

Resolution No. 86-48

**Appendix E to the Otero County
Subdivision Regulations**

**ROADS, ALLEYS, EASEMENTS,
AND OTHER RIGHTS-OF-WAY**

Adopted March 27th, 2007

BLACK – EXISTING LANGUAGE

BLUE – ADDITIONS PROPOSED BY PLANNING COMMISSION 01/26/2009

RED – DELETIONS PROPOSED BY PLANNING COMMISSION

E.1 GENERAL

These regulations are to be used in road design and construction in Otero County. Where the word "minimum" is used, it implies the lowest acceptable limit in design and construction.

The arrangement, character, extent, width, grade, and location of all roads shall conform to the topographical conditions, to public convenience and safety, and to their relation to the proposed use of the land to be served by such roads.

All roads are required to be constructed with a minimum dedicated fifty foot (50') wide easement. When subdivisions are accessed from a road or highway that is chip sealed or asphalt paved, the **main arterial entering the subdivision shall be at minimum chip sealed, within twenty-four months after the final approval and recording of the subdivision, or in a timely manner based on a cooperative agreement with the Otero County Road Department, based on the availability to perform the work subdivision roads are required to be chip sealed at a minimum, or asphalt paved at the subdivider's option, to county specifications.** When the subdivision is accessed from any road or highway that is not chip sealed, or asphalt paved, the subdivision roads are required to be gravel roads at a minimum and constructed to county specifications.

All public roads will be dedicated as such on the subdivision preliminary and final plats, and shall be constructed to the specifications within these regulations with full consideration for terrain limitations and flood easements and control measures. When the subdivider proposes private roads within a subdivision, they are required to be built to **the same** county standards and the designation of such roads as "private" shall be noted on the plats and in the disclosure statement. The disclosure statement shall also contain a required road maintenance agreement for signature by the individual lot purchasers in the subdivision. In addition, the plat and disclosure statement shall contain the following statement: "Should the lot owners petition the County to take over maintenance of the roads within the subdivision, it will be the lot owners' responsibility to bring the roads up to the then existing current County road standards."

The acceptance of easements and/or dedicated road rights-of-way does not bind the County in any way to acceptance of the roadway upon such easements or rights-of-way. The County's acceptance of roads for maintenance shall follow the procedure outlined in these regulations.

E.2 DEFINITIONS

alley	A minor right-of-way to provide supplementary access to the rear or side of lots or tracts but not for primary access to lots or tracts or off-road parking facilities.
cul-de-sac	A local road with an outlet at one end and a turn-around at the other.
driveway	Access to private property not open to the public.
easement	A grant by a property owner (grantor), to a certain person or persons, the general public, a corporation, or a specific utility or all utilities (grantees), of the right to use land for a specific purpose, such as access or utility extensions.
frontage road	A local road parallel and adjacent to another road with limited access points, normally a highway or a freeway.
half road	A public right-of-way which is half the required.
local road	A road which is parallel to or branching from a collector or arterial road to provide access to abutting properties and protection from through traffic.
private road	A road which is privately owned, is not open to the public, is limited to specific persons, and is not maintained by the County.
public road	A local, arterial, or collector road that is owned outright by a government entity or by legal easement, and open to the public and may or may not be maintained by the County based on use, need, and funds available.

public right-of-way	The total area of land deeded, reserved by plat, dedicated or otherwise provided for a highway, road, alley, and other public access to lots, or easements to the Federal Government, State of New Mexico or its political subdivisions, for use by the public.
rectilinear street patterns	A development grid laid out with unbroken street patterns in straight lines irrespective of topography representing minimal government expenditure and maximum potential for land speculation.
road	An open way for vehicular traffic, whether designated as a street, highway, thoroughfare, parkway, throughway, avenue, boulevard, lane, place, or otherwise designated, a public way dedicated, reserved by plat or otherwise provided which affords the principal means of access to abutting property units.
trail	An easement to cross property for recreational purposes or to reach recreational sites.
variance	sub-divider's request to be excused from specific requirements in the subdivision regulations.
waiver of protest agreement	An agreement passing with the property to future owners which obligates them to pay the costs of any requirement involved in a requested and approved variance, if the County, for any reason, at any time in the future, requires said requirements to be constructed.

