42-4-511.

10.2.2 ADDITIONS

Through issuance of any permit authorized by this Regulation, Grand County Road and Bridge may include, in addition to all other conditions, the following:

- Limit the number of trips or establish seasonal or other time limitations of operation;
- Limit or prescribe other conditions of operation when necessary to protect the safety of road users, the efficient movement of traffic, or the County roads from undue damage;
- Require security to compensate for any injury or property damage;

- Prescribe conditions necessary for the proper administration and enforcement of the extra-legal permit program.

10.2.3 ADHERENCE

Permittee shall be responsible for adherence to all terms and conditions in the Road and Bridge standards, all terms and conditions in the Transport Permit Application and all applicable legal requirements including the Commercial Vehicle Rules, State of Colorado, Division of Public Safety, rules and regulations concerning minimum standards for the operation of commercial vehicles (8 CCR1507-1). Permittee shall be responsible for the safe movement of the extra-legal vehicle or load and all liability for damage or injury to County roads or Rights-of-Way or any persons using those County roads or Rights-of-Way.

10.3 DEFINITIONS

10.3.1 WORDS, TERMS AND PHRASES

The following words, terms and phrases, when used in the chapter shall have the meanings described to them in this Section, except where the context clearly indicates a different meaning. The definitions set forth and applicable at 2 C.C.R. 601-4 Chapter 2 “Rules and Regulations of the COLORADO DEPARTMENT OF TRANSPORTATION pertaining to transport permits for and the movement of extra-legal vehicles or loads” as amended, shall apply to this Regulation and are hereby adopted by reference, except as set forth below.

Applicant

An individual, firm, partnership, corporation, or associations submitting an application for an extra-legal vehicle or load transport permit.

Axle or Single-Axle

All wheels, whose centers may be included within two parallel transverse vertical planes not more than forty inches apart, extending across the full width of the vehicle.

Axle Group

An assemblage of two or more consecutive axles that are considered to be together for the purpose of determining their combined load effect on a bridge or other roadway structure.

Booster Axle

An additional axle used to distribute weight. Also referred to as a dolly, jeep, or stringer axle.

Cluster Lights

An assemblage of three or more red or yellow clearance lights.

Commercial Vehicle Rules

The State of Colorado, Division of Public Safety, rules and regulations concerning minimum standards for the operation of commercial vehicles (8 C.C.R. 1507-1).

County Road

A road on the County road system, as defined in C.R.S. §43-2-110.

C.R.S.

Colorado Revised Statutes, as may be amended.

Emergency

An emergency is defined as “the immediate threat to the loss of life or property”.

Extra-Legal Vehicle or Load

An overweight or oversize vehicle or load which exceeds the legal limits and for which Grand County Road and Bridge has granted a permit to operate or move on County roads.

Flashing Yellow Light

A warning lamp mounted as high as practical, which shall be capable of displaying a flashing, oscillating, or rotating yellow light with sufficient intensity to be visible at 500 feet in normal sunlight.

Good Cause

A need to operate or move an extra-legal vehicle or load on a County road together with a showing that such operation or movement will not impair the safety of road users, the efficient movement of traffic, the integrity of the County road, or the administration and enforcement of Grand County Road and Bridge permit program, as determined from the permit application information.

Gross Vehicle Weight (GVW)

The total weight of a vehicle or combination of vehicles, including any load.

Height

The total vertical dimension of any vehicle above the ground surface, including any load and load-holding device thereon.

Hours of Darkness

Sunset to Sunrise

Hours of Daylight

Sunrise to Sunset

Lane

As defined in C.R.S. §42-1-102(46). That portion of roadway used for the movement of a single line of vehicles.

Legal Limits

The size and weight limits for a vehicle or load, as defined in C.R.S. §42-4-502 et. seq.

Length

The total longitudinal dimension of any vehicle or combination of vehicles, including any load or load-holding devices thereon.

Load

A weight of commodity or equipment resting upon something else regarded as its support.

Local Authorities

As defined in C.R.S. §42-1-102(48). Every County, Municipal, or other local board of body having authority to adopt local police regulations under the constitution and laws of the State of Colorado.

Maximum Limits

The Maximum size and weight limits that may be allowed by permit for an extra-legal vehicle or load, as established in the Rules and the Transport Restriction Map.

Manufactured Home

As defined in C.R.S. §24-32-3302(20).

Mobile Machinery

As defined in C.R.S. §42-1-102(54).

MUTCD

Manual on Uniform Traffic Control Devices. Published by the Federal Highway Administration.

Nondivisible Load or Vehicle

Any load or vehicle exceeding applicable length or weight limits which, if separated into smaller loads or vehicles, would compromise the intended use of the vehicle, for example:

- a) Make it unable to perform the function for which it was intended;
- b) Destroy the value of the load or vehicle, i.e., make it unusable for its intended purpose; or
- c) Require more than 8 work hours to dismantle using appropriate equipment. The applicant for a non-divisible load permit has the burden of proof as to the number of work hours required to dismantle the load.

Overhang

As stated in C.R.S. §42-4-504(5) and (6). Any projection four feet beyond the front of the vehicle or ten feet beyond the rear of the vehicle.

Permittee

An applicant who has been granted a transport permit by Grand County Road and Bridge.

Pilot Escort Vehicle

A motor vehicle used for the express purpose as a warning vehicle for extra-legal vehicles or loads.

Quad Axle

A group of four (4) axles, not more than eight (8) feet from each other.

Reference Point (RP)

Identifies a physical location on the road in relationship to the preceding milepost markers.

Right-of-Way

A general term denoted lane, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes.

Road

The entire width between the boundary lines of every way publicly maintained when any part thereof is open to the use of the public purposes of vehicular travel or entire width of every way declared to be a public road by any law of this state.

Rule(s)

Rules and regulations of the Grand County Road and Bridge Road Standards pertaining to Transport Permits for the Operation or Movement of Extra-Legal Vehicles or Loads, as approved by the Board of County Commissioners Resolution.

Special Mobile Machinery Exemption

Mobile machinery that exceeds maximum limits as identified in these rules is prohibited from travel on County roads except under a Colorado Department of Transportation issued Special Mobile Machinery Exemption (SMME) and Grand County Road and Bridge Special **SECTION 10.8** permit.

Transport Permit

A license granted by Grand County Road and Bridge to move or operate an extra-legal vehicle or load on a County road within Grand County.

Tandem Axle

The same as defined in C.R.S. §42-4-507(4) (b). A tandem axle is defined as two or more consecutive axles, the centers of which may be included between parallel vertical planes spaced more than forty inches and not more than ninety-six inches apart, extending across the full width of the vehicle.

Transport Restrictions

Additional restrictions on specific Road and Bridges.

The Transportation/Bridge Weight Restriction map along with a copy of these Rules and the valid permit (a copy is allowed) must be carried in the permitted vehicle by Annual permit holders.

Bridge Weight Restrictions:

Indicates the load posted bridges and the allowable axle weight for other bridges within the County road system. This chart illustrates all bridges within the County road system in a color coded manner to indicate allowable weight limits of extra-legal vehicles or loads on bridges. This chart defines the maximum axle and gross vehicle weights authorized by the Rules.

Pilot Escort and Oversize Restrictions:

Pilot escort vehicles are required **on all County roads** for the operation or movement of extra-legal vehicles or loads exceeding certain widths as follows:

ESCORT REQUIREMENTS FOR WIDTH

- a) An extra-legal vehicle or load **at least 11 feet but not more than 13 feet** in width requires **one pilot car** in front.
- b) An extra-legal vehicle or load **at least 13 feet but not more than 15 feet** in width requires **two pilot cars** (one front, one rear).
- c) An extra-legal vehicle or load **over 15 feet** in width requires a (SECTION 10.8) Special Permit.

Height Restrictions:

The Transportation/Bridge Weight Restriction Map prepared by Grand County Road and Bridge indicates the structures that have a minimum clearance of 15 feet or less. A copy of the map may be obtained from Grand County Road and Bridge.

Triple Axle

A group of three (3) axles, not more than eight (8) feet from each other.

Truck

As defined in C.R.S. §43-1-102(108). Any motor vehicle equipped with a body designed to carry property and which is generally and commonly used to carry and transport property.

Truck Tractor

Any motor vehicle which is generally and commonly designed and used to draw a semitrailer and its cargo load as defined in C.R.S. §42-1-102(109)(109.5).

Vehicle

A devise as defined in C.R.S. §42-1-102(112).

Width

The total outside transverse dimension of a vehicle including the load or load-holding devices thereon and approved safety devices and tire bulge due to the load, with the exception of rear view mirrors, clearance lights, or other accessories required by Federal, State, or Local laws or Regulations.

10.4 PERMIT DEFINITION

10.4.1 SPECIAL PERMIT

A permit that is valid for only a single one-way trip over designated County roads for an extra-legal vehicle or load that exceeds the maximum limits. All special permits are subject to the provisions in SECTION 10.8.

10.4.2 ANNUAL PERMIT

A permit that is valid for one (1) year from the date of issuance on all County roads for up to 15 vehicles (registered to the same owner and/or corporation), and extra-legal vehicle or load that does not exceed the maximum limits as set forth in the Rules and the Transport Restriction Map.

10.5 TRANSPORT PERMIT APPLICATION INFORMATION

The applicant must apply to Grand County Road and Bridge to obtain a permit and include the following information and documentation as part of the application.

10.5.1 ANNUAL PERMIT

- a) Valid for up to 15 vehicles registered to the same owner and/or corporation.
- b) Each vehicle will require a Transport Permit application. Only one permit number will be issued for up to 15 vehicles per applicant.
- c) Maximum weight of extra-legal vehicle or load.

- d) Maximum height of extra-legal vehicle or load.
- e) Maximum width of extra-legal vehicle or load.
- f) Maximum length of extra-legal vehicle or load.
- g) Maximum number of axles of the complete unit.
- h) Maximum front overhang of extra-legal vehicle or load.
- i) Maximum rear overhangs of extra-legal vehicle or load.
- j) Applicant name.
- k) Applicant address.

10.5.2 SPECIAL PERMIT

- a) Maximum weight, or for a Special Permit, may be required to provide a professional engineer's estimated weight of the extra-legal vehicle or load.
- b) Maximum height of extra-legal vehicle or load.
- c) Maximum width of extra-legal vehicle or load.
- d) Maximum length of extra-legal vehicle or load.
- e) Description of object or load to be move.
- f) Point of origin and destination of movement within the County.
- g) Identification numbers of County roads to be traveled.
- h) Inclusive dates required for movement.
- i) Maximum number of axles of the complete unit.
- j) Axle weight or group axle weights, and the distance between axles (centers) in feet-inches, for overweight vehicles.
- k) Maximum front overhang of extra-legal vehicle or load.
- l) Maximum rear overhangs of extra-legal vehicle or load.
- m) Applicant name.
- n) Applicant address.

10.5.3 MAXIMUM LIMITS

The maximum limits that may be authorized for an extra-legal vehicle or load operating under an **annual permit** are as follows:

- a) **Height:** 15 feet.
- b) **Weight:** 200,000 pounds gross vehicle weight, subject to the maximum limits for axle weight designated on the Bridge Restriction Chart.
- c) **Width:** 15 feet in width.
- d) **Length:** 110 feet in length.
- e) **Overhang, Rear:** 35 foot rear overhangs.

- f) **Overhang, Front:** 25 foot overhang.

10.5.3.1 EXCEEDS MAXIMUM LIMITS

If an extra-legal vehicle or load operating under an annual permit **exceeds any one of these maximum limits**, applicant shall apply for a special permit (SECTION 10.8).

10.5.3.2 EXCEEDS MAXIMUM HEIGHT OR LENGTH

If an extra-legal vehicle or load exceeds the maximum limits for **height or length** the applicant must obtain a (SECTION 10.8) Special permit.

10.5.3.3 EXCEEDS MAXIMUM WIDTH OR WEIGHT

If an extra-legal vehicle or load exceeds the maximum limits for **width or weight** the applicant must obtain a (SECTION 10.8) Special permit.

10.5.4 OPERATING UNDER A SPECIAL PERMIT

When an extra-legal vehicle or load is operating under a Special permit, a faxed copy of a transport permit shall be acceptable. Permittee may be required to pay with payment in hand or Grand County may invoice by mail or fax to the Permittee. Any invoices must be paid within 30 days of permit issue. If unpaid invoices older than 30 days exist, no new permits shall be issued until account is current.

10.5.5 DOCUMENTS IN THE PERMITTED VEHICLE

The annual Permittee must have the following documents in the permitted vehicle when operating or moving on County roads, except as provided in (SECTION 10.9):

- a) Transportation/Bridge Weight Restriction map.
- b) Copy of rules.
- c) A copy of the annual permit is acceptable but original must be on file and available for inspection by a Grand County Representative.
- d) Copy of State Permit.

10.6 TRANSPORT PERMIT OPERATIONG REQUIREMENTS, LIMITS AND RESTRICTIONS

10.6.1 TRAVELING GRAND COUNTY ROADS

An extra-legal vehicle or load may travel on County roads 24 hours per day, seven days a week, except as follows:

- a) Hours of Darkness: An extra-legal vehicle or load more than 11 feet in width is prohibited from travel during hours of darkness, unless authorized under a (SECTION 10.8) Special permit.
- b) HAZARDS: An extra-legal vehicle or load is prohibited from travel when:

- i. The Grand County Road and Bridge, Colorado Department of Transportation, State Patrol, Sheriff's Office or other peace officer determines and provides public notice by any available means that a hazardous road condition exists for an extra-legal vehicle or load; or
- ii. The Permittee knows that hazardous road condition exists for an extra-legal vehicle or load. Hazardous road conditions may include:
 - 1. Water, ice, snow, mud, wind, rocks, fog or other conditions reducing visibility on the road.
 - 2. Debris from an accident, natural disaster, or emergency on the road.
- iii. If a hazardous road condition exists on the route to be traveled, the Permittee shall comply with the following procedure to determine if an alternate route is available:
 - 1. The Permittee shall contact the Sheriff's Office or the Grand County Road and Bridge office.
 - 2. Grand County Road and Bridge must be contacted to determine if an alternate route is available.
 - 3. If Grand County Road and Bridge determines that an alternate route is available, the permit must be changed by the Sheriff's Office, State Patrol, Port of Entry, or Grand County Road and Bridge personnel to allow travel on the alternate route.
 - 4. If Grand County Road and Bridge cannot be contacted or if Grand County Road and Bridge determines that an alternate route is not available, then no changes shall be made to the permit and the extra-legal vehicle or load shall not travel until the hazardous road condition ceases to exist.

10.6.2 LANE RESTRICTION

An extra-legal vehicle or load which is 13 feet or more in width shall travel only in the farthest right-hand lane available to traffic and shall travel as far to the right as safely possible, except when passing another vehicle or preparing for a left turn.

10.6.3 PROHIBITED TRAVEL

A divisible extra-legal vehicle or load is prohibited from travel on County roads, except as proved in (SECTION 10.10).

10.6.4 EXCEEDING MAXIMUM LIMITS FOR AXLE WEIGHT

An extra-legal vehicle or load with axle configurations which exceed the maximum limits for axle weight for certain County roads, as described on the Bridge Restriction map, is prohibited from travel on such roads unless authorized under either a (SECTION 10.8) Special permit or as provided in (SECTION 10.10).

10.6.5 GROSS VEHICLE WEIGHT > 140,000 POUNDS

An extra-legal vehicle or load that weighs more than 140,000 pounds gross vehicle weight must:

- a) Not exceed 30 miles per hour when crossing bridges; and
- b) Travel in the center of the driving lane when crossing bridges.

10.6.6 GROSS VEHICLE WEIGHT > 200,000 POUNDS

An extra-legal vehicle or load that weights more than 200,000 pounds gross vehicle weight and all (SECTION 10.10) Special Mobile Machinery Equipment (SMME) must:

- a) Not exceed ten (10) miles per hour on those bridges specifically restricted by Grand County road and Bridge and listed on the permit;
- b) Travel in the center of the driving lane when crossing bridges, and
- c) If required to slow to ten (10) miles per hour on any bridge along the approved route, attached to the rear of the extra-legal vehicle or load an Oversize Load Sign reading as follows:

“CAUTION: THIS VEHICLE MAY SLOW TO TEN (10) MPH TO CROSS BRIDGES”.

