

La Plata County New Land Use Code

Topic Focused Workshop #3

Road and Bridge Construction Standards, Level of Service Standards,
Drainage and Erosion Control Standards

June 12, 2020



Agenda overview

- Desired Outcomes/Goals for the Day
 - Provide education to the community about the land use code
 - Understand how the new code is expected to impact the community
 - Gain insights from the community about how they perceive the new code
 - Gain insights from the community to guide changes to the new code
- Agenda
 - 10 min – Introductions & Welcome
 - 20 min – Road and Bridge Construction/Design Standards– Presentation & Discussion
 - 60 min – Road and Bridge Level of Service - Presentation and Discussion
 - 10 min –Wrap-up and Next Steps

Meeting Overview

Zoom Protocols	Meeting Agreements
<p>Webinar format</p> <ul style="list-style-type: none">• Muted device• Recording the presentation• Polling <p>Feedback Cue</p> <ul style="list-style-type: none">• Use the raise hand icon or *9• Use the chat icon• State your name and then speak• Comments will be timed to 2 minutes, you can get back in the cue	<ul style="list-style-type: none">• Equalize participation• Respect – in words and meeting conduct• Listen to understand• Focus on our goals for the day, the content at hand• Step-Up/Step-Back – be concise and to the point

Panelist Introductions

- Consultants
 - Gabe Preston, RPI
 - Stacy Beagh, Strategic By Nature
- Planning Commission
 - Geri Malandra, Chair (Florida Road District Area)
 - Chris Scott, Vice Chair (Florida Mesa District)
- County Staff
 - Megan Graham, Public Affairs Officer
 - Neal Starkebaum, Community Development Director
 - Robert Bowie, Senior Planner
 - Daniel Murray, Principal Planner
 - Dan Murphy, Senior Planner
 - Jim Davis, Public Works Director
 - Aaron McKelvey, Planning Engineer



Planning Commissioner Welcome

- Goals for the Day
- Board of County Commissioner Goals for New Code
 - Reconcile and clarify the land use code
 - Provide for predictability and improved certainty of the process and outcomes
 - Facilitate and direct growth to appropriate areas
 - Improve the review process
 - Articulate clear development standards
 - Streamline the development process
 - Protect and respect the county's most valued assets
 - Minimize sprawl
- Highlights from the New Code
- Community Role



New Code Timeline 2020



<p>Topic-Focused Workshop 1:</p>	<p>Development Review Process (Ch. 63, 66)</p> <ul style="list-style-type: none"> • Improvements and changes to the review process <ul style="list-style-type: none"> ○ Increased administrative review ○ Reduced public hearings ○ Sketch plan and compatibility review ○ Roles and procedures of decision-making bodies • Transitioning from old to new code 	<p>Fri, May 29: 2-4 pm</p>
<p>Topic-Focused Workshop 2:</p>	<p>Development Standards (Ch. 65, 66, 67, 68, 70, 72, 73)</p> <ul style="list-style-type: none"> • Development standards <ul style="list-style-type: none"> ○ Effect of improved/clarified standards on process ○ Compatibility and mitigation standards ○ Tiny homes and manufactured homes standards ○ Wildfire and other natural hazards • New tools for development <ul style="list-style-type: none"> ○ Economic development areas ○ Planned unit development ○ Clustered rural development 	<p>Fri, June 5: 2-4 pm</p>
<p>Topic-Focused Workshop 3:</p>	<p>Road Level of Service Standards, Road Construction Standards and Drainage & Erosion Control Standards (Ch. 70, 74)</p> <ul style="list-style-type: none"> • Road Level of Service Standards <ul style="list-style-type: none"> ○ Background ○ Level of service metrics and studies • Road Construction Standards <ul style="list-style-type: none"> ○ Standards for non-county roads ○ Roads in 35-acre subdivisions • Drainage and erosion standards <ul style="list-style-type: none"> ○ Revised drainage and detention standards ○ Water quality requirement for detention ponds 	<p>Fri, June 12: 2-4 pm</p>
<p>Topic-Focused Workshop 4:</p>	<p>Topics Requested by Participants and Overflow</p>	<p>Fri, June 19: 2-4 pm</p>

Road construction/design standards

Chapter 74



Applicability (Ch. 74)