Table A

a. PRIVATE ROAD	b. PRIVATE EASEMENT	c. MAINTENANCE
Privately owned by individual or group.	Only for authorized persons and use only as specified in easement, i.e.: road only or utility and road, or one utility only.	Can be left un-maintained; can be maintained by owner; or can be maintained by owner and/or users. County maintenance PROHIBITED.

- a. Owner pays taxes on the land under the easement.
- b. Owner can grant others compatible usage for same or different purpose.
- c. Entitled persons can sell or assign to public or other individuals unless prohibited when granted.

a. PRIVATE ROAD	b. PUBLIC EASEMENT	c. MAINTENANCE
Privately owned by individual or group.	Public use only for specified purpose or purposes.	Can be left un-maintained; can be maintained by grantor and/or users. County maintenance PROHIBITED.

- a. Owner pays taxes on the land under the easement.
- b. County can use easement, sell easement, assign it to others, to individuals, abandon it, or return it to grantor unless otherwise specified when granted.
- c. When given by an individual to the public or the county, it has to be accepted by the Board of County Commissioners to be binding.

a. COUNTY ROAD	b. PUBLIC ROAD	c. MAINTENANCE
Owned by County; received by deed or dedicated on subdivision plat.	For vehicle, flood control ditches, and utilities for public service.	Can be left un-maintained; can be maintained by grantor and/or users; or maintained by County if funds are available and Board of County Commissioners authorize maintenance.

- a. County owns the land and no taxes are collected.
- b. It is formally accepted by county when subdivision is approved or a legal document is accepted.
- c. County can allow public use, maintain and develop it, sell it, assign it to individuals, to groups, abandon it, return it to grantor, or give it to contiguous land owners, unless otherwise specified.

EASEMENT BY PRESCRIPTION is a method of obtaining legal easement by court action after open, hostile, and continuous trespass for a ten-year period. The court evaluates, considers, and if it approves and grants the easement or right-of-way, it may award the owner equitable compensation, after considering the appraised value and for the impact on the value of the property.

Note: Some roads, utility easements, and trails are utilized by the public and maintained by utility companies and even maintained by the County Road Department without legal documentation. Historically, documentation of earlier agreements has been lost and/or failure to properly document original agreements has occurred. Any subdivider who owns properties so involved in a subdivision, and/or contiguous to those involved in the subdivision, will be asked to legally document such easements as a part of their act of subdividing.

EMINENT DOMAIN is the method that a government entity can use to condemn and purchase property for public right-of way or easements for trails, roads, ditches, utilities, or other purposes. This procedure has provisions for compensating the owner after consideration of appraised value and for the impact on the value of the property.

E.3 ROAD LAYOUT

The proposed road layout shall be made according to sound land planning practice for the type of development proposed, shall be coordinated with the road development proposed, and shall be coordinated with the road system of the surrounding areas. All roads must provide for the continuation of appropriate projections of principal roads in surrounding areas and any future roads identified in the Otero County Comprehensive Plan.

Any recorded easement upon the property being subdivided may be vacated, abandoned or altered.

E.4 ROAD DESIGN

Road grades shall conform to good engineering standards. All proposed roads shall be designed under the supervision of a New Mexico registered engineer or land surveyor, as allowed by law. The design of the structural section of the road shall follow methodologies recommended by AASHTO or other such commonly recognized authority in the field. Factors for consideration shall include but not be limited to soil data, use reflective of ultimate development and projected car and truck activity, maximum and minimum grades, climatic conditions, drainage, environmental concerns, and the incorporation of materials that will enhance the logistics and economics associated with long term maintenance operations.

When requested by a County Representative, the subdivider shall furnish design calculations proving adequacy. Referencing minimal criteria without appropriate engineering interpretations shall not be acceptable. When the Soil Conservation Service Survey exists, it will be appropriate to use it. Otherwise, a current Geotechnical Investigation will be required.

E.5 ROAD RIGHT-OF-WAY WIDTH

Minimum road right-of-way widths for public and private roads shall be fifty feet (50') for two-lane roads, and seventy feet (70') for four-lane roads.

E.6 CUL-DE-SACS

Cul-de-sacs in excess of fifteen hundred feet (1,500') long shall have a turn around at the closed end plus intermediary turnarounds at regular intervals of not greater than fifteen hundred feet (1,500') from center to center of successive turnarounds. They shall have a minimum right-of-way radius of fifty feet (50') and a minimum surfaced-area radius of forty feet (40').