10.6.7 DISPLAYING SIGNS

An extra-legal vehicle or load shall display “WIDELOAD”, “LONG LOAD”, OR “OVERSIZE LOAD” signs, as applicable, which shall be visible to approaching traffic from the front and the rear, except as provided in (SECTION 10.9). All such signs shall either be five (5) feet wide, ten (10) inches high with one (1) inch wide brush stroke, black letters a minimum of eight (8) inches high on yellow background, or shall be seven (7) feet wide, eighteen inches high, with a 1.41 inch brush stroke, black letters a minimum of ten inches high on yellow background.

10.6.8 MINIMUM DISTANCES

A minimum distance of one-half (1/2) mile shall be maintained at all times between extra-legal vehicles or loads, except when passing, stopping at the Port of Entry, truck stops, rest areas, whenever not traveling on a designated State highway or when otherwise authorized under (SECTION 10.8) Special permit. One extra-legal vehicle or load may pass another extra-legal vehicle or load only under the following conditions:

- a) There must be no other traffic in the immediate vicinity on the County road; and
- b) The vehicles or loads involved must communicate by radio concerning the pass prior to making the passing maneuver.

10.6.9 MODULAR OR MANUFACTURED HOMES

A load consisting of a modular or manufactured home with an open side(s) is prohibited from travel unless it is fully enclosed with paneling. The paneling shall consist of 0.5 mil. plastic sheathing or stronger, backed by a grill work not more than a square four (4) feet by four (4) feet or if the open side is wrapped in reinforced polyethylene, grill work is not necessary. Any read-made poly tarps and/or poly tarp rolls are not permissible.

10.6.10 TRAVELING DURING DAYLIGHT HOURS

An extra-legal vehicle or load traveling during daylight hours shall comply with the requirements as designated on the Transportation/Bridge Restriction Map.

10.6.11 TRAVELING DURING HOURS OF DARKNESS

An extra-legal vehicle or load traveling during the hours of darkness shall comply with the following requirements:

- a) All lighting required by C.R.S. §42-4-204 e. seq., and the Commercial Vehicle rules, as applicable.
- b) An extra-legal vehicle or load that exceeds legal width but does not exceed 11 feet in width:
 - i. A flashing yellow light shall be mounted to the top of the cab of the vehicle.
 - ii. At least two (2) but not more than three (3) flashing yellow lights shall be mounted to the extreme rear.
- c) An extra-legal vehicle or load that exceeds the legal limits for length or has an overhang shall have a flashing yellow light mounted to the front of the vehicle. The Permittee shall attach at least one (1) but not more than three (3) yellow or red cluster lights to any overhang, as follows:
 - i. If the overhang is in the rear, red cluster lights shall be used.
 - ii. If the overhang is in the front, yellow cluster lights shall be used.

10.6.12 OVERHEAD STRUCTURES AND UTILITIES

The Permittee shall be responsible to check all overhead structures and utilities on the route to be traveled to ensure that the extra-legal vehicle or load has adequate clearance of all over-height restrictions.

An extra-legal vehicle or load more than 15 feet in height is prohibited from travel unless a pilot escort vehicle is positioned in the front with a height pole.

10.6.13 MAXIMUM LENGTH LIMITS

An extra-legal vehicle or load which exceeds the following maximum limits for length must use a pilot escort vehicle:

- a) More than 85 feet when traveling on mountainous two-lane routes, the pilot escort vehicle must be positioned in the front and the rear.
- b) More than 110 feet when traveling on all non-mountainous two-lane roads, the pilot escort vehicle must be positioned in the front and the rear.

10.6.14 OVERHANGS

An extra-legal vehicle or load which has an overhang that exceeds the following limitations must use a pilot escort vehicle. The pilot car escort vehicle shall be positioned according to the overhang, as follows:

- a) If the overhang is more than 15 feet in the front, the pilot escort vehicle shall travel in the front.
- b) If the overhang is more than 25 feet in the rear, the pilot escort vehicle shall travel in the rear.

10.6.15 WIDTHS

An extra-legal vehicle or load which has a width that exceeds the following limitations must use pilot car escort vehicle(s). The pilot escort vehicle shall be positioned as follows:

- a) An extra-legal vehicle or load at least 11 feet but not more than 13 feet in width requires one pilot escort vehicle in front.
- b) An extra-legal vehicle or load at least 13 feet but not more than 15 feet in width requires two pilot escort vehicles (one front, one rear).
- c) An extra-legal vehicle or load over 15 feet in width requires a (SECTION 10.8) Special permit.

10.7 PILOT ESCORT VEHICLE REQUIREMENTS

10.7.1 OPERATOR REQUIREMENTS

The operator of the pilot escort vehicle must comply with all applicable traffic laws (contained in C.R.S. §42-4-101 et.seq) and with the requirements of these Rules when escorting a vehicle or load on a County road, in order to protect the safety of the Road users, the County roads, and to protect the efficient movement of traffic from unreasonable interference.

10.7.2 ESCORT DRIVER CERTIFICATION

The pilot escort driver certification must be in the possession of the pilot escort vehicle operator at all times when the operator is escorting an extra-legal vehicle or load on a County road. The certification shall be exclusive to the operator named in the certificate and may not be assigned or transferred.

10.7.3 ESCORT DRIVER REQUIREMENTS

When the pilot escort vehicle is in front of the extra-legal vehicle or load being escorted, the operator shall:

- a) Warn oncoming traffic of the presence of the vehicle or load by use of lights and signs as provided in (SECTION 10.7.6 and 10.7.9) of these rules.
- b) Notify the driver of the extra-legal vehicle or load, by two-way radio of all hazards, overhead clearances; obstructions; traffic congestion; pedestrians; and any other circumstances evident to the operator that could affect either the safe movement of the

extra-legal vehicle or load, the safety of the traveling public, or the efficient movement of traffic in sufficient time for the driver of the extra-legal vehicle or load to take remedial action, as necessary.

- c) To the extent necessary, locate safe places (if available) adjacent to the roadway and notify the driver of the extra-legal vehicle or load thereof to allow the extra-legal vehicle or load and the pilot escort vehicle(s) to clear the road, so that following traffic can safely pass or for any other reasons necessary to protect public safety and the efficient movement of traffic.
- d) Be far enough in front of the extra-legal vehicle or load to signal oncoming motorist to stop in a timely manner, pursuant to (SECTION 10.7.18), before such motorists enter any narrow structures or other restrictions on the road to permit the safe passage of the vehicle or load.

10.7.4 REAR ESCORT DRIVER REQUIREMENTS

When the pilot escort vehicle is behind the extra-legal vehicle or load, the operator shall:

- a) Warn traffic approaching from the rear of the presence of the extra-legal vehicle or load ahead, by use of lights and signs as provided in (SECTION 10.7.6 and 10.7.9) of these rules.
- b) Notify the driver of the extra-legal vehicle or load by two-way radio of: flat tires or other problems with the extra-legal vehicle or load; objects coming loose from the extra-legal vehicle or load; other traffic approaching or passing the extra-legal vehicle or load; and any other circumstances evident to the operator that could affect either the safe movement of the extra-legal vehicle or load, the safety of the traveling public, or the efficient movement of traffic in sufficient time for the driver of the extra-legal vehicle or load to take remedial action, as necessary.
- c) Notify the front pilot escort driver and the driver of the extra-legal vehicle or load by two-way radio of traffic build-up and other delays to the normal flow and efficient movement of traffic caused by the movement of the extra-legal vehicle or load.
- d) Notify the driver of the vehicle or load by two-way radio of other vehicles attempting to pass the extra-legal or load.
- e) Be far enough behind the extra-legal vehicle or load to signal motorist following the extra-legal vehicle or load to slow or stop in a timely manner, pursuant to (SECTION 10.7.18), before narrow structures or other restrictions in the road to permit the safe passage of the extra-legal vehicle or load.

10.7.5 PILOT ESCORT VEHICLE CONDITION

The pilot escort vehicle operator shall ensure that the pilot escort vehicle is in safe operating condition at all times when the pilot escort vehicle is escorting an extra-legal vehicle or load.

10.7.6 PILOT ESCORT VEHICLE EQUIPMENT

A pilot escort vehicle shall, in addition to any other equipment required by the traffic laws, be equipped with at least one, but not more than three, flashing yellow lights. The flashing yellow light(s) shall be visible to approaching traffic from the front and the rear of the pilot escort vehicle.

10.7.7 PILOT ESCORT VEHICLE REQUIREMENTS

The pilot escort vehicle shall:

- a) Be either a passenger car or a two-axle truck;
- b) Not exceed a maximum gross vehicle weight of 16,000 pounds;
- c) Be at least 60 inches wide; and
- d) Properly registered and licensed;
- e) Not exceed the legal limits of size and weight, as defined in (SECTION 10.3.1) of these Rules.
- f) Not tow trailers at any time while in Pilot Escort operations.

10.7.8 PILOT ESCORT VEHICLE LOAD REQUIREMENTS

The pilot escort operator shall not carry any item(s) or equipment or load in or on the pilot escort vehicle which:

- a) Exceeds the height, length, or width of the pilot escort vehicle, or overhangs the pilot escort vehicle, or otherwise impairs its immediate recognition as a safety pilot escort vehicle by the motoring public; or
- b) Obstructs the view of the flashing yellow lights or the signs used by the pilot escort vehicle; or
- c) Causes safety risks; or
- d) Otherwise impairs the performance by the operator of the pilot escort vehicle of the duties required by these Rules.
- e) The pilot escort vehicle operator shall properly load and secure any item(s) or equipment or load carried by the pilot escort vehicle to ensure compliance with the requirements of the Section.

10.7.9 PILOT ESCORT VEHICLE SIGNAGE

A pilot escort vehicle shall display “WIDE LOAD”, “LONG LOAD”, or “OVERSIZE LOAD” signs, as applicable, and be mounted on the top of the pilot escort vehicle which shall be visible to approaching traffic from the front and the rear. All such signs shall be a minimum of five feet (5’) wide, ten inches (10”) high with one inch (1”) wide brush stroke, black letters a minimum of eight inches (8”) on yellow background, or shall be a maximum of seven feet (7’) wide, eighteen inches (18”) high, with a 1.41 inch brush stroke, black letters a minimum of ten inches (10”) on yellow background.

10.7.10 PILOT ESCORT VEHICLE HEADLIGHTS

The pilot escort vehicle shall use its headlights at all times when escorting an extra-legal vehicle or load.

10.7.11 PILOT ESCORT VEHICLE RADIO REQUIREMENTS

The pilot escort vehicle shall be equipped with two-way radio facilities capable of providing reliable voice communication both ways between the driver of the extra-legal vehicle or load and the driver of the pilot escort vehicle at all times when the extra-legal vehicle load is in motion on a County road.

10.7.12 ITEMS REQUIRED FOR PILOT ESCORT VEHICLE

A pilot escort vehicle shall carry the following items of equipment at all times when escorting an extra-legal vehicle or load:

- a) Standard 18 inch reflective STOP & SLOW paddle sign.
- b) Three (3) bi-directional emergency reflective triangles.
- c) Eight (8) red-burning flares, glow sticks or equivalent illumination device approved by Grand County Road and Bridge.
- d) Three (3) orange traffic cones with two reflective bands which are a minimum of 18 inches in height.
- e) A flashlight with a red cone a minimum length of six inches (6") for use when directing traffic.
- f) A minimum of one five (5) pound BC fire extinguisher.
- g) An orange or white hard hat and Type two (2) reflective orange safety vest for each personnel involved in pilot escort operations.
- h) One spare "oversize load" sign, a minimum of five (5) feet wide by ten (10) inches high or a maximum of seven (7) feet wide by 18 inches high.
- i) A copy of the Transport Restriction Map.

10.7.13 ESCORTING MORE THAN ONE EXTRA-LEGAL VEHICLE

A pilot escort vehicle is prohibited from escorting more than one extra-legal vehicle or load at the same time, unless expressly so authorized.

10.7.14 PILOT ESCORT VEHICLE HEIGHT POLE

A pilot escort vehicle shall use a height pole at all times when escorting and extra-legal vehicle or load exceeding fifteen feet in height, unless otherwise expressly authorized by Grand County Road and Bridge. The height pole shall not extend more than six inches (6") above the maximum height of the extra-legal vehicle or load that pilot escort vehicle is escorting. When the pilot escort vehicle is not escorting and extra-legal vehicle or load but is moving on the road, the height pole shall be removed, tied down, or shortened to within legal limits.

10.7.15 PILOT ESCORT VEHICLE IDENTIFICATION SIGNS OR PLACARDS

Identification signs or placards shall be displayed on the pilot escort vehicle at all times when escorting an extra-legal vehicle or load. The sign or placard must:

- a) Appear on both sides of the pilot escort vehicle.
- b) Be in letters that contrast sharply in color with the background on which the letters are placed.

- c) Be readily legible, during hours of daylight, from a distance of 50 feet while the vehicle is stationary; and
- d) Be kept and maintained in a manner that retains legibility.

10.7.16 PILOT ESCORT VEHICLE COMPLIANCE

The operator of the pilot escort vehicle shall use the pilot escort vehicle and the equipment described herein only in compliance with the rules.

10.7.17 PILOT ESCORT VEHICLE NOT ESCORTING EXTRA-LEGAL LOAD

When a pilot escort vehicle is not escorting an extra-legal vehicle or load but is moving on the road, the signs described in (SECTION 10.7.9) of these standards shall either be removed or covered, and the flashing yellow lights described in (SECTION 10.7.6) of these standards shall not be operated.

10.7.18 PILOT ESCORT VEHICLE DUTIES

In the performance of the duties required by these standards, the operator of the pilot escort vehicle may direct other traffic to stop, slow, or proceed in situations where such direction is necessary to allow the extra-legal vehicle or load to continue moving safely, except as provided below.

The operator of the pilot escort vehicle shall signal the extra-legal vehicle or load to stop, and the extra-legal vehicle shall stop, as far off the roadway as practicable to allow other traffic to pass the stopped extra-legal vehicle or load in the following situations:

- a) When the extra-legal vehicle or load becomes disabled; or
- b) When the movement of the extra-legal vehicle or load on a particular section of County road presents a safety risk or unreasonably interferes with the efficient movement of other traffic, based upon such factors as the widths of the extra-legal vehicle or load and the roadway, volume of other traffic, visibility and limited sight distance, and mountainous terrain; or
- c) When driving conditions for the extra-legal vehicle or load are hazardous for any other reason, including weather. When the extra-legal vehicle or load has been stopped pursuant to (SECTION 10.7.3), the pilot car escort operator shall then direct other traffic past the extra-legal vehicle or load, as necessary, until such time as the extra-legal vehicle or load can re-enter the roadway and continue moving without presenting a safety risk or unreasonably interfering with the efficient movement of other traffic; and
- d) When directing traffic in the situations described in these standards, the operator shall:
 - 1. Stand outside the pilot car escort vehicle;
 - 2. Use the paddle signs and other equipment identified in (SECTION 10.7.12); and
 - 3. Comply with the flagging procedures and requirements described in SECTION 6E.07 of the MUTCD.

10.7.19 BEFORE & DURING TRIP REQUIREMENTS

The operator of the extra-legal vehicle or load and the operator of the pilot escort vehicle shall comply with the following procedures:

a) Before trip:

1. Discuss aspects of the move, including the extra-legal vehicle or load, the route, and specific responsibilities.
2. Review permit conditions.
3. Review the permitted route.
4. Determine the proper position of the pilot car escort vehicle(s).
5. Establish particular procedures.
6. Check mandatory equipment.
7. Mount signs, adjust mirrors, and turn on lights.
8. Check each 2-way radio to ensure clear communication on a selected channel.
9. Verify that driver's licenses, extra-legal vehicle or load transport permit, and pilot car escort vehicle certification are in the possession of the operators.
10. Determine if additional flag persons will be necessary and, if so, have them available.

b) During trip:

1. Obey all traffic laws.
2. Maintain proper distance between the extra-legal vehicle or load and the pilot car escort vehicle.
 - I. Do not follow or precede more closely than is reasonably prudent, considering the speed of the extra-legal vehicle or load, other traffic, and road conditions;
 - II. Be close enough to warn other traffic of extra-legal vehicle or load.

c) Traffic Lights:

1. If the front pilot escort vehicle goes through a traffic light but the extra-legal vehicle or load does not, then the pilot escort vehicle must pull over to the right side of the road, where practicable, to wait for the extra-legal vehicle or load.
2. If the extra-legal vehicle or load goes through the traffic light but the rear pilot escort vehicle does not, then the extra-legal vehicle or load must continue and the pilot escort vehicle must catch up when possible.