- Applicable to all new uses and development except:
 - Development that does not require a development permit
 - Additional dwelling units via director determination
 - Lot consolidations, boundary adjustments and plat amendments
 - Temporary uses
 - Accessory uses (home-based businesses)
 - Special events
 - AgPlus uses
 - Telecommunication facilities

Projects that do not require a land use permit

On a legally created and compliant lot or parcel of record

- One new single family, stick-built and manufactured
- Remodels/additions to single family homes and other legal structures
- Accessory structures (sheds, garages, agricultural barns etc.)
- Second dwelling unit on 70 acres and a third dwelling on 105 acres
- AgPlus uses by right
- Home business less than 400 sq. ft. inside the main residences, no outside visibility

Revised Road Standards 74-2

New Code

Road Classification and Standards							
Road Class	ADT	Design Speed (miles per hour)	Minimum Right-of-Way Width (feet)	Travel Way Width (feet)	Shoulder Width (feet)	Surface Type	Maximum Grade (percent)
Arterial	2500+	45-55	80	24	4	Paved	6
Collector	1,000 - 2,499	30-45	70	24	3	Paved	8
Major local	400 – 999	25-40	60	22	2	Paved	8
Minor local	49 – 399	15-30	50	20	2	Gravel	10
Low ADT	25 - 48	N/A	30	20	N/A	Gravel	10

- Reduces number of categories and reduces road width for some classifications.

Current Code

Type	ADT or Units Served	Design Speed (mph)	R.O.W. (feet)	Surface Width (feet)*	Shoulder Width (feet)*	Maximum Grade (percent)
Major arterial	5,000 plus ADT	55	90	32	4	6
Minor arterial	2,500—4,999 ADT	45	80	30	3	6
Major collector	1,500—2,499 ADT	20-30	80	24	5	8
Minor collector	1,000—1,499 ADT	20-45	75	24	4	8
Local	1—4 units	15-30	40	18		10
Local	5—9 units	15-30	50	22	3	10
Local	10 plus units	20-45	60	24	3	8

Revised Road Standards 74-2

- Sets minimum width for LOW ADT roads and Emergency Access to 20 ft. for EMS access
- Exemptions from standards by Public Works Director vs. Board of Adjustment
- Emergency access standards aligned with International Fire Code

Traffic analysis required (74-3)

- Two types of analysis depending on the project, both require an engineer
 1. Traffic evaluation for smaller projects with no LOS impacts. Analyze traffic volumes, turn lane warrants and sight distance.
 2. Traffic impact study for larger projects (100+ ADT) and/or LOS impacts. Analyze traffic for larger area and generate 20 year traffic projections.

Road standards for 35 acre developments 74-6

- 35+ acre developments have not had to meet road standards in the past
- Specifies applications submittal requirements and procedures
- Traffic evaluation required
- Requires compliance with road construction standards in 74-4
- Rationale for requiring compliance is based upon safety considerations and meeting minimum standards for emergency service response and access
- 35+ acre developments not subject to Level of Service Standards

Road and bridge level of service

Chapter 74



Purpose of Roads and Bridge Standards (Ch. 74)

- Ensure safe and adequate access to public roads
- So that future development doesn't create need for road improvements that the county cannot pay for with its current revenue streams
- Direct development toward areas that have adequate road infrastructure

Road and Bridge LOS and Land Use

74-2, II.A. – Level of service standards apply to any existing county road that experiences an increase in traffic due to a development, from the project entrance to the nearest state highway, city or town road. If the LOS is not met, the development may make the improvements necessary to meet the LOS standard or wait until the needed improvements are constructed by others.



Applicability (Ch. 74)

- Applicable to all new uses and development except:
 - Development that does not require a development permit
 - Additional dwelling units via director determination
 - Lot consolidations, boundary adjustments and plat amendments
 - Temporary uses
 - Accessory uses (home-based businesses)
 - Special events
 - AgPlus uses
 - Telecommunication facilities
 - Oil and gas development (Ch. 90)
 - 35+ acre developments (addressed separately in 74-6)

Projects that do not require a land use permit

On a legally created and compliant lot or parcel of record

- One new single family, stick-built and manufactured
- Remodels/additions to single family homes and other legal structures
- Accessory structures (sheds, garages, agricultural barns etc.)
- Second dwelling unit on 70 acres and a third dwelling on 105 acres
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- Home business less than 400 sq. ft. inside the main residences, no outside visibility