E.7 HALF ROADS

The dedication of half roads at the perimeter of a new subdivision is prohibited. If a half road dedication is needed from adjacent property owners to merge with a half road in the subdivision to provide the full road width, the subdivider shall be responsible to make all arrangements to acquire the land dedication and any other contribution or cooperation from the adjacent property owners to provide the total width, to plat and build the total road with or without cash contribution from the adjacent property owners depending on his separate and personal negotiations with the adjacent property owners.

E.8 ROAD NAMES AND ADDRESSES

Road names shall be shown on all preliminary and final subdivision plats. No road name shall be used which will duplicate or be confused with the names of existing roads within Otero County. Road names shall be subject to the approval of the Otero County Geographic System Office and the Board of County Commissioners.

- A. Where subdivisions abut, and an existing road continues into the adjacent subdivision, the pre-existing road names will be used to the extent possible so that road names will continue until the logical terminus of the road.
- B. Prior to submitting the preliminary plat, the subdivider shall contact the Geographic Systems Office to confirm that road names do not duplicate existing road names. The Geographic Systems Office will reserve road names for the subdivision upon request.
- C. Where parcel sizes are such that the Geographic Systems Office can assign address numbers during the subdivision preliminary approval process, the assigned numbers shall be shown on the final plat.

E.9 SUBDIVISIONS ADJACENT TO HIGHWAYS

Where a proposed residential subdivision contains lots abutting a major highway, it shall be planned so as to have a minimum number of intersections with the highway. The sight distance at any intersection must provide for adequate stopping distance. Where the subdivision contains, or is adjacent to a state or federal highway, the subdivider must satisfy the New Mexico State Highway Department as to the permit required to connect.

E.10 SCENIC CORRIDORS

Along county, state, or federal designated scenic corridors, a "greenbelt" or "scenic greenbelt", of a width deemed appropriate by the Planning Commission or the Board of County Commissioners shall be reserved from development.

E.11 SUBDIVISIONS ADJACENT TO PUBLIC LANDS

Any subdivision with a common boundary with a National Forest, U.S. Government, or New Mexico State owned land shall provide an easement for access to contiguous lands provided there is not a pre-existing right-of-way to such lands in existence within one-half (1/2) mile of the boundaries of the proposed subdivision, if the Federal or State government requests such access in writing.

E.12 LOTS

Shapes and location of lots shall be governed by topographic conditions, use, and surrounding or adjacent areas. Every lot shall have access to a public thoroughfare. Block corners, points of curvature, and points of tangent shall be permanently marked with clearly visible metal stakes, T-posts, or similar markers with an approximate height of five (5) feet.

Double frontage lots should be avoided. Backing up a lot to an existing high traffic road is not considered as double frontage. Side lot lines should be substantially at right angles or a radial line to roads.

Caution should be exercised in the layout of lots adjacent to a highway with a high traffic count and adjacent to a railroad because of the noise level and night lights. Normally, these lots should be deep.

When a commercial or industrial area is part of or all of a subdivision, consideration must be given to provide off-street parking when sizing the lots. Where land is subdivided into extra large tracts where the potential for future re-subdivision exists, such tract shall be arranged so as to allow for the provision of future roads and a logical further re-subdivision pattern.

E.13 UTILITY AND DRAINAGE EASEMENTS

Where utility easements are located at rear or side of lot lines, they shall have a minimum width of fifteen (15) feet. These easements must be approved by the local utility companies.

On any subdivision with a common boundary to a national forest, the utility easements are to be located entirely within the subdivision. When a subdivision is traversed by a watercourse, drainage way, channel, or storm drainage, the plat must provide a right-of-way for flood control measures conforming with the lines and floodway of such watercourse.

E.14 DESIGN STANDARDS

A. Geometric Standards

1. Horizontal Alignment

(NOTE: Horizontal alignment is the position of the road in a horizontal plane fixed by the road centerline.)

Sharp horizontal curves shall not be introduced at or near the top of pronounced vertical curves, nor at the end of long tangents.

a. Minimum Radius

The minimum centerline radius for any road shall be fifty feet (50').

b. Grade

No road or alley shall exceed nine percent (9%) in grade.

Grades approaching intersections shall not exceed five (5) percent for a distance of not less than one hundred (100) feet each way from the intersection.