10.8 SPECIAL PERMITS

10.8.1 EXTRA-LEGAL VEHICLE OR LOAD REQUIRING EXTRAORDINARY ACTION

An extra-legal vehicle or load which Grand County Road and Bridge determines, based upon the application information, either requires extraordinary action or exceeds the maximum limits, and which does not qualify for a (SECTION 10.10) Special Mobile Machinery Equipment (SMME) is prohibited from travel unless authorized by a (SECTION 10.8) Special Permit.

An extra-legal vehicle or load under a Special Permit shall comply with the following:

- a) Applicable requirements of the Grand County Road and Bridge Standards.
- b) All conditions of the permit, which Grand County Road and Bridge determined to be necessary after a detailed analysis of the extra-legal vehicle or load and the proposed move, including but not limited to:
 1. The size and type of load to be moved.
 2. The method to be utilized in making the move.
 3. The areas where the move originates and terminates.
 4. Route requested for the move.
 5. The distance of the move.
 6. Seasonal and other weather conditions.

10.8.2 SPECIAL PERMIT VALIDITY

Special permits shall be valid for only a single use one-way trip.

10.8.3 SPECIAL PERMIT PILOT REQUIREMENTS

An extra-legal vehicle or load under a special permit shall have one pilot escort vehicle in the front and shall have one pilot escort vehicle in the rear, except when expressly designated otherwise by Grand County Road and Bridge. Grand County Road and Bridge may require the Permittee, as condition of the permit, to provide additional pilot escort vehicle and flag persons based upon certain factors including, but not limited to:

- a) County road width.
- b) Traffic volume.
- c) Visibility or other road or weather conditions.
- d) Whether the width of the load interferes with or blocks more than one lane of traffic.

If additional pilot escort vehicles and flag persons are required, they shall stop traffic at all intersections and other turn out areas ahead of the load as necessary in accordance with (SECTION 10.7) of these standards to allow the load to pass such areas without causing safety or traffic hazards, except as otherwise described in the permit by Grand County Road and Bridge.

10.8.4 STANDBY PULLING VEHICLES

When required as a condition of the permit, the Permittee shall employ standby pulling vehicles as precaution in case of vehicle breakdown when utilizing high volume sections of the County road.

10.8.5 ROAD CLOSURES

If a condition of the permit requires a County road to be closed because the extra-legal vehicle or load will use the entire road, the Permittee shall provide public notification of the temporary closure of a County road, not less than two weeks in advance of the move. A minimum of two (2) notification ads and/or announcements shall be required.

Public notification shall consist of one or more of the following:

- a) Local newspaper
- b) Radio
- c) Television
- d) On site location signs as determined by Grand County Road and Bridge to be appropriate and as indicated by Grand County Road and Bridge in the permit.

10.8.6 ADDITIONAL REQUIREMENTS

The Permittee shall comply with additional requirements, including but not limited to the following, when included as condition(s) of the permit:

- a) Bridge shoring.
- b) Setting up turn out areas.
- c) Traveling in the center of the driving lane.
- d) Posting a bond to pay for potential damage to the road. Removing all material used in the move from the road Right-of-Way.
- e) Any other requirements Grand County Road and Bridge deems necessary.
- f) Cost of Grand County Road and Bridge, Colorado State Patrol, or Colorado Department of Transportation employees to accompany the load and supervise movement, as determined in advance by Grand County Road and Bridge.

10.8.7 PROPOSED ROUTE

The applicant shall examine the proposed route and shall determine whether conflicts exist between the dimensions of the load and all structures, including overhead lines, phone pedestals, and railroad crossings, that may be damaged, disturbed or otherwise interfered with due to the move and that may need to be altered to allow for the move. The applicant shall contact the representatives including but not limited to (Mountain Parks Electric, Century Link, Comcast, Western Area Power and Tri-State Electric) of all such structures including but not limited to any utility companies not mentioned, and prohibited from travel until such conflicts have been resolved.

10.9 EXCEPTIONS TO THE RULES

10.9.1 EXEMPTION FROM REQUIREMENTS

An extra-legal vehicle or load identified in C.R.S. §42-4-510(9), shall be exempt from the requirement to obtain a permit.

10.9.2 POLITICAL SUBDIVISION REQUIREMENTS

All extra-legal vehicle or loads owned by the United States or a Colorado political subdivision shall be required to obtain a permit but shall be exempt from applicable fees.

10.9.3 LIGHTING REQUIREMENT EXEMPTION

Vehicles or loads that are within all legal limits except height are exempt from the lighting requirements of (SECTION 10.6.11).

10.9.4 HEIGHT POLE THAT EXCEEDS LEGAL LIMITS

A pilot escort vehicle operating with a height pole which exceeds the legal limit for height shall be exempt from the requirements to obtain a permit for the pole.

10.9.5 EMERGENCY MOVES EXEMPT FROM REQUIREMENTS

Emergency moves of an extra-legal vehicle or load are exempt from the requirement to obtain a permit to move an endangered extra-legal vehicle or load out of the danger area. However, an extra-legal vehicle or load is required to obtain a permit to move from the temporary safe location to new permanent location. All emergency moves shall comply with the following:

- a) If practicable, verbal authorization shall be obtained prior to the move, as follows:
 1. If the emergency occurs during business hours, Grand County Road and Bridge must be contacted.
 2. If the emergency occurs at night, on weekends, or holiday, the Grand County Sheriff's Office must be contacted.
- b) The Rules, unless otherwise authorized by Grand County Road and Bridge.

10.9.6 TOWING CARRIERS

Towing carriers may transport a disabled extra-legal vehicle, or other combination or single unit that becomes extra-legal when connected to a towing carrier, from the point of breakdown or crash under the following conditions:

- a) The towing carrier must have a valid annual extra-legal permit.
- b) The towing carrier must have a PUC permit as required in C.R.S. §40-13-103.
- c) The move from the accident scene must be authorized by a law enforcement officer.

- d) The towing carrier must utilize the braking system of the trailer if it is operational, when towing a combination vehicle unless exempted by a law enforcement officer.
- e) Any pilot escort vehicle, which were required to accompany the load prior to requiring the tow, shall continue to accompany the load, while being towed.

10.9.7 COMMERCIAL SNOW REMOVAL VEHICLES

Commercial snow removal vehicles that are within all legal limits except width shall be exempt from the restrictions of (SECTION 10.6.15) subject to the following conditions:

- a) The vehicle must not exceed fourteen (14) feet in width; and
- b) The snow removal blade must be raised and turned parallel to the road as much as possible, and when raised and turned, shall not exceed fourteen (14) feet in width with respect to the road, at all times when the vehicle is moving on a County road but not plowing snow, so that the width of the blade to oncoming traffic is minimized.

10.9.8 SIGN REQUIREMENT EXEMPTION

A vehicle or load which is within all legal limits except weight shall be exempt from the sign requirements of (SECTION 10.6.7).

10.9.9 CRANE BOOM SECTIONS

Crane boom sections transported side by side as items essential to the operation of the crane shall be exempt from (SECTION 10.6.3) regarding divisible loads, provided that such sections do not exceed an overall width of eleven feet six inches, and provided that the trailer unit carrying the crane boom sections travels on the roads with and directly behind the crane. Guidelines set forth in (SECTION 10.6.15) shall still be required. Notwithstanding (SECTION 10.6.8), a distance of not less than 100 feet or more than 500 feet shall be maintained between the crane and the trailer unit. Cranes will be allowed to carry counterweights providing the vehicle does not exceed the Bridge Weight Limit map limits, and the counterweights are manufactured as part of the unit.

10.9.10 EXTRA-LEGAL VEHICLE OR LOAD CROSSING A COUNTY ROAD

An extra-legal vehicle or load entering County road Right-of-Way for the sole purposes of immediately crossing the County road is exempt from the requirement to obtain a permit if the extra-legal vehicle or load does not exceed the annual permit specifications listed in (SECTION 10.5.3).

The Permittee of an extra-legal vehicle or load which exceeds the annual permit specifications of (SECTION 10.5.3) shall contact Grand County Road and Bridge prior to crossing the County road to determine if a permit will be required. In determining whether a permit will be required, Grand County Road and Bridge shall consider the number of proposed crossings, seasonal and weather conditions, time of crossing, protection of efficient movement of traffic, protection of the road from undue damage to the road, width of the County Right-of-Way involved, and any other factors relevant to the specific Right-of-Way.

10.9.11 MANUFACTURED HOME WIDTH

Notwithstanding (SECTION 10.3.1) of the Standards, the overall width of manufactured home shall be based on the total width of the manufactured home exclusive of the measurement of the eaves of the manufacture home, provided:

- a) The base width of the manufactured home does not exceed fourteen feet; and
- b) The total width of the eave or eaves does not exceed two feet.

10.10 SPECIAL MOBILE MACHINERY EXEMPTION (SMME)

10.10.1 MOBILE MACHINERY EXCEEDING MAXIMUM LIMITS

Mobile machinery that exceeds maximum limits as identified in these rules is prohibited from travel on County roads unless the Mobile machinery is in possession of a Special Permit (SECTION 10.8)

10.10.2 CARRYING SMME EXEMPTION

A copy of the SMME shall be carried in the mobile machinery when the mobile machinery is operating or moving on the roadways. The certificate of exemption shall be open to inspection by any law enforcement officer or by an authorized agent of Grand County.

10.11 DENIAL OF PERMIT APPLICATION / SUSPENSION OR REVOCATION OF PERMITS / HEARINGS AND APPEALS

10.11.1 OVERVIEW

Grand County Road and Bridge may deny a permit application and may amend, revise, modify, suspend, or revoke a permit for violations of the Rules or of permit conditions. If the application for a new permit or a renewal permit is denied without a hearing, Grand County Road and Bridge shall notify the applicant in writing of such action and the ground(s) therefore, and the applicant has sixty days after the giving of such notice in which to request a hearing.

10.11.2 DENIAL OF PERMIT APPLICATION

Grand County Road and Bridge may deny a permit application if:

- a) The applicant does not comply with the stated criteria, terms, purpose, requirements of the standards, a prior permit or C.R.S. §42-4-510.
- b) The applicant makes a false statement on the application for a transport permit.
- c) The applicant fails to provide all applicable information in the form required by Grand County Road and Bridge.
- d) The applicant violates any ordinance or resolution of a local authority concerning operation or movement of an extra-legal vehicle or load.
- e) Grand County Road and Bridge determines that granting a permit in the particular circumstances described in the application will present a public safety hazard, will unreasonable interfere with the efficient movement of traffic, or will subject the County roads to undue damage.
- f) The applicant fails to follow requirements set forth in (SECTION 10.8.5 or 10.8.6) for (SECTION 10) Special Permits.

10.11.3 REVOKING OR SUSPENDING PERMIT

Grand County Road and Bridge may revoke or suspend an existing permit as follows:

- a) Upon a finding that the Permittee has violated the stated criteria, terms, purpose, requirements and conditions of the permit, the Rules or C.R.S. §42-4-510.
- b) Upon determining the applicant made a false statement in the application for a transport permit.
- c) Falsification or misrepresentation by the Permittee of an emergency situation, in order to obtain oral authorization to move an extra-legal vehicle or load.
- d) Where Grand County Road and Bridge has reasonable ground to believe and finds that the Permittee has been guilty of deliberate and willful violation or that the public health, safety or welfare imperatively requires emergency action.
- e) Permittee actions or omissions while operating or moving an extra-legal vehicle or load which impairs public safety, interferes with the efficient movement of traffic, or damage to the County road.
- f) Violation by the Permittee of any ordinance or resolution of a local authority concerning operation or movement of an extra-legal vehicle or load.

10.11.4 PERMIT HEARING

Any hearing required by this Chapter shall be presided over by Grand County Road and Bridge Superintendent or his designee. If a hearing is held and if either party is dissatisfied with the initial decision of the Grand County Road and Bridge Superintendent, then an appeal may be made to the Board of County Commissioners (BOCC) of Grand County within thirty days after the date of service of the initial decision. The appeal shall specify the finding of fact and a conclusion of law, the dissatisfied party is appealing. All appeals shall be submitted to:

Grand County
Board of County Commissioners
P O Box 264
Hot Sulphur Springs, CO 80451

10.11.5 APPEAL HEARING

The BOCC shall conduct a hearing on said appeal within forty-five (45) days of the receipt of said appeal, unless otherwise agreed by the parties. The BOCC may affirm, reverse, or modify the decision of the Grand County Road and Bridge Superintendent, provided that the grounds of the decision must be within the scope of the issues presented on the record. The BOCC's decision constitutes final agency action and subject to judicial review.

10.12 ENFORCEMENT AND PENALTIES

10.12.1 VIOLATING RULES

It is unlawful for any individual, firm, partnership, corporation or association to violate any of these Rules and Regulations.

10.12.2 EXCEEDING WEIGHT OR SIZE LIMITS

It is a Class B traffic infraction as provided in C.R.S. §42-4-1701 for any individual, firm, partnership, corporation or association or for the owner to cause or knowingly permit to be driven or moved on any road over which Grand County has jurisdiction, any vehicle or vehicles of a size or weight exceeding the limitations set forth in these Rules and Regulations.

10.12.3 UNLAWFUL VEHICLE

Any law enforcement officer as defined in C.R.S. §16-2.5-101, having reason to believe that the weight or length of a vehicle is unlawful under the terms of these Rules and Regulations, is authorized to require the vehicle to stop and submit to the measurement or weighing of the same by means of either portable or stationary scales, or shall require that such vehicle be driven to the nearest public scales in the event such scales are within five (5) miles.

10.12.4 FAILURE TO COMPLY WITH LAW ENFORCEMENT OFFICER

Any driver of a vehicle who fails or refuses to stop and submit the vehicle and load to measurement or weighing or fails or refuses when directed by a law enforcement officer upon weighing of the vehicle to stop the vehicle and otherwise comply with the provisions of this Ordinance commits a Class Two Misdemeanor traffic offense.

10.12.5 LIABILITY

Nothing contained in this Ordinance shall relieve any person from liability for damages to County roads and Highways as otherwise provided by Law.

10.13 FEES

10.13.1

Annual Oversize/Overweight (Up to 15 vehicles registered to the same owner and/or corporation)	\$15.00
Special Permit (see requirements)	\$125.00

Chapter 11

Fines



CHAPTER 11: FINES

11.1 STATEMENT AND PURPOSE

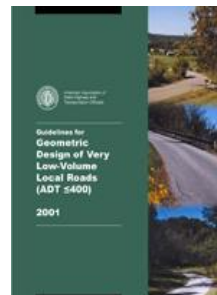
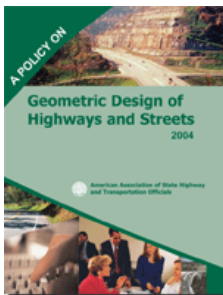
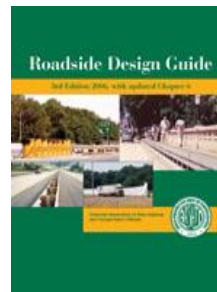
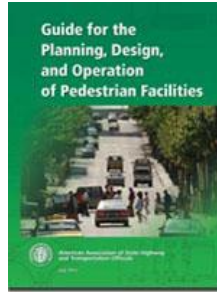
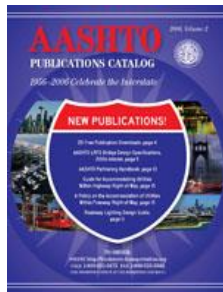
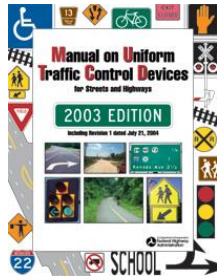
Any person, firm, or corporation violating any provisions of these regulations, or any amendment thereof, is guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine of not more than five hundred dollars (\$500.00), or by imprisonment in the County jail for not more than ten (10) days, or both such fine and imprisonment.

11.2 EXTRA-LEGAL VEHICLES OR LOADS

Any person, firm or corporation violating these regulations shall in violation of C.R.S §42-4-511, C.R.S. §42-4-511.2 and C.R.S. §42-4-512.

Chapter 12

Accepted Publications



CHAPTER 12: ACCEPTED PUBLICATIONS

The most up to date publications listed below are acceptable sources for design information not found in these Standards. These publications may be useful for variance request submittals. A publication not listed below may be used at the discretion of the County.