Level of Service Standards – Analytical Process

BOCC Directed Staff to Investigate Level of Service Policies in 2018

Pavement Condition Index - 2017

2017 State of the Roadway Network in La Plata County



Zac Thomason, M.B.A., National Client Services Manager
IMS Infrastructure Management Services

Fiscal Impact Analysis 2018

Cost of Land Use Fiscal Impact Analysis *La Plata County, Colorado*

Submitted to:
La Plata County, Colorado

March 30, 2018

Prepared by:
TischlerBise
FISCAL | ECONOMIC | PLANNING

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Level of Service Study 2019

LA PLATA COUNTY LOS HIGHWAY CAPACITY STUDY

Prepared for:



La Plata County
Department of Public Works
1365 S. Camino del Rio
Durango, CO 81303

Prepared by:



Felsburg Holt & Ullevig
6300 South Syracuse Way, Suite 600
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303.721.1440

Project Manager: Paul Brown, PE, PTOE

FHU Reference No. 118246-01

February 2019

Level of Service – Paved Roads

Highway Capacity Manual 6th Edition

- LOS “A” = free flow conditions
→ LOS “F” = full congestion, breakdown in vehicle flow
- Land use code sets LOS for paved roads at ‘C’ in rural areas and ‘D’ in urban areas
- Some joint jurisdiction roads near City of Durango are exempt, for example, 32nd Street from Holly to CR 250.

LOS A	<ul style="list-style-type: none">• Free-flow conditions• users are virtually unaffected by the presence of others in the traffic stream.• Freedom to select desired speeds• Excellent in level of comfort and convenience
LOS B	<ul style="list-style-type: none">• Allows speeds at or near free-flow speeds,• The presence of other users in the traffic stream begins to be noticeable.• Freedom to select desired speeds is relatively unaffected,• A slight decline in the freedom to maneuver within the traffic stream relative to LOS A.
LOS C	<ul style="list-style-type: none">• Speed at or near free-flow speeds,• Freedom to maneuver is noticeably restricted (lane changes require careful attention on the part of drivers).• Level of comfort and convenience declines significantly (Disruptions in the traffic stream)• Result in significant queue formation and vehicular delay.
LOS D	<ul style="list-style-type: none">• Speeds begin to decline slightly with increasing flow.• The freedom to maneuver becomes more restricted and drivers experience reductions in physical and psychological comfort.• Generate lengthy queues
LOS E	<ul style="list-style-type: none">• LOS E represents operating conditions at or near the roadway's capacity.• maneuverability is extremely limited and drivers experience considerable physical and psychological discomfort.
LOS F	<ul style="list-style-type: none">• describes a breakdown in vehicular flow.• Vehicles typically operate at low speeds in these conditions and are often required to come to a complete stop.

Level of Service – Paved Roads

- All paved county roads except a segment of County Road 233 meet LOS standards and most have additional capacity.
- Theoretical capacity of two lane paved road under base conditions (Highway Capacity Manual):
 - 1,700 passenger vehicles/hr one lane
 - 3,200 passenger vehicles/hr both lanes
- Base conditions
 - Lane width greater than or equal to 12 ft,
 - Clear shoulders wider than or equal to 6 ft,
 - No, no-passing zones,
 - All passenger cars (i.e., no trucks) in traffic stream,
 - Level terrain,
 - No impediments to through traffic

Level of Service – Gravel Roads

- No more than four hundred 400 ADT (after a proposed project is occupied)
- Have a total surface width of 20 feet
- Adequately surfaced to carry a 60,000 pound vehicle, all-weather

Example of a gravel road that does not meet LOS

County Road 228 – west end – approx. 16 feet wide, high ADT.