2. Super Elevation

The maximum rate of Super elevation for roads with design speed less than 30 mph shall not exceed 0.04 feet per foot. For design-speeds of 30 mph or greater, the maximum rate of Super elevation shall not exceed 0.08 ft/ft.

(NOTE: Super elevation is the tilting upward of the outside of a curve to counteract the centrifugal force which tends to cause a vehicle to overturn or slide outward from the center of a curve.)

3. Intersections

a. Intersection Sight Distance - Unpaved Roads

The minimum sight distance provided for a car entering an intersection from a side road shall be 300 feet. Sight distance shall be measured from a location ten (10) feet back from the edge of the through roadway with the entering driver's eye at a height of 3.5 feet and the height of the oncoming vehicle at a height of 4.25 feet. Constructed Improvements are required to meet these setback requirements.

b. Intersection Sight Distance - Paved Roads

The minimum sight distance provided shall be determined according to criteria contained in AASHTO - A Policy On Geometric Design of Highways and Streets, Current Edition. This requirement shall apply if (1) the through roadway is paved, or (2) both roadways are paved.

Road intersections shall be as nearly perpendicular as possible, and shall not be more than 15E from perpendicular. Road grades shall not exceed six percent (6%) for minimum distance of fifty feet (50') from any road intersection.

At intersections, the minimum radius at the edge of the road surface shall be twenty feet (20').

B. Geometric Cross Section

1. Surface Width

The minimum surface width of two-lane arterial roads serving more than 500 parcels of land, exclusive of shoulders, shall be thirty feet (30'). Four-lane arterial roads shall have a surface width of sixty feet (60').

1. The minimum surface width of all other roads, exclusive of shoulders, shall be twenty-four feet (24') for public roads and twenty feet (20') minimum for private roads.

2. Crown Slopes

The standard crown slope for all types of road surface shall be two percent (2%).

3 Shoulders

Side slopes shall not be steeper than 3:1. Shoulder width on paved and chip-sealed roads shall not be less than one (1) foot.

4 Side Ditches

Side ditches shall be used in all cut sections except as noted herein. The slope from the edge of the shoulder to the bottom of the ditch shall correspond to the shoulder slope, and shall not be steeper than 3:1. Minimum depth shall be one foot (1'), top-of-sub-grade to bottom-of-ditch.

Where the cross slope permits, side ditches may be omitted if (1) the road surface is out-sloped at two percent (2%) to three percent (3%) and (2) proper road drainage can be accomplished without a side ditch.

5. Side Slope

a: Cut Slope

Cut slopes shall not be steeper than the slope required to maintain stability of the cut bank.

b. Fill Slopes

Fill slopes shall not be steeper than 1-1/2:1.

c. Slope Rounding

The top of all cut slopes shall be rounded, except in solid rock. Cut slopes at the ends of all cuts shall be shaped to blend with the natural ground slope. This does not apply to rock cuts.

6. Fill Widening

Where fill height at the shoulder is less than three feet (3'), no widening is required. Where a fill height exceeds three feet (3'), the fill shall be widened one foot (1').

C. Roadbed Structure

1. Aggregate - Surface Roads

The minimum acceptable aggregate - surfaced road shall consist of a base course and aggregate surface course, as defined in these standards, constructed over a suitable sub-grade.

2. Paved Roads

The minimum acceptable paved road shall consist of a base course and bituminous, surface, as defined in these standards, constructed over a suitable sub-grade.

3. Soil Borings

Soil borings may be required for aggregate surfaced roads. The design shall account for all conditions encountered in the sub-grade materials. This includes provisions for the removal of unsuitable materials for the reinforcement of the sub-grade, where these measures are necessary.

Soil borings are required for the construction of paved roads. Soil tests are required only to the extent necessary to identify the major types of sub-grade materials and to identify the probable structural qualities of these materials.

The AASHTO Classification of Highway Sub-grade Materials shall be used for all soil classifications.

4. Aggregate Base Course and Aggregate Surface Course

The minimum thickness of pit run or crushed aggregate and base course material shall be eight inches for public roads and five inches minimum for private roads. The pit run or Crushed Aggregate for the base course shall be a minimum thickness of 6 inches compacted for public roads and a minimum thickness of 3 inches compacted for private roads, capped by a minimum of two inch compacted base course

Pit-run or crushed aggregate base course and surface course conforming to the Materials Specifications in Section E.15 may be used on aggregate surfaced roads.

Crushed aggregate base course shall be used on paved roads.