1. ADA Standards for Accessible Design, Department of Justice
2. A Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials (AASHTO)
3. Colorado State Forest Service Wildfire Safety
4. Colorado Supplement to the MUTCD
5. Design Manual, Division of Highway State of Colorado
6. Design of Pavement Structures, (AASHTO)
7. Erosion and Sediment Control for Construction Activities Guidance Handbook, East Grand Water Quality Control Board (EGWQCB)
8. Grand County Storm Drainage Design and Criteria, Department of Community Development
9. Grand County Subdivision Exemption Regulations, Department of Community Development
10. Grand County Subdivision Regulations, Department of Community Development
11. Guide for the Planning, Design and Operation of Pedestrian Facilities, AASHTO
12. Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT <400), AASHTO
13. M&S Standard Plans, Colorado Department of Transportation (CDOT)
14. Manual on Uniform Traffic Control Devices (MUTCD), Federal Highway Administration
15. Roadside Design Guide, AASHTO
16. Rules and Regulations of the Colorado Department of Transportation, Pertaining to Transport Permits for the movement of extra-legal vehicles or loads.
17. Standards Specifications for Highway Bridges, AASHTO
18. Standard Specifications for Road and Bridge Construction, CDOT
19. Transportation Engineering Handbook, Institute of Transportation Engineers (ITE)
20. Trip Generation, ITE

Chapter 13

References



CHAPTER 13: REFERENCES

These publications listed below have been referenced for the preparation/revision of these Standards.

1. A Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials (AASHTO) (2004)
2. Article 4: Site Development Standards, Eagle County (January 4, 2005)
3. Colorado Revised Statutes
4. Erosion and Sediment Control for Construction Activities Guidance Handbook, East Grand Water Quality Control Board (EGWQCB) (Spring 2005)
5. Guide for the Planning, Design and Operation of Pedestrian Facilities, AASHTO (July 2004)
6. Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT <400), AASHTO
7. Land Use and Development Code Chapter 5; Road and Bridge Standards, Summit County (October 1, 1998)
8. Larimer County Road Manual, Larimer County (January 1, 2000)
9. M&S Standards Plans, Grand County Department of Community Development (Adopted September 11, 1985)
10. Manual on Uniform Traffic Control Devices, Federal Highway Administration (2003 Ed.)
11. Road and Bridge Standards, Grand County Department of Community Development (Adopted September 11, 1985)
12. Road and Bridge Specifications, Mesa County Public Works (February 1, 2006)
13. Roadside Design Guide, AASHTO (January 1996)
14. Rules and Regulations of the Colorado Department of Transportation, Pertaining to Transport Permits for the movement of extra-legal vehicles or loads.
15. Transportation Engineering Handbook, Institute of Transportation Engineers (ITE) 5th Ed.

Chapter 14

Definitions



CHAPTER 14: DEFINITIONS

Applicant – person responsible for the development and/or improvements being proposed.

Average Daily Traffic (ADT) – the average 24-hour volume, being the total number during a stated period, divided by the number of days in the period. Unless otherwise stated, the period is a year.

Backfill – material used to replace or the act of replacing material removed during construction; also may denote material placed or the act of placing material adjacent to structures.

Base Course – the layers of specified or selected material of selected thickness placed on a subbase or a subgrade to support a surface course.

Bridge – a structure including walls 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.

Clear Zone – is used to designate the unobstructed, relatively flat area beyond the edge of the roadway for the recovery of errant vehicles. Recoverable slope are defined as 4:1 or flatter, and a non-recoverable slope between 4:1 and 3:1.

Contour – a line, as shown on the plans that connects points of equal elevation on a land surface.

Corner Sight Distance – the necessary distance needed to accelerate enough so as to not slow the travel speed of other cars by more than 10 MPH.

County – employees and/or representatives of Grand County. Includes but not limited to the Community Development Department, Road and Bridge Department, Board of County Commissioners, County Attorney, County Engineer, County Surveyor, etc.

Critical Flow – a condition which exists at the critical depth; under this condition, the sum of the velocity head and static head is a minimum.

Crown/Cross Slope – on road, each lane of the pavement may be sloped separately or have a unidirectional slope across the entire width of pavement, almost always downward to the outer edge.

Cul-de-sac – a local street open at one end only, and with special provisions for turning around (bulb, hammerhead, “T”, etc.).

Culvert – a closed conduit, other than a bridge, which conveys water carried by a natural channel or waterway transversely under the roadway.

Decision Sight Distance – the distance needed for a driver to detect an unexpected or otherwise difficult-to-perceive information, source or condition in a roadway environment that may be visually cluttered, recognize the condition or potential thread, select an appropriate speed and path, and initiate and complete the maneuver safely and efficiently.

Design Speed – a speed determined for design and correlation of the physical features of a highway that influence vehicle operation. It is the maximum safe speed that can be maintained over a specific section of highway when conditions are so favorable that the design features of the highway govern.

Driveway – an access point onto the County road system from a home, garage or other structure and an access serving less than 20 ADT.

Drainage Appurtenances – inlets, storm sewer, curb and gutter, drain pipes, culverts, valley pans, etc.

Easements – a right to use or control the property of another for designated purposes.

Engineer – a Colorado Licensed Professional Engineer.

Erosion – the wearing away of land surface by detachment and transporting of soil and rock particles by the action of water, wind, or other agents.

Flowable Fill – liquid soil which is placed as a flowable liquid, yet hardens and rapidly develops excellent load-bearing properties with no compaction.

Grade – the rate expressed in terms of percent of ascent or descent divided by the length.

Grading Plan – a drawing showing an arrangement of contours intended to integrate construction and topography, improve appearance, retard erosion and improve drainage.

Guardrail – a protective device intended to make roadways safer by reducing accident severity.

Husbandry – the act or practice of cultivating crops or breeding or raising livestock; agriculture.

Horizontal Alignment – horizontal geometries for safe and continuous operation at a uniform design speed for substantial lengths of roadway and shall afford at least the minimum stopping distance for the design speed at all points on the roadway.

Implement of Husbandry – and “Implement of Husbandry” is a vehicle which is used exclusively in the conduct of agricultural operations.

Intersection – 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 (2) roadways which join on another at, or approximately at right angles, or the area within which vehicles traveling on different roadways joining at any other angle may come in conflict.

Mailbox – any receptacle used to receive mail, newspapers, packages, etc. from any type of delivery service.

Minimum Turning Radius – the radius of a minimum turning path of the outside of the outer front tire or overhang.

MUTCD – Manual on Uniform Traffic Control Devices.

Plowing – utility installation by the use of ripping or cutting the surface for utility placement, does not involve major excavation.

Point of Curvature (PC) – beginning of horizontal curvature, tangent to previous segment.

Point of tangency (PT) – end of horizontal curvature, tangent to next segment.

Point of Vertical Curvature (PVC) – beginning of vertical curvature, tangent to previous segment.

Point of Vertical Inflection (PVI) – a point of two intersecting grades.

Point of Vertical Tangency (PVT) – end of vertical curvature, tangent to next segment.

Right-of-Way – a general term denoted land, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes.

Roadway – a portion of roadway including shoulders for vehicular use and ADT's greater than 20. A divided highway has two or more roadways.

Shoulder – 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.

Stopping Sight Distance (SSD) – the sum of the brake reaction distance and the braking distance. SSD is measured from the driver's eyes, three and a half feet (3 ½') above the road surface, to an object two feet (2') high on the road.

Subbase – the layer or layers of specified or selected material of designed thickness placed on a subgrade to support a base course.

Subgrade – the top surface of a roadbed upon which the pavement structure and shoulders, including curbs, are constructed.

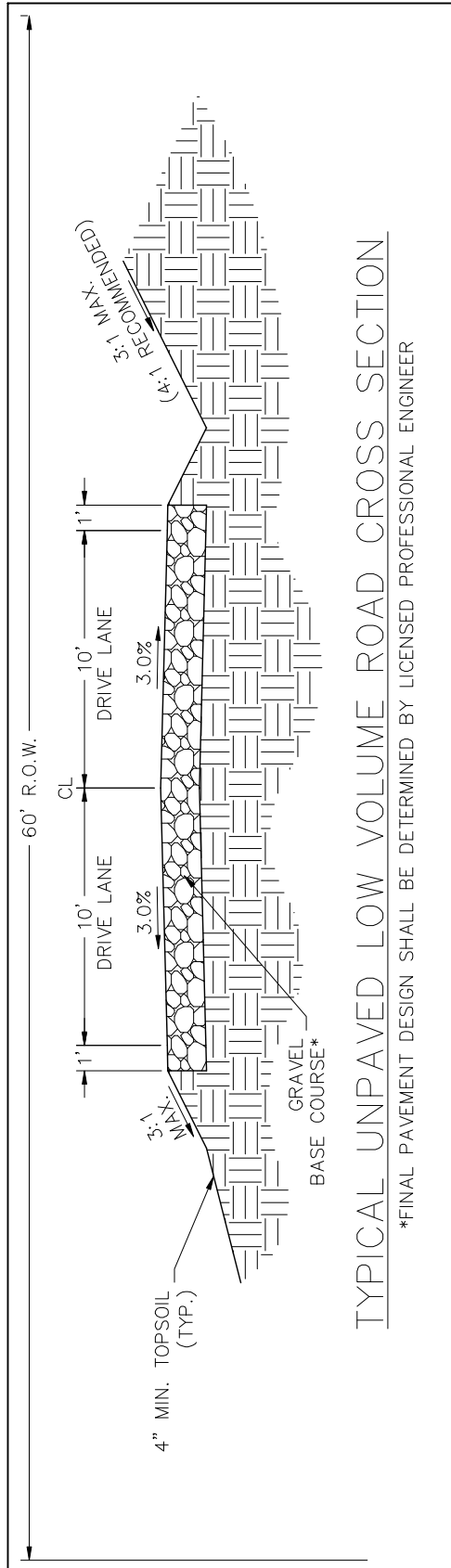
Superelevation – the vertical distance between the heights of inner and outer edges of roadway pavement used to prevent vehicle from sliding outward, or to counteract all the centrifugal force of a vehicle traveling at an assumed speed, or roadway banking.

Traffic Control Device – any sign, signal marking, or installation placed or erected under public authority, for the purpose of regulating, warning, or guiding.

Vertical Alignment – element of road design intended to provide adequate sight distance, safety, comfortable driving, good drainage, and pleasing appearance. Stopping sight distance requirements controls minimum lengths of crest vertical curves.

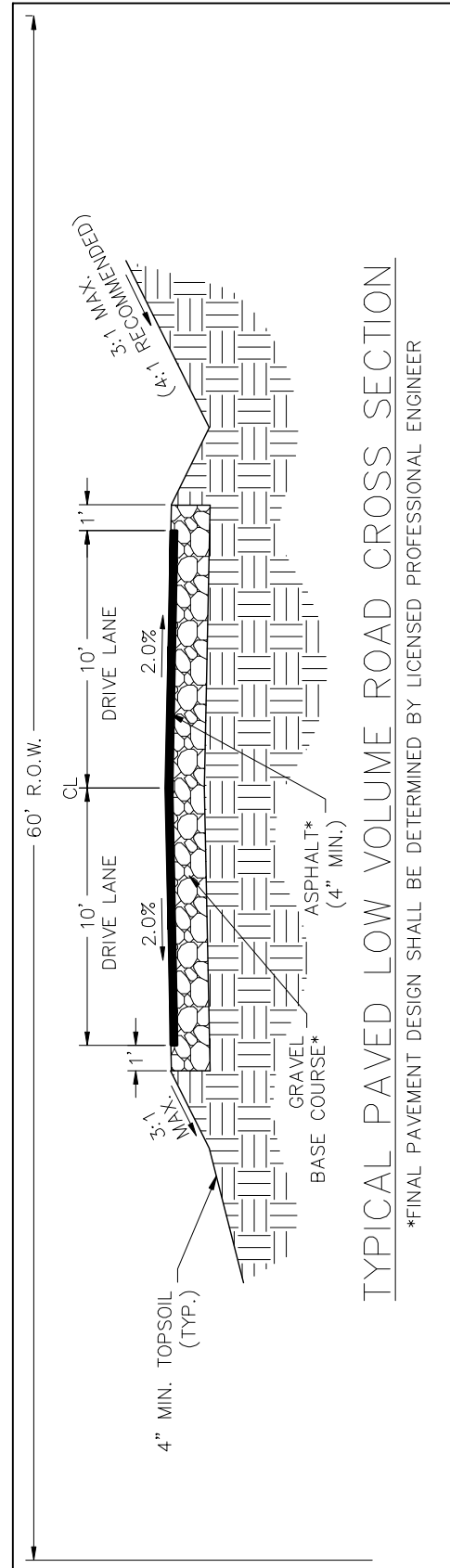
FIGURE 1

TYPICAL CROSS-SECTIONS FOR LOW VOLUME ROADS



TYPICAL UNPAVED LOW VOLUME ROAD CROSS SECTION

*FINAL PAVEMENT DESIGN SHALL BE DETERMINED BY LICENSED PROFESSIONAL ENGINEER



TYPICAL PAVED LOW VOLUME ROAD CROSS SECTION

*FINAL PAVEMENT DESIGN SHALL BE DETERMINED BY LICENSED PROFESSIONAL ENGINEER

FIGURE 2

TYPICAL CROSS-SECTIONS FOR LOCAL ROADS

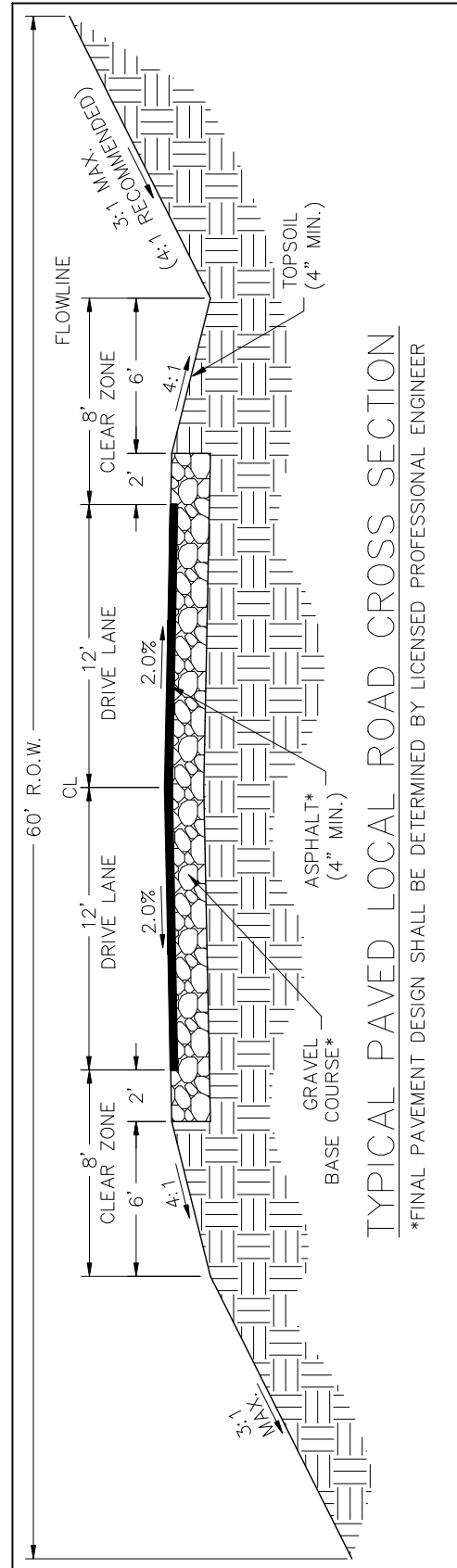
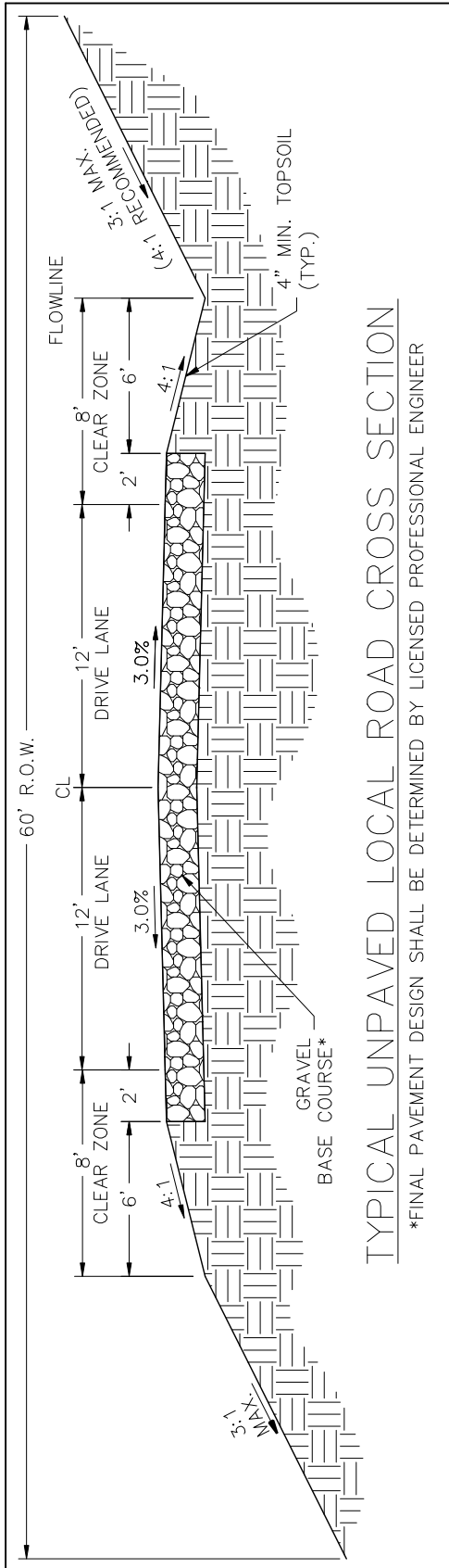