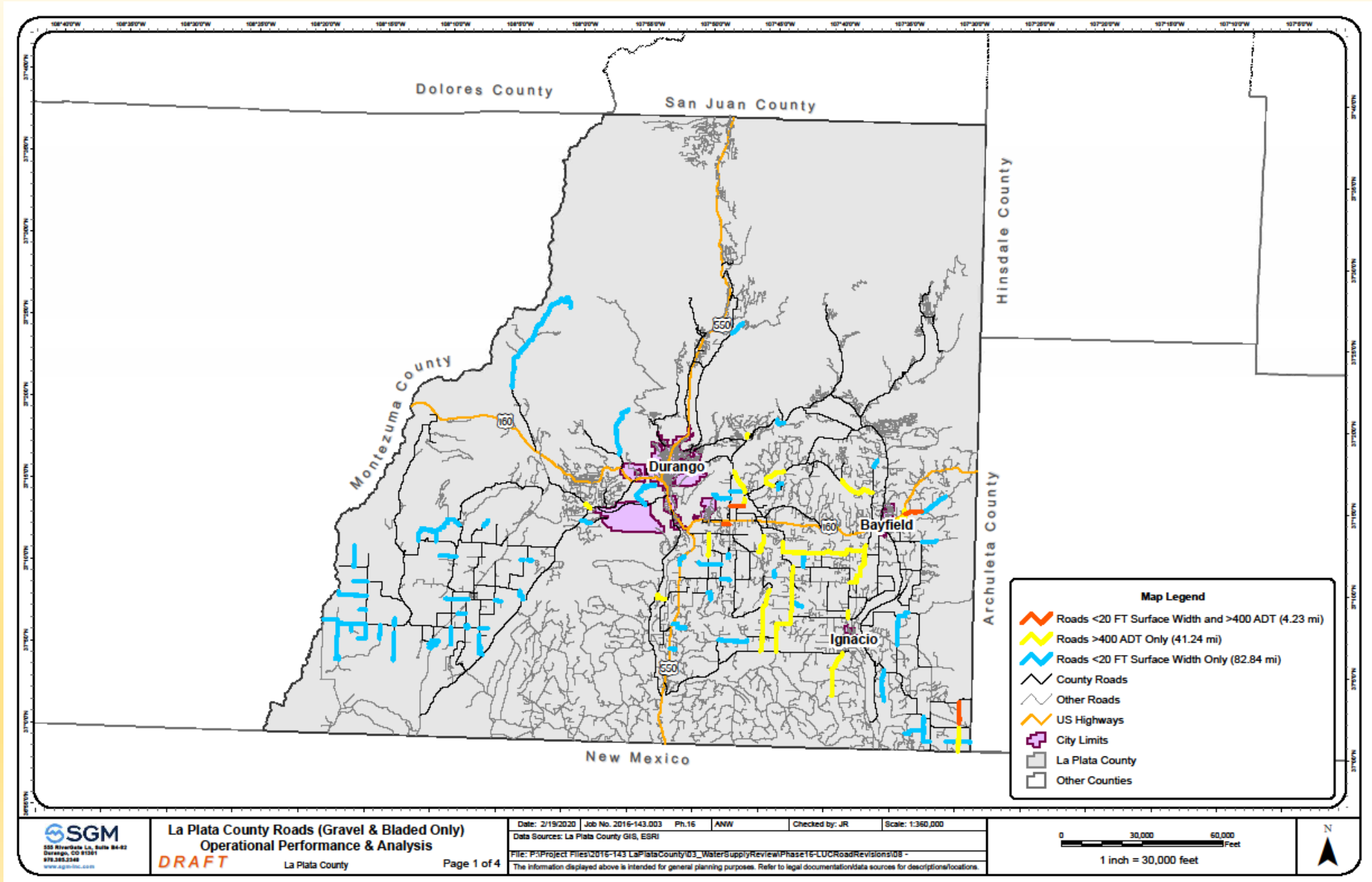


Has averaged between 800 and 1,000 average daily trips since 2004. Requires grading at least 4 times/year.

Why LOS?

- 1) Maintenance Problems
- 2) Safety Problems

Generalized gravel road LOS analysis



Bringing a county road up to standards

- An existing county road needs to be brought up to an acceptable Level of Service Standard
- A gravel county road would need be upgraded by paving to a width that brings it up to an acceptable level of service for a paved road (i.e. at least 20 ft. wide)

Drainage and erosion control standards

Chapter 70



Grading, Drainage and Erosion Control 70-9

- Developments in the Cooperative Planning Area conform with City of Durango standards.
- Revised drainage and detention standards reference Urban Storm Drainage Criteria Manual with specific changes included in a technical appendix.
- Water quality requirement for detention ponds.
- As-built certification for detention ponds.

Next Steps for Additional Input

- Attend another workshop!
- Additional comments are welcome and encouraged!
- Email: **NewCode@co.laplata.co.us**
- Project website: **https://bit.ly/LPC_LUC**
- Turn in comments by June 26 for consideration in New Code Draft 2
- BOCC and Planning Commission Work Sessions 6 PM June 11 and 18, with public comment period at 8 PM