5. Bituminous Surface

Pavement is optional for subdivisions of fewer than 100 lots. However, when used, the minimum bituminous surface treatment shall be a bituminous prime coat followed by a two-course application of bituminous material and cover aggregate. Materials shall conform to the Materials Specifications. If paving is to be used the sub-grade shall consist entirely of base course in which event the material shall not be less than 6" in compacted thickness.

6. Compaction

- a. Aggregate Surfaced Roads - Compaction of sub-grade, base, and surface course materials may be accomplished by any method that will result in a firm, unyielding course. Materials shall be dried or moistened to obtain moisture content suitable for compacting the course to a firm, unyielding surface.
- b. Paved Roads – Sub-grade materials on a bituminous surfaced road shall be compacted to ninety-five percent (95%) of the maximum density determined in accordance with AASHTO T-180, Method D. Field density tests shall be made during the work in accordance with AASHTO tests for the in-place density of materials.

D. Drainage

1. Hydrology

- a. In all cases, road bridges and culverts shall be designed for a 100 year 1% chance storm overtopping and so that a 100-year storm 1% chance storm shall not cause flooding on adjacent properties by backing up water that can escape from the area up stream from the bridge or culverts in a 100 year storm 1% chance storm event. Construction on the up stream side shall have concrete reinforcement designed to prevent any volume of retained flood water washing out the structure and causing greater damage down stream.
- b. Developers must ensure that no additional flows from new developments are allowed onto the highway right-of-way. Drainage flows from the subdivision shall not be increased in velocity or volumes greater than the level that existed in the predevelopment flow.

Structures other than bridges shall be designed as follows:

- i. Where the estimated runoff from a 50-year frequency storm is less than 1000 cfs, the structure shall be designed for a 25-year frequency storm. Headwater depth may be considered in the design.
- ii. Where the estimated runoff from a 50-year frequency storm exceeds 1000 cfs or greater, the structure shall be designed for a minimum 50-year frequency storm. Headwater depth may be considered in the design.
- iii. The hydrologic design shall be based on methods contained in USDA-SCS Engineering Field Manual, Peak Rates of Discharge for Small Watersheds, latest edition. A drainage report, with calculations, shall be submitted with the plans required under Section E.22, Plans. The drainage report shall include USGS topographic map showing the contributory drainage area(s).

2. Culverts

- a. Material
 - i. Culverts shall be corrugated metal, corrugated polyethylene or reinforced concrete, conforming to the Materials Specifications in Section E.15. Steel culverts shall be galvanized.
 - ii. Gauge - Culvert gauge shall be determined from the manufacturer's recommendation for the height of cover and an water design loading. The minimum for corrugated steel pipe shall be 16 gauge.
- b. Installation
 - i. General - Installation of culverts shall be in accordance with these specifications. The minimum culvert size, including ditch relief, shall be eighteen inches (18") inside diameter.
 - ii. Minimum Cover - The minimum cover over a culvert shall be six inches (6"), top of pipe to top of road surface.
 - iii. Gradient - The gradient of ditch relief culverts shall be greater than the gradient of the approaching ditch.
 - iv. Camber - Culverts shall be installed with a camber of not less than 0.1 foot in five feet (5') of length.
 - v. Outlet - All culverts shall outlet on natural ground. Where necessary to prevent erosion below a culvert outlet, slope protection shall be employed. Culverts shall extend at least one foot (1') beyond the toe of the fill.
 - vi. Multiple Culvert Installation - Where multiple culverts are used, they shall be separated by a minimum horizontal distance of eighteen inches (18"), outside of pipe to outside of pipe. Unless installed in an existing drainage, all ditch relief culverts shall be skewed a minimum of 15 degrees ahead (downhill) of the inlet end of the culvert, measured from a perpendicular to the center line of the road.

3. Side Ditches

All Side Ditches shall be positively drained by use of ditch relief culverts or by ending the ditch at fill sections. At the end of a cut section, the side ditch shall be turned away from the fill slope to prevent erosion of the fill slope.

Ditch relief culverts shall be spaced to prevent excessive ditch erosion.

4. Underdrain

Underdrains shall be provided where necessary to remove ground water from the road. Pipe shall conform to the Materials Specifications

5. Dips

The use of dips requires prior written approval of the Board of County Commissioners. Where such use is approved, dips shall be constructed of reinforced concrete. Cut-off walls and slope protection shall be provided. Concrete roadway pavement shall extend a minimum of one foot (1') above anticipated high water. Cut-off walls shall extend a minimum of two feet (2')

below the stream bed. Where necessary to prevent channel erosion, an apron shall be provided on the downstream side of the dip.