FIGURE 3

TYPICAL CROSS-SECTIONS FOR COLLECTOR ROADS

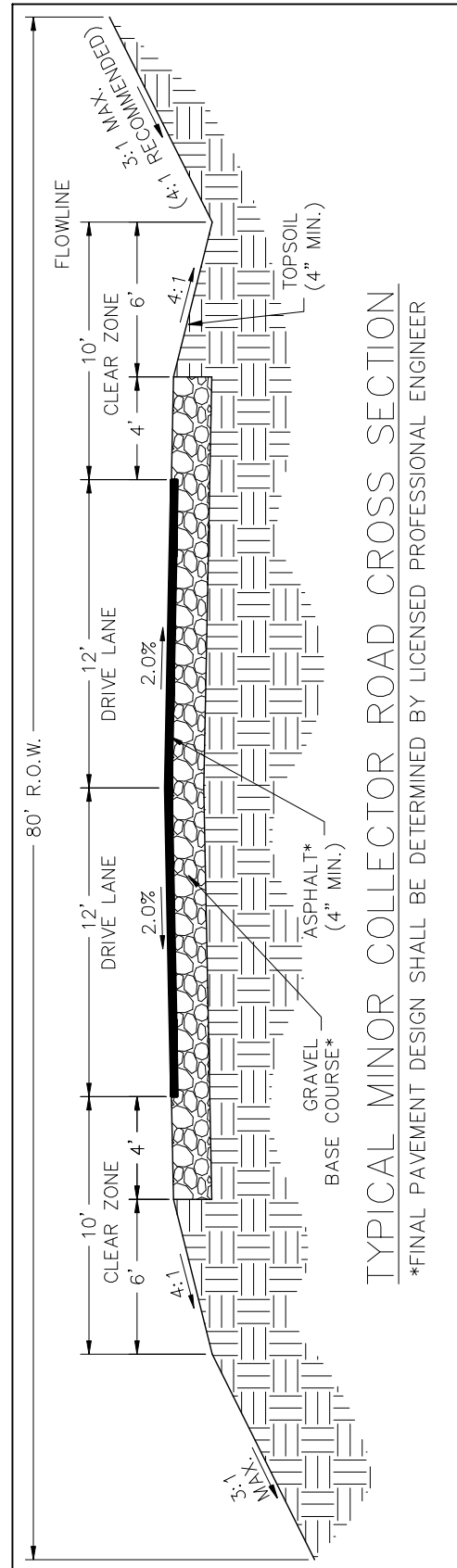
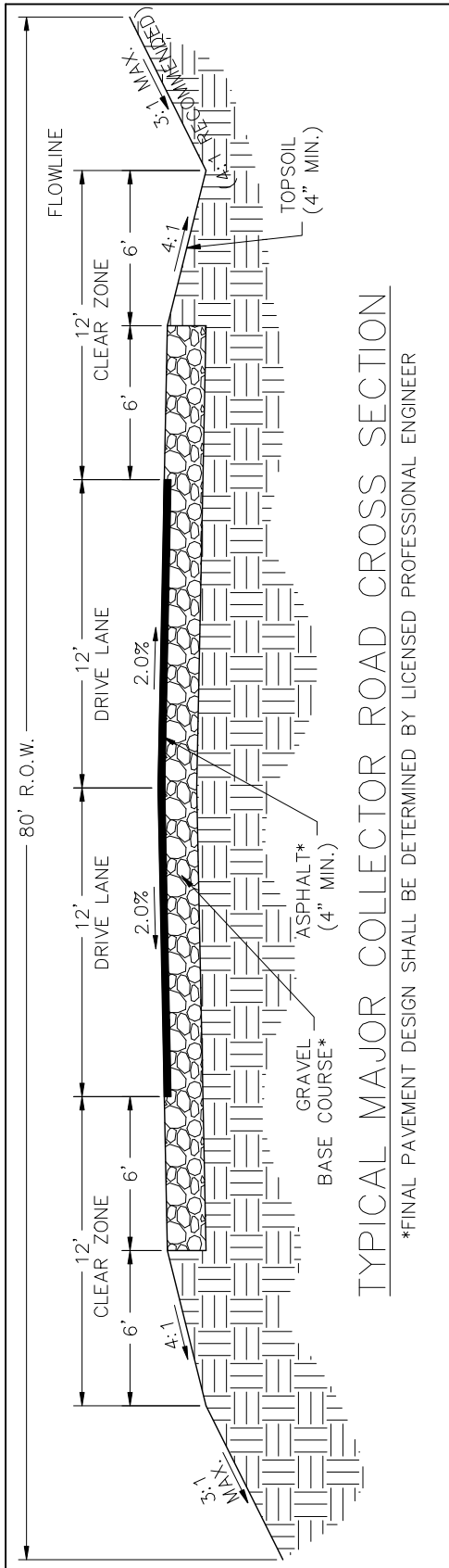


FIGURE 4

TYPICAL CUL-DE-SAC AND TURNAROUNDS FOR ROADWAYS

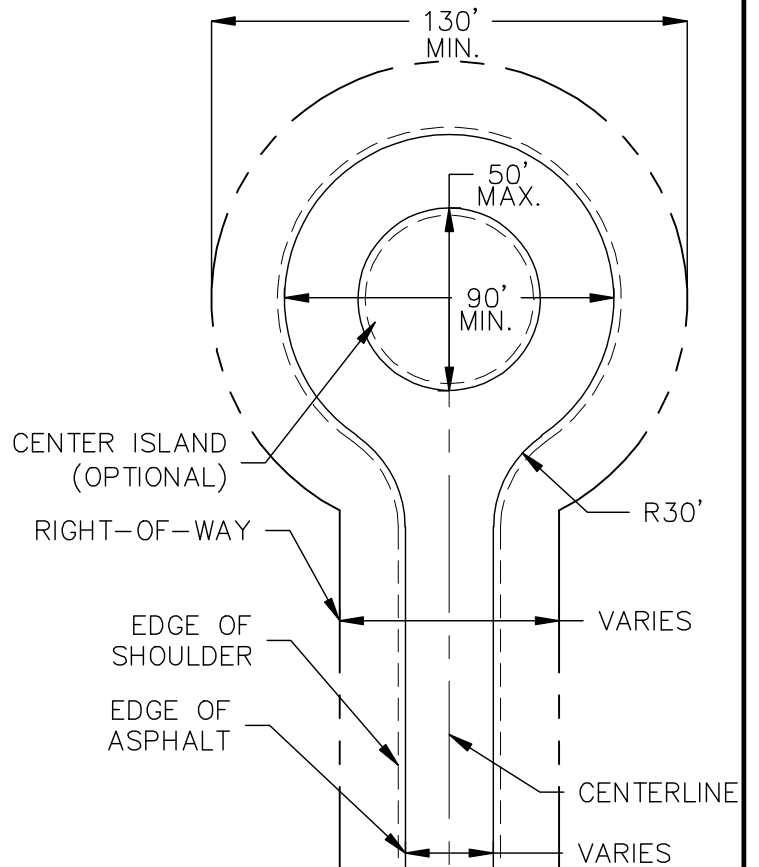
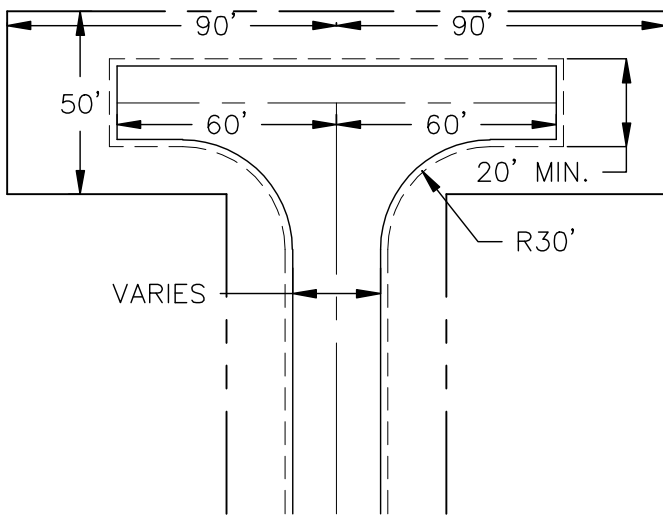
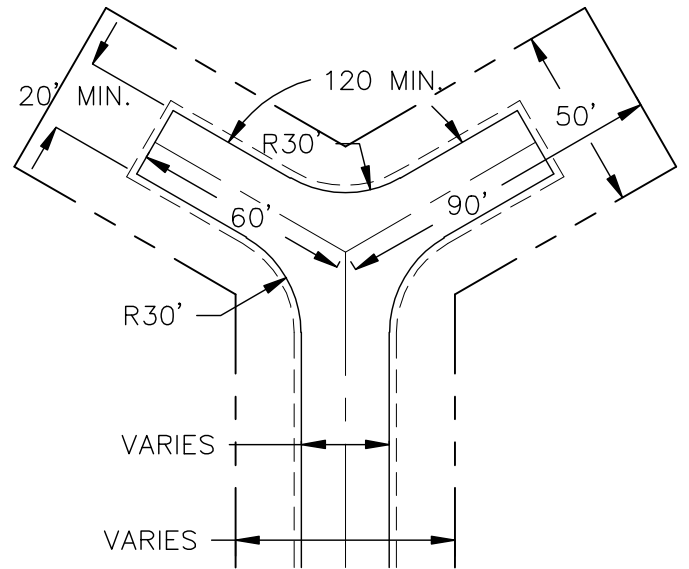
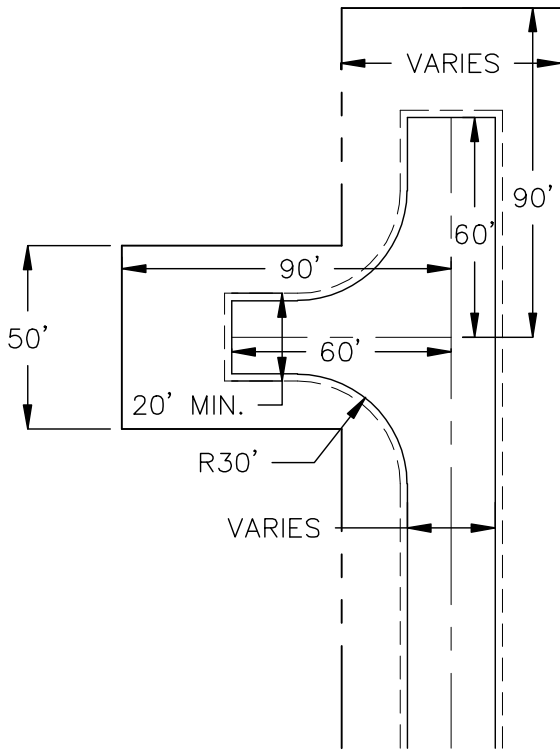
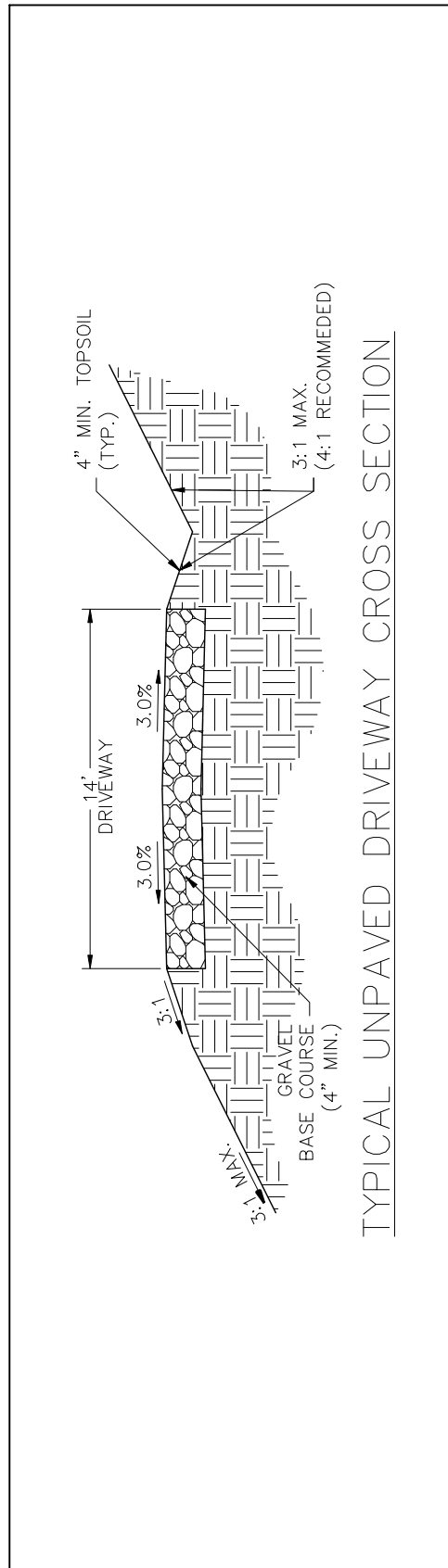


FIGURE 5

TYPICAL CROSS-SECTION FOR DRIVEWAYS



TYPICAL UNPAVED DRIVEWAY CROSS SECTION

FIGURE 6

TYPICAL CUL-DE-SAC AND TURNAROUNDS FOR DRIVEWAYS

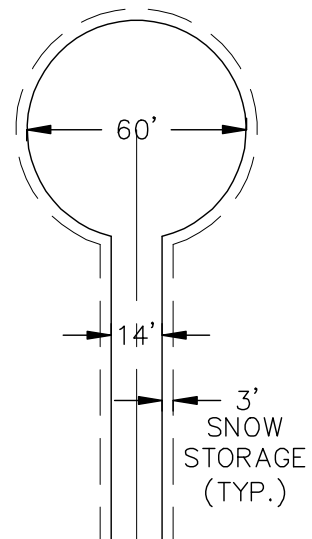
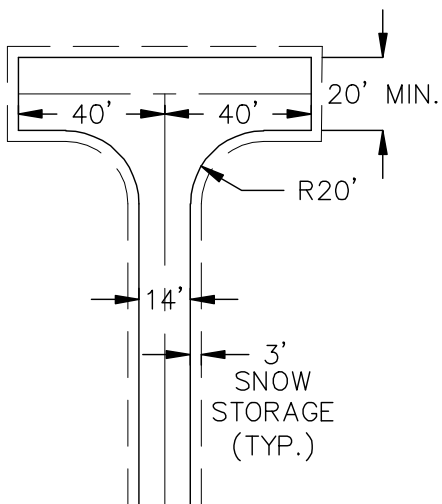
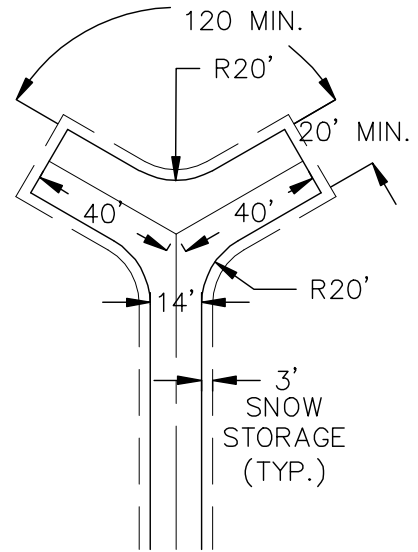
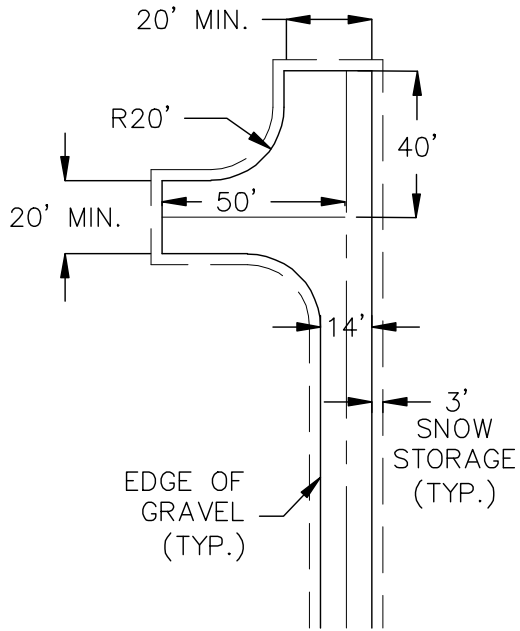
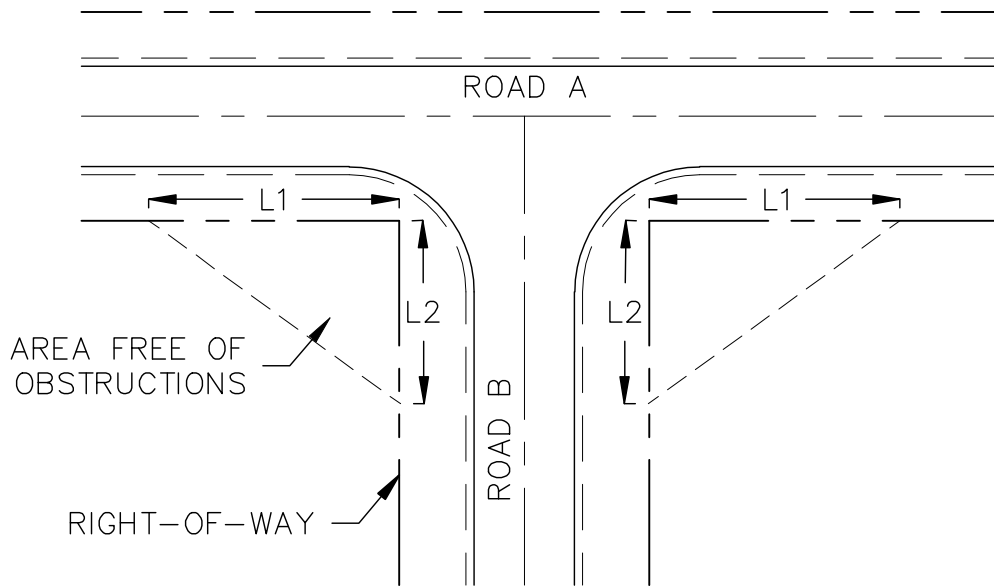


FIGURE 7

INTERSECTION SIGHT TRIANGLES

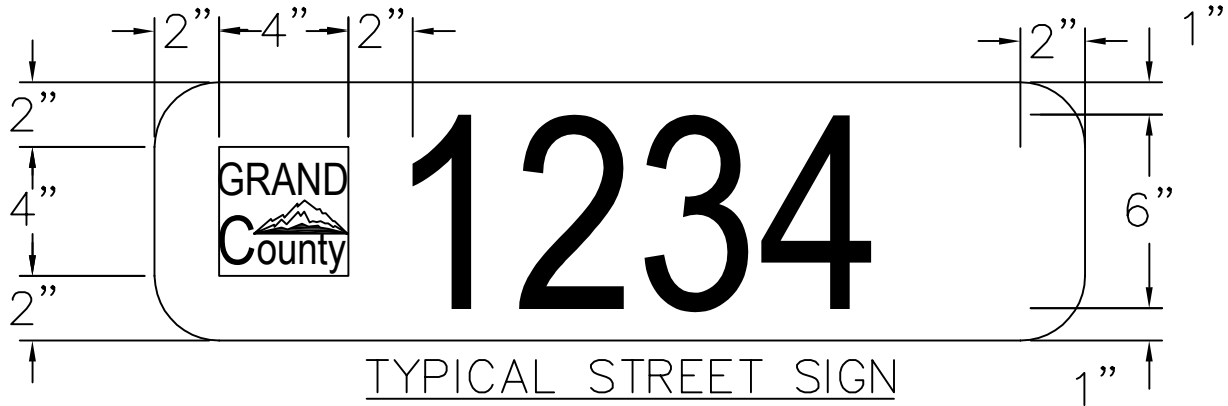


ROAD A	ROAD B			
	ARTERIAL	COLLECTOR	LOCAL/LOW VOL	DRIVEWAY*
HIGHWAY	SPECIAL DESIGN SEE STATE HIGHWAY ACCESS CODE FOR DESIGN			
ARTERIAL	L1 = 70' ; L2 = 70'	L1 = 70' ; L2 = 50'	L1 = 70' ; L2 = 30'	ACCESS DISCOURAGED
COLLECTOR		L1 = 50' ; L2 = 50'	L1 = 50' ; L2 = 30'	L1 = 50' ; L2 = 10'
LOCAL/LOW VOL.			L1 = 30' ; L2 = 30'	L1 = 30' ; L2 = 10'

*DRIVEWAYS ARE MEASURED FROM EDGE OF DRIVING SURFACE

FIGURE 8

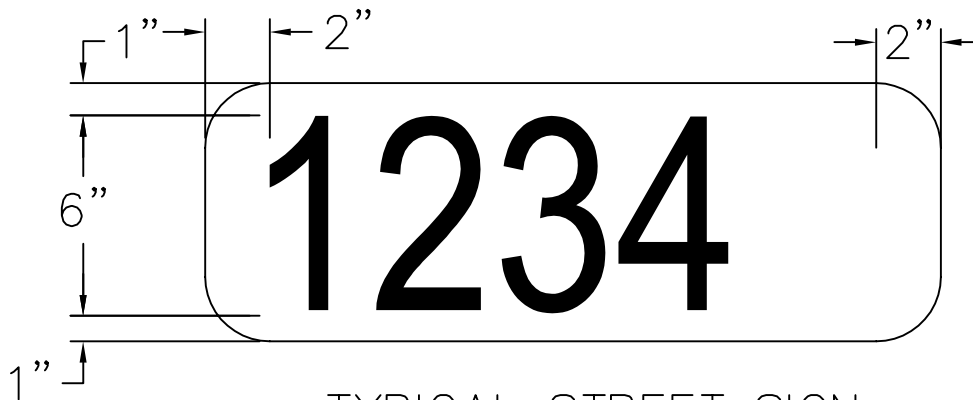
TYPICAL STREET SIGN



TYPICAL STREET SIGN
GRAND COUNTY OWNED AND MAINTAINED



TYPICAL STREET SIGN
GRAND COUNTY OWNED, NON COUNTY MAINTAINED
NCM LETTERS AVAILABLE AT THE ROAD & BRIDGE DEPARTMENT



TYPICAL STREET SIGN
PRIVATELY OWNED AND/OR MAINTAINED

Submit completed form **at least 5 working days prior to** construction to:
Any construction started prior to permit issuance will result in a penalty of \$500

Grand County Road and Bridge
467 East Topaz Avenue / PO Box 9
Granby, CO 80446

FOR OFFICE USE ONLY			
Date Received: _____			Permit # _____
District: _____	Faxed/E-mailed: _____		Check # _____
District Foreman/Designee Initials: _____	Date: _____	APPROVED DENIED	Initials: _____
Surface Type: <input type="checkbox"/> Gravel <input type="checkbox"/> Chip Seal <input type="checkbox"/> Asphalt <input type="checkbox"/> Magnesium Chloride			Entered: _____
District Foreman Comments/Requirements: Compaction test are required and must be certified by a Geo-Tech engineer.			
Date of Inspection: _____	Inspector: _____	PASS FAIL	



Application for Grand County Public Right-Of-Way Use Permit

Permits are only issued from April 15th until October 15th each year, please plan accordingly.

Please print or type clearly. **Incomplete applications will be denied.**

All construction must be completed by October 31st.

Company Name (Applicant): _____

Contact Person: _____

Mailing Address: _____

E-Mail Address: _____

Phone: _____ **Alternate Phone:** _____ **Fax:** _____

Property Owner: _____ **Phone:** _____

UNCC Locate Ticket Number _____

Right-of-way Work/Use Type and Minimum Depth Requirements:

- Water (Min depth 9 feet) Phone (Min depth 36 inches) Sewer (Min depth 9 feet) Gas (Min depth 36 inches)
- Electricity (Min Depth 48 inches) Fiber Optics (Min depth 48 inches) TV Cable (Min depth 36 inches)
- County Road Access Other: _____

Location:

County Road: _____ Nearest Intersection: _____ Address: _____

Location Details/Description:

Method of Installation:

- Boring Jacking Trenching Other: _____

Length of Installation within right-of-way: _____ **Depth:** _____ (see min. depth requirements)

Installation will be:

- In the road In the ditch In the shoulder Other _____

Construction Dates:

Start: _____ End: _____

Construction must be completed by the end date or additional fees will be incurred. No construction will be allowed after October 31st.

Instructions for Right-of-Way Use Permit:

1. One (1) application must be completed for **each** installation.
2. Applications must be completed and signed by construction contractor, incomplete applications will be denied.
3. This application must be submitted to Grand County Road and Bridge **at least 5 working days prior** to the anticipated start of the installation.
4. Except in cases of emergency, as defined by the Grand County Road and Bridge Design Standards, revised July, 2015, no work shall begin until a valid permit has been issued by Grand County Road and Bridge: this application is **not** a valid permit and is not a guarantee that a permit will be issued. Any construction started prior to permit issuance, will result in a penalty of \$500.00 to the contractor and/or criminal charges.
5. A permit fee of \$100.00 is required with the submittal of this application
6. A cost estimate to repair the road to its original condition must accompany this application.
7. A surety bond in the amount of **150% of the cost estimate** (or annual general contractor liability bond of \$1M) in a form acceptable to Grand County Road and Bridge is required with the submittal of this application (you must submit a new surety bond for each application). Surety bonds **shall be valid for two (2) years** from the date of work completion.
8. A detailed sketch of the work site must accompany this application and must show the placement of the utility or county road access.
9. A detailed traffic control plan, including signage and distances, may be required.
10. All work done must comply with Grand County Road and Bridge Design Standards and all requirements listed in the "Requirements" section of this application.

Requirements:

1. A valid permit must be issued by Grand County Road and Bridge prior to installation. Any construction started in a Grand County Right-of-Way prior to permit issuance will result in a penalty of \$500.00 to the contractor and/or criminal charges for obstructing a public highway.
2. Applicant must mark the work site prior to submitting application.
3. Utilities must be buried to the minimum depth as stated herein. (any utility not buried to min. depths will be the responsibility of the utility company after the bond period.)
4. Applicants are required to call for all utility locates from the appropriate agency.
5. Roadways must be capable of re-opening for emergency vehicles at all times.
6. Applicants shall contact Grand County's Sheriff Dispatch office (970-725-3343) and Grand County Road & Bridge (970-887-2123) prior to closing any road and in case of emergencies.
7. A copy of this permit application shall be available for inspection at the work site at all times.
8. If work site fails inspection upon completion of installation, Contractor has ten (10) calendar days after notification to repair the work site to Grand County Road and Bridge standards and a re-inspection fee of \$100.00 shall be assessed.
9. Failure to perform under any one (1) permit issued to Contractor may result in the suspension or revocation of any and all other open permits and permit applications pending for Contractor.
10. Flowable fill will be required as backfill on any cuts made to paved surfaces.
11. **Compaction test are required and must be certified by a professional Geo-Tech engineer.**
12. Grand County Road & Bridge will randomly inspect depths of utilities placed in R.O.W.
13. Photo Documentation will be required.
14. All Flaggers must be CDOT Certified (including appropriate apparel).
15. Grand County will require boring on all asphalt roads less than five (5) years old.
16. Any road cuts within paved Right-of-ways older than five years will require proof of a density test meeting minimum County standards either by compaction or flowable fill.

Applicant's Statement of Responsibility:

I, the above-stated applicant, as the applicant for a Right-of-Way Use Permit, understand that I have the following responsibilities:

- I shall return the road/right-of-way to it's original condition including placement of vegetation, or I may incur additional fees and construction requirements;
- I shall be responsible for any and all damage occurring to the roadway during the installation;

- I shall call Grand County Road and Bridge (970-887-2123) upon completion of the construction project to schedule an inspection. If my work site fails inspection, I shall be responsible for repairing the work site to Grand County Road and Bridge standards within ten (10) days of being notified that repairs are needed and I shall be responsible for payment of a \$100.00 re-inspection fee;
- I shall comply with all Grand County Road and Bridge Design Standards, as revised in July, 2015;
- I shall take any and all measures to ensure the safety of all travelers over, around, and through the construction site, including, but not limited to, certified flagger, barricades, signage;
- I shall not close any road to traffic without the authority/permission from Grand County Road and Bridge and the Grand County Sheriff's Office;
- I shall not store any excavated materials at the work site that will obstruct traffic in any manner;
- I shall remove contaminated materials and replace with new Class 6 Minus gravel at a depth of six inches (6") on the road surface;
- I expressly warrant and guarantee the compaction and rebuild work on the road/right-of-way for a period of two (2) years, and if the compaction/rebuild work fails at any time during that two (2) year period, I am responsible for beginning repairs within forty-eight (48) hours of being notified that repairs are needed and if I do not so perform, I hereby authorize Grand County to file a claim against the surety bond submitted with this application;
- Grand County Road and Bridge is hereby released from liability for any damages to utilities not buried at the proper minimum depth or not installed in compliance with Grand County Road and Bridge standards.
 - If during normal maintenance/grading, Grand County Road and Bridge damages a utility that is not at the proper minimum depth, I, as the applicant, shall be personally responsible for those damages during the bond period;
 - I agree to indemnify and hold harmless Grand County Road and Bridge, its employees and affiliates, from all liability for any and all damage to property or person resulting from the issuance, construction, or work associated with this permit;
 - Nothing contained in this permit shall be construed as a waiver or partial waiver of Grand Counties Governmental immunity.

By signing below, I hereby acknowledge that I have read and understand the terms of this permit application; that I have read and understand the Grand County Road and Bridge Design Standards as revised in July, 2015; that I am willing and able to comply with all applicable County, State, and Federal laws; that I am willing and able to comply with my responsibilities as set forth in this application; and that the information provided herein is true and correct to the best of my knowledge.

The applicant is responsible for keeping a copy of this application; the original must be submitted to Grand County Road and Bridge.

If this permit application is being submitted under **emergency** circumstances, I understand that I have **5 working days** from today's date to comply with all provisions of this permit application including payment of the permit fee, submittal of surety bond, and any and all other requirements or I will be assessed a \$500.00 penalty for conducting right-of-way activities without a permit.

Authorized Signature

Date

Printed Name

Title

FAILURE TO RETURN WORK SITE TO IT'S ORIGINAL CONDITION MAY RESULT IN A RE-INSPECTION FEE OF \$100.00 AND A CLAIM AGAINST YOUR SURETY BOND.

ANY CONSTRUCTION STARTED IN A GRAND COUNTY RIGHT-OF-WAY PRIOR TO PERMIT ISSUANCE WILL RESULT IN A PENALTY OF \$500.00 TO THE APPLICANT.

BOCC RESOLUTION 2005-12-25 - C.R.S. 30-11-101, 30-28-205, 43-5-301

Submit completed form **before** submitting building application:
 Any construction started prior to permit issuance will result in a penalty of \$500

Grand County Road and Bridge
 467 East Topaz Avenue / PO Box 9
 Granby, CO 80446



**Application for
 Grand County Driveway Permit**

Incomplete applications will be denied.
 Permits are valid for one (1) year from date of issuance.