E. Driveways

Wherever driveways cross side ditches, the property owner shall be responsible for installing culverts conforming to these standards when necessary. The Road Department shall be contacted prior to the installation of any culvert for the purpose of providing design specifications, depth of culvert and size at the particular location.

Driveways shall be constructed in such a manner that drainage there from will not erode or deposit material on any road surface.

F. Structures.

Bridges, cattle guards, and box culverts shall be designed to withstand water loadings in accordance with the New Mexico State Highway Department design standards. All cattle guards shall be so designed and constructed so as to minimize surface drainage into them; they shall also extend three feet (3') on each side beyond the traveling surface and they shall be seven feet (7') across and at least thirty-six inches (36") in depth. Sufficient drainage shall be provided for in order to prohibit the filling of the cattle guard with water and debris.

E.15 MATERIAL SPECIFICATIONS

A. Corrugated Metal Culvert Pipe

Materials for corrugated culvert pipe, pipe arches, and connecting bands, including base metal, rivets and spelter coating shall be as specified in AASHTO M-36.

B. Structural Plate Culvert Pipe, Pipe Arches, and Arches

Materials for structural plate culvert pipe, pipe-arches, and arches shall be as specified in AASHTO M-167.

C. Corrugated Polyethylene Culvert

Materials for corrugated polyethylene culverts shall be as specified in AASHTO M-252.

D. Reinforced Concrete Culvert

Materials for reinforced concrete culverts shall be as specified in AASHTO M-170 or M-207.

E. Under drain

Under drain pipe of the various materials shown shall be as required by the corresponding specifications;

Perforated Corrugated Galvanized Metal Pipe	AASHTO M-36
Bituminous Coated Corrugated Metal Pipe	AASHTO M-19
Corrugated Polyethylene Tubing	AASHTO M-252

Filler material shall consist of land, durable, clean sand, gravel, or crushed rock. Gradation shall be as required by the individual installation.

F. Pit Run Aggregate Base and Surface Course

Pit run aggregate shall consist of gravel, talus rock, broken rock, caliche, or other suitable material that when compacted will produce a stable base or surface course. Base and surface course materials shall be reasonably free from vegetative matter or other objectionable materials.

The maximum dimension of any particle in a base course shall not exceed 2/3 of the compacted thickness of the layer in which it is placed. The maximum dimension of any particle in a surface course shall be 1-1/2 ".

Material to be used as a surface course shall be such that twenty to fifty percent (20%-50%) by weight will pass the No. 4 screen. If additional filler material, passing a No. 4 screen, is necessary it shall be uniformly blended into the surface course. A maximum of fifteen percent (15%) of surface course material shall pass the No. 200 sieve.

The aggregate may be broken down on the road by whatever means will accomplish the required reduction.

Aggregate shall be dried or moistened to obtain a moisture content suitable for compaction to a firm, unyielding base or surface course.

G. Crushed Aggregate Base and Surface Course

The materials used in the base or surface courses shall conform to one of the following gradations. Gradations A through C may be used for base course. Gradations C through E may be used for surface course and/or for combined base and surface course. The base course shall be at least one (1) gradation larger than the surface course.

**Grading requirements for crushed aggregate base course or surface courses
Percentage by weight Passing Square Mesh Sieves, AASHTO T-27**

Sieve Designation	Maximum Tolerance (Plus or Minus)	Grading Designation and Maximum Size				
		A(3'')	B(2'')	C(1-1/2'')	D(1'')	E(3/4'')
3 inch	0	100				
2 inch	0	---	100			
1-1/2 inch	15	74	87	100*		
1 inch	16	62	73	84	100*	
3/4 inch	16	54	64	73	88	100*
3/8 inch	16	40	47	53	64	73
No. 4	16	29	34	39	47	54
No. 8	15	21	25	28	34	39
No. 30	10	12	14	15	18	21
No. 40	8	10	11	13	15	13
No. 200	6	4	5	6	7	8

* Tolerances shall not apply to 100 percent passing requirements.

The percentage passing No. 200 sieve shall not be more than 2/3 percentages passing No. 40 sieve.