Approval Stamp Here

Property Owner (Applicant): _____

Mailing Address: _____ **City:** _____ **ST:** _____ **Zip** _____

Phone: _____ **Alternate Phone:** _____ **Fax:** _____

E-mail address: (PRINT CLEARLY) _____

Excavator/Contractor constructing driveway: _____

Excavator/Contractor Phone Number: _____ **Excavator/Contractor Cell Phone** _____

UNCC Locate Ticket Number (required) _____ (Call 811 from any phone)

Is driveway center line staked (This is required)? Yes ___ No ___ **Address must be posted on property prior to inspection.**

Property Address: _____ County Road #: _____ Nearest Intersection: _____

Subdivision (if applicable): _____ Lot: _____ Block: _____

Location Details/Description:

Length of driveway: _____ **ft.** **Width of driveway:** _____ **ft.**

FOR R&B OFFICE USE ONLY			
Date Received: _____ By: _____	District: _____	Permit # _____	Entered: _____
District Foreman/Designee Initials: _____ Date: _____	APPROVED	DENIED	Amt Due: _____
Comments/Requirements/Conditions:			Pymt Rcv'd
			Initials: _____
			Ck #: _____
		Pymt Pending w/ Bldg Permit: _____	
Culvert Required: Yes ___ No ___ Size: _____ "	Permit not required from Grand County Road and Bridge:		
Variance Required: Yes ___ No ___	Within Town Limits _____ Town: _____		
Driveway Profile Required: Yes ___ No ___	Existing Driveway Yes ___		
Driveway Final Inspection:			
Date of Inspection: _____ Inspector: _____	PASS	FAIL	
Date of Re-inspection _____ Inspector: _____	PASS	FAIL	

Submit completed form **before** submitting building application:
Any construction started prior to permit issuance will result in a penalty of \$500

Grand County Road and Bridge
467 East Topaz Avenue / PO Box 9
Granby, CO 80446

Instructions & Requirements for Driveway Permit:

1. One (1) application must be completed for **each** driveway.
2. Applications must be completed, dated and signed, **incomplete applications will be denied.**
3. Applicant must mark the center line of proposed driveway prior to submitting application.
4. Applicant will have their property address posted prior to submitting application.
5. Once completed application is received by Grand County Road and Bridge (GCR&B), a site inspection will be conducted within **5 business days.**
6. No work shall begin until an approved permit has been issued by Grand County Road and Bridge: this application is **not** a valid permit and is not a guarantee that a permit will be issued.
7. A permit fee of \$125.00 is required with the submittal of this application.
8. A detailed sketch of the work site must accompany this application and must show the placement of the driveway including adjacent property lines and any adjacent driveways or roadways.
9. Driveway inspections will only occur between April 15 and October 31 unless weather permits.

Driveway Sketch

Submit completed form **before** submitting building application:
Any construction started prior to permit issuance will result in a penalty of \$500

Grand County Road and Bridge
467 East Topaz Avenue / PO Box 9
Granby, CO 80446

Applicant's Statement of Responsibility:

I, the above-stated applicant for a Driveway Permit, understand that I have the following responsibilities:

- I shall comply with Grand County Road and Bridge Standards, Chapter 4 Driveway Design Standards revised 2015;
- I shall take any and all measures to ensure the safety of all travelers over, around, and through the construction site;
- I shall not store any excavated materials at the work site or in County Right-of-Way that will obstruct traffic in any manner;
- **I shall call Grand County Road and Bridge (970-887-2123) upon completion of the construction project to schedule an inspection.** If my work site fails inspection, I shall be responsible for repairing the work site to Grand County Road and Bridge standards within ten (10) days of being notified that repairs are needed and I shall be responsible for payment of a \$100.00 re-inspection fee;
- Grand County Road and Bridge is hereby released from liability for any damages to culverts not in compliance with Chapter 4 of the Grand County Road and Bridge Standards, as revised in July, 2015.
 - If during normal summer and/or winter maintenance/grading operations, Grand County Road and Bridge damages a driveway culvert that is not at the proper minimum depth, I, as the applicant, shall be personally responsible for those damages;
 - I agree to indemnify and hold harmless Grand County Road and Bridge, its employees and affiliates, from all liability for any and all damage to property or person resulting from improper installation of culverts and driveways under this permit;
- I understand that during normal plowing operations, snow may be plowed onto my property/driveway. It is my responsibility to remove this snow to my satisfaction. The county will not clear snow berms from my driveway.
- **I shall not plow snow across or place snow on any County Right-of-Way or road.**
- It is my responsibility to keep my personal items clear of the roadway or County Right-of-Way, such as parked cars, trash cans, mailboxes, etc., so that they may not obstruct normal road maintenance or snow plowing operations.
- I understand that the Code of the West (<http://www.co.grand.co.us/DocumentCenter/View/807>) applies to living and building in Grand County, Colorado.

By signing below, I hereby acknowledge that I have read and understand the terms of this permit application; that I have read and understand Chapter 4 of the Grand County Road and Bridge Standards as revised in July, 2015; that I am willing and able to comply with all applicable County, State, and Federal laws; that I am willing and able to comply with my responsibilities as set forth in this application and Chapter 4 of the Grand County Road and Bridge Standards; and that the information provided herein is true and correct to the best of my knowledge.

Printed Name of Applicant

Signature of Applicant

Date

FAILURE TO COMPLY WITH CHAPTER 4 OF THE ROAD AND BRIDGE STANDARDS, AS REVISED IN JULY, 2015, MAY RESULT IN A RE-INSPECTION FEE OF \$100.00.

ANY CONSTRUCTION STARTED PRIOR TO PERMIT ISSUANCE WILL RESULT IN A PENALTY OF \$500.00 TO THE APPLICANT.

THE INDICATION BY THE COUNTY THAT THE LANDOWNER HAS COMPLIED WITH THE REQUIREMENT OF PROVIDING A DRIVEWAY ACCESSIBLE TO EMERGENCY VEHICLES IS IN NO WAY A CERTIFICATION OF THE QUALITY OR INTEGRITY OF SAID DRIVEWAY. THE MANNER OF CONSTRUCTION AND OPTIONAL EMPLOYMENT OF AN ENGINEER ARE AT THE DISCRETION OF THE LANDOWNER, WHO ASSUMES ALL RISKS AND CONSEQUENCES ASSOCIATED WITH THOSE DECISIONS.

TRANSPORT PERMIT APPLICATION

Permit No. _____

GRAND COUNTY ROAD & BRIDGE
 467 E. TOPAZ, P. O. Box 9
 GRANBY, CO 80446
 Phone: (970) 887-2123 Fax: (970) 887-3168

Applicant Contact Name: _____

Applicant Fax Number: _____

<input type="checkbox"/> Annual Oversize/Overweight Permit	
<input type="checkbox"/> Special Permit	USDOT# _____

Payment Required:

Special Permit \$125
 (Over 200,001lbs and/or width greater than 15' &/or depending on road width)

Annual Oversize/Overweight \$15
 (Up to 15 vehicles registered to the same owner and/or corporation) (Each vehicle up to 15 must submit a separate application, all 15 will fall under one permit #)

Method of Payment Cash Check

Permit Delivery Method:

Walk-In Fax Permit To: _____ Mail Permit To: _____
 E-Mail Permit To: _____@_____

Shipment Consists Of: _____

From (Town): _____ To (Facility or Address): _____

Over County Roads:

On the following dates: _____ Serial Number: _____ Mobile Home Use Only:

Year and make of Vehicle: _____ Tax Authentication: _____

Vehicle VIN (Last 8 characters): _____ County being moved from: _____

Axle Weight and Length Distribution:

Lbs.	<input type="checkbox"/> _____ <input type="checkbox"/>	<input type="checkbox"/> _____ <input type="checkbox"/>	<input type="checkbox"/> _____ <input type="checkbox"/>	<input type="checkbox"/> _____ <input type="checkbox"/>	<input type="checkbox"/> _____ <input type="checkbox"/>	<input type="checkbox"/> _____ <input type="checkbox"/>	<input type="checkbox"/> _____ <input type="checkbox"/>	
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Ft'-In"	1 _____	2 _____	3 _____	4 _____	5 _____	6 _____	7 _____	8 _____
Lbs.	<input type="checkbox"/> _____ <input type="checkbox"/>	<input type="checkbox"/> _____ <input type="checkbox"/>	<input type="checkbox"/> _____ <input type="checkbox"/>	<input type="checkbox"/> _____ <input type="checkbox"/>	<input type="checkbox"/> _____ <input type="checkbox"/>	<input type="checkbox"/> _____ <input type="checkbox"/>	<input type="checkbox"/> _____ <input type="checkbox"/>	
<input type="checkbox"/> _____ <input type="checkbox"/>	<input type="checkbox"/> _____ <input type="checkbox"/>	<input type="checkbox"/> _____ <input type="checkbox"/>	<input type="checkbox"/> _____ <input type="checkbox"/>	<input type="checkbox"/> _____ <input type="checkbox"/>	<input type="checkbox"/> _____ <input type="checkbox"/>	<input type="checkbox"/> _____ <input type="checkbox"/>	<input type="checkbox"/> _____ <input type="checkbox"/>	
Ft'-In"	9 _____	10 _____	11 _____	12 _____	13 _____	14 _____	15 _____	16 _____

Gross Weight:	No. of Axles:	Distance first to last axle:	Overall Length: Trailer Length:
Width:	Height (actual):	Front Overhang:	Rear Overhang:
Applicant and/or Company Name:			Telephone:
Applicant Billing Address (print Street/P. O. Box, City, State, Zip):			

(Office Use Only) Restrictions: _____

Signature: _____ Fee: \$ _____ .00

LOAD LIMITS

LEGAL LOAD LIMITS - Any load exceeding any one of the following shall require a permit:

Width:	8 feet 6 inches
Height:	13 feet 6 inches
Length:	70 feet
Weight:	20,000 lbs. on any one axle or 85,000 lbs. gross vehicle weight (Maximum weight is Total Gross Weight of Vehicle and Load)

The maximum limits allowed are as follows (Refer to Colorado Statutes 42-4-507 Wheel and Axle Loads and 42-4-508 Gross Weight of Vehicles and Loads.):

Width:	Fifteen (15) feet, subject to the maximum limit for width designated on the Transport Restriction Map.
Height:	Sixteen (16) feet, subject to the maximum limits for height designated on the Transport Restriction Map.
Length:	One hundred ten (110) feet in length.
Weight:	Two hundred thousand (200,000) pounds gross vehicle weight. Limit of 25,000 lbs. on any one axle. Subject to the maximum limits for axle weight designated on the Bridge Weight Restriction Map.
Overhang, Rear:	Thirty-five (35) foot rear overhang.
Overhang, Front:	Twenty-five (25) foot front overhang.

Permittee must have the following documents in permitted vehicle when operating or moving on County Roads and such permit shall be open to inspection by any Sheriff's officer or authorized agent of Grand County:

Grand County Road & Bridge Weight Restriction Map and Extra-Legal Restriction Map
Signed permit

Be it understood by the applicant that this permit, when issued, is valid only on those county roads under the jurisdiction of Grand County. To operate on roads under other jurisdictions, (State Highways or local streets) it is necessary to obtain a separate permit from the local authorities having jurisdiction there over. **Please refer to Grand County Road & Bridge Standards Chapter 10.**

If the requested permit is granted, the undersigned agrees:

1. To take every precaution to protect the county road and traffic from damage or injury, using pilot cars or flagpersons to warn the traveling public on all blind curves, both vertical and horizontal.
2. In case of an overwidth load, the same is to be placed on the vehicle with the overhang as far to the right as possible. In any event the material shall be loaded so as to present the minimum hazard to the public.
3. An extra-legal vehicle or load greater than 11 feet wide is prohibited from travel during the hours of darkness. An extra-legal vehicle or load less than 11 feet wide traveling at night shall follow provisions in Chapter 11 of the Grand County Road & Bridge Standards .
4. To be financially responsible and to make prompt payment for any damage caused to the traffic, wires, cables or other installations or to the County Road or Bridges by the transportation of this load in excess of limitations prescribed by statute.
5. That the operator of the vehicle(s) is duly licensed according to statute.
6. To operate the vehicle at all times in accordance with any and all provisions of the law, with regard to motor vehicles and the operation thereof.
7. Except when a permit is requested and granted for overweight, the undersigned applicant specifically states that the load is legal weight, and that the same cannot be loaded to conform with the statute.
8. Applicant certifies that they understand and accept all provisions and requirements of this permit, including the provisions on the reverse side and the provisions of the Grand County Road & Bridge Standards, Chapter 10.

In issuing this permit, Grand County does not assume any liability in regard to the condition of roads or capacity of culverts or bridges. It is the applicant's responsibility to make necessary inspections of the road or bridge before proceeding. In case of an emergency, an authorized Grand County employee or an authorized agent may suspend the permit until emergency conditions have passed. Refer to Colorado State Statutes for any regulations not covered within this permit.

Oversize/overweight loads may be restricted from use of County roads during periods when roads are wet and damage to the roads could occur. Bringing roads back to County standards is the responsibility of the applicant.

THIS PERMIT IS NOT AN AUTHORIZATION TO CROSS LOAD POSTED STRUCTURES.

APPLICANT IS RESPONSIBLE FOR CLEARANCE OF ALL STRUCTURES LOCATED IN GRAND COUNTY INCLUDING ALL OVERHEAD CLEARANCES.

PERMIT NOT VALID FOR TRANSPORTATION OF HAZARDOUS MATERIALS.



DEPARTMENT OF ROAD & BRIDGE

Ken Haynes • Road Superintendent

Central Maintenance Facility

467 E. Topaz • P.O. Box 9 • Granby, Colorado 80446

Phone: 970-887-2123

Fax: 970-887-3168

APPLICATION FOR INSTALLATION/REMOVAL OF A CATTLEGUARD IN GRAND COUNTY

Date: _____ County Road #: _____ Nearest Intersection: _____

Township: _____ Range: _____ Section: _____

Name of Applicant: _____

Address of Applicant: _____ City: _____ St: _____ Zip: _____

Contact person if different than Applicant: _____

Applicant Telephone number: (____) _____ Cell: (____) _____

Contact Person Telephone number: (____) _____ Cell: (____) _____

Approximate location of requested installation/removal: (give brief description and attach map or sketch to application)

Applicant's interest in property adjacent to installation/removal and reason for requesting installation/removal:

Name of all property owners surrounding proposed installation/removal site:

Portion of cost of the cattleguard and cost of installation/removal applicant will be responsible for paying:

Additional provisions or conditions:

By signature below, the applicant, for him/her/themselves and their heirs, assigns, agents, and employees, as the case may be, release and agree to hold harmless Grand County, their employees, officers and agents from all liability for any injuries suffered by animals or persons in these installations.

Applicant: Please Print Name Here: _____

Applicant's Signature: _____ Date: ____ day of _____, 20__

Received in the office of Grand County Road & Bridge this _____ day of _____, 20__.

District Foreman Comments:

R&B District: _____

Road & Bridge Superintendent Comments:

Approved by Board of County Commissioners this _____ day of _____, 20__.

Chairman, County Commissioners _____

Grand County Road & Bridge Standards shall be followed including Colorado Revised Statue §43-2-211 for installation/removal of Cattleguards.



DEPARTMENT OF ROAD & BRIDGE

Ken Haynes • Road Superintendent

Central Maintenance Facility

467 E. Topaz • P.O. Box 9 • Granby, Colorado 80446

Phone: 970-887-2123

Fax: 970-887-3168

Approval
Stamp
Here

APPLICATION FOR INSTALLATION OF A STREET LIGHT IN GRAND COUNTY

Date: _____ County Road #: _____ Nearest Intersection: _____

Township: _____ Range: _____ Section: _____

Name of Applicant: _____

Address of Applicant: _____ City: _____ St: _____ Zip: _____

Contact person if different than Applicant: _____

Applicant Telephone number: (____) _____ Cell: (____) _____

Contact Person Telephone number: (____) _____ Cell: (____) _____

Applicant E-Mail Address: _____

Contact Person E-Mail Address: _____

Location of requested installation: **(Required documentation to include: Site Plan (to scale), ROW at proposed location, Mounting height for light, Type of light, Manufacture light specification, Electric vs. Solar.)**

Applicant's reason for requesting installation:

Name of all property owners surrounding proposed installation site:

By signature below, the applicant, for him/her/themselves and their heirs, assigns, agents, and employees, as the case may be, release and agree to hold harmless Grand County, their employees, officers and agents from all liability for any injuries suffered by persons in these installations.