Aggregate shall conform to AASHTO M-147, except for surface course aggregate where the liquid limit shall not exceed 35 and the plasticity index shall not be less than 6 nor more than 14.

H. Bituminous Prime Coat

Materials may cutback asphalt, asphalt cement, or emulsified asphalt. Application shall be in accordance with manufacturer's recommendations.

I. Bituminous Surface Treatment

Cover aggregate shall be screening of crushed stone or gravel free from dirt, clay balls, vegetable matter, and other deleterious substances. The material shall consist of clean, durable particles of aggregate meeting the following grading requirements.

**Percentages by weight passing square mesh sieves
as determined by AASHTO-T-11 and T-27.**

Sieve Designation	Grading X	Grading Y	Grading Z
3/4 inch	100	---	---
2 inch	90-100	100	---
3/8 inch	45-75	90-100	100
No. 4	0-15	10-30	75-100
No. 10	0-5	0-8	0-10
No. 200	0-2	0-2	0-2

The aggregate shall further conform the following requirements as determined by the listed AASHTO designation:

Unit Weight-Loose	AASHTO T-19	Not less than 80 lbs. pcf
Percent of Wear	AASHTO-96	Not more than 40
Stripping Test	AASHTO T-182	Minimum 95% coated

Not less than 70 percent of the material retained on the No. 4 sieve shall be particles having at least one fractured face.

Blotter material shall be clean on other fine granular material.

The design and application of the surface treatment shall be in accordance with sound engineering practices.

The minimum thickness of the finished surface treatment shall not be less than one inch (1").

J. Tests

1. Material Sources - Sufficient laboratory tests shall be made to determine whether or not the proposed material source is suitable to produce the needed volume of acceptable materials, according to these specifications. As a minimum, gradation and plasticity index shall be shown. Test results shall be submitted with the plans.
2. Density, compaction and alignment - Test results shall be submitted to the County authority for inclusion in the County Road Department's file along with verification that the roads have been built per County Specifications, in the location and position depicted in the Final Plat, in a "Certificate of Completion" affidavit from the designated County Official for recording with the Final Plat and Disclosure Statement.
3. Cost - The Cost of all necessary materials testing, verification and certification will be paid by the subdivider and/or party constructing the road or street.

E.16 PLANS

Plans shall be prepared under the supervision of a registered NM Licensed Professional Engineer or land surveyor and shall bear his or her seal. These plans shall be included on the preliminary plat. The plans shall show the following information for all roads:

1. Horizontal alignment at a scale of 1"=50', 100', or 200';
2. Where road gradients exceed 2%, center line profile, showing existing ground and proposed grade lines with percentage grade;
3. Proposed drainage structures, on plan and profile;
4. Property boundaries;
5. Center line stationing, with every fifth station numbered;
6. Station number of all PCs and Pts;
7. Tangent bearings;
8. Curve data;
9. North arrow and scale;
10. Bench mark data;
11. Proposed typical section, showing thickness and type of base and surface courses proposed and gradations of base and surface courses and types of asphalt, if any; and,
12. Where gradients exceed 2%, proposed grade line of any proposed alleys

Detailed plans shall be submitted for any road dip, bridge, cattle guard, or box culvert.

E.17 ROAD CONSTRUCTION

The subdivider shall construct the roads so intended according to the design standards, specifications, and relative stipulations of these Regulations and the approved Road Construction Plan. At least seven (7) days prior to any road construction activities, the subdivider shall submit to the County a written schedule for the accomplishment of the proposed work. The subdivider shall provide at least two (2) days notice of any changes in the schedule. Dedication of any road right-of-way or easement in no way relieves the subdivider of any duties or obligations to construct proposed dedicated roads.

1. Road construction shall conform to County standards for width, material, and construction
2. The developer shall notify the County Road Manager, in writing, when construction is to start.
3. The developer shall monthly contact the County Road Manager and schedule an inspection of the road during construction.
4. Upon request the developer shall provide the County Road Manager with a copy of testing lab certifications that materials (base course & paving) meet County standards.
5. The developer shall provide certification from the manufacturer that other materials meet County standards (culverts, erosion, fencing, concrete, etc.).
6. Upon request the developer shall provide the County Road Manager with all testing lab certification as to compaction of the road.
7. The developer shall provide the County Planner with a copy of all state and federal permits required for the road construction.