Applicant: Please Print Name Here: _____

Applicant's Signature: _____ Date: ____ day of _____, 20__

OFFICE USE ONLY
BELOW LINE

Received in the office of Grand County Road & Bridge this _____ day of _____, 20____,

By: _____ Title: _____

Design Plans included?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Type of Lighting?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	_____
Manufacture?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	_____
Height of Light Pole?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	_____ ft.
Type of Pole being used?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	_____
Downward Facing?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Site Plan included?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
County Engineer approval?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Minimum requirements explained Applicant?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Site Review conducted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	

Site Review Notes:

District Foreman Comments:

Approved by Road & Bridge Superintendent this _____ day of _____, 20____.

Superintendent signature: _____

Notes: _____

Approved by County Engineer (if applicable) this _____ day of _____, 20____.

Notes: _____

Engineer Stamp Here

Approved by Board of County Commissioners this _____ day of _____, 20____.

Chairman, County Commissioners _____

Notes: _____

**GENERAL RELEASE OF LIABILITY FOR
PRIVATE ACTIVITIES CONDUCTED IN COUNTY R.O.W**

OWNER: County of Grand, State of Colorado; Board of County Commissioners for the County of Grand, and its directors, supervisors, and employees;

_____, (hereinafter referred to as "Operator") shall be granted access to a right-of-way held by Owner, as described below, for the following exclusive purpose:

- Removal of trees/vegetation damaged by insect infestation, agricultural vector, or otherwise identified by the Grand County Road & Bridge Supervisor
- Commercial Filming (requiring complete road closure) Commercial Filming (requiring partial road closure)
- Other (please describe): _____

1. AFFECTED RIGHT-OF-WAY (legal or general description): _____

2. Said right-of-way is adjacent to real property owned by Operator, described as follows: (physical address or legal description) _____

3. DURATION: Requested access period is from ____ : ____ A.M./P.M. on the ____ day of _____, 200__, until ____ : ____ A.M./P.M. on the ____ day of _____, 200__. All activities shall be completed on/between the above date(s).

4. NOTICE TO NEIGHBORS: Operator warrants that he/she provided written notice to adjacent land owners within 200 ft of proposed activity area on the ____ day of _____, 200__. A copy of the mailing list and notice is attached hereto.

5. TRAFFIC CONTROL: Operator warrants that he/she has arranged for the following controls on traffic through/adjacent to the proposed activity area: _____

6. Operator warrants that he/she shall return the affected right-of-way, as well as any and all portions of road surface affected by the proposed activity, to the state in which it was found prior to the described activity.

7. RELEASE OF LIABILITY: Operator has requested access to this right-of-way in order to secure a perceived benefit to Operator or Operator's real property. In consideration of Owner's permission to operate in the right-of-way, during any activities in the right-of-way, the Operator assumes, as against the Owner, all risk of damage, theft, loss or destruction to Operator's personal property and of personal injury to or death of the Operator or any person assisting or employed by Operator in performing the above activity. By signature below, Operator, for him/herself and his/her spouse and heirs, assigns, agents, and employees releases and agrees to indemnify and hold harmless the Owner, its employees, officers and agents from all liability for such damage, theft, loss, destruction and/or personal injury or death occurring at the time of the above activities or thereafter arising from conditions or injuries occurring during the removal, directly or indirectly arising from the circumstance of the removal activities, including claims made by third parties, even if the same is caused in whole or in part by the negligence of Owner or any of Owner's employees, officers or agents.

This Release includes any and all matters relating thereto, and any and all consequences thereof, for which Operator could assert a claim against Owner, whose liability is hereby expressly denied.

Operator retains full liability for damage to persons and property incident to Operator's activities.

Nothing herein shall be interpreted as a waiver of Owner's governmental immunity, pursuant to the Colorado Governmental Immunity Act as amended.

8. Operator acknowledges that he/she holds no property right in or liberty right to receive permission for the proposed activity. Owner reserves the right to deny access for the proposed activity at the discretion of the Board of County Commissioners for the County of Grand, State of Colorado, and the Grand County Road & Bridge Department.

OPERATOR: Full Name (Please Print): _____

Signature: _____ Date: _____

On behalf of (agency rel. if any): _____

Address: _____



DEPARTMENT OF ROAD & BRIDGE

Ken Haynes • Road Superintendent

Central Maintenance Facility

467 E. Topaz • P.O. Box 9 • Granby, Colorado 80446

Phone: 970-887-2123

Fax: 970-887-3168

Keep Grand County Grand
ADOPT-A-COUNTY ROAD

PROGRAM GUIDELINES

Grand County has recently initiated an Adopt-A-County Road program. The program allows any organization to take pride in the community by keeping it litter free. Joining the program costs nothing to the organization but time. The organization's efforts are rewarded with a sign posted at the ends of the associated stretch of road. The sign will have the group or organization's name. If there is a specific stretch of road that you would like to maintain, please request it, and we will try to accommodate your request the best we can.

In order to Adopt-A-County Road the applicant must agree to the following terms:

1. Any organization or individual may apply to Adopt-A-County Road. Grand County reserves the right to determine whether an application is accepted or rejected and whether a road will or will not be available for adoption.
2. The organization or individual must agree to a minimum of a two-year commitment in order for a sign to be placed.
3. Each individual must sign a liability waiver before they can volunteer. A copy of the waiver is attached.

Grand County will provide the following:

1. Determine the specific section of right-of-way to be adopted.
2. Install and maintain signs (if necessary).
3. Provide group members with trash bags.
4. Remove and dispose of filled trash bags.
5. Provide SPRUCE UP COLORADO VOLUNTEER SAFETY VIDEO to group coordinator.

CONTACT INFORMATION

To request information regarding joining the program or if you have some questions please contact:

GRAND COUNTY ROAD & BRIDGE
467 Topaz Ave.
Granby, CO 80446
970.887.2123



DEPARTMENT OF ROAD & BRIDGE

Ken Haynes • Road Superintendent

Central Maintenance Facility

467 E. Topaz • P.O. Box 9 • Granby, Colorado 80446

Phone: 970-887-2123

Fax: 970-887-3168

Keep Grand County Grand
ADOPT-A-COUNTY ROAD

WAIVER AND RELEASE OF LIABILITY – VOLUNTEER/PARTICIPANT

- PLEASE READ CAREFULLY -

THIS IS A RELEASE OF LIABILITY AND WAIVER OF LEGAL RIGHTS

I, _____ (“Volunteer”), in consideration of being permitted to participate in the _____ Grand County Adopt-A-County Road Event (“Event”) as a Volunteer/Participant, the good and sufficient value of which is hereby acknowledged; for myself, my spouse, legal representatives, heirs, and assigns, hereby release, waive, discharge and hold harmless Grand County, any Event Sponsors, and Owners of the premises on which the Event takes place, their officers, directors, employees, agents, and assigns from all claims, liabilities, damages, losses, or expenses on account of damage to property, bodily injury, or death resulting from participation in the Event.

Volunteer acknowledges, agrees, and represents that he/she understands the nature of the Event and that he/she is qualified, in good health, and in proper physical condition to participate in the Event. Volunteer understands that the Event will be conducted on or near public roads and rights-of-way that are open to the public during the Event and upon which the hazards of traveling are to be expected. Volunteer agrees and warrants that if at any time he/she believes conditions to be unsafe, he/she will immediately discontinue further participation in the Event. Volunteer acknowledges that Events of this nature near public roads and trails involve inherent risks and dangers of serious bodily injury, death and other unforeseen economic risks. Volunteer hereby agrees to fully assume the risk of any such injuries, disabilities, and expenses, including the possibility of an accident resulting in death.

Volunteer acknowledges that he/she participates in this Event as an independent contractor only and expressly disclaims any employer-employee or agency relationship with Grand County for activities performed during this Event. Volunteer understands and acknowledges that should he/she incur an injury as a result of participation in the Event, Volunteer is solely responsible for any costs of medical expenses and that no coverage or insurance (e.g., workman’s compensation or liability) shall be provided under any policy of insurance held by Grand County, or any of the other Event Sponsors, promoters, or agents. Volunteer also understands that his/her participation in this activity is dependent upon his/her knowing and voluntary execution of this Release.

By executing this Waiver and Release of Liability, Volunteer acknowledges that this instrument is a full and final release of all claims of every nature and kind whatsoever, whether known or unknown. Volunteer expressly agrees that this Release is intended to be as broad and inclusive as permitted by the laws of the State of Colorado. Furthermore, Volunteer acknowledges and understands that this Release

shall be relied upon by Grand County, any Event Sponsors and Owners of the premises on which the Event takes place.

No term or condition of this instrument shall be construed as a waiver, express or implied, of any of the immunities, rights, benefits, protection, or other provisions for Grand County, of the Colorado Governmental Immunity Act, C.R.S. 24-10-101 *et seq.* or the Federal Tort Claims Act, 28 U.S.C. 2671 *et seq.* as applicable, as now or hereafter amended.

Volunteer acknowledges that the terms herein are contractual and not a mere recital, that he/she has carefully read the foregoing Waiver and Release of Liability and understands its contents, that he/she signs the instrument of his/her own free will, and that he/she is of the lawful age and legally competent to sign this Release. (If under 18 years of age, this agreement must also be executed by a parent, guardian, or custodian of the minor.)

DATED: _____

BY: _____ Printed Name
of Volunteer or Parent/Guardian

Signature
of Volunteer or Parent/Guardian



DEPARTMENT OF ROAD & BRIDGE

Ken Haynes • Road Superintendent

Central Maintenance Facility

467 E. Topaz • P.O. Box 9 • Granby, Colorado 80446

Phone: 970-887-2123

Fax: 970-887-3168

SAFETY RULES & REQUIREMENTS

Safety is very important when working alongside an active public right-of-way. Adherence to the following safety provisions is mandatory to participation in the Adopt-A-County Road program:

1. Please carpool to the site to minimize the number of vehicles parked on the shoulder.
2. When parking vehicles on the shoulder, please pull off the traveled surface and as far onto the shoulder as possible.
3. Do not park your vehicle on bridges, curves, intersections, overpasses or other areas that are constrained or where visibility is obstructed.
4. All Group members shall attend a safety meeting in which all shall view the SPRUCE UP COLORADO VOLUNTEER SAFETY VIDEO prior to any planned clean-up. It is the responsibility of the group coordinator to arrange such a meeting.
5. Group shall notify Grand County Road & Bridge at least forty eight (48) hours in advance of a planned clean-up, so that trash collected may be timely removed;
6. Group shall restrict program activities to the area of right-of-way off the traveled portion of the roadway, i.e. that area off the road surface;
 - a. Group shall only work on ONE SIDE OF THE ROAD AT A TIME AND KEEP THE GROUP TOGETHER. This makes it easier for drivers to see, anticipate and accommodate you.
 - b. Always pay attention to traffic and face it at all times. DO NOT WANDER INTO THE ROAD OR WALK ON THE ROAD!!!!
7. While performing activities in the right-of-way, the method, manner and appearance of the participants shall not in any way distract, disrupt or adversely affect traffic. Participants may not display messages, carry banners, or advertise their business affiliation or cause.
8. Grand County prohibits the possession, consumption, or being under the influence of alcohol or drugs while performing work or litter clean up on any county right-of-way;
9. Drivers are not going to expect you. Please be aware of your environment. Be alert and use common sense at all times.
10. Please do not overfill or compact the trash bags. Grand County will provide as many bags as you need and will arrange for pick up of the filled bags.
11. Have a crew leader who will ensure everyone follows these safety rules, knows where the nearest hospital is, and will always watch for traffic.
12. The group shall provide one (1) adult supervisor for every eight (8) participants between 13-17 years of age and one (1) adult supervisor to every four (4) participants between 6-12 years of age.

NO ONE UNDER THE AGE OF SIX SHALL BE ALLOWED TO PARTICIPATE IN THE PROGRAM.

- a. Grand County reserves the right to request the name and legal address of all participants.
- 13. GROUP SHALL NOT PICK UP LITTER IN A MANNER THAT WILL INTERFERE WITH TRAFFIC!!!
- 14. Do not pick-up litter in the driving lanes. County crews will pick up trash in the driving lanes.
- 15. Work can only be done from one hour after sunrise to one hour before sunset and not during inclement weather.
- 16. Bring extra water on hot days.
- 17. Wear gloves.
- 18. Wear good solid shoes or boots.
- 19. Do not work in construction areas.
- 20. Potential dangers involved while participating in this program can include, but are not limited to, high speed traffic, noxious plants, broken glass, hazardous materials, sharp objects, and harmful wildlife
 - a. Do not pick up any suspicious or hazardous materials. Please notify your Grand County contact if you find any of these items.
 - b. Do not approach any animals, including dogs, while working. If appropriate please contact Animal Control.
- 21. Do not bring along any pets.
- 22. All individuals shall have good eyesight, hearing and be in good health.

I have read and understand the safety information and directions listed above. I agree to implement the items above at each Adopt-A-County Road clean-up. I agree to coordinate the viewing by all group members of the SPRUCE UP COLORADO VOLUNTEER SAFETY VIDEO prior to any planned clean-up.

_____ (COMPANY NAME) agrees to adopt the said road section described on the Adopt-A-County Road Request Form and will abide by the conditions set forth above.

Name of Group Representative

Title (If Applicable)

Representative's Telephone No.



DEPARTMENT OF ROAD & BRIDGE

Ken Haynes • Road Superintendent

Central Maintenance Facility

467 E. Topaz • P.O. Box 9 • Granby, Colorado 80446

Phone: 970-887-2123

Fax: 970-887-3168

REQUEST FOR MAINTENANCE ON A COUNTY ROAD

Date: _____ County Road #: _____ Nearest Intersection: _____

Township: _____ Range: _____ Section: _____

Name of Applicant: _____

Address of Applicant: _____ City: _____ St: _____ Zip: _____

Contact person if different than Applicant: _____

Applicant Telephone number: () _____ Cell: () _____

Contact Person Telephone number: () _____ Cell: () _____

Applicant E-Mail Address: _____

Contact Person E-Mail Address: _____

The following items must be submitted before Grand County Staff will submit to the Board of County Commissioners. Any requests submitted that does not meet the requirements listed below will not be submitted to the Board of County Commissioners.

Roads have been constructed to County Regulations and Standards. Yes: No: N/A:

A survey showing the current road Right-of-Way and alignment. Yes: No: N/A:

All drainage criteria as outlined in the County regulations and standards have been satisfied. Yes: No: N/A:

Proper easement for drainage requirements have been identified and are shown on the plans. Yes: No: N/A:

The included roads are legally connected to the existing County road system. Yes: No: N/A:

All necessary road Right-of-Ways have been dedicated to Grand County. Yes: No: N/A:

All combustible or objectionable material is cleared from the roadside and all required signage is property installed.

Yes: No: N/A:

All areas requiring revegetation as outlined in the Grand County Road and Bridge Section 7.4.

Yes: No: N/A:

A letter from a licensed Engineer indicating that the road meets all Road and Bridge Standards.

Yes: No: N/A:

NOTE: Acceptance of platted developments by the County does not constitute acceptance of the roads and Right-of-Ways for maintenance. Until each road is specifically accepted for maintenance by the Board of County Commissioners at the road hearings, held annually on the second Tuesday in September. It is the responsibility of the property owners/Homeowners Association (HOA) to maintain, provide construction repair and snow removal.

By signing below, the applicant acknowledges that they have read and understand the requirements for "Requesting Maintenance on a County Road".

Applicant: Please Print Name Here: _____

Applicant's Signature: _____ Date: ____ day of _____, 20__

GRAND COUNTY ROAD & BRIDGE STANDARDS

ADOPTIONS/REVISIONS

Policy approved by the Grand County Board of County Commissioners on July 29, 1976.
BOCC minutes 7-29-1976

AMENDED AND READOPTED by the Grand County Board of County Commissioners on September 24, 1985.
Resolution # 1985-9-11

AMENDED AND READOPTED by the Grand County Board of County Commissioners on March 5, 1998.
Resolution # 1998-3-5

AMENDED AND READOPTED by the Grand County Board of County Commissioners July 2006.
Resolution # 2006-7-2

AMENDED AND READOPTED by the Grand County Board of County Commissioners August 3, 2010.
Resolution # 2010-8-9

AMENDED AND READOPTED by the Grand County Board of County Commissioners September 25, 2012.
Resolution #2012-9-23

AMENDED AND READOPTED by the Grand County Board of County Commissioners July 7, 2015.
Resolution #2015-7-68

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