8. All roads required to be constructed pursuant to this Ordinance must be completed within twelve (12) months of preliminary approval of the subdivision.
9. An as-built set of plans shall be submitted to the County Planner or designee upon completion of the road and prior to the County's final inspection of the road.
10. The developer, upon completion of the project, shall schedule a final inspection with the County Authority."

E.18 SIGNS

The subdivider shall place road name signs at all intersections, "Dead End Road" signs at the entrance of Cul-de-sacs, and "End of County Maintenance" signs at the points where private roads join or intersect with public roads.

Road name signs shall be constructed of maintenance free, double-facing plates. Street names will be white reflectorized copy on a green baked enamel background. All signs shall meet standards established by the New Mexico Department of Transportation. Signs shall be securely mounted on New Mexico Department of Transportation approved poles, and shall be installed at the time of road construction.

Traffic control signs will be furnished and installed by the County.

E.19 ROAD PAVING

All roads in proposed Types I and II subdivisions containing one hundred (100) or more lots shall be paved to specifications stated in Sections E.14 and E.15. At their own discretion, subdividers may utilize hot mix bituminous asphalt surfacing (one and one-half inches minimum thickness) and/or additional asphaltic penetration or wearing courses.

The subdivider may request the County Road Department Supervisor for joint cooperative effort to achieve chip-sealing of roads in subdivisions. In those cases where the Road Supervisor finds that chip-sealing the road would reduce the maintenance burden on the county and reduce costs he may recommend to the Board of County Commissioners that the County provide the equipment and manpower to accomplish chip-sealing of the road(s) requested and the subdivider provide the materials and oil. The County Commission may in its discretion either elect to enter into the joint cooperative effort or not depending on their judgment of the relative financial condition of the County, availability of personnel and benefit to be derived by the public from such participation.

E.20 VARIANCE

The Board of County Commissioners may grant a variance from the these regulations if the Board of County Commissioners finds upon presentation of adequate information that compliance with the these regulations will result in an arbitrary and unreasonable taking of property or exact undue hardship, and that a variance from the these regulations will not result in a condition injurious to health or safety. In all cases where a variance is sought, the variance request shall be processed pursuant to the procedures set forth in the main body of the Subdivision Ordinance.

E.21 ROAD ACCEPTANCE OR APPROVAL

After receiving the Certificate of Completion from the subdivider's Professional Engineer or land surveyor stating that the roads have been built in compliance with these regulations and located in compliance with the approved Preliminary Plat and properly depicted on the Final Plat, and Upon request by subdivider, the County Road Department will inspect the roads to verify completion of the roads and determine compliance with the provisions of these regulations. If the roads are found to be completed and in compliance, the Board of County Commissioners shall approve roads to be built or accept the roads for public use on a conditional basis pending the successful completion of the Warranty Period described in Section E.23 and all other requirements being met, approve the Final Plat for recording.

E.22 MAINTENANCE (PUBLIC ROADS ONLY)

No maintenance will be performed on the roads by the Road Department until the subdivision has reached an occupancy level of twenty percent (20%). The subdivider shall notify the Road Department when the subdivision has reached an occupancy level of twenty percent. After which the Road Department will perform routine maintenance as needed, but will not be responsible for any repair due to improper design or construction of the roads, and not until any and all repairs and maintenance needed at this time are performed by the subdivider.

E.23 WARRANTY PERIOD

The subdivider shall maintain the roads until the subdivision reaches an occupancy level of twenty percent (20%), and shall be responsible for any repairs to the roads for a period of twenty-four months from the date upon which the Preliminary Approval is granted, or twelve months from the date upon which the subdivision reaches an occupancy level of twenty percent (20%), whichever occurs later. The County Road Department will notify the subdivider of any required repair work **at** this time, and will perform no routine maintenance on the roads until the repair work is satisfactorily completed. Failure of the subdivider to make the required repairs within sixty (60) days of notification shall automatically void the Conditional Final Plat Acceptance granted pursuant to Section E.21.

E.24 ACCEPTANCE FOR MAINTENANCE (PUBLIC ROADS ONLY)

Upon successful completion of the Warranty Period, and provided that any and all required repairs have been satisfactorily completed, the roads will be eligible for Acceptance for Maintenance by the Board of County Commissioners. Any road that is deemed to cause undue maintenance and/or repair expense to the County due to improper design or construction will not qualify for Acceptance for Maintenance